

Original Article

Analysis of annual expenditure in equipment by 5k and 10k runners according to race time

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Abstract:

The aim of this research was to analyse the direct expenditure of the runners who participated at the II Charity Run Real Madrid Foundation, as well as direct expenditure's influence on race times at the 5km run and the 10km run. The sample was composed of 429 runners (M=34.36±11.68 years old; M=5.70±6.64 years of experience) from a total of 3638 runners who participated in the II Charity Run Real Madrid Foundation, which took place on 28th of January, 2018 at Madrid (Spain). The sample was divided into three groups according to their race time (measured in minutes), using k-means clustering. For the 5km run, the three resulting groups were divided into 47'-73', 32'-46' and 16'-31', while for the 10km run, the groups were divided into 61'-77', 52'-60' and 36'-51'. Results reveal a clear tendency towards economic efficiency among runners with the lowest race times (5km and 10km) compared to the other groups. Getting to know precisely how runners' money is spent annually will allow for individualized marketing campaigns targeting each type of runner.

Key words: fun runs; economic impact, sporting equipment, running.

Introduction

The last available report of the sporting habits survey published by the Ministry of Education, Culture and Sport (2017), place running as the second most popular sport by percentage, bested only by gymnastics, as well as being the sport with the highest percent growth between 2010 and 2015, increasing from 4.8% to 10.6% of the total population in terms of active participation.

Weekend fun runs have become more and more noticeable in Spanish municipalities, with approximately three thousand annual events countrywide (Burillo and Pérez-González, 2016). It is estimated that two and half million people go for a run in Spain (Pompeu Fabra University, 2016), many of whom participate in organised fun runs, whose number largely increased from 2010. Mentioning examples from Spain's two largest cities, Barcelona's Marathon had 12,000 participants by the beginning of this decade and it has exceeded 20,000 participants in the last few years. In Madrid, 377 runs took place in 2016 (Fonseca, 2017) compared to the 161 events that took place in 2008. Only in the capital city, 158 events were held in 2016. Most of them took place at weekends, an average of three runs were held each week. Some experts from the fields of events organisation and media outlets related to the sport, consider that the number of fun runs in Spain has already peaked, and they even predict a decline in the number of fun runs (Miñana, 2018).

The aforementioned wide range of events force the organizers of these events to differentiate their product from other runs (Buning and Walker, 2016). Fun runs enjoy the distinct advantage, in terms of economics, of not causing an excessive burden on council's public funds compared to other sporting events (Coleman and Ramchandani, 2010).

On the other hand, it must be highlighted that the average age of the Spanish runner is around 28 years old, slightly higher than other sports, which translates into a higher purchasing power (Burillo and Pérez-González, 2016); this can explain why the spending on running material (footwear, watches, clothing and other equipment) has grown significantly over the past five years. This increase can be checked in sectoral reports like the one published by We are testers and Runnea (2017), which analyses the neighbouring market generated by runners: footwear, textile material, registrations, physiotherapy and training services, heart rate monitors, locators, etc. Calculating the economic impact of any sporting event has become something critically important for organisers. For small events, like fun runs, it is acceptable to simply use direct expenditure as an indicator of impact (Li and Jago, 2013).

Although some experts believe that an increase in the number of fun runs will be difficult, the major sporting brands rely on a sustained increase in their sales in running footwear, clothing or wearables, just as it has happened over the last few years. (NPD Sports Tracking Europe, 2017).

Running represents one of the most important categories to sporting outlets and it will sustain an upward trend. This is confirmed by the data compiled by NPD Sports Tracking Europe, a firm specialised in market studies, which points out that the running market keeps reporting sales growth in Spain, in both footwear and clothing. NPD Sports Tracking Europe adds that the oldest consumers (older than 35 years old in footwear and older than 45 years old in clothing) represent the group with the highest expenditure increase in running footwear and clothing.

Half of Spaniards who state that they want to start exercising choose running as their preferred physical activity (Tradesport, 2018a), which reaffirms the optimism of running brands. These brands do not stop offering new products for all customer segments. In fact, running is the fastest growing sector for companies like Adidas, which confirmed this segment as one of its priorities after verifying that running sales are getting closer to football sales (Diffusion Sport, 2018b, 2018c). Another example is the Spanish company Joma, whose sales growth led it to get involved in European competitions sponsorships (Diffusion Sport, 2018e), something that used to be exclusive for big multinational companies.

In addition to the importance attributed to footwear and clothing, one of the most important investments is related to technological products that enable to measure progress, to compare oneself with other runners or to access virtual spaces. These devices, also known as wearables, are not only offered by companies that used to be considered the specialists of this sector, like Garmin or Polar (Diffusion Sport, 2018b, 2018d, 2018h; Tradesport, 2018b); for example, Mizuno (Diffusion Sport, 2018f) has developed a virtual league for runners, Asics (Diffusion Sport, 2018a) has created a global community of runners and Nike (Diffusion Sport, 2018g) has created another virtual community offered to runners in order to improve their experience with all the Nike products.

