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Original Article

Economic trend analysis of the fitness sector

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Abstract:
The aim of the study was to analyse the evolution of the financial solvency and viability of the fitness sector during the economic crisis and the tax change in Spain. An analysis of the operating reports of sport centre companies that operated in the Spanish fitness sector from 2004 to 2013 was analysed in function of the size of the company, observing the possible economic crisis repercussions, the increase of VAT or the polarization of the sector. More uniform tendencies were found in micro and small companies during the period time studied, showing a general increment in the financial problems at medium term. Meanwhile, the big companies show much more variability, showing how the surrounding problems affect in different ways both small and big companies in the fitness sector.
Key words: Sport economics, Fitness sector, Sport facilities, Economic crisis.

Introduction

Nowadays, society is responsible and knowledgeable of the importance of physical activity practised on a regular basis, as a way of improving quality of life (De Barros, Gonçalves, 2009). This has favoured a comprehensive remodelling within the fitness sector to be able to meet the new demands of the clients (Reverter, Barbany, 2007). This remodeling of the sector is preceded by a boom in the promotion of public sports services, which based the most majority of its funding on subsidies (García-Unanue, Felipe, del Corral, Gallardo, 2016), offering these at a much lower cost than the real. With the crisis that Spain experienced since 2007, and its inability to continue to manage sports facilities through subsidies, there were the appearance of more complex facilities, managed in a more specialized way (García-Unanue et. Al, 2016). This management model led to an increase in the number of consumers in the fitness sector, making it one of the sectors with the best pretensions in the promotion of a healthy lifestyle (Reverter, Barbany, 2007; Teva-Villén, Pérez-Ordás, Grao-Cruces, Tamayo-Fajardo, Nuviala, 2014). This way, we find that the fitness sector has incremented worldwide the number of clients from 85 to 140 million, incrementing from 82,000 to 180,000 the number of fitness centres and from 39 to 77.5 billion dollars the income volume between 2004 and 2014 (IHRSA, 2005, 2015). Although this tendency is generalized worldwide, it is necessary to analyse each environment in a specific manner.

Spain, suffered one of the biggest economic crises of the last decades, like many countries worldwide, caused by the collapse of the housing bubble in the United States, affecting a large number of sectors and industries, including sports (Andreff, 2007; Benito, Solana, Moreno, 2012; Jurak, Andreff, Popović, Jakšić, Bednarik, 2014). This crisis had a direct influence on sports income, as well as on the decreasing GDP of many countries (Coşkuner, Gacar, Coban, and Devecioğlu, 2011; Cainarean, Veverita, and Veverita, 2011). In a more analytical way, we see how the fitness sector in Spain suffered a recession process regarding the number of clients, with 7,890,000 clients reduced to 6,400,000 in 2013 (IHRSA, 2011, 2013), decreasing the invoicing from 5.035 million dollars (IHRSA, 2011) to 4.206 million dollars (IHRSA, 2013). All of this was conditioned by the increase in VAT from 8% to 21% that was registered in 2012 (FNEID, 2013) as well as the management policies that had been developed in the previous years by sports centres, in which marketing policies and client recruitment predominated, instead of loyalty policies (Ortín, 2010).

Concentrating on the deterioration of the sector, a study of the diverse factors and variables to try and convert the situation was necessary. Client satisfaction (Bodet, 2006; Murray, Howat, 2002), building of customer loyalty (Avourdiadou, Theodorakis, 2014; Bodet, 2008), or the quality and the value they perceive (Shonk, Chelladurai, 2008; Tsitskari, Antoniadis, Costa, 2014) have been the elements that the research has concentrated on to understand the benefits or disadvantages that could have caused events like VAT increase or the inclusion of new types of fitness centres like low-cost. These analyses show that the VAT increase has not affected in the same way all of the different types of sport centres. The low-cost gyms have registered an exponential growth in the number of centres since their inclusion in the sector in 2009 (de la Cámara, 2015). These have led to a radical change in the paradigm of marketing, becoming the customers who clearly express

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the offer they want, the format, the price to pay and the channel of purchase being the company that must identify what is claimed and adapt (Valls, 2010).

This has unleashed in the sector a great economic competence within the installations, achieving to mitigate the client decrease, converting the management of these centres and most of all the client management as a vital element for the growth of the sector, improving the volume of income (O´Brien, Sattler, 2003).

A distinctive characteristic of the Spanish sports sector is the high participation of the public sector, although in the case of fitness, outsourcing and subcontracting of services have been used (Gallardo, 2007; Lifefitness, 2016; Martínez-Tur, Ramos and Tordera, 1996). Also, large gym companies develop public management through contracts.

When evaluating accounting topics of the sector, reference documents for evaluating any possible causes of the recession and its effects or new management trends of the sector have been absent. The most standardized documents within the fitness sector are sectorial reports done in most cases by consultancy firms. They present very limited information as they show very general accounting ratios, as well as ambiguous results (IHRSA, 2015; LifeFitness, 2015). It is unquestionable that the perception of accountant managing of the Spanish fitness sector has been increasingly negative over the past years (IHRSA, 2011; LifeFitness, 2015), producing problems like inefficiency and unknowing of real accounting results.

For this reason, the aim was to analyse the evolution of viability and financial solvency of sport centre management companies analysing important economic events like the economic crisis, VAT increase or the polarization of the fitness sector.

Material & methods

Participants

The data collected from the sports centres were obtained from the Iberian Balance Analysis System (SABI), a platform that gathers general information and annual exploitation of more than 2 million Spanish companies. In the data collection, only those sport companies organized under the codification and nomenclature of the platform were used (Table 1):

Table 1. Criteria for classification of sports centres in SABI.

Activity	Activity Classification	Codes	Nº of Companies
93. Sport, Recreative and Entertainment Activities (5533 companies)	931. Sport Activities (5533 companies)	9311. Sport Installation Mangement	1917
		9313. Gym Activities	969
		9319. Recreative and Entertainmet Activities	2647

The participation and classification of sport companies for the research was made, like in previous studies (Grimaldi-Puyana, Ferrer-Cano, Bravo, Poz-Cruz, 2015) following the criteria of the European Directive 78/660/CEE. The total asset ranges were established as shown in Table 2 as a variable for distributing the sample in function of size.

Table 2. Distribution criteria of the sample according to the European Directive

Variable	Micro-Company	Small	Medium	Large Company
Total Assets (AT)	≤500.000€	≤4.400.000€	≤17.500.000€	>17.500.000€

Using the total asset of companies as a distribution variable, the number of companies and final classification by size was obtained for the accounting analysis of sports centres. Finally, the accounting data from 2004 to 2013 were collected of all of the companies that were active in each one of the years in an independent manner.

The ratio analysis is a common method for evaluating financial solvency or financial distresses. Given the characteristics of the companies to be analysed, general and/or sport sectors were taken as a reference. In this manner, the study by Pascual and Vega (2013) was taken as a reference, in which an ample battery of indicators was proposed to compare the solvency of football clubs with companies in bankruptcy, including all of the sectors. Therefore, those indicators are susceptible of being applied to the sector of management of sport installation companies. Also, among them there were a few of the indicators proposed by Barajas and Rodríguez (2010), chosen after a literature review on financial distress, including studies from Altman (1969; 1977) or Alfaro-Cid et al. (2009). With these indicators (Table 3) the evolution of the financial results of companies dedicated to sport installations and fitness were analysed (Table 3).

Table 3. Classification criterions of SABI sport centres

Variable	Variable Calculation
Operating results	Exploitation income- Exploitation expendiutre
Income Results	Results before tax- Taxes/Profits
Economic Structure	Fixed assests/ Total asset
Indebtedness	Liability/ Total asset
Viability of Activities 1	Added Value/ Turnover
Net margin	Net Margin- Company costs
Viability of Activities 2	Generated resources/ Liability
Profitability	Operating results /Total asset
Long-term solvency	Equity and non-current liability/ Total asset
Liquidity	Current asset/ Current liability
Stability	Basic finance/ Fixed assest
Guarantee	Total asset/ Liability

Procedure/Test protocol/Skill test trial/Measure/Instruments

To find out the operational efficiency of the company, an operating results analysis was made.

Income results: An analysis of the income results was done with the outcome of calculating the difference between the income generated and the losses registered by the company, in each one of the years analysed.

Economic structure: The analysis of the economic structure is particularly representative in situations of bankruptcy, as it allows bankrupt companies to discover their assets that could be liquidated to pay debt.

