Three decades of research on loyalty programs: A literature review and future research agenda

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ABSTRACT

Loyalty programs (LPs) are an important marketing instrument used to promote repeat purchases and customer relationships. Although numerous studies have shed light on the adoption, design, and outcomes of LPs, research that reviews the accumulated knowledge in a holistic manner is sparse. Against this background, this study reviews 131 LP-related articles following the Theory–Context–Characteristics–Methodology (TCCM) review protocol. By considering the theories, contexts, characteristics, and methodologies used in LP research, this study (1) paints the most comprehensive picture of the field to date and (2) develops a future research agenda to help advance the field further. Our review reveals that existing studies mostly rely on status-based, inertia-based, or relationship-based mechanisms to theoretically explain LP-related effects, while multi-theoretical perspectives are rare. LP research focuses strongly on a few key industries, such as retail, airlines, and hotels, but lacks insights into the design and outcomes of LPs in online and B2B contexts. Furthermore, we diagnose a need for more research on the role of competition among LPs and the impact of recent technological advances on LP management.

1. Introduction

A loyalty program (LP) comprises integrated systems of personalized marketing actions and marketing communications that offers tangible (e.g., discounts, vouchers, or gifts) or intangible (e.g., personalized service, status, or information) rewards (Bombaij & Dekimpe, 2020; Meyer-Waarden, 2007; Steinhoff & Palmatier, 2016). The launch of an LP helps to induce perceived value, which leads consumers to enroll and stay with an LP, and reinforces their purchase behaviors and relationship with the firm. It involves incentives such as points, miles, or other currencies that customers can accumulate and redeem for rewards (Chaudhuri, Voorhees, & Beck, 2019; Sharp & Sharp, 1997). Thus, an LP is a key customer relationship management (CRM) tool that marketers use to identify, award, and retain profitable customers.

The origins of LPs can be traced back to the 20th century when they started to emerge among airlines and retailers. In 1981, American Airlines launched its first electronic reward scheme called AAdvantage, which remains the world's largest frequent flyer program with up to 67 million members today (Points, 2020). The principle which rewards loyal customers has remained unchanged since the inception of LP. With

the primary goal of engaging customers in long-term relationships, other airlines and sectors (hotels, car rentals, grocery and specialized retail, and credit cards) quickly imitated this marketing tool and have furthered the practice by personalizing rewards based on customers' purchase history. Today, LPs are a multi-billion-dollar business, and digitalization is pushing forward their evolution (Jones, 2016). Between 2015 and 2017, total LP enrollments in the U.S. increased by 15%, reaching almost four billion memberships (Fruend, 2017). However, only half of all U.S. customers actively use their LP cards (Berry, 2015; Fruend, 2017). In light of increasing expenditures for the management of LPs, which are projected to reach $71 billion by 2026 (Perrin, 2019; Shaukat & Auerbach, 2011; Insights, 2019), these figures collectively suggest that LPs do not always lead to a high return.

At the same time, recent technological advances have created new opportunities for the management of LPs. Digitalization facilitates new ways of interacting with customers and collecting rich customer data (Grewal, Ahlbom, Beitelspacher, Noble, & Nordfält, 2018; Tong, Luo, & Xu, 2020), which allows the delivery of highly personalized offerings (e. g., incentives, rewards, products, services). Artificial intelligence (AI), augmented/virtual reality (AR/VR), smart displays, as well as mobile

devices and applications (Agarwal, Dugas, Gao, & Kannan, 2020) hold the potential to re-invent the customer experience and increase LP efficiency. However, these new technologies also come with new challenges (e.g., data privacy concerns, big data management) that have, thus far, received little attention.

Given that the success of LPs is not guaranteed and the technological environment is rapidly evolving, managers face great uncertainties regarding their development, implementation, and execution (Keh & Lee, 2006; Meyer-Waarden, 2007; Meyer-Waarden & Benavent, 2009). To unravel the complexity of the effective management of LPs, over the past three decades marketing scholars have paid considerable attention to the adoption, design, and outcomes of LPs—both from firm and consumer perspectives.

Although several reviews of this mature field of study exist, prior reviews are limited in at least two regards: first, existing reviews focus on either (a) the design and execution of LPs (Bijmolt, Dorotic, & Verhoef, 2011; Breugelmans et al., 2015; McCall & Voorhees, 2010), or (b) the theoretical mechanisms underlying LP-related phenomena (Beck, Chapman, & Palmatier, 2015; Henderson, Beck, & Palmatier, 2011; Kim, Steinhoff, & Palmatier, 2020). For example, Breugelmans et al. (2015) reviewed the role of different design elements of LPs for their adoption and success but did not embed the focal relationships in theory. Conversely, Henderson et al. (2011) reviewed the psychological mechanisms that underlie LP effectiveness, but they did not account for the individual characteristics of the empirical studies to which their work relates. Therefore, prior reviews only paint a fragmented and incomplete picture. Second, digitalization has only recently begun to reshape many markets, prompting new opportunities and challenges for LPs. These topics are not yet covered in the literature and the field lacks direction in terms of which concepts and methods should be investigated in the future. Such future research directions are instrumental for LP research to keep pace with the quickly evolving reality of modern LPs.

Against this background, this review complements and extends prior reviews on LPs by (1) providing a holistic review of both the manifold theoretical and empirical aspects of LP research, and (2) outlining future research directions that support the field's advancement. To this end we employ the Theory–Context–Characteristics–Methodology (TCCM) review protocol (Paul & Rosado-Serrano, 2019; Rosado-Serrano, Paul, & Dikova, 2018) which sheds light on both theoretical and empirical aspects of a specific research domain, thus overcoming the limitations of more narrow domain-based (e.g., Martin & Murphy, 2017; Snyder, Witell, Gustafsson, Fombelle, & Kristensson, 2016), theory-based (e.g., Branstad & Solem, 2020; Gilal, Zhang, Paul, & Gilal, 2019), or method-based (e.g., Davis, Golicic, Boerstler, Choi, & Oh, 2013; Voorhees, Brady, Calantone, & Ramirez, 2016) systematic reviews (Palmatier, Houston, & Hulland, 2018). Specifically, we aim to provide answers to the following questions: What *theories* have been used to explain the adoption and outcomes of LPs? In what *contexts* (e.g., industries, countries) have LPs been investigated? What independent, dependent, mediating, and moderating variables have been studied (i.e., *characteristics*)? What *methods* have been applied to study LP-related phenomena?

We contribute to the literature on LPs in multiple ways. First, this study paints the most comprehensive and most recent picture of the state of LP research to date. In total we review 131 articles concerning key theoretical and empirical characteristics, many of which have not been considered in previous reviews. Following the TCCM protocol, our review reveals that existing studies mostly rely on a few single theories to explain LP-related effects, mostly proposing and testing psychological mechanisms that are status-based, inertia-based, or relationship-based. Most LP research is set in Western countries and focuses on a few key industries, such as retail, airlines, and hotels, which are studied using quantitative methods. Our analysis of independent, mediating, moderating, and dependent variables suggests that LP research has extensively studied program- and consumer-related variables, whereas some other promising groups of variables, such as competition-related variables, have received limited attention.

Second, based on gained insights and unfolding trends, we develop a future research agenda that outlines a range of topics based on the TCCM structure. We suggest the use of multi-theoretical perspectives to better account for the complexity of LPs that often feature multiple actors and various design elements in different contexts. Especially cultural theories could guide future studies that explore cross-national differences in LP-related phenomena, a major gap in LP research. Likewise, more research is needed regarding the design and outcomes of LPs in online and B2B contexts. Finally, new technologies offer great opportunities (e. g., richer customer data, improved personalization, increased LP efficiency) and challenges (e.g., data privacy concerns) that have so far received little research attention.

In the following sections, we first introduce our review approach. Then, we provide a general overview of LP research. Afterwards, we discuss theoretical perspectives which researchers commonly adopt to explain LP-related phenomena. Next, we present our results concerning the investigated contexts, specified explanatory and criterion variables (including potential mediating and moderating variables), and methods used in LP research. Finally, we address extant research gaps and outline promising directions for future research that help advance LP research.

2. Review approach and structure

A systematic literature review requires eligible criteria from journal selection to article identification (Littell, Corcoran, & Pillai, 2008; Snyder, 2019). For our literature search, we adopted practices from Morgan, Feng, and Whitler (2018) "[t]o ensure the representativeness, completeness, and high quality" (p. 62) of the studies included in our review. First, we selected the most influential marketing and management journals based on multiple influential ratings. Specifically, we combine journal ratings reported by Theoharakis and Hirst (2002), Baumgartner and Pieters (2003), and Hult, Reimann, and Schilke (2009). This type of combined approach has been used in prior reviews (e.g., Lehmann, 2005; Morgan et al., 2018) and enables us to maximize the coverage of influential LP research. We then selected the 20 most influential journals and had expert judges assess the appropriateness of the list, similar to prior reviews (e.g., Katsikeas, Morgan, Leonidou, & Hult, 2016). The resulting list of journals includes: *Journal of Marketing, Journal of Marketing Research, Marketing Science, Management Science, Journal of Consumer Research, Journal of Consumer Psychology, Journal of the Academy of Marketing Science, International Journal of Research in Marketing, Journal of Retailing, Journal of Service Research, Journal of Business Research, European Journal of Marketing, Harvard Business Review, Californian Management Review, Industrial Marketing Management, Journal of Advertising Research, Journal of International Marketing, Marketing Letters, MIT Sloan Management Review,* and *Psychology & Marketing.*

Next, in accordance with the topic of this review, we specified a set of search terms for the identification of relevant articles. Since loyalty programs are often labelled differently, depending on the specific industry, we took special care to cover all equivalent terms (e.g., "frequent flier program") and related terms (e.g., "loyalty card"). As a result, we used a broad set of search terms, including: "loyalty program," "reward program," "customer loyalty program," "store loyalty program," "frequent program," "loyalty card," "loyalty scheme," "customer reward," "frequent flier program," and "frequent buyer program" to identify relevant papers in LP research from multiple databases (Web of Science, Google Scholar, EBSCO, JSTOR, Science Direct, and Emerald) and individual journal websites. We limited our search to the last three decades (i.e., from 1989 to 2019[1]) because LP research only began during the 1990 s, concurrently with their increasing popularity in practice. Only a few studies covered this topic before 1989 (see Kearney,

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[1] We considered all articles that were available at that time, including an early access version of Bombaij and Dekimpe (2020).

Table 1
Sampled publications on loyalty programs.

Journal	No. of articles	%	Articles
Journal of Retailing and Consumer Services	24	18.3	Arbore and Estes (2013); Azeem et al. (2018); Bridson et al. (2008); Chan et al. (2016); Cortiñas et al. (2008); Danaher et al. (2016); Demoulin and Zidda (2008); Eason et al. (2015); Filipe et al. (2017); Frisou and Yildiz (2011); García Gómez et al. (2012); Jai and King (2016); Kreis and Mafael (2014); Leenheer and Bijmolt (2008); Mauri (2003); Meyer-Waarden (2015a); Mimouni-Chaabane and Pez (2017); Pandit and Vilches-Montero (2016); Sharma and Verma (2014); Smith et al. (2003); Söderlund and Colliander (2015); Steyn et al. (2010); Vesel and Zabkar (2009); Vilches-Montero et al. (2018)
International Journal of Retail & Distribution Management	14	10.7	Cedrola and Memmo (2010); Gable et al. (2008); Kim et al. (2012); Ieva and Ziliani (2017); Lin and Bennett (2014); Meyer-Waarden et al. (2013); De Noni et al. (2014); Asiah Omar and Musa (2011); Parker and Worthington (2000); Rowley (2005); Smith et al. (2004); Worthington (1998); Worthington and Hallsworth (1999); Wright and Sparks (1999)
Journal of Marketing Research	10	7.6	Drèze and Nunes (2004); Drèze and Nunes (2011); Kivetz and Simonson (2002); Kivetz and Simonson (2003); Kivetz et al. (2006); Lewis (2004); Roehm et al. (2002); Stourm et al. (2015); Van Heerde and Bijmolt (2005); Zhang and Breugelmans (2012)
European Journal of Marketing	9	6.9	Allaway et al. (2006); Berezan et al. (2017); Esmark et al. (2016); Hutchinson et al. (2015); Melnyk and Bijmolt (2015); Meyer-Waarden (2008); Palmeira et al., 2016; Sayman and Hoch (2014); Vesel and Zabkar (2010)
Journal of Services Marketing	8	6.1	Hansen et al. (2010); Kearney (1989); Liu and Mattila (2016); Ma et al. (2018); Meyer-Waarden (2013); Ramaseshan and Ouschan (2017); Rosenbaum et al. (2005); Tuzovic (2010)
International Journal of Research in Marketing	7	5.3	Bombaij and Dekimpe (2020); Dorotic et al. (2014); Leenheer et al. (2007); Minnema et al. (2017); Sharp and Sharp (1997); Viswanathan et al. (2017); Wang and Lalwani (2019)
Journal of the Academy of Marketing Science	7	5.3	Bolton et al. (2000); Chaudhuri et al. (2019); Daryanto et al. (2010); Evanschitzky et al. (2012); Meyer-Waarden and Benavent (2009); Steinhoff and Palmatier (2016); Yi and Jeon (2003)
Journal of Retailing	7	5.3	Allaway et al. (2003); Demoulin and Zidda (2009); Keh and Lee (2006); Mägi (2003); Meyer-Waarden (2007); Schumann et al. (2014); Taylor and Neslin (2005)
Journal of Business Research	7	5.3	Bruneau et al. (2018); Kang et al. (2015); Mimouni-Chaabane and Volle (2010); Noble et al. (2014); Septianto et al. (2019); Smith and Sparks (2009); Stathopoulou and Balabanis (2016)
Journal of Consumer Research	5	3.8	Bagchi and Li (2010); Drèze and Nunes (2009); Kivetz (2005); Nunes and Drèze (2006); Zhang and Gao (2016)
Management Science	5	3.8	Chun and Ovchinnikov (2019); Kim et al. (2004); Rossi (2018); Sun and Zhang (2019); Zhang et al. (2000)
Journal of Marketing	4	3.1	Liu and Yang (2009); Liu (2007); Verhoef (2003); Wagner, Hennig-Thurau, and Rudolph (2009)
Psychology & Marketing	4	3.1	Ivanic (2015); Kim and Ahn (2017); Kim et al. (2009); Sajtos and Chong (2018)
Marketing Letters	4	3.1	Breugelmans and Liu-Thompkins (2017); Dorotic et al. (2011); Melnyk and van Osselaer (2012); Montoya and Flores (2019)
Journal of Service Research	3	2.3	Eggert et al. (2015); Lemon and Wangenheim (2009); Wirtz et al. (2007)
Journal of Service Management	3	2.3	Noordhoff et al. (2004); Rehnen et al. (2017); Stauss et al. (2005)
Journal of Consumer Psychology	2	1.5	Kwong et al. (2011); Van Osselaer et al. (2004)
Journal of International Marketing	2	1.5	Beck et al. (2015); Thompson and Chmura (2015)
Marketing Science	2	1.5	Kopalle et al. (2012); Wang et al. (2016)
Industrial Marketing Management	1	0.8	Keeling et al. (2013)
Journal of Advertising Research	1	0.8	Wansink (2003)
Journal of Business & Industrial Marketing	1	0.8	Lacey and Morgan (2009)
Journal of Strategic Marketing	1	0.8	Palmer et al. (2000)
Total	**131**	**100**	

1989). This approach yielded a total of 84 papers.

Then, we excluded articles that do not constitute original studies (e. g., reviews) and those that contain mere descriptions of LPs in the market (2 in *Harvard Business Review*, 1 in *Californian Management Review*, 1 in *Journal of Consumer Psychology* and 1 in *MIT Sloan Management Review*). At this stage, 79 papers in 17 journals remained for review. Next, we checked each article's reference list and its citations for any additional relevant articles; this pointed to a substantial body of relevant work in less influential journals. Thus, to minimize the risk of excluding relevant studies (Paul & Rialp Criado, 2020), we broadened the search scope to consider any journal with a 2018 ABS (*Association of Business Schools*) rank of at least 2 and an Impact Factor greater than 2. We then repeated the same procedures as earlier (i.e., keyword search, paper exclusion, and extant research identification). This led to the inclusion of 52 articles in six additional journals: *Journal of Retailing and Consumer Services*, *International Journal of Retail & Distribution Management*, *Journal of Services Marketing*, *Journal of Service Management*, *Journal of Strategic Marketing*, *Journal of Business & Industrial Marketing*.

Overall, this stepwise approach led to the identification of 131 articles (see details in Appendix A), published in 23 different journals (see details in Table 1). Among the 23 journals identified, 17 are ranked as 2018 ABS 4*, 4, or 3. About a third of all papers in our review (35.9%) were published in six of these leading outlets, i.e., *Journal of Marketing*

Research (10 papers), *European Journal of Marketing* (9 papers), *International Journal of Research in Marketing* (7 papers), *Journal of the Academy of Marketing Science* (7 papers), *Journal of Retailing* (7 papers), and *Journal of Business Research* (7 papers). Despite the lower ranking (ABS 2), we decided to include work published in the *Journal of Retailing and Consumer Services*, the *International Journal of Retail & Distribution Management*, and the *Journal of Services Marketing* because much LP research is conducted in the retail context, a main interest of these journals. These three journals account for another third (35.1%) of all papers in our review. The remaining 38 articles (29.0%) were published in various other outlets in the field of marketing and management.

3. General overview

The literature on LPs addresses a variety of aspects that determine consumers' adoption of LPs and their subsequent attitudes and behavior that ultimately drive firm performance (i.e., LP efficiency). To consolidate and visualize existing knowledge, we developed a comprehensive map of LP research that provides a general overview (see Fig. 1). This map depicts theories and different types of concepts that are relevant to LP research which can be found at the theoretical or empirical level. The theoretical level comprises various theories that underpin the conceptual frameworks that are tested at the empirical level. These theories are

reviewed in Chapter 4. The empirical level can be structured along two dimensions. On the one hand, LP research can be distinguished based on the stage(s) to which it pertains, i.e., the adoption, execution, or outcomes of LPs. On the other hand, LP studies differ in their units of analysis and the levels to which the associated concepts relate. While some studies investigate certain concepts and associated effects at the consumer level (e.g., economic, cognitive, and psychological motivations), others may incorporate constructs at the program level (e.g., design characteristics), industry level (e.g., product characteristics), and/or country level (e.g., cultural and economic factors). Fig. 1 depicts this structure, linking various classes of concepts at different levels and stages.

Below, we systematically review the literature on LPs following the TCCM framework (Paul & Rosado-Serrano, 2019). Accordingly, we first discuss the theoretical realm of LP research, reviewing the theoretical frameworks/lenses that are most frequently used to explain LP-related phenomena, namely social identity theory, social comparison theory, prospect theory, behavioral learning theory, social exchange theory, and equity theory. Then we review the empirical realm of LP research starting with an assessment of the different contexts, i.e., industries and countries, in which LP research was carried out. Next, we shift the spotlight from the macro-perspective (countries and industries) to the micro-perspective and turn to the various LP concepts related to different actors and entities (e.g., firm, program, and consumer characteristics) that play a role during the adoption, execution, and outcome stages of LPs. Specifically, we review the types of variables that have been studied and provide a differentiated analysis of independent, mediating, moderating, or dependent variables in LP research. Finally, we assess key methodological aspects of the field including the research approach, data types, and analytical tools that have been used to derive insights about LPs. Based on this systematic review, we outline a comprehensive agenda for future research following the same structure.

4. Theory

LP research draws on various theoretical frameworks and paradigms to explain relevant effects. In general, the term theory refers to a set of statements that are systematically related and empirically testable (Rudner, 1966; Hunt, 2002). Thus, in an applied context, theories can be understood as reasoned propositions on how a set of relevant constructs (e.g., LP design characteristics and purchasing behavior) relate to one another with the aim to explain and/or predict empirical phenomena. Table 2 provides an overview of the most frequently used theories in LP research. These theories can be roughly categorized into three groups according to their similarity in terms of the core psychological mechanism that is presumed to underlie the investigated effects, i.e., status-based mechanism, inertia-based mechanism, or relationship-based mechanism (Henderson et al., 2011). In the following sections, we discuss these mechanisms and related theories as well as less frequently used theories.

4.1. Status-based mechanism

To explain the status-based mechanism, LP researchers often apply social identity theory and social comparison theory (e.g., Kivetz & Simonson, 2003; Sajtos & Chong, 2018). For most consumers, status is highly desirable as it is associated with privileges and feelings of superiority. Thus, the status-focus of many LPs comes as no surprise (Henderson et al., 2011). In general, LPs create perceived value through social, informational, and hedonic rewards, as well as through utilitarian discounts and convenience (Mimouni-Chaabane & Volle, 2010). Studies relating to social, informational, and hedonistic rewards often place an emphasis on status (Liu & Mattila, 2016). Because consumers define themselves in relation to others, selective programs, or tiered programs, that involve special treatments, such as queue exclusivity, can serve status signaling purposes (Ivanic, 2015). Among the 131 articles

we analyzed, fifteen papers applied in total, either social identity theory (7 articles, 5.3%; e.g., Esmark, Noble, & Bell, 2016) or social comparison theory (8 articles, 6.1%; e.g., Steinhoff & Palmatier, 2016).

4.1.1. Social identity theory

Social identity theory (Tajfel & Turner, 1979) argues that people define themselves based on their membership to a relevant social group. A social group is "a collection of individuals who perceive themselves to be members of the same social category [and] share some emotional involvement in this common definition of themselves" (Tajfel & Turner, 1979, p. 40). Social groups provide their members a sense of identity through social comparison, i.e., they define themselves as similar to, or different from, members of other social groups. These relational identifications are referred to as the "social identity" of a person (Tajfel & Turner, 1979). According to social identity theory, a person's social identity, and the value and emotional importance he or she ascribes to the membership of a specific social group, is directly linked to his or her self-concept (i.e., beliefs about his or her own attributes, such as values, traits, competencies, and social roles; Mittal, 2006). Thus, social identities are closely related to people's need to belong and their sense of community (Ivanic, 2015).

The membership of an LP often provides such communal benefits and promotes a shared social identity among members (Rosenbaum, Ostrom, & Kuntze, 2005). For some consumers, such a sense of community can be a primary motivation to engage in a LP and can even outweigh the importance of financial incentives (Rosenbaum et al., 2005). Consequently, social identity theory is often used to explain the power of status-related incentives in LPs and the psychological mechanism of customers' adoption of hierarchical or open LPs (Eggert, Steinhoff, & Garnefeld, 2015; Esmark et al., 2016). Such status-related incentives help customers to signal their (non-)belonging to a certain social group. For example, Melnyk and Bijmolt (2015) found that non-monetary rewards that are better adapted to customers' needs increase their commitment to firms and the adoption of their LPs. Similarly, Kang, Alejandro, and Groza (2015) show that customer-company identification helps to convert program loyalty into company loyalty. Moreover, open programs often lead to higher in-group identification than selective LPs (Esmark et al., 2016). Other studies relate social identity to perceived prestige and status, demonstrating that degrading customers from a top tier (e.g., gold) to a lower tier status (e.g., silver) has negative consequences in terms of loyalty intentions and share-of-wallet (Ivanic, 2015; Ramaseshan & Ouschan, 2017).

