

The Psychology of Choice Overload: Implications for Retail Financial Services

Alexander Chernev

Associate Professor

Kellogg School of Management, Northwestern University

filene
RESEARCH INSTITUTE



Deeply embedded in the credit union tradition is an ongoing search for better ways to understand and serve credit union members. Open inquiry, the free flow of ideas, and debate are essential parts of the true democratic process.

The Filene Research Institute is a 501(c)(3) not-for-profit research organization dedicated to scientific and thoughtful analysis about issues affecting the future of consumer finance. Through independent research and innovation programs, the Institute examines issues vital to the future of credit unions.

Ideas grow through thoughtful and scientific analysis of top-priority consumer, public policy, and credit union competitive issues.

Researchers are given considerable latitude in their exploration and studies of these high-priority issues.

Traditionally, the Filene Research Institute focuses on long-term research questions that can take months or years to research and publish. Occasionally Filene also publishes Research or Innovation briefs. These briefs allow Filene to present important, time-sensitive, notorious, and unbiased topics to the credit union system. Oftentimes these briefs present an opportunity to distribute original research or innovation findings from Filene researchers or Fellows. We hope the “brief” format meets your need to obtain actionable and objective information in a timely manner.

The author would like to acknowledge the valuable input from Jean-Albert Maisonneuve (Affinity Federal Credit Union, Basking Ridge, New Jersey), Lily Newfarmer (Tarrant County Credit Union, Fort Worth, Texas), and Kerry Parker (A+ Federal Credit Union, Austin, Texas).

by Ben Rogers,
Research Director

Imagine for a moment the difference between shopping at Walmart and shopping a high-end boutique on Rodeo Drive or Fifth Avenue. The sounds are different. The employees are different. The prices are certainly different. In fact, the retail environments couldn't be much more different, especially in terms of product selection. Whereas an upscale boutique might sell no more than a few dozen different clothes in a narrow range of sizes, Walmart prides itself on stocking hundreds of options in a wide variety of colors and sizes. Despite the different focuses, planners construct each product set deliberately based on the needs of their anticipated customers.

Consumers in North America have many choices. Walmart, the boutiques, and all the stores in between prove that. But sometimes a large number of choices is not what consumers want or need. In recent years, especially since the Internet explosion, retailers and other providers have begun to use the word “curate” to describe the value they provide. It's not enough to offer lots of choices anymore: Consumers expect you to do some of the hard deciding for them, to make their decisions easier. At credit unions, the product is money management, not fancy duds, but this brief examines why the planning principles are the same. Specifically, it questions the assumption that offering credit union members more choices in the form of ever more products and services is better than offering fewer, more curated choices.

What Is the Research About?

Recent research in consumer psychology and behavioral economics has shown that the assumption that consumers always benefit from having more options to choose from does not always hold and that in some cases consumers benefit from fewer, rather than more, options. Every day, consumers reel from information overload and decision overload, so they look for easier decisions. Larger product assortments also lead to higher expectations, which firms might not be able to fill. And the ongoing drive to build the “right” product for every taste means, paradoxically, that not every need can be filled. All of these factors make it harder to choose, and when it's hard to choose, the easier option is to not choose at all.

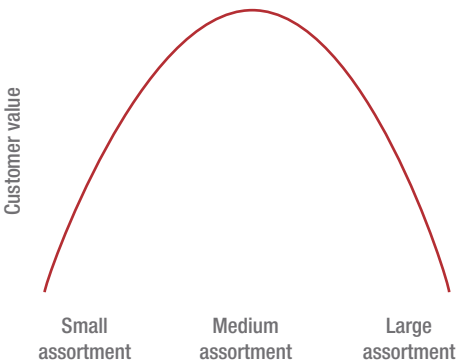
Economic scarcity still holds, but cognitive scarcity does not.

What Are the Credit Union Implications?

Retail is retail, whether you're selling prom dresses, chocolates, or even checking accounts. Consumers consider their available options and choose. For retail firms like credit unions, part of your responsibility is to make those choices easier. Here are some ways to do it:

- **Less is more.** Our recent interviews with credit union CEOs indicate that many recognize the need to pare their offerings to an efficient core group. Consider the strategic decisions banks like ING Direct and Ally have made in keeping their assortments lean. You should probably not seek to be *that* lean, but you should ask yourself why that model works.
- **Actively curate your offerings.** Rather than reducing the number of *available* options offered by the credit union, consider focusing on a smaller number of options *promoted* by the credit union. Thus, instead of overwhelming a new member, you might choose to promote only a subset of options that will most likely appeal to a new member. Sometimes just telling consumers which option is the most popular is enough to help them make a decision.
- **Organize around defaults.** Beyond simply curating, take a cue from the now common practice of allowing employees to opt out of 401(k)s rather than asking them to opt in. Participation rates go up dramatically after such a switch, and setting default options at a credit union can significantly ease the decision burden on members. It even helps members who don't want the default options to make better decisions: Deciding whether each option is better or worse than the default option is much easier than evaluating each option relative to all the other options available.

