

Social networks in fitness centres: the impact of fan engagement on annual turnover

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Abstract:

Few studies to date discuss the use of social networks or examine whether they have a positive impact on user engagement and the turnover of sports entities. This study aims to analyse the use of social networks (that is, the number of fans/followers) by the 194 companies belonging to code 9313 of the National Classification of Economic Activities in Spain; to analyse the corresponding of engagement on Facebook and Twitter; and, to examine the relationship between this engagement and the annual turnover of each company. The results indicate that these companies use ten social networks (Facebook and Twitter being the most common) and that a positive relationship exists between the number of fans/followers and their engagement and the revenue of the fitness centres. This study shows that social networks should form part of the marketing strategies of sports entities, as they generate good content and value via their posts, so that users who are fans/followers have a greater sense of belonging to these centres.

Key words: Social networks, customer engagement, fitness industry, fitness centre, Facebook, Twitter.

Introduction

The use of social networks by companies in the services sector has grown exponentially in recent years (Park & Dittmore, 2014). In sports organisations, for example, in an environment in which it is essential that customers are active contributors to the brand (Williams & Chinn, 2010), managers are today especially aware of the benefits of social media as a tool for implementing their marketing strategies (Coyle, 2010; Filo, Lock, & Karg, 2015). Given this situation, and because of the popularity attained by the social media, organisations across the board are investing both time and money in promoting customer participation and in fostering relationships with their clients. In return, they are reaping the rewards of rising levels of revenue and consumer satisfaction (Richter, Muhlestein, & Wilks, 2014).

The present study focuses on the analysis of sports facilities, primarily on fitness centres. The Yearbook of Sports Statistics (MECD, 2016) defines sports facilities as all those “that include one or several sports spaces where a physical-sport activity can be carried out”. Focusing specifically on fitness centres, Barros and Gonçalves (2009) have defined them as service organizations that sell experiences, not products, and identify them as clear examples of suppliers of sports activities. In the academic literature, several classifications of fitness centres have been proposed (Reverter & Barbany, 2007). However, they all have in common the characteristic that they offer equipment that can improve physical and mental aptitudes. García-Fernández (2012) employs the concept of the fitness centre in his study to refer to sports facilities, which he defines as “facilities that comprise indoor spaces, fitness rooms and polyvalent rooms, either privately or publicly managed, for the carrying out of physical activities that improve physical and psychic health, promoting and supplying sport, wellness or leisure activities.”

Sport contributes positively to economic growth, citizens’ employability and social cohesion, while it limits health expenditure (European Commission, 2007). According to Deloitte (2015), the European health and fitness sector serves 46 million consumers, generates revenues of 25.2 billion euros, employs 400,000 people and operates 46,500 facilities. With a total market share larger than 26.8 billion euros, Europe boasts the largest health and fitness market in the world, with the United Kingdom, Germany, Italy, France and Spain representing 65% of the total European market.

In recent years, the fitness business has developed rapidly as a consequence of the growth in demand for this service (García-Fernández, Gálvez-Ruiz, Vélez-Colon, & Bernal-García, 2016), which affects a range of aspects that include health, social status and affective relationships, in addition to the opportunities generated by the services offered.

The number of Internet users exceeded three billion in 2014, with 2,078 billion active social media accounts worldwide. Facebook continues to dominate the social media with 1,366 million active users as of

January 2015 (We are Social, 2015), while Twitter has more than half a million active accounts (Associated Press, 2013). Europe is one of the geographical areas with the most Internet users at 77.6 million (Observatorio Nacional de Telecomunicaciones y de la Sociedad de la Información, ONTSI, 2016). In the case of Spain, more than 19.1 million people between the ages of 16 and 55 use the Internet, of which 81% use social networks (IAB Spain, 2016). In relation to brands, up to 47% of users use them to keep themselves informed and up to 36% to know more about the products and/or services of the brand they follow (IAB Spain, 2016). Among the most popular social networks, Facebook remains the social network par excellence, followed by Twitter and YouTube (IAB Spain, 2015). Specifically, Facebook has more than 1.18 million active users daily (Facebook Inc., 2016) while Twitter has more than 313 million monthly active users (Twitter Inc., 2016). The users of social platforms in Spain spend an average of 1.9 hours a day using the media (We are Social, 2015).

