

Which former professional football players become successful professional head coaches?

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ABSTRACT

One of the potential avenues for former professional football players to pursue their career is to become a head coach of a club's first team. An important question is how to best prepare for such a reconversion. This letter is the first in the academic literature quantifying the association between success as a professional head coach and prior experience of former professional players as a youth coach, player-coach, head coach at a lower division, assistant coach, in other staff positions and in club management positions. Our regression analyses, based on unique coach career data, show a significant positive association for the jobs of assistant or youth coach.

Keywords: football, coaching, education, regression analysis, sports management.

JEL classifications: L830, Z220, Z260.

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1. Introduction

Over recent decades, professional football clubs have grown to become complex commercial organisations with substantial economic impact. Therefore, not surprisingly, academic research concerning success determinants in this sector has grown too in domains such as sports economics, finance, management, medicine and psychology (Albanese et al., 2020; van Ours, 2021). For instance, recent research has assessed the effects on team performance of player substitutions during a game (Amez et al., 2021) and coach replacement during the season (Van Ours & Van Tuijl, 2016). In this study, we focus on success determinants on the coaching side (i.e., the association of early coaching career choices and the successes obtained as a professional head coach afterwards).

One of the potential avenues for former professional football players to pursue their career is to become a coach. However, being a successful player is not automatically indicative of having the skills of a good professional head coach. A head coach may need to develop additional skills, such as people management and motivational and communication skills (Van Den Bosch & Leten, 2017; Raúl González Blanco & Roberto Martínez, personal Communication, August 24, 2021). Therefore, a question former professional football players often pose is: ‘Which experience is needed prior to becoming head coach of a professional team, in order to become a successful head coach?’ (Sven Vermant & Yves Vanderhaeghe, personal communication, September 20, 2020).

Previous research exploring the determinants of successful coaching careers is limited and mainly approaches this topic from a qualitative perspective. This letter complements this qualitative evidence with a quantitative analysis.

2. Data

Data from the Royal Belgian Football Association (RBFA) were used as a basis. These data comprise the nationality, birth date and type and date of the obtained licenses of all former professional players who obtained a UEFA B license or higher between 1 July 1979 and 30 June 2018 in Belgium (N = 205). The data were merged with data regarding the coaches' career experiences from *transfermarket.com*, a data source often used in academic research because of its demonstrated reliability (Peeters, 2018). For each official position held, the job title, start and end date were retrieved. Additionally, for all jobs as a professional head coach, the number of obtained points by type of competition were added to allow success to be measured. The few coaches with professional club head coach experience in a non-UEFA country were omitted from the dataset because we were not able to calculate for them the performance measures mentioned below.

The dependent variable in this research is the weighted average number of points per match for a coach g :

$$Y_g = \frac{\sum_i(u_{i,g} \cdot c_{i,g} \cdot s_{i,g} \cdot P_{i,g}) + \sum_j(f_{j,g} \cdot s_{j,g} \cdot P_{j,g})}{\sum_i(M_{i,g}) + \sum_j(M_{j,g})}. \quad (1)$$

A distinction is made between points won with European clubs ($P_{i,g}$) and with national teams ($P_{j,g}$).

For clubs, three coefficients implement the weighting. UEFA coefficient $u_{i,g}$ accounts for the strength of the club's country because winning in a stronger competition should be valued higher. Similarly, winning in the first division in a country should be valued higher than winning in a lower division of that same country. This difference is reflected by coefficient $c_{i,g}$. Moreover, $s_{i,g}$ accounts for the strength of a team within a competition, based on the final ranking of the previous season. Obtaining points with a weaker team should be valued higher than with a stronger team in the same competition.

For national teams' matches, only continental qualifiers for the major tournaments are considered. Hence, $f_{j,g}$ captures the relative strength of the federation, based on its FIFA World Ranking points. Similarly to the club weighing, $s_{j,g}$ accounts for the strength of the individual team, based on the pot wherein the team is seeded for the qualification draw.

The values for the UEFA coefficient and FIFA ranking points are unambiguously defined. The choices for c and s were more arbitrary. In the base case, winning points in the second division is considered *ceteris paribus* to be worth 33% of the first division. Moreover, an increasing exponential relationship expresses our consideration that winning with a strong team is worth approximately 70% of winning with the weakest team in the competition. To mitigate the impact of these arbitrary values, many different specifications have been used for sensitivity testing, and it was verified that our conclusions were robust with respect to the parameter value choices. The same holds when adding additional points for different trophies won.

