Trends of Competitive Balance in the Ethiopian Male Premier league

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Abstract: Competitive balance (CB) refers to the balance of sports teams capabilities. Uncertainty in soccer results can be investigated by several methods, but from the practical point of view it is assumed that the most balanced league/tournament is one in which the point differences between competitors are as little as possible. Thus, CB reflects a greater chance for all participants to win the title or qualify for continental tournaments during a season. With this in mind the purpose of this paper was to investigate trends of competitive balance in the Ethiopian premier league held between 1999/2000 and 2018/19 seasons. To do this, a descriptive analytic research methodology was employed. Secondary data was collected from the Ethiopian football federation and internet sources [www.soccerway.com]. Then the data was subjected to quantitative analysis using the HHI and HICB mathematical models for competitive balance. The result of the analysis show as there was a significant decline in seasonal Competitive balance in the Ethiopian premier league.

Key terms: Competitive balance, Ethiopian premier league, Herfindahl-Hirschman Index

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I. INTRODUCTION

Football is organized in seasonal league championship competitions and uncertainty of outcome over who is going to win the championship is central. If championship and relegation battles are decided early in a season, remaining fixtures have less meaning and supporter/spectator interest tends to trail off [Michie & Oughton 2004].

Coined by Simon Rottenberg in 1956, the term competitive balance [CB] refers to the uncertainty of outcomes in sports. According to Rottenberg (1956), perfect competitive balance can be found when two teams that compete against each other each have a 50% chance of winning. Sports economics literature suggests there is a strong positive correlation between competitive balance and fan interest, as indicated by match attendance and television ratings.

A league championship with a good competitive balance is a priori more attractive, since uncertainty in the final result increases the public's interest, positively influencing the different revenues made by the league's participating clubs such as the revenues generated by the ticket office, stadium operations, sponsorships and the broadcasting rights [Gasparetto & Barajas 2016]. Therefore, when applying concepts of competitive sports, a balance is expected in the competitions between all the clubs, being in the sphere of a reduced number of unwanted associations [Michie & Oughton 2004].

At the beginning of the season, football fans want their teams to obtain the best possible results. In the best scenario, they can hope for their teams to win all competitions in which they participate. Nevertheless, it is evident that not all fans see their dreams fulfilled. However, it is evident that in football competitions some clubs tend to be dominant over the others [Gomes & Tadeo, 2010].

Sports contests are interesting when there is not much difference in the quality of the contenders. As Quirk and Fort (1992), page 243, put it:

"One of the key ingredients of the demand by fans for team sports is the excitement generated because of uncertainty of outcome of league games. . . In order to maintain fan interest, a sports league has to ensure that teams do not g et too strong or too weak relative to one another so that uncertainty of outcome is preserved."

As Michie & Oughton (2004) pointed out, in a perfectly balanced league each team would have an equal chance of winning each match and each team would therefore have an equal chance of winning the league title. Moreover, in a perfectly balanced league it would be impossible to predict with any certainty which teams would be more likely than others to win the league title next year or the year after.

Consequently, if on the one hand the theoretical presupposition suggests that there should be increased competitiveness, on the other what has been happening in practice in some world championship leagues is exactly the opposite trend [Michie & Oughton]. For example, evidence from previous studies point to reduced CB in the 2009-2010 seasons in the main European national football leagues, especially in the English and Spanish leagues, where a small number of teams usually dominate over the long term. Demonstration of this effect is the concentration of wealth experienced by Spanish football through Real Madrid and Barcelona, which is recognized worldwide and has been a case for discussion and creation of theoretical frameworks that enable effective interventions to ensure competitiveness [Naghshbandi, Yousefi, Moradi, 2011].

In Ethiopia, football in general and the Ethiopian premier league in particular are popular. However, there has been a question regarding competitiveness of the league. Hence, The purpose of this study is to uncover the trends of competitive balance in the league through time.

II. METHODS AND MATERIALS

This research was descriptive-analytic. The data were secondary and collected from valid documents and football league tables of final tables in Ethiopia football federation and www.soccerway.com. Two economical indexes were used to analyze the data; Herfindahl Hirschman index (HHI) and the Herfindahl Hirscman meaasure of CB [HICB]. These are mathematical models used in several studies to measure CB in several leagues.

CB measure used

Seasonal uncertainty refers to the uncertainty over which team is going to win the championship at a particular season. As it can be noted from various scholarly articles on the issue of CB, there are several useful models which can be used to measure this particular form of CB. Many different approaches have been introduced to measure CB; as Zimbalist (2002, p. 112) puts it:

"there are almost as many ways to measure competitive balance as there are to quantify money supply".

However, the most appropriate of these methods often depends on what the researcher is attempting to specifically measure (Humphreys, 2002). Hence, among the more popular measures of CB, the researcher in this study use the Herfindahl Hirschman index and the Herfindