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The effects of introducing and terminating loyalty programs

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Abstract

Purpose – The goal of this paper is to empirically investigate the effects of an loyalty program (LP) introduction and termination, accounting for simultaneous effects of LP designs, cross-customer effects and competition effects. Despite firms across the globe spend billions of dollars on LPs, it is not clear: whether these programs enhance customer loyalty, what happens if a program is terminated and which LP design elements enhance effectiveness of LPs.

Design/methodology/approach – The authors empirically investigate to what extent the effects of introducing and terminating a LP depend on: its monetary and non-monetary design elements, customer characteristics and competition. The empirical evidence is based on a bivariate hierarchical linear model, using a large-scale dataset involving 9,783 consumers rating 24 different LPs across eight industries.

Findings – While the characteristics of LP are more important in influencing customer behavior when they join the LP, the competitive environment and the duration of membership in an LP are the primary drivers of customer reactions to LP termination. Non-monetary discrimination between members and non-members is a more powerful tool in creating customer loyalty than offering higher discounts or saving points. The effect of discrimination on loyalty sustains when an LP is terminated.

Research limitations/implications – This is the first research to empirically investigate the effect of an LP termination, accounting for simultaneous effects of LP designs and competition effects. The authors measured behavioral intentions in a hypothetical case of LP termination. Future research could assess the effects of LP termination and the moderating role of both monetary and non-monetary design elements on other behavioral loyalty variables based on, e.g. household panel data, when such data on LP terminations across industries becomes available.

Practical implications – When a firm considers the introduction of an LP or changing an existing one, non-monetary discrimination between members and non-members seems to be the most effective tool in building sustainable customer loyalty. Further, offering a relatively low saving rate is a viable way to keep costs down because the savings percentage does not significantly affect loyalty. For the same reason, firms can also consider reducing or eliminating LP-based discounts. The competitive environment and the duration of membership in an LP are the primary drivers of customer reactions to LP termination.

Originality/value – To the best of authors' knowledge, the potential effects of LP termination have not been addressed in the current literature. The authors empirically assess the effects of LP termination and effects of those programs at the introduction. Understanding the factors that moderate the potential negative impact of terminating an LP is of crucial importance to managers and researchers alike. The paper is of great value for firms that consider introducing, modifying or terminating an LP.

Keywords Customer loyalty, Loyalty schemes

Paper type Research paper



Introduction

In the USA alone, firms distribute an estimated USD48 billion per year in loyalty programs (LPs) points and rewards (Altair, 2012). Despite these expenditures and an abundance of LPs, actual consumer loyalty has been on the decline since 2008 (Deloitte, 2011). Therefore, it is not surprising that many firms have reconsidered the value of their LPs. As a result, several firms across the globe have decided to terminate their LPs, e.g. supermarkets: Safeway (USA), Edah, Jan Linders, Coop (The Netherlands) and Coles (Australia); and banks: ABN Amro (The Netherlands). Other firms are concerned that terminating their LP may backfire (Wagner *et al.*, 2009). In a review of LPs, Uncles *et al.* (2003, p. 310) concluded:

[...] once these programs have been introduced, managers seem very reluctant to cancel them – even if their claimed benefits are not being realized. For example, there are persistent rumors that many airlines would like to end their frequent-flyer programs if they could find an acceptable way to do this.

Yet, it is largely unknown what the effects of discontinuing an LP actually are[1].

There is only anecdotal evidence concerning the effects of discontinuing an LP. In 1992, Shell terminated its LP in The Netherlands, which caused an adverse response from its clientele. After a 2 per cent revenue loss corresponding to €45.5 million, the firm apologized publicly and reinstated the LP (De Jong, 1993). In addition to lost revenues, some firms faced other consequences from their frustrated customers. When Continental Airlines downgraded its LP, a \$100 million loss and a lawsuit by upset customers followed (Kumar and Reinartz, 2005). Similarly, following the termination of Subway's Sub Club, frustrated consumers started an online petition to reinstate the LP (Ogles, 2005). Hence, there are case-based empirical indications that terminating an LP could have negative consequences for a firm. However, to the best of our knowledge, the issue has not been addressed in a systematic way, while understanding the factors that moderate the potential negative impact of *terminating* an LP is of crucial importance to managers and researchers alike.

Prior research has looked at the effects of *introducing* or *maintaining* LPs. These effects were shown to depend on the LP design (Drèze and Nunes, 2009; Kivetz and Simonson, 2002, 2003; Zhang and Breugelmans, 2012). Particularly, an LP may have monetary (e.g. savings and discounts) and/or non-monetary elements (e.g. extra service and preferential treatment). However, a call in the literature to broaden research on LP to account for effects of LP designs and cross-customer effects (Henderson *et al.*, 2011) remains unaddressed to date.

Further, while the importance of both monetary and non-monetary elements of LPs has been stressed (Gustafsson *et al.*, 2005; Oliver, 1999), empirical studies on LP effectiveness have exclusively focused on monetary elements of LPs. The literature has looked at the effects of savings points (Bagchi and Li, 2011; Nunes and Drèze, 2006; van Osselaer *et al.*, 2004), discounts (Zhang *et al.*, 2000), cash rewards (Kim *et al.*, 2001) or their combinations (Drèze and Nunes, 2004). These elements of LP design create monetary benefits for customers which presumably increase switching barriers and enhance loyalty. The problem with these elements is that they are usually costly for the firm (Meyer-Waarden, 2008), while the effects of terminating such LPs remain unclear.

