

{ New Strategies }



/// Sometimes consumers benefit from fewer rather than more options.

When More Is Less and Less Is More: THE PSYCHOLOGY OF MANAGING PRODUCT ASSORTMENTS

Alexander Chernev

The strategy of giving customers what they want can backfire when it comes to designing and managing product assortments. Not only does offering more options lead to higher costs for the company, larger assortments often lead to lower probability of purchase and decreased satisfaction due to choice overload. Surprisingly, most consumers (as well as many managers) are unaware of the drawbacks of larger assortments, displaying preference for the greater variety of options even in cases when such variety makes consumers less confident in their decisions and lowers their satisfaction with choice. Understanding the psychology of choice gives managers a competitive advantage, allowing them to design assortments and product lines that create value for both the company and its customers.

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The Paradox of Large Assortments

One of the decisions that managers — in both manufacturing and retail — have to make involves designing and managing their product lines and product assortments. Offering too many or too few choices can lead to suboptimal performance, so the question is how to decide on the optimal number of alternatives to make available. Conventional wisdom suggests that offering an extensive variety of options — although costly for the company — tends to benefit, and therefore attract, consumers. Indeed, research surveys indicate that when asked to state their preferences, consumers opt for the retailer (and brand) offering the greatest variety. Hence, when deciding on the size of their assortments, managers typically try to maximize the number of options offered to consumers, subject to cost constraints on the part of the company.

Recent research argues that the assumption that consumers always benefit from having more options to choose from does not always hold and that in some cases consumers will benefit from fewer, rather than

more, options. In particular, the empirical data document an interesting paradox: when choosing among assortments — such as deciding on a retailer — consumers typically prefer the variety offered by larger assortments. Yet, when making a choice from a given assortment, consumers often find it more difficult to choose from assortments offering large selections, are less confident and less satisfied with their choices, and are more likely to walk away without making a choice. This preference inconsistency implies that consumers cannot accurately predict their need for variety and tend to systematically overestimate the benefits offered by larger assortments.

The inconsistent pattern of consumer preferences for larger assortments and consumers' inability to accurately predict their own need for assortment variety raise the question of identifying conditions in which larger assortments will benefit consumers, as well as conditions in which consumers are better served by smaller assortments.

The Pros and Cons of Large Assortments

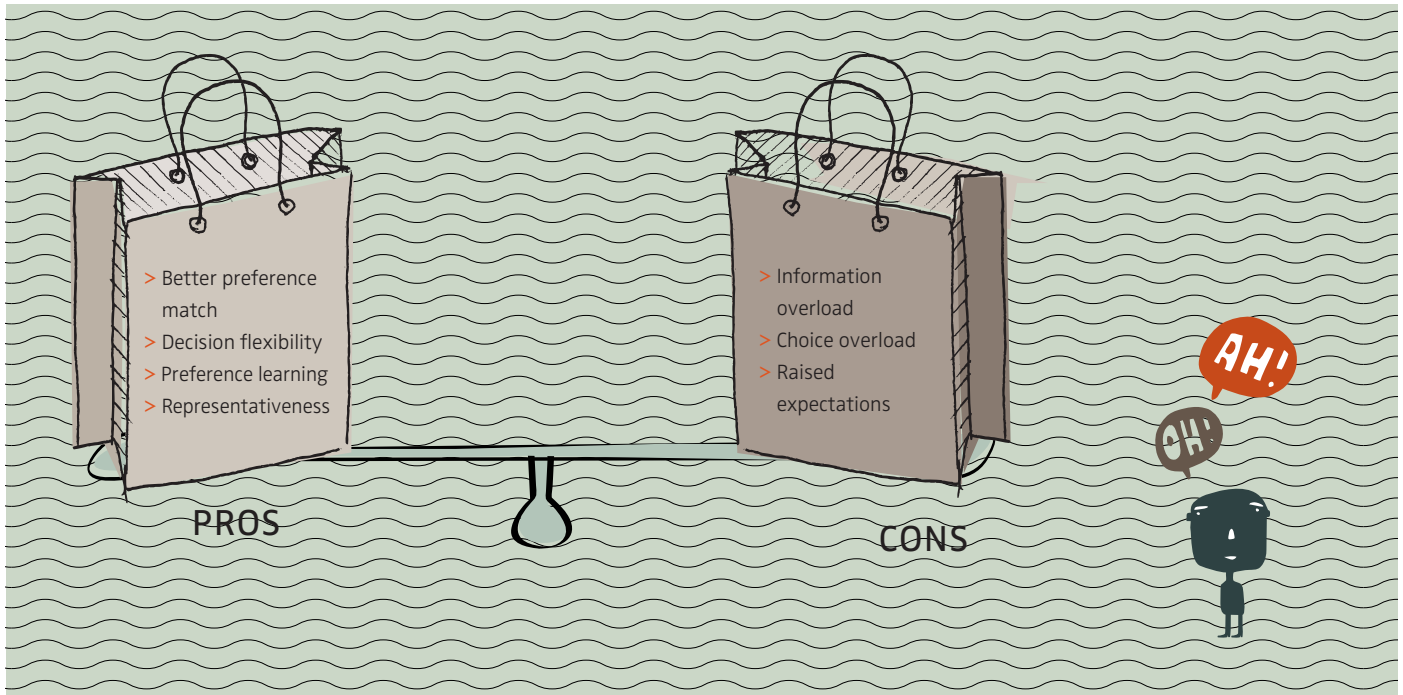
So why do most managers think that variety facilitates choice? Reasons abound:

