insight

Predictably Irrational Customers

Optimizing Choices for How People Really Buy, Not How We Think They Buy

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The Internet has a huge influence on consumer behavior worldwide. Millions of customers use the Web, as well as cell phones and in-store kiosks, to compare, contrast, and purchase products. Once a nascent "marketspace," the Internet is now an established shopping environment in which even the smallest features can cause shifts in buyer behavior.

In spite of the new opportunity arising from online channels, most companies do not test their e-commerce interfaces for revenue maximization. Those that do, often fail to leverage the science of behavioral economics, which documents how people really think, as opposed to how they are supposed to think (as suggested by rational economic theory). Companies that deploy behavioral economics to improve their e-commerce interfaces can garner short-term profits and long-term competitive advantage, because they are in a position to learn faster than their competition about what really works.

Diamond thanks Dan Ariely, the Alfred P. Sloan Professor of Behavioral Economics, Massachusetts Institute of Technology, for his contributions to this paper.

Diamond Partners Paul Blase, Anand Rao, and John Sviokla, and Senior Associate Eric Siegmann, also contributed to this report.

Executive Summary

Targeting consumers with behavioral economics principles clearly has wide-ranging impacts beyond online channels. The Internet, however, provides us with the necessary flexibility for testing purposes as well as the ability to mine an abundance of data. Once analyzed, the results can be scaled to optimize online marketing efforts and also be cascaded through brick-and-mortar storefronts and other channels.

Based on our marketing and e-commerce project experience, and our partnership with Prof. Dan Ariely, a highly respected behavioral economist from MIT and a Diamond Fellow, we believe firms can begin to drive up conversion rates by designing and testing new models fast and frequently (Figure 1).

Simple factors can have profound impact on success rates. In Europe, countries that had an "opt-out" organ donor strategy saw a seven-fold increase in donor participation; firms that offered fewer 401(k) investment options radically improved participation in retirement plans; a magazine that framed purchase choice with three options rather than two more than doubled the uptake of the pricier—and more profitable—option. Details matter. It is necessary to employ a scientific approach to truly know what to offer: If you don't test your strategy, you won't learn what really works.

While companies continue to spend heavily on online marketing and sales, online shopping cart abandonment rates remain high and conversion rates remain low. One reason for this is that few companies carefully address all the subtle levers in the sales cycle—from offer presentation through order execution—that can influence consumer purchase behavior. As a result, consumers often face a confusing array of product combinations and uncertainty around the online purchase process, causing them to turn to higher-cost channels, migrate to a competitor, or delay the purchase entirely.

Valuable insights into consumers' decision-making behavior can be gained from the field of behavioral economics. Behavioral economics brings together insights from psychology and economics, as they relate to human judgment and decision-making. The central premise is that when confronted with limited resources (e.g., ability, time, information), human beings are not "rational" and do not make the same economic decisions as if complete and certain information were available.

In collaboration with Prof. Ariely and through independent research, our findings have led us to propose a set of ideas and an approach to apply behavioral economics principles to improve online marketing. We refer to the use of behavioral economics to improve online marketing and sales as "Choice Optimization."

Measuring Value Through a Structured Testing Approach

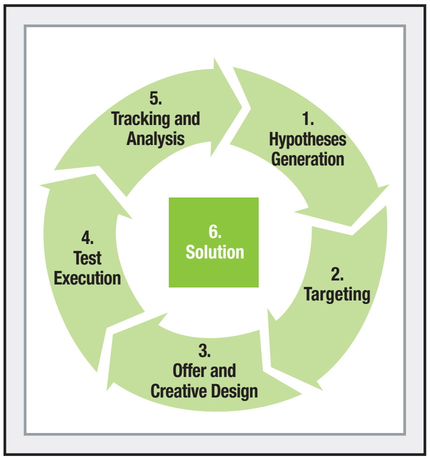

Figure 1

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Key Behavioral Economics Principles

The field of behavioral economics addresses how consumers use heuristics, or personal rules, to assist their decision-making process. It further examines how heuristics combine with alternatives in information presentation to affect the ultimate choices of consumers. An online marketing strategy that maximizes consumers' willingness to buy will carefully consider how consumers approach the decision-making process. Further, understanding how the framing and placement of products influence that process allows companies to tailor their strategies to reap the most benefits.

The three key behavioral economics principles that should inform any online marketing strategy are purchase paralysis, risk aversion, and framing.

1. Purchase Paralysis

When consumers are offered an exhaustive variety of options, they are often paralyzed by their inability to choose. If they ultimately choose one of the options, they will be left less satisfied with their selection relative to the others (Schwartz, 2004). Causes of purchase paralysis include:

- Regret. Too many choices might cause consumers to regret or anticipate regret for the possibility of having made the wrong choice.
- Opportunity Cost. It is difficult for consumers to assess trade-offs between what would be received and foregone.
- Escalation of Expectations. Comparing options relative to each other increases expectations, which can raise doubt that the choice was correct post-purchase.
- Blame. Consumers will blame themselves and retailers for errors in judgment and selection.

When deciding on the number and variety of products to offer consumers, companies must optimize the number of available choices to encourage browsing and purchasing, and to minimize consumer regret that could damage the brand.

