(SP) THE EFFECTIVENESS OF A COACH TURNOVER IN SOCCER: THE EFFECT ON HOME TEAM ADVANTAGE AND TEAM QUALITY.

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Introduction

The effectiveness of a coach turnover on team performance has widely been discussed in the literature (Audas et al., 2002; Bennet et al., 2003; Rowe et al., 2005). In general, most studies defined team performance as winning percentages or the number of points obtained. The papers that described the effect of a coach turnover on team quality and home team advantage are scarce (Koning, 2003). This study presents a method to calculate team quality and home team advantage under the old and new coach. The focus is a coach turnover within a competition season.

Methods

A simple method to calculate home team advantage and team quality under the old and new coach is presented. The method is an extension of the simple method presented by Clarke and Norman (1995) to calculate home team advantage. Some preliminary findings are discussed as well.

Results

The outcome of a match is related to home team advantage and team quality. The winning margin (D_{ij}) in a match between two teams i and j played at the home ground of team i is modelled as: $D_{ij} = u_i - u_j + h_i + \varepsilon_{ij}$ where u_i is a parameter of team quality of team i; u_j is a parameter of team quality of the opposing team j and h_i is a parameter of home team advantage. Home team advantage and team quality are assumed to be constant throughout the season. Our model also implies the restriction that h_i and u_i are constant means but accepts the assumption that a coach turnover within the season significantly changes home team advantage and team quality. The overall mean home team advantage (h_i) of a team per game is the sum of the mean home team advantage under the old (h_{io}) and new coach (h_{in}). The overall mean team quality (u_i) of a team per game is the sum of the mean team quality under the old (u_{io}) and new coach (u_{in}).
The values for home team advantage and team quality are determined based on the formula $D_{ij} = u_i - u_j + h_i + \varepsilon_{ij}$. Table 1 presents the home team advantages and team qualities for teams with a coach turnover in the Belgian competition season 2003-2004. In general, it is especially team quality that determines whether the new coach will obtain better mean points than his predecessor.

Discussion

Most studies have assessed the effectiveness of a coach turnover by comparing the winning percentages under the old and new coach. However, this approach gives no further insight in possible strategies or changes that occur in teams when a new coach takes power. By considering home team advantage and team quality under both coaches, we focus on goal differences. Home team advantage is weighted against the goal

difference between home and away games whereas especially the goal difference of the away games is important in measuring team quality.

Table 1: Team quality and home team advantage for teams with a coach turnover within the season 2003-2004.

Club	Mean points coach1	Mean points coach2	h_{io}	u_{io}	h_{in}	u_{in}	h_i	u_i
Antwerp	0,88	0,77	-0,50	-0,14	0,57	-0,76	0,06	-0,89
AA Gent	1,33	1,09	-0,24	0,23	-0,07	0,07	-0,31	0,30
Charleroi	0,50	1,12	-0,06	-0,17	0,44	-0,25	0,50	-0,42
Bergen	0,63	1,08	-0,18	-0,28	0,62	-0,03	-0,44	-0,25
Lokeren	0,60	1,38	-0,21	-0,14	0,39	-0,04	0,19	-0,18
Genk	1,57	2,50	-1,29	-0,16	-0,04	0,20	-1,25	0,04
Sint-Truiden	1,09	1,50	-0,32	-0,03	-0,18	-0,06	-0,50	-0,03

h_{io}: home team advantage for coach 1; h_{in}: home team advantage for coach 2; u_{io}: team quality for coach 1; u_{in}: team quality for coach 2; h_i: mean home team advantage for the season; u_i: mean team quality for the season.

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