Non-monetary elements of LPs have received scant attention in the literature. The customer relationship management (CRM) literature (Rust *et al.*, 2004; Verhoef, 2003)

suggests that implementing relationship-oriented strategies may enhance behavioral loyalty via changes in customer attitudes. Such strategies put more emphasis on the quality of interactions between firms and customers. We assert that LPs may improve the interaction quality between firms and customers due to two non-monetary elements: *discrimination* and *customization*. Non-monetary *discrimination* means that a firm treats its LP members differently from non-members (van Heerde and Bijmolt, 2005) by offering them extra services and special events (e.g. extra shopping evenings) that do not provide direct monetary benefits. Non-monetary *customization* means that the non-monetary rewards are adapted to the individual's needs rather than being standardized across all members (Coviello *et al.*, 2002). Hence, it captures differentiation *among* members (e.g. elite members of airlines board a plane first). Both types of non-monetary elements make a customer feel special. In the case of discrimination between members and non-members, the psychological benefits to consumers comes from their sense of belonging to the in-group (Bhattacharya and Sen, 2003), while in case of customization, it comes from a sense of being recognized and treated as an "individual" (Baumeister and Leary, 1995). Although, discrimination and customization are often implemented as parts of LPs, it is unknown whether these elements create loyalty.

Overall, the paper makes the following contribution. First, we address a recent call in the literature to investigate effects of LP's introduction and termination (Dorotic *et al.*, 2012) by examining the impact of *both introducing* and *terminating* an LP on stated loyalty. To the best of our knowledge, we are the first to empirically address *both* stages of an LP. Second, we empirically investigate to what extent the effects of introducing and terminating an LP depend on its monetary and non-monetary design elements and customer characteristics. We provide empirical evidence based on a bivariate hierarchical linear model, using a large-scale dataset involving 9,783 consumers rating 24 different LPs across eight industries. This contrasts with extant research on LPs that has either focused on one specific industry (Leenheer *et al.*, 2007; Meyer-Waarden, 2007) or one specific LP (Reinartz and Kumar, 2003; Zhang and Breugelmans, 2012).

Theoretical background

Customer loyalty

From an economic point of view, customer loyalty is irrational because it implies that people stick to the status quo despite having an opportunity to switch to a better option, even when the price difference covers the switching costs (Oliver, 1999). Such "irrational" loyal behavior may include, for example, increasing expenditure, knowing that it would not be rewarded (Lal and Bell, 2003) or voluntarily choosing to pay a higher price for the same product (Chaudhuri and Holbrook, 2001). Therefore, it is not surprising that in marketing, loyalty is often viewed in terms of specific behavioral outcomes. These outcomes include at least one of the following: an increase in expenditure, increase in basket size, acceleration of purchase frequency, decrease in price-sensitivity, increase in share of wallet or in share of category requirements, increased retention rate, increased membership duration and an increase in positive word-of-mouth (Kumar and Reinartz, 2005).

Because this research involves real consumers and investigates the cross-section of LPs across different industries, it was important to select a loyalty measure that is comparable across industries and understandable to real consumers. Thus, in this paper

loyalty is operationalized in terms of *behavioral intentions* regarding expenditures and retention likelihood. We focus on behavioral intentions (rather than attitude) because they have a stronger link to managerial performance measures, such as sales.

Effects of introducing an LP

An LP is “an integrated system of marketing actions that aims to make member customers more loyal” (Leenheer *et al.*, 2007, p. 32). The main goal of an LP is to create or enhance customer loyalty. Ideally, an LP not only enhances loyalty to the program but also toward a firm (Yi and Jeon, 2003), which implies that the desired deviation in loyalty will be sustained even after an LP is discontinued (Dick and Basu, 1994; Oliver, 1999). Thus, to the extent that an LP motivates customers to change their behavior, a firm can expect a change in customer loyalty levels. The pressing question is: in what direction and how significant would this change be in both cases of introduction and termination of an LP?

Extant studies in marketing have focused on change in loyalty after an LP has been introduced (see Dorotic *et al.*, 2012; Melnyk, 2011 for the overview) and present mixed empirical evidence with respect to LPs effectiveness. While some studies report zero effects of LPs on loyalty (DeWulf *et al.*, 2001; Sharp and Sharp, 1997), other studies found positive effects (Lewis, 2004; Liu, 2007; Meyer-Waarden, 2007, 2008). Further, grocery LPs were shown to generate short-term behavioral changes on their introduction, but failed to influence long-term changes in attitudes and commitment (Meyer-Waarden and Benavent, 2009). These inconsistencies in findings could be explained partly by methodological differences of the corresponding studies but also by the fact that LPs differ in their effectiveness.

There seem to be an agreement that an LP’s design and consumer-related factors (Drèze and Nunes, 2004, 2009; Kivetz and Simonson, 2002, 2003) are largely responsible for an LP’s effectiveness. Yet, to the best of our knowledge, none of the studies investigated the aggregate impact of LP across multiple LPs from different industries with different design elements and consumer characteristics. Hence, it is time to examine the impact of LPs across a wide range of firms varying in LP design and industry.

Figure 1 presents our framework. We investigate across 24 different LPs from eight different industries the effects of two groups of factors influencing loyalty in case of LP *introduction* and *termination*:

- (1) LP design (both monetary and non-monetary design elements).
- (2) Consumer characteristics (demographics and psychographics).

Effects of LP design elements on customer loyalty at LP introduction

Monetary elements. There are several reasons to expect positive effects from monetary elements of LPs. First, by providing direct financial benefits to customers, monetary elements, such as discounts, can stimulate customer purchases (van Heerde and Bijmolt, 2005). Second, particularly a savings feature may enhance behavioral loyalty by creating switching costs (Corstjens and Lal, 2000). Third, customers might attribute the received discount to their own effort, which induces positive emotions and stimulates customers to re-patronize the firm (Kivetz, 2005). Finally, consumers tend to overestimate the value of the reward they obtain from LPs (van Osselaer *et al.*, 2004), which also enhances loyalty.