2. Risk Aversion

Consumers tend to think differently about benefits and disadvantages when considering alternatives. Using mental accounting, they keep track of and evaluate transactions individually. They also tend to assess specific risks in isolation, rather than consider the broader perspective of overall or long-term gains (Rabin, 2001).

- Mental Budgets. Consumers behave differently with respect to money that is allocated to accounts (e.g., savings for a car). Once consumers mentally allocate money to such accounts, it is no longer "free" for consumption.
- Risk Transfer. People are willing to pay premiums to insure themselves from risk and uncertain outcomes.
- Likelihood. Consumers often have a difficult time assessing risk. They tend to purchase warranties to protect against long-shot failures while underestimating the likelihood of near-certainties.
- Happiness. Segregating windfalls (e.g., annuities) and pooling setbacks (e.g., credit card balances) minimizes unhappiness and maximizes happiness.

To compensate for this behavior, companies must help lower the risk associated with consumers giving up what they have in exchange for the product being sold.

3. Framing

People draw inferences about a decision based on the way they frame the question or their response to it. They also evaluate options on relative rather than absolute terms. The implication is that framing comparisons can influence purchase decisions. Thus, configuring product or service offerings online can guide a consumer's current and future perception and decisions. Actual reversals of preference are demonstrated in choices regarding money, both hypothetical and real, and in questions pertaining to chance (Tversky, 1981).

For example:

- Faulty Discounting. Customers are impatient with decisions that involve benefits received in the future. This leads to inconsistent and often incorrect discounting of the future benefits. Instead, they prefer to be presented with near-term savings, even if long-term benefits are considerably more valuable.
- Loss Aversion. Consumers tend to prefer gains over losses, even if the values of the gain and loss are equal.
- Irrelevant Benchmarks. Consumers' perceptions of a product can be influenced by providing comparisons to more expensive or premium-priced products.
- Priming. Consumers remember an item best in the form and context in which they first learned about it. This can be shaped through advertising and product placement.

Companies can improve acceptance and purchase rates by carefully designing product value propositions that focus on the product's immediate benefits. Adding frames of reference also helps consumers understand the relative value of the product, and shapes consumer perceptions of the product.

Current State of Online Marketing

Behavioral economics is concerned with the ways in which the actual decision-making process influences decisions that are made in practice.

Online channels continue to grow in importance. Sales through online channels accounted for almost 3% of overall sales in 2006, and this rate is growing at more than 25 percent annually (Figure 2). Forrester Research estimates that almost $400 billion of store sales—or 16 percent of total retail sales—are directly influenced by the Web, as consumers research products online and purchase them offline (Forrester Research, Inc., *The Web's Impact on In-Store Sales*, May 2007).

These "cross-channel" shoppers migrate from online channels for several reasons, including:

- Desire for immediate gratification
- Need to physically inspect or try on the item before buying
- Concern about online security and identity theft

These will likely remain significant factors, but over the next five years, the value of retail sales influenced by the Web will increase by 63 percent, and cross-channel sales will experience a 17% CAGR to over $1 trillion in 2012 (Figure 3).

As this market grows, companies continue to spend significantly on improving the functionality and effectiveness of their Web sites. More than half of large companies are increasing their Web site operations budgets by more than 5 percent annually (Figure 4). Increasing usability, strengthening customer satisfaction, and demonstrating ROI are among the top five challenges these companies report.

Despite all this investment, a significant gap exists between the share of consumers who want to shop online and those who actually follow through with purchases. The percentage of customers who click through a site all the way to conversion remains steady at 3 percent, and e-commerce shopping cart abandonment rates range between 15 percent and 90 percent, with an average of 60 percent (Brinker, 2007; Baxter, 2007).

The keys to improving the success rate of these investments are: 1) employ a rigorous approach to designing product presentation and the end-to-end purchase process, and 2) evaluate and refine product offers over time. Unfortunately, today we see a daunting and loosely connected array of offers from companies that are not consistently applying controlled tests to their offers or the purchase process.