The boom in social platforms has created greater opportunities for new business models (Hennig-Thurau et al., 2010), as it is the users themselves that can share their enthusiasm for a particular brand via Twitter, Facebook or YouTube. Via the social networks users can even solve problems related to a product or service free of charge, significantly reducing the costs of service presentation, and increasing levels of perceived value (Mathwick, Wiertz, & De Ruyter, 2008). However, despite the notoriety of social media within both the professional and academic fields, few studies have discussed the organisational potential of social networks and whether they could have positive impacts for sports entities in terms of enhanced user engagement and greater revenues.

Most academic research to date speaks of the positive qualities of social networks, praising their use in organisations (Svensson, Mahoney, & Hambrick, 2014) and identifying their huge potential as an online tool of communication. According to He, Zha, and Li (2013), companies are using social networks to find new customers, to improve customer satisfaction and brand loyalty, to increase sales and revenues, and to build up their reputation centred on brand image. When used effectively, social networks can increase revenue, facilitate employee recruitment and boost customer satisfaction (Richter et al., 2014). Williams and Chinn (2010), for example, in their study of social networks in sports entities specified communication, interaction and strong relationships with the consumers of sport as the advantages of these tools for fulfilling their relationship-marketing goals.

However, there is a gap in the literature regarding which networks are used in the fitness sector and what their impact is on interactions with customers. This paper therefore specifically addresses the question as to which social networks are used most in the fitness sector, what use is made of them, and how much interaction they encourage with their fans/followers (measured using “engagement”). Additionally, if empowering social networks ultimately does not impact the organizational performance of fitness centres, the study seeks to determine if it makes sense to invest time and effort in managing them. For this reason, this paper seeks to determine whether increasing customer engagement through social networks translates into greater organizational turnover. In short, the aim of the paper is to shed further light on the use of social networks in Spain’s fitness industry, and to study their effectiveness by measuring the relationship between the number of fans/ followers and engagement and the turnover of the sports organization.

Social networks in sports organisations

According to Filo et al. (2015), the emergence of social networks has facilitated the appearance of a new form of consumption of sport, a field where various media exploit new technologies to facilitate interactivity and the development and exchange of user-generated content among and between brands and consumers. In a similar vein, Hopkins (2013) refers to social media as the main platforms from which brands can communicate and build relationships with sports fans. The author highlights the ability of Twitter for providing real-time updates and interactivity and the use of Facebook for enriching consumer experiences. Likewise, Abreza et al. (2013) identify the opportunities brands are afforded by social networks to get to know their consumers, increase their interaction with them, create effective participation and ensure a more efficient use of resources. This explains why in recent years the Internet display advertising (display banner ads, flash-based rich media and digital video) used in social networks has become a global, multi-billion dollar industry; with such campaigns representing about three quarters of all display advertising (Aksakall, 2012). In campaigns of this kind, companies reach out to their target audiences via different forms of visual advertisement to maximise their short-term sales revenue (Aksakall, 2012).

In the field of sport, social media and new communication technologies have generated considerable academic and professional interest (Filo et al., 2015). According to Witkemper et al. (2012), social media applications provide sports clubs with the initial opportunity to interact with their consumers. The authors identify four reasons why fans use social networks: as a means to obtain information, as a form of entertainment, as a way to improve their supporter experience or ‘fanship’, or simply as a way of passing the time. Similarly, Stavros et al. (2014) note that these platforms provide fans with an additional means of engaging more passionately with their team and so the club can strengthen fan relationships. Pronschinske et al. (2012) suggest that social networks serve as a marketing strategy that can facilitate the participation of

customers and contribute to building relationships, as consumers feel they form part of the organisation, and so identify more closely with it. In this way, social media can be seen as a tool that promotes interaction between the organisation and the customer, a concept that can be delimited in terms of engagement.

In Spain, the use of social networks by fitness centres presents quite distinct levels of activity, with some being more committed to and aware of the importance of client care and follow-up using new technologies (García-Fernández, Fernández-Gavira, Durán-Muñoz, & Vélez, 2015).

Engagement in social networks

Verhoef et al. (2010) consider customer engagement to be a behavioural manifestation toward a brand or firm that goes beyond a simple transaction. Engagement, according to Gummerus et al. (2012), is able to capture the entire set of actions and/or behaviour of the users of social media. Likewise, Brodie et al. (2011) see engagement as a reflection of the theoretical paradigm of relationship marketing, that is, as a concept whereby firms seek to create effective relationships with their customers. The same authors claim that customer engagement generates greater benefits for organisations, including sales growth, greater competitive advantage and increased profitability.

