

Evaluating channel performance in multi-channel environments

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Abstract

Evaluating channel performance is crucial for actively managing multiple sales channels, and requires understanding the customers' channel preferences. Two key components of channel performance are (i) the existing customers' intrinsic loyalty to a particular channel and (ii) the channel's ability to attract switching customers. We apply the Colombo and Morrison (Colombo, R., Morrison, D., 1989. A brand switching model with implications for marketing strategies. *Marketing Science* 8, 89–99) model to assess channel performance along these dimensions. Using data from a large home-shopping company, we analyze the evolution in the performance of its main channels over time, and test for differences in channel performance among different product categories offered by the company, as well as between different customer segments. Based on the results, we derive implications for managers to operate a company's multiple sales channels more effectively.

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1. Introduction

More and more companies become multi-channel operators (Ganesh, 2004; Coelho et al., 2003). Therefore, managers need metrics that help them assess the performance of each individual sales channel, as well as the inter-relationships among the different sales channels in their portfolio. Preferably, these metrics should be grounded in marketing theory and should be objective, based on readily available data, easy to quantify, intuitively appealing, and should have diagnostic value (Ailawadi et al., 2003). Furthermore, these metrics should be based on customers' channel preferences (Reardon and McCorkle, 2002). A key component of customers' channel preference is their behavioral loyalty to each sales channel. Even though it was initially argued that customer loyalty would disappear in near-perfect Internet markets (Kuttner, 1998), recent research has convincingly argued that customer loyalty

remains central to long-run profitability.¹ However, channel loyalty is only one component of sales channel performance, because some customers may not have a strong intrinsic preference for any specific channel, and occasionally (or even regularly) switch among different channels. Therefore, a second key characteristic for sales channel performance is the ability to attract these switching customers (Reichheld and Schefter, 2000).

Insights into these issues can be obtained through the analysis of aggregate switching matrices (see, e.g. Lilien et al. (1992, pp. 41–42) for an in-depth discussion on the construction and interpretation of such matrices). Repeat purchases with the same sales channel then appear in the diagonal elements of the matrix, while switching between the various channels, or defection to competing companies, is reflected in its off-diagonal elements. However, not all observed consecutive purchases through the same sales

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¹For an extensive review on the brand-loyalty literature, we refer to Mellens et al. (1996) and Oliver (1999). Papers on the relevance of the loyalty concept in an Internet environment are, among others, Danaher et al. (2003), Flavián et al. (2006), Harris and Goode (2004), and Srinivasan et al. (2002).

channel reflect the same level of channel loyalty. Indeed, some repeat purchases could come from customers who buy repeatedly with probability one, and hence do not consider the use of other sales channels or companies. But a repeat purchase could also come from customers who have considered other sales channels or companies, but have not yet switched. Terech et al. (2003) refer to the former as hard-core loyals, and to the latter as soft-loyal customers. Obviously, the former are the more attractive customers for a given sales channel.

Various stochastic models allow for a further decomposition of the aggregate switching matrix beyond the simple diagonal/off-diagonal dichotomy (e.g. Bayus, 1992; McCarthy et al., 1992; Colombo and Morrison, 1989; Grover and Srinivasan, 1987). A well-established model is the one developed by Colombo and Morrison (1989). Its empirically determined parameter estimates have clear managerial interpretation and diagnostic value. Furthermore, its data requirements are low and its implementation and interpretation are straightforward, thereby satisfying the various criteria advocated in Ailawadi et al. (2003).

In this paper, we apply the Colombo and Morrison model to assess multi-channel performance. We illustrate that it allows for more detailed insights into customers' channel preferences by decomposing the observed switching behavior among a company's sales channels into (i) customers' intrinsic loyalty to a particular sales channel and (ii) each sales channel's ability to attract potential switchers, referred to as its conquering power. In doing so, we also distinguish between hard-core loyal and soft-loyal customers to account for different levels of loyalty (Terech et al., 2003). In addition, we not only investigate the overall channel performance, but also evaluate whether there are (i) changes in a channel's loyalty and conquering power over time, (ii) specific product categories that are better suited to be sold over a particular channel (Inman et al., 2002; Morrison and Roberts, 1998), and (iii) differences between specific customer segments. To that extent, we distinguish between heavy and light users. Lim et al. (2005) argue that light users are more likely to attribute their channel choice to external causes than to an internal cause—such as their intrinsic preference for that sales channel.