The U-Shaped Nature of the Relationship between Assortment Size and Consumer Benefits



Credit unions have made great strides toward becoming full-service financial institutions. But the urge to be all things to all people has a downside. In addition to driving up operating expenses, offering an endless array of product varieties may not be best for credit union members. Instead, consider following this behavioral science to its logical conclusion with a well-considered assortment of products. Somewhere between Walmart and Rodeo Drive, your assortment should be big enough that members have choices, and small enough that those choices do not overwhelm.



Alexander Chernev, PhD

Alexander Chernev is associate professor of marketing at the Kellogg School of Management, Northwestern University. He holds a PhD in psychology from Sofia University and a PhD in business administration from Duke University. Professor Chernev's research applies theories and concepts related to consumer behavior and managerial decision making to develop successful corporate branding and customer management strategies. His research has been published in leading marketing journals, and he has received numerous teaching and research awards. Professor Chernev serves on the editorial boards of the top academic journals and has advised numerous companies on issues such as strategic marketing, new product development, and customer management policies. Professor Chernev teaches marketing management, marketing strategy, and marketing research courses to MBA students, behavioral decision theory to PhD students, and various executive education programs.

A key decision that many firms, including consumer goods manufacturers, retailers, and financial institutions, have to make involves designing and managing their product assortments. The conventional wisdom is that more choice always benefits consumers. Recent research has shown, however, that this strategy can backfire, leading to lower probability of purchase and decreased satisfaction due to choice overload. Managing choice overload, therefore, is becoming an increasingly important aspect of designing product assortments and is a key factor in designing assortments that create value for both the company and its customers.

The Pros and Cons of Variety

Conventional wisdom suggests that offering an extensive variety of options—although costly for the company—always benefits consumers. Consequently, when deciding on the size of their assortments, managers often try to maximize the number of options offered to consumers, subject to cost constraints on the part of the company. This assortment-maximization strategy is supported by several key considerations:

- **Better preference match.** Larger assortments offer an opportunity for a better match between a consumer's preferences and the benefits provided by the options available in the choice set. The more options available in a given assortment, the greater the chance that each individual consumer will find the "ideal" option.
- **Greater decision flexibility.** Larger assortments are also preferred because they allow consumers to keep their options open, allowing them more flexibility when making a selection. Thus, consumers who have not finalized their choices prefer larger assortments because they offer the flexibility to reconsider their initial selection. In this context, lack of variety might create negative sentiment among consumers who feel that their choice is "locked in" by the limited roster of options.
- **Greater opportunity to learn about the possible options.** Consumers might also experience additional utility simply from having multiple items in the choice set because it allows them to explore a more complete roster of options available in the product category. Variety is especially relevant for consumers who want to determine the entire range of attribute values available and learn more about the different features and benefits among the choice alternatives before making a decision.
- **Reduced risk of missing a superior option.** Larger assortments also reduce the uncertainty of whether the choice set at hand adequately represents all potentially available options. Indeed, consumers may opt not to make a choice if they think that the

available assortment does not adequately represent the entire set of possible options. As a result, consumers might feel more confident when selecting from an assortment that offers a greater number of options because it is less likely that a potentially superior option is not represented in the available choice set.

The list of reasons why larger assortments are likely to benefit consumers is impressive, which explains the common belief that more choice always benefits consumers. And yet, recent research in the area of consumer psychology and behavioral economics has shown that the assumption that consumers always benefit from having more options to choose from does not always hold and that in some cases consumers benefit from fewer, rather than more, options. There are several reasons why this might happen:

- **Information overload.** Extensive assortments often lead to information overload because consumers presented with a greater number of options have to process more information than those considering relatively few options. Thus, consumers often find it easier to deal with smaller assortments simply because they have to evaluate fewer options and consider fewer attributes on which these options are described. The effect of information overload is often compounded in assortments in which options are poorly organized, since the very lack of structure further complicates evaluating the available options.
- **Decision overload.** In addition to information overload, larger assortments are more likely to lead to decision overload in cases where the available choice set yields multiple acceptable options. Indeed, the more acceptable options one has to choose from, the more difficult the decision is. Consumer choice is especially difficult when the considered options are hard to compare because different options are superior on different attributes. Decision difficulty in this case stems from consumers having to decide which of these attributes is more important and determine the exact trade-off involved—that is, how much better an option should be on one dimension in order to compensate for a deficiency on another dimension.
- **Higher consumer expectations.** Larger assortments are also likely to complicate choice by raising consumer expectations about the likelihood of finding the “ideal” option. When choosing from large assortments, consumers often have much higher expectations than when choosing from a relatively smaller selection. The higher the expectations of the match between the ideal and the available options, the greater the probability that consumers will walk away from the assortment if a perfect match is not available (Diehl and Poynor 2010).

