

The Cross-Channel Impact of Marketing Communications

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Overview

The cross-channel impact of marketing actions has long been a topic of interest. However, in recent years, the introduction of the Internet and the difficulty of identifying the source of orders placed over this channel has made this issue even more important for retailers. In this paper we report the findings from a large-scale field test that investigates how mailing catalogs affects both Internet demand and demand through traditional catalog channels (telephone and mail orders).

The findings reveal an interesting dichotomy. Amongst the catalog's "average" customers, mailing additional catalogs yielded a significant increase in demand across all channels. The effect on the Internet channel was large and confirms that catalogs have an impact beyond the traditional mail and telephone channels. In contrast, amongst the company's most valuable customers, who purchase most frequently, mailing additional catalogs did not increase demand over the Internet. Instead, there was a significant reduction in the number of items ordered over the Internet. Moreover, because the Internet orders tended to be larger, mailing additional catalogs actually *reduced* total demand, the sum of catalog and Internet orders, for some of these customers.

Rationale

Mailing catalogs to customers has at least two potential effects on their behavior.

1. First, for many customers it increases overall demand by prompting purchases and increasing awareness and preferences for the brand.
2. Second, in addition to demand expansion, the catalog mailings affect which channels customers order from, tending to increase the probability that customers purchase from traditional catalog channels (telephone and mail orders) and reducing the probability that they will order over the Internet.

For average customers, both effects occur: customers order more and a higher proportion of their orders occur through the telephone and mail channels. The outcome is an increase in demand across all channels. In contrast, for the catalog's best customers, there is little evidence of demand expansion. These customers already purchase frequently, have strong awareness and very favorable preferences for the brand. In the absence of demand expansion, for the best customers we only simply see substitution from the Internet channel to the traditional catalog channel. This leads to an increase in telephone and mail orders, but a reduction in Internet orders.

Sending additional catalogs to the subset of most valuable customers who were also prior Internet users caused such a large shift in demand from the Internet to the catalog channel that the net effect on their overall demand was actually negative. To understand this effect we compared the size of the orders placed on the Internet compared to orders placed through the catalog channel. Internet orders are significantly larger in size and more frequently have items from different categories. We interpret this as evidence that the Internet channel, because of its user-friendly searching, browsing and recommendation capabilities, leads to more impulse purchasing compared with the catalog channel. As a result, substitution away from the Internet channel

can lead to lower total sales in the face of increased advertising.

Implications

The direct marketing industry has traditionally relied on an extensive program of testing and measurement. There is a long-standing tradition of conducting repeated split-sample tests in which randomly selected samples of customers are exposed to different marketing actions. The difficulty of tracking the source of orders placed over the Internet has undermined the testing programs for many firms, making it much harder to evaluate the effectiveness of different marketing actions. If firms do not measure how marketing actions affect all of their channels, they risk making serious mistakes. In this study, if the firm had only measured how catalogs affected orders from its catalog channels it would tend to under-invest in mailing to its average customers, while mailing too frequently to its best customers. We have seen examples of this occurring in practice. The reduction in response rates over the traditional mail and telephone ordering channels led some firms to conclude that the return on their investment in mailing catalogs no longer justifies the cost of the catalogs. However, when these firms reduced their mailing rates they saw sharp drops in demand on their Internet channel, a consequence that they had not anticipated when designing their mailing policies.

Study Design

The study was conducted with a retailer of women's clothing. A sample of 10,000 of the company's "Best" customers was selected together with a separate sample of 10,000 of the company's "Average" customers. Customers from each of these samples were then randomly assigned to equal-sized Treatment and Control groups (yielding a total of four groups: Treatment and Control for both Best and Average customers). Customers in the two Control groups received 12 catalogs over a nine-month period. Customers in the two Treatment groups were mailed the same 12 catalogs plus 5 additional catalogs over this period. We then separately measured the demand from each group in the firm's catalog and Internet channels over a period of 18 months (the nine-month test period plus the subsequent nine months).

Results

The impact of the additional mailings on demand in each channel is summarized below.

	Impact of Treatment on Demand	
	Best Customers	Average Customers
Internet Channel	-12%	32%
Catalog Channel	3%	8%
Total Demand	2%	12%

Demand reflects the number of items ordered. The impact of the treatment is estimated using a multivariate approach to control for individual customer differences.

There are several findings of interest.

1. First, for the firm's best customers total demand is not statistically significantly changed when additional catalogs are mailed, because the decline in the Internet channel offsets any gains in the catalog channel. This contrasts with the average customers, where total demand expanded by 12%.
2. Second, demand through the catalog channel increases for both customer segments.
3. Third, and perhaps most notably, the results for the Internet channel are different for the two segments. Amongst the best customers, channel switching and the absence of demand expansion leads to a reduction in demand over the Internet. For the average customers, demand expansion leads to an increase in demand across all channels. Fourth, further investigation revealed that the size of Internet orders is between 10% and 20% larger than the size of mail and telephone orders. For the best customers, for whom we do not observe any demand expansion, this leads to the prediction that switching customers to the catalog channel can lead to a reduction in total demand. We

do see evidence of exactly this outcome. Amongst the approximately 800 best customers who had previously placed orders over the Internet, sending additional catalogs actually led to a 12% *reduction* in total demand.

Conclusion

In this paper we study the impact of marketing actions in traditional channels on the Internet. Using data collected from a large-scale field experiment that is conducted by a retailer that has both an Internet channel and a catalog channel, we demonstrate that marketing actions in traditional channels can have a significant impact on the Internet. Our results also show that the overall cross-channel effect can be different in magnitude as well as signs for different segments of customers. Key parameters that can be used to segment a customer base in this context include measures of customers' past purchasing history as well as their familiarity with the Internet channel.

Because of this cross-channel effect, marketing plans that are profitable in the absence of the Internet channel may not make sense in the presence of the Internet channel. Using sending additional catalogs as an example of marketing actions, we find that sending additional catalogs can potentially have two effects on demand. It can cause an increase in overall demand, and it may also shift demand from the Internet to the catalog channel. Our findings confirm the existence of both effects and reveal an interesting dichotomy. Amongst the Good customers mailing additional catalogs yielded a significant increase in demand across both channels. The effect on the Internet channel was large and confirms that catalogs have an impact beyond the catalog channel. If firms only measure how catalogs affect orders through the catalog channel they will tend to under-invest in mailing to these Good customers. In contrast, amongst the Best customers, mailing additional catalogs did not increase demand over the Internet. Rather, the main effect is a shift of demand from the Internet to the catalog channel. If firms only measure how catalogs affect orders through the catalog channel they will tend to over-invest in mailing to these Best customers. In order to make the right marketing decision, firms cannot isolate channels from one another and assume the non-existence of cross-channel effect. Instead, the right marketing plan requires sharing of data across

marketing channels and integrating customer data that are scattered across organizations.

We also find that the Internet channel, because of its user-friendly searching, browsing, and recommendation capabilities, often leads to more impulse purchasing compared with traditional channels. We provide evidence supporting the theory of increased impulse purchasing on the Internet, including the larger order size on the Internet compared with through the catalog channel, and the higher frequency of Internet order combining items from multiple categories compared with orders through the catalog channel. These results suggest that a multi-channel retailer should drive its customers toward the Internet channel by engaging in efforts such as designing catalogs that promote its Internet channel, providing online tools for customers to easily locate items that appear in catalogs, and offering Internet promotions.

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