Those more detailed analyses provide multi-channel managers with additional insights into the performance of a company's sales channels. Thus, analyzing changes over time enables managers to evaluate whether customers start to migrate from one sales channel to another. Moreover, knowing the product-channel association helps to better tailor the assortment to the different sales channels, and additional insights into different customer segments allow managers to better target their multi-channel marketing activities.

The remainder of the paper is organized as follows: Section 2 outlines the research methodology. Section 3 describes the data set. Empirical results are given in Section 4, and Section 5 provides conclusions and implications of our results.

2. Method

We use the model developed by Colombo and Morrison (1989) to examine customers' behavioral channel loyalty and inter-channel switching behavior. The model is based on the assumption that there are two groups of customers:

- customers who are intrinsically loyal and stay with the same sales channel, called *hard-core loyals*, and
- customers who potentially switch from one sales channel to another on every purchase occasion. They choose between the available sales channels according to a zero-order process. We refer to those customers as *potential switchers*.

Potential switchers who use the same channel on two consecutive purchases are called 'soft-loyal' customers, whereas those who switch are labeled as 'switchers'. All potential switchers are assumed to have the same probability to use a specific channel, but this probability may differ across channels. The fraction of loyal customers (hard core as well as soft-loyal customers) and the switchers' choice probabilities are linked to the elements of the observed switching matrix through:

$$p_{ii} = \alpha_i + (1 - \alpha_i)\pi_i, \quad i = 0, 1, \dots, I, \quad (1)$$

$$p_{ij} = (1 - \alpha_i)\pi_j, \quad i, j = 0, 1, \dots, I \text{ and } i \neq j, \quad (2)$$

where p_{ij} (p_{ij}) is the conditional probability that a customer who last used channel i will next use channel $i(j)$; α_i the fraction of channel i 's current customers who are completely loyal to that channel (hard-core loyals); π_i (π_j) the fraction of potential switchers who will next use channel $i(j)$, with $\sum_{i=0}^I \pi_i = 1$.

The diagonal elements of the switching matrix (p_{ii}) might be considered as an intuitive metric for channel loyalty, since those elements express the repeated use of a particular sales channel. However, the diagonal elements of the aggregate switching matrix can be decomposed into repeat purchases from hard-core loyal (α_i) and soft-loyal customers ($(1 - \alpha_i)\pi_i$, since also a zero-order buyer may end up making two or more consecutive purchases from the same sales channel. To accommodate customers who did not use any sales channel within a considered time interval, a 'no purchase' option is introduced (see Chiang, 1991 for a similar practice). The corresponding α_0 denotes what fraction of all current non-users can be considered hard-core non-users, while π_0 measures the probability that a potential switcher opts to not use any of the company's sales channels in a given period. To take left-censoring of the data into account, we use a certain time interval of the observed time span for initialization purposes. Specifically, to determine whether the first purchase in a given time interval was a 'repeat use of a particular channel' or a 'channel switch', the sales channel currently used is compared to the sales channel used for the last purchase

in the initialization period (Steenkamp and Dekimpe, 1997).

The estimation of the parameters is based on the following LogLikelihood function:

$$\begin{aligned} LL &= \sum_{i=0}^I n_{ii} \ln(p_{ii}) + \sum_{i=0}^I \sum_{\substack{j=0 \\ j \neq i}}^I n_{ij} \ln(p_{ij}) \\ &= \sum_{i=0}^I n_{ii} \ln[\alpha_i + (1 - \alpha_i)\pi_i] \\ &\quad + \sum_{i=0}^I \sum_{\substack{j=0 \\ j \neq i}}^I n_{ij} \ln[(1 - \alpha_i)\pi_j], \end{aligned} \quad (3)$$

where n_{ii} is the observed number of customers who use channel i on two subsequent purchase occasions and n_{ij} is the observed number of customers who last used channel i and switch to channel j .

3. Data description

We observe data from a large European home-shopping company that owns two direct sales channels: a call center and an Internet channel. Customers have two possibilities to purchase a product. First, they can watch TV shows featuring a subset of the company's products on a privately owned broadcasting channel. The company alternates between a number of shows, which each focuses on specific product categories such as cosmetics or jewelry. During the shows, the call center's phone number is displayed where customers can place their order. Second, customers can place their order over the Internet channel, which is comparable in conceptualization to a variety of e-commerce websites.