- **Assortment gaps.** Offering a greater variety of options inevitably involves introducing new attributes or attribute levels that differentiate the newly added options. Differentiating individual options on an increasing number of dimensions, however, makes it more difficult (and often cost-inefficient) for the firm to offer all possible combinations of each attribute and attribute level. As a result, it is often the case that a particular attribute combination desired by a consumer is unavailable despite the larger number of options.

The Cost–Benefit Analysis of Product Variety

The abundance of reasons for and against large assortments highlights the importance of developing a conceptual framework for analyzing the benefits and costs of product variety. The basic prem-

ise of such a framework is the conceptualization of value as a function of benefits and costs. So, let's consider these two aspects of value.

On the benefit side, value is a concave function of the number of options in an assortment:

As the number of options in an assortment increases, the marginal value of each additional option tends to decrease. This is because as more options are offered by an assortment, the distance between a consumer's ideal point and one of the available options narrows. As a result, the larger the assortment, the greater the match between the options in this assortment and the preferences of its target customers, and the smaller the marginal benefit that each additional option can add. This diminishing marginal utility of assortment size is illustrated in Figure 1.

On the cognitive cost side, however, the value function is not concave; rather, it is convex. The reason is that as the number of options increases, the associated cognitive cost of processing these options does not decrease. In fact, one could argue that as the number of attributes and attribute values increases, so do the cognitive costs of evaluating these attributes and trading off their benefits and costs. Moreover, one could argue that when the number of information units exceeds the storage capacity of people's short-term memory (conventionally assumed to be 7 +/- 2 units of information; Miller 1956), additional cognitive resources are required. In this context, consumers' cognitive costs associated with choosing from large assortments can be represented as shown in Figure 2.

Recent research in consumer psychology and behavioral economics has shown that the assumption that consumers always benefit from having more options to choose from does not always hold and that in some cases consumers benefit from fewer, rather than more, options.

Figure 1: The Relative Advantage of Larger Assortments Decreases with Size

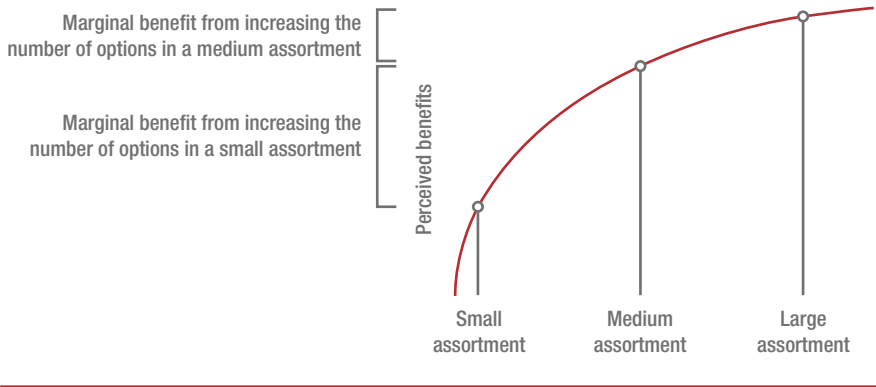
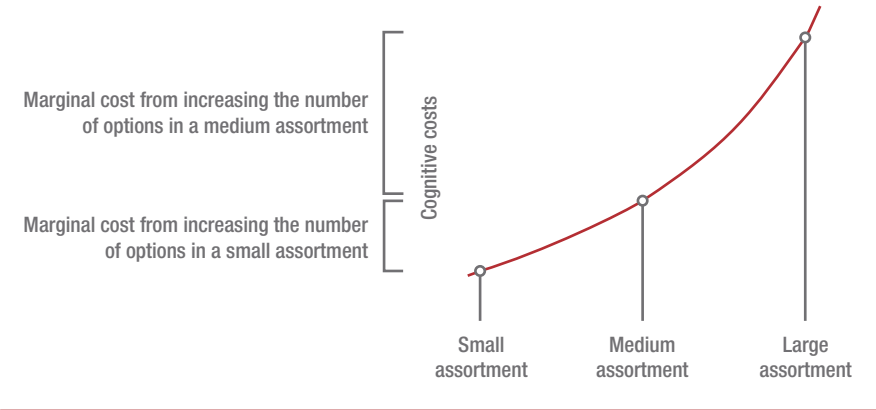


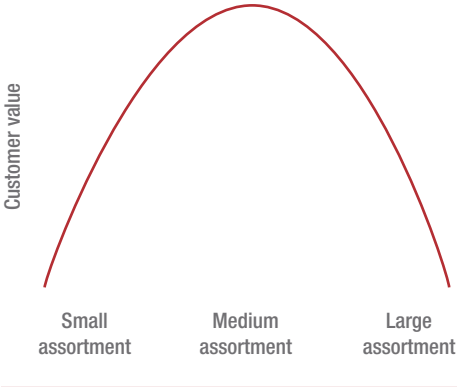
Figure 2: The Cognitive Costs of Choosing from Large Assortments



Using Vanguard Fund data, one study found that when there are only two options in a 401(k) fund, 75% of all eligible employees elect to participate. Increasing the number of options to 30 results in a decline, rather than an increase, in participation rates to 70%.