Indebtedness: With this ratio we will study the distribution of financial resources of the company from the point of view of the property of the company, in a way that we can evaluate the weight of the financial resources that are of a liability character, over the total of the financial resources that the company has for its financing.

Viability of Activities 1 (Added value / Turnover): The proportion of the income that the company can apply to the remuneration of the workers and of those who provide financing is quantified. The companies that have an elevated expenditure percentage in consumer goods (supplies) and therefore a reduced value of this ratio will have more difficulty to remunerate the rest of the production factors and its viability will be compromised.

Net Margin: The importance of calculating the net margin lies in indicating the proportion of income that the proprietors could distribute or reinvest in the company. When this ratio is positive the companies can repay capital contribution, reducing investor's interest of abandoning the company. When the ratio is negative, especially if it happens during various consecutive exercises, the viability of the company can result interdict.

Viability of Activities 2 (Generated resources/ Liability): This indicates the ability of the company to attend their financial compromises with the generated resources of their exploitation activities. To obtain the figure of generated resources we add repayment and provisions that do not generate treasury outputs to the operating results. The bigger the value of this ratio and the ability to generate company resources, the better they can deal with unbalances that lead to excessive debt.

Profitability: With the value of profitability, we can measure the average performance obtained by all the investments of the company. The higher the ratio of this value, the more profitable the company will be as they are able to generate more profit due to their economic structure.

Long-term solvency: This ratio indicates which part of the asset has been financed with long-term funds. A higher value of this ratio indicates higher long-term solvency.

Liquidity: With the liquidity analysis or "ratio of working capital", the ability to face payments of the exploitation cycle is measured. The higher the value, less difficulties the company has to face the due dates of debts at short-term. On the contrary, if the liquidity ratio is below the unit it will have a negative effect and will be difficult to face the payments of the company.

Stability: This ratio is also called "firmness ratio", "consistency ratio" or "strength ratio". It is recommendable that a temporary correlation exists between assets and liabilities that they finance. In other words, the longer the time to recuperate assets – and therefore lower liquidity -, a longer refund time is present, in a way that the fixed investments are financed with permanent assets. The ratio that measures this relation should be higher than the unit.

Guarantee: Measurement of the capacity of the company to respond to acquired obligations. This ratio indicates the security of payment that the company offers to its creditors and informs of the "distance to bankruptcy".

Data collection and analysis / Statistical analysis

The data analysis was done with the SPSS Software 20.0 version. Since the aim of the study is to analyse the evolution of the fitness sector in terms of financial indicators has developed a trend analysis through

a polynomial contrast. This method has been developed in previous research that analyses the evolution of different performance variables in sports facilities and sports services (Liu, 2009; Liu et al., 2009; García-Unanue et. Al, 2016). The polynomial contrast allows trends and trend changes of the dependent variable to be detected on ordered categories of the independent variable (Field, 2009). The polynomial contrast is adequate when the levels of the independent variable are ordered in time intervals (Kepel, 1991). Comparing the pairwaise contrast the polynomial contrast divides the total variation among the treatment mens into trends (Craig, Wendorf, 2004). In this way, we can see if there is a linear tendency that shows a change in the value of the dependent variable across categories, a quadratic trend, in which a trend change is shown (the line changes and shows a curve, usually forming a U-shape or inverted U) or a cubic trend, in which two changes in the direction of the trend are observed (Field, 2009). We did not analyse contrasts superior to the cubic trend because of the difficulty in its interpretation. Analogous tests exist to develop this type of analysis by both regression methods and analysis of variance (ANOVA) (Laija, 1997). In this case, the ANOVA test has been chosen.

This test was done for the different variables described and detailed previously. The significance value for the linear, quadratic and cubic contrasts will be presented for all ratios in each company size in the text and are complemented by graphical analyzes to aid interpretation. If there are significant differences in more than one, the results will be interpreted attending to the most prevailing value, with the highest significance and the best verification in the graph.

Results

As shown in Figure 1, the micro-company shows a clear descendent linear tendency for the operating result ($p<0.001$), income ($p<0.001$), profitability ($p<0.05$) and long-term solvency ($p<0.05$) as well as, an ascending linear tendency in the indebtedness ($p<0.05$). Equally, there was a cubic tendency for the guarantee ratio ($p<0.05$) and the viability of activities 2 ($p<0.001$). Also an increment in the average value was shown which indicates the worsening of the economic results of the micro-companies of the sector.