As the cost per order is substantially lower when customers use the Internet channel, management has a strong preference to migrate customers towards this sales channel.² Management feels such a channel substitution should be feasible, as both sales channels share a number of common features (Dholakia and Usitalo, 2002): they present products via a screen, and do not offer the opportunity to physically experience products prior to purchase. However, the Internet channel also differs from the call center in a number of aspects. The Internet channel offers the company's complete assortment at all times, which allows for more cross-selling opportunities. Also, when using the Internet channel, customers are no longer confronted with waiting lines when all call-center operators are busy serving other customers. However, the Internet channel does not allow personal interaction. Currently, management has little knowledge on customers' channel preferences, and does not know whether both sales channels are comparable in terms of channel loyalty, or

whether both sales channels are equally effective in attracting new customers.

Data are available on about 1.5 million customers for 15 consecutive months from January 2001 to March 2002. No serious seasonal fluctuations in the number of orders per month are observed. For every order placed, the following information is available: the customer's identification number, every SKU that was bought, its product category, the sales channel through which the order was placed, and the timing of the order.

The company sells a huge range of products. Every year, about 10,000 new SKUs are introduced. The most frequently purchased product categories are housewares (53.2%), cosmetics (12.5%) and jewelry (10.3%). Those are also the categories that receive most airtime. As most products are (semi-)durables, consumption occurs over an extended period of time. In our data set the average interpurchase time for those customers making more than one purchase is 21 days. When focusing on purchases within specific product categories, the average interpurchase times become 73 days for cosmetics, 71 days for housewares and 40 days for jewelry. We use the first 3 months of data for initialization purposes. To account for the 'no purchase' option when constructing the switching matrix across sales channels, we considered the number of German households. We focus on the number of German households as these constitute the vast majority of our company's customer base (see Biyalogorsky and Naik (2003) for a similar practice).

4. Empirical findings

As indicated in Table 1, the overall number of transactions is decreasing (−2.9%). However, the number of transactions conducted on the Internet channel is gradually increasing, in both absolute and relative terms.

An intuitive metric to evaluate channel loyalty would be to consider the diagonal elements of the aggregate switching matrix, which represent the hard-core loyal as well as

Table 1
Number of transactions

	Month 4–9	Month 10–15	Difference
Call center	3,744,129 (97.0%)	3,619,880 (96.5%)	−3.3% (−0.5%)
Internet	116,924 (3.0%)	130,535 (3.5%)	+11.6% (+0.5%)
Total	3,861,053	3,750,415	−2.9%

Table 2
Aggregate switching matrix

	Call center (%)	Internet (%)	No option (%)
Call center	94.7	0.7	4.6
Internet	22.6	67.9	9.5
No option	7.0	0.5	92.5

²Such managerial preference is not uncommon. Lufthansa, for example, offers its customers a price reduction when their flight is booked online.

Table 3
Fraction of hard-core loyal customers and potential switchers

	Full sample (%)	Split-half (at random)	
		Sample 1 (%)	Sample 2 (%)
<i>Fraction of hard-core loyal customers*</i>			
Call center ($\alpha_{\text{call center}}$)	84.3	84.4	84.3
Internet (α_{Internet})	66.4	66.6	66.2
<i>Fraction of potential switchers*</i>			
... who will next use the call center ($\pi_{\text{callcenter}}$)	66.0	66.0	66.0
... who will next use the Internet (π_{Internet})	4.4	4.4	4.4

*Differences are significant ($p < 0.05$).

the soft-loyal customers. Using this metric, 94.7% of the current users of the call center and 67.9% of the Internet channel users would be considered loyal to these sales channels (see Table 2). One might argue that the superior performance of the former sales channel is not surprising, as it represents the company's well-established incumbent sales channel (Dholakia and Usitalo, 2002), which has a considerably longer history than the more recent Internet channel.

However, this superior performance becomes somewhat less pronounced when further decomposing these diagonal elements into hard-core loyal and soft-loyal customers (see Table 3). For the call center, a substantial fraction ($10.4\% = 94.7 - 84.3\%$) of the current customer base considered a potential switch, which is significantly larger than the fraction of current Internet users who considered to switch ($1.5\% = 67.9 - 66.4\%$). As a consequence, the difference in the channel's intrinsic loyalty of 17.9% ($= 84.3 - 66.4\%$) is smaller than would be suggested by a straightforward inspection of the diagonal elements of the aggregate switching matrix ($26.8\% = 94.7 - 67.9\%$). Since the estimates of the Colombo and Morrison model provide managers with more detailed insights, we focus on these estimates in the subsequent analyses.³