As a result, the aim of this research was to analyse the direct expenditure of the runners who participated in the II Charity Run Real Madrid Foundation, as well as direct expenditure's influence on race times in the 5km run and the 10km run, which were the two distances covered by participants.

Material and Methods

Sample

The sample consisted of 429 runners ($M=34.36\pm 11.68$ years old; $M=5.70\pm 6.64$ years of experience) from a total of 3638 runners who participated in the II Charity Run Real Madrid Foundation, which took place on the 28th of January, 2018 at Madrid (Spain).

Questionnaire design

An ad hoc questionnaire was designed for this research, based on similar prior work (Delamare et al. 2001; Kim & Petrick 2005; Lee & Taylor 2005; Turco 1998). That questionnaire consisted of two sociodemographic questions (Age and Gender) and ten running-related questions (race number; previous experience; personal best race time; equipment brand and annual expenditure on equipment, etc.).

On-site surveys were conducted at the race number collection point (runner's fair, Santiago Bernabéu stadium, Madrid, Spain). Data collection was undertaken by 10 researchers previously trained to handle these situations. Each researcher had an iPad 2™ (Apple, CA, USA) for data collection. Surveys were managed and delivered with the software QuickTap Survey™ (QuickTap, Toronto, Canada). This software enables the on-site registration of offline surveys, which are downloaded afterwards to the database.

Data analysis

The sample was divided into three groups according to their race time (measured in minutes), using k-means clustering. For the 5km run, the three resulting groups were divided into 47'-73', 32'-46' and 16'-31', while for the 10km run, the groups were divided into 61'-77', 52'-60' and 36'-51'. A descriptive analysis of annual expenditure on footwear, clothing, registrations and in total (the former categories plus the expenditures on physiotherapy) was made, as well as a Kruskal-Wallis test for independent samples in order to analyse the differences between the different race-time groups.

Results

Participants of this research have stated to have spent an average annual expenditure of 134.3€ (± 94.8) on running shoes, 114.8€ (± 96.9) on running sportswear, 96.3€ (± 99.9) on registrations to sporting races, 41.8€ (± 105.2) on physical therapists and medical recovery, for a total of 376.22€ (± 264.6) devoted annually to running. However, there are other natural consumption components of the runner that are not annually amortized, such as watches or wearables, whose average expenditure is 108.6€ (± 146.3) per participant.

Figure 1 compares the annual expenditure incurred by the sample of this research. The sample was divided into groups according to their race time (1 being the slowest group and 3 being the fastest group). Results reveal a clear tendency towards economic efficiency among runners with the lowest race times (5km and 10km) compared to the other groups.

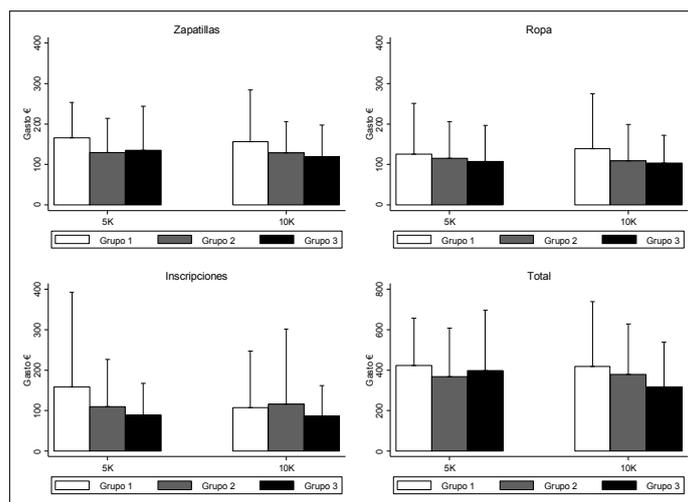


Fig.1. Analysis of annual expenditure on footwear, clothing, registrations and total for each group

As an example, in the 5km run, the annual expenditure of group 1 (slowest runners) on footwear (165.3€±87.6), clothing (126.0€±125.0), registrations (102.9€±63.8) and total (422.1€±234.8) progressively decreases as race times lower, with an expenditure 10-20% lower for group 3, which consists of the fastest runners. (134.9€±68.7 on footwear; 107.4€±88.6 on clothing; 91.7€±78.4 on registrations and 396.7€±298.1 annual total).

