Nonprofit Pricing: Determinants of Membership Fee Levels in Nonprofit Sports Clubs in Germany

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Acknowledgements

Abstract

In Germany, membership fees in nonprofit sports clubs are comparatively lower than fees or prices for other leisure time activities, such as sports offers from fitness clubs, music schools, or theatre visits. However, it is unclear on which basis sports clubs set their membership fees for different groups and why fees differ between clubs. Based on panel data of nonprofit sports clubs in Germany (*n*=1,538), this study investigates which factors influence the setting of membership fee levels using classical pricing-approaches adapted to the nonprofit context. The results show that costs related to coaches and instructors as well as facility costs significantly determine the level of membership fees, whereas perceived competition does not. Moreover, club goals such as offering competitive sports or sports for socially vulnerable groups have an impact on the level of membership fees. Furthermore, clubs with higher revenue diversification display lower levels of membership fees two years later.

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Introduction

Nonprofit sports clubs (NSCs) are membership organizations, meaning that they are largely financed through revenue from membership fees. Among a variety of income sources, membership fees are their most important source of revenue (Lamprecht, Bürgi, Gebert, & Stamm, 2017; Nagel, 2006). Compared to nonprofit organizations in other areas like arts or health, nonprofit sports organizations rely more heavily on fees from their members (Steinberg, 2007). In Switzerland, for example, membership fees make up almost one-third of all revenue NSCs generate (Lamprecht et al., 2017), and in Germany, all NSCs receive fees from their members (Breuer & Feiler, 2019). In their role as nonprofit sports providers, clubs are aiming to offer affordable sports programs to a wide range of different population groups. Thereby, clubs build the basis of sports systems in many European countries and help to promote "sport for all," which is a policy goal throughout Europe (European Commission, 1999). In Germany, which is the research context of this study, almost 29% of the

population are members of NSCs. Within the age group of the 7- to 14-year-olds, more than 80% of boys and more than 60% of girls are members of sports clubs (DOSB, 2018).

This high organizational degree of sport is possible since the offers of NSCs are comparably cheap. Other leisure time activities, such as taking part in programs of commercial sport providers (CSPs), music schools, or art schools as well as visits to theatres or cinemas are on average far more expensive than joining a sports club (Breuer, Wicker, & Swierzy, 2016; Fischer & Tschurer, 2011). For example, half of the German sports clubs charge a maximum monthly membership fee of €3 for kids, €4 for youth, and €8 for adults (Breuer & Feiler, 2019), whereas the average membership fee for commercial fitness clubs amounts to €44 per month (DSSV, 2018). This price difference can be ascribed to the nonprofit character of clubs. Almost all NSCs in Germany (97.6%) are registered associations under German law (Breuer & Feiler, 2015), meaning that their contribution to public welfare is officially confirmed by financial offices. This legal form makes clubs eligible to receive public support from different governmental levels (cf., Feiler, Wicker, & Breuer, 2018). Public sport promotion in Germany is justified by the contribution of NSCs to the welfare of society (Heinemann, 2005). Benefits include direct public subsidies, the usage of public sport infrastructure for free or for a low fee, and tax benefits (Deutscher Bundestag, 2019).

However, the legal form of a nonprofit organization prohibits clubs from distributing profits among their members (Hansmann, 1980). Therefore, clubs do not, in contrast to CSPs, pursue monetary profit targets but rather are guided by needs-oriented club goals. These goals often include, apart from offering sports programs, intangible benefits for members like companionship and conviviality (Nagel, 2006). Thereby, clubs have, economically, no incentive to charge higher levels of membership fees than necessary to run key club operations. Likewise, the interests of members to join a sports club are two-fold (Klenk, Schlesinger, & Nagel, 2017): First, membership is goal-oriented, meaning that individuals are interested in taking part in sports programs and maybe even participating in official competitions. The latter is only possible through a club membership, which is a further differentiating factor of sports clubs compared to other sports providers (Gratton & Taylor, 2000). Second, club membership can be value-oriented, meaning that members appreciate the social-integrating atmosphere of clubs (Klenk et al., 2017), which is less likely to be found in commercial fitness centres (Ulseth, 2004). Therefore, joining a club by paying a given membership fee is related to different member interests.

However, it is unclear how clubs actually decide the level of membership fees, which would be interesting to know as clubs are a socially relevant phenomenon (Rittner & Breuer, 2004). As membership fees differ between sports clubs (Emrich, Pitsch, & Papathanassiou, 2001), it is likely that differences in the provision of sports offers, e.g., the number and quality of coaches, is relevant in this regard. Therefore, from time to time, clubs should examine whether their membership fees are still adequate (Kotler, 2000), i.e., sufficient to cover costs related to the sports offers (Wicker, 2011).

Despite the importance of membership fees for NSCs and their members, it has so far not empirically been studied on which basis clubs set their membership fees. Therefore, the purpose of this study is to shed light on pricing processes in NSCs by investigating which factors are relevant to the level of membership fees sports clubs charge so that differences in membership fees between different clubs can be explained. The study contributes to the body of research on the finances of NSCs by investigating determinants of the clubs' most important income source.

State of Research

Membership fees are the most important revenue source for German NSCs. While sports club surveys in different countries cover membership fees and display descriptive results (e.g., Lamprecht et al., 2017; SRA, 2018), empirical research on membership fees for NSCs is mainly related to the willingness-to-pay (WTP) of club members (e.g., Swierzy, Wicker, & Breuer, 2018b). Studies on determinants of membership fees are, with few exemptions (e.g., Huth & Kurscheidt, 2019), scarce. Instead, studies have investigated price determinants of different sport products (e.g., Pawlowski, 2011). Thus, this chapter gives a short insight in the state of research on a) membership fee levels of NSCs in different countries and b) empirical research related to pricing in sports.

