

# Rethinking dual careers: success factors for career transition of professional football players and the role of sport entrepreneurship

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## Abstract

**Purpose** – The purpose of this longitudinal study is to examine the dual career and entrepreneurial experiences of professional football players and their influence on the career transition process to entrepreneurship or employment.

**Design/methodology/approach** – The study examined a Portuguese employer–employee data set from 1991 to 2017 using the logit model, a binary choice regression model that allows predicting the probabilities of two possible qualitative and binary outcomes.

**Findings** – Entrepreneurial experience is the key driver for retired football players to pursue entrepreneurship. Having a dual career and working during the athletic career leads to higher chances of continuing in the labor market as an employee. Higher education levels did not significantly influence the decision to pursue a second career but having secondary education increases the chances of continuing as an entrepreneur.

**Research limitations/implications** – First, the study aims to shed light on success factors in career transition of professional football players who engage in a dual career. Second, the authors introduce sport entrepreneurship as a possible activity alongside an athletic career.

**Practical implications** – Athletes can benefit from the experience they gain during a dual career in the process of career transition. Working in the final year of an athletic career represents a promising strategy to gain work experience alongside sport without jeopardizing sporting success.

**Originality/value** – This study adds evidence to the contemporary discourse on dual career theory and career transitions and reconciles the theory of sport entrepreneurship and dual careers.

**Keywords** Sport, Entrepreneurship, Career transition, Dual career, Professional, Football, Soccer

**Paper type** Research paper

## Introduction

The increasing commercialization and professionalization of elite sport in recent decades has led to high energy and time demands, limiting the possibilities for a dual career (education or work alongside sport) (Baron-Thiene and Alfermann, 2015). However, a dual career can differentiate an athlete's focus, provide support in difficult athletic times (Debois *et al.*, 2015), be a pressure valve (Aquilina, 2013), create new perspectives (Stambulova and Wylleman, 2019), shape multifaceted athlete identity (Ryba *et al.*, 2015) and drive personal development that enhances overall performance (Debois *et al.*, 2015).



Only few athletes receive such amounts of attention and recognition and are able to accumulate enough financial capital to rely on the revenues from sport and maintain their lifestyle during retirement (Granovetter, 2018). Athletes develop transferable skills during their participation in elite sport, such as discipline, commitment, high stress tolerance (Dewenter and Giessing, 2014), efficient time management under pressure (Burlot *et al.*, 2018) and the will to achieve above average (Hemme *et al.*, 2017), skills which are transferable to other areas of life and hence increase employability (Bernes *et al.*, 2009). Nevertheless, athletes experience difficulties, problems, or negative emotions during their career transitions (Park *et al.*, 2013). Being a DC athlete is a potent strategy to positively impact the quality of career transition. A DC allows athletes to be better prepared for their career transition (Stambulova *et al.*, 2021), learn to be proactive about the process (Knights *et al.*, 2019), foster personal resources by taking responsibility for managing their careers (Ryba *et al.*, 2015) and develop valuable competences which are associated with success in the labor market (Ekengren *et al.*, 2018; Barriopedro *et al.*, 2018).

So far, the concept of DC is limited to education and work alongside the athlete's career. Value creation in sport is increasingly characterized by sport entrepreneurial behavior (Hammerschmidt *et al.*, 2020; Pellegrini *et al.*, 2020; Huertas González-Serrano *et al.*, 2020; Escamilla-Fajardo *et al.*, 2020) and being a professional athlete and entrepreneurial behavior are two vitally connected initiatives (Hindle *et al.*, 2021). Entrepreneurial activity and innovative initiatives represent valuable means to sharpen the identity of athletes and their sport organizations (Escamilla-Fajardo *et al.*, 2020). Athletes often engage in sport entrepreneurship because of the opportunity to innovate (Jones *et al.*, 2017). However, there is still much to learn how an athletic career is entrepreneurial and to what extent the entrepreneurial nature influences career transitions of professional athletes.

The research on dual careers is firmly anchored in sport literature (Stambulova *et al.*, 2021). However, there is currently a large discrepancy in the contemporary evidence in the field of dual careers. The analyzed papers included in the recent review by Stambulova and Wylleman (2019) address mainly a DC in sport and education, with only two of them considering aspects of working alongside an athletic career. Moreover, the concept of the DC is limited to education and work alongside an athletic career, neglecting other value creating activities such as entrepreneurship or social engagement. With this in mind, the literature on career transition, dual careers and sport entrepreneurship could benefit from further reflection on educational, working and entrepreneurial experiences that influence the transition to a second career after retirement from elite sport. The study contributes to this debate by testing several concepts of key factors for a successful career transition among professional football players by using a longitudinal data sample of 8,809 players from 1991 to 2017. The purpose of this study is twofold. First, it aims to expand the current literature by examining success factors of decision-making during career transition of professional football players who engage in a DC. In doing so, this study is one of the few that contributes to the current scientific debate of work alongside sport, a relatively neglected field of science. Second, the authors introduce sport entrepreneurship as a possible activity alongside an athletic career, promoting a holistic approach to the concept of the dual career. To conduct the study, this research uses the matched employer–employee data set Quadros de Pessoa (QP). The longitudinal nature of the data allows us to follow, analyzes this study the career path of professional football players over several years and gives us the unique opportunity to track their career transitions. Different authors (Kallmuenzer *et al.*, 2021; Baptista *et al.*, 2020) have used QP to perform recent longitudinal studies. The results indicate that professional football players should keep in mind that they probably need a second career after retiring from professional sport. To increase the chances of success in their career transition, they should develop diverse interests, try to reach high levels of education and acquire additional working and entrepreneurial experiences while playing. Working besides elite sport might negatively

affect the athlete's performance (Baron-Thiene and Alfermann, 2015; Stambulova *et al.*, 2015; Sorkkila *et al.*, 2018). However, the study indicates that an effective strategy is to work only in the last year of the athlete's career, significantly improving the quality of the athlete's transition without compromising the success of the athlete's career. In addition, the study shows that the current concept of dual careers should be reconsidered, and other types of value creation, such as entrepreneurship or social value creation, should be incorporated into the framework.

## Literature review and hypotheses

### *Dual career competencies and athletes' career transitions*

Few professional athletes are full-time athletes. Most pursue an education or a job in addition to their athletic career (Cartigny *et al.*, 2019). Following Stambulova and Wylleman (2015), a dual career (DC) is defined as "a career with foci on sport and studies or work" (p. 1). DC athletes are usually aware that it is challenging and stressful to follow the DC pathway of doing elite sport and invest in education or a job at the same time (Brown *et al.*, 2015). The increasing commercialization and professionalization of elite sport made it a time demanding and exhausting profession (Baron-Thiene and Alfermann, 2015). DC athletes must not only create a dynamic balance between athletic, academic, social and personal demands (Stambulova and Wylleman, 2019). DC athletes must also deal with stressors such as financial pressures (Cartigny *et al.*, 2019), fatigue/burnout (De Bosscher *et al.*, 2016; Brown *et al.*, 2015), pressure from coaches and/or parents (Cosh and Tully, 2015), weak academic/organizational support (Tshube and Feltz, 2015) and lack of flexibility in scheduling education/work and sport (Baron-Thiene and Alfermann, 2015).

Current literature suggests that the athletes' personal resources are crucial factors in developing coping strategies for stressors on the DC pathway (Stambulova and Wylleman, 2019). In addition, the external network is also important to support the athlete in DC management (De Brandt *et al.*, 2017), but serve only as a compensatory or complimentary factor (Brown *et al.*, 2015). Effective support has to be oriented to the needs of the DC athlete, to emphasize the external view in order to identify problems early on and to strengthen the belief in the DC (Knight *et al.*, 2018). In other words, assisting the athlete to help themselves develop their DC competencies (Stambulova *et al.*, 2021). Athletes report that the most important DC competencies (that make up the DC competency framework) are career planning, mental toughness, social intelligence and adaptability (De Brandt *et al.*, 2017).

The fatigue of DC efforts is obvious and immediate, while the benefits and advantages (e.g. employability) are mostly apparent only in the long run (Pavlidis and Gargalianos, 2014). Athletes report positive motivational aspects to maintain high levels in overlapping sectors such as education, work and sport (Cosh and Tully, 2015). In addition, a differentiated focus between sport and a second activity can function like a pressure valve through the perspectives created for the athlete (Aquilina, 2013; Stambulova and Wylleman, 2019). Investing in education or working can enrich the facets of the athlete's identity, balancing successes and failures in the sporting life (Ryba *et al.*, 2015). Most elite athletes do not focus solely on sport (Cartigny *et al.*, 2019). Development in all domains, including nonsport competencies and skills, may facilitate a supportive environment for the athlete to promote their athletic development. Nonsport components of the athlete's life can be a support especially in difficult periods, such as times of injury or a drop in performance (Debois *et al.*, 2015).

In fact, the benefits and advantages of a DC are going beyond the athletic career itself. Being a DC athlete is positively associated with the preparation for their career after sport (Stambulova *et al.*, 2015). DC athletes act as the primary architects of their life careers and thus of the transition from an athletic career to a second career (Ryba *et al.*, 2015). DC athletes

learn to proactively manage their careers, which will be a critical feature for a successful career transition (Knights *et al.*, 2019). With the help of a DC, athletes can prepare for their career transition and facilitating safety and stability for their post sport lives (Henry, 2013). A DC can positively sport retirement preparation and hence life satisfaction after sport (Lavallee and Robinson, 2007). By pursuing a DC pathway, athletes can develop valuable skills and knowledge in alternative areas that can enhance career opportunities after leaving sport (Ekengren *et al.*, 2018), ease the transition out of sport (Stambulova and Wylleman, 2019) and facilitate integration into the labor market (Barriopedro *et al.*, 2018).

#### *Student athletes and career transition*

In general, only a few of the aspiring athletes make it to become a professional one time and “in order to secure transition into the labor market, student-athletes need to strive for success in both sport and school” (Sorkkila *et al.*, 2018, p. 1). In addition, a professional athlete is exposed to major risks if he does not invest in his education parallel with his athletic career. An adverse shock, i.e. an unexpected injury, can significantly affect the athlete’s career and expose him or her to existential threats (Henry, 2013). In such a high-risk environment, athletes and practitioners should furthermore place emphasizes on proper education and prepare elite football players for their postcareer life (Hickey and Kelly, 2008). Practitioners are therefore urged to provide athletes with support programs that help them invest in education and transferable skills during their athletic careers (Stambulova and Wylleman, 2019). In practice, this means that teachers and coaches could motivate students in sport and in school by using self-development and learning as a method (Sorkkila *et al.*, 2018).