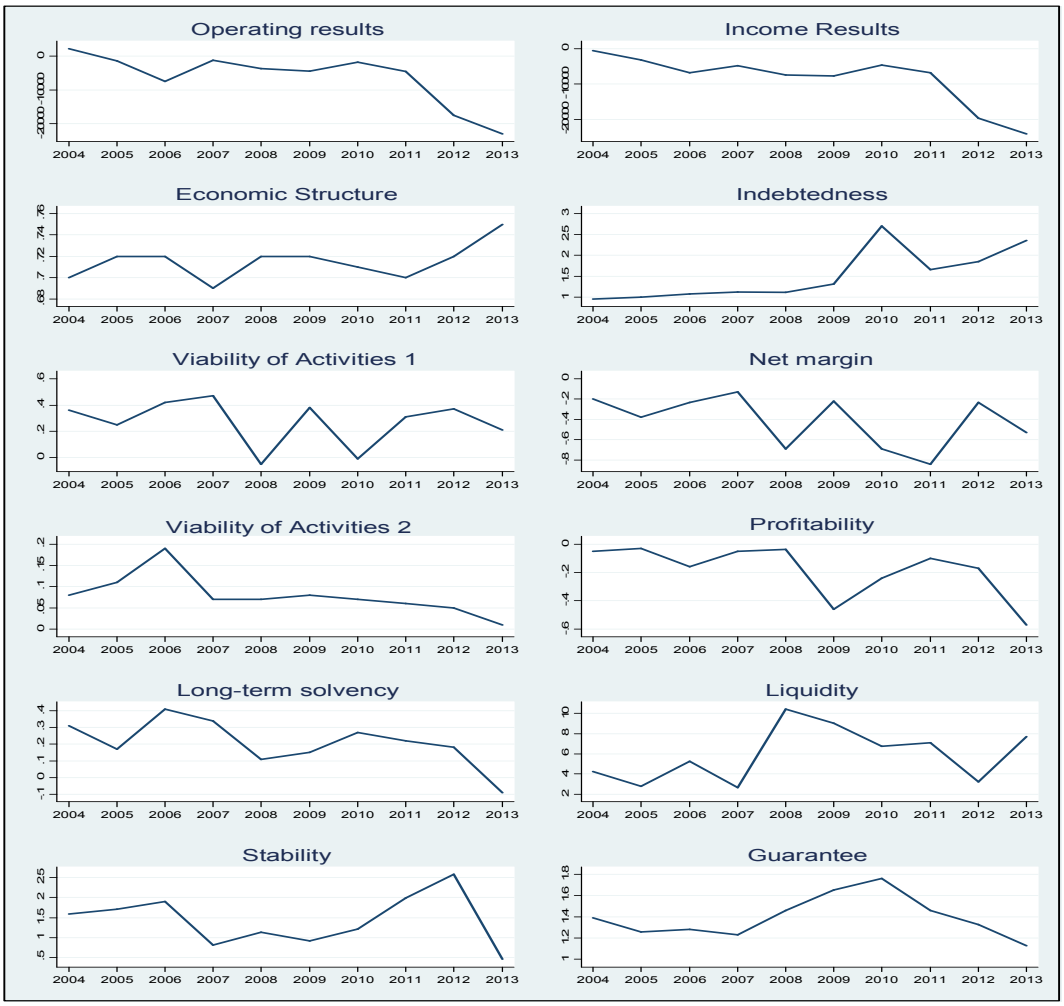

Fig.1. Micro-companies operating accounts of the fitness sector.

As we can observe in the results for small companies (Figure 2), a descending linear tendency is obtained for the ratios of operating results ($p<0.001$), income ($p<0.001$), viability of activities 1 ($p<0.05$) and profitability ($p<0.001$). It also presents an ascending linear tendency for the economic structure ($p<0.001$). Some

of the most representative ratios for the small companies are operating results, income or profitability, as well as a descending linear tendency, they show an average maintained negative value over the analysed years. The small company, as well as the micro-company, show a negative value for the net margin ratio and an increase in the indebtedness ratio over the years.