- > **Better match between preferences and options.** 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.
- > **More choice 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 know what they are looking for but have not finalized their preferences tend to prefer larger assortments because they offer them the flexibility to reconsider their initial selection. In this context, a lack of variety might create negative sentiment among consumers who feel that their choice is restricted by an insufficient menu of options.
- > **More chance to explore 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. In addition, consumers might feel more confident when selecting from a retailer that offers a larger assortment because it is less likely that a potentially superior option is not represented in the available choice set.
- > **Information overload.** Extensive assortments often lead to information overload because consumers evaluating large assortments have to process more information than those evaluating relatively smaller assortments. 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.
- > **Choice overload.** In addition to information overload, larger assortments are also more likely to lead to choice overload in cases when the available assortment yields more than one acceptable option. Indeed, the more attractive options one is given to choose from, the more difficult it is to make the decision. The choice among attractive options is especially difficult when these options are attractive because of different attributes. Decision difficulty in this case stems from consumers having to decide which of these attributes are more important and determine the exact trade-off involved—that is, how much better an option should be on one attribute in order to compensate for a deficiency on another attribute.
- > **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 retailers specializing in a particular product category (i.e., category killers), consumers often have much higher expectations and more precise ideal points than when shopping at a retailer offering 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. Figure 1 summarizes the pros and cons.

The list of reasons why larger assortments are likely to benefit consumers is impressive, which explains why the belief in the universal "goodness" of offering more options to consumers is so popular. And yet, as the title of this article suggests, larger assortments are not always beneficial to consumers and in some cases can hamper rather than facilitate choice. There are several reasons why this might happen:

The Role of Consumer Expertise

Selecting the "right" assortment size is not a trivial task. There are clearly conditions where large assortments will benefit consumers, as well as scenarios in which larger assortments will be detrimental to consumer choice. So, when do consumers benefit from having fewer options? Recent research suggests that consumers' reaction to assortment size is a function of their expertise, and, in particular, their knowledge of the attributes and attribute levels describing the choice alternatives, as well as the degree to which they have established preferences for



these options (meaning that 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" who are unfamiliar with the product category and do not have articulated preferences.

The theoretical rationale underlying this argument 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 the 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 design assortments targeting "novice" consumers without articulated preferences? Empirical data suggest that the drawbacks of large assortments can be attenuated by helping "novice" consumers articulate their preferences prior to making a choice. To illustrate, in one study respondents had to choose from

either a larger (24 options) or a smaller (6 options) assortment of Godiva chocolates. Prior to making a choice some of the respondents were 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 Godiva 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 were more confident when choosing from small assortments, whereas "experts" were 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. The preference articulation task

FIGURE 1:
The Pros and Cons
of Large Assortments

that preceded making a choice from larger assortments clearly helped increase decision confidence and choice satisfaction among novices.

Choosing an Assortment versus Choosing an Item

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. This paradoxical behavior calls for identifying the reasons causing this inconsistency in consumers' choice behavior.

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 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.

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To illustrate, consider two consumers who are choosing among assortments that vary in size, such that one consumer is focused only on choosing among the available assortments, whereas the other is focused on both selecting 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 will be 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 will be 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 raises the issue of identifying strategies that can help increase consumer preference for smaller assortments in cases when 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.