However, pursuing the big dream of becoming a successful athlete occupies a major amount of their capacities. The consequence is that elite athletes concentrate primarily on their athletic career (Torregrosa *et al.*, 2015). Entering the world of elite sport is commonly associated with issues regarding their educational trajectories and hence their post athletic career options (Hickey and Kelly, 2008). Participation in both education and elite sport is very stressful for athletes (Cosh and Tully, 2015). Athletes reported that their sport careers had a negative impact on their educational progress which resulted in professional difficulties during the career transition process of athletes (Stronach and Adair, 2010).

Education and development in human resources are generally means of developing behavioral and technical knowledge to enhance performance and thereby contribute to the achievement of human resources and organizational goals (Jacobs, 2017). Elite athletes are usually not financially secure after the end of their athletic career, a fact that underlines the importance of pursuing a dual career or preparing the transition to a second career after sport (Aquilina, 2013). Moreover, sport career transition practitioners can successfully contribute to the quality of athletes’ career transitions. A key implication for them is the implementation of psychoeducational development and training intervention programs (Hong and Coffee, 2017). A key driver for a successful career transition of elite athletes is the development of life skills (Park *et al.*, 2013). Overall, literature indicates that the education level of athletes positively influences the quality of their career transition process (Conzelmann and Nagel, 2003; Cević Erpić *et al.*, 2004) and athletes associate a lack of second-career opportunities with poor personal development during their athletic years (Chow, 2001). Based on the prior discussion, it can be assumed that the level of education of a professional football player positively influences his career transition. Since football players are fully committed to the sport at a young age, it is assumed that educational qualifications can only be acquired during the athlete’s career in the context of a DC. Hence, the following hypothesis can be proposed:

- H1.* A higher level of education as a professional football player increases the likelihood of a second career as an entrepreneur after retirement.

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- H2. A higher level of education as a professional football player increases the likelihood of a second career as an employee after retirement.

### *Dual career as employee*

The field of DC research is well advanced and has built up a large evidence base, especially in the last decade (Stambulova *et al.*, 2021). As previously reported, the DC describes education and work alongside the athlete. However, the research community focuses primarily on the combination of sport and education, and there is little evidence in the current literature on athletes who work alongside their careers (Stambulova and Wylleman, 2019). Athletes working alongside their athletic careers are much rarer than pursuing additional education in parallel. This could be due, among other things, to the fact that athletes find the combination of elite sport and workout significantly more difficult than the combination of sport and education (Debois *et al.*, 2015).

Athletes report that they tend to choose easy jobs to accompany their athletic careers so that they do not distract them from achieving excellence in sport. Having a dual career, however, gives an athlete the opportunity to develop formal knowledge and general work experience alongside playing, increasing their employability (Ryba *et al.*, 2015). Athletes are often competitive, goal oriented and hard-working. They also develop confidence, leadership and communication skills during their athletic careers, especially in team sport, which are important attributes for career success (Hemme *et al.*, 2017). Sport management literature indicates that there is a positive connection between overall performance in various careers such as sport, employment, art or entrepreneurship (Escamilla-Fajardo *et al.*, 2019). Athletes describe the benefits of a dual career with work alongside sport as being able to do other things besides sport, gain useful knowledge, receive a student grant, or have additional income (Ekengren *et al.*, 2018). Torregrosa *et al.* (2015) suggest that athletes who work while still active as elite athletes are better able to adapt to new professional or personal situations during career transition because they had to make largely autonomous decisions during their DC. A review of the literature indicates that athletes who pursue DC as employees are often better prepared for the transition to retirement (Park *et al.*, 2013). Overall, there is limited evidence but research indicates that working while competing may have a positive effect on the career transition of professional athletes. Hence the following hypothesis is proposed:

- H3. Working alongside a career as a professional football player increases the likelihood of a second career as an employee after retirement.

### *Sport entrepreneurship, entrepreneurial experience and entrepreneurial activity*

The nature of the professional sport environment, its internationalization, the increase in the funding of teams and events, sponsorships and mediatic coverage has offered opportunities for entrepreneurship to occur (Ratten, 2015). Entrepreneurship appears in a wide variety of forms in the spectrum of sport such as community-based entrepreneurship, club entrepreneurship or social entrepreneurship (Ratten, 2010). Evidence suggests that there are parallels between being an athlete and being an entrepreneur (Hammerschmidt *et al.*, 2020). In addition, entrepreneurship is a useful strategy to better understand the processes and mechanism of sport, thereby reducing athletic career management complexity and improving overall performance (Ball, 2005; Pellegrini *et al.*, 2020; Hammerschmidt *et al.*, 2020). An emerging and closely aligned area of research is the study of the processes by which professional or elite sport clubs are managed. While this area is still nascent, attempts are being made to use an entrepreneurial lens to improve the management processes of sport organizations (Hammerschmidt *et al.*, 2021).

Many athletes engage in entrepreneurship after sport retirement (Hindle *et al.*, 2021), and the success of their entrepreneurial initiatives can benefit greatly from spillovers effects of their athletic careers. The visibility and brand image of successful athletes can be particularly valuable, providing external remunerations to the professional athletic career, which can also benefit them when they start new businesses after their careers end (Parmentier and Fischer, 2012). Athletes can use their athletic success to get involved in entrepreneurial activities, from marketing campaigns to launching their own brands or products (Ratten, 2015). Athletes are mainly driven by emotionally based motives, quite similar to entrepreneurs whose emotional experiences of passion and frustrations are amplifiers for the motivation for entrepreneurial activities (Ruskin *et al.*, 2016; Chan *et al.*, 2015). Sport organizations are a natural environment for entrepreneurship to emerge (Hammerschmidt *et al.*, 2020; Escamilla-Fajardo *et al.*, 2020), and a supportive organizational atmosphere can foster the translation of entrepreneurial intentions into entrepreneurial activities (Meoli *et al.*, 2020).