Studies, such as those of Prahalad and Ramaswamy (2004), Bowden (2009) and Brodie et al. (2011) have analysed this concept in relation to social media. They show that the behaviour of engaged customers generates more references to the product and the brand, creating experiences and contributing to the process of organisation, innovation and customer retention.

To analyse the relationship between a social network and its followers various metrics have been proposed. Among these, de Vries et al. (2012) use as their metric the number of Facebook “likes” posted to identify brand relevance in the social network. Similarly, Liu-Thompkins and Rogerson (2012) analysed the number of subscribers to the YouTube channel, while Oviedo-García et al. (2014) proposed a formula for customer engagement for users of Facebook and Twitter based on the number of “likes”, “comments”, “shares” and “posts”.

In a similar vein, Moore and McElroy (2012) and Ruiz-Mafe et al. (2014) conclude that a “post” with many “likes” and “shares” indicates that its content is interesting. This in turn increases the possibility that somebody else will “like” it, and disseminate the brand message to additional potential customers via Facebook. Sabate et al. (2014) suggest that the success of a “post” can be determined by the number of “comments” about it, since it indicates that users have invested their time to share their opinions.

In the light of the above, this study aims to explore the use of social networks of fitness companies in Spain, by examining the number of fans/followers and the corresponding level of engagement on Facebook and Twitter, and to analyse the relationship between this engagement and the turnover of fitness centres.

The model tests the following hypotheses:

H1: Engagement – calculated according to Facebook Oviedo-García – has a positive effect on turnover.

H2: Engagement – calculated according to Facebook Rival IQ – has a positive effect on turnover.

H3: Engagement – calculated according to Facebook AgoraPulse – has a positive effect on turnover.

H4: Engagement – calculated according to Twitter Oviedo-García – has a positive effect on turnover.

H5: Engagement – calculated according to Twitter Rival IQ – has a positive effect on turnover.

H6: Engagement – calculated according to Twitter AgoraPulse – has a positive effect on turnover.

Material & methods

Participants

The present study focuses on the analysis of sports facilities, or more specifically fitness centres. We analysed the companies listed under code 9313 of the National Classification of Economic Activities (NACE), that is, Gymnasium Activities, as extracted from the Sistema de Análisis de Balances Ibéricos (SABI) database. To be included in the study, the company thus identified had to employ a minimum of five workers. The reason for not including companies with fewer than five employees – that is, micro-enterprises (European Parliament and Council, 2009) with an operating income below 500,000 euros – is that the business dimension is an important factor for the survival of the organizations, which means including these companies is not significant in the medium-long term (Acedo et al., 2003; Grimaldi-Puyana et al., 2016). We ended up with a total of 376 companies.

As some of the company names listed in the SABI database do not correspond with the trading name or brand name used by the sports centre or chain, we undertook an Internet search and contacted these firms directly to confirm identification. At the same time, companies that had ceased to trade, although continuing to appear in the SABI database, and those that used a personal account as the company’s main page were eliminated. Likewise, fitness centres belonging to the same chain were grouped together under the chain name. This gave us a total of 194 chains/centres, which was the number of entities that eventually participated in the study.

Instruments

First, using an observation sheet, we proceeded to record key information about these companies (website and social networks used). This information was obtained using different search engines (Google, Bing and Yahoo). Specifically, we recorded whether they had social networks, like Facebook Fan Page, and accounts with Google+, LinkedIn, Tuenti, Twitter, Tumblr, Pinterest, Instagram, Flickr and YouTube. Then, in order to study the companies using Facebook and Twitter in greater depth, a professional tool for analysing digital activities, Rival IQ, was used to identify and obtain objective data about the actions taken by fans and followers in these social profiles. Finally, to assess engagement on the Facebook Fan Pages and Twitter profiles, different formulae were calculated to determine its value. First, we used the method devised by Oviedo-García et al. (2014), which quantifies engagement using a mathematical formula based on user actions in different social profiles. Additionally, we employed two digital analytical tools for the social media, Rival IQ and AgoraPulse, which use their own logarithms to calculate engagement.