The fact that a considerable fraction ($> 10\%$) of the call center's repeat users considered another sales channel or even churn offers a first indication that its loyalty base may be gradually eroding. To more formally assess this finding, we perform a split-half analysis. Therefore, distinct switching matrices were constructed for months 4–9 and months 10–15, respectively. The fraction of hard-core-loyal call-center users indeed experienced a significant drop of 5.2% (see Table 4). As expected, the absolute values of the α -parameters are somewhat lower in Table 4 than for the full sample (Table 3). This is due to the fact that the sample split reduces the observation period from 12 to 6 months, which basically means that customers have less time to repeat a purchase, so that a larger fraction will end up in

the 'no-purchase' cell. However, this observation applies to both the first and the second sub-sample, enabling a comparison of their respective estimates.

One could argue that this evolution is in line with management's aspiration to see more channel migration towards the more profitable Internet channel. Less comforting, however, is the observation that both the intrinsic loyalty to the Internet channel (-6.5%) as well as the call center's conquering power (-6.0%) decrease over time. These reductions are not compensated by a comparable increase in the Internet channel's ability to attract floating customers (-0.1%). Overall, these results suggest two unfortunate developments: (i) the fraction of non-loyal customers increases and (ii) a larger fraction of these potential switchers opts to use neither of the company's channels. Hence, even though Wallace et al. (2004) argue that multiple-channel retailing can be a useful strategy for building customer retailer loyalty; this does not seem to stop this company's customer attrition.

Since the behavioral loyalty to the Internet channel is decreasing over time, it is of interest whether specific product categories are better suited to be sold over the Internet to counter this effect. Especially, housewares, cosmetics, and jewelry have been found to be well suited to be sold over the Internet (Portnoy and Colvin, 2005; Radwick, 2005; Law, 2005; Vishwanath and Mulvin, 2001). Those are also the key product categories in the company's assortment. They are analyzed to investigate which product categories should best be used to keep and attract Internet customers. However, since prior studies used traditional brick-and-mortar stores as benchmark, it is not a priori clear to what extent the Internet has any further (dis)advantages over a TV-supported call center.

In line with the aforementioned more aggregate findings, we find that the fraction of hard-core loyal call center users is significantly higher in every category than the corresponding fraction of Internet users (see Table 5). However, when comparing the estimates for the fraction of hard-core loyal customers across the various categories, we note a significantly higher intrinsic preference for the Internet channel among buyers of cosmetics (76.0%), while the Internet channel also has a significantly higher conquering

³Very similar results were obtained on two sub-samples based on a random split of the households, which supports the stability of the estimates (see Table 3).

Table 4
Parameter estimates (split-half analysis across periods)

	Fraction of hard-core loyal customers**		Fraction of potential switchers**	
	Call center (%)	Internet (%)	... who will next use the call center (%)	... who will next use the Internet (%)
Months 4–9	79.9	59.4	44.5	2.8
Months 10–15	74.7	52.9	38.4	2.7
Difference	–5.2*	–6.5*	–6.1*	–0.1*

*Differences are significant ($p < 0.05$).

**Differences between sales channels are significant ($p < 0.05$).

Table 5
Estimates for different product categories

	Fraction of hard-core loyal customers*		Fraction of potential switchers*		
	Call center (%)	Internet (%)	... who will next use the call center (%)	... who will next use the Internet (%)	... who will switch to the no-purchase option (%)
Housewares	98.1	55.5	82.3	3.1	14.6
Cosmetics	78.8	76.0	69.7	5.1	25.2
Jewelry	86.5	54.7	93.3	1.7	5.0

*All differences between the call center and the Internet channel are significant ($p < 0.05$).

Table 6
Estimates for heavy and light users

	Fraction of hard-core loyal customers*		Fraction of potential switchers* ...who will next use the		
	Call center (%)	Internet (%)	Call center (%)	Internet (%)	No-purchase option (%)
Light user	70.0	62.2	55.8	3.7	40.6
Heavy user	92.5	72.7	94.4	5.6	0.0

*All differences between the call center and the Internet channel are significant ($p < 0.05$).

power for this category (5.1%), which is in line with the findings of Kim (2002). Hence, if the company would like to increase the share of customers using the Internet, it should especially aim at promoting cosmetics on its website to boost the number of new online users. Moreover, customers who buy this category online are also more likely to become or remain loyal to this channel.