The process of managing a personal, professional, successful athletic career has many similarities to the process of being an entrepreneur (Hindle *et al.*, 2021). The developed social network, useful contacts acquired and prior business experience can be beneficial in pursuing an entrepreneurial career (Gielnik *et al.*, 2018; Blanchflower *et al.*, 2001; Eesley and Roberts, 2012). In addition, Steinbrink *et al.* (2020) found a connection between professional athletes' and entrepreneurs' personality characteristics, which suggests they are suitable for an entrepreneur's position. During their career, athletes learn characteristics that support them in entrepreneurship. Elite athletes, as well as entrepreneurs, constantly have to deal with uncertainty, as the outcome of any sporting competition is unclear (Pellegrini *et al.*, 2020). Both athletic and entrepreneurial careers are often subjected to high workloads, constant pressure and risk of failure, so they must be resilience and motivated to deal with these circumstances (Steinbrink *et al.*, 2020). Particularly, previous entrepreneurial experience was proven to be the most influential type of human capital in the discovery of business opportunities (Davidsson and Honig, 2003). Individuals with higher human capital might have a better ability to perceive a business opportunity and better knowledge and skills to exploit it (Shane, 2003). The link between building human capital during an athletic career and later success in entrepreneurial activities could be due to the fact that an athlete's human capacity is strongly linked to entrepreneurial capacity (Hindle *et al.*, 2021). This means that the human capacities necessary to master a successful athletic career are closely linked to those of an entrepreneurial initiative. However, this does not only apply to entrepreneurial activities. Moreover, Gielnik *et al.* (2018) emphasize that working adults with prior experience from an entrepreneur's perspective can ease the transition to starting entrepreneurial activities. The basis of the literature suggests that the entrepreneurial experience of professional athletes has a nonnegligible influence on the likelihood that they will engage in entrepreneurial activities after their athletic career. Therefore, the following hypothesis can be formulated:

*H4. Football players' entrepreneurial experience increases the likelihood of entrepreneurial activity after retirement.*

## Method

### *Data set*

To test the hypotheses, the study used information on personnel records from the data set Quadros de Pessoal (QP). QP is a mandatory national survey collected yearly by the Portuguese Ministry of Labor and Social Security and a longitudinal matched employer–employee data set, where firms and workers are identified by a unique number, which allows us to track and merge information about the firms and workers over time. Professional

footballers have been monitored and their career paths followed, as some of them continue to work in the Portuguese labor market and pursue a second career. Between the years of 1991 and 2017, 35,001 observations were identified, including 8,809 distinct individuals.

### Variables

The information available from QP allows to define a set of variables associated with the players who can impact the probability of each possible outcome. The dependent variables refer to the two binary outcomes of the study: returning to the labor market and returning as an entrepreneur. The explanatory variables used in the logit models are summarized in Table 1. Part of the variables was used for studying the comeback to the labor market, others for the entrepreneur/employee choice models, and some are shared by both.

Having an additional job during the athletic career was identified if the same individual had two different job categories in the same year (player and nonplayer). If his professional situation corresponded to the entrepreneur's, it means that he gained the additional professional experience as an entrepreneur. For the education level, four categories were defined based on the completed years at school: Low (less than 4 years), Basic (9 years), Secondary (12 years) and Tertiary (a higher education degree). For the "Last league" and "Highest league" variables, 3 categories were defined: First league, Second League and Semiprofessional leagues (third and fourth league).

### Statistical analysis

To relate the choices studied to the variables available from QP, the logit model was used, a binary choice regression model that allows to predict the probabilities of two possible qualitative and binary outcomes (pursue a second career or stay retired; become an entrepreneur or become an employee). The probability of a binary event can be modeled by equation:

$$P(y = 1|x) = G(\beta_0 + \beta_1x_1 + \beta_2x_2 + \dots + \beta_nx_n + u) = G(X\beta)$$

Variable	Description
Return (dummy)	If the former football player pursues a second career as employee after retirement
Entrepreneur (dummy)	If the former football player pursues a second career as entrepreneur after retirement
Education level (dummy)	Number of years completed at school
Portuguese (dummy)	If the individual is Portuguese
Retirement age (years)	Individual's age at the time of retirement from football
Gap (years)	Time period between retirement and second career
Number of clubs	Number of clubs in which the individual has played
Player career length (years)	Number of years the individual was a player
Additional job once	If the player had an additional job during anytime of the football career
Additional job last year	If the player had an additional job during the last year of the football career
Last salary (euros)	The value of the salary received in the last year of the professional player career
Total salary (euros)	The total value accumulated in salaries in all years of professional playing career in Portugal
Last league	The football league in which the individual played during the last year of his football career
Highest league	The highest football league in which the individual played during his career
Entrepreneur once (dummy)	If the individual had gained entrepreneurial experience during the player career

**Table 1.**  
Explanatory variables  
used in the models

where  $P$  is the probability of the outcome and  $y$  is the dependent or explained variable,  $x_n$  are the independent or explanatory variables, collected from QP,  $\beta_0$  is the intercept and  $\beta_n$  are the parameters associated with the  $x_n$ . The term  $u$  models the error term, which includes all other unobserved variables that impact the probability.  $G$  is a nonlinear function that ensures that the probability  $P(y = 1|x)$ , always fits between 0 and 1 for all values of the  $\beta_n$  and the  $x_n$ . The logit model uses the cumulative logistic function for  $G(X\beta)$ :

$$G(z) = \frac{e^z}{1 + e^z}$$

To explain the effects of an explanatory variable  $x_n$  on the study response probability,  $P(y = 1|x)$ , the marginal effects of the variables in the model are calculated, which can be interpreted as the effect that a change in one explanatory variable has on the change in the probability of the positive outcome when everything else is held constant. To obtain such values in Stata, the average marginal effect method is used, which is obtained by calculating the average of the individual marginal effects across the sample.