The formula developed by Oviedo-García et al. (2014) can be expressed as follows:

$$\text{Engagement on Facebook} = \frac{\text{Likes + Comments + Shares + Other clicks}}{\frac{\text{Number of Posts}}{\text{Average impressions}} \times \text{Average reach}}$$

This, however, had to be adapted due to the limitations detected, namely that the values “Other clicks”, “Average impressions” and “Average reach” could only be accessed from the administration panel, giving us the following formula:

$$\text{Engagement on Facebook} = \frac{\text{Likes + Comments + Shares}}{\text{Number of Posts}}$$

The formula was, likewise, adapted for use with Twitter:

$$\text{Engagement on Twitter} = \frac{\text{Favorites + Mentions + Retweets}}{\text{Number of Tweets}}$$

In the case of Rival IQ, a specialist tool for analyzing digital activities and those of the competition, the formulas used to calculate engagement on Facebook and Twitter were the following:

$$\text{Engagement on Facebook} = \frac{\text{Likes + Comments + Shares}}{\text{Number of Posts}}$$

$$\text{Engagement on Twitter} = \frac{\text{Favorites + Retweets}}{\text{Number of Tweets}}$$

Finally, the social media management tool, AgoraPulse, a tool for analyzing social networks, employed the following formulas to calculate engagement on both social networks:

$$\text{Engagement on Facebook} = \frac{\text{Likes + Comments + Shares}}{\text{Number of fans (total)}} \times 100$$

$$\text{Engagement on Twitter} = \frac{\text{Favorites + Retweets + Mentions}}{\text{Number of Followers (total)}} \times 100$$

In relation to the companies’ billing data, the Iberian Balance Sheet Analysis System (the SABI database) reports the annual turnover of all companies included in the National Classification of Economic Activities (NACE). SABI is a financial database, in web format, that includes general information and annual accounts of more than 2,000,000 Spanish companies and 500,000 Portuguese companies. Each file provides exhaustive information about the entity and the data are updated periodically from official sources, including the Mercantile Register and the Spanish Patent and Trademark Office. Thus, we obtained revenue data for each of the companies belonging to code 9313: gymnasium activities, as recorded in the SABI database.

Procedure and data analysis

Data collection was conducted between 1 and 31 March 2015. These data refer to actions performed by users on Facebook and Twitter, including posts, likes and shares of comments. The data count was conducted on one day (22 April 2015) between 09:00 and 21:00, with the aim of identifying a minimum time band during which all the participants in the study were competing on a level playing field. In this way, we

avoided favouring the acquisition of new actions (posts, likes/favourites, shares/retweets) from any of the companies' users.

Given that companies do not publish on social networks with the same intensity every day, and that on certain specific dates of the year they are more likely to post more information than on others (for example, when launching a marketing campaign), a random date was chosen so that this factor would affect the results as little as possible. Thus, we were able to carry out an initial approximation of the publications and engagement generated by the companies' social networks.

To detect the social platforms used by the fitness centres, we analysed their websites and social networks to confirm use. We noted the total number of social networks used by the companies and then identified the two that were most frequently used, employing an observation template and the online digital tool, Rival IQ. This gave us the number of followers, number of posts, number of comments, number of shared posts and number of likes/favourites. At the same time, we analysed engagement on each network and in each sports centre so that we could eventually calculate, using SPSS 22.0 software, the relationship between the number of fans/followers and their engagement and the annual revenue using linear and multiple regressions.

Results

Use of social networks in sports centres

The main means of communication with customers was via the corporate website, being used by 88.66% (n = 172) of centres. In addition, ten social networks were identified as tools of communication (Table 1). Among these, Facebook was used by 70.62% (n = 137) of companies, Google+ by 9.79% (n = 19), LinkedIn by 4.64% (n = 9) and Tuenti by 0.52% (n = 1). Twitter was used by 51.03% (n = 99) of companies and Tumblr by 1.03% (n = 2). Finally, Pinterest was used by 3.61% (n = 7), Instagram by 8.76% (n = 17), Flickr by 3.09% (n = 6) and YouTube by 18.56% (n = 36). Among the social networks, Facebook and Twitter were the most used, with 137 organizations using the Facebook Fan Page and 99 having a Twitter account. Of these, 85 chains/centres used both Facebook and Twitter.