Provided that the benefits of offering more variety increase at a reduced rate whereas cognitive costs increase exponentially, the relationship between the number of available options and consumer benefits can be represented as an inverted U-shape (Figure 3). Applied to the domain of retail financial services, for example, this inverted U-shape value function means that an increase in the number of available investment options was found to lead to a decrease

Figure 3: The U-Shaped Nature of the Relationship between Assortment Size and Consumer Benefits



rather than an increase in individuals’ propensity to exercise their right to choose.

The existing empirical research lends support to the inverted U-shape value function, and in particular to the notion of choice overload. Thus, a study examining how the number of funds in a 401(k) plan influences employee participation rates found that for every 10 funds an employer adds to its retirement plan, the likelihood of participation drops between 1.5% and 2%. Using Vanguard Fund data, the study found that when there are only two options in a 401(k) fund, 75% of all eligible employees elect to participate. Increasing the number of options to 30 results in a decline, rather than an increase, in participation rates to 70%. Further increases in the number of options leads to a further decrease in participation rates, suggesting that the additional difficulty of choosing among a larger number of funds outweighs the potential benefits of offering more

options. A related study found that increasing the number of options makes individuals not only less likely to invest but also more likely to pick conservative options—such as low-yielding money market accounts—that over the long run lead to lower returns (Iyengar, Huberman, and Jiang 2004; Huberman, Iyengar, and Jiang 2007).

The above discussion suggests that when deciding on the optimal assortment size, managers need to consider the marginal benefits and costs associated with adding new options to their assortments. The general principle here is that at some point the costs of adding more options tend to outweigh the corresponding benefits. Thus, the larger the assortment of options currently offered, the lower the contribution of each additional option. To illustrate, adding a new type of checking account, a new savings plan, or a new type of loan can create value for consumers by providing them with a potentially better match with their needs. At the same time, the availability of multiple items to choose from might make it more effortful for consumers to understand the details of each account as well as decide which account best fits their current and future needs. As a result, once assortments have reached a reasonably broad range, managers need to carefully consider the overall viability of adding new options.

The Paradox of Large Assortments

Despite the fact that large assortments often lead to more complicated choices—especially for novice consumers—empirical data show that when given a choice, both novice and expert consumers universally prefer larger to smaller assortments. This is the paradox of large assortments: When choosing among assortments, consumers

prefer the variety offered by larger assortments, even when these assortments lead to less confident decisions and lower satisfaction with the chosen option. For example, when choosing between two retirement plans, one offering only a few options and the other offering significantly more alternatives, most consumers tend to prefer the latter. When asked to make a choice, however, they are less likely to choose, less confident in their choices, and less satisfied with the outcome than if they had chosen from the smaller assortment. This paradoxical behavior naturally raises the question of why this inconsistency in consumers' choice behavior exists.

The paradox of large assortments is best explained when looking at choice as a hierarchical decision process that comprises two different stages: selecting an assortment and, subsequently, selecting an option from that assortment. Thus, the observed discrepancy in consumer preferences when choosing an assortment and when choosing an

item from the selected assortment can be attributed to the nature of the consumer decision process and, in particular, to whether these two stages of the overall decision are considered jointly or separately. If the

One strategy to increase consumer preference for smaller assortments is to shift their focus from choosing among assortments to choosing a specific option from a given assortment.

choice of an assortment and the subsequent product selection are viewed as two independent decisions, then choosing the larger assortment is likely to be perceived as the optimal strategy. If, however, both decisions are considered jointly, the choice of an assortment is likely to be influenced by a consumer's desire to optimize the subsequent choice as well. As a result, when consumers believe that choosing a product from the larger assortment is likely to have substantial drawbacks, such as increased decision difficulty, the probability of choosing that assortment is likely to decrease.

Consider two consumers who are choosing between assortments that vary in size, such that one consumer is focused only on choosing between the two available assortments, whereas the other is focused on selecting both the assortment and the optimal product from the chosen assortment. The different tasks faced by these consumers are likely to activate different decision strategies. A consumer who is focused only on choosing among assortments is more likely to display a preference for larger assortments because of uncertainty about future preferences and a desire to put off the effort of making trade-offs. In contrast, a consumer who focuses simultaneously on choosing an assortment and on the subsequent task of selecting an option from the chosen assortment is less likely to display a preference for larger assortments because of the anticipated difficulty of making a choice from a large selection.