Finally, it is of interest whether customer segments differ in their channel usage behavior. This analysis allows managers to better target their multi-channel marketing activities. To that extent, we distinguish between heavy and light users. Lim et al. (2005) argue that light users are more likely to attribute their channel choice to external causes than to an internal cause. In line with the previous research, we define heavy (light) users as those customers whose average monthly purchase quantity is above (below) the median monthly purchase quantity in the initialization period (Lim et al., 2005).

The estimates of the Colombo and Morrison model elicit that heavy users indeed have a greater loyalty to both sales channels (see Table 6). Also the fraction of churning customers that will migrate to the undesirable no-purchase

option is significantly smaller among heavy users than among light users. Hence, the company should place special emphasis on their heavy users. They not only generate higher immediate revenues, they are also more loyal what will impact the company's future revenue stream.

5. Conclusions

In this paper, we proposed the Colombo and Morrison model to assess the performance of the various channels in a company's portfolio. Its implementation and interpretation are relatively simple, and the data requirements are low. As such, the method is applicable even in companies that only have a limited amount of data available. Moreover, we have shown how additional insights can be gained by splitting the data set in several sub-samples, e.g., according to different time periods, segments or product categories, and by comparing the corresponding parameters across those sub-samples. Still, as any other approach, the Colombo and Morrison model has a number of limitations (see also Dekimpe et al., 1997). Specifically, it

is assumed that there are only two groups of customers: hard-core loyals and switchers. This is obviously a simplification of reality, where varying degrees of loyalty between these extremes may exist. Moreover, the model does not allow for heterogeneity in the purchase probability of the various switchers. Both previous assumptions can be relaxed (see, e.g. Terech et al., 2003; Yim and Kannan, 1996), but this will come at the expense of added complexity. Finally, it is important to realize that the approach derives the latent or underlying loyalty from observed behavioral data, while a more complete measure of loyalty would reflect both observed behavior and underlying commitment to the channel (Jacoby and Chestnut, 1978). Still, in spite of these limitations, the Colombo and Morrison model offers a useful first step in getting a better assessment of various channels' performance.

The results of our specific application indicate that the incumbent sales channel is still, by far, the dominant sales channel in the company's channel portfolio. A more proactive approach using, for example, some of the marketing tactics described in Ansari et al. (2005), therefore seems to be needed to enhance the migration to the less cost-intensive Internet channel. Furthermore, the decline in both channels' loyalty supports the common observation that more customers become multi-channel shoppers. It is especially worrying that the call-center's diminishing ability to attract 'floating customers' is not compensated by a comparable increase in the conquering power of the Internet channel. This may require a rethinking of the design of the Internet channel, which is beyond the scope of the current study. A more pro-active customer attraction and retention program, or a reconsideration of the assortment the company is offering through its Internet channel may positively affect customers' loyalty to that channel.

As for the latter, we find that customers who buy cosmetics have a much higher loyalty to the Internet channel, while that sales channel is also able to attract a higher fraction of the potential channel switchers among the cosmetics buyers. Furthermore, a pro-active approach may be especially needed to convince the heavy users to migrate to the Internet, as they were found to have a considerably higher intrinsic preference for the more established sales channel.

References

- Ailawadi, K., Lehmann, D., Neslin, S., 2003. Revenue premium as an outcome measure of brand equity. *Journal of Marketing* 67 (4), 1–17.
- Ansari, A., Mela, C., Neslin, S., 2005. Customer channel migration. Working Paper, Columbia University.
- Bayus, B., 1992. Brand loyalty and marketing strategy: an application to home appliances. *Marketing Science* 11, 21–38.
- Biyalogorsky, E., Naik, P., 2003. Clicks and mortar: the effect of on-line activities on off-line sales. *Marketing Letters* 14, 21–32.
- Chiang, J., 1991. A simultaneous approach to the whether, what and how much to buy questions. *Marketing Science* 10, 297–315.
- Coelho, F., Easingwood, C., Coelho, A., 2003. Exploratory evidence of channel performance in single vs multiple channel strategies. *International Journal of Retail and Distribution Management* 31, 561–573.
- Colombo, R., Morrison, D., 1989. A brand switching model with implications for marketing strategies. *Marketing Science* 8, 89–99.
- Danaher, P., Wilson, I., Davis, R., 2003. A comparison of online and offline consumer brand loyalty. *Marketing Science* 22, 461–476.
- Dekimpe, M., Steenkamp, J.-B., Mellens, M., van den Abeele, P., 1997. Decline and variability in brand loyalty. *International Journal of Research in Marketing* 14, 405–420.
- Dholakia, R., Uusitalo, O., 2002. Switching to electronic stores: consumer characteristics and the perception of shopping benefits. *International Journal of Retail and Distribution Management* 30, 459–470.
- Flavián, C., Guinaliú, M., Gurrea, R., 2006. The influence of familiarity and usability on loyalty to online journalistic services: the role of user experience. *Journal of Retailing and Consumer Services*, in press, doi:10.1016/j.jretconser.2005.11.003.
- Ganesh, J., 2004. Managing customer preferences in a multi-channel environment using web services. *International Journal of Retail and Distribution Management* 32, 140–146.
- Grover, R., Srinivasan, V., 1987. A simultaneous approach to market segmentation and market structuring. *Journal of Marketing Research* 24, 139–153.
- Harris, L., Goode, M., 2004. The four levels of loyalty and the pivotal role of trust: a study of online service dynamics. *Journal of Retailing* 80, 139–158.
- Inman, J., Shankar, V., Ferraro, R., 2002. You Are Where You Shop: Channel Associations and the Drivers of Cross-Channel Variation in Shopping Behavior. Report no. 02-117, Marketing Science Institute, Cambridge.
- Jacoby, J., Chestnut, R., 1978. *Brand Loyalty: Measurement and Management*. New York.
- Kim, Y.-K., 2002. Consumer value: an application to Mall and Internet shopping. *International Journal of Retail and Distribution Management* 30, 595–602.
- Kuttner, R., 1998. The net: a market too perfect for profits. *Business Week* 3577 (May 11), 20.
- Law, G., 2005. Jewelry leads pack as holiday web sales surge. *National Jeweler*, February 1, http://nationaljeweler.com/nationaljeweler/search/search_display.jsp?vnu_content_id=1000789598&imw=Y.
- Lilien, G., Kotler, P., Moorthy, K., 1992. *Marketing Models*. Englewood Cliffs, NJ.
- Lim, J., Currim, I., Andrews, R., 2005. Consumer heterogeneity in the longer-term effects of price promotions. *International Journal of Research in Marketing* 22, 441–457.
- McCarthy, P., Kannan, P., Chandrasekharan, R., Wright, G., 1992. Estimating loyalty and switching with an application to the automobile market. *Management Science* 38, 1371–1393.
- Mellens, M., Dekimpe, M., Steenkamp, J., 1996. A review of brand loyalty measures in marketing. *Tijdschrift voor Economie en Management* 4, 507–533.
- Morrison, P., Roberts, J., 1998. Matching electronic distribution channels to product characteristics: the role of congruence. *Journal of Business Research* 41, 223–230.
- Oliver, R., 1999. Whence consumer loyalty? *Journal of Marketing* 63 (4), 33–44.
- Portnoy, C., Colvin, K., 2005. NPD survey indicates housewares and home improvement gift items to round out holiday shopping lists. NPD Press Release, November 21, http://www.npd.com/dynamic/releases/press_051121c.html.
- Radwick, D., 2005. NPD reports the internet is the fastest growing channel for beauty products. NPD Press Release, June 29, http://www.npd.com/dynamic/releases/press_050629.html.

- Reardon, J., McCorkle, D., 2002. A consumer model for channel switching behavior. *International Journal of Retail and Distribution Management* 30, 179–185.
- Reichheld, F., Scheffer, P., 2000. E-loyalty—your secret weapon on the web. *Harvard Business Review* 78 (4), 105–113.
- Srinivasan, S., Anderson, R., Ponnabolu, K., 2002. Customer loyalty in E-commerce: an exploration of its antecedents and consequences. *Journal of Retailing* 78, 41–50.
- Steenkamp, J.-B., Dekimpe, M., 1997. The increasing power of store brands: building loyalty and market share. *Long Range Planning* 30, 917–930.
- Terech, A., Bucklin, R., Morrison, D., 2003. Consideration, choice and classifying loyalty. Working Paper, The Anderson Graduate School of Management at UCLA.
- Vishwanath, V., Mulvin, G., 2001. Multi-channels: the real winner in the B2C internet wars. *Business Strategy Review* 12, 25–33.
- Wallace, D., Giese, J., Johnson, J., 2004. Customer retailer loyalty in the context of multiple channel strategies. *Journal of Retailing* 80, 249–263.
- Yim, C., Kannan, P., 1996. Consumer behavior loyalty: a segmentation model and analysis. Working Paper, Rice University.