E-Commerce Sales as a Percentage of Total Sales

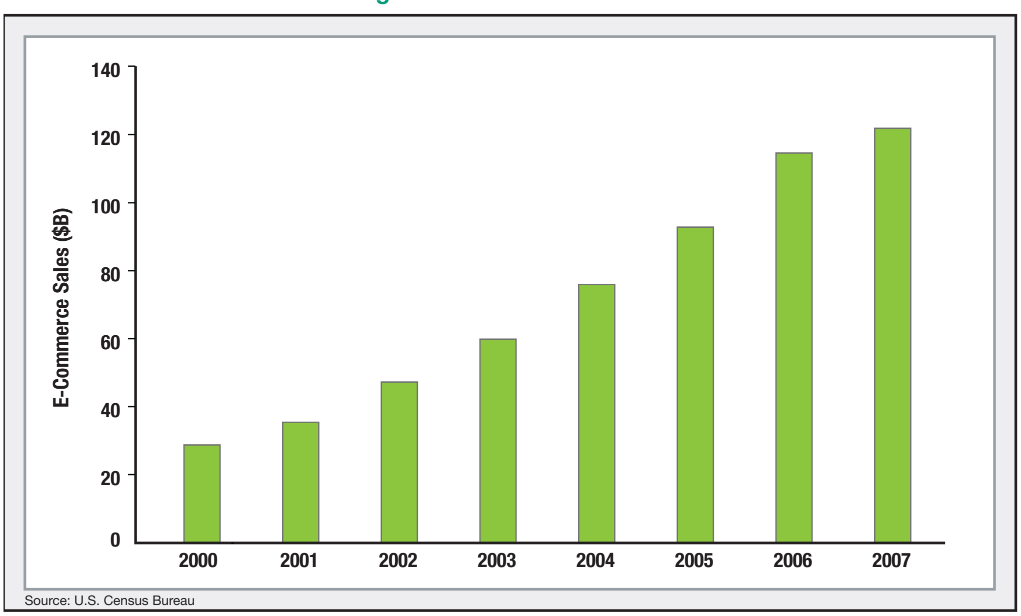
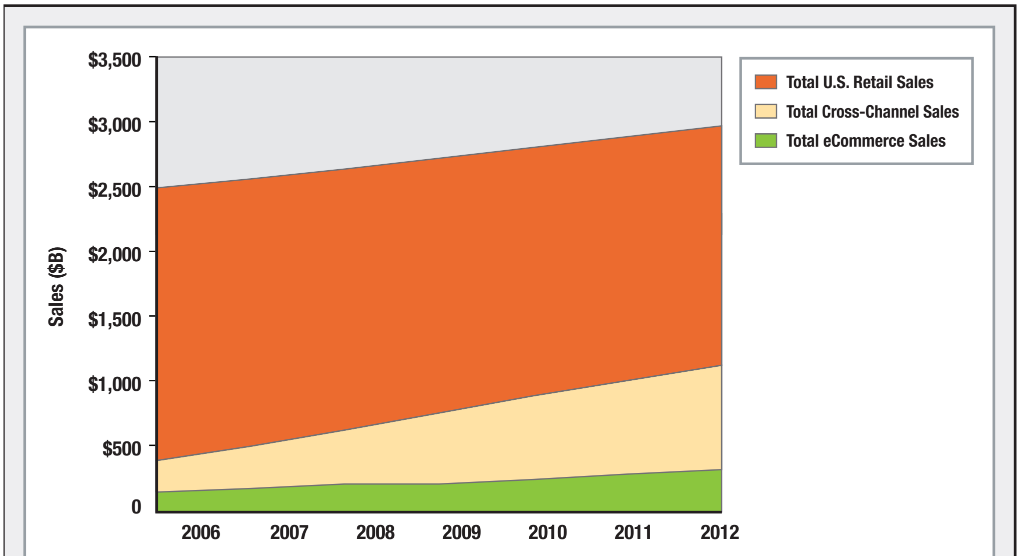


Figure 2

We believe companies can increase the effectiveness of their online marketing efforts and sales channels by applying behavioral economics concepts. Behavioral economics provides insight into how the decision-making process influences the decisions consumers make. Traditional economics suggests that consumers make rational, consistent choices to obtain products or services that best meet their needs at the least possible cost. This suggests presenting consumers with a wide range of choices increases their chances of obtaining this goal. In reality, however, too much choice can become a barrier in the consumer's decision-making process, along with other obstacles such as increased complexity, uncertainty, and limited information around a selection's future value.

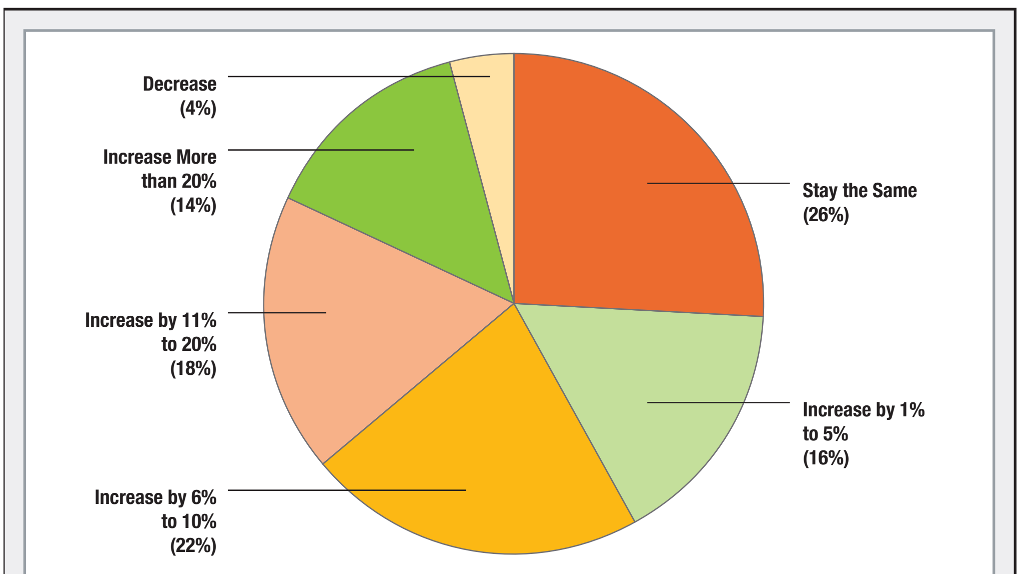
Forecast: U.S. Cross-Channel Sales, 2006–2012



Source: Forrester Research, Inc., *The Web's Impact on In-Store Sales*, 2007

Figure 3

Change in Site Operations Budgets from 2006 to 2007



Source: JupiterResearch, *Web Site Spending*, 2007

Figure 4

Common Pitfalls Companies Encounter

Choice Optimization is the application of behavioral economics principles in online marketing to simplify the decision-making process and increase conversion rates.