4.1.2. Social comparison theory

Social comparison theory (Festinger, 1954) explains the psychological processes of how individuals define themselves and determine their worth by comparison with others. It is humans' innate motivation to compare themselves with others to form accurate appraisals of themselves. Thus, social comparisons require the evaluation of others (Marsh, 1987), starting with the selection of a target and the observation of similarities and differences between the target and the self. This evaluation occurs across domains such as attractiveness, social status, intelligence, wealth, and success. Social comparisons can have an impact on individuals' cognition (e.g., comparative judgments), affect (e.g., pride and envy), and behavior (e.g., status consumption) (Richins, 1991; Wood, 1996).

LPs often offer special treatments to their members which can serve as potential criteria for social comparisons. Furthermore, in hierarchical programs (e.g., silver, gold, and platinum), the offered treatments often differ between tiers (Drèze & Nunes, 2009). Thus, social comparisons can occur between members and non-members (Liu & Mattila, 2016; Steinhoff & Palmatier, 2016), as well as between members in different tiers (Esmark et al., 2016; Palmeira, Pontes, Thomas, & Krishnan, 2016). The review of studies using social comparison theory suggests a predominant focus on issues related to the exclusivity and visibility (to others) of special treatments and associated status perceptions (Drèze &
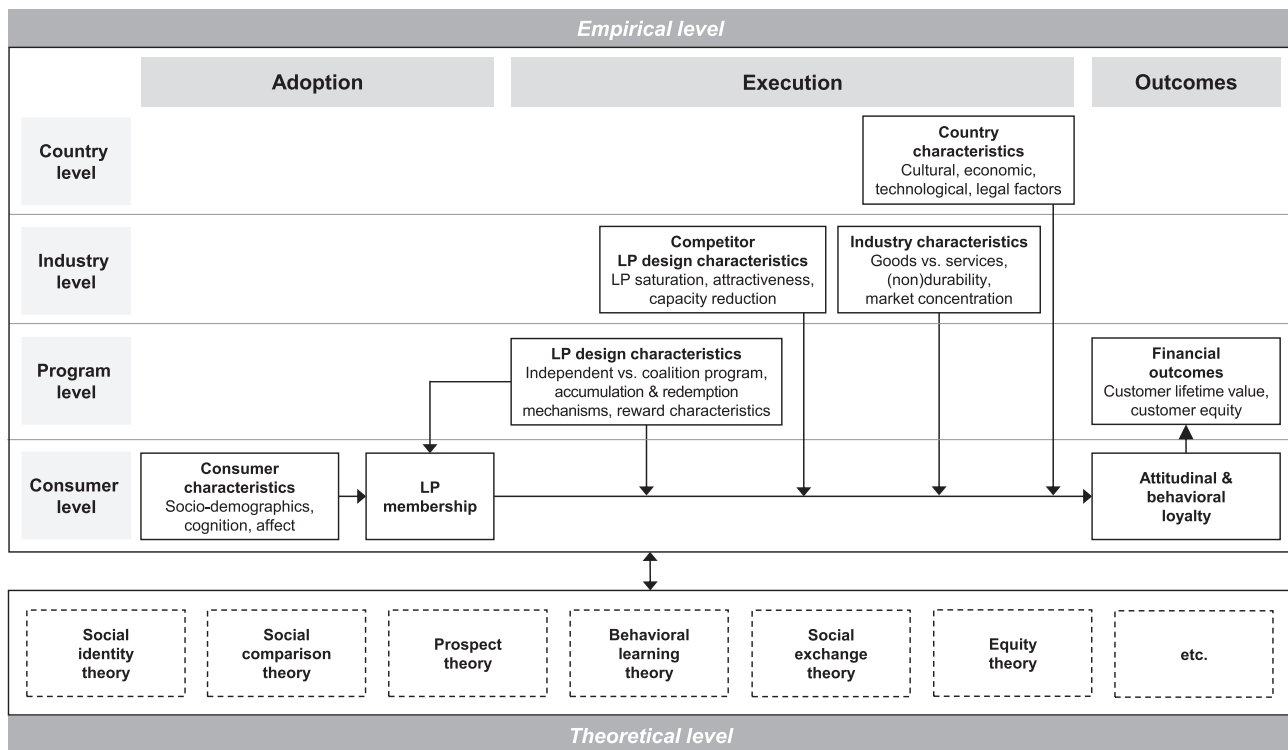
Fig. 1. Overview of loyalty program research.

Table 2
Theories employed in loyalty program studies.

Theory	No. of articles	%	Exemplary studies
Social identity theory	7	5.3	Esmark et al. (2016); Ivanic (2015); Kang et al. (2015)
Social comparison theory	8	6.1	Kivetz and Simonson (2003); Liu and Mattila (2016); Viswanathan et al. (2017)
Prospect theory	7	5.3	Kwong et al. (2011); Melnyk and Bijmolt (2015); Stourm et al. (2015)
Behavioral learning theory	7	5.3	Drèze and Nunes (2011); Kivetz and Simonson (2002); Taylor and Neslin (2005)
Social exchange theory	6	4.6	Evanschitzky et al. (2012); Ma et al. (2018); Vesel and Zabkar (2010)
(Customer) equity theory	6	4.6	Kim et al. (2009); Ramaseshan and Ouschan (2017); Verhoef (2003)
Other theories	61	46.6	Demoulin and Zidda (2009, *diffusion of innovations theory*); Rossi (2018, *moral harzard*); Schumann et al. (2014, *information integration theory*);
No guiding theory	51	38.9	Kearney (1989); Lewis (2004); Zhang et al. (2000)

Note: Number of articles amount to more than 131 because several articles draw on multiple theoretical perspectives (e.g., Esmark et al., 2016; Steinhoff & Palmatier, 2016); relative frequencies are based on 131 articles.

Nunes, 2009; Steinhoff & Palmatier, 2016). The satisfaction of customers in different tiers depends on their feelings of being special, the degree of status they attained, and the difficulty for others to earn a similar status. Likewise, the number and size of LP tiers also affects members' status perceptions (Arbore & Estes, 2013; Drèze & Nunes, 2009).

4.2. Inertia-based mechanism

To explain the inertia-based mechanism, which refers to a duplication of previous actions, LP researchers often use prospect theory and behavioral learning theory (e.g., Keh & Lee, 2006; Kim, Shi, & Srinivasan, 2004; Stourm, Bradlow, & Fader, 2015). The major aim of an LP is to enhance consumers' repeated purchase and foster a habit of participation and engagement (Keh & Lee, 2006; Kivetz, Urminsky, & Zheng, 2006). Generally, the LP offers rewards such as gifts, discounts, and convenience. Costs and benefits, as well as inputs and outcomes, are often rationally evaluated following the perceived value of these utilitarian rewards (Danaher, Sajtos, & Danaher, 2016; Meyer-Waarden, 2015a). These economic incentives help build basic habits, reinforce

repeat purchases, and increase switching costs for consumers. That is, developing a consumption pattern which relies on individuals' asymmetric reactions to benefits and losses is the main focus in these inertia-based LPs. Among the reviewed articles, fourteen applied either prospect theory (7 articles, 5.3%; e.g., Nunes & Drèze, 2006), or behavioral learning theory (7 articles, 5.3%; e.g., Kivetz & Simonson, 2002).

4.2.1. Prospect theory

Prospect theory (Kahneman & Tversky, 1979) explains individuals' asymmetric reactions to gains and losses. It suggests that individuals prefer lower gains with higher certitude, rather than the prospect of higher gains with greater risk. According to this theory, a cumulative view discusses uncertainty and risky prospects, and takes different weighting functions into consideration (Tversky & Kahneman, 1992). In this case, the decision is cumulative rather than separate, following both the diminishing sensitivity principle and the loss aversion principle. The intuitive nature of invested efforts and monetary or non-monetary gains, and how individuals respond to these (perceived) losses and gains, explains the popularity of prospect theory in LP research (Bolton, Kannan, & Bramlett, 2000; Drèze & Nunes, 2009; Kivetz et al., 2006).

To explain customers' motivation/de-motivation to pursue and achieve a redemption goal, LP research mainly applies prospect theory. Because customers need to invest significant budgets and efforts (e.g., repeat purchases, collection of points, etc.), this theoretical angle focuses on their evaluations of the costs and benefits associated with a given reward. Generally, the closer customers get to completion, the perceived costs and risks are lower (Garland & Conlon, 1998). As a result, there is a stronger motivation to continue the investment. For example, in Nunes and Drèze (2006) research, prospect theory is used to explain consumers' decisions in their investment efforts to reduce or recoup past losses when completing tasks in certain LPs. Similarly, Melnyk and Bijmolt (2015) argue that the termination of LPs has a negative influence on customer loyalty as the accompanied removal of benefits is considered a loss from the customer's point of view. Stourm et al. (2015) use prospect theory to explain how consumers perceive gains and losses of cash relative to gains and losses of points.

4.2.2. Behavioral learning theory

Behavioral learning theory (Haleblian & Finkelstein, 1999) predicts individuals' behavior by considering the influence of the environment, both in the past and the present. Although the present environment is seen as an important predictor, present behavior could also be impacted by the consequences of past behavior. More importantly, behavioral learning theory provides a future prospect view and argues that behavior can be changed and learned through stimuli (Rothschild & Gaidis, 1981). In this context, reinforcement is considered a key element. Two major principles suggest that (1) individuals will persist in behaviors that help them gain rewards, and (2) will avoid those behaviors that lead to punishment.

In LP research, this theory is used to explain consumers' responses to rewards and the reinforcement of their repeated purchases. It is often applied in the context of reward types (Taylor & Neslin, 2005) and reward timing (Keh & Lee, 2006), or both simultaneously (e.g., Yi & Jeon, 2003). Taylor and Neslin (2005) identify the process of repeated behavior and link it to different types of rewarding behaviors: points pressure and rewarded behavior. Keh and Lee (2006) use the theory to justify the stronger impact of immediate rewards on customers' loyalty. Customers may experience a cognitive form of inertia over time. Customers' learning-based preferences for certain behavioral patterns (i.e., habits) can be fostered by rewards (Henderson et al., 2011; Meyer-Waarden, 2013). Moreover, substantial rewards in a program can impose significant switching costs. Even disregarding the amount or value of their reward balance (Hartmann & Viard, 2008), customers might accrue psychological costs of switching if they feel dependent on or accustomed to the program, so much so that they become locked in (Klemperer, 1995).

4.3. Relationship-based mechanism

To explain the relational mechanism, LP researchers often use equity theory and social exchange theory. One fundamental aim of LPs is to form, maintain, and strengthen the relationship between brands and their customers. Strong customer-brand relationships, which are forged through interaction and exchange (that are ideally fair for all involved parties), are strongly tied to positive word of mouth, increased revenue, share of wallet, and customer retention (Hansen, Deitz, & Morgan, 2010; Ramaseshan & Ouschan, 2017; Verhoef, 2003). Against this background, researchers have investigated the role that social, hedonic, and utilitarian benefits play in converting general customers into patrons of a brand for the sake of long-term success. Among the reviewed articles, twelve applied either equity theory (6 articles, 4.6%; e.g., Kim, Lee, Bu, & Lee, 2009), or social exchange theory (6 articles, 4.6%; e.g., Vesel & Zabkar, 2010).

4.3.1. Social exchange theory

Social exchange theory (Blau, 1964) explains the exchange within dyadic relationships. It suggests that the formation of the relationship is based on the interaction between two parties. The exchange is often not a one-shot transaction and it considers the implementation of cost-benefit analysis (Kingshott, 2006). Social exchange theory relies on several key assumptions (Cook, Cheshire, Rice, & Nakagawa, 2013). The first is the individual's desire to increase gains and avoid losses during the exchange. Second, the exchange is structured by mutual dependence; i.e., it only occurs when one party has something which another party values. Third, the exchange and mutual benefits require long-term cooperation, while the perceived value of the exchange will diminish following the law of marginal utility.

Generally, continuous exchange helps building reciprocal relationships that are characterized by trust, commitment, and loyalty. Personal interactions within an LP play a vital role for customers' loyalty towards both the program (Vesel & Zabkar, 2010) and the company (Evanschitzky et al., 2012). Other studies connect social exchange to program structure (Septianto, An, Chiew, Paramita, & Tanudharma, 2019) and reward type (Ma, Li, & Zhang, 2018), suggesting that customers' decisions on whether to maintain or to terminate a relationship are based on their subjective benefits and sacrifices with different program structures, as well as different configurations of rewards. Furthermore, Esmark et al. (2016) applied the social exchange theory to explain the mechanism of how different LPs (open vs. selective programs) trigger different levels of gratitude, which in turn increases customers' loyalty to the company.

4.3.2. Equity theory

Equity theory (Adams, 1965) postulates that parties in exchange relationships compare their ratios of exchange inputs to outcomes. Inequity exists when the perceived inputs and/or outcomes in an exchange relationship are psychologically inconsistent with the perceived inputs and/or outcomes of the referent (Huppertz, Arenson, & Evans, 1978). Perceived inequities lead exchange parties to feel under or overrewarded, angry or resentful. This can affect their behaviors in subsequent periods and encourage them to change their contributions to the relationship, potentially resulting in suspicion and mistrust of the exchange partner (Ganesan, 1994).

In some circumstances, LPs might cause different reactions among different consumers, including feelings of (un-)fairness, gratitude, or skepticism (Eggert et al., 2015; Esmark et al., 2016; Söderlund & Colliander, 2015). For example, Söderlund and Colliander (2015) find that under-rewarding customers can lead to lower levels of satisfaction and repurchase intentions due to perceptions of injustice. Similarly, Eggert et al. (2015) show that endowed elevated status can elicit both gratitude and skepticism. Specifically, if customers receive unearned status rewards, they might become skeptical about the motive for the reward, despite feeling somewhat grateful (Eggert et al., 2015).

4.4. Multi-theory application

Notably, some studies use multiple theories to support their conceptual models. For example, Steinhoff and Palmatier (2016) combined social comparison theory (to explain effects related to status), equity theory (to explain effects related to perceived [un-]fairness), and attribution theory (to explain effects related to contractual/non-contractual rewards based on rule clarity) to investigate the impact of three comparison mechanisms on LP members and bystander customers. Using this multi-theoretical perspective, the authors uncover opposing effects on customers' attitudinal loyalty and sales, which could not be explained by a single theory alone. Another example is Evanschitzky et al. (2012) study that combined social exchange theory and equity theory to shed light on the drivers of company loyalty and program loyalty. On the one hand, they use social exchange theory to explain how commitment, trust, and satisfaction shape customers' affective bonds with company. On the other hand, they use equity theory to explain the role of customers' cost-benefit evaluations and trade-off decisions for

Table 3
Industries investigated in loyalty program research.

Industry	No. of studies	%	Exemplary studies
Retailing			
Offline retailing	101	50.0	Bombaij and Dekimpe (2020); Mimouni-Chaabane and Volle (2010); Taylor and Neslin (2005)
Online retailing	9	4.5	Kivetz (2005); Wang and Lalwani (2019); Zhang and Breugelmans (2012)
Hospitality			
Airlines	38	18.8	Liu and Yang (2009); Palmeira et al. (2016); Van Osselaer et al. (2004)
Hotels	23	11.4	Berezan et al. (2017); Hansen et al. (2010); Liu and Mattila (2016)
Restaurants	12	5.9	Bagchi and Li (2010); Keh and Lee (2006); Kwong et al. (2011)
Coffee shops	7	3.5	Kim and Ahn (2017); Kivetz et al. (2006); Esmark et al. (2016)
Other hospitality services	8	4.0	Chaudhuri et al. (2019); Dorotic et al. (2011); Esmark et al. (2016)
Other service industries			
Information-oriented services	11	5.4	Bolton et al. (2000); Verhoef (2003); Wirtz et al. (2007)
Good-oriented services	9	4.5	Kivetz and Simonson (2002); Melnyk and Bijmolt (2015); Nunes and Drèze (2006)
Person-oriented services	6	3.0	Daryanto et al. (2010); Esmark et al. (2016)
Products			
Consumer non-durables	5	2.5	Chaudhuri et al. (2019); Rosenbaum et al. (2005); Wansink (2003)
Consumer durables	4	2.0	Keeling et al. (2013); Rosenbaum et al. (2005)
Other industries	7	3.5	Kivetz et al. (2006); Rosenbaum et al. (2005); Viswanathan et al. (2017)
Industry not explicitly stated	13	6.4	Sayman and Hoch (2014); Thompson and Chmura (2015); Zhang and Gao (2016)

Note: The reported frequencies are based on 202 individual studies in 127 empirical articles (we excluded conceptual and simulation-based articles, i.e., Beck et al., 2015; Chun & Ovchinnikov, 2019; Kearney, 1989; Kim et al., 2004).

building program loyalty.

4.5. Other theories

It is noteworthy that a large share of studies (50.9%) rely on theories other than the "leading" theories. A closer analysis suggests that some studies (a) draw on specialized theories due to their focus on specific, more narrow phenomena, or (b) occasionally use more generic theories. Examples for the singular application of a theory to explain a niche phenomenon include: Daryanto and colleagues' (2010) investigation of regulatory fit in the context of health clubs, using regulatory focus theory; Schumann, Wünderlich, and Evanschitzky (2014) investigation of spillover effects in coalition LPs, using information integration theory; and, Tuzovic (2010) study of the effect of frustration in frequent-flier programs on dysfunctional behaviors, using frustration theory. Examples for the occasional use of rather generic theories include Thompson and Chmura (2015) reference to cultural values theory that explains differences in customers' reward preferences. Importantly, our analysis suggests that, in many cases, researchers merely refer to certain theories without extensively discussing them nor drawing on them when developing specific hypotheses. Notably, more than a third of the studies (38.9%) do not mention any theories, nor do they use theoretical elements to conceptualize their research framework.

5. Context

Tables 3 and 4 summarize our findings regarding the contexts investigated in LP research. These reported results are based on 202 studies reported in 127 empirical articles. As some studies cover multiple industries and/or countries, the total count of industries and countries exceeds the number of studies. The reported relative frequencies relate the absolute number of studies that feature a given industry or country to the total number of individual studies (not countries).

5.1. Industries

Our analysis demonstrates that LP research is mostly set in the retail (110 studies, 54.5% of all individual studies) and hospitality industries (88 studies, 43.6%). This is not surprising given the fact that LPs originated in the airline industry and have been rapidly adopted by the retail industry. Another possible explanation is that retailer scanner data and consumer panel data are more easily available in the retail sector. In the

retail industry, most studies (101 of 110 studies; 91.8%) focus on offline retail stores and grocery outlets (e.g., Allaway, Berkowitz, & D'Souza, 2003; Demoulin & Zidda, 2009; Meyer-Waarden & Benavent, 2009). Only a few studies (9 studies, 8.2%) focus on online retailing (e.g., Chaudhuri et al., 2019; Ivanic, 2015; Wang & Lalwani, 2019), mostly published during the last decade. Although the limited number of studies can be explained by the relatively recent emergence of e-commerce and the time it takes for research to catch up with such a quickly evolving market, the crucial importance of this sector clearly demands more research on the transferability of prior findings to this new context.

The hospitality industry covers a series of sub-industries ranging from airlines (38 of 88 studies, 43.2%; e.g., Palmeira et al., 2016), hotels (23 studies, 26.1%; e.g., Liu & Mattila, 2016), restaurants and coffee shops (19 studies, 21.6%; e.g., Kim & Ahn, 2017), to other hospitality services such as theme parks and theaters (8 studies, 9.1%; e.g., Esmark et al., 2016). Hotels have especially gained in popularity as a study context. While in the 2000s only four studies investigated LPs in a hotel context, 19 studies have emerged in this context since 2010. This research trend reflects the rapid growth of global tourism over the past two decades (UNWTO, 2020). Due to the fact that hospitality services tend to provide experiential benefits, the effectiveness of certain LP design features differs from other industries that place a primary emphasis on functional benefits (e.g., discount retailing). Therefore, non-monetary rewards, such as upgrades and additional services that improve program members' service experience, play a significant role in enhancing customer loyalty. Another explanation for why LPs are so widespread in the airline and hospitality industries is that services (such as hotel rooms and airplane seats) are highly perishable. This crucial feature makes it attractive for LP operators to reward loyal customers with upgrades if those offers are not already booked by paying customers. As these capacities would otherwise perish, upgrade rewards increase the (perceived) value for the customer at low marginal costs. Also, research on customer tiers is often set in hospitality contexts as this sector often involves situations in which the special treatment of customers is visible to others. However, it is noteworthy that the hospitality industry is very diverse, which implies that findings from a specific subsector cannot necessarily be transferred to another sub-sector.

Other service industries account for 12.9% (26 studies), including information-oriented services (e.g., financial services; Bolton et al., 2000), good-oriented services (e.g., car rentals; Kivetz & Simonson, 2002), and person-oriented services (e.g., health club; Daryanto, de Ruyter, Wetzels, & Patterson, 2010). By contrast, manufacturing and

Table 4
Countries investigated in loyalty program research.

Country	No. of studies	%	Exemplary studies
Americas			
United States	96	47.5	Allaway et al. (2003); Lemon and Wangenheim (2009); Sajtos and Chong (2018)
Latin America	2	1.0	Montoya and Flores (2019); Thompson and Chmura (2015)
Europe			
United Kingdom	14	6.9	Hutchinson et al. (2015); Keeling et al. (2013); Smith et al. (2003)
Benelux (Netherlands & Belgium)	14	6.9	Leenheer et al. (2007); Minnema et al. (2017); Van Heerde and Bijmolt (2005)
France	11	5.4	Bruneau et al. (2018); Meyer-Waarden and Benavent (2009); Mimouni-Chaabane and Volle (2010)
Germany	9	4.5	Schumann et al. (2014); Thompson and Chmura (2015); Viswanathan et al. (2017)
Other European countries	9	4.5	Demoulin and Zidda (2009); Mägi (2003); Vesel and Zabkar (2010)
Non-disclosed European countries	10	5.0	Bolton et al. (2000); Bombaij and Dekimpe (2020); Sayman and Hoch (2014)
Asia			
East-Asia (China, Hong Kong, Taiwan, South Korea)	15	7.4	Kwong et al. (2011); Ma et al. (2018); Yi and Jeon (2003)
South-East Asia (Singapore, Malaysia, Thailand)	14	6.9	Septianto et al. (2019); Wirtz et al. (2007); Zhang and Gao (2016);
India	1	0.5	Thompson and Chmura (2015)
Russia	1	0.5	Thompson and Chmura (2015)
Oceania			
Australia	8	4.0	Keh and Lee (2006); Ramaseshan and Ouschan (2017); Sharp and Sharp (1997)
New Zealand	2	1.0	Chan et al. (2016)
Country not reported	5	2.5	Wang et al. (2016); Daryanto et al. (2010); Kang et al. (2015)

Note: The reported frequencies are based on 202 individual studies in 127 empirical articles (we excluded conceptual and simulation-based articles, i.e., Beck et al., 2015; Chun & Ovchinnikov, 2019; Kearney, 1989; Kim et al., 2004).

other industries account for only 4.5% (9 studies including consumer durables and non-durables) and 3.5% (7 studies; e.g., agricultural products), respectively. A few studies do not explicitly state the examined industry (13 studies, 6.4%).

5.2. Countries

As shown in Table 4, most of the reviewed studies are conducted in the United States (96 studies, 47.5% of all studies) and Europe (67 studies, 33.2%), with the UK, Benelux states, and France jointly accounting for more than half (58.2%) of these European studies. The dominant focus on the U.S. over the past three decades can be explained by the fact that the new generations of LPs were first introduced in the U. S. market. Another explanation is that most management science research is principally focused on mature markets in North America and Europe. In particular, research tends to overemphasize theories developed for U.S. contexts that are insufficiently adapted for local circumstances and businesses elsewhere (Tsui, Nifadkar, & Ou, 2007). Indeed, only 31 of the reviewed LP studies (15.3%) are set in Asia. These studies are set in various countries and regions with a similar number of studies in East-Asia (15 studies), such as mainland China (6), Hong Kong (6), Taiwan (1), and South Korea (2), as well as in South-East Asia (14 studies), such as Singapore (7), Malaysia (6), and Thailand (1). India and Russia have only been considered in a cross-national study by Thompson and Chmura (2015). Importantly, we observe an increasing interest in Asian country contexts over time, which shows a certain emancipation in academia from the U.S. domination of the management literature. In the period between 2000 and 2009, a mere four studies were set in East and South-East Asia. This number increased to 25 studies between 2010 and 2019, which represent 21.6% of all studies conducted in that period and makes Asia the second most frequent context after the U.S. in the last decade. This is not surprising given the rapid economic and technological developments that have taken place in Asia over the past two decades. These changes, together with increased consumer spending, lead to significant growth of the retail and hospitality sector, both of which represent LP-intensive industries.

Furthermore, ten studies (5.0%) are set in Australasia, i.e., Australia (8 studies) and New Zealand (2 studies). To date, studies on LPs in African countries are non-existent. Importantly, the lack of studies set in Africa should not be misinterpreted as an indication of the non-existence of LPs. In fact, South Africa has one of the highest incidences of loyalty

card use in the world (Nielsen, 2018). Finally, it is noteworthy that there are five individual studies (2.5%) in which country setting is not identifiable.

The results of our in-depth analysis further revealed that most of the studies were conducted within a single country (e.g., Berezan, Krishen, Tanford, & Raab, 2017; Kivetz et al., 2006; Mägi, 2003; Minnema, Bijmolt, & Non, 2017). Only six articles explore LPs in a multinational context or use samples that include multi-national respondents (i.e: Bolton et al., 2000, 3 (unspecified) European countries; Bombaij & Dekimpe, 2020, 27 Western & Eastern European countries; Melnyk & van Osselaer, 2012, Netherlands and New Zealand; Noordhoff, Pauwels, & Odekerken-Schröder, 2004, Netherlands and Singapore; Steyn, Pitt, Strasheim, Boshoff, & Abratt, 2010, Singapore, Malaysia, Hong Kong, Taiwan, and Thailand; Thompson & Chmura, 2015, Brazil, Russia, India, China, and Germany). The focus on individual countries might be due to the fact that, traditionally, LPs have been limited to a specific geographic area or region. However, the lack of cross-national LP research is problematic in light of the border-spanning operations of multi-national retailers (MNRs) and online retailers. Managers need to understand what LP design elements can be standardized across markets, and what elements need to be adapted to achieve the desired customer responses in local markets (Thompson & Chmura, 2015). Single-country studies only provide limited insights in this regard because their findings cannot be directly compared. Likewise, due to the increased integration of global markets, consumers are increasingly becoming members of foreign LPs. This implies an increasing heterogeneity of program members and amplifies the importance of understanding the role of cultural differences in the design of LPs.

6. Characteristics

In general, LP research investigates the antecedents and consequences of LP adoption and execution (see Fig. 1). Researchers have investigated a variety of variables relating to the firm, program, customer, and competition along the different stages (adoption-execution-outcomes). Table 5 provides an overview of variables that have been examined in LP research. We grouped variables according to their role in each study, i.e., we distinguish between independent, mediating, moderating, and dependent variables. Within each group of variables, we further classified them according to the entity to which they are primarily related, i.e., firm-related variables, LP-related variables,

Table 5
Variables investigated in loyalty program research.

Variables	No. of articles	%
Independent variables		
Firm-related variables		
Program adoption	6	5.1
Product/brand/service characteristics	17	14.5
Firm/store characteristics	13	11.1
LP-related variables		
Perceived value and benefits	24	20.5
Promotion	10	8.5
Redemption requirements and mechanisms	27	23.1
Reward status and characteristics	29	24.8
Customer tiers	11	9.4
Consumer-related variables		
Program membership	17	14.5
Purchasing behavior	19	16.2
Relationship characteristics	15	12.8
General characteristics, cognition, and affect	16	13.7
Competition-related variables	11	9.4
Other variables	10	8.5
Mediating variables	*42*	*35.9*
LP-related variables		
Perceived value and benefits	7	16.7
Redemption process	4	9.5
Reward characteristics	3	7.1
Consumer-related variables		
Program membership	2	4.8
Purchasing behavior	3	7.1
Relationship characteristics	17	40.5
General characteristics, cognition, and affect	12	28.6
Other variables	4	9.5
Moderating variables	*55*	*47.0*
LP-related variables		
Program type	6	10.9
Promotion	3	5.5
Redemption requirements and mechanisms	8	14.5
Reward characteristics	10	18.2
Customer tiers	3	5.5
Consumer-related variables		
Program membership	10	18.2
Purchasing behavior	8	14.5
Relationship characteristics	5	9.1
General characteristics, cognition, and affect	14	25.5
Competition-related variables	3	5.5
Other variables	2	3.6
Dependent variables		
Firm performance (financial, strategic)	17	14.5
Consumer-related variables		
Program membership	17	14.5
Redemption behavior	15	12.8
Reward preferences and choice	6	5.1
Perceptions, attitudes, and motivations	16	13.7
Purchasing behavior	56	47.9
Relationship characteristics	41	35.0
Other variables	7	6.0

Note: The reported frequencies are based on 117 articles (we excluded conceptual articles and studies that do not include quantitative examinations of bi/multi-variate relationships).

consumer-related variables, competition-related variables, and other variables. We consider 117 empirical articles in our analysis (excluding conceptual articles and studies that do not involve bi/multi-variate relationships).

6.1. Independent variables

With respect to typically investigated independent variables (IVs), Table 5 shows different groups of variables and their sub-groups accordingly. Firm-related variables capture various characteristics related to different intra-firm units covering: characteristics of firms' (core) products/services and brands (17 articles, 14.5%); general firm or (if applicable) store characteristics, such as market share and store

distance (13 articles, 11.1%); and firms' decisions to set up a particular type of program (6 articles, 5.1%). Studies focusing on market share and competitive situations show that lower market shares go hand in hand with lower purchases and lower loyalty (i.e., double jeopardy phenomenon), leading to reduced LP efficiency (Meyer-Waarden & Benavent, 2006; Sharp & Sharp, 1997). Furthermore, customers' possession of competitors' loyalty cards is an obstacle to LP efficiency (Azeem, Baker, Villano, Mounter, & Griffith, 2018; Leenheer, van Heerde, Bijmolt, & Smidts, 2007; Meyer-Waarden & Benavent, 2009).

Our review suggests that most studies include program-related and consumer-related IVs (see details in Table 5). Program-related characteristics concern the programs' specific structure and content, and include: redemption requirements and mechanisms, such as point accumulation and expiry policies (27 articles, 23.1%); reward status and reward characteristics, such as rewarded members vs. bystanders, reward type and rate (29 articles, 24.8%); and, the perceived value and benefits that the LP offers (24 articles, 20.5%). These three types of variables are the most common IVs used over time and are included in more than two thirds of all studies (a combined 68.4%).

Reward requirements and mechanisms induce consumers to actively engage with the brand. Most reward mechanisms are transaction-based, awarding customers for making purchases. The reward rate and redemption time are particularly important for LP adoption in early customer lifecycle stages as customers take into account the distance (points needed) and step size (points/dollars/euros) of the LP (Bagchi & Li, 2010; Liu, Lamberton, & Haws, 2015). If LP members perceive quick (artificial) advancement towards the goal of reward redemption, they show greater persistence towards achievement (Nunes & Drèze, 2006). Contrarily, in advanced and mature customer relationship cycles, hedonic, relational, status, and even delayed rewards are more appropriate to maintain customers' achievement motivation (Nunes & Drèze, 2006; Steinhoff & Palmatier, 2016). With increasing digitalization, LP rewards mechanisms are also based on consumers' engagement-behaviors as reflected in writing reviews, social sharing, or downloading an LP app (Bruneau, Swaen, & Zidda, 2018). Reward status refers to the number of hierarchical levels or tiers, depending on the customers' input/purchase levels (e.g., platinum, gold, and silver), that are offered in an LP (Steinhoff & Palmatier, 2016). Rewards might be linear, hierarchical (e. g., rewards increase with greater spending levels), offer-related (e.g., only during a specific time period, such as promotional activities), or cyclical (e.g., special occasions, birthdays, or Christmas). The variable reward type, which mainly refers to tangible (hard benefits) and intangible (soft benefits) rewards, is also categorized in this sub-group. Hard benefits tend to have a stronger impact on LP satisfaction, whereas soft benefits tend to affect brand loyalty (Bridson, Evans, & Hickman, 2008). Social and psychological (intangible) rewards can induce positive emotions, such as gratitude (Steinhoff & Palmatier, 2016), and enhance customers' affective commitment and, subsequently, the relationship/customer lifetime value (Melancon, Noble, & Noble, 2011). Furthermore, relational rewards, such as preferential treatment, tend to have positive effects on customers in higher tiers (Nunes & Drèze, 2006), but can also backfire due to bystander effects related to perceptions of unfairness by lower tier members (Steinhoff & Palmatier, 2016; Söderlund & Colliander, 2015). It is noteworthy that redemption requirements and mechanisms, as well as reward status and characteristics, are closely connected to each other and often investigated together (Nunes & Drèze, 2006; Yi & Jeon, 2003; Zhang & Gao, 2016).

Finally, LP perceived value refers to customers' evaluation of their benefits relative to the costs (Meyer-Waarden, 2015b). To evaluate the perceived value of a program membership, consumers simultaneously consider the different types of rewards and the effort they have to make to meet the redemption requirements (i.e., weighing benefits against costs). This assessment depends on how easy it is for customers to compute the value of the potential benefits they could obtain and the time needed to collect and redeem them (Bagchi & Li, 2010; Kwong, Soman, & Ho, 2011). High perceived value positively affects LP and

brand loyalty (Yi & Jeon, 2003). Other program-related IVs include the number and structure of customer tiers (11 articles, 9.4%), and promotional activities associated with LPs (10 articles, 8.5%).

Consumer-related IVs include: customers' memberships in an LP (17 articles, 14.5%); their purchasing behaviors (19 articles, 16.2%); their relationships to the firm, such as attitudinal loyalty (15 articles, 12.8%); their general characteristics, such as socio-demographics; and cognitive and affective variables (16 articles, 13.7%). Customer membership in an LP refers to LP adoption from customers' perspectives. It includes whether customers choose to enroll in a particular LP, their possession of a loyalty card, or their selection of different payments for annual fees if they participate in a tiered program (Azeem et al., 2018; Eason, Bing, & Smothers, 2015; Filipe, Marques, & Salgueiro, 2017). Purchase behavior refers to the variables relating to actual behavior in LPs, such as spending, or the number of items purchased per shopping trip, or in total (Allaway, Gonner, Berkowitz, & Davis, 2006; Lemon & Wangenheim, 2009). Change in shopping patterns, often observed in transactional scanner data, can help predicting future consumption patterns and customer loyalty to the LP or the program sponsor. The customer's relationship with a firm encompasses positive attitudes towards the brand (or store) and willingness to maintain a value-added relationship in the future. Therefore, this sub-group includes relational constructs such as attitudinal loyalty, commitment, and trust. Consumers' general characteristics, cognitive, and affective variables refer to customers' individual characteristics and their cognitive and emotional predispositions. Customers' evaluation of benefits received and overall experience (Keh & Lee, 2006; Yi & Jeon, 2003), sensitivity to price (García Gómez, Gutiérrez Arranz, & Gutiérrez Cillán, 2012), perceived pride or happiness (Septianto et al., 2019) all positively influence customers' decisions to continue to use or to quit the LP. When consumers' perceptions of cognitive or affective switching costs are high, "lock-in effects" may occur. Regarding the customer-related IVs, each subcategory is equally investigated. Specifically, consumers' general characteristics gain in popularity in recent years. We observe an increase in use, rising from only two articles (4.7%) in the 2000s to 14 articles (19.2%) in 2010s, making it one of the most popular IV categories of the period.

Less utilized IVs include competition-related variables, such as customers' possession of competitors' loyalty cards and the attractiveness of competitors that negatively affect the focal store's/brand's LP efficiency (Azeem et al., 2018; Leenheer et al., 2007; Meyer-Waarden & Benavent, 2009), as well as other variables, such as engagement, information searching, and communication style in an LP (Berezan et al., 2017; Bruneau et al., 2018).

6.2. Mediating variables

Regarding mediating variables, we find that only 42 of the 117 assessed articles (35.9%) include mediators. Most of these mediators are related to (1) design characteristics of the program, or (2) characteristics of the customer. Program-related variables are less frequently used as mediators compared to consumer-related variables. Program-related variables include perceived value and benefits (7 articles, 16.7%), redemption processes (4 articles, 9.5%), and reward characteristics, such as reward rarity (3 articles, 7.1%). In contrast, two of the most popular categories of mediators are customers' relationship characteristics (17 articles, 40.5% of all articles which include mediators), and their general characteristics, cognition, and affect (12 articles, 28.6%), used in nearly a third of studies that consider one or more mediators.

Typical relationship characteristics that mediate the effects of IVs on outcomes are customers' attitudinal loyalty (e.g., resistance to counter-persuasion from competitors), such as trust and commitment, representing a motivation to maintain a valued relationship toward the focal firm and a willingness not to be betrayed (Morgan & Hunt, 1994). Customers' in/out-group identification, perceptions of (un-)fairness, and feelings of gratitude represent common cognitions and emotions

that are relevant in the context of tiered programs and positively mediate the effects of IVs on outcomes (Esmark et al., 2016). In contrast, only a few articles specify consumers' memberships (2 articles, 4.8% of all articles which include mediators) or purchasing behaviors (e.g., repeat purchasing behaviors such as purchase frequency, amount, and recency; 3 articles, 7.1%) as mediating variables.

Over time, we observe that consumers' LP memberships, as well as the programs' perceived value and benefits, were common mediators in the 2000s (4 out of 10 articles which include mediators in that period). In the 2010s, the focus shifted towards the mediating role of consumers' characteristics, cognition and affect, as well as relationship characteristics.

6.3. Moderating variables

Concerning moderating variables, our analysis indicates about half of all studies (55 articles; 47.0%) consider moderating effects. Similar to the mediators, most moderators are related to (1) consumer characteristics or (2) LP design characteristics. Variables related to the consumer cover customers' general characteristics in the form of cognition and affect (14 articles, 25.5%), membership in a program (10 articles, 18.2%), their purchasing behaviors (8 articles, 14.5%), and characteristics describing their relationships with the firms/brands (5 articles, 9.1%). General characteristics, as well as cognition and affect, are the most popular moderating variables in LP research, especially socio-demographics (e.g., age, gender, income) and other household-related variables which are plausible given that, in retailing and hospitality (i. e., the two dominating contexts), a large amount of consumption is done on a family basis (Dorotic, Verhoef, & Bijmolt, 2014; Leenheer et al., 2007). Moreover, cognitive and emotional traits, such as personal involvement, the relevance of the purchases, and the psychological benefits which consumers derive from membership, regulate their attitudes towards LPs, and their participation, accordingly (Vesel & Zabkar, 2010).

The second most frequently used moderators are program-related variables. This category includes reward characteristics (10 articles, 18.2% of all articles which include moderators), redemption requirements, and mechanisms (8 articles, 14.5%), the type of program (6 articles, 10.9%), promotional activities (3 articles, 5.5%), and the number and structure of customer tiers (3 articles, 5.5%). Reward characteristics can be classified into several types following their exclusivity, visibility, tangibility, as well as the rate of reward (Esmark et al., 2016; Schumann et al., 2014; Steinhoff & Palmatier, 2016). Notably, researchers started to investigate the moderating effects of reward characteristics in the 2010s, accounting for one third of all moderators used during the period from 2010 to 2019.

We also observe an increasing consideration of program membership over time, making it one of the most common moderators in the period of 2010–2019 (7 articles, 18.9%), after reward characteristics (10 articles, 27.0%), general characteristics, cognition, and affect (8 articles, 21.6%). Furthermore, relationship characteristics (e.g., attitudinal loyalty, trust, and commitment) form another noteworthy category, one which was frequently studied during the 2000s. Its popularity declined from 22.2% of all moderators used in the 2000s to 2.7% in the 2010s, which could be an indication of the maturity of relationship marketing research. Indeed, new concepts such as customer engagement – an active interaction between customers and the firm (Kumar & Pansari, 2016), or its LP (Bruneau et al., 2018) – have emerged and attract increasing attention in marketing research. Only three articles (Azeem et al., 2018; Bombaij & Dekimpe, 2020; Liu & Yang, 2009) consider competition-related variables, e.g., market saturation due to the number of existing LPs, and entry of new competitors. For example, Bombaij and Dekimpe (2020) find that LP efficiency is lower when operated by discounters, and higher in markets with weak competition. Very few other variables (2 articles, 3.6% of these articles) are studied as moderators, including industrial exclusivity and LP duration.

6.4. Dependent variables

Finally, our review of the investigated dependent variables (DVs) shows that most studies focus on customer-related outcomes, only 14.5% (17 articles) of the articles reviewed focus on investigating LPs effectiveness in terms of firm performance. These studies consider both financial and strategic performance outcomes, employing measures of (future) sales, sales productivity, profitability, or financial risk (e.g., Chaudhuri et al., 2019; Kang et al., 2015). Compared to these financial measures, other measures of intangible assets, such as brand or customer equity, are more difficult to be measured and causally attributed to a particular LP. This is because they are created gradually and their ramifications may only manifest slowly over time.

Referring to the customer-related DVs, researchers specially focus on (1) purchasing behavior (56 articles, 47.9% of all articles), and/or (2) relationship outcomes (41 articles, 35.0%). Purchasing behavior-related outcomes include repeat purchases, purchase quantities, frequencies, total spending, and share of wallets (Azeem et al., 2018; Breugelmans & Liu-Thompkins, 2017; Wang, Lewis, Cryder, & Sprigg, 2016). Meanwhile, relationship outcomes reflect, for example, customers' attitudinal loyalty, trust, and commitment toward the LP or firm, their levels of satisfaction, and consequent word of mouth intentions (Meyer-Waarden, 2015b; Noble, Esmark, & Noble, 2014). Due to the inherent objectives of loyalty programs, i.e., stimulating repurchases and fostering attitudinal and behavioral loyalty among customers, these two categories are the prevailing DVs and have been studied consistently over time (88.4% of all articles in the 2000s, 79.5% in the 2010s).

Other frequent consumer-related DVs are LP membership (e.g., adoption likelihood and timing, decision to stay or cancel; 17 articles, 14.5%), redemption behavior (e.g., decision to spend points, dynamics of spending points, redemption amounts; 15 articles, 12.8%), perceptions, attitudes, and motivations (e.g., sense of pride, perceived justice; 16 articles, 13.7%). Our results indicate increasing trends in focus on (1) consumers' redemption behaviors and (2) their perceptions, attitudes, and emotions, rising from 9.3% in the 2000s to 15.1% in the 2010s, and 4.7% in the 2000s to 19.2% in the 2010s, respectively. During the same period, we observe a decreasing trend regarding the focus on LP membership-related DVs, from 20.9% in the 2000s to 11.0% in the 2010s. Other non-classified DVs (7 articles, 6.0%) include, market price and total consumer (social) welfare.

7. Methodology

To assess the literature in terms of methodology, we reviewed 128 empirical articles (excluding three conceptual articles) according to the research approach (quantitative or qualitative) and the analytical method(s) used to investigate the relationships of interest. Table 6 summarizes our findings.

7.1. Research approach

Our review clearly indicates that quantitative approaches dominate the field, with 121 articles that include quantitative studies compared to 13 articles that include qualitative studies (note that the overall number exceeds 128 due to several mixed methods articles, e.g., for scale development procedures). Among the articles that include quantitative studies, 97 articles (80.2%) use primary data from surveys and experiments (e.g., Bagchi & Li, 2010; Drèze & Nunes, 2004). The use of experimental and survey data is distributed quite evenly, with 41 articles (42.3%) focusing on exploring causal relationships and 56 articles (57.7%) focusing on exploring correlational relationships. In most cases, these articles report results that are based on heterogeneous consumer samples (83.2%), yet 24 articles use student samples either exclusively (10 articles; e.g., Ivanic, 2015; Ma et al., 2018) or in addition to consumer samples (14 studies; e.g., Breugelmans & Liu-Thompkins, 2017; Kivetz & Simonson, 2003). Very few studies use survey data collected

Table 6
Research approach and methods used to study loyalty programs.

Research approach & method	No. of articles	%	Exemplary studies
Quantitative approach	121	94.5	Drèze and Nunes (2009); Kivetz (2005); Vesel and Zabkar (2010)
Experimental (primary) data	41	32.0	Liu and Mattila (2016); Steinhoff and Palmatier (2016); Wagner et al. (2009)
Correlational (primary) data	56	43.8	Melnyk and Bijmolt (2015); Sharp and Sharp (1997); Wang and Lalwani (2019)
Secondary data	37	28.9	Liu and Yang (2009); Rossi (2018); Zhang and Breugelmans (2012)
Qualitative approach	13	10.2	Bruneau et al. (2018); Hutchinson et al. (2015); Tuzovic (2010)
Regression analysis[a]	69	53.9	Allaway et al. (2006); Breugelmans and Liu-Thompkins (2017); Kivetz et al. (2006)
(Multivariate) Analysis of (co-)variance[b], *t*-Test, Sobel test	30	23.4	Bagchi and Li (2010); Keh and Lee (2006); Ramaseshan and Ouschan (2017)
Structural equation modeling (covariance/variance-based)	24	18.8	Berezan et al. (2017); Esmark et al. (2016); Kang et al. (2015)
(Bayesian) Hierarchical (linear) models (incl. meta-analysis)	6	4.7	Drèze and Nunes (2011); Stourm et al. (2015); Van Heerde and Bijmolt (2005)
(Hierarchical) Cluster analysis, latent class analysis, and mixture models	5	3.9	Hansen et al. (2010); Rosenbaum et al. (2005); Vesel and Zabkar (2010)
Scale development[c]	5	3.9	Bruneau et al. (2018); Meyer-Waarden (2013); Mimouni-Chaabane and Volle (2010)
Other methods[d]	28	21.9	Chun and Ovchinnikov (2019); Lewis (2004); Sayman and Hoch (2014)

Note: Number of articles amount to more than 128 studies (excl. conceptual work) because several studies employ multiple methods (e.g., Hansen et al., 2010; Keeling et al., 2013; Meyer-Waarden & Benavent, 2009); relative frequencies are based on 128 studies. [a] Includes, among others, (multinomial) logistic/logit regressions (Drèze & Nunes, 2009), tobit and probit models (e.g., Kivetz et al., 2006), seemingly unrelated regressions (e.g., Dorotic et al., 2011), generalized linear models (e.g., Ivanic, 2015), diff-in-diff models (e.g., Chaudhuri et al., 2019), vector autoregressive models (Meyer-Waarden & Benavent, 2009), and event history/hazard models (e.g., Viswanathan et al., 2017); [b] includes repeated measure (M)ANOVAs (e.g., Daryanto et al., 2010); [c] we designate scale development procedures as a distinct class, typically involving the use of other methods, i.e., qualitative interviews, exploratory factor analysis, confirmatory factor analysis, and structural equation modeling; [d] includes various methods which were mostly applied in singular studies, ranging from qualitative methods (e.g., case studies, Hutchinson et al., 2015; fsQCA, Ma et al., 2018; critical incident technique, Tuzovic, 2010) to mathematical proof (Drèze & Nunes, 2004) and numeric simulations (Chun & Ovchinnikov, 2019).

among (1) managers responsible for LPs (for exceptions, see Leenheer & Bijmolt, 2008; Wansink, 2003) or (2) commercial customers in B2B relationships (for exceptions, see Keeling, Daryanto, de Ruyter, & Wetzels, 2013; Viswanathan, Sese, & Krafft, 2017). This is surprising given that these populations represent important key information sources that probably hold valuable insights for the advancement of the field. The remaining 37 articles (28.9%) use secondary data, either longitudinal consumer panel data (e.g., Meyer-Waarden, 2007; Meyer-Waarden & Benavent, 2009), or longitudinal transactional scanner data from LPs (e.g., Leenheer et al., 2007; Viswanathan et al., 2017) which are occasionally combined with geo-coded address information (e.g., Allaway et al., 2006; Meyer-Waarden & Benavent, 2009).

7.2. Analytical methods

Researchers use various analytical methods that are applied according to the data used (see Table 6). As most LP studies use quantitative data sets, regression analysis is the most popular analytical method (69 articles, 53.9%). Studies based on transactional LP scanner data predominantly use regression-based (panel) analyses such as (multinomial) logistic/logit regressions (e.g., Drèze & Nunes, 2009), tobit and probit models (e.g., Kivetz et al., 2006), generalized linear models (e.g., Ivanic, 2015), diff-in-diff models (e.g., Chaudhuri et al., 2019), vector autoregressive models (Meyer-Waarden & Benavent, 2009), and event history models/hazard models (e.g., Allaway et al., 2003) to explain why some customers are more likely to engage in certain behaviors, e.g., signing up for an LP.

The second most frequently used group of methods apply to studies based on survey data. This group includes different forms of mean comparisons such as (multi-variate) analyses of (co-)variance or *t*-Tests (30 articles, 23.4%) and structural equation modeling (SEM) (24 articles, 18.8%; e.g., Ma et al., 2018; Steinhoff & Palmatier, 2016). Compared to these conventional volatile methods, other more specialized methods are used less frequently. Examples of more specialized methods include (1) hierarchical models, such as meta-analysis, to account for the nested structure of observational units, e.g., customers in programs or studies in articles (6 articles, 4.7%; e.g., Bombaij & Dekimpe, 2020), and (2) cluster analysis, latent class analysis, or mixture models to uncover latent structures, e.g., a distinction of LPs based on the perceived sense of community (5 articles, 3.9%; e.g., Rosenbaum et al., 2005). Furthermore, we designate scale development procedures as a distinct category, which includes five articles (3.9%) that involve a qualitative analysis of interviews, exploratory and confirmatory factor analyses, and SEM. This group includes, for example, Mimouni-Chaabane and Volle (2010) development of a multi-dimensional scale to measure the perceived benefits of LPs. Other methods (28 articles, 21.9%) that are typically used in singular studies include, for example, mathematical proof (Drèze & Nunes, 2004), numeric simulations (Chun & Ovchinnikov, 2019), fsQCA (Ma et al., 2018), and critical incident technique (Tuzovic, 2010).

It is noteworthy that there is no single analytical method that is inherently superior to others. In fact, several studies employ multiple methods to account for different types of data sets from multiple sources (e.g., Hansen et al., 2010; Keeling et al., 2013; Meyer-Waarden, 2007) in order to increase the generalizability of their findings and reduce common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

8. Future research agenda

Over the past three decades, LP research has generated a vast body of research that, collectively, has improved our understanding of why and how LPs work. Despite prior attempts to summarize empirical *or* theoretical aspects of this literature, it has not been reviewed in a holistic manner. To structure and consolidate existing knowledge, we provided a general overview of LP research, followed by an in-depth review of *theories* that have been used to explain phenomena related to LPs; *contexts* in which these phenomena have been investigated; *characteristics* (i.e., variables) that have been studied; and *methods* that have been used to draw conclusions about the investigated relationships. Based on this systematic review of what has been done, we outline an agenda for future research to stimulate further advancement of the field. In correspondence with the structure of our main section, and other reviews following the same protocol (e.g., Paul, Parthasarathy, & Gupta, 2017), we again distinguish between theory, context, characteristics, and methodology. It is noteworthy that, although we provide several directions for future research, the presented research questions are not exhaustive.

8.1. Theory

With respect to theory, our review shows that researchers have used diverse theories to explain the mechanisms associated with LPs. These theories often take a particular angle, focusing on status-based mechanisms (e.g., social comparison theory), inertia-based mechanisms (e.g., behavioral learning theory), or relationship-based mechanisms (e.g., equity theory). As a result, most of the reviewed articles use a single theory to underpin their conceptual framework. However, a single theoretical perspective is unlikely to account for the complexity of LPs that often feature multiple actors (firm, coalition partner, competitors, and customers) and various design elements (accumulation and redemption mechanisms, reward type, rate, and timing) in different contexts (industries and countries). Therefore, LP studies should adopt a multi-theoretical perspective to account for this complexity.

Given the lack of cross-cultural studies, the adoption of cultural theories in LP research is scant. However, the effectiveness of many design features of LPs could be contingent on culture. This notion is supported by initial evidence from Bombaij and Dekimpe (2020) who find that LPs have a stronger impact on retail sales in countries with more individualistic and short-term oriented cultures. At the same time, it is conceivable that the performance of a community-based LP may be more effective in a collectivistic culture than in an individualistic culture. Future research should adopt established cultural theories, such as Hofstede (2001) dimensions of national culture, Schwartz (1992) theory of basic values, or Trompenaars (1993) model of national culture differences, when investigating the moderating role of specific cultural dimensions.

For example, power distance is likely to play a role in the acceptance and perceived value of tiered/hierarchical LPs, in that the degree to which a society accepts hierarchies and inequalities might have implications for the optimal number of tiers and the extent to which differential treatments are perceived to be fair. Also, indulgence, and long-term orientation are likely to be related to the types of rewards consumers prefer and how rewards should be timed. For example, indulgence, which stands for a society that allows free gratification and enjoyment of life, suggests a preference for hedonic and relational rewards over utilitarian and altruistic rewards. Similarly, a culture's long-term (short-term) orientation suggests a preference for delayed (immediate) rewards. Finally, uncertainty avoidance appears to be of particular interest for LP research because little is known about how customers endow their efforts in LPs in which their progress is more or less difficult to assess and predict. Insights into the role of uncertainty avoidance for customers' endowment and perceived progress would help to adapt the requirements and processes of reward redemption to local idiosyncracies.

Furthermore, Schwartz (1992) and Trompenaars (1993) cultural frameworks could be used to explain cross-national differences in customers' LP-related value perceptions. For example, Schwartz's stimulation (excitement or feeling of novelty) and hedonism (pleasure and sensuous gratification for oneself) dimensions are likely to be related to the hedonic value of a given LP. Achievement (demonstrating competence according to social standards) and power (social status and prestige, or control), just as Trompenaars (1993) achievement vs. ascription dimension, could be linked to the value-creation of tiered programs. Finally, Schwartz's benevolence dimension (enhancing the welfare of others), or Trompenaars (1993) communitarianism vs. individualism dimension, could be used to explain the perceived altruistic value of an LP that donates points or miles to good causes.

We therefore encourage future studies to investigate cross-cultural differences and similarities related to the adoption, execution, and outcomes of LPs. Future research could encompass both the validation of existing models, for which generalizability has not yet been established, and the hypothesizing and testing of new relationships involving country and culture-related factors.

8.2. Context

With respect to the investigated contexts, we identified that a large number of LP studies are set in specific industries, such as retail, airlines, and hotels. Studies exploring other industries remain scarce. For example, there is only one study found in the literature that investigates LPs in a B2B context (Viswanathan et al., 2017). Generally, relationships between companies are often well-established and long-term oriented in a B2B context. Facing increasing competition, B2B companies are intensifying their efforts to build and maintain strong relationships with their customers (Lilien, 2016).

Additionally, our review revealed that most LP research has been carried out in Western countries, while very limited attention has been paid to emerging markets in Asia, Africa, and Latin America (Thompson & Chmura, 2015; Yi & Jeon, 2003). Yet, as globalization and digitalization enable expanded global LP management and operations, there is greater need for research emerging countries in Asia, Africa, and Latin America (Burgess & Steenkamp, 2006; Kumar & Srivastava, 2019). Therefore, future research should study the adoption, design, and execution of LPs in varying market settings, including emerging countries, to generalize prior findings and theories, as well as to learn more about the moderating role of contextual factors, such as economic conditions, cultural particularities, and technological infrastructure.

Another research gap results from the rapid technological developments in recent years that have led to more purchases being concluded via websites or mobile applications. Consequently, revenues increasingly shift from offline towards online channels. Although a few studies have considered the online retail industry (i.e., Ivanic, 2015; Kivetz & Simonson, 2002; Lewis, 2004; Zhang & Breugelmans, 2012), more research is needed to understand the effectiveness of LPs in the quickly evolving context of new digital business models. Apart from emerging e-retailers, some traditional retailers, such as Macy's, Bloomingdale's, and Neiman Marcus recently started their online businesses (Han, Fu, Cao, & Luo, 2018). As a result, the frontiers of LPs will expand, and future research should focus more on online retailing to support and improve marketing practices.

Also, LP managers have new advanced technologies, such as augmented/virtual reality (AR/VR), artificial intelligence (AI), and robotics, at their disposal to increase convenience and strengthen relationships with their members (Agarwal et al., 2020; Rauschnabel, He, & Ro, 2018). For example, IKEA allows their LP members to upload pictures of a room to a mobile app and then insert different IKEA products to determine how to achieve the look they desire (Joseph, 2017). Moreover, embodied or disembodied service robots, such as Alexa or Siri, can be integrated into LPs to evoke feelings of presence and to provide customers with immediate information and recommendations, thus enhancing the customer experience (Grewal et al., 2018; Van Doorn et al., 2017). More research is needed to understand how LPs can effectively leverage these new technologies with the aim of fostering stronger customer relationships and increasing LP efficiency. Future investigations could also focus on customers' motivations and the behavioral consequences of using these innovative and interactive technologies in online and offline LPs.

8.3. Characteristics

With respect to the investigated constructs, our review reveals that LP research has addressed related phenomena from various angles, employing explanatory variables related to the firm, its LP, current and potential customers, and competitors. Compared to the remarkable variety of firm, LP, and consumer-related characteristics studied as explanatory, mediating, moderating, and criterion variables, we diagnose a need to incorporate competition-related variables. To date, few studies have explicitly considered the competitive context (for exceptions see Kim et al., 2004; Liu & Yang, 2009; Liu & Ansari, 2020). LPs are not executed in an isolated manner, but rather in saturated markets with various competing programs. Therefore, it is important to understand these complex dynamics and the intense competition among multiple market actors. It would also be interesting to study the impact of the discontinuation of an LP on customer purchase behavior, and on the competitive structure and dynamics of the market. For future LP research, researchers may apply more competition-related variables, such as memberships in competing LPs, as well as attractiveness of competing programs, and may consider theories that explain strategic interactions among decision-makers, such as game theory (e.g., Fudenberg & Tirole, 1991).

Furthermore, digitalization and new technologies present important opportunities for the development of LPs and draw attention to new concepts that future research should investigate (Agarwal et al., 2020). First of all, LPs are expected to move from plastic cards to intangible and virtual accounts that are managed through mobile applications. The digitalization of LPs is said to be more cost-efficient and minimizes the problem of data input errors known to occur with paper registrations. Such mobile LP application can be easily integrated into a larger network of connected objects that form an LP application ecosystem. These connected objects, such as wearables, smart home appliances, personal assistants (e.g., chatbots, voicebots), and other sensors, provide access to LP members' "quantified self," including physiological measures, such as heart rate, blood pressure, dietic information (e.g. allergic information), sleep quality, sports performance, and other health-related indicators that are associated with personal well-being. Such information, derived from the LP application ecosystem, facilitates the delivery of highly personalized LP incentives, rewards, products, and services that contribute to customers' quality of life and well-being, concepts that are attracting increasing attention in marketing science (Mogilner, Aaker, & Kamvar, 2012; Munzel, Meyer-Waarden, & Galan, 2018; Sirgy, 2012).

In addition, advances in artificial intelligence provide multinational corporations with enhanced analytical capabilities that enable them to gain insights from the large amounts of data they collect on a daily basis. For example, AI-powered tools enable LP managers to estimate members' individual product preferences and price sensitivities. Such insights offer tremendous opportunities for personalizing the communication with, and offers made to, LP members where the aim is to stimulate customer engagement, increase perceived value, and strengthen customer-firm relationships.

However, the large amount of data collected through LPs raises ethical issues related to data security and privacy risks. Specifically, risks linked to the consequences of privacy concerns, loss of control, and risks from hackers, are all sources for potential doubt, stress, and decrease in well-being that might inhibit LP adoption and usage (Cloarec, 2020; Martin et al., 2020). IT-literature refers to the "privacy-personalization paradox" to show that perceived benefits of personalization can outweigh the perceived risk of privacy loss resulting in higher levels of trust (e.g., Awad & Krishnan, 2006; Hong & Thong, 2013). Indeed, also in the marketing literature, personalization-privacy issues are gaining importance (Aguirre, Mahr, Grewal, de Ruyter, & Wetzels, 2015). To the best of our knowledge, very few studies examine the privacy aspects of LPs. Future research should shed light on LP members' trade-off between privacy risks (e.g., the potential loss associated with the release of personal information to the firm) and personalization benefits (e.g., satisfaction with targeted emails, tailored services, or individualized offers; Martin et al., 2020; Rust, 2020). For example, future research should investigate the types of data LP members are willing to share using opt-in and opt-out options, which could help LP managers find the right balance between using customer data to deliver personalized LP offerings and satisfying members' privacy rights (Martin & Murphy, 2017). Finding this balance is crucial as it takes time to build customer trust while it can be destroyed very quickly if customer data are "exploited" without permission, or are inadequately protected (Dekimpe, 2020). Consumer traits, including technology readiness and openness, past experiences, and level of education, could be considered

as factors that potentially influence consumers' privacy-personalization trade-off.

8.4. Methodology

Finally, with respect to methods used in LP research, the findings of our review attest to the healthy state of the field. We find a clear dominance of quantitative research that relies strongly on primary data from experiments and surveys, as well as secondary data from retailers (i.e., transaction records). These data types inform the choice of method, in that survey data (including experiments) tends to be analyzed by using SEM or conventional multivariate tests, and panel data such as LP scanner data tends to be analyzed using regression-based methods.

While experiments offer high levels of internal validity and are instrumental in establishing the causality of investigated relationships, secondary data on real behavior (e.g., transaction records) offer high levels of external validity and are key to test the generalizability of findings in real-world settings. However, many studies rely on a single data source to test their propositions, especially in the context of surveys. This raises the issue of common method variance, i.e., "variance that is attributable to the measurement method rather than the constructs the measures represent" (Podsakoff et al., 2003, p. 879). Common method variance can undermine the validity of estimated parameters and reduce the opportunities to detect interactive/moderating effects. Aside from ex-ante remedies to reduce the amount of common method variance and ex-post statistical tests to assess it, using multiple data sources for different model constructs is an effective way to circumvent such bias (Podsakoff et al., 2003). Likewise, the use of secondary data has been limited due to the fact that access to corporate data tends to be more restricted. However, as more retailers monetize and share their data (e.g., to enrich suppliers' business intelligence), LP scanner data becomes increasingly easier and more affordable to obtain. Such data provides reliable behavioral information that does not suffer from the same biases associated with experiments and surveys (e.g., demand artifacts).

Against this background, we believe that future studies should use mixed-method approaches to leverage the unique strength of both primary and secondary data. By combining more reliable real-world data with primary data from experiments and surveys, studies can reduce the risk of common method variance, thus safeguarding internal validity. This also helps reduce the divergence of self-reported loyalty intentions and actual behavior, thus enhancing external validity. In the retail sector, there is a long history of scanner-data availability which has given a strong impetus to econometric research in the sector (Inmann & Nikolova, 2017; Wedel & Kannan, 2016). Therefore, future studies could, for example, combine real-world behavioral scanner data with declarative attitudinal data from customer surveys to assess the impact of LP design features on objective performance measures at the firm or program-level, such as sales and profits, to enhance their theoretical, methodological, and managerial contributions.

Another untapped, rich source of data are customers' posts and comments on social media and other textual data from consumer interface platforms (Berger et al., 2019; Humphreys & Wang, 2018). These textual data could be used to measure customers' LP-related sentiments and attitudes on a large scale while avoiding some biases of conventional surveys, such as social desirability. Advanced text mining tools are able to identify the latent structure of narratives and text by means of sentiment analysis (e.g., Kumar & Paul, 2016; Naldi, 2019).

Furthermore, our review shows that only a few investigations have analyzed longitudinal data (Bolton et al., 2000; Kopalle, Sun, Neslin, Sun, & Swaminathan, 2012; Meyer-Waarden, 2007). While the short-term effects of LPs are well-established in the literature, the long-term effects are less clear. Future research should thus integrate long-term customer profit streams and financial data to investigate LP efficiency in terms of customer lifetime value (CLV; Gupta et al., 2006) or customer

equity (Villanueva & Hanssens, 2007), as these measures capture both the effects of LPs and the costs at all stages of a customer's life cycle (Rust, 2020).

Finally, future research should adopt stochastic and probabilistic retention and churn models (e.g., Pareto/NBD, BG/NBD and explanatory Pareto/NBD models) for analyzing LP customer bases and forecasting customers' future purchasing behavior and CLV (Castéran, Meyer-Waarden, & Reinartz, 2017; Fader, Hardie, & Lee, 2005). Based on large longitudinal databases, these models help LP managers to understand why their programs work, or not, and how they can improve the allocation of resources among different LP customer segments. However, research has to consider the difficult balance between the technical complexity of big data analyses and managerial relevance (Dekimpe, 2020; Wübben & Wangenheim, 2008).

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A

List of all papers

1. Allaway et al. (2003)
2. Allaway et al. (2006)
3. Arbore and Estes (2013)
4. Asiah Omar and Musa (2011)
5. Azeem et al. (2018)
6. Bagchi and Li (2010)
7. Beck et al. (2015)
8. Berezan et al. (2017)
9. Bolton et al. (2000)
10. Bombaij and Dekimpe (2020)
11. Breugelmans and Liu-Thompkins (2017)
12. Bridson et al. (2008)
13. Bruneau et al. (2018)
14. Cedrola and Memmo (2010)
15. Chan, Kemp, and Finsterwalder (2016)
16. Chaudhuri et al. (2019)
17. Chun and Ovchinnikov (2019)
18. Cortiñas, Elorz, and Múgica (2008)
19. Danaher et al. (2016)
20. Daryanto et al. (2010)
21. Demoulin and Zidda (2008)
22. Demoulin and Zidda (2009)
23. Dorotic, Fok, Verhoef, and Bijmolt (2011)
24. Dorotic et al. (2014)
25. Drèze and Nunes (2004)
26. Drèze and Nunes (2009)
27. Drèze and Nunes (2011)
28. Eason et al. (2015)
29. Eggert et al. (2015)
30. Esmark et al. (2016)
31. Evanschitzky et al. (2012)
32. Filipe et al. (2017)
33. Frisou and Yildiz (2011)
34. Gable, Fiorito, and Topol (2008)
35. García Gómez et al. (2012)
36. Hansen et al. (2010)
37. Hutchinson, Donnell, Gilmore, and Reid (2015)
38. Ieva and Ziliani (2017)
39. Ivanic (2015)
40. Jai and King (2016)

41. Kang et al. (2015)
42. Kearney (1989)
43. Keeling et al. (2013)
44. Keh and Lee (2006)
45. Kim and Ahn (2017)
46. Kim, Kang, and Johnson (2012)
47. Kim et al. (2009)
48. Kim et al. (2004)
49. Kivetz and Simonson (2002)
50. Kivetz and Simonson (2003)
51. Kivetz (2005)
52. Kivetz et al. (2006)
53. Kopalle et al. (2012)
54. Kreis and Mafael (2014)
55. Kwong et al. (2011)
56. Lacey and Morgan (2009)
57. Leenheer and Bijmolt (2008)
58. Leenheer et al. (2007)
59. Lemon and Wangenheim (2009)
60. Lewis (2004)
61. Lin and Bennett (2014)
62. Liu and Mattila (2016)
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