In addition, the annual expenditure decrease is stronger for 10km runners, with the fastest runners' expenditure decreasing from 14% to 27% when compared to the slowest runners' expenditure. In this case, yearly consumption of items like running shoes (156.3€±127.1 for group 1 vs. 119.3€±78.1 for group 3) and clothing (138.6€±135.3 for group 1 vs. 102.8€±68.7 for group 3) show greater efficiency. Regarding registrations for the 10km run, although the general tendency is similar, group 2 runners spend the most (100.5€±116.1), similar to group 1 (99.4€±86.6) and more than group 3 (86.6€±75.5).

Discussion

Over the last few years, the impact evaluation of sporting events has become an important line of research in scientific literature. These evaluations use input-output models, in which numerous expenditure items and the direct and indirect taxes generated are included, as well as other methodologies that provide an approximate indication of the event's real impact. However, it is acceptable to simply use the participants' direct expenditure as an impact indicator for small events (Li and Jago, 2013). This approach has not yet been exploited in a sector like running, with more than three thousand annual running events only in Spain and fun runs standing out (Burillo and Pérez-González, 2016). Another fact that brings to light the so-called "running fever" is reflected in the significant increase of running practitioners among the Spanish population. In fact, running has become the physical activity with the second highest weekly sports practice (from 4.8% in 2010 to 10.6% in 2015), ranked after keep-fit gymnastics. (Ministry of Culture, Education and Sport, 2017).

Equally, it is difficult to find studies that classify runners according to their fitness and consumption habits. The most recent examples in Spain, although far from scientific literature, are the reports elaborated by Cinfasalud (2017) and We are testers-Runnea (2017). The main contributions of both reports are an attempt to define a runner profile, as well as indicating the runners' expenditure. As a result, Cinfasalud (2017) mentions that there is an average expenditure of 39.6 monthly euros in running-related products, while one third of the sample spends from 10 to 20 monthly euros. On the other hand, We are testers-Runnea (2017) shows that the runners' average yearly expenditure ranges from 100 to 300 euros for 44.76% of respondents (representative sample), while 45.67% of respondents spend less than 100 euros. Our results are lower than Cinfasalud's (475.2 € per year), but this difference is more significant when compared to the We are testers-Runnea report, going well beyond the average expenditure. This fact could be explained by the sample size (our sample is lower than the sample used by the two reports), as well as by the runner's origin. Our study is mainly composed of runners from Madrid, while the two reports include runners from all over the national territory. Consequently, it would be convenient to increase our sample size, replicating this study in other fun runs across other regions, which in turn would allow the analysis of other interesting variables, such as the analysis of each Autonomous Community's expenditure.

Returning to the We are testers-Runnea report (2017), the most interesting aspect of this study is the fact that it segments the different running practitioners, creating four categories: beginner, amateur, advanced and expert. The majority of beginners spend less than 100 euros, amateurs and advanced spend between 100 and 200, and experts spend more than 300. Nevertheless, this report does not take into account the race times in any distance (10 km, half marathon and marathon) to create this segmentation, but it considers the weekly kilometres

of training. It also considers other variables related to the number of running shoes, whether runners took part in an effort test and whether runners had a coach. As a result, we cannot extrapolate these results to ours, because we do not know the four categories of runners' sporting performance based on their race times.

There are other studies that have tried to segment runners. Hallmann and Wicker (2012) did a report about marathon runners, establishing three clusters: "holidayers", "socialisers" and "marathoners" according to their expense in the host city (rather than in sporting material); Vos, Scheerder, Boen and Feys (2008) interviewed a large sample of runners and took into account sociodemographic variables (among which sporting material was included). However, as with other studies aforementioned, none of these studies have considered sporting performance based on race times, but other variables such as the number of runs in which runners participated during the last few months. The internationalization bias should also be highlighted, due to the fact that both studies were conducted in a specific territory (Germany and Belgium, respectively) and, because of that, each country's sporting industry and their level of sports practice can influence the results. Based on this information, it would be useful to elaborate a running sectoral report at a European level.

Conclusions

Our research has the strength of establishing for the first time a relationship between the sporting performance and the expenditure incurred by runners. Similarly, expenses specification is much more specific compared to other studies, including current relevant aspects for any sports practitioner, such as wearables. Nevertheless, the main limitation of our research is the small sample size, which can explain the absence of significant differences among the groups that were created according to their performance regarding the annual investment in running clothes, footwear, registrations and health treatments. Increasing the number of surveys and covering a national sample universe would allow for the extraction of more conclusive data, as well as including more variables of interest, analysed in the aforementioned studies, in order to have an in-depth discussion about the situation and the real impact of running.

However, as an element to be highlighted, we cannot forget the apparent tendency towards economisation shown by the high-performance runners. Producing conclusive results of this behaviour would be very interesting from a social research perspective, and it could also be interesting for marketing oriented towards companies and other interest groups.

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