The inconsistency in consumer preferences when choosing an assortment and when choosing an item from a given assortment points to the importance of identifying strategies that can help increase consumer preference for smaller assortments in cases where these assortments are likely to lead to greater purchase probability and stronger satisfaction with the chosen option. Because consumer preference for larger assortments stems from underestimating the decision difficulty associated with evaluating multiple options, one strategy to increase consumer preference for smaller assortments is to shift their focus from choosing among assortments to choosing a specific option from a given assortment. This shift of focus is likely to make the difficulty of choosing from large assortments more prominent, thus tilting consumer preferences in favor of smaller assortments.

To illustrate, in another experiment respondents had to choose between a small and a large assortment in the context of several product categories (Chernev 2006a). To direct their focus to the difficulty of choosing from large assortments, some of the respondents were initially asked to select their most preferred option from another large assortment in a different product category. When these respondents were subsequently asked to choose between a large and a small assortment, they were much more likely to prefer the smaller assortment compared to those not given the initial choice highlighting the difficulty of the decision task. In particular, among respondents not initially asked to make the “difficult” choice, only a few (2%) preferred the small to the large assortment. In contrast, those given the “difficult” choice were less consistent in their preferences for the larger assortment, with 16% choosing the smaller assortment.

Consumer preference for smaller assortments can also be increased by varying the temporal proximity of choosing an assortment and choosing an option from that assortment. To illustrate, in another experiment respondents had to choose between two stores that carried either a large (60) or a small (12) assortment of pens (Chernev 2006a). Some of the respondents were told that immediately following the choice of a store they would have to choose a pen from that store, whereas others were told that they would have the option to choose a pen a month later. The data show that in the delayed-choice condition only a few respondents (3%) selected the smaller assortment—a finding consistent with the conventional wisdom that variety benefits consumers. When the assortment choice had to be immediately followed by the selection of a specific item from that assortment, the preference for the smaller assortment increased significantly to 19%.

Another approach to increasing consumer preference for smaller assortments involves making decision accountability more prominent. The logic here is that when consumers feel they have to provide

reasons for choosing a particular option, they are more likely to prefer the smaller assortment because fewer options need to be rejected (and reasons for rejecting them explained). To illustrate, in one experiment involving a choice between travel agencies offering a different number of hotel options, asking respondents to provide reasons for choosing a particular hotel from the travel agency they selected resulted in the choice share of the agency with the smaller assortment increasing from 2% to 34% (Chernev 2006a).

Strategies for Managing Choice Overload

The cost–benefit analysis of product variety suggests that consumer choice can be optimized by increasing the benefits, reducing the costs, or both. Existing behavioral research identifies several strategies for optimizing consumer choice: (1) reducing the number of available options, (2) reducing consumer preference uncertainty, (3) optimizing the way these options are organized (e.g., bundling), (4) providing a default option, and (5) increasing the attractiveness of the options offered (Chernev 2011; Hamilton and Chernev 2010). Let’s consider these strategies in more detail.

Reducing the Number of Available Options

Given the proliferation of investment options available and the relatively low marginal cost of making them accessible to consumers, the most likely strategy to facilitate choice involves reducing rather than increasing the number of available options. Empirical evidence suggests that this strategy could pay off.

To illustrate, the data obtained from a large online grocery store show that even a dramatic reduction of assortment size (by an average of 54%) across most product categories can result in an increase rather than a decrease in sales. Counter to the predictions of most economic theories of choice, this reduction in assortment size increased sales by 11%, with approximately 75% of customers actually spending more (Boatwright and Nunes 2001). The same pattern has been reported in numerous empirical studies with both real and hypothetical consumer products.

Decreasing the number of available options is a particularly viable strategy in cases of assortments that contain a relatively large number of options that are either undifferentiated or do not target a clearly identified customer need. For example, a financial institution offering more than 10 types of checking accounts differing only on

Reducing the number of available options is most likely to benefit less experienced consumers.

minor benefits that are largely irrelevant to its target customers might consider trimming its product line—an action that would benefit its customers by simplifying their choice and would benefit the company by lowering the cost of managing and promoting its offerings.

When deciding on assortment size, it is important to keep in mind that reducing the number of available options is most likely to benefit less experienced (novice) consumers, who are uncertain in their preferences and are more likely to experience disutility from choice

overload with larger assortments. For these consumers, smaller assortments comprising relatively attractive items can lead to greater satisfaction with the chosen option compared to larger assortments. In this con-

Firms could benefit from offering smaller assortments composed of relatively attractive options such as best sellers or custom-selected items.

text, firms could benefit from offering smaller assortments composed of relatively attractive options such as best sellers or custom-selected items. This would help circumvent the potential limitations associated with choosing from smaller assortments. To illustrate, Apple’s “six best” principle, adopted by its retail stores, distills third-party products to only six per category.