Membership fees differ within clubs between different groups. Usually, kids and adolescents pay lower membership fees (Nagel, 2006), and some clubs offer reduced fees for the elderly, families, and socially disadvantaged groups (Breuer et al., 2016; Lamprecht et al., 2017). For example, sports clubs in the UK charge a yearly average membership fee of £108 (approx. €10.45 per month) for participating adult members and £68 (approx. €6.60 per month) for junior members (SRA,

2018). In Switzerland, the latest club survey revealed yearly membership fees of CHF 70 (approx. €5.10 per month) for children, CHF 80 (approx. €5.80 per month) for youth, and CHF 117.50 (approx. €9.80 per month) for active adult members (Lamprecht et al., 2017). In Germany, membership fees have slightly increased over the past two years. Nevertheless, the level of membership fees for the different groups is still rather low: In 2017, half of the German NSCs charged a maximum monthly membership fee of €3.00 for children, €4.00 for youth, and €8.00 for adults (Breuer & Feiler, 2019). Interpersonal price discrimination, i.e., charging different prices for the same product or service based on characteristics like age or income, is typical in nonprofit organizations due to their social orientation (Anheier, 2014; Young, Jung, & Aranson, 2010). Since clubs themselves decide the amount of membership fees they charge, membership fees are considered autonomous income (Emrich et al., 2001).

Existing studies dealing with membership fees in NSCs mainly focus on the WTP of members but not on determinants of membership fee levels. Wicker (2011) finds that the average WTP of adult sports clubs members across 21 sports for an annual membership fee is higher (€265) than the actual membership fee they paid (€148), showing that the paid membership fees are lower than the utility members received from being a member and taking part in the sports programs. Moreover, the study showed that a higher current membership fee was positively associated with WTP, a result that was confirmed by Kiefer (2015) in her study on the WTP and willingness-to-work for quality improvements in riding clubs. Swierzy et al. (2018b) investigates the WTP for memberships in NSCs, applying a multi-level framework taking into account both individual and organizational determinants. They find, similar to Wicker (2011), that average WTP is about 30% higher than the currently paid membership fee. Moreover, in cases of perceived financial problems of the club, WTP of members was higher, suggesting that members are open to supporting the club in tense financial situations.

Determinants of membership fees and green fees in golf clubs have been investigated by Huth and Kurscheidt (2019). The study makes use of hedonic pricing, which was introduced by Rosen (1974) and has frequently been applied to investigate determinants of prices of products and services that consist of a bundle of differently-valued characteristics, particularly in the field of real estate, i.e., housing prices (e.g., Goodman & Thibodeau, 2003) but also in the sports context. Examples are studies calculating attribute values of ski lift passes (e.g., Falk, 2008; Pawlowski, 2011), investigating prices of riding lessons (Hess et al., 2014), and determining the value of environmental quality around golf courses (Limehouse, Melvin, & McCormick, 2010). The golf study (Huth & Kurscheidt, 2019) shows that differences in membership fees are mainly explained by differences in product attributes of golf courses. Average annual membership fees amount to €1,252, which largely exceeds the average membership fees in other sports (Wicker, 2011). Thus, the results are hardly comparable to other sports. Also, the other listed studies in the sports context investigating price determinants by using hedonic pricing differ from investigating membership fees of NSCs because most of these studies are related to private goods (e.g., riding lessons). In contrast, membership fees of NSCs have a different character than a regular price, like for example a price for a riding lesson, since sports club memberships are club goods (Buchanan, 1965). Consequently, applying hedonic pricing to investigate membership fee levels does not seem sufficient, as factors other than product attributes are also likely to be relevant for setting membership fees. Instead, classical pricing approaches, adapted to the nonprofit context, are used as theoretical foundation in this study.

Theoretical Framework

Club Goods and Nonprofit Characteristics

Through paying a membership fee to a sports club, people become members of the respective club and consequently have access to mostly all programs and services the club provides (Heinemann, 1995), i.e., they have a general usage right of the clubs' offers (Horch, 1992). Moreover, members of sports clubs pool their resources, such as membership fees and voluntary work, to share production costs and to benefit from the shared action, with these benefits exceeding benefits from individual action (Cornes & Sandler, 1986). Thus, sports club memberships are club goods (Buchanan, 1965), with non-members being excluded from the benefits the club provides. However, member utility may only be positive until a certain optimal club size, where marginal benefits of members are equal to marginal costs (Buchanan, 1965). This means that, with an increasing number of members who derive utility from the club good, marginal utility of the individual member decreases at a certain point due to congestion and crowding (Cornes & Sandler, 1986). Therefore, pricing

processes of membership fees need to take into account that fees that are set too low might lead to an overuse of the club's offers, i.e., crowding, whereas fees that are set too high will lead to an underutilization of the club's offers and thereby to higher costs per member. Thus, membership fees should be set according to the members' tastes for crowding (Anderson, Shughart, & Tollison, 2004). Consequently, the character of membership fees differs from classical prices for private goods, which needs to be considered when investigating determinants of membership fee levels.

Moreover, investigating membership fees of NSCs calls for taking into account further aspects of the nonprofit context. These aspects are related to the constitutive and economic characteristics of NSCs. First, NSCs have democratic structures, are mainly run by volunteers, and are oriented on the members' interests (Horch, 1994). This is relevant in the context of membership fees because all decisions, also about the level of membership fees, are taken by the members. Voluntary work as a non-monetary resource can help to provide affordable membership fees. Second, NSCs are bound to the non-distribution constraint (Hansmann, 1980), meaning that clubs are not allowed to distribute surpluses to their members but must reinvest them (Coates & Wicker, 2017). Thereby, clubs have no incentive in making profit but rather in reaching their organizational goals (Nagel, 2008), fulfilling their mission (Anheier, 2014; Young et al., 2010), and operating economically viable, meaning to maintain solvency (Steinberg, 2007) and cover most of the occurring costs, knowing that other income sources (e.g., donations, subsidies, sponsorship income) are necessary to secure and stabilize the overall financial situation (Kotler, 2000). Thus, the missing incentive to maximize revenues is relevant for deciding about membership fee levels since membership fees do not have the function to reach particularly high revenue but to finance the provided sports offers in accordance with the aim of minimizing economic entry barriers.

Pricing Approaches

This study makes use of classical pricing policy approaches (cf., Kotler, 1997) adapted to the nonprofit context. Generally, pricing decisions are influenced by internal and external factors. The former are concerned with offers and related costs as well as organizational objectives; the latter deal with market demand and competition (Shank & Lyberger, 2015). Based on these assumptions and taking into account the nonprofit characteristics, it is expected that sports clubs take on pricing decisions, i.e., decide about the level of membership fees, based on costs, competition, members' demand, and nonprofit specificities.