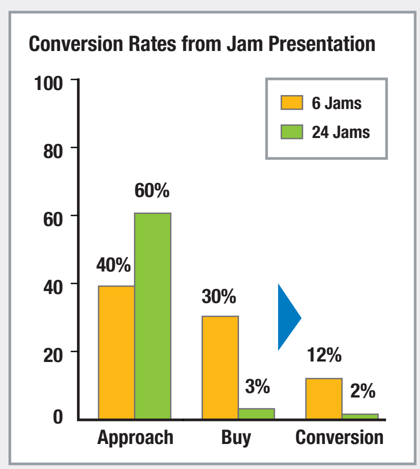
Companies can drive higher conversion rates by applying Choice Optimization. But before tapping into these strategies, companies need to understand how offers might negatively impact consumers. We believe there are three main reasons for suboptimal online sales performance:

1. **Too many choices.** If an e-commerce site requires that customers choose between a myriad of product options or configurations, customers might fail to complete the decision process. Adding options also increases the risk that consumers will regret their purchases or have unreasonably high expectations about the value of their purchases.

   Research has found that increasing the number of mutual funds available to employees in their 401(k) plans can result in lower participation rates. One employer found that for every 10 mutual funds included in its program, participation dropped 2 percent, even though opting out of the plan meant passing up the opportunity to receive up to $5,000 in employer matching funds (Schwartz, 2004). In another study, researchers set up tables in an upscale grocery store that featured a line of exotic jams. Consumers who stopped could taste samples and they received a $1 coupon if they bought a jar. Consumers were presented with either six or 24 jam varieties. When 24 varieties were available, more people stopped at the table than when six were available, but only 3 percent of people examining the 24 varieties made a purchase, compared with 30 percent of those exposed to the six varieties (Figure 5). The researchers concluded that an extensive array of options can be appealing at first glance, but a wide variety also can subsequently reduce consumers' motivation to purchase the product (Iyengar, 2000). These studies imply that companies can determine an ideal number of choices that will optimize the behavior of certain segments, and we believe these core concepts can be applied effectively to online marketing.

   To examine the impact of choice on product satisfaction, researchers conducted a study where participants selected from either a limited assortment or an extensive array of chocolates. Participants then sampled their selections and were given the option to receive cash compensation or an equivalent value of the chocolate they chose. Participants with the extensive array found the decision-making process more enjoyable than those with the limited array, but were later more dissatisfied and regretful of their choice and were considerably less likely to choose chocolates over money as compensation. (Iyengar, 2000). Having a greater number of options to choose from ultimately forced these consumers to abandon the product altogether.

Too much choice leads to purchase paralysis



Source: Iyengar, 2000; Diamond analysis

Figure 5

2. Process uncertainty. Customers may be dissuaded from completing a transaction if a Web site does not clearly help them place an order, determine when they will receive it, understand when and how much they will be billed, or feel that their information is secure.

   The average e-commerce shopping cart abandonment rate is around 60 percent. Of this figure, 48 percent of carts are abandoned during the checkout process. Many of the factors contributing to abandonment are related to uncertainty in the process, including hidden charges at the checkout, lack of clear delivery details, and discomfort with the buying process (Baxter, 2007).

   To reduce uncertainty, companies can add cues within the checkout process that guide customers through the process. For example, Esurance, an insurance company with a heavy online presence, developed a simple, three-step process to purchase insurance, and adopted it as their slogan ("Quote. Buy. Print."). This process is prominently displayed as the consumer progresses from obtaining a quote to printing a policy, providing a simple visual cue as to progress through the transaction. Additionally, companies such as Dell and Amazon provide estimated shipment and delivery dates throughout the process to properly set consumer expectations.

   The risks of credit card theft and identity theft also deter some customers from completing online purchases. Among consumers who have never shopped online, the top reason they cite for not doing so is the fear of providing their financial information online. Among consumers who have shopped online, 17 percent have stopped buying online altogether because of fears of identity theft (Forrester Research, Inc., *Checkout Tools That Boost eBusiness*, January 2007).

   Companies are starting to incorporate tools to make the purchase process more predictable and secure. Google Checkout, for example, integrates with merchant Web sites, allowing customers to use their Google accounts to complete a purchase instead of creating a separate account at each merchant. Other companies are letting consumers use PayPal in addition to credit and debit cards. Offering a third-party payment mechanism with built-in security features and consumer familiarity reduces risk and uncertainty in the purchase process.

3. Faulty discounting. If a Web site over-emphasizes the long-term benefits of a product relative to its short-term appeal, consumers might be dissuaded from purchasing because they tend to incorrectly and inconsistently discount future benefits. Consumers value current over future consumption, even when that future consumption is considerably more valuable.