We also recorded the number of fans/followers associated with each of the social networks for each sports chain/centre. The sports clubs with the highest number of Facebook fans were Holmes Place, with a total of 178,547, Club DIR with 26,423, Viva Gym with 21,750, Basic Fit with 20,604, Bfit Ibiza Sports Club with 15,368, O2 Centro Wellness with 15,049 and Metropolitan with 14,237. In the case of the number of Twitter followers, in the period studied Club DIR had 6,245, O2 Centro Wellness had 5,976, Metropolitan had 3,460, Sato Sport Club had 3,306 and Viva Gym had 3,201.

Table 1. Communications channel used by social networking.

Social media	Number of clubs	Percentage
Facebook	137	70.6%
Twitter	99	51.0%
Youtube	36	18.6%
Google +	19	9.8%
Instagram	17	8.8%
LinkedIn	9	4.6%
Pinterest	7	3.6%
Flickr	6	3.1%
Tumblr	2	1.0%
Tuenti	1	.5%

Analysis of engagement on Facebook and Twitter

Our results show that the level of engagement varied depending on the specific formula applied (Table 2; Table 3). In the case of Facebook, the companies with the highest levels of engagement, as measured using the metric of Oviedo-Garcia et al. (2014) and the Rival IQ formula, were McFit (452.78) and Basic Fit (266.38). However, when using the AgoraPulse metric, the highest levels were recorded for Area Gym (301.19) and Polideportivo Marxalenes (146.63). In the case of Twitter, the companies with the highest levels of engagement were Gymage (8.50) and McFit (7.81) according to the metric of Oviedo-Garcia et al. (2014), Gymage (8.00) and Fitness Algete (6.80) according to the Rival IQ formula and Area Gym (150) and Gym Tonic (48.54) when using the AgoraPulse measure. The companies with a level of engagement equal to zero are those that did not perform any activity or action during the month under analysis.

Table 2. Engagement on Facebook.

Clubs	Face-Oviedo	Face-RIVALIQ	Face-AGORAPULSE
McFit	452.78	452.78	53.70
Basic Fit	266.38	266.38	16.81
Area Gym	6.84	6.84	301.19
Poli. Marxalenes	9.53	9.53	146.63

Table 3. Engagement on Twitter.

Club	Twit-Oviedo	Twit-RIVALIQ	Twit-AGORAPULSE
Gymage	8.50	8.00	2.38
McFit	7.81	4.77	13.54
Fitness Algete	7.00	6.80	6.64
Area Gym	.19	.19	150.00
Gym Tonic	1.04	1.04	48.54

Relationship between engagement and total number of fans/followers and annual turnover

To analyse the potential relationship between engagement and the annual turnover of the companies analysed, a double regression analysis was performed. First, we analysed the positive relationship of each engagement construct with turnover (Table 4). For the analysis, we have taken into account the formulas of Oviedo-García et al. (2014), the Rival IQ tool and the AgoraPulse tool, for both social networks, i.e., Facebook and Twitter.

Here, the results indicated that engagement on Facebook (as measured using the metric proposed by Oviedo-García et al., 2014), when regressed with annual turnover, presented an $R^2 = .060$ ($F = 5.344$; $p < .05$), indicating a significant relationship between the two concepts. Naturally, the value of R^2 is low as there are many other factors that account for revenue, but the aim of this paper was to determine whether there was a positive relationship between engagement and turnover and this has been corroborated. When performing the same analysis, though in this case using the Rival IQ formula to measure engagement, annual turnover presented an $R^2 = .060$ ($F = 5.344$; $p < .05$), indicating again a significant and positive relationship with this dimension. When employing the AgoraPulse method for calculating engagement, annual turnover presented a nonsignificant R^2 value ($R^2 = .016$ ($F = 1.315$; $p > .05$)).

In the case of Twitter, when making the calculation using the Oviedo-García et al. (2014) metric, the annual revenue dimension presented an $R^2 = .108$ ($F = 10.032$; $p < .01$) with respect to engagement, indicating that there is a positive and significant relationship with this dimension. When calculating engagement according to Rival IQ, there was also a significant and positive relationship between the two constructs ($R^2 = .080$ ($F = 7.181$; $p < .01$)). Finally, when making the calculation according to AgoraPulse, there was no significant relationship between this dimension and annual turnover, as we obtained $R^2 = .002$ ($F = .154$; $p > .05$)).