Cost-oriented pricing is the first pricing approach. Costs are factors that are related to producing, promoting, and providing products and services (Shank & Lyberger, 2015). In order for organizations to survive, costs need to be covered by revenue, meaning that organizations are required to break even (Young et al., 2010). Nonprofit organizations may apply a slightly different pricing approach, namely striving only for partial cost-coverage, knowing that other revenue sources such as donations or subsidies need to cover the costs remaining (Kotler, 2000). This approach is also applicable to NSCs. To keep club operations running, costs related to the provided sports programs should be covered by membership fees (Fischer & Tschurer, 2011; Wicker, 2011), with the rest of the costs expected to be covered by different income sources. Most of the costs occurring in NSCs are related to personnel, sports equipment, and infrastructure, i.e., sports facilities (Breuer & Feiler, 2019; Lamprecht et al., 2017). Thus, it is expected that costs related to the core sports offers (e.g., coaches, equipment, facilities) will have a positive effect on the level of membership fees.

The second pricing approach is competitor-oriented pricing. Generally speaking, competition is regarded as a critical factor in determining prices, which calls for examining the competitive environment of the organization. If offers of competitors are similar to the own offers, prices should be similar. If offers are inferior (superior), prices should be lower (higher) (Kotler, 2000). In the sports context, this means that prices and offers of competitors of sports organizations should be monitored before setting own prices (Shank & Lyberger, 2015). NSCs report to mainly face competition from other NSCs (Breuer & Feiler, 2019; Lamprecht et al., 2017). In addition, CSPs such as fitness studios, dancing schools, or tennis halls, can be seen as competitors of NSCs. In this regard, it is found that the density of programs from CSPs in the clubs' region has a negative effect on club sport participation (Hallmann, Feiler, & Breuer, 2015). However, there are large differences between the prices of CSPs and NSCs, as CSPs are usually more expensive (DSSV, 2018). Moreover, NSCs often differ from CSPs in terms of offered sports. In particular, most competitive sports and team sports such as hockey and handball are primarily provided by NSCs (Gratton & Taylor, 2000; Ulseth, 2004), which makes it hard to compare offers and prices.

Nevertheless, the perceived problem due to competition from CSPs by German NSCs has significantly increased from 2005 to 2015 (Breuer & Feiler, 2017b). Therefore, competition from other sports clubs and CSPs might influence the setting of membership fees, as increasing competition could lead to lower levels of membership fees to attract members.

The third pricing approach is demand-oriented pricing, in the case of NSCs member-oriented pricing. Generally, "demand is the quantity of a sports product that consumers are willing to purchase at a given price" (Shank & Lyberger, 2015, p. 516). Given that NSCs are democratic associations (Heinemann, 1995), the membership fees are set yearly by the general member assembly. Hence, members are both consumers of the sports offers and at the same time producers, financiers, and decision-makers. Since NSCs are regarded as communities of solidarity (Horch, 1994), members decide the level of membership fees based on what they are willing or able to pay. Due to the solidarity thinking, different groups of members pay different membership fees. For example, adult members pay higher fees than kids, thereby helping finance the clubs' engagement in youth work (Nagel, 2006). Thus, the setting of membership fees is oriented on the members' (i.e., consumers') interests, which are reflected in the main club goals. Individuals join sports clubs to derive mutual benefit from sharing common interests with other members (Cornes & Sandler, 1986). These interests, and thereby the club goals, can, for example, be to provide sports to socially vulnerable groups for a small amount of money. On the other hand, members might be interested in participating in competitive sport, which is likely to be more expensive (Wicker, 2011), or rather to enjoy the sociability of NSCs (cf., Nagel, 2008). Therefore, different club goals are expected to influence the level of membership fees.

However, what might be considered related to member-oriented pricing are principal-agent-relationships in NSCs. In this context, information asymmetries could arise between members as principals and the clubs' boards as agents (Steinberg, 2010), which might lead to different ideas about pricing. Club boards are responsible for club management and the provision of sports offers to the members, relying on the available financial and human resources (mainly volunteers). If, for example, the levels of membership fees members are willing to pay are too low to keep a stable financial situation or the club needs additional income to renovate a sport facility, the club board needs to inform the members about this situation and suggest charging higher membership fees. These financially necessary fees might differ from the original ideas of members regarding the level of fees.

However, information asymmetries are usually rather small in NSCs due to the role identity of members being consumer, producers, decision-makers, and financiers at the same time (Horch, 1994). The club board is elected by members from the group of club members in the general assembly. Afterwards, club members have the yearly opportunity to control the club board by taking part and voting in the general assembly. In this regular assembly, the club board has to inform members about the situation of the club and potential pressing issues, such as financial problems. Afterwards, club members relieve the club board if they approve the club boards' report. Therefore, principal-agent-problems are rather unlikely in NSCs. Consequently, specificities of NSCs need to be considered when investigating pricing processes of membership fee levels, which is further addressed in the following paragraphs.

Fourth, and in addition to the three established pricing approaches, pricing decisions of NSCs need to consider the specifics of the nonprofit context. NSCs aim to provide sports offers to their members for a reasonable amount of money (Breuer & Feiler, 2019; Nagel, 2008) while covering costs to avoid financial distress (Shank & Lyberger, 2015; Young et al., 2010). In this regard, three aspects need to be considered. First, a key characteristic of NSCs is voluntary work (Horch, 1992), which is a precondition for affordable club offers (Heinemann, 1995). Voluntary work can, to a certain extent, substitute financial resources (Coates, Wicker, Feiler, & Breuer, 2014) to achieve club goals (Coates & Wicker, 2017). Related to this finding, a recent study found that parents of underage children who are members of clubs are more likely to volunteer if the club perceives financial problems (Swierzy, Wicker, & Breuer, 2018a). Consequently, voluntary work can be expected to play a role when setting membership fees because large shares of volunteers can substitute financial resources, i.e., save costs, and clubs can consequently set membership fees at lower levels.

