



Beware the 'Walking Dead': Analyzing Customer Data from a Multi-Service Firm

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Think of them as the "walking dead." They're not ghosts or freaks from a horror movie, but rather a certain type of customer whose relationship with a company will soon be history.

The walking dead are "customers who currently maintain service but whose next action will be to discontinue all services, an important economic consequence to the firm," according to a new study that examines how the customers of a telecommunications firm acquire and discard services over time. Companies would be wise to identify their walking dead and not market additional services to them because there may be an unintended effect, the paper suggests.



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"Not only are you going to waste marketing and advertising dollars, you're going to remind these customers they're dead," perhaps prompting them to cancel their service altogether, said Wharton marketing professor [Peter S. Fader](#). "It's better to leave the walking dead alone." Fader co-authored the paper, titled "[Modeling the Evolution of Customers' Service Portfolios](#)," with Wharton marketing professor [Eric T. Bradlow](#) and David A. Schweidel, a marketing professor at the University of Wisconsin-Madison. Their paper has been submitted to the *Journal of Marketing Research*.

In examining the subscribing patterns of more than 3,000 customers of a major telecom firm over two years, the researchers also found that it's not necessarily a bad thing when customers cancel a particular service, e.g., a premium movie channel, as long as they maintain other ones. "Though conventional wisdom would argue that a customer who has dropped a service is less valuable, such customers have told the firm that they are still making active decisions about their service portfolio and are therefore more likely to acquire other services in the future," the authors write. "Therefore, such a customer clearly is not a member of the walking dead."

The research findings are relevant to the issue of "cross-selling," the strategy of marketing additional products or services to customers who already have done business with the company. Multi-service telecom companies may decide to market Internet service to customers who already subscribe to cable, or market additional premium channels to cable subscribers who already get HBO. Cross-selling occurs in many industries. A financial services company, for instance, may target IRA account customers for other products and services, such as home equity loans, CDs and mortgages.

"By cross-selling additional services to existing customers, multi-service providers can strengthen relationships, curtail churn, and increase revenue," the researchers write. "But to make cross-selling a powerful instrument in a firm's CRM (customer relationship management) toolbox, the firm must be able to identify those customers who are most likely to adopt new services, as well as those customers who are at risk for discarding some or all of the services to which they currently subscribe."

The researchers did their study using the telecom firm's monthly subscription information for January 2002 through May 2004. The firm, which is not named in the paper, offers a variety of services, including basic cable, a digital cable package, premium channels (HBO, Showtime, Starz, Cinemax and TMC) and high-speed Internet service. The researchers focused on a random sample of 3,393 new customers in a given region and tracked what services they adopted or dropped. "While two years doesn't sound like a long period of time, it's amazing how much movement we see, how much acquisition of new services and shedding of services customers exhibit over that time," Fader said.

The researchers wanted to see how customers' service portfolios evolved with time and examine how past subscribing behavior influenced future actions. To accomplish that, they developed a model which they said "can be used to value customers, enabling multi-service providers to determine where their money is best spent: Should resources be allocated to enhancing the relationships of existing customers or to acquiring new ones?"

Fader said the model allows for the creation of a "co-purchasing map," showing where customers lie at any given time in relation to the various services offered by the company. While previous studies look independently at the issues of customer evolution and multi-product ownership, "No one (to the best of our knowledge) has simultaneously explored these aspects in a contractual setting," the authors state in their paper.

From Chevrolet to Cadillac

According to Fader, a traditional view holds that customers progress through a fairly predictable pattern of business with a company. For instance, the bank customer starts out with a student loan, goes on to a car loan and eventually ends up getting a home loan. Likewise, there's the old image of the upwardly mobile car owner. "You first buy the Chevrolet, then you move up to the Pontiac, then the Buick, then the Oldsmobile, then the Cadillac," Fader said. But while there are certain "lifecycles" that customers move through, he added, people don't move in lockstep through the phases, and even within a phase, there is a lot of variation across customers. "Preferences are incredibly variable across people and over time."