   In one study, the subjects were told that they had won $15 in a lottery and that they could take the money now or wait until later. Participants were asked how much they would require to make waiting just as attractive as getting the money now. The median responses were $20 in one month, $50 in one year, and $100 in 10 years. These figures imply a compound discount rate of 345% over the one-month period, 120% over the one-year period, and 19% over the 10-year period (Thaler, 1981). The large discount rate seen in the short-term periods illustrates consumers' preferences for short-term gains.

   Offers of short-term gains can also influence consumers into buying products. For example, Amazon.com offers free shipping on orders over $25, which may encourage consumers to buy more than they intended to order to meet the threshold for free shipping. In a July 25, 2006, press release, Amazon reaffirmed this strategy, citing the free shipping offers "as an effective worldwide marketing tool" that the company intends to continue offer indefinitely.

Each of these three factors represents an area of increased risk for not acquiring potential online customers. Ignoring these factors has serious consequences:

- Lost or delayed sales due to consumer indecisiveness or anxiety;
- Migration to higher-cost channels due to customer impatience or uncertainty; and
- Inconsistent expectations of the product's future value which may lead to increased downstream support, churn, and damage to the brand.

Companies with Complex Products at Risk

Companies in several key industries are vulnerable to these risks, due to the complexity and breadth of their product and service offerings:

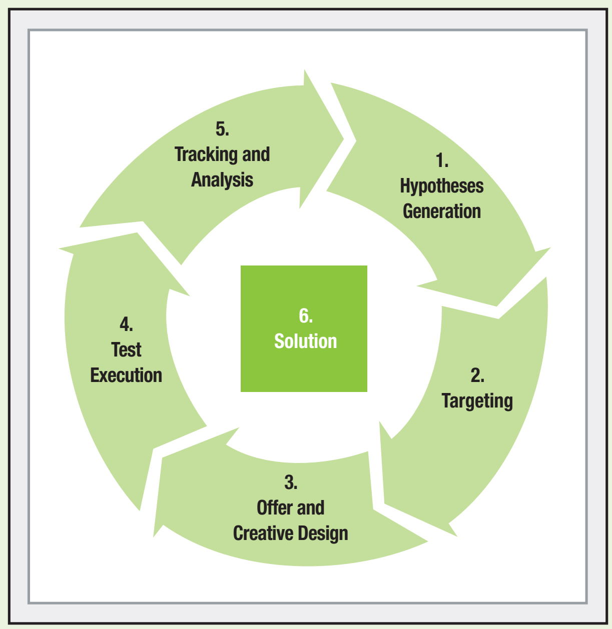
- Wireless Carriers. Wireless companies are offering a wider variety of handsets (e.g., clamshell, candy bar, camera, 3G, smart phones) along with an array of voice and data plans (e.g., local, national, 3G data) and additional services (e.g., text and picture messaging). Many of these options also have variants, including handset color; inclusion of a camera; and number of allowable minutes, messages, or kilobytes of data per month. When choosing a plan, Web sites do not effectively segment customers or provide historical usage data that might be available from a representative in the store or on the customer support line. Potential areas of segmentation could include average minutes per month, roaming patterns, and international calls.

- **Cable and Internet Providers.** Cable and high-speed Internet providers are cross-selling tiers of core products along with telephone service, packaging them into bundles to save customers money. However, each of these products has a number of variants, including a wide range of premium channels and Internet connection speeds. This diversity of choice places a large burden on consumers to research and find the ideal plan.
- **Financial Services Firms.** Credit card companies offer a complex array of services, including cards linked to checking accounts, cards with branded rewards, and cards with unique payment options. To prevent the risk of overwhelming customers with options, many companies leverage self-segmentation questioning to narrow the list of choices.
- **Insurance Companies.** Insurance policies are based on a complex set of factors (e.g., the item being insured, the coverage levels sought, and the discounts for which the insured is eligible). Many companies allow consumers to obtain rate quotes online, but there are many options from which to select. The initial quote is generally based on a default set of coverage options and discounts, but it is left to consumers to adjust coverage based on their preferences.

Testing Online Marketing Efforts for Maximum Impact

Diamond uses the following structured testing approach to generate insights, provide value, and improve customer profitability:

1. **Hypotheses Generation.** Review background data to develop hypotheses around the types of offers desired by each segment. Leverage segmentation schemes to ensure targeting of the right customers.
2. **Targeting.** Identify the targeting criteria based on hypotheses. Determine to whom and to which channel the offer will be presented. Size both target and control groups.
3. **Offer and Creative Design.** Develop a compelling offer based on hypotheses, channels, and segments.
4. **Test Execution.** Test multiple options at the same time, using a multivariate test design, and execute the marketing campaign.
5. **Tracking & Analysis.** Analyze offer effectiveness by collecting responder data. Calculate response rates for target and control cells and evaluate the test economics to decide whether the test offer should be rolled out or not. Finally, gather learnings from the test cycle to refine hypotheses.
6. **Solution.** Roll out successful offers to the broader population. This new offer becomes the control for future campaigns.



Applying Behavioral Economic Concepts Online

The application of seemingly subtle presentation factors can significantly affect conversion rates.

Research in behavioral economics has shown that conversion rates can be affected by seemingly subtle presentation factors. For example, an online publisher tested two offers on its Web site. The first offered "7 Days Free," and the second "7 Days Risk-Free." The words "Free" and "Risk-Free" were bolded to highlight the key benefit, and the second example resulted in a 12 percent higher conversion rate than the first option. In a separate experiment, the same publisher tested two different page layouts, the first containing two columns of text and the second containing only one. Simplifying the layout by combining two columns of text into one produced an 88 percent improvement in conversion rates (McGlaughlin, 2006).

Based on our work with Prof. Ariely, as well as our own research, we believe there are three specific ways companies can use core behavioral economics principles to improve online sales:

1. Choice Filter. Offering customers excessive options can overwhelm them with a fear of making the wrong choice, or cause them to anticipate regret, which can lead to postponing a purchase. The ability to properly filter through an exhaustive list of products or services can help consumers complete the purchase process. Companies can provide collaborative, explicit, or implicit filters—either individually or in combination—to help customers narrow their choices.

   - Collaborative filtering examines the preferences of many users to make predictions about the interests of any one user. Web sites such as Amazon and Netflix use this technique to make recommendations to their users. The relevance of recommendations can vary, but they tend to improve the collection of larger amounts of data. These techniques are good for categories with large numbers of products (e.g., books, music) because a single person cannot view all of the items. But results also must be filtered to prevent recommending items that the consumer has already purchased. Netflix employs a collaborative filtering approach that leverages user ratings, movie genre frequency, and cross-sell likelihood. As a result, the online movie rental service is able to quickly filter through thousands of movie titles to show consumers one title they can have collaborative faith in renting.

   - Explicit filtering (also known as "self-segmentation") requires consumers to select or rate their preferences in order to narrow the number of options presented. Citibank and U.S. Bank allow customers to self-segment by identifying the credit card features most important to them. U.S. Bank asks its customers to select up to seven key features (e.g., traditional cards, student cards, travel or cash rewards), in order to present them with cards that match those preferences. Since this data directly reflects consumer choices, it can be especially useful in understanding their preferences. However, since providing this information requires consumers to expend effort, companies often have less data than what they desire. In addition, this process indicates to customers that there are additional options available to which they are not being exposed. Also, explicit filtering still introduces the risk of regret.

   - Implicit filtering involves identifying consumer preferences based on their actions (e.g., items viewed or purchased), or on the demographic information they provide. Data on items viewed and purchased during a session gives insight into preferences, and information such as customer billing zip codes can be matched to databases from vendors such as Claritas and Acxiom to obtain socioeconomic characteristics. For the most part, data collection is automatic and largely independent from the consumer,

Companies across industries can benefit from applying behavioral economics principles to their online sales channels.

A Sampling of How Behavioral Economics Principles Can Impact Consumers			
Industry	**Too Many Choices**	**Process Uncertainty**	**Faulty Discounting**
Wireless	1,900 Combinations[1]	• A four-step process is presented to choose a phone and plan followed by a separate four-step process to complete the purchase. *Presenting one process to guide the consumer through the full transaction would reduce uncertainty about next steps.* • The activation fee is described in small print at the bottom of the page, where customers might not see it. *Displaying the fee more clearly as part of "one-time charges" helps avoid surprises.*	• A trial period allows customers to cancel within a few weeks, but they must pay service charges. *A shorter, risk-free trial period might attract more customers because it could reduce current consumption in favor of long-term benefits.* • Free 2–4 day shipping is offered for online purchases, forcing customers to delay benefits. *Free overnight shipping reduces the delay before benefits are realized and might avoid delayed decisions or migration to a higher-cost sales channel.*
Cable	64 Combinations[2]	• The site indicates that a limited package selection is available online, but full range is available via phone. *Customers are likely to call Customer Service, a higher-cost sales channel, to understand all options.*	• Savings resulting from choosing a package instead of individual services are not consistently indicated. *Displaying the specific savings will lead customers to focus on the product's near-term value.*
Credit Cards	34 Unique Options[3]	• Sites do not contain a timeline to help customers understand their progress through the application process. *Including timing elements helps customers reduce uncertainty about next steps.*	• The annual fee to earn rewards in effect promises customers future rewards in exchange for current consumption. *Customers may incorrectly value the benefits received over time.*
Insurance	65 Combinations[4]	• Sites do not contain timing elements to help customers understand their progress toward obtaining an online quote. *Including details about timing helps reduce customers' uncertainty about next steps.*	• Many companies add a service charge for the option to pay premiums monthly. *Framing this fee instead as a discount for payment in full helps customers realize the near-term value of their choice, instead of having to value it into the future.*

[1] Examination of a national wireless carrier's consumer Web site revealed 41 handset models available for purchase (excluding color variations), eight plan types with six levels of minutes within each. Total number of phone/plan combinations available is 1,968 (41 x 8 x 6).

[2] Examination of services available from a national cable provider's Web site revealed seven choices for cable service, three for Internet, and one for phone. Consumers have the option of only choosing one or two of the services (e.g., cable and Internet, cable and phone, Internet and phone), so each category also has an "opt-out" option. Total number of combinations available is 64 (8 x 4 x 2).

[3] Examination of consumer cards available on a major carrier's Web site revealed 34 unique options.