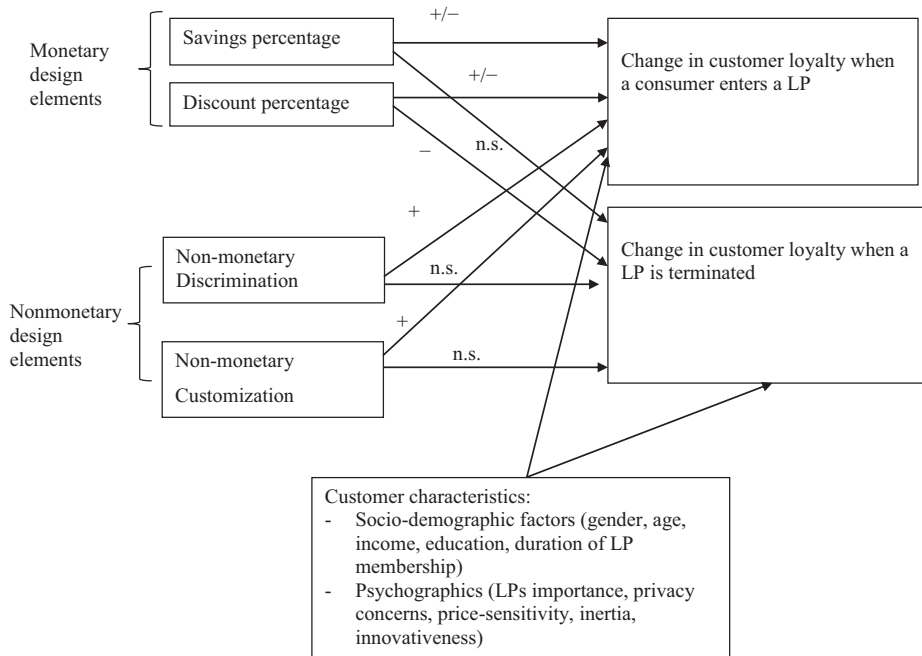


Figure 1.
Conceptual
framework

On the other hand, monetary rewards train consumers to become more sensitive to deals (Rothschild and Gaidis, 1981). Thus, getting a deal (discounts or points) in one firm stimulates a customer to search for further deals, resulting in interchangeable usage of multiple loyalty cards from different firms (Oliver, 1999). Discounts especially prime consumers to pay more attention to price and encourage them to search several places for the best deals rather than staying with one firm (Yi and Jeon, 2003).

Consistent with the conflicting theoretical predictions, the empirical evidence addressing effects of monetary elements on loyalty is also mixed. Some studies found that monetary rewards have a positive impact on different aspects of behavioral loyalty (Bolton *et al.*, 2000; Meyer-Waarden, 2008). Others report insignificant effects of monetary elements on loyalty (Ailawadi *et al.*, 2001; Leenheer, *et al.* 2007; Liu, 2007). Further, some studies suggest that consumers may not even be motivated enough to process the information about saving points (Dorotic *et al.*, 2011).

Due to the conflicting evidence, we refrain from formulating the directional hypothesis with respect to the effect of discounts and saving feature once consumers join the LP and will treat their separate effects on customer loyalty as empirical questions.

Non-monetary elements. The CRM literature suggests that customers should be targeted in a more personal way, which creates trust and enhances their loyalty (DeWulf *et al.*, 2001; Rust and Verhoef, 2005). LPs allow firms to develop customer databases, enabling more personal relationships with customers (Kumar and Reinartz, 2005; Rust and Chung, 2006). We distinguish two ways that facilitate more personalized relationships within an LP: *discrimination* and *customization*.

Discrimination captures the non-monetary differentiation between LP members and non-members. This implies that a firm provides extra non-monetary benefits to members only (Reinartz and Kumar, 2000; van Heerde and Bijmolt, 2005). These benefits might include extra services for members and members-only events. This type of discrimination gives the customer a feeling of belonging to a special group. Studies in psychology reveal that even arbitrary categorization of people into groups is sufficient to produce inter-group behavior and enhance loyalty (Tajfel *et al.*, 1971). Therefore, we expect that:

H1. Non-monetary discrimination between LP members and non-members has a positive effect on loyalty at the LP introduction.

Customization means that a firm treats individual (or groups of) LP members differently (Drèze and Nunes, 2009; Thomas *et al.*, 2004). For example, firms can send a personalized clearance sale flyer to price-sensitive LP members and a new collection flyer to price-insensitive members (Meyer-Waarden, 2007). This implies that the (non-monetary) rewards or communication that an LP member receives are adapted to the individual's needs and behaviors rather than being standardized across all members (Coviello *et al.*, 2002). The theory of the fundamental need to belong (Baumeister and Leary, 1995) suggests that a stable commitment can only be achieved if a consumer believes that the firm cares about him/her personally. Consistently, research suggests that consumers respond positively to personalized experience (Rust and Verhoef, 2005), and customization may enhance loyalty by increasing perceived service quality, satisfaction and trust (Coelho and Henseler, 2012). Therefore:

H2. Non-monetary customization within an LP has a positive effect on loyalty at the LP introduction.

Effects of terminating an LP

While in case of an LP introduction, when a customer joins an LP he/she is an active decision-maker who knows the terms of the program and makes an active decision to join; in case of an LP termination, it is the firm that decides to terminate the LP and a customer has to react to this decision. The difference between those processes is likely to result in asymmetric responses to LP introductions and terminations from customers. Prospect theory (Kahneman and Tversky, 1979) suggests that losses loom larger than gains. Terminating an LP or removing benefits that consumers enjoyed represents a loss from a consumer's point of view, leading to decreased loyalty toward the firm. Consistently, Lewis (2004) concluded that terminating an LP for an online grocery and drugstore merchant would result in a drop of about \$13 in revenue per customer per week. Similarly, research on customer status demotion suggests that when a firm changes the terms of an LP, the negative impact of status decreases is stronger than the positive influence of status increases (Drèze and Nunes, 2009; Wagner *et al.*, 2009).

