Today’s retailers need to adopt a data-driven view — with the goal of understanding how website features and advances in AI will affect consumer behavior.
Avoid These Five Digital Retailing Mistakes

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Today’s retailers need to adopt a data-driven view — with the goal of understanding how website features and advances in AI will affect consumer behavior.

We researched the effects of web technologies on a retailer’s critical performance metrics such as sales and returns. To study these effects, we needed to measure consumers’ actual web technology usage and match it with their transactions. Toward this end, we partnered with a women’s clothing retailer that has a large online presence and offers the type of web technologies that consumers typically encounter in e-commerce. Overall, we studied 7 million purchases made by approximately 1 million unique customers of this medium-size company over three years, and focused primarily on two months’ worth of data, consisting of 183,000 transactions and 52 million lines of server logs that tracked consumers’ web activities. Detailed findings from our research were published in the academic journals Management Science and Information Systems Research.

Our findings suggest that managers should encourage consumers to embrace innovative technology features like different types of web technologies, personal assistants, and apps, because such usage is generally associated with a higher level of sales. But our research also indicates that it’s critical for retailers to take steps to avoid five common digital retailing mistakes.

**Mistake 1: Letting a Consumer Get Lost in a Sea of Products** When consumers do generic searches on the web, a retailer should not just present a large set of...
products to them. Rather, the company should guide the consumer through a process to narrow the search results. This is important because a large set of potential options can confuse consumers and lead them to abandon the purchase process.

Some companies already do this. For example, Nordstrom Inc. has “Nordstrom Style Boards” enabling store salespeople (called stylists) to offer product recommendations to customers via the internet, and J. Crew’s website offers the “Very Personal Stylist,” a service that gives customers a way to connect with a personal shopper 24/7. But for many companies, significant improvements are still needed in this area. In the near future, shopping assistants driven by artificial intelligence (AI) should help deliver those improvements.

**Mistake 2: Recommending Only Popular Products**

Amazon.com Inc.’s recommendation system (for example, “Customers Who Viewed This Item Also Viewed”) is an example of how website features can be used to steer sales. Our research found that a recommendation system can increase sales by more than 5.5%. This is because it lets consumers learn about products in unprecedented ways.

Recommendation systems enhance sales of both popular, well-known products and products that are not so well-known yet. However, our research found that their effect is more prominent for the latter group of products. Popular products typically have a higher sales volume and a lower margin because of competition, whereas less-known products are likely to command a higher margin.

Therefore, retailers should carefully choose a mix of both types of products in their recommendations. Similarly, a retailer should not just promote popular products to consumers who are using the store app. Starbucks Corp.’s Digital Flywheel — which is an AI-driven recommendation engine that goes beyond just simplifying a customer’s favorite order — is, not surprisingly, utilizing consumers’ prior transaction history and other types of digital traces left by them.

**Mistake 3: Fostering Unrealistic Customer Expectations**

While collecting information on a product online, consumers typically gain two types of intel: factual and impression-based. Factual information relates to concrete facts, whereas impression-based information is the perception one forms by looking at a product. For example, when collecting information about a dress, details like what the fabric is made of and how the buttons are sewed offer factual information. On the other hand, the customer’s perception about the dress based on looking at a model wearing it is predominantly impression-based information.

Consumers generally have an expectation about a product before buying it, and their satisfaction with the product depends on how well that expectation matches with their post-purchase experience. Typically, factual information helps a consumer form a realistic pre-purchase expectation, which, in turn, leads to a better match between this expectation and the post-purchase experience. In contrast, impression-based information may result in an unrealistic pre-purchase expectation in customers’ minds that their post-purchase experience can’t usually match.

**Mistake 4: Focusing on Sales Rather Than Net Sales**

Retail executives are often just keen on increasing sales. High product returns, however, could negate the effect of high sales — after all, returns amount to about $260 billion per
year in the United States alone, according to the National Retail Federation. Hence, retailers should focus on net sales (that is, sales minus returns), rather than sales alone.

Consequently, it is important to carefully consider what types of information consumers are gathering when they use technologies made available by retailers. In particular, many retail websites and apps now have product-oriented technologies that are geared toward helping consumers collect information.

While impression-based information may increase sales, it increases returns as well. In fact, our study of the women's clothing retailer found that the use of alternative photos — a technology that presents images of models wearing the product from different angles, often in an unrealistic scenic environment — primarily provides impression-based information and not only leads to more returns but also decreases net sales.

In contrast, our research found that factual information reduces returns significantly. As a result, the overall effect of adding technology facilitating factual information — such as the ability to zoom in to view a product's features more closely — is typically positive.

Retailers need to proactively ensure that the technologies on their websites and apps are leading to desired results. For example, one way to mitigate the negative effect of alternative photos is to allow consumers to upload their own photos and videos showing the product in use. Then future potential customers can form more realistic expectations about the product by seeing how other consumers look wearing the product or how they use it. Not surprisingly, a number of major retailers now encourage their consumers to upload photos or videos.

These consumer-uploaded pictures arguably balance any unrealistic expectations potential consumers may form by looking at the retailer-provided photos.

Mistake 5: Not Keeping Pace With Technology Advances
AI is going to be a critical part of the next wave of technological advancements affecting e-commerce. The increasing use of digital personal assistants such as Siri or Google Now; adoption of smart home devices such as Amazon Echo; and developments like Apple opening up Siri to third-party developers will significantly influence many tasks consumers regularly do, including shopping.

As a result, retailers must ensure that their apps and websites are ready to serve consumers using AI-driven digital assistants. For example, a consumer may ask Siri to find a pair of jeans. A retailer needs to utilize its data about that consumer to present a set to Siri that fits the consumer's needs. At a time when Siri is, in effect, a platform through which different retailers supply options to be featured in front of the consumer, only the retailers that present the best options are likely be retained, and others would be removed from the consideration set.

Considering a digital assistant's overarching focus on gaining efficiency, increasingly through machine learning techniques, retailers face a serious threat of being thrown out of the consideration set, which could put them in a downward spiral with obviously grave consequences. After all, these digital assistants are programmed to collect data and constantly improve their services. As a result, it will become evermore important for retailers to take advantage of their data to offer consumers options that are well-targeted to their needs.
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