[4] Examination of options required to obtain an auto insurance quote on a national carrier's Web site revealed that consumers must choose coverage levels within 10 categories, along with up to nine discounts for which they are eligible. Each of the 10 coverage categories (e.g., property damage, collision deductible) contains between two and nine coverage levels (e.g.,$25–50, $500–1000), for a total of 56 combinations. The nine discounts offered a "Yes/No" option. Total coverage/discount combinations is 65 (56 + 9).

meaning that much more data is available. Behavioral data, however, does not necessarily provide an accurate representation of a user's true opinion of an item. For example, some purchases will be given as gifts and do not necessarily reflect the consumer's own preferences. Companies such as Best Buy and Target use both types of implicit filtering through a consumer's account information, viewing history, and purchase history. By using algorithms, these retailers then present the customer with better-defined product or service options.

2. **Risk.** In theory, people are willing to pay a premium to avoid risk. Eliminating any perceived risks in the purchase process can help increase consumer conversion rates.

    - Process risk is introduced when consumers do not understand the steps in the purchase process, such as when their items will be shipped, or when their credit cards will be charged. Hewlett-Packard helps eliminate process risk by presenting a clear purchase process, providing estimated shipping and delivery dates, telling the consumer when their credit card will be charged, and allowing the customer to click on a previous step in the process to review or revise the information they provided.

    - Price risk arises when consumers delay or forgo a purchase because they think that a better price might be available from another retailer or channel. Bed Bath and Beyond has significantly reduced price risk for its customers through the use of price matching. Consumers feel they are getting the lowest price available since the retailer advertises the price matching policy. Other companies, such as Progressive Insurance and Buy.com, display prices of the same or comparable products at other companies to help consumers choose to buy their products.

    - Satisfaction risk often results when consumers are faced with too many choices. For many consumers, examining a wider array of product options raises their expectations because they search for a product that contains many of the most desired attributes. This also increases the chance that consumers will regret their ultimate choice because another option might have better met their needs. Verizon Wireless reduces this risk by offering a 30-day return policy. When the fear of satisfaction is a deal-breaker in completing the purchase of a phone and plan, consumers can feel reassured that they have 30 days to return the phone and cancel their contract at limited or no cost.

3. **Framing.** The way in which choices are presented can influence a consumer's decision to purchase a product. Effective frames give consumers points of reference to understand the relative value of a product compared to alternatives. Understanding the impact of framing can help companies cross-sell, up-sell, or steer customers toward more profitable options.

    - Relative framing highlights the positive value of a decision compared with an alternative. *The Economist* magazine once offered three subscription options on its Web site:

        1. Online Only for $59
        2. Print Only for $125
        3. Online and Print for $125

      Sixteen percent of customers chose the "Online Only" option and 84 percent selected the "Online and Print" option. No customer chose the "Print Only" option, so the company removed it. However, when only two choices were presented ("Online Only" and "Online and Print," at $59 and $125, respectively), the number of customers choosing the lower-priced "Online Only" product increased to 68 percent, while the percentage of subscribers choosing "Online and Print" dropped to 32 percent. While no one chose the "Print Only" option, having it available made the more expensive "Online and Print" option appear to be a bargain, and this drove a higher percentage of customers to select it. Amazon.com effectively cross-sells additional products to consumers by highlighting the remaining amount of a balance required for free shipping. The relative framing of additional purchases as savings in shipping costs helps consumers overcome the reality of a higher total price after additional items are added.

    - Constructed framing allows companies to position a preferred product for maximum exposure. For example, T-Mobile strategically highlights one of its most popular plans in a list of other options. While the highlighted plan is not the most expensive, its price is above the average. Emphasizing this plan begins to set customer expectations about cost. By steering the consumer selection this way, the carrier is positioned to sell a more expensive plan than it might have sold without constructed framing.

    - Priming allows companies to make consumers more receptive to their products by creating associations with items that consumers value. Fidelity's Web site allows consumers free access to tools for financial planning and investment research. As consumers use these tools, they increasingly get the impression that Fidelity has a wealth of knowledge and would make the financial planning experience easy.

Getting Started

Applying behavioral economics principles to improve online marketing and sales requires companies to take a careful look at where they currently stand. It also requires creative thinking about applying the principles, and a rigorous process to test and measure their impact (Figure 6).

1. **Define the Focus.** Commercial Web sites typically have multiple purposes, including consumer education, prospect development, lifecycle management (acquisition, stimulation, cross-sell, up-sell, retention, winback), and self-service. Key consumer decision points will vary across companies and industries, and each company has its own pain points. Choice Optimization efforts should focus on areas likely to produce a high return on investment. For example, consumers visit a car company's Web site primarily to learn about a car before buying one at a dealer. The focus here should be providing a rich, targeted education on features, options, and pricing, then helping the customer find a dealer. On the other hand, consumers who visit Amazon.com are more likely to complete an online purchase, so the focus should be on helping customers narrow down their options and quickly complete the purchase.