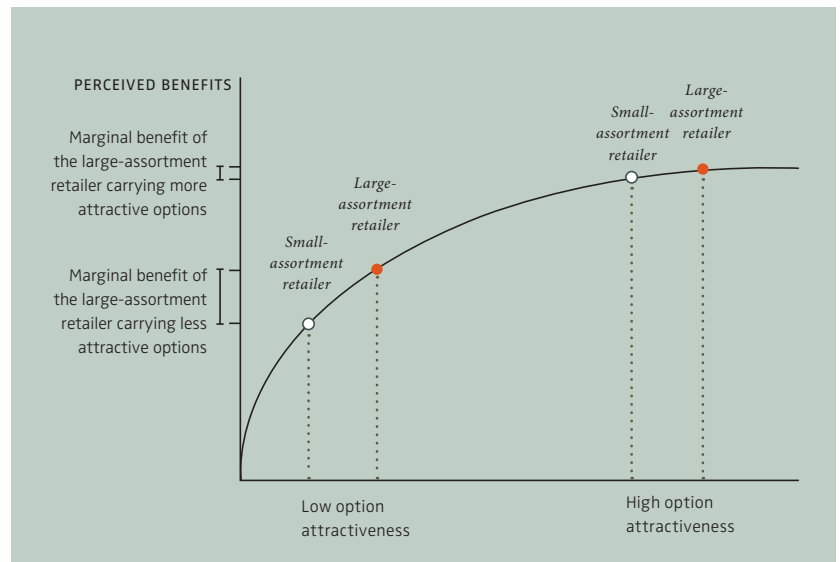
To illustrate, in one experiment, respondents had to choose between a small and a large assortment in the context of several product categories. To direct their focus to the difficulty of choosing from large assortments, some of the respondents were initially asked to select their most preferred option 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 who were not given the initial choice which highlighted the difficulty of the decision task. In particular, of the respondents who were not initially asked to make the "difficult" choice, only 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. 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 3 % of respondents 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 the 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 smaller agency increasing from 2 % to 34 %.

“Better” Options Can Benefit Smaller Assortments

Consumer preference for larger vs. smaller assortments also depends on the overall attractiveness of the options comprising these assortments. The basic finding is that as the attractiveness of the options increases, consumer preference for larger vs. smaller assortments tends to decrease. 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 having a corresponding effect on decision costs. As a result, when faced with assortments comprised of attractive options (e.g., assortments offered by retailers and manufacturers perceived to be of high quality, bestsellers or options tailored to a consumer’s prefer-



ences), the relative benefits of larger assortments are less evident. The logic of this argument is illustrated in Figure 2.

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. 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 in 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 increased to 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. In one study, consumers had to choose between small and large assortments in three different categories: data CDs, dating services, and vitamin water.

FIGURE 2:
The Relative Advantage of
Larger Assortments Decreases
when Assortments Comprise
Relatively Attractive Options

In the data CD scenario, participants had the option of purchasing from two retailers: one offering a selection of 6 brands and one offering a selection of 18 brands. In the dating service scenario, participants were given a choice of two options: one offering 8 potential date matches and one offering 24 matches. In the vitamin water scenario, participants could buy vitamin water from one of two local stores: one carrying 8 brands of vitamin water and one carrying 30 brands.

The attractiveness of the options in these assortments was varied by providing participants in the data CD scenario with the ratings of the options in each of the two stores. In the dating service scenario, participants were told that the potential date profiles were generated by matching either 20 personality dimensions or a single personality dimension. Finally, in the vitamin water choice, attractiveness was manipulated by varying the assortment choices by either the most popular, best-selling brands or only low-priced, economy brands.

The data in all product categories reflected a shift in preferences towards larger assortments from the low-quality sellers and smaller assortments from the higher quality sellers. Thus, when choosing from lower quality retailers, the majority of consumers preferred the larger assortment (68 % in the CD category, 78 % in the dating service category, and 65 % in the vitamin water category). When choosing from retailers carrying attractive options, however, the data pattern was reversed such that most of the respondents selected the smaller assortment (55 % in the CD category, 62 % in the dating service category, and 65 % in the vitamin water category).