The second aspect that needs to be considered when setting membership fees is the availability of further revenue. Usually, NSCs generate income from a variety of income sources, such as membership and admission fees, subsidies, donations, and sponsorship income (Wicker, Breuer, & Hennigs, 2012). Within this revenue portfolio, subsidies from different governmental levels play an important role in the financing of NSCs, as clubs are eligible to receive public support for different areas, e.g., sports facilities and equipment (Feiler et al., 2018). Subsidies from the municipality are among

the four most important revenue sources for German NSCs (Breuer & Feiler, 2019). Without public subsidies, more than half of NSCs would not break even (Breuer & Wicker, 2009). Moreover, financial support from sponsors can help clubs to reduce costs for sports equipment if, e.g., jerseys are paid for by sponsors. In Germany, 12.4% of clubs receive sponsorship income for sports equipment (Breuer & Feiler, 2019). Thus, revenue diversification is expected to have an impact on the level of membership fees, because the reliance on various revenue streams helps to cover costs that are not covered by the fees (Kotler, 2000). Thereby, clubs with a high revenue diversification might set lower levels of membership fees.

Third, it is expected that clubs facing financial problems that threaten club operations in terms of offering sports to their members might feel the need to generate additional income. Since membership fees are a constant and secure income source and can, due to their autonomous character (Emrich et al., 2001), be controlled more easily by clubs than heteronymous revenue such as donations or subsidies (Wicker et al., 2012), club boards need to inform members in cases of financial distress to discuss the possibility of adapting the level of membership fees to compensate financial problems. In this regard, research findings show that members are willing to pay higher membership fees than they currently pay (Breuer et al., 2016; Wicker, 2011) and that WTP is higher if clubs perceive financial problems (Swierzy et al., 2018b).

Method

Data Source

This study used primary data from an online sports club panel in Germany that started in 2005, with seven waves having been conducted every two years so far. In all seven waves, email addresses of the clubs were provided by the 16 state sport confederations, and the sports clubs received an invitation email containing a personalized link to the survey. Each data collection took part in autumn and lasted for about 12 weeks. By means of the personalized link, an interruption of the survey was possible, which allowed the clubs to search for information they did not have directly at hand, e.g., yearly revenues and expenses and monthly membership fees for different age groups. Moreover, more than one person, e.g., the club's chairperson and the treasurer, could fill in the survey by forwarding the personalized link.

Dataset

Based on data from four of the seven waves, namely the third (2009, $n = 19,345$), the fourth (2011, $n = 21,998$), the fifth (2013, $n = 20,846$), and the sixth wave (2015, $n = 20,546$), a balanced vertical panel dataset (i.e., data in the long format) is constructed, containing only single-sport clubs that had taken part in at least three consecutive waves. The decision to investigate only single-sport clubs was taken since no information on additional charges for certain sports or divisions was available for multisport clubs. Moreover, it was decided to use four waves instead of all seven waves since the number of clubs having taken part in all seven waves would not have been sufficient for the analysis. Furthermore, relevant questions for this study (e.g., club philosophy) were not asked in all waves. Additionally, only clubs that had given full information on membership fees and finances could be used for the analysis. This resulted in a vertical panel dataset of $n = 1,538$ observations, with $n = 1,110$ observations, i.e., 370 clubs, having taken part in three consecutive waves, and $n = 428$ observations, i.e., 107 clubs, having taken part in four consecutive waves.

Measures and Variables

The variables used for the analysis are displayed in Table 1. Clubs were asked to report their monthly membership fees for kids, adolescents, and adults. In the statistical models, the natural logarithm (*ln_mbfee_kids, ln_mbfees_youth, and ln_mbfees_adults*) is used for all three dependent variables instead of using absolute values for membership fees. Using the natural logarithm is a common procedure in financial research in studies investigating price determinants (e.g., Pawlowski, 2011) and has been applied in prior organizational studies (Carroll & Stater, 2009) to ensure that the distribution of the variable is closer to the normal distribution.

The lagged independent variables (denoted with $_{t-1}$) reflect the different pricing approaches, taking into account the specificities of NSCs. The first pricing approach, cost-oriented pricing, is reflected by annual costs per member in different areas, namely coaches and instructors (*cost_coaches_pc$_{t-1}$*), administrative staff (*cost_adminstaff_pc$_{t-1}$*), sports equipment (*cost_sportsequ_pc$_{t-1}$*), maintenance and service for own sports facilities (*cost_facilties_pc$_{t-1}$*), and rent as well as compensation for not club-owned facilities (*cost_rent_pc$_{t-1}$*). To further investigate the role of infrastructure for setting

membership fees, two additional variables were used, namely whether the club is in possession of own sports facilities (*own_fac_{t-1}*) and whether the clubs has to pay a usage-fee for public sports facilities (*fee_public-fac_{t-1}*). Moreover, as it was assumed that expenses in various areas, i.e., complex cost structures, have an impact on the level of membership fees, a variable measuring expenditure diversification (*expend_div_{t-1}*) is added to the models. Expenditure diversification was constructed based on the Herfindahl Index (*Herf*), which is a concentration measure. To obtain a measure of diversification, *Herf* was subtracted from 1.

Pricing related to competition, i.e., the second pricing approach, is reflected by two variables. The first variable measures the felt pressure by clubs through competition from other NSCs (*probclub_{t-1}*), and the second variable covers competition from CSPs (*probcommercial_{t-1}*). Both variables reflecting competition are measured on a 5-point Likert scale (from 1 = no problem to 5 = a very big problem). For the analysis in this study, the two problem items were recoded to dummy variables, with categories 4 and 5 indicating a big or very big problem due to competition.

Demand-oriented pricing reflects the members' interests and thereby the club goals. This approach is operationalized by six variables from the club philosophy, which was measured on a 5-point Likert scale (from 1=do not agree at all to 5=totally agree). For the underlying study, the items used from the club philosophy were recoded to dummy variables, with categories 4 and 5 indicating agreement with the stated item. Whether members were interested in their club staying the way it is, i.e., a reflection of tradition, is covered by the variable *phil_stay_{t-1}*. The aim to provide an inexpensive opportunity to practice sports and consequently strive for lower levels of membership fees is measured by the variable *phil_inexpensive_{t-1}*. Additionally, it is tested whether the clubs' aim of offering people with a low income the possibility to practice sports (*phil_lowinc_{t-1}*) is reflected in lower membership fees. Since NSCs are interested in providing a place not only to actively participate in sports but also to socialize and share common interests with other people, a further variable covered this social aspect (*phil_nonsports_{t-1}*). Additionally, two key areas of NSCs, namely being engaged in youth sport (*phil_youth_{t-1}*) and being engaged in the promotion of young talent (*phil_talent_{t-1}*), are represented in the models as possible explanatory factors for the level of membership fees.

Lastly, three further variables are integrated into the models. These variables are closely related to the specifics of NSCs. The first variable reflects the share of volunteers among members (*share_volunteers_{t-1}*), suggesting that higher shares of volunteers can substitute financial resources and thereby have an impact on membership fees. Second, a variable measuring the diversity of income sources (*rev_div_{t-1}*) is added to the models, as revenue diversification might decrease the need to set higher membership fees. Revenue diversification was constructed analogue to expenditure diversification (1-Herf). Lastly, perceived problems due to the financial situation of the clubs is represented by the variable *probfinance_{t-1}*, suggesting that increasing financial problems will lead to higher membership fee levels to compensate for lacking financial resources.

It is additionally controlled for club size and its squared term to see whether membership fees are related to any optimal club size (Buchanan, 1965). Moreover, community size, the clubs' foundation year, the survey year, and the 30 most relevant sports offered by clubs in the sample are controlled to account for sport-specific effects.

Data Analysis

The data analysis consists of descriptive statistics and three ordinary least squares (OLS) regression models for monthly membership fees for kids, adolescents, and adults. For a robustness check, a seemingly unrelated regression model (SUR) is run where the three regression equations are estimated jointly with identical regressors. Identical regressors are common in financial models (Greene, 2012). Although in cases of identical regressors there is usually no reason to run anything else than OLS models in terms of efficiency, SUR models can be used to test whether there are cross-equation correlations of the errors. Usually, in the case of identical regressors, OLS models and SUR models are identical (Baum, 2006; Cameron & Trivedi, 2010). However, in the underlying study, the sample sizes of the three separate OLS models differ because some clubs received no membership fees for kids or adolescents—only for adults. On the other hand, there are also pure youth-sports clubs in the sample, meaning that they did not receive membership fees from adults. Therefore, the number of observations in the SUR-model is reduced to those clubs which charge membership fees for all three investigated groups (*n* = 933).

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Table 1. Overview of Variables

Variable	Description	Scale
Dependent variables		
ln_mbfee_kids	Logged monthly membership fees for kids	Metric
ln_mbfees_youth	Logged monthly membership fees for adolescents	Metric
ln_mbfees_adults	Logged monthly membership fees for adults	Metric
Independent variables		
cost_coaches_pc$_{t-1}$	Cost per member for coaches and instructors	Metric
cost_adminstaff_pc$_{t-1}$	Cost per member for administrative staff	Metric
cost_sportequ_pc$_{t-1}$	Cost per member for sports equipment	Metric
cost_facilities_pc$_{t-1}$	Cost per member for maintenance and service for club-owned sports facilities	Metric
cost_rent_pc$_{t-1}$	Cost per member for rent and compensation for the usage of not-club-owned sports facilities	Metric
own_fac$_{t-1}$	Club possesses its own sports facilities (1 = *yes*)	Dummy
fee_public_fac$_{t-1}$	Club has to pay a usage fee for using public sports facilities (1 = *yes*)	Dummy
expend_div$_{t-1}$	Expenditure diversification (0 = *perfect concentration*, 1 = *perfect diversification*)	Metric
compclub$_{t-1}$	Club has problems due to competition from other sports clubs (1 = *big / very big problem*)	Dummy
compcommercial$_{t-1}$	Club has problems due to competition from commercial sport providers (1 = *big / very big problem*)	Dummy
phil_stay$_{t-1}$	Our club should stay the way it is (1 = *agree/totally agree*)	Dummy
phil_inexpensive$_{t-1}$	Our club gives an inexpensive opportunity to practice sports (1 = *agree/totally agree*)	Dummy
phil_lowinc$_{t-1}$	Our club offers low income people the possibility to practice sports (1 = *agree/totally agree*)	Dummy
phil_nonsports$_{t-1}$	Our club sets high value on non-sports programmes (1 = *agree/totally agree*)	Dummy
phil_youth$_{t-1}$	Our club is highly engaged in youth work (1 = *agree/totally agree*)	Dummy
phil_talent$_{t-1}$	Our club is highly engaged in the promotion of young talent (1 = *agree/totally agree*)	Dummy
share_volunteers$_{t-1}$	Share of volunteers relative to members	Metric
rev_div$_{t-1}$	Revenue diversification (0 = *perfect concentration*, 1 = *perfect diversification*)	Metric
probfinances$_{t-1}$	Club has problems due to the financial situation (1 = *big / very big problem*)	Dummy
Controls		
mg$_{t-1}$	Total number of members	Metric
mg²$_{t-1}$	Total number of members squared	Metric
inhabitants	Inhabitants of the community the club is situated in	Metric
foundation_year	Foundation year of the club	Metric
year	Year of survey (reference category = 2011)	Dummy
type of sport	30 most relevant sports in the sample (1 = *yes*)	Dummy

Table 2. Membership Fees in € Over Time (2009 to 2015)

	2009		*2011*		*2013*		*2015*	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Mean*	*SD*
mbfee_kids	3.37	3.22	3.42	3.28	3.36	3.06	3.51	3.16
mbfees_youth	4.16	3.54	4.05	3.88	4.06	3.60	4.17	3.65
mbfees_adults	8.16	8.68	8.22	8.88	8.03	8.26	8.15	7.41

Multicollinearity of the independent variables is checked using variance inflation factors (VIFs). Since all VIFs (except for members and its squared terms, which are naturally correlated) are below the suggested threshold of 10 (Hair, Black, Babin, & Anderson, 2010), there were no collinearity issues in the models. The independent variables are calculated with a one-period time lag (denoted with $_{t-1}$) to address endogeneity. This means that, by using lagged variables, it can be estimated whether the independent variables influence the level of membership fees in the next period, i.e., two years later. It was decided to use a one-period time lag of the independent variables instead of, e.g., a lag of two periods, as average membership fees varied from wave to wave (see Table 2). Models with a lag of two waves were estimated as a robustness check. The results were fairly similar to the one-period time lag models[1]. Standard errors were clustered by club in the OLS models to account for unobserved club heterogeneity.