When using a simple regression analysis, the AgoraPulse method fails to confirm the hypothesis regarding the relationship between engagement on both Facebook and Twitter with annual turnover. For this reason, it is not a tool that we recommend using with fitness centres.

Table 4. Confirmation or rejection of the hypothesis.

Relationship	R^2	$F (p)$	Hypothesis
H1: Engagement – calculated according to Facebook Oviedo – has a positive effect on turnover.	.060	5.344 (.023)	Confirmed
H2: Engagement – calculated according to Facebook Rival IQ – has a positive effect on turnover.	.060	5.344 (.023)	Confirmed
H3: Engagement – calculated according to Facebook AgoraPulse – has a positive effect on turnover.	.016	1.315 (.255)	Unconfirmed
H4: Engagement – calculated according to Twitter Oviedo – has a positive effect on turnover.	.108	10.032 (.002)	Confirmed
H5: Engagement – calculated according to Twitter Rival IQ – has a positive effect on turnover.	.080	7.181 (.009)	Confirmed
H6: Engagement – calculated according to Twitter AgoraPulse – has a positive effect on turnover.	.002	.154 (.696)	Unconfirmed

After analysing the number of *perform a general analysis* “likes” and “followers”, a regression analysis was performed to determine if there was a relationship between these indicators and the turnover of the sports centres. When applying the multiple regression model, we take into account two objective variables

for the analysis. These variables are measured directly: the number of likes in the case of Facebook, and the number of followers in the case of Twitter. Here, the number of Facebook “likes” presented a coefficient of determination $R^2 = .203$ ($F = 21,144$; $p < .001$) in relation to the revenue of the centres, indicating a significant relationship between the two. In the case of Twitter, the annual turnover variable presented an $R^2 = .692$ ($F = 186.198$; $p < .001$) with the followers of this social platform, indicating a significant relationship with this variable.

In order to calculate a multiple regression model avoiding collinearity between the variables, we undertook an analysis of the joint effect of the number of “likes” and “followers” on annual turnover and the result is a regression model with an $R^2 = .721$. The model is statistically significant and is appropriate for explaining the turnover of the sports centres. The values of the t-statistic show that all the factors are significant. In this model, the number of “followers” is the best predictor of revenue, with a beta value of .732, while the number of “fans” presented a beta value of .318 (Table 5).

Table 5. Multiple regression model. Regression coefficients.

	<i>Non-standardised coefficients</i>	<i>Standardised coefficients</i>		<i>t</i>	<i>Sig.</i>
	<i>B</i>	<i>Standard error</i>	<i>Beta</i>		
<i>Constant</i>	-711.373	340.983		-2.086	.040
“Like” (Facebook)	.081	.015	.318	5.360	.000
Follower (Twitter)	3.270	.265	.732	12.354	.000

Discussion

The analyses undertaken above, aimed at determining the relationship between the number of fans/followers and their engagement and the annual turnover of fitness centres, confirm the results obtained in previous studies (Pronschinske et al., 2012). Our results indicate that social networks should be used as a marketing strategy to facilitate the participation of fans and that such networks have an important role to play in the process of building relationships. It is in this way that fans can feel as if they belong to the organization and so identify more closely with it.

The present study indicates a positive relationship between engagement and annual turnover, when using both the formula proposed by Oviedo-Garcia et al. (2014) and the Rival IQ tool for the analysis of digital activities. Moreover, the study shows that there are committed customers capable of generating product and brand references and of even contributing to customer retention (Bowden, 2009; Brodie et al., 2011; Prahalad and Ramaswamy, 2004). As for the specific social network, we recommend using Twitter in conjunction with the Oviedo-García et al. metric (2014), as this appears to be the most appropriate model for analysing the relationship between engagement and the annual turnover of fitness centres.

Stavros et al. (2014) have reported that social networks allow users to feel passionate about their sports clubs and to connect with them in a continuous, more intense manner. Thus, they demonstrate the important role being acquired by these technological tools. Moreover, although this study stresses the relationship between engagement and revenue, some authors, including Witkemper et al. (2012), claim that the main motivation of some fans/followers who use social networks is to use them for entertainment and as a way of passing the time. However, this study has revealed that social networks provide companies with the opportunity to interact with consumers, which impacts favourably, albeit at low levels, on their turnover.