In some cases, a viable alternative to reducing the number of *available* options offered by a company is reducing the number of options *promoted* by the company. Thus, even though a company might offer an extensive array of options that could easily overwhelm a novice consumer, a company might choose not to promote all of these options and instead promote only a subset that would most likely appeal to these consumers. This strategy allows companies to simplify consumer choice and maintain competitive parity by offering a portfolio of options that is, if not superior to, then at least similar to those offered by their competitors. This implies that by not promoting some of their less popular or less distinct options, firms can simplify consumer choice without necessarily decreasing consumer benefits.

Reducing Consumer Preference Uncertainty

Consumers’ reaction to assortment size is a function of their expertise—in particular, their knowledge of the attributes and attribute levels describing the choice alternatives as well as the degree to which they know how to trade off options’ benefits and costs on different attributes. Thus, consumers with product expertise and readily articulated preferences—for simplicity let’s call them “experts”—are more likely to benefit from the variety afforded by larger assortments than “novices”—those unfamiliar with the product category and without articulated preferences.

The theoretical rationale underlying this finding is that experts are better able to deal with information and choice overload than

novices, who are less certain in their preferences. Indeed, when evaluating the available options, novices are faced with the dual task of forming their ideal point and choosing the option that is closest to that ideal point.

In this context, the task of

simultaneously articulating preferences and making a choice presents consumers with a decision that often involves a greater degree of latitude than they can handle, which in turn makes it less likely that consumers will end up making a choice.

So, how should firms facilitate the way novice consumers choose from large assortments? Empirical data suggest that the drawbacks of large assortments can be attenuated by helping novice consumers articulate their preferences *prior to* making a choice (Chernev 2003a; Chernev 2003b). To illustrate, in one study respondents had to choose from either a larger (24 options) or a smaller (6 options) assortment of chocolates. Prior to making a choice, one group of respondents was asked to write down their preferences for each of the attributes describing the choice alternatives (e.g., chocolate type, flavor, and texture), as well as to rank-order the attributes in terms of their importance, whereas respondents in the other group were not given this preference articulation task. After they made their chocolate selection, all respondents were given the option to switch their choice with the most popular item from the entire chocolate collection. The rationale was that consumers who were less confident in their decision and less satisfied with their choice would be more likely to switch to the “default” option preferred by the majority of consumers.

The data show that novice consumers are more confident when choosing from small assortments, whereas experts are more confident when choosing from large assortments. Thus, when choosing from the smaller assortment, only 9% of novices opted to replace their selection with the default option, compared to 27% of experts. However, when choosing from larger assortments the preference pattern was reversed: 38% of novices opted to switch—indicating a rather low degree of confidence in their choice—compared to only 13% of experts who were unhappy with their selection and opted to switch.

Thus, firms can reduce consumer confusion, decrease their intimidation with the assortment size, and avoid choice overload by having consumers construct their preferences *before* they start evaluating the available options. Online retailers offering large assortments or

Consumers who were less confident in their decision and less satisfied with their choice from a large assortment were more likely to switch to the “default” option preferred by the majority of consumers.

customizable options offer decision support tools that help consumers avoid “variety shock” and figure out their preferences prior to making a choice. For example, prior to presenting all customization options, computer maker Dell’s website asks consumers to answer several basic questions aimed at helping them articulate the most important attributes they want in a computer. In the same vein, financial institutions often ask new customers to articulate their goals prior to presenting them with an extensive array of offerings. For example, when applying for a credit card, customers who are aware of their preferences and can rank-order different attributes such as payment terms, interest rates, and reward type would find it easier to make a choice from a large array of card options and would likely be more satisfied with the decision process.

Streamlining the Organization of the Available Options

In addition to managing the number and attractiveness of options composing an assortment, consumer choice can be optimized by organizing the available options in a way that minimizes the effort involved in making a decision. Making an assortment easier to search increases the likelihood that consumers will select an item for purchase rather than forgo making a choice. Because decision complexity increases with assortment size, clear organization is especially important for choices from larger assortments.

Novices are inclined to be more receptive to offerings described in terms of benefits, whereas experts are apt to prefer information about the actual features of the products they are considering.

There are two popular approaches to organizing choice options: by product category

(e.g., checking vs. savings account) and by goals consumers are trying to achieve (e.g., growth vs. income). While each approach has its advantages, goal-based organization tends to be beneficial to less experienced consumers, whereas category-based organization tends to benefit those who are more experienced. The reason is that novices are inclined to be more receptive to offerings described in terms of benefits, whereas experts are apt to prefer information about the actual features of the products they are considering. Thus, goal-based organization can reduce consumers’ search costs by providing a more intuitive or natural way of searching through assortments.