Importantly, the decrease in loyalty upon an LP termination may apply to any LP independent of whether or not it generated an increase in loyalty at its onset. Thus, in case of an LP termination, loyalty may even decrease below the level it was before the LP existed:

H3. On average, termination of an LP has a negative effect on customer loyalty.

Effects of LP design elements on customer loyalty at an LP termination.

Because losses loom larger than gains (Kahneman and Tversky, 1979), the more a customer enjoyed a specific element of an LP, the more likely terminating an LP with this element is going to reduce loyalty. Because an LP's design elements are usually liked by consumers, removing those elements is unlikely to result in increases in loyalty (unless a store completely changes its format). Hence, the most desirable realistic effect for those design elements upon LP termination is "no effect" rather than a negative effect. Yet, as the psychological drivers behind the effect of monetary and non-monetary elements of LP differ in nature (i.e. rewards-related drivers for the monetary benefits versus sense of belonging or recognition-related drivers for the non-monetary ones), losing those elements may have a different impact on loyalty.

Saving points stimulate consumer inertia by creating additional switching costs (Corstjens and Lal, 2000). Even if the savings feature is removed, habits created by inertia may still provide a memory advantage over competitors (Wood and Neal, 2009). Therefore, we expect:

H4. Savings feature has no significant effect on customer loyalty in case of an LP termination.

Discounts prime consumers to become more price-sensitive over time (Yi and Jeon, 2003). Hence, removing this feature after consumers have experienced it is likely to decrease loyalty, especially for price-sensitive customers. Scattered empirical research provides support for this idea. For example, Zhang and Breugelmans (2012) found that a switch from an LP using discounts to an LP where price discounts were replaced by reward points resulted in a significant reduction in total spending by LP's current members. Therefore, we expect:

H5. Discounts feature has a negative effect on customer loyalty in case of an LP termination.

Consumer's perceptions of their preferential treatment are positively related to their sense of commitment toward the firm (Lacey *et al.*, 2007). As consumers experiencing *discrimination* and/or *customization* over time, their commitment to the firm may grow, and as a result, their loyalty may sustain in the event of an LP termination (Oliver, 1999). Although research on customer status demotion suggests that the negative impact of status decreases is stronger than the positive influence of status increases (Wagner *et al.*, 2009), the effect of status is largely driven by status comparison (Drèze and Nunes, 2009). Hence, unless an LP has an explicit status feature that activates the status comparison among different tiers of customers, the negative effect of the LP termination is likely to be reduced. Therefore:

H6. Non-monetary discrimination between members versus non-members has no effect on customer loyalty in case of an LP termination.

H7. Non-monetary customization within LP has no effect on customer loyalty in case of an LP termination.

Controlling for effects of consumer characteristics on customer loyalty

We expect that consumer characteristics moderate the change in loyalty due to LP introduction and termination. We also expect a number of interaction effects between

consumer characteristics and LP design elements. Rather than studying all possible interactions, we focus on those with a strong theoretical foundation and high managerial relevance.

Socio-demographic characteristics. Research suggests that men seek relationships with firms more than women because men are (more than women) focused on group-based (as opposed to one-on-one-based) relationships (Melnyk *et al.*, 2009). Thus, we expect men to be generally more responsive to LPs than women. We also expect an interaction effect: with women to respond more to customization features because these may create a feeling of a more personalized relationship with a firm (Melnyk and van Osselaer, 2012).

Because younger people can more easily adjust their behaviors to a new situation (Lambert-Pandraud *et al.*, 2005), we expect them to be more responsive to LPs both at their introduction and termination. We expect education and income to influence consumer's responses to LPs because they enhance the cognitive and financial ability (respectively) to benefit from LPs. We also expect an interaction effect: higher educated customers are more likely to interpret a customization feature of an LP as a firm's attempt to influence their behavior, which could give rise to a higher reactance (Kivetz, 2005). Hence, they can react more negatively to the LP introduction and more positively to the LP's termination than lower-educated consumers. Based on the economic theory, we also expect another interaction effect: the higher the discounts of an LP that is terminated, the stronger the adverse effect on loyalty for lower-income earners.

Psychographic characteristics. Consumer *inertia* may reduce the response to LPs both at the LP's introduction and termination stages (Seetharaman and Chintagunta, 1998). In contrast, *innovativeness* may stimulate consumers to explore a larger variety of LPs (Theoharakis and Hooley, 2008). *Privacy concerns* may dampen consumer's responsiveness to LPs (Rust and Chung, 2006). We expect *price-sensitive* customers to be more influenced by an LP (Taylor and Neslin, 2005). Finally, we expect that consumer's general *predisposition toward LPs* is likely to enhance their responses to an individual LP (Chandon *et al.*, 2000).

Method

Data

To study the effects of an LP design and consumer characteristics on customer loyalty at LP entry and termination, we used a large-scale survey conducted in The Netherlands (finalized in June 2005). Eight large firms from different industries (food, telecom, oil, financial services, utilities and retail) participated in the project. The sample for our study has been randomly drawn from the customer databases of these eight firms with a total of 120,000 customers. Each firm has already been in existence for many years and serves a very broad, general market. Hence, it is appropriate to assume that the sample closely matches the national population. These customers were contacted by e-mail. The response rate was just over 8 per cent, which is a common response rate for Internet-based surveys (Alreck and Settle, 2004). Unfortunately, 323 respondents did not provide answers to one or more of the four dependent variables, typically because they did not make a selection among the set of 24 LPs (see below). These cases were omitted from the analysis. Less than 10 per cent of the cases had missing values on one or more independent variables. These missing values are coded by a separate category "unknown" (for income) or replaced by the mean (for education level) or the mode (for all

other independent variables). The final sample consists of 9,795 respondents (40.2 per cent female), with customers from all age groups, income and education levels. As several LPs across the eight industries had been terminated in the decade before the survey, the respondents have experienced LPs termination directly or indirectly.

First, respondents answered questions on a variety of topics, including a section on demographic variables and questions probing the overall attitude toward LPs. Next, respondents chose 1 of the 24 listed LPs, of which they were members and answered specific questions related to this program. These 24 LPs represent the most well-known LPs in The Netherlands and cover different product categories, e.g. gas stations, department stores, airlines, clothing stores and supermarkets. The firms that owned these LPs existed for many years before they introduced the LPs during the decade preceding data collection. We catalogued the design of each of the LPs using booklets about the LPs and, if necessary, consultations with their management. The coding of the information is described in the Elements of LP Design section.

Customer loyalty (dependent variables)

We measured two customer loyalty constructs. First, *Change in Loyalty at LP entry* was measured using two items: "After you joined the LP, were you more or less likely to remain a customer of this firm?" (five-point scale: 1 = "it became much less likely"; 3 = "no change"; 5 = "it became much more likely") and "After you joined the LP, did you start spending more or less at this firm?" (five-point scale: 1 = "I started to spend much less"; 3 = "no change"; 5 = "I started to spend much more"). The Cronbach's α of the scale was 0.70, thus the average of the two items is a reliable measure of the change in individuals' behavioral loyalty after entering the LP. Similarly, the change in loyalty due to the hypothetical LP termination was measured using two items: "If the firm stops the LP, would it become more or less likely that you would remain a customer of this firm?" (five-point scale: 1 = "it would become much less likely"; 3 = "no change"; 5 = "it would become much more likely") and "If the firm stops the LP, would you start spending more or less at this firm?" (five-point scale: 1 = "I would start to spend much less"; 3 = "no change"; 5 = "I would start to spend much more"). The Cronbach's α of the scale representing the *Change in Loyalty at LP termination* was 0.80. As expected, the two loyalty constructs are negatively correlated (-0.46).

Elements of LP design

We used a *savings percentage* variable that measures the monetary value of the savings points received relative to the amount spent. Similarly, we use a *discount percentage* variable that measures the direct monetary discount relative to the amount spent. If an LP offers extra services or special events for members only, we coded the dummy for *discrimination* as 1 (otherwise 0). If an LP provides special offers tailored to individual members' interests or shopping behavior and/or there is personalized communication to the members, we coded the dummy for *customization* as 1 (otherwise, 0). As none of the LPs in our dataset had monetary benefits differing among members, our construct measures *non-monetary customization*.

The LPs in our study differ considerably in their design. While savings points was a very common element (23 of the 24 LPs), the value of the points being saved ranged from 0.5 to 6.1 per cent of the expenditures with an average of 2.5 per cent. The discounts were less common (8 of the 24 LPs); the discount percentage ranged from 2 to 10 per cent, with

an average of 4 per cent. Under half of the LPs used customization or discrimination (11 of the 24 LPs), while 8 LPs had them both.

Consumer characteristics

To eliminate possible alternative explanations and to account for heterogeneity of customers, we measured several consumer characteristics (Figure 1). We have measurements of the following socio-demographic factors: gender, age (three groups: 34 year or younger, 35-54 year and 55 year or older), income (yearly net household income in four groups: <€40,000; between €40,000 and €60,000, above €60,000 and unknown), and level of education (number of years of education completed and mean-centered). Furthermore, we controlled for the amount of time a customer was a member of a particular LP because it is possible that it takes customers time after joining the LP to show enhanced loyalty. We expect that this would be most relevant for the LPs with savings features because consumers would need to experience accumulating and redeeming points to adjust their behavior.

We measured the psychometric variables as follows. *LPs importance* in general was measured by two items (Cronbach's $\alpha = 0.82$): "Participation in an LP gives me the feeling that I am special" and "Possession of a loyalty card gives me a feeling of being a regular customer". *Privacy concerns* were measured by two items (Cronbach's $\alpha = 0.68$): "I dislike that firms can get information about my shopping behavior via an LP" and "LPs infringe my privacy because of the registration system". *Price-sensitivity* was measured by two items (Cronbach's $\alpha = 0.82$): "I am very price-sensitive and often remember prices well" and "I often buy products because they are on sale". *Innovativeness* was measured by two items (Cronbach's $\alpha = 0.79$): "If there is a new product on the market, I often buy it right away" and "I always try new products". *Inertia* was measured by three items (Cronbach's $\alpha = 0.57$): "I always buy the same brands", "If I do not know the brand or firm, I do not buy the product" and "I never change my brand or product choice decision". All psychometric items were measured on five-point Likert scales (1 = strongly disagree; 5 = strongly agree).

As the effect of multiple independent variables was examined simultaneously, we assessed the collinearity between these variables. The correlations (Pearson correlations or Spearman's rho) between variables were generally low (see Table I). The maximum variance inflation factor across all of the independent variables was 3.62, well below 10 (Hair *et al.*, 2006, p. 193); thus, multicollinearity was not a critical problem in our study.

To account for industry effects, we control for *LP penetration*. Seven experts on customer loyalty management provided judgments on the percentage of firms with LPs within each industry. The Cronbach's α for these seven expert judgments was 0.93, so we took the average ratings for *LP penetration*. Values ran from 13 per cent for food specialty stores to 81 per cent for gas stations.

The study design controls for common method bias (Podsakoff *et al.*, 2003) in two different ways. First, the variables at the LP-level and at the consumer-level have been collected from different sources. Second, in the questionnaire, the dependent variables are clearly separated from the independent consumer-level variables and also use other types of items and scales.

Table I.
Descriptive statistics
for the dependent
and independent
variables

Variable	Mean ^a	SD	Correlations between variables (columns and rows in the same order) ^b																
			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
<i>Independent variables</i>																			
Intended behavior change at LP entrance (A)	3.56	0.64																	
Intended behavior change at LP termination (B) termination(A)(A)	2.50	0.68	-0.46																
<i>LP characteristics</i>																			
Savings percentage (C)	1.22	1.26	0.07	0.03															
Discount percentage (D)	1.15	1.86	-0.08	0.06	-0.33														
Discrimination element (yes = 1) (E)	0.60	0.49	0.05	-0.02	0.54	-0.71													
Customization element (yes = 1) (F)	0.30	0.46	0.00	0.01	-0.40	0.70	-0.41												
LP penetration rate (C)	0.69	0.17	0.04	-0.09	-0.25	-0.62	0.50	-0.76											
<i>Consumer characteristics</i>																			
Gender (male = 1) (H)	0.60	0.49	0.06	-0.09	0.02	-0.09	0.01	-0.08	0.12										
Age category (I)	2		-0.01	0.02	0.08	-0.10	0.09	-0.09	0.09	0.17									
Income category (J)	2		0.11	-0.09	0.10	-0.13	0.15	-0.04	0.09	0.15	0.28								
Education (in years) (K)	0.00	2.48	0.10	-0.11	0.02	0.04	0.02	0.12	-0.03	0.11	-0.04	0.31							
LP membership category (L)	3		0.01	-0.08	0.12	-0.25	0.23	-0.26	0.30	0.08	0.33	0.22	0.01						
Price-sensitivity (M)	0.00	0.79	0.03	-0.11	-0.02	-0.04	0.00	-0.05	0.05	0.08	0.00	-0.06	-0.00	0.05					
LPs importance (N)	0.00	0.95	0.25	-0.08	0.09	-0.04	0.07	-0.01	-0.00	-0.02	0.07	-0.05	-0.17	0.03	-0.01				
Privacy concerns (O)	0.00	0.93	-0.15	0.06	-0.02	0.01	-0.02	-0.01	0.00	0.01	0.04	-0.01	-0.01	0.01	0.07	-0.10			
Inertia (P)	0.00	0.65	0.05	0.01	0.01	-0.02	0.02	-0.03	0.02	0.11	0.08	0.01	-0.08	0.06	-0.05	0.23	0.05		
Innovativeness	0.00	0.85	0.10	-0.04	-0.01	0.02	0.00	0.02	-0.00	-0.05	-0.08	0.01	-0.06	0.01	-0.03	0.22	-0.02	0.21	

Notes: ^aFor variables with multiple categories, this column refers to the median; ^bFor correlations with at least one categorical variable, this column refers to Spearman's rho

Analysis

To test the effect of the LP design and consumer characteristics on loyalty, we investigated changes in behavioral intentions between when a consumer entered an LP (first dependent variable) and when the LP was hypothetically terminated (second dependent variable). To accommodate the nested nature of the data, we estimated a bivariate hierarchical linear model (Raudenbush and Bryk, 2001; Snijders and Bosker, 2012):

$$\begin{pmatrix} \text{Change in Loyalty at LP entry}_{jk} \\ \text{Change in Loyalty at LP termination}_{jk} \end{pmatrix} = \begin{pmatrix} X'_{jk}\beta_1 \\ X'_{jk}\beta_2 \end{pmatrix} + \begin{pmatrix} v_{k1} \\ v_{k2} \end{pmatrix} + \begin{pmatrix} u_{jk1} \\ u_{jk2} \end{pmatrix}$$

where Change in Loyalty at LP entry_{jk} is the extent to which consumer *j* changed her/his behavioral loyalty due to entering LP *k*, and Change in Loyalty at LP termination_{jk} is the extent to which consumer *j* would change her/his behavioral loyalty if LP *k* were terminated. Vector X'_{jk} includes an intercept and the LP design and consumer characteristics. The random effects v_{k1} and v_{k2} capture unobserved LP characteristics. The disturbance terms u_{jk1} and u_{jk2} follow bivariate normal distributions, accounting for correlations between the two dependent variables. Given the multilevel structure of the data (consumers nested within LPs), we use MLwiN 2.17 (Rasbash *et al.*, 2009) for the analyses.

The study design resulted in a sample size of 9,795 consumers, nested within 24 LPs. Hence, the sample size at the consumer-level is very large, leading to a high statistical power (Snijders and Bosker, 2012). The sample size at the LP-level is much smaller, though relatively large compared to all existing studies on LP effects. As a result, the statistical power to find significant differences between the LPs will be relatively low (Snijders and Bosker, 2012). Yet, Maas and Hox (2005) showed that the estimates of the regression coefficients (β 's) and the standard errors of these coefficients will not be biased. Therefore, the study design (sample, variables and analysis) is adequate for testing the hypotheses.

Results

Table II shows the results of the bivariate hierarchical linear model. The model fits significantly better than the baseline model with only a random intercept (chi-square = 1,304.13; *df* = 36; *p* < 0.001). Apart from the main effects model, we have studied the interaction effects. These interactions were included one by one in the model (Table III displays the results).

The effects of entering an LP

For the dependent variable "Change in Loyalty at LP entry", we found that neither the discount percentage nor savings percentage had a significant positive main effect (both *p*-values > 0.05). However, discrimination between members and non-members does enhance loyalty ($\hat{a} = 0.11$; *p* < 0.05). In contrast, customization does not have a significant effect (*p* > 0.10) on loyalty. However, we find a significant interaction effect between customization and education in the expected direction, implying that customization is less effective for higher educated customers, consistent with the reactance effect (Kivetz, 2005).

Table II.
Results of the hierarchical linear model: The main effects of LP characteristics and consumer characteristics on behavioral intentions (customer loyalty)

	Dependent variable: change in behavioral intentions			
	When the consumer entered the LP		If the LP is terminated	
	Parameter estimate	Standard error	p-Value	p-Value
<i>Independent variables</i>				
Constant	3.446***	0.120	< 0.001	2.827***
				0.117
<i>LP characteristics</i>				
Savings percentage	-0.008	0.017	0.638	0.003
Discount percentage	-0.019*	0.011	0.084	0.006
Discrimination element (yes = 1)	0.111**	0.055	0.044	-0.001
Customization element (yes = 1)	-0.005	0.054	0.926	0.003
LP penetration rate	0.228	0.141	0.106	-0.444***
				0.137
<i>Consumer characteristics</i>				
Gender (male = 1)	0.042***	0.013	0.001	-0.086***
Age (35 to 54 years = 1)	-0.046***	0.015	0.002	0.025
Age (55 years or older = 1)	-0.031	0.020	0.121	0.100***
Income (below €40K = 1)	-0.006	0.021	0.775	0.011
Income (€40-60 K = 1)	0.055***	0.021	0.009	0.012
Income (above €60K = 1)	0.122***	0.022	< 0.001	-0.069***
Education (in years)	0.027***	0.003	< 0.001	-0.027***
LP membership (3 to 5 years)	-0.035*	0.019	0.065	-0.047**
LP membership (5 to 8 years)	-0.027	0.019	0.155	-0.079***
LP membership (8 years or more)	-0.008	0.020	0.689	-0.127***
Price sensitivity	0.032***	0.008	< 0.001	-0.089***
LPs importance	0.163***	0.007	< 0.001	-0.07***
Privacy concerns	-0.082***	0.007	< 0.001	0.037***
Inertia	-0.001	0.010	0.92	0.031***
Innovativeness	0.043***	0.008	< 0.001	-0.029***
				0.008

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%

Independent variables	When the consumer entered the LP		Dependent variable: intended change in behavior		If the LP is terminated	
	Parameter estimate	Standard error	<i>p</i> -Value	Parameter estimate	Standard error	<i>p</i> -Value
Gender (male = 1) (A)	0.052***	0.016	0.001	-0.121***	0.017	< 0.001
Customization (Z)	0.012	0.057	0.833	-0.059	0.055	0.283
Interaction A × Z	-0.033	0.027	0.222	0.112***	0.030	< 0.001
Income category, below €40 K (A)	-0.015	0.024	0.532	0.020	0.027	0.459
Income category, 40-€60 K (B)	0.055	0.025	0.028	0.009	0.027	0.739
Income category, above €60 K (C)	0.142**	0.025	< 0.001	-0.104	0.027	< 0.001
Discount percentage (Z)	-0.018***	0.015	0.230	0.001	0.015	0.947
Interaction A × Z	0.006	0.011	0.585	-0.004***	0.012	0.739
Interaction B × Z	-0.000	0.012	1.000	0.003	0.013	0.817
Interaction C × Z	-0.021**	0.012	0.080	0.037***	0.013	0.004
Education (A)	0.032***	0.003	< 0.001	-0.031***	0.003	< 0.001
Customization (Z)	-0.002	0.055	0.971	-0.000	0.053	1.000
Interaction A × Z	-0.020***	0.006	0.001	0.016***	0.006	0.008

Notes: *significant at 10%; **significant at 5%; ***significant at 1%; ^aOnly terms related to the interaction effect are reported. Other main effects are not substantially different from those in the main effects model (Table I)

Table III. Results of the hierarchical linear model: the interaction effects between LP characteristics and demographic variables^a

As anticipated, the effect of entering an LP on loyalty is larger for males than for females ($\hat{a} = 0.04$; $p < 0.01$). As expected, customers with higher incomes, higher educated people, price-sensitive customers and customers who generally appreciate LPs and more innovative customers are the types of customers that tend to increase their loyalty to a firm more after entering its LP ($p < 0.01$). In contrast, the more privacy concerns customers have, the less the change in loyalty ($\hat{a} = -0.082$; $p < 0.01$). Interestingly, consumers between 35 and 54 years of age are the age group that is the least responsive to an LP introduction. Conceivably, this age group is caught in life's rush hour of careers and children, and has least time available to respond to LPs.

The effects of terminating a LP

For the dependent variable "Change in Loyalty at LP termination", we find that the discount percentage and savings percentage do not have significant main effects ($p > 0.10$) on loyalty. However, as expected, we find a significant interaction between income and discount percentage (chi-square = 22.45; df = 6; $p < 0.001$): the higher the discounts of an LP that is terminated, the stronger the adverse effect on loyalty for lower income earners.

Neither customization nor discrimination has a significant main effect on loyalty if the LP stops (both p -values > 0.10). Thus, customers do not perceive the loss of these elements as being critical for changing their behavior toward the firm if an LP is terminated. The program's termination generally has a stronger negative effect on men than on women ($\hat{a} = -0.09$; $p < 0.01$). However, women perceive a larger negative impact for termination of LPs with customized elements: the interaction effect between gender and customization is significant: $\hat{a} = 0.112$; $p < 0.001$. This finding is consistent with Melnyk and van Osselaer (2012).

The level of LP penetration in an industry is a determinant of customer reaction to an LP termination ($\hat{a} = -0.44$, $p < 0.01$). Thus, consistent with Liu and Yang (2009) and manager beliefs (Leenheer and Bijmolt, 2008), we find that the larger the share of firms with LPs in a given industry, the stronger the loss a firm will experience if it terminates its LP.