The researchers identified three general states that define a customer's relationship with a company. In State 1, customers are close to certain key services, such as basic cable. "In this introductory state, you're just dipping your toes in the water and trying out one or two services to see if they meet your needs and if you like working with the company," Fader said.

In State 2, "you broaden your relationship, often acquiring additional services, like premium channels," Fader noted. But that's not always a good thing. "A customer who moves rapidly into State 2 is likely to reconsider his portfolio more quickly and possibly acquire additional services. However, while such customers may appear tempting, these same customers are also likely to transition into State 3 quickly and reconsider their portfolios (i.e., drop all services) without much delay," the researchers write.

State 3 customers, the walking dead, are just one move away from severing their ties with the company. "However, customers' transition to this state may not be immediately observable; they may maintain their current portfolio for several months (or longer) due to inertia. Having plateaued in their level of service, their next change almost certainly will be to drop all services," the researchers state.

Fader adds an important caveat: "While we see a relatively sudden drop in this particular dataset, there could be additional states in other settings. Customers might gradually shed their services as they slowly sever their relationship with the firm. It would be interesting to compare these evolutionary processes across different types of multi-service providers."

Knowing what kinds of customers are in each state can help a company shape its marketing efforts. With State 3 customers, for example, "cross-selling activities may actually encourage the customer to reconsider his portfolio -- and drop all services in the process," the researchers contend. "Rather than devoting resources to waning customers, it may be more profitable to target new prospects and provide them with incentives to begin (and broaden) their relationship with the firm."

In the case of those customers who "age" rapidly, going quickly from State 1 to 2 to 3, a firm may be able to develop a strategy to slow down the "aging process," thus holding on to the customer longer, the researchers note, adding that companies can determine a specific financial valuation for such a strategy.

It's important to view customers in terms of their entire history of purchasing decisions, not a single recent decision, since "the entire sequence of portfolios is informative of his current lifecycle state and future behavior," the paper states. Getting back to the concept of the co-purchasing map, a customer who already subscribes to one service may be likely to buy another one that is located nearby on the map. For instance, customers who already have one premium cable channel may be more apt to subscribe to another premium channel than to high-speed Internet access, which is located farther away on the map.

"The number of subscribers to Showtime, Cinemax, Starz and TMC closely mirrored each other," the researchers wrote. "Some customers have a high propensity to subscribe to all of these services, while other customers have a low propensity for all of them, indicating that these services are complements rather than substitutes."

The authors say their model can also be used place a dollar value on customers in the various states of purchasing behavior. Using the telecom firm data, they calculated the average remaining lifetime value of customers after 12 months in one of the three groups. Customers in State 1 were still worth \$3,470 in additional business; those in State 2 were worth \$1,834, and customers in State 3 were worth \$555. That final figure shows why it's probably best to leave the walking dead alone, Fader said, since there are numerous customers in that category and they are still worth a considerable chunk of money to the company.

The researchers have had informal discussions with managers in other industries who indicated they could relate to the concept of the walking dead in contexts such as magazine subscriptions, extended warranty service contracts and retirement accounts being held for former employees. "In all three cases (among others), attempts to utilize the 'relationship' a firm has with certain customers may backfire and remind them to close their accounts," the article states.

In summarizing this research project, Fader points out that every customer's "lifecycle" with a multi-service provider appears to be unique, and firms are often unable to see some strong but subtle patterns that exist across customers. "Firms want to get into each customer's mind to figure out the next service to promote to him or her. This is a good idea in theory, but it's very difficult to do this well without a formal model that captures the underlying drivers. It's clear from this research that marketing actions along these lines can hurt as much as they can help. Firms can gain a great deal if they approach these important decisions more scientifically."

Download the paper: [Modeling the Evolution of Customers' Service Portfolios](#)

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