Choices from large assortments can be further facilitated by optimizing the very task of choosing. One such optimization strategy involves partitioning large assortments into smaller sub-assortments. For example, to simplify furniture choice for its customers (most of whom are nonexperts), IKEA breaks down its retail space into separate room-sized areas, effectively limiting the variety of options available to consumers at any given point in time.

Another strategy to simplify choice is to bundle items that are likely to appeal to the same target market. To illustrate, financial institutions often offer bundles of products focused on the needs of a particular customer segment, thus effectively decreasing the number of options in the consideration set for each of their target segments. For example, bundles targeting college students might include loans and growth-oriented financial products as well as products offering mobile access. Furthermore, within that segment, bundles targeting college seniors might include products that are uniquely tied to their likely needs, such as car loans. The idea here is to tie product offerings to customer lifestyle and promote only the most relevant offerings, thus increasing their effectiveness while at the same time reducing choice overload.

Providing a Default Option

Firms can also help consumers deal with larger assortments by providing a default option—an option that is automatically selected unless an alternative is chosen. Making an option a default can have a dramatic impact on consumers' judgments and choices. A clas-

sic illustration of the role of defaults in choice is provided by the finding that countries with an opt-out (enrollment by default) policy of organ donation had significantly higher donor rates than countries

Deciding whether each option is better or worse than the default option is much easier than evaluating each option relative to all the other options available.

with an opt-in policy (enrollment by choice). The difference was dramatic: In countries with an opt-in policy, only 42% consented to being donors, compared to 82% in countries with an opt-out policy (Johnson and Goldstein 2003). This was not because the residents of some countries were more altruistic than others; the reason was the way the question was framed. Making an option a default can dramatically increase the likelihood that it will be chosen.

In the domain of financial decision making, it has been shown that when consumers are enrolled by default in a retirement plan and have the option to opt out, participation rates are substantially higher than when the default is non-participation and consumers must opt in. For example, switching the default retirement savings plan 401(k) from opt-in to opt-out has been shown to dramatically increase participation rates. Another study reports that an opt-out plan enlisting employees to commit to future increases in retirement savings resulted in an increase in the average savings rates from 3.5% to 11.6% in a little over two years, with the majority of employees remaining in the retirement savings plan (Thaler and Sunstein 2003; see Benartzi and Thaler 2007 for a review).

Thus, providing a default option may make choosing from larger assortments much easier because it gives consumers a low-effort way of making a choice in lieu of expending the energy needed for a thorough search and evaluation. In addition, the default option serves as a reference point for evaluating the other options in the set. Deciding whether each option is better or worse than the default option is much easier than evaluating each option relative to all the other options available. For example, a customer who is uncertain about how to evaluate different types of savings accounts and which account to choose might find it much easier to decide when one of the accounts is designated as a default option; the default not only offers an option that can be readily chosen without further deliberation but also provides a benchmark against which to evaluate the other available options.

Increasing the Attractiveness of the Assortment Options

Increasing the attractiveness of the available options can facilitate consumer choice from an already available assortment as well as consumer choice among assortments. Indeed, studies have shown that consumer choice among assortments depends on the attractiveness of each option: Consumers tend to prefer smaller assortments when choosing among assortments comprised of relatively more attractive options than when choosing among relatively less attractive options (Chernev and Hamilton 2009; Chernev 2006b). To illustrate, when choosing between a store offering a larger assortment and one offering a smaller assortment, buyers tend to prefer the smaller assortment when both stores carry more attractive options than when they both carry less attractive options.

The rationale is that increasing the attractiveness of the options in both larger and smaller assortments brings these assortments closer together in terms of the perceived consumer benefits. This prediction is consistent with the concept of diminishing marginal utility, whereby the marginal value of adding a benefit to a given option (assortment) tends to decrease as the overall attractiveness of that option (assortment) increases, without a corresponding effect on decision costs. As a result, when faced with assortments composed of attractive options (e.g., assortments offered by retailers and manufacturers perceived to be of high-quality options, best sellers, most popular options, or options tailored to a consumer's preferences), the relative benefits of larger assortments are less evident.

To illustrate, in one experiment participants had to choose a snack from one of two retailers: one carrying a menu with 9 snacks and

another carrying a menu with 38 snacks (Chernev and Hamilton 2009). One group of participants was told that both retailers used premium ingredients and their snacks were highly rated on taste. The other group was told that both retailers used only average ingredients and their snacks were rated below average on taste. The menus were sealed so that the participants could not preview snack descriptions; they had to pick a menu based only on the number of snacks offered.

The data were consistent with the “attractiveness” theory. More participants selecting from the high-quality retailers preferred the smaller assortment compared to those in the low-quality group. In the group that was given a choice between the lower quality retailers, only 13% selected the one with the smaller assortment. In contrast, among those given a choice between the higher quality retailers, preference for the smaller assortment was 40%. Additional experiments using diverse products found an even stronger effect of option attractiveness, resulting in a reversal of preferences in favor of the smaller assortment.