Price-sensitivity has a negative effect on loyalty if the LP stops ($p < 0.01$), implying that price-sensitive customers are less likely to remain customers of a firm if its LP stops. Customers who generally perceive LPs to be important are more likely to decrease their loyalty to a firm when its LP is terminated ($\hat{a} = -0.07$; $p < 0.01$). For customers with strong privacy concerns, the termination of an LP has a small positive effect on loyalty ($\hat{a} = 0.04$; $p < 0.01$). Conceivably, they felt that the firm did not intend to violate their privacy anymore and focus on the benefits of the firm instead. We find a positive effect on loyalty for more inert consumers ($\hat{a} = 0.03$; $p < 0.01$). More innovative consumers are more likely to decrease their loyalty to a firm should it terminate its LP ($\hat{a} = -0.03$; $p < 0.01$). The negative impact of an LP termination would be strongest for customers who were members for a longer period ($\hat{a} = -0.047$, $p < 0.05$ for 3-5 years of LP membership; $\hat{a} = -0.079$, $p < 0.05$ for 5-8 years of LP membership).

Discussion

This paper investigates the effects of LPs on customer loyalty at the point when a consumer enters an LP and when the LP is terminated. Across 24 LPs and close to 10,000 respondents, our results suggest that overall, non-monetary discrimination between

members and non-members is more effective in building customer loyalty than monetary elements. Namely, offering services and special events for members only enhances loyalty at the LP introduction and this effect is sustained (i.e. does not decrease) when an LP is terminated. Interestingly, the saving percentage does not significantly affect loyalty, neither at the LP's start nor at its termination. The discount percentage does not enhance loyalty, yet higher discounts backfire for lower-income groups if an LP is terminated.

Theoretical implications

In addition to being the first study to empirically investigate how consumers are likely to react to an LP termination, this study contributes to the stream of recent literature highlighting that the design of an LP plays a critical role in its effectiveness (Liu and Yang, 2009; Melnyk and van Osselaer, 2012) by investigating the effects within monetary and non-monetary designs. Further, the literature indicates that key decisions on the LP management, such as LP structures (Kopalle *et al.*, 2012) and level of investments into individual members (Musalem and Joshi, 2009) depend on customer characteristics. This study contributes to these streams of literature by investigating the effects of customer characteristics on responses to LPs and customer sensitivity to different LP program design characteristics. For example, the results show that customization reduces the response to LPs (both at the introduction and termination) for higher educated consumers; while terminating an LP with a customization element especially reduces loyalty for women.

Finally, previous literature largely ignored the effects of competitive environment, while firms presumably decide on LP adoption and design by taking into account what competitors do. Our results suggest that while the characteristics of LPs are more important in influencing customer behavior when they join the LP, the competitive environment and the duration of membership in an LP are the primary drivers of customer reactions to LP termination.

Implications for LP management

LPs should ideally have a positive effect on customer loyalty at their introduction, and this effect should be sustained (and definitely not decrease below the pre-program level) if the program is discontinued. Our results suggest that realistically managers can expect a significant drop in loyalty in cases of LP termination. This drop is likely to be especially high if there is a higher share of other firms in the given industry with LPs.

When a firm considers introducing a new LP or the modernization of an existing LP, our results suggest that non-monetary discrimination between members and non-members seems to be the most effective tool in building loyalty. This is because it significantly increases loyalty after entering an LP and can be sustained if the LP is discontinued. While saving elements are common in LP, offering a relatively low saving rate is a viable way to keep costs down because the savings percentage does not significantly affect loyalty. For the same reason, firms can also consider reducing or eliminating LP-based discounts.

Firms should also find a way to minimize the privacy concerns of their customers (e.g. by giving a choice between an anonymous card and a personalized one).

When termination is unavoidable, firms should do it gradually, especially if it is an “older” LP based on a savings feature and is likely to have a higher share of long-term customers. It is advisable to ensure that customers (especially longer-term members) can still redeem all of their saved points as it may help to soften the negative effect of the termination.

Regarding consumer characteristics, while it appears to be relatively easy to enhance loyalty for men by introducing an LP, the corresponding size of the decrease in retention for men if an LP is discontinued is substantial too. Extra caution with female customers is needed when terminating an LP with a customization feature. Firms with a high concentration of price-sensitive customers should be aware that for these customers, the potential decrease in loyalty in case of an LP termination may very well outweigh the gain due to the LP introduction.

Limitations and future research. Our research, has limitations that offer potential avenues for future research. First, the data we used are of a self-reported nature, which could be subject to memory and social desirability biases. Moreover, we measured behavioral intentions in a hypothetical case of LP termination. Although behavioral intentions are often used in marketing as a good proxy for actual behavior (Kivetz and Simonson, 2002, 2003), and empirical evidence suggests that the *directions* of behavioral intentions are good predictors of the *directions* of actual behavior (Chandon *et al.*, 2005), intentions might differ from actual behavior. The self-reported data were collected by means of a single-wave survey method, which provides less evidence for causality of the relations compared to experimental or longitudinal studies. Further, some of the control variables (i.e. price-sensitivity and inertia) were measured using items from marketing practice, which have not yet been validated. Hence, more research is needed on the effects of LP termination on other loyalty variables (e.g. share of wallet and spending patterns) based on other research design (e.g. household panel data and laboratory experiments) and across different cultures.

Second, our paper focused on the benefit side of LPs. However, it is not clear if the increase in customer retention and spending is large enough to exceed an LP's costs to justify the LP at the firm level. Future research could address the match between costs and benefits of LPs.

Finally, although this research specifically focused on the non-monetary elements of LPs, both customization and discrimination can be realized both in non-monetary and monetary form (e.g. personalized discount coupons). This opens an interesting avenue for future research to investigate the effectiveness of monetary types of customization and discrimination within LPs.

To conclude, this study shows that the effects of LP introduction and termination are moderated by several of the LPs monetary and non-monetary design elements, as well as by consumer characteristics. We hope this study generates additional research in this area.

Note

1. Temporary programs have been used in practice and have been studied in the literature (Lal and Bell, 2003; Taylor and Neslin, 2005). In this paper, we study the effect of terminating an LP that was intended to be permanent.

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