To improve the representativeness of the sample, weights were calculated based on club size. The weights were calculated for four groups of clubs: < 100 members, 101 to 300 members, 301 to 1,000 members and > 1,000 members. This procedure is executed for all 16 federal states since club size differed between states. The calculated weights are applied in the estima-tion of the OLS regression models. Weighting was not possible in the estimated SUR-model since importance weights were not available for the sureg-command in Stata.

Results and Discussion

The summary statistics are displayed in Table 3. On average, monthly membership fees of single-sport clubs in Germany amount to €3.41 for kids, €4.10 for adolescents, and €8.14 for adults. These values are similar to what half of all sports clubs in Germany charged in 2009 (Breuer & Wicker, 2009), i.e., in the 2nd wave of the panel study, and in 2017 (Breuer & Feiler, 2019), i.e., the 7th wave of the panel study. Compared to other European countries like the UK (SRA, 2018) and Switzerland (Lamprecht et al., 2017), the fees are slightly lower. A plausible explanation is that the underlying study only includes single-sport clubs whereas presented average fees in the other surveys apply to single- and multisport clubs. The share of membership fees relative to the clubs' total revenue amounts to 55%, underlining the importance of this revenue source.

The highest average annual costs per member occur for coaches and instructors (€24.18), closely followed by costs for the maintenance and running of own sports facilities (€22.70). Average costs per member for sports equipment amount to €16.52, and the average costs for renting not club-owned facilities are €10.80. The lowest average costs per member per year occur for administrative staff, with €3.43. Expenditure diversification is 0.66, indicating a moderate to high number of different types of costs. Almost 39% of single-sport clubs possess their own sports facilities, and about a quarter of the clubs have to pay a usage fee when using public sports facilities.

Regarding competition, 11.5% of the clubs state that they have a large or very large problem due to the competition of other NSCs, while only 5.4% feel a problem due to the competition of CSPs. Pertaining to the members' interests, the results show that about half of the clubs feel that the club should stay the way it is, i.e., keep its traditions. A large share of clubs, namely 84.7%, state that the club gives an inexpensive opportunity to practice sports, supporting the general notion of NSCs offering sports for a small amount of money. In line with this is that 72.3% of clubs state that they offer low-income people the possibility to practice sports. A similar proportion of clubs (67.5%) are highly engaged in youth work, and almost one-third of clubs set high value on non-sports programs, i.e., fostering the aspect of sociability. A slightly lower proportion of clubs (27.1%) reports to be highly engaged in the promotion of young talent, i.e., involved in elite and competitive sport.

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[1] The models with two-period time lags are available upon request.

Table 3. Summary Statistics

Variable	Mean	SD
mbfee_kids	3.415	3.176
mbfees_youth	4.096	3.690
mbfees_adults	8.136	8.333
ln_mbfee_kids	1.071	.766
ln_mbfees_youth	1.211	.753
ln_mbfees_adults	1.809	.733
share_mbfees	.550	.273
cost_coaches_pc	24.179	70.488
cost_adminstaff_pc	3.433	30.887
cost_sportequ_pc	16.523	54.386
cost_facilities_pc	22.695	54.748
cost_rent_pc	10.791	34.311
own_fac	.389	-
fee_public_fac	.244	-
expend_div	.660	.166
compclub	.115	-
compcommercial	.054	-
phil_stay	.505	-
phil_inexpensive	.847	-
phil_lowinc	.723	-
phil_nonsports	.312	-
phil_youth	.675	-
phil_talent	.271	-
share_volunteers	16.645	14.683
rev_div	.497	.233
probfinances	.116	-
mg	173.078	188.242
mg²	65,366.91	152,134.36
inhabitants	229,932.59	679,941.055
foundation_year	1964	36.115

The proportion of volunteers among members amounts to 16.6%. Revenue diversification reaches a moderate level (0.497), similar to prior studies on NSCs (Wicker, Longley, & Breuer, 2015). With regard to financial problems, 11.6% of the sports clubs report having a big or very big problem due to the financial situation of the club.

Table 4 displays the results of the three OLS regression models. The results show that membership fees for kids, adolescents, and adults are significantly determined by different cost categories. In this context, costs per member for coaches and instructors, for running own sports facilities, and for renting sports facilities significantly influence the amount of membership fees in all three models: Increasing costs in these three categories lead to increases in membership fees for all three groups of members in the next period, which is in line with theoretical assumptions that costs are an important factor in pricing decisions of sports clubs (Shank & Lyberger, 2015; Young et al., 2010).

These results are further supported by the finding that increasing expenditure diversification, i.e., costs in various areas, leads to higher membership fees for all three groups of members. However, not all cost categories that are related to the core sports offers seem to be relevant for clubs when setting membership fees. In this regard, no significant effects are found for costs for sports equipment, and costs for administrative staff also do not show any significant effects. Thus, costs for sports equipment, which are necessary to offer the sports programs and should, therefore, be included in the calculation of membership fees (Fischer & Tschurer, 2011; Wicker, 2011), are neglected. Given that the highest costs per member occur for coaches and facilities, it is plausible that clubs mainly take these cost categories into account when calculating membership fees. However, this requires that other income sources are available to cover the remaining costs (Kotler, 2000). In this regard especially, subsidies and sponsorship income might help, as sports equipment can be subsidized or paid for by public institutions (Feiler et al., 2018) or sponsors (Breuer & Feiler, 2019).

The importance of infrastructure for membership fee calculations is reflected in the following results: Clubs with own sports facilities charge higher membership fees for adolescents and adults than clubs without such facilities. In this case, higher membership fees for adults and adolescents allow keeping membership fees for kids lower, which is in accordance with the principle of solidarity (Horch, 1994). Moreover, clubs that are required to pay usage fees for public sports facilities transfer these expenses to members by charging higher membership fees for all three groups.

Regarding competition from other NSCs and CSPs as possible factors influencing the level of membership fees, no significant effects are found. An explanation in terms of CSPs could be that offers and prices of CSPs differ largely from sports clubs' offers (DSSV, 2018; Ulseth, 2004), and only few sports clubs (5.4%) perceive problems due to competition from CSPs. This might indicate that clubs do not see the relevance in taking CSPs into account for pricing decisions.

Table 4. Results of the OLS Regression Models

VARIABLES	1: ln_mbfee_kids		2: ln_mbfee_youth		3: ln_mbfee_adults	
	Coef.	*t-stat.*	*Coef.*	*t-stat.*	*Coef.*	*t-stat.*
cost_coaches_pc$_{t-1}$	0.002**	2.437	0.002***	2.792	0.001**	2.109
cost_adminstaff_pc$_{t-1}$	-0.002	-1.173	-0.002	-1.398	0.000	0.341
cost_sportequ_pc$_{t-1}$	0.000	0.374	0.000	0.278	0.000	0.828
cost_facilities_pc$_{t-1}$	0.001*	1.868	0.001**	2.036	0.002***	3.758
cost_rent_pc$_{t-1}$	0.004***	6.842	0.004***	7.188	0.004***	5.827
own_fac$_{t-1}$	0.109	1.372	0.150**	2.017	0.176***	2.710
fee_public_fac$_{t-1}$	0.212***	3.156	0.196***	2.969	0.109*	1.963
expend_div$_{t-1}$	0.349**	1.967	0.367**	2.232	0.418***	3.064
compclub$_{t-1}$	-0.015	-0.215	0.028	0.401	0.040	0.621
compcommercial$_{t-1}$	-0.013	-0.113	0.010	0.093	0.111	1.192
phil_stay$_{t-1}$	-0.061	-1.245	-0.066	-1.472	-0.073*	-1.889
phil_inexpensive$_{t-1}$	-0.099	-1.224	-0.028	-0.430	-0.097	-1.630
phil_lowinc$_{t-1}$	-0.138**	-2.187	-0.124**	-2.297	-0.135***	-2.766
phil_nonsports$_{t-1}$	-0.122**	-2.580	-0.096**	-2.132	-0.047	-1.185
phil_youth$_{t-1}$	0.259***	2.925	0.227***	2.937	0.188***	3.197
phil_talent$_{t-1}$	0.219***	3.771	0.207***	3.654	0.180***	3.720
share_volunteers$_{t-1}$	-0.000	-0.104	-0.001	-0.547	-0.001	-0.336
rev_div$_{t-1}$	-0.310**	-2.156	-0.294**	-2.135	-0.345***	-3.051
probfinances$_{t-1}$	0.173**	2.242	0.205***	2.896	0.094	1.596
mg$_{t-1}$	0.000	0.672	-0.000	-0.264	-0.000	-0.026
mg^2$_{t-1}$	-0.000	-0.930	0.000	0.500	0.000	0.408
inhabitants	0.000***	5.022	0.000***	5.833	0.000***	5.898
foundation_year	0.001	1.620	0.002**	2.277	0.000	0.286
sport dummies	included		included		included	
year dummies	included		included		included	
constant	-2.221	-1.218	-2.993*	-1.753	1.084	0.791
p	<.001***		<.001***		<.001***	
F	40.29		21.38		45.01	
R-squared	0.456		0.479		0.556	
n	938		988		1,059	

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; displayed are the unstandardized coefficients; standard errors clustered by club.

However, this result should be treated with caution since competition was measured as a perceived problem by clubs, meaning that no actual information on fees or prices from competitors was considered.

Demand-oriented pricing is operationalized by several factors reflecting the members' interests. Clubs which aim at staying the way they are, i.e., traditional clubs, charge lower membership fees for adults. It is possible that traditional clubs are rather lethargic (Thiel & Mayer, 2009), meaning less flexible and open to changes in the environment, which might call for adjustments of membership fees. As expected, social policy aspects have a decreasing impact on the level of membership fees: Clubs that particularly follow the goal of providing sports for low-income people charge significantly lower membership fees for all three groups, and clubs that set high value on non-sports programs apart from the core sporting aspects also have lower membership fees for children and adolescents. These results support the notion that nonprofit pricing decisions are a trade-off between fulfilling the overall social mission of the organization and renouncing possible additional income to stabilize the clubs' financial situation (Young et al., 2010).

On the other hand, if member demand is rather competitive-oriented, membership fees increase, as reflected in the following results: Clubs following competitive goals by promoting young talents and being highly engaged in youth work charge higher membership fees for all three groups of members. This might be ascribed to the organization of competitive sport in Germany: The prerequisite to participate in sporting competitions, e.g., on the regional or national level, is to be a member of a sports club. Moreover, competitive sport is expensive (Wicker, 2011), which is consequently reflected in the level of membership fees. The engagement in youth sport is cross-subsidized by higher levels of membership fees, i.e., all members are paying for something that they do not directly receive benefit from personally, which is related to the principle of solidarity (Horch, 1994; Nagel, 2006).

Finally, the results suggest that pricing decisions of NSCs are related to the specifics of the nonprofit context. Although higher shares of volunteers could substitute financial resources (Coates et al., 2014) and thereby possibly have a decreasing effect on membership fees, no significant effects are found in the models. However, a diversified income portfolio leads to decreases in membership fees in all three groups. Thus, if more revenue from various sources is available to cover costs, clubs can afford to charge lower membership fees (Kotler, 2000). Finally, the results show that clubs with perceived problems due to their financial situation increased the level of membership fees two years later for kids and adolescents, probably knowing that club members are willing to support the club financially by paying higher fees in tense financial situations (Swierzy et al., 2018b). Hence, a prerequisite for keeping membership fees stable is a healthy financial situation.

Club size and its squared term are controlled in the models but did not show any significant effects, suggesting that the number of members is no significant predictor of the level of membership fees in single-sport clubs. However, a different picture could appear when investigating multisport clubs, which usually have more members (Breuer & Feiler, 2017a) and thereby potentially more crowding. Size effects in terms of economies of scope have previously been found for sports clubs in Germany and Switzerland (Wicker, Breuer, Lamprecht, & Fischer, 2014).