The data reported in this study indicate that overall there are ten social networks used in the fitness industry: Facebook, Google+, LinkedIn, Tuenti, Twitter, Tumblr, Pinterest, Instagram, Flickr and YouTube; and that 88.66% of the companies studied maintain a corporate website. The two most frequently used social networks are reported to be Facebook and Twitter, with 43.81% of companies using both platforms to communicate with their customers. Moreover, we have reported a relationship between this engagement and the revenue of the companies analysed, with the number of “followers” being the best predictor of their turnover.

The study has a number of implications for management, which arise out of the eminently practical nature of our research. Above all, what is most evident is the relevance of the use of social media today and the variety of such social platforms. Our results highlight this and stress the need for firms to form part of these communities that have been created via the new social media, so that they can attain a greater dissemination of their brand and boost their presence in the digital realm. In this way, potential customers can follow the actions of firms and interact with them, in turn presenting them with an opportunity to interact directly with their activities. To perform a general analysis we recommend using directly measurable variables, such as the number of likes on Facebook and the number of followers on Twitter. However, to conduct a specific analysis of the relationship between engagement and the turnover of fitness centres, we recommend using the calculations based on the formulas presented herein. Likewise, given that a relationship exists between the number of fans/followers on social platforms and annual revenue, companies should

strengthen their use of these social networks and seek to gain more subscribers to them. The results also suggest an opportunity for many firms in the fitness sector to invest specifically in Facebook and Twitter, especially as we find that these are the most beneficial platforms to increase engagement with customers. However, around 30% of the centres are not currently users of Facebook, while 49% do not use Twitter. One action that could be adopted is the use of influencers as they would help to increase the number of fans and thus enhance engagement with the clients.

Similarly, this study provides tools that might be used by fitness centre managers to evaluate their customer engagement. Measured longitudinally this could be an indicator of customer commitment and, in turn, according to the findings reported herein, of the income obtained.

Moreover, as regards user interaction, and in the light of the results obtained for the correlation of this level of engagement with annual revenue, firms should strive to achieve greater levels of user activity on corporate social networks. This could be achieved with new strategies of use for these social networks, thus generating both content and value in users' posts (e.g., conveying emotions, and sharing experiences and hopes) so that users who are fans and/or followers have good reasons for belonging to, as well as a strong sense of affinity for, the sports entity. For all these reasons, managers need to pay careful attention to how they communicate via social networks and, in particular, how they can engage their fans.

Limitations and future research

Like any research, this study has a number of limitations. First, and due to the innovative nature of the work, not all companies belonging to the NACE 9313 code – Gymnasium Activities – could be contacted and analysed. It was, therefore, not possible to examine the full database. Likewise, and due to the lack of established tools for analysing engagement in social networks, our measurement has been limited to examining factors and data that are external to the administration panel of each firm's social networks. Indeed, in terms of the formulas used to obtain the engagement data, mention should be made of the restrictions we were obliged to introduce when applying the Oviedo-Garcia et al. metric (2014). Here, we had to suppress the factors "other clicks", "average impressions" and "average reach", because of the impossibility of accessing data in the administration panels of the different social networks. In addition, we had to adapt this formula when applying it to Twitter, given that it was designed specifically for Facebook. Likewise, there is a lack of consensus regarding the factors that make up the formula of engagement. Finally, we should stress the lack of studies implementing metrics of engagement on Facebook and Twitter in the social media, which means this study can be deemed fairly innovative in this field, and more specifically in the sports sector.

These limitations however point the way forward for future lines of research based on longitudinal studies of the correlation between customer engagement and annual revenues. Similarly, and given that the data collection here was completed in one given month, if we hope to obtain more objective results on the effect of fans/followers and their engagement on a specific profile, longitudinal analyses need to be undertaken. Such analyses should be based on the periodic collection of data that could then be summarized, for example, as a monthly mean. This would avoid the possibility that data were collected during a period of relative inactivity in this profile, resulting in zero engagement. Thus, we would obtain a more reliable correlation between engagement and annual turnover. It is also necessary to analyse the management of social networks and its impact on the relationship between engagement and annual turnover. In this way, we would establish the significance of the correlation between fans/followers and their engagement with the annual turnover of companies in the fitness sector. At the same time, we could compare those companies that have introduced measures to increase the number of fans/followers and the impact of their engagement on their social profiles in relation to a control group that has not implemented such measures. Thus, we could verify whether there is a significant relationship between these factors and the centres' annual revenue.

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