The impact of foreign players on international football performance

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Abstract

I investigate the impact of foreign players on international football performance of club teams and national teams in this paper. My empirical findings show that foreign players have a positive effect on club teams' international performance. Howewer, foreign players don't have any effect on performance of national teams.

Keywords: Football; Foreign players

Jel classification: L83

1. Introduction

Football[1] is one of the most popular sports in the world. It has gradually become a huge industry by live matches, sponsorships and licensed products income. Aiming to gain larger slices from the cake, the clubs are searching for strengthening their teams to become more successful especially in the international contests. Therefore, doors are opening more and more to the foreign players. However, this situation causes a big debate in the world of football. It is accepted that soaring number of foreigners has a positive impact on the success of these teams. On the other hand, it is claimed that if this number goes on increasing, native players are becoming discluded from the matches more and their absence would have a very negative reflection on national team. This point of view has a wide acceptance throughout many countries and since restrictions are applied on the number of foreign players.

The aim of this paper is to investigate the impact of foreign players on international football performance of club teams and national teams. To my knowledge, it is the first to examine this issue. My main findings are: (i) foreign players have a positive effect on international performance of club teams; (ii) foreign players don't have any effect on national teams' performance.

The rest of the paper is organized as follows. Section 2 describes the model and data. Section 3 presents the empirical results. Section 4 concludes the paper.

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[1] The term football is used meaning Association Football in this paper. Association Football is known as soccer in some countries.

2. Model and data

In this paper, I use a modified version of the model presented in Hoffmann et al. (2002b). The specifications of model, for club teams and national teams, are:

$$UEFA_i = \alpha + \beta\, POP_i + \chi\, GNI_i + \delta\, (TEMP_i - 14)^2 + \eta\, PFP_i + \varepsilon_i \tag{1}$$

$$FIFA_i = \alpha + \beta\, POP_i + \chi\, GNI_i + \delta\, (TEMP_i - 14)^2 + \eta\, PFP_i + \varepsilon_i \tag{2}$$

Definitions of the variables and sources of data are in Table 1.

There are 36 countries in the sample, largely dictated by availability of the data on foreign players[2]. The data on foreign players was constructed in the following way. From http://www.eufo.de European clubs and squads database, I collected players' numbers and nationalities in first football leagues for 36 countries during 2003-2007 period. Then, I calculated percentage of foreign players for period average.

To measure performance of national teams I use FIFA/Coca-Cola World Ranking points. These are calculated on a monthly basis using the performance of a given country's national team in all international matches over the previous four years. This is also the measure used by Houston and Wilson (2002), Hoffmann et al. (2002b) and Hoffmann et al. (2006).

UEFA Country Ranking points was used to measure international performance of club teams. These are calculated on a yearly basis using the performance of a given country's club teams in the European Cups over the previous five years.

In addition to these variables, I used population, per capita GNI and yearly average temperature data of each country. More populous countries can draw on a greater pool of potential football talent and therefore are expected to be relatively more successful at this sport. Higher income is associated with the availability of better sporting infrastructure as well as leisure time for potential athletes. Yearly average temperature concerns the countries' geographical setting. Temperate climates provide a more conducive geographical setting for development of outdoor activities which may promote sports success. Hoffmann et al. (2002a) and Hoffmann et al. (2002b) also found significant relationships between average temperature and sports success both in the Olympic summer games and international football. Following Hoffmann et al. (2002b), the variable was specified as the deviation from an ideal average annual temperature of 14°C.

3. Empirical results

Table 2 shows regression results for club teams' international performance. I estimate three different specifications in this part of analysis. In the first specification, I regress UEFA Country Ranking points on the percentage of foreign players. The coefficient on the percentage of foreign players is positive and statistically significant. In the second

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[2] A list of the sample countries is: Austria, Belarus, Belgium, Bosnia and Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, England, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Israel, Italy, Latvia, Lithuania, Malta, Netherlands, Northern Ireland, Norway, Poland, Portugal, Romania, Russian Federation, Scotland, Slovenia, Spain, Sweden, Switzerland, Turkey and Ukraine.

specification I include population, per capita GNI and yearly average temperature as control variables. Howewer, in this specification the coefficient on per capita GNI is statistically insignificant. Therefore, I drop per capita GNI in the third specification. In this specification, the coefficient on the percentage of foreign players remains positive and statistically significant. This indicates that countries with a higher number of foreign player of club teams tend to be more succesfull in the European Cups.

Table 3 presents regression results for national teams' performance. I estimate three different specifications in this part of analysis, too. At first, I regress FIFA/Coca-Cola Ranking points on the percentage of foreign players. In this specification, the coefficient on the percentage of foreign players is positive and statistically significant. In the second specification, I include population, per capita GNI and yearly average temperature as independent variables. The coefficient on per capita GNI is statistically insignificant in this specification. Therefore, I drop per capita GNI in the following specification. The coefficient on the percentage of foreign players is positive but statistically insignificant in third specification.

4. Conclusion

In this paper I have investigated the impact of foreign players in first leagues on international football performance of club teams and national teams. My empirical findings show that foreign players have a positive effect on international performance of club teams. Howewer, foreign players don't have any effect on national teams' performance. When FIFA/Coca-Cola ranking points are regressed on the percentage of foreign players alone, the coefficient of independent variable is positive and statistically significant. Howewer, when control variables are included in the analysis, the coefficient on the percentage of foreign players is statistically insignificant.

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Table 1
Description of variables in regressions

Variable	Description
$UEFA_i$	UEFA Country Ranking points (2007). Data source: http://www.xs4all.nl/~kassiesa/bert/uefa/index.html
$FIFA_i$	FIFA/Coca-Cola World Ranking points (December 2007). Data source: http://www.fifa.com/worldfootball/ranking/index.html
POP_i	Country i's share of world population (2003, %). Data source: http://www.worldbank.org and http://www.statistics.gov.uk (for England, Northern Ireland and Scotland).
GNI_i	GNI per capita (2003, USD). Data source: http://www.worldbank.org and http://www.statistics.gov.uk (for England, Northern Ireland and Scotland).
$TEMP_i$	Average annual Celsius temperature in country i's capital. Data source: http://www.worldclimate.com
PFP_i	Percentage of foreign players in first football league of country i (2003-2007 average, %) Data source: http://www.eufo.de and author's calculation.
ε_i	Error term
$\alpha, \beta, \chi, \delta, \eta$	Parameters

Table 2
Regression results for club teams' international performance

Variable	(1)	(2)	(3)
Constant	0.2957	11.1254	10.8236
	(0.059)	(1.857)***	(1.797)***
POP_i		15.3779	12.6352
		(2.833)*	(2.559)**
GNI_i		0.0003	
		(1.182)	
$(TEMP_i - 14)^2$		-0.2455	-0.2063
		(-2.645)**	(-2.365)**
PFP_i	0.9506	0.440	0.6167
	(5.364)*	(1.891)***	(3.448)*
R-squared	0.458	0.635	0.618
Adjusted R-squared	0.442	0.588	0.582

Dependent variable: UEFA. Number of observations is 36. t statistics are in parantheses. * significant at 1%, ** significant at 5%, *** significant at 10%

Table 3
Regression results for national teams' performance

Variable	(1)	(2)	(3)
Constant	541.6384 (4.959)*	753.7019 (5.543)*	745.1647 (5.388)*
POP_i		288.5378 (2.342)**	210.9672 (1.860)***
GNI_i		0.0075 (1.473)	
$(TEMP_i - 14)^2$		-5.1357 (-2.437)**	-4.0268 (-2.009)***
PFP_i	10.7848 (2.813)*	-0.1791 (-0.034)	4.8293 (1.176)
R-squared	0.189	0.398	0.356
Adjusted R-squared	0.165	0.320	0.295

Dependent variable: FIFA. Number of observations is 36. t statistics are in parantheses. * significant at 1%, ** significant at 5%, *** significant at 10%