The results of the SUR model, which are displayed in Table 5, show similar results to the OLS regression models, suggesting that the results are fairly robust. However, there are small differences between the models. For example, while there are no significant effects with the club goal of giving an inexpensive possibility to practice sports in the OLS models, this variable has a significant negative, i.e., decreasing effect on membership fees for adults in the SUR model. The differences between the results of the OLS models and the SUR model might be ascribed to the different sample sizes. Moreover, the SUR model cannot be estimated with weighted data and clustered standard errors. Therefore, the results of the SUR model should only serve as a robustness-check.

However, an additional information of the SUR model is that decisions about membership fees for the three different groups of members are related and not taken by clubs independently from each other. This is shown by the Breusch-Pagan Lagrange multiplier test for error independence in the SUR model, which reveals that the errors in the three equations are positively correlated ($chi^2 = 1,688.055$, $p = 0.000$), which confirms that the three types of membership fees have similar underlying pricing determinants.

Table 5. Results of the SUR Analysis

VARIABLES	4: ln_mbfee_kids		5: ln_mbfee_youth		6: ln_mbfees_adults	
	Coef.	*t-stat.*	*Coef.*	*t-stat.*	*Coef.*	*t-stat*
cost_coaches_pc$_{t-1}$	.001***	2.609	.001***	3.406	.001*	1.774
cost_adminstaff_pc$_{t-1}$	-.001	-1.234	-.002**	-2.087	.001	.662
cost_sportequ_pc$_{t-1}$	.001*	1.655	.000	.852	.000	1.564
cost_facilities_pc$_{t-1}$	.001***	3.607	.001***	3.686	.002***	6.063
cost_rent_pc$_{t-1}$	.004***	7.455	.004***	8.438	.004***	9.851
own_fac$_{t-1}$	.130**	2.425	.163***	3.214	.211***	4.696
fee_public_fac$_{t-1}$	.225***	4.587	.205***	4.425	.103**	2.494
expend_div$_{t-1}$	.381***	2.809	.453***	3.522	.494***	4.327
compclub$_{t-1}$	.046	.730	.064	1.067	.111**	2.069
compcommercial$_{t-1}$	.070	.803	.060	.727	.108	1.468
phil_stay$_{t-1}$	-.066*	-1.738	-.075**	-2.079	-.068**	-2.119
phil_inexpensive$_{t-1}$	-.064	-1.089	-.081	-1.459	-.105**	-2.118
phil_lowinc$_{t-1}$	-.145***	-2.828	-.115**	-2.373	-.123***	-2.865
phil_nonsports$_{t-1}$	-.100**	-2.428	-.089**	-2.297	-.064*	-1.854
phil_youth$_{t-1}$	.211***	4.261	.197***	4.214	.138***	3.327
phil_talent$_{t-1}$	.224***	5.080	.216***	5.172	.167***	4.498
share_volunteers$_{t-1}$	-.001	-.763	-.002	-.947	-.001	-1.015
rev_div$_{t-1}$	-.311***	-3.179	-.293***	-3.159	-.273***	-3.318
probfinances$_{t-1}$	.183***	3.071	.211***	3.734	.120**	2.394
mg$_{t-1}$	.001**	2.228	.000	0.555	.000	.318
mg$^2_{t-1}$	-.000*	-1.676	.000	0.244	.000	.292
inhabitants	.000***	7.330	.000***	8.081	.000***	7.882
foundation_year	.002***	3.062	.002***	3.685	.000	.733
sport dummies	included		included		included	
year dummies	included		included		included	
constant	-3.017**	-2.473	-3.396***	-2.938	.699	.681
p	<.001***		<.001***		<.001***	
chi²	722.52		845.70		1,190.70	
R-squared	0.436		0.476		0.561	
n	933		933		933	

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Conclusion

This study empirically investigates relevant factors for pricing decisions of NSCs for three types of membership fees. Membership fees are the most important revenue source for NSCs, and thereby it is highly relevant for the running of club operations to accurately decide the fee level. Based on classical pricing-approaches, it is suggested that clubs set membership fees related to costs, competition, members' demand, and specifics of the nonprofit context. The results show that costs related to coaches and sports facilities are particularly relevant for the setting of membership fees, while costs for sports equipment are not considered by clubs in the pricing of membership fees. Thus, other income, e.g., sponsorship income or subsidies, is needed to cover these costs. Thereby, it became clear that NSCs often seem to face a trade-off between covering costs, which is a prerequisite for the clubs' survival in the long run (Young, 2007), and fulfilling the clubs' social mission. Moreover, perceived competition did not play a role in the setting of membership fees, while the importance of social aspects in the pricing decisions of clubs is supported by the results of this study. However, when facing financial problems, clubs react by increasing the level of membership fees.

The results of the study inform about reasons for differences in membership fees. For example, if individuals are interested in participating in competitive sports, they need to expect that clubs offering this possibility will charge higher membership fees. On the other hand, the possibilities to participate in sports offers and social activities is also open for socially vulnerable groups, as clubs that have set the goal of providing offers for low-income people consequently set membership fees at lower levels.

Regarding clubs, it seems possible to avoid financial problems if further costs related to the provision of sports programs, namely sports equipment, are taken into account when calculating membership fee levels. Since membership fees represent autonomous income, this would be a safer approach than relying on less certain income sources, i.e., heteronymous income, such as sponsorship revenue (Emrich et al., 2001). To increase acceptance among members for possibly higher levels of membership fees, which are necessary to cover all sports-related costs, it could help to make the yearly occurring costs public, i.e., to further decrease information asymmetries, as transparency was found to increase WTP (McCarville, 1991).

This study has some limitations that can guide the way for future research. First, only single-sport clubs were examined, which disregards a large number of sports clubs that offer more than one type of sport and are thereby likely to have different fee structures. Second, the operationalization of competition as a pricing-approach could be improved. In the underlying study, competition did not account for actual prices or fees of competitors, which could be considered in future research by using information on the clubs' environment. This could also include adding further context variables from the macro level, e.g., the regional gross domestic product or the unemployment rate in the region of the club, which might be relevant for the level of membership fees. Lastly, although the regression models are estimated with lagged independent variables and thereby attempt to allow causal interpretations, the estimation strategy can be improved. Unfortunately, models estimating the impact of changes in the independent variables between 2009 and 2011 on changes in the dependent variables between 2013 and 2015 using a horizontal panel fail to be significant, probably due to the small sample size (n = 107 clubs).

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