## Results

### *Descriptive analysis*

About 33% of the football players in the database pursued an alternative professional activity after retiring from sport in Portugal, and of this proportion, only 8% returned to the market as entrepreneurs, while the rest pursued a second career as employee. The most common career choices among retired players that get reemployed are in public administration and defense, compulsory social security, wholesale and retail trade, repair and maintenance of motorcycles and vehicles, and in sporting, artistic, entertainment and recreational activities, including careers in coaching, club administration and sport management.

Active football players do not have high education levels. About 69% have not completed 12 years of school (the mandatory school attendance in Portugal since 2012) and only about 1% has any type of higher education degree. Regarding salaries, there is a wide pay scale, and the salaries vary a lot between leagues. While first league players earn on average 140,192 euros annually, 50% of the players (of all leagues) receive not more than 15,960 euros per year. All salaries are shown as gross salaries.

On average, players retire at 25.8 years old with a standard deviation (SD) of 5.2 years. After playing for 2.6 years (SD = 2.2) in 1.6 clubs. 71% of the players are Portuguese, but when solely considering the reemployed, this value raises to 92%, since foreign players leave the country either to return to their own, or to play professionally in a club from another country. The reemployed players usually retire with an older age, with more career years and club participations. The retired players that decide to get reemployed, do it on average at 26.9 years old (SD = 5.5), 3.2 years after retirement (SD = 3.6). The ones who become entrepreneurs have a higher average reemployment age and gap and also played during more years and in more clubs. There is a higher percentage of Portuguese individuals in the entrepreneurs' group, as well as individuals with previous entrepreneurial experience. Considering education, entrepreneurs have a higher percentage of individuals who have completed 12 years of school. On the other hand, employees have a higher percentage of individuals with higher education degrees.

Table 2 summarizes information on the players who did or did not pursue a second career. Table 3 summarizes information about the retired players who got reemployed, either as employees or entrepreneurs.

Figure 1 shows the time gap between retirement and reemployment for entrepreneurs versus employees. One can see a clear difference in the distribution curves of the two cases,

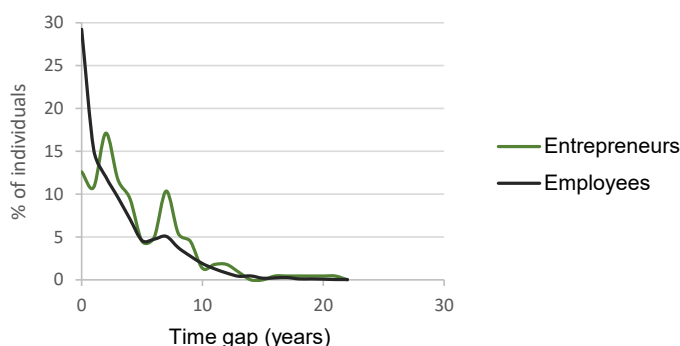
	Does not return		Does return		All retired players	
	Average	SD	Average	SD	Average	SD
Retirement age (years)	25.3	5	26.9	5.5	25.8	5.2
Player career length (years)	2.4	2.1	3	2.4	2.6	2.2
Number of clubs	1.5	1	1.9	1.2	1.6	1.1
Total earned as player (euros)	216,663	787,276	103,897	407,823	180,064	689,475
% of Portuguese	58%		92%		71%	
% with an additional job	0.35%		1.75%		0.81%	
<i>Education</i>						
<4 years	5.3%		6.6%		5.8%	
9 years	60.8%		63.8%		61.8%	
12 years	32%		28%		30.7%	
Higher education	1.4%		1.6%		1.4%	
NA	0.5%				0.3%	
Number of individuals	5,950		2,859		8,809	

**Note(s):** The values refer to the last year of the individuals' career as a professional player

**Table 2.**  
Football career  
variables and  
education levels of  
retired players

	Becomes employee		Becomes entrepreneur		All reemployed players	
	Average	SD	Average	SD	Average	SD
Reemployment age (years)	26.7	5.6	28.8	4.4	26.9	5.5
Gap to reemployment (years)	3.1	3.5	4.4	4	3.2	3.6
Player career length (years)	2.9	2.4	3.5	2.6	3	2.4
Number of clubs	1.8	1.2	2.3	1.4	1.9	1.3
Total earned as player (euros)	96,562	371,934	191,027	701,848	103,897	407,823
% of Portuguese	92%		97%		93%	
% with entrepreneurial experience as players	0.04%		1.8%		0.17%	
<i>Education</i>						
<4 years	2.6%		0.9%		2.4%	
9 years	56.3%		52.7%		56%	
12 years	33.3%		40.1%		33.9%	
Higher education	7.8%		6.3%		7.7%	
Number of individuals	2,637		222		2,859	

**Table 3.**  
Football career  
variables and  
education levels of  
reemployed players



**Figure 1.**  
Time gap between  
retirement and  
reemployment  
(1991–2017)

with that of the entrepreneurs being more irregular. Also, entrepreneurs take, on average, more time to become professionally active again.