2. **Establish Baseline and Improvement Targets.** Establishing a baseline is crucial for identifying areas where behavioral economics principles can have the most impact, for preparing a convincing business case, and for measuring the effectiveness of improvements. Useful baseline metrics for defining and measuring the progress of improvements to online sales channels include the following:

   - Number of available product combinations;
   - Number of clicks to purchase;
   - Cart-abandonment rate;
   - Number of steps completed before abandonment;
   - Conversion rates;
   - Customer satisfaction scores; and
   - Cost per transaction.

   As choice optimization efforts are being implemented, monitoring progress against the baseline helps determine whether the efforts are truly improving processes. Tools that track Web site activity, such as Omniture and Google Analytics, can also be useful in identifying pain points in the purchase process, including the stage at which customers abandon their carts.

3. **Identify and Prioritize Improvement Opportunities.** One of the most effective ways to determine where behavioral economics principles can deliver superior results is to examine the process from the consumer perspective. Documenting the processes used by customers in searching for product information uncovers opportunities for improvement. Such opportunities may include framing options

Diamond's Choice Optimization Approach

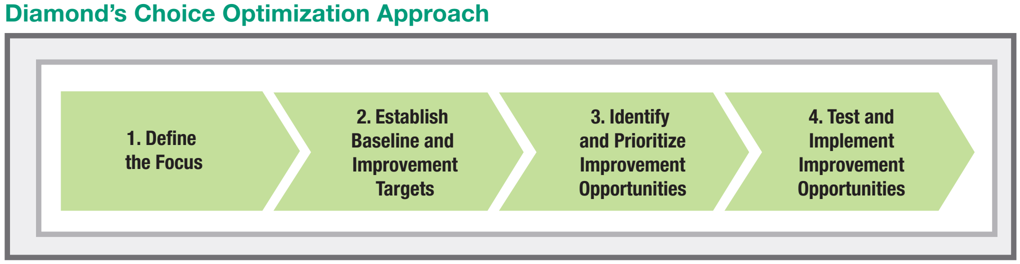


Figure 6

more strategically, articulating next steps more clearly, or eliminating underperforming choices. Further hypotheses can come from brainstorming workshops, root-cause analysis of Web data, customer surveys, and industry research. Quantifying and prioritizing the costs and benefits of each improvement maintains the focus of the Choice Optimization efforts.

4. Test and Implement Improvement Opportunities. Continuous hypothesis-based testing, in which multiple versions of an offer are tested using statistical techniques, improves profitability by allowing companies to choose the offers with the highest success rates. Using an approach to segment customers and analyze offers, such as the one outlined in "Testing Online Marketing Efforts for Maximum Impact" on page 8, helps deliver the right products to the right customers. This works because it teaches companies to understand the profit drivers for each segment, identify characteristics of effective offers within each segment, and document lessons learned that can be applied to the development of future offers.

Conclusion

Incorporating key elements of the consumer decision-making process into the development of an online sales and marketing strategy can help maximize the effectiveness of that strategy. Specifically, companies must:

1. Optimize the number of choices available to encourage browsing and purchasing, and to minimize customer regret.
2. Help lower the risk consumers associate with completing an online transaction.
3. Focus more heavily on their products' immediate benefits (and discount future benefits to compensate for consumers' inability to correctly value them).

Choice Optimization applies these behavioral economics principles to improve product framing with the goal of positively influencing consumer decisions for improved online marketing.

Additional Diamond insights on behavioral economics and marketing are available at www.diamondconsultants.com:

"Behavioral Economics Comes to the Rescue of Retirement Savings," 2007

"Rapid Market Segmentation: Collaborate and Conquer," 2007

"Word-of-Mouth Marketing: How to Harness the Power of Consumer Influence," 2007

"Curing Customer Churn," 2006

The following papers provide good insight into key behavioral economics principles and their application:

"Placebo Effects of Marketing Actions: Consumers May Get What they Pay For." Dan Ariely et al, 2005.

"Amazon.com Recommendations. Item-to-Item Collaborative Filtering." Greg Linden et al, 2003.

"The Paradox of Choice: Why More is Less." Barry Schwartz, 2005.

"The Winner's Curse." Richard Thaler, 1994.

"Why the Soy Milk King Still Reigns." G. Pascal Zachary, 2004.

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Diamond Partners **Paul Blase, Anand Rao,** and **John Sviokla,** and Senior Associate **Eric Siegmann,** also contributed to this report.

Diamond thanks **Dan Ariely** for the title of this paper, also the title of his upcoming book on behavioral economics.

About Diamond

Diamond (NASDAQ: DTPI) is a premier global management consulting firm that helps leading organizations develop and implement growth strategies, improve operations, and capitalize on technology. Mobilizing multidisciplinary teams from our highly skilled strategy, technology, and operations professionals worldwide, Diamond works collaboratively with clients, unleashing the power within their own organizations to achieve sustainable business advantage. To learn more visit www.diamondconsultants.com.

Diamond has extensive experience in helping clients improve customer profitability by implementing marketing strategies, retention campaigns, and loyalty programs. We generate value for our clients by integrating disparate data, identifying opportunities for profitability improvement based on customer-level analysis, and using the results to optimize marketing campaigns and enable real-time decision making.

To assist in these efforts, Diamond has created an Information and Analytics center of excellence (www.diamondconsultants.com/dias) that provides fast, insightful analysis of complex marketing and operational issues, where intelligent use of data holds the key to better decisions and actions.

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