There are two popular strategies for making an assortment more appealing to consumers: a best-seller strategy and a customization strategy that involves selecting the available options to match consumer preferences. The best-seller strategy is straightforward: It involves carrying only the most popular options that are known to be attractive to most target customers. Despite its intuitive appeal, this strategy has two important drawbacks. First, consumers with non-mainstream preferences are likely to get short shrift. Second, focusing only on the most popular options hampers a company’s ability to differentiate itself from its competitors.

Customization offers a viable alternative to the best-seller strategy. Instead of carrying best-seller options that appeal to the majority of its customers, a company might consider developing customized offerings for each of the different segments it serves. Offering options that better fit consumer preferences can enable companies to offer smaller assortments while reducing some of the negative consequences of restricting consumer choice. In industries where the degree of commoditization of products is relatively high (as is the case with many financial products), customization is also a means of strategic differentiation. For example, because of their unique relationship with their customers and their knowledge of the credit rating of the payee, many credit unions are in a position to offer payday-alternative loans (e.g., a two-day advance against a paycheck) in a way that benefits them as well as their customers.

Conclusion

When it comes to managing product assortments, offering more variety is not always the best option. Empirical research in the domain of retailing, consumer packaged goods, and financial services shows that in many cases large assortments can lead to lower purchase likelihood, lower customer satisfaction, and decreased customer churn. The research presented in this article further highlights the factors that managers need to consider when designing product lines and identifies effective strategies for optimizing consumer choice: reducing the number of available options, reducing consumer preference uncertainty, optimizing the way these options are organized, providing a default option, and increasing the attractiveness of the options offered. Incorporating these strategies into the development of a product line strategy is essential for designing customer-centric offerings that will create value for customers and the company.

- Benartzi, Shlomo, and Richard Thaler. 2007. "Heuristics and Biases in Retirement Savings Behavior." *Journal of Economic Perspectives* 21 (3): 81–104.
- Boatwright, Peter, and Joseph Nunes. 2001. "Reducing Assortment: An Attribute-Based Approach." *Journal of Marketing* 65 (3): 50–63.
- Chernev, Alexander. 2003a. "Product Assortment and Individual Decision Processes." *Journal of Personality and Social Psychology* 85 (July): 151–62.
- . 2003b. "When More Is Less and Less Is More: The Role of Ideal Point Availability and Assortment in Consumer Choice." *Journal of Consumer Research* 30 (September): 170–83.
- . 2006a. "Decision Focus and Consumer Choice among Assortments." *Journal of Consumer Research* 33 (June): 50–59.
- . 2006b. "Differentiation and Parity in Assortment Pricing." *Journal of Consumer Research* 33 (September): 199–210.
- . 2011. "When More Is Less and Less Is More: The Psychology of Managing Product Assortments." *Marketing Intelligence Review* 3 (1): 8–15.
- Chernev, Alexander, and Ryan Hamilton. 2009. "Assortment Size and Option Attractiveness in Consumer Choice among Retailers." *Journal of Marketing Research* 46 (June): 410–20.
- Diehl, Kristin, and Cait Poynor. 2010. "Great Expectations?! Assortment Size, Expectations and Satisfaction." *Journal of Marketing Research* 47 (April): 312–22.
- Hamilton, Ryan, and Alexander Chernov. 2010. "Managing Product Assortments: Insights from Consumer Psychology." In Tybout, Alice M., and Bobby J. Calder, eds., *Kellogg on Marketing*. Hoboken, NJ: John Wiley & Sons, 348–60.
- Huberman, Gur, Sheena Iyengar, and Wei Jiang. 2007. "Defined Contribution Pension Plans: Determinants of Participation and Contributions Rates." *Journal of Financial Services Research* 31 (1): 1–32.
- Iyengar, Sheena S., Gur Huberman, and Wei Jiang. 2004. "How Much Choice Is Too Much? Contributions to 401(k) Retirement Plans." In Mitchell, Olivia S., and Steve Utkus, eds., *Pension Design and Structure: New Lessons from Behavioral Finance*. Oxford: Oxford University Press, 83–96.

Johnson, Eric F., and Daniel Goldstein. 2003. "Do Defaults Save Lives?" *Science* 302 (November): 1338–39.

Miller, George A. 1956. "The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information." *Psychological Review* 63 (2): 81–97.

Thaler, Richard H., and Cass R. Sunstein. 2003. "Libertarian Paternalism." *American Economic Review* 93 (2): 175–79.



ideas grow here

PO Box 2998
Madison, WI 53701-2998
Phone (608) 231-8550

www.filene.org

PUBLICATION #245 (7/11)

filene
RESEARCH INSTITUTE

