Relative age effect in elite soccer

Abigail Titzer, Yushan Zhao, Molly Thorbahn, Net Zhang

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I: Introduction

Rephrase the main goals, content, and backgrounds of the article.

II: Modeling

2.1 Methods

Our goal is to model the Relative Age Effecct (RAE) for frequency using the birth-week number (W_B). Here, the birth-week number (W_B) denote the week in which the player was born. For the sake of compatibility, we will transform W_B into time of birth, illustrating how far through the competation year a player's birthday is :

$$t_B = (W_B - 0.5)/52$$

In other words, we scaled the player's birth-week number into the interval of $(0, 1)$. The data collect the information on the 1000 top professional soccer players in the major leagues. We think it is reasonable to apply the poisson regression model here since the probability of having a successful professional athlete is quite low. The overall model is denoted as below:

$$Frequency = e^{\beta_0 + \beta_1 * t_B}$$

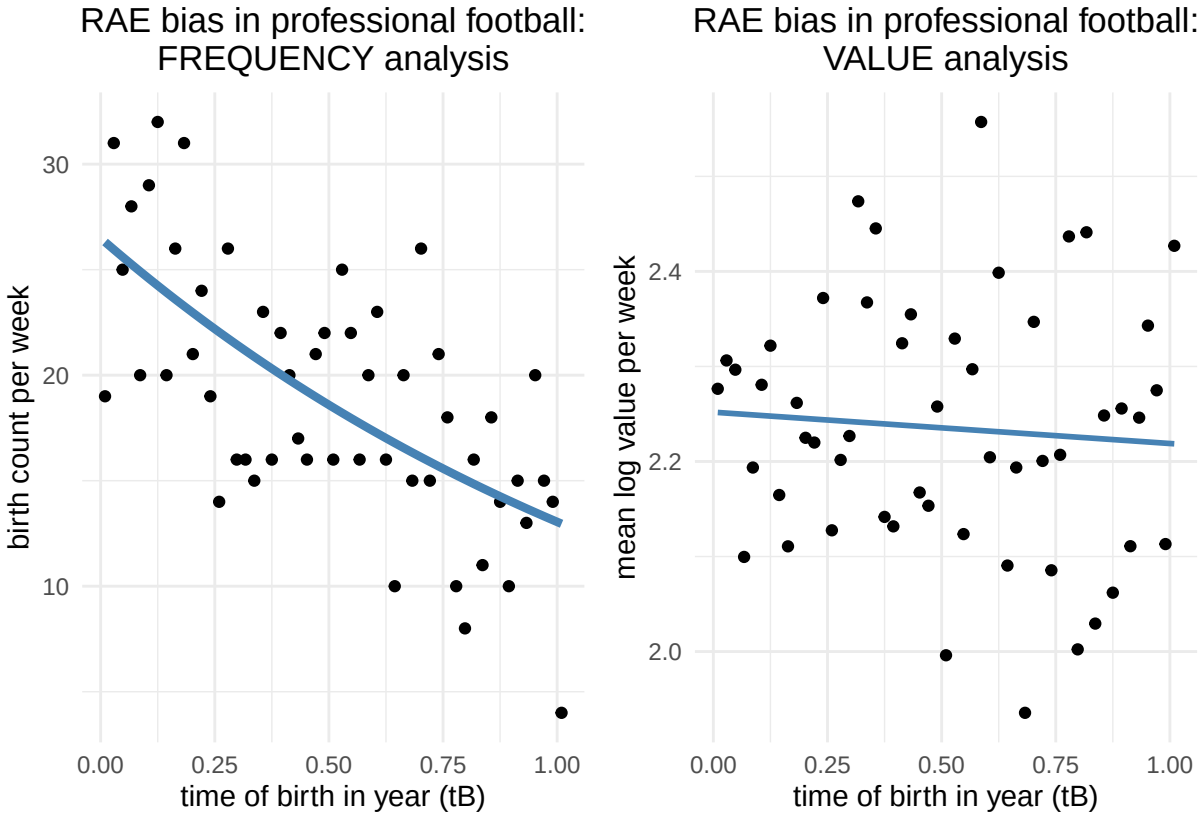
From our model output, we get the estimate values of $\hat{\beta_0} = 3.2768$ and $\hat{\beta_1} = -0.7083$. Therefore, our fitted model is denoted as below:

$$\hat{Frequency} = e^{3.2768 - 0.7083 * t_B}$$

Table 1: Table 1. Model results: Overall and country-by-country analysis

Country	beta_0	beta_1	AIC
Argentina	0.9480	-1.0332	100.1744
Netherlands	0.8256	-0.9554	72.6025
Turkey	0.2097	0.0817	45.6419
Belgium	0.6231	-0.7516	59.6048
Spain	1.3626	-0.9953	143.1613
Italy	0.9125	-0.7415	118.4851
Germany	0.6832	-0.1381	107.1367
Portugal	0.5031	-0.4505	57.9986
Brazil	0.9775	-0.2442	134.9844
Russia	0.5982	-0.7704	47.5641
France	0.8445	-0.3907	130.8024
all	3.2768	-0.7083	315.8524

2.2 Findings



III: Commentary & Future work