Strategies for Managing Product Assortments

The discussion of the pros and cons of large and small assortments suggests several strategies for designing and managing product assortments. These strategies include:

- **Know your customers.** Selecting the optimal assortment size involves two important considerations: (1) knowing consumers' shopping goals and (2) knowing their expertise with the product category at hand.

a) Consumer goals. Because the potential disadvantages of large assortments are caused by the increased difficulty of choosing an option, removing the burden of having to make a choice also removes the drawbacks of large assortments. Thus, when consum-

ers' goal is to learn more about the available options as well as about their own preferences, larger assortments tend to be the better way to go. When, however, the goal is to choose a particular option (or options) other factors—such as the level of consumers' expertise—are at play.

b) Consumer expertise. The degree to which consumers have an articulated ideal point can make a big difference in their reaction to assortments that vary in size. Accordingly, "experts" are more likely to benefit (more likely to make a choice and have stronger preferences for the chosen option) when choosing from larger assortments, whereas "novices" are more likely to benefit from smaller assortments.

- **Set assortment size to facilitate choice.** Because their level of expertise influences consumers' reactions to product assortments, the optimal assortment size depends on whether a particular assortment targets "novice" or "expert" consumers.

a) Designing assortments for "novice" consumers. Consumers who are uncertain in their preferences are more likely to experience disutility from choice overload with larger assortments, ultimately feeling more comfortable with smaller assortments. For these customers, smaller assortments comprising relatively attractive items can lead to greater satisfaction with the chosen option compared to larger assortments. In this context, retailers will benefit from offering bestsellers or custom-selected items. This will 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. This approach works very well for PC users new to Apple products and is consistent with Apple's retail-store strategy of doubling its market share.

b) Designing assortments for "expert" consumers. Because the decision for "expert" consumers simply involves matching their existing preferences with the available options, choosing from large assortments does not involve much additional cognitive effort on their part than choosing from smaller assortments. As a result, consumers with an articulated ideal point typically benefit from larger assortments that enable them to easily locate their most preferred option.

> **Optimizing assortments to facilitate choice.** In addition to choosing how many and which options to carry, retailers can also facilitate consumer choice by streamlining the choice process. This approach includes:

a) Optimizing large assortments for “novice” consumers. In cases when retailers have no alternative but to offer larger assortments to “novice” consumers (e.g., because “experts” comprise a large share of its customers or when the diversity of the customer base calls for carrying a large variety of options), choice can be facilitated by optimizing the very task of choosing. One such strategy involves partitioning large assortments into smaller sub-assortments. For example, to simplify furniture choice for its customers, IKEA breaks down its retail space into separate room-size areas, effectively limiting the variety of options available to consumers at any given point in time. In the same vein, online retailers offering large assortments or customizable options (e.g., Dell) offer decision support tools that help consumers avoid the “variety shock” and figure out their preferences prior to making a choice.

b) Optimizing small assortments for “expert” consumers. A retailer offering a smaller assortment to consumers with articulated preferences can improve the probability that customers will make a choice from that assortment and increase their satisfaction with the selected option by optimizing the attractiveness of the available options. One obvious strategy to increase attractiveness is to tailor the options to the preferences of customers. A retailer could also increase the perceived variety of its offerings by making its assortments a bit less organized—a strategy based on the notion that disorganization increases the perceived variety of the available options thus making the assortment more appealing to those seeking greater variety.

When it comes to managing product assortments, offering more variety is not always the best option. Empirical research shows that in many cases smaller assortments can lead to greater likelihood of purchase, lower rate of returns, and more satisfied customers. To avoid potential drawbacks of large assortments, managers need to account for consumer goals and consumer expertise. Incorporating these two factors into the development of a product line strategy is essential for creating customer-centric assortments and achieving market success. •

FURTHER READING

Chernev, Alexander (2003), “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), pp. 170–83.

Chernev, Alexander (2003), “Product Assortment and Individual Decision Processes,” Journal of Personality and Social Psychology, 85 (1), pp. 151–162.

Chernev, Alexander (2006), “Decision Focus and Consumer Choice among Assortments,” Journal of Consumer Research, 33 (June), pp. 50–59.

Chernev, Alexander (2008), “The Role of Purchase Quantity in Assortment Choice: The Quantity-Matching Heuristic,” Journal of Marketing Research, 45 (April), pp.171–181.

Chernev, Alexander and Ryan Hamilton (2009), “Assortment Size and Option Attractiveness in Consumer Choice among Retailers,” Journal of Marketing Research, 46 (June), pp. 410–20.

Hamilton, Ryan and Alexander Chernev (2010), “Managing Product Assortments: Insights from Consumer Psychology,” in Kellogg on Marketing, 2nd ed. (Editors Alice Tybout and Bobby Calder). New York, NY: Wiley.

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