While 30% of former players who become employees do so immediately (with a time lag of zero years), this is the case for only 13% of entrepreneurs. More than half of all employees returned during the first 2 years after retirement and 77% during the first 5 years. In contrast, only about 23% of the entrepreneurs return during the first 2 years and 66% during the first 5.

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#### *Logit model results: entrepreneur career*

In these models, the control group is a non-Portuguese individual, with a low level of education, with no prior entrepreneurial experience. The last league he played in was the first league and the highest league he played in throughout his career was the first league.

Having been an entrepreneur at least once during the athletic career is the variable with the largest effect on the probability of the outcome, increasing the probability of the positive outcome by 73.8 percentage points. This provides support for [hypothesis 1](#).

The effect of the level of education on the probability of becoming an entrepreneur is only significant for the secondary education group. This means, consistent with [hypothesis 3](#), that a higher level of education increases the probability of being an entrepreneur by around 7 percentage points compared to someone with a low level of education.

The log of the last salary and the log of the total salary accumulated during the career have statistically significant and positive effects, when modeled with the base variables. However, when all the variables are included, the value of the effect of the log of the total salaries increases, but makes the effect of the log of the last salary negative and not significant. According to the results, a 100% increase of the total salary increases the probability of becoming an entrepreneur by 2.9 percentage points, while the log of the last salary is irrelevant for the analysis. Results show that after the decision of returning is made, being Portuguese only increases the probability of becoming an entrepreneur by 3 percentage points. The retirement age is also significant and positive across all models. The effect of the length of the athletic career is significant and positive when modeled along the base variables, showing that one additional year on the individual's career increases his chances of becoming an entrepreneur by 0.6 percentage points. Similar results were obtained for the annual gap between retirement and reemployment: the larger this gap, the more likely the individual is to become an entrepreneur (see [Tables 4 and 5](#)).

The last league in which the individual played during his career is not significant for this decision for either models in which the variable appears. The highest league is statistically significant when modeled with the baseline variables but not with the final model. The Pseudo-R<sup>2</sup> values are similar to those reported by [Lenten et al. \(2013\)](#). Model 17 estimates show that someone who played in the second league or in a semiprofessional league has a lower probability of becoming an entrepreneur than someone who played in the first league.

#### *Logit model results: employee career*

This model includes a set of base variables that remain on every subsequent model: whether the individual is Portuguese or not, his education level, and his age at the time of retirement. The effects of other variables, beyond control variables, are analyzed from Model 2 to Model 10. Model 10 includes the whole set of variables used in previous models. In addition to the variables presented before, dummies for each year were included in every model, in order to capture fixed effects that could influence the decision in each year and that are not able to observe.

The results obtained show that having had an additional job while playing professionally (dual career) increases the probability of returning to work by 19.7 percentage points.

Variables	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18
Portuguese	0.034* (0.018)	0.031* (0.019)	0.033* (0.018)	0.036** (0.017)	0.035** (0.017)	0.034* (0.018)	0.034** (0.018)	0.032* (0.018)
<i>Education level</i>								
Basic	0.030 (0.025)	0.033 (0.023)	0.028 (0.025)	0.034 (0.023)	0.038* (0.021)	0.031 (0.024)	0.032 (0.024)	0.034 (0.022)
Secondary	0.066** (0.026)	0.068*** (0.025)	0.065** (0.027)	0.069*** (0.025)	0.070*** (0.023)	0.067*** (0.026)	0.067*** (0.025)	0.067*** (0.024)
Tertiary	0.029 (0.030)	0.034 (0.029)	0.029 (0.031)	0.032 (0.028)	0.038 (0.027)	0.030 (0.030)	0.031 (0.029)	0.038 (0.029)
Retirement age	0.004*** (0.001)	0.003*** (0.001)	0.004*** (0.001)	0.004*** (0.001)	0.003*** (0.001)	0.004*** (0.001)	0.004*** (0.001)	0.003*** (0.001)
Gap	0.006*** (0.001)	0.007*** (0.001)	0.006*** (0.001)	0.006*** (0.001)	0.007*** (0.001)	0.006*** (0.001)	0.006*** (0.001)	0.007*** (0.001)
Player career length		0.006*** (0.002)						−0.004 (0.004)
Entrepreneur once			0.740*** (0.175)					0.738*** (0.181)
Log of last salary				0.010* (0.005)				−0.015 (0.009)
Log of total salary					0.015*** (0.004)			0.029*** (0.010)
<i>Last league</i>								
Second						0.009 (0.019)		0.021 (0.022)
Semiprofessional						−0.011 (0.013)		−0.003 (0.018)
<i>Highest league</i>								
Second							−0.030* (0.016)	−0.020 (0.017)
Semiprofessional							−0.024** (0.012)	0.013 (0.020)
Log Likelihood	−551	−547	−544	−549	−543	−550	−548	−533
Pseudo R <sup>2</sup>	0.083	0.089	0.095	0.086	0.096	0.085	0.088	0.112
N	2,269	2,269	2,269	2,269	2,269	2,269	2,269	2,269

**Note(s):** All models control for the year. The base value of each categorical variable is not displayed (education level = low, last league = first and highest league = first). The standard error for each marginal effect is shown in the parentheses below. \*significant at 10%; \*\*significant at 5%; \*\*\*significant at 1%

**Table 4.**  
Logit model results for  
pursuing a second  
career as entrepreneur

[illegible]

This result supports [hypothesis 2](#). However, this effect loses significance when modeled together with the effect of an additional employment in the last year before retirement, which is the variable with the highest effect of all. According to the results of Model 5, having had a job alongside the athletic career on the last year before retirement increases the chance of returning to work by 34.8 percentage points.

As for the effect of education, contrary to expectation, the marginal effects are generally not statistically significant, and it cannot be concluded that education level affects the probability of choosing reemployment. The results therefore reject [hypothesis 4](#).

For the variables related to player salaries, the study used the log of the sum of salaries earned during the athlete's career and the log of the last salary as a player, since players' annual salaries are widely distributed. The estimation results related with the log of the total amount earned in salaries during the career and with the log of the last salary earned from the athletic career are negative and statistically significant. With joint modeling, one of the variables becomes less significant again. Model estimates show that the logarithm of total salary is the predominant effect and that a 100% increase in the value of total salaries decreases the likelihood of pursuing an alternative employment by 6 percentage points. The effects of the retirement age and the number of club participations along the athletic career are positive and significant when modeled with the baseline variables, but lose significance in the final model. This model considers for all variables, including player career length, as there may be some relationship between them: A higher career length may imply a higher retirement age, as most players start playing around the same age, and may also be related to more club participations. The effect of the length of the athletic career is positive and statistically significant, both when modeled with the baseline variables alone and in the final model. Accordingly, an additional year in a football player's career increases his chance by 3.6 percentage points of finding alternative employment rather than remaining unemployed. Furthermore, the highest league they played in was the first league. The effect of being Portuguese is significant across all models and that being Portuguese increases the probability of finding reemployment in Portugal by 24.6 percentage points.

Results show that the effect of the league the player last played in is significant and positive. Having played in the second league in the last year before football retirement increases the probability of returning to work by 12.6 percentage points compared to an individual who last played in the first league. The probability increase rises to 15 percentage points for someone who played on the semiprofessional leagues (third and fourth leagues). The results for the effect of the highest league played during the whole career are similar, despite being lower in value. However, when both variables (last and highest leagues) are included in the same model, the last league results in higher (and positive) marginal effects and the effects of the highest league become negative.

## Discussion

The purpose of this study was to further investigate the influences of dual careers on the career transition of elite athletes by exploring their experiences alongside their athletic careers and their impact on the decision-making process during the transition. The role of sport entrepreneurship within this process is an important contribution to a value-based concept of the dual career. The pattern of findings throughout the study supports theory about the importance of a well-managed career transition of elite athletes for success in a second career. The process of career transition seems to be mainly characterized by the preparations during the athlete's career. The decision as to which path the athlete chooses in this process, either as an entrepreneur or as an employee, is significantly shaped by his or her experiences.

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*Antecedents of entrepreneurial activity after retirement*

Human capital in the form of entrepreneurial experience and managerial competencies have been associated with better chances of identifying and exploiting more business opportunities (Ucbasaran *et al.*, 2008). The study identified that someone who has had some type of entrepreneurship experience is more likely to pursue an entrepreneurial path as a second career. However, approximately 33% of the football players in the database pursued a second career after retiring from sport and of that portion only 8% returned to the market as entrepreneurs. Sport is a natural environment for entrepreneurial behavior to occur (Hammerschmidt *et al.*, 2020). The longitudinal study contributes with in-depth evidence on the relationship between entrepreneurial experience in sport and the launch of entrepreneurial initiatives. In accordance to current literature (Gielnik *et al.*, 2018; Blanchflower *et al.*, 2001; Eesley and Roberts, 2012), the results show that the greatest influence of becoming an entrepreneur is prior experience. Being an entrepreneur once supports contemporary evidence suggesting that managing an athletic career can build bridges to embark on entrepreneurial efforts after retiring from elite sport (Hindle *et al.*, 2021). The role of educational level and its impact on the decision to pursue a second career was surprisingly different than expected. A secondary education degree increases the chance of becoming an entrepreneur rather than finding employment after retirement. Education allows to capture general human capital and individuals with higher levels of education might be more likely to perceive a business opportunity (Vakili *et al.*, 2017). These findings emphasize previous evidence which showed that entrepreneurial behavior in sport is often linked with investing in human capital (Hammerschmidt *et al.*, 2020, 2021). In addition to human capital, financial capital increases the likelihood of becoming an entrepreneur. Players who earned above-average either retire completely or engage in entrepreneurial activity. In addition, players who did not return to the labor market accumulated on average twice the salaries of players who returned to pursue a second career, and players who became entrepreneurs also accumulated on average twice the salaries during their football careers compared to players who became employees. High financial stability may increase the players' willingness to take risks, a fundamental characteristic of being an entrepreneur (Kraus *et al.*, 2010, 2012; Covin and Wales, 2012), and invest in entrepreneurial activities. The logit model results allow to conclude that a high retirement age significantly increases the likelihood of choosing entrepreneurship as second career opportunity. This could be due to the fact that a long career path enables players to generate more income. Both a higher retirement age and a longer gap between retirement and reemployment increase the probability of pursuing an entrepreneurial path. It has been found that if there are career breaks due to unemployment, human capital is likely to depreciate (Baptista *et al.*, 2020). Being unemployed for a longer period may lead to difficulties in finding a job as an employee and consequently players decide to engage in entrepreneurial initiatives.

*The narrative of a second career as an employee after retirement*

The literature review showed that current dual career research focuses on education and work alongside an athlete's career. By the subject of the work was meant primarily a position as an employee (Ryba *et al.*, 2015; Debois *et al.*, 2015) and, moreover, this field of the DC has been largely neglected in the discourse to date (Stambulova and Wylleman, 2019). Literature states that it is questionable to what extent a job alongside an athlete's career is suitable for acquiring competencies which can increase employability. Athletes report that they choose simple jobs alongside sport in nonrelevant areas that are less distracting from sport and serve only to provide financial security, rather than to build professional competencies (Ryba *et al.*, 2015; Ekengren *et al.*, 2018). Contrarily, having an additional job while being in the last year of the football career is the variable with the biggest effect on the decision to pursue a career as

an employee in the study. Especially having a dual career in the last year before the retirement from elite sport increases the likelihood of continuing as an employee. This circumstance might be a consequence of career transition programs from clubs, practitioners or supportive institutions (Hong and Coffee, 2017). This is an interesting fact, as the current literature shows that a DC is a major challenge for athletes and DC athletes are prone to negative physical or health issues (e.g., injuries, role strain, burnout symptoms) that inevitably affect the athlete's performance (Baron-Thiene and Alfermann, 2015; Stambulova *et al.*, 2015; Sorkkila *et al.*, 2018). The study shows that it is also an effective method to aim for a DC only in the last year of the athlete's career. This leads to the advantage of being better prepared for a career transition through the acquired professional experience, without jeopardizing the sporting career through possible negative influences of a DC. As mentioned above, the level of formal education, contrarily to expectations derived from current literature (Park *et al.*, 2013; Conzelmann and Nagel, 2003; Cević Erpić *et al.*, 2004), does not have an effect on the probability of pursuing an employment after sport retirement. One possible answer to this circumstance could be that personal resources and soft skills play a more important role in the choice to hire a former professional football player than their current educational status. According to Jacobs (2017), achieving behavioral and technical competencies particularly contributes to the development of human resources, which in turn enhances the performance of both the individual and the organization. During their career, elite athletes develop skills such as self-confidence, leadership and communication skills which can be important attributes for success in their second careers (Hemme *et al.*, 2017; Dewenter and Giessing, 2014; Burlot *et al.*, 2018). Hence, former professional football players may be better prepared for the labor market than initially thought. Especially players who did not have high salaries during their athletic career work as employees afterward. This seems reasonable, because although football is an above-average income industry, the data show that most professional footballers cannot accumulate enough financial capital to sustain a lifestyle after retirement without additional income, emphasizing the necessity of professional football players to proactively take responsibility for their second career and prepare for the transition process. Moreover, a high football player retirement age, length of athletic career and number of club participations enhances employability, which may be due to the fact that they managed to improve their knowledge and expertise about the sport sector. Industry-specific human capital can be valuable for performing on an organizational level (Vakili *et al.*, 2017), especially in the sport industry or related fields (Hammerschmidt *et al.*, 2020; Hindle *et al.*, 2021). In addition, a diverse experience at the club level is likely to enhance the quality of the personal network and thus might increase the chance of employment.

## Conclusion

When athletes decide to pursue a career as professional football player, they should keep in mind that their financial situation will likely require them to launch a second career after retiring from sport. Playing an active role in preparing the process is imperative to facilitate a high-quality career transition. This study highlights the importance of experiences in deciding whether to continue as an entrepreneur or employee after athletic retirement, and shows how investing in a dual career can increase success when embarking on a second career. This study is an important foundation for future studies, with the development of sport entrepreneurship and multifaceted value creation within dual career theory as an important next step.

## *Theoretical implications*

Current dual career research benefits from the presented findings of how the level of education, experience as entrepreneur or experience as employee influences the decision

making in the career transition process. Moreover, the longitudinal study adds evidence to the scarce field of literature on the topic of employment alongside an athlete's career and how this can impact the success of an athlete's career transition. In addition, the study rethought the concept of DC and introduced entrepreneurship as a possible value-adding activity alongside an athlete's career.

A possible improvement for future studies is to include interactions between explanatory variables in the models to capture possible differences in the effect of one independent variable on the outcome as a function of the values of another independent variable. Further research can be improved by increasing the sample size and research in other sport and other countries. Especially Sweden or Denmark are suitable for this, where national employer–employee data are similarly available. The findings also urge the DC research community to consider other types of value creation within dual career theory, such as investing in entrepreneurship, supporting nonprofit organizations, or engaging in social projects.

### *Practical implications*

Professional athletes can benefit from a dual career in their career transition process in several ways. First of all, they should keep in mind that the financial capital accumulated during the athletic career will probably not be sufficient and a second career will be required. The fact that personal competencies such as education or experience in nonsport professions facilitate the career transition shows how important it is for athletes to prepare and actively shape the process that is sure to come. The results of the study were also able to show how work experience, especially in the last year of the career, can increase the likelihood of starting a second career after retirement. Planning ahead for retirement from sport and taking up supplementary employment in the final year of a career represents a promising strategy for athletes to gain work experience alongside their sport without jeopardizing their sporting success.

### *Limitations*

The study is subject to certain limitations. The study is based on the Portuguese employer–employee data set QP. Therefore, there is no information on the employment status of players who either move to a different country or decided to work as self-employed without creating a company. In addition, there have been significant changes in entrepreneurship and dual careers in recent years, which means that the data set ending in 2017 may have limited explanatory power. Since the study is limited to a specific population, sociodemographic characteristics of the sample may influence the results.

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