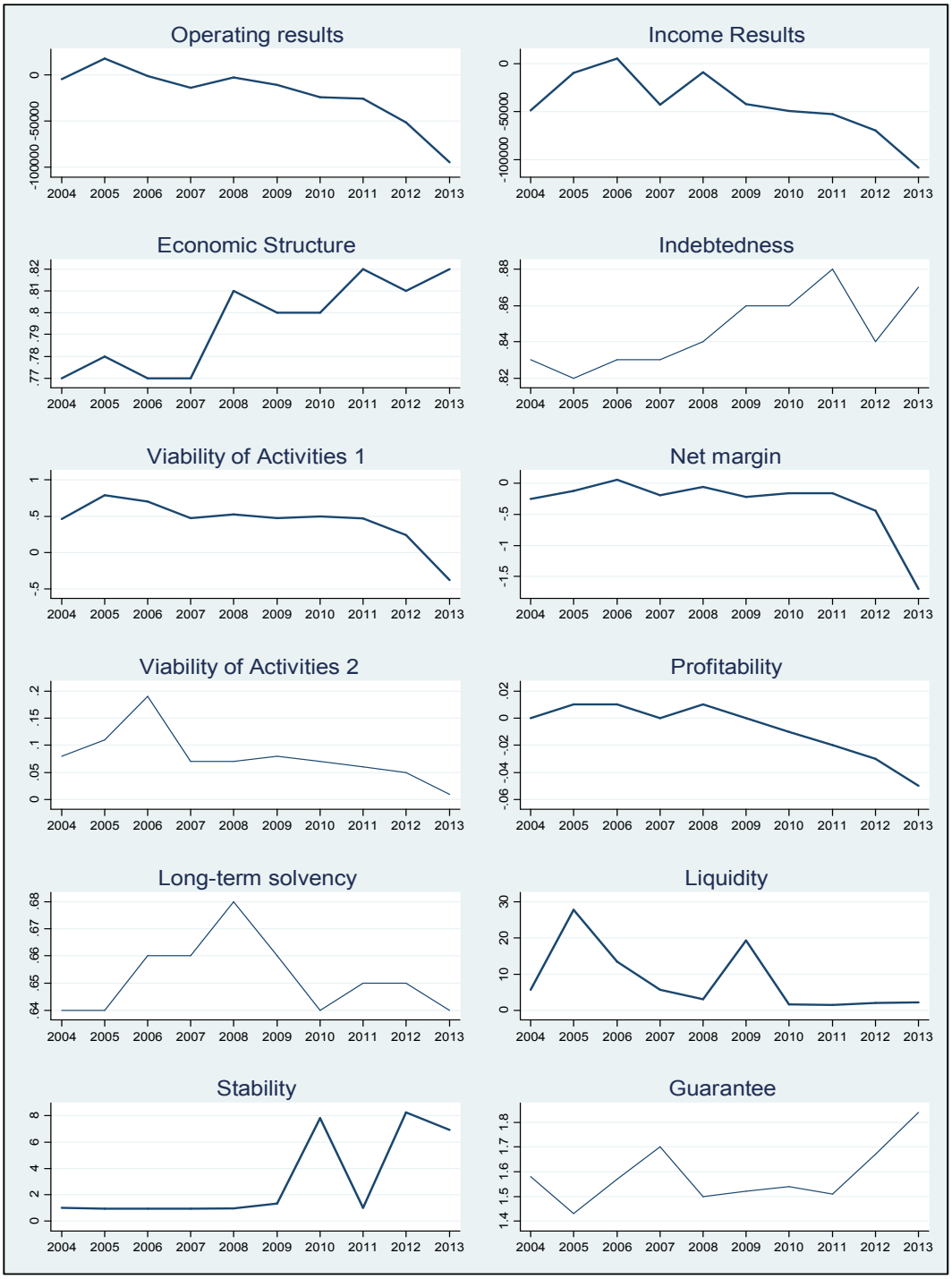

Fig.2. Small companies operating accounts of the fitness sector.

In the results for medium sized companies (Figure 3), an ascending linear tendency was obtained showing positive values for the economic structure ratio and negative values for the net margin ratio ($p<0.05$). Also a quadratic tendency is shown for the viability activity 1 ratio ($p<0.05$). For the medium sized companies, on the contrary of the other companies analysed, there are positive operting results, as well as a decrease in the indebtedness ratio, proving positive values over the analysed years. Finally, the net margin changes in a sharp manner its values from negative to positive.

Fig.3. Medium sized companies' operating accounts of the fitness sector.