Six types of coaching experiences prior to becoming a professional head coach were considered: (i) assistant coach, (ii) other staff positions, (iii) youth coach, (iv) head coach at an amateur team or level below second division, (v) management positions in a club and (vi) player-coach. Three groups of independent variables have been constructed. First, for each type of experience, a dummy variable reflecting whether a former professional player has had this type of experience before becoming a professional head coach has been constructed. A second cluster of variables measures the number of times this position was held before becoming a professional head coach. A final cluster captures how many years this position was occupied before becoming a professional head coach. We hypothesise for each group of measurements a positive association between these

experiences and our success outcome because these experiences allow individuals to observe other coaches, learn and test different aspects of coaching (Gilbert & Trudel, 2001; Rathwell, Bloom & Loughhead, 2014).

Ordinary least squares (OLS) regressions with heteroscedasticity-robust errors were performed to analyse the association between these dependent and independent variables. These analyses adopted three control variables that may correlate with our dependent and independent variables: (i) the age at which a former professional player obtains their first coaching experience, (ii) a dummy variable indicating whether or not a coach is Belgian (because the data are derived from the Belgian FA's database) and (iii) the position the coach had as a professional player on the field—the summary statistics of all discussed variables are presented in Table 1. The absence of multicollinearity was checked using variance inflation factors (VIF) of the variables, which were always below 3.

TABLE 1 ABOUT HERE.

3. Results

The most prominent finding from the regression results in Table 2 is that independent of the chosen model specification, prior experience as an assistant or youth coach has a significant positive association with the subsequent success as a professional head coach. However, from the significant negative second-order effects for the total time spent in these jobs in model (3), we find evidence for diminishing returns over time. This association is plausible because the additional knowledge obtained from executing a specific job before becoming a professional head coach is expected to diminish over time.

TABLE 2 ABOUT HERE.

In some models, we also find evidence for experience in other staff positions and experience as a player-coach to be positively associated with later head coach success. The fact that this association is not significant in each model might be due to the fact that the variation in the related independent variables is low. Finally, the parameter estimates for experience as a head coach at a lower level and experience in club management positions are found to be insignificant—the absence of a significant association with respect to the latter experience is not surprising because it is completely different from a job as a professional head coach.

4. Conclusion

This research is the first in the academic literature quantifying the association between former professional players' success as a professional head coach and their prior experiences in other positions. We found robust evidence of prior experience as an assistant coach or a youth coach as success determinants.

As in all studies, some limitations exist, giving rise to avenues for future research. Follow-up works could extend the scope to people with coaching ambitions without any professional playing experience or that did not attend coach education in Belgium. This approach could help increase the number of observations involving some of the prior experiences to make more sound conclusions on some other working experiences and generalise the findings to the context of other countries. A final limitation is that our analyses are correlational in nature: no causal interpretations can be given to our estimates. Due to our data structure, we were not able to control for (i) unobserved success determinants and (ii) a dynamic selection problem in which only former players with particular observable and unobservable characteristics become a head coach. It goes

without saying that we would very much welcome research that can supplement our initial but striking evidence with studies that can be interpreted causally.

References

- Albanese, A., Baert, S., Verstraeten (2020). Twelve eyes see more than eight. Referee bias and the introduction of additional assistant referees in soccer. *Plos One*, 15, e0227758.
- Amez, S., Neyt, B., Van Nuffel, F., & Baert, S. (2021). The right man in the right place? Substitutions and goal-scoring in soccer. *Psychology of Sport and Exercise*, 54, 101898.
- Gilbert, W. D. & Trudel, P. (2001). Learning to Coach through Experience: Conditions that Influence Reflection. *Journal of Teaching in Physical Education*, 62(1), 32–43.
- Peeters, T. (2018). Testing the Wisdom of Crowds in the field: Transfermarkt valuations and international soccer results. *International Journal of Forecasting*, 34(1), 17–29.
- Rathwell, S., Bloom, G. A. & Loughead, T. M. (2014). Head Coaches' Perceptions on the Roles, Selection, and Development of the Assistant Coach. *International Sport Coaching Journal*, 1(1), 5–16.
- Van Den Bosch, P. & Leten, R. (2017). *Act Like a Coach* (1st Ed.). Antwerpen: Cannibal Publishing.
- Van Ours, J. C., & Van Tuijl, M. A. (2016). In-season head-coach dismissals and the performance of professional football teams. *Economic Inquiry*, 54(1), 591–604.
- Van Ours, J. C. (2021). Common international trends in football stadium attendance. *Plos One*, 16, e0247761.