The results from the large companies (Figure 4) have a descending linear tendency in the stability ratio ($p<0.05$) and guarantee ($p<0.01$), whilst in the cases of indebtedness ($p<0.01$) and long-term solvency ($p<0.05$) an ascending linear tendency can be observed.

Fig. 4. Large companies operating accounts of the fitness sector.

Dicussion

The reduction in the turnover of the fitness sector from 5.035 million dollars (IHRSA, 2011) to 4.206 million dollars (IHRSA, 2013) implied an increment in the annual drop outs which reached 60-70%. Also, during this time some important events happened like the economic crisis, the increase in VAT from 9% to 21% or the strong polarization of the sector. These factors led to the responsible agents of the sport centres to take strategic measures like the reduction in monthly fees reducing from 50 euros to 39.5 euros (IHRSA, 2013, LifeFitness, 2016). Despite this, sport centres still have major problems in client turnover and given that the

diversification is low (70% of turnover comes from the clients fees) it is a complex situation for solvency (LifeFitness, 2015).

The decrease in turnover in the fitness sector registered over the crisis years and continued by the increase in VAT could be reflected in the results of the company's accounts between 2008 and 2013. Both the micro-company and the small companies show significant tendencies, with a clear descending orientation and an average negative result in all of the years of the period analysed. The sectorial reports suggest that after the VAT increase, one of the main actions taken that has been associated mostly with SME´s was to redeem and rebound the costs of the VAT increase with the accounts of the company, maintaining the previous prices with the aim of not losing clients (FNEID, 2013).

The results of this study support this theory proving that the public policies like VAT increase maintained a descending linear tendency even after the economic crisis, affecting the SME´s. This decrease accentuates mainly around 2010, which suggests that the economic crisis is the main trigger in profitability decrease of these companies. The VAT increase in 2012 affirms the maintenance of the descending pattern of the results.

In spite of this, it cannot be concluded whether the decrease started due to that the economic crisis maintained until 2013 (the last analysed year) or if on the other hand the VAT increase in 2012 is the reason for why the decrease is renewed and persistent. However, this data coincides with the registered results in other studies, where the worsening of the economy sector is ostensible (IHRSA, 2013; Ortín, 2010). In a more detailed manner, Ortín (2010) reflected on how sport centres were suffering deterioration and a continuous decrease in annual turnover. Therefore, taking into account the positive externalities that sport generates in society, a preventive measure should be taken seriously in favour of these types of companies (SME´s) with changes in tax policies, as their sustainability and viability is compromised. Therefore, subsidiary policies that were previously made like reducing tax could improve the fitness situation and the sport sector in general.

Exploring the rest of the indicators used, it is observed how the micro-companies and small companies have also seen their solvency affected. They present an average negative net margin in all cases which could difficult the appearance of new investors. On the other hand, large companies have to affront more complex ratios like debt. Finally, there is not homogeneity between medium and large sized companies, who have made very different adaptations to affront the polarization of the market (LifeFitness, 2015). This fact has been reflected in the implantation of the new low-cost centres that have been driven by major chains or franchises, experts in their ability to overcome indebtedness ratios and their adaptation to new changes compared to the micro-companies and medium sized companies (LifeFitness, 2015; de la Cámara, 2015). Seeing as the most affected in the crisis period of the fitness sector have been the SME´s, these are the ones who should play the main role in the processes of creation, development, promotion and implant client loyalty policies that have started to be established in the sector (Daryanto, de Ruyter, Wetzels, Patteron, 2010; Li, Petrick, 2010). Previous research shows how the feeling of belonging and loyalty influence in better ratios of fee repurchasing (Bedford, 2009; Ferrand, Robinson and Valette-Florence, 2010).

Conclusions

Results of this study show the fragile finance situation of the sport installations and sport centre sector, as well as a continued decrement of solvency and stability from 2004 to 2013. Also, part of the results of the last years could be linked to both the economic crisis and the VAT increase, as in many cases it is possible to observe that the deviations are much more marked. In second place, the micro-company and the small company are the ones that have suffered more in general, finding more variability in the cases of the medium and large sized companies. Lastly, this study suggests the evident need to boost the sector through new tax policies or to return to more favourable polices like the reversing in VAT. These types of installations generally attend to the demands of sport practice of the population and given the positive externalities of sport, it would be a long-term investment.

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