Table 1. Descriptive statistics.

	Average (proportion)	Standard deviation
A. Dependent variable		
Weighted average number of points won as head coach	0.115	0.168
B. Independent variables		
Was assistant before T1	18.5%	-
Was youth coach before T1	8.8%	-
Was head coach at lower level before T1	14.1%	-
Was club manager before T1	2.9%	-
Was player-coach before T1	2.0%	-
Was other staff member before T1	2.0%	-
Positions held as assistant before T1	0.234	0.572
Positions held as youth coach before T1	0.132	0.492
Positions held as head coach at lower level before T1	0.293	0.870
Positions held as club manager before T1	0.039	0.259
Positions held as player-coach before T1	0.020	0.139
Positions held as other staff member before T1	0.029	0.219
Time as assistant before T1	0.434	1.249
Time as youth coach before T1	0.342	1.445
Time as head coach at lower level before T1	0.437	1.291
Time as club manager before T1	0.056	0.475
Time as player-coach before T1	0.021	0.204
Time as other staff member before T1	0.080	0.730
C. Control variables		
Age at start of coaching career	36.824	4.148
Belgian nationality	88.3%	-
Other nationalities	11.7%	-
Goalkeeper	9.3%	-
Defender	33.2%	-
Midfielder	39.5%	-
Attacker	18.0%	-
Number of observations	205	

Table 2. Regression results.

	(1)	(2)	(3)
A. Independent variables			
Was assistant before T1	0.130*** (0.029)		
Was youth coach before T1	0.132** (0.052)		
Was head coach at lower level before T1	0.041 (0.034)		
Was club manager before T1	-0.022 (0.084)		
Was player-coach before T1	0.108** (0.054)		
Was other staff member before T1	0.117 (0.166)		
Positions held as assistant before T1		0.076*** (0.025)	
Positions held as youth coach before T1		0.082*** (0.025)	
Positions held as head coach at lower level before T1		-0.001 (0.010)	
Positions held as club manager before T1		-0.018 (0.028)	
Positions held as player-coach before T1		0.113*** (0.043)	
Positions held as other staff member before T1		0.048 (0.118)	
Time as assistant before T1			0.097*** (0.026)
(Time as assistant before T1) ²			-0.011*** (0.004)
Time as youth coach before T1			0.056*** (0.021)
(Time as youth coach before T1) ²			-0.005** (0.002)
Time as head coach at lower level before T1			0.026 (0.026)
(Time as head coach at lower level before T1) ²			-0.004 (0.004)
Time as club manager before T1			-0.051 (0.121)
(Time as club manager before T1) ²			0.003 (0.019)
Time as player-coach before T1			0.077 (0.098)
(Time as player-coach before T1) ²			-0.002 (0.037)
Time as other staff member before T1			0.334* (0.201)
(Time as other staff member before T1) ²			-0.044* (0.027)
B. Control variables			
Age at start of coaching career	0.002 (0.026)	0.002 (0.025)	-0.021 (0.028)
(Age at start of coaching career) ²	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Belgian nationality	-0.053 (0.036)	-0.041 (0.036)	-0.051 (0.038)
Goalkeeper	0.035 (0.036)	0.031 (0.037)	0.033 (0.037)
Defender	0.008 (0.027)	0.014 (0.027)	0.014 (0.029)
Midfielder	0.027 (0.027)	0.023 (0.026)	0.021 (0.027)
Constant	0.153 (0.532)	0.172 (0.515)	0.628 (0.575)
Number of observations	205	205	205
R ²	0.250	0.222	0.246

Notes: The mentioned statistics are linear regression estimates with standard errors in parentheses; the dependent variable is our measure of head coach success;

***p ≤ 0.01; **p ≤ 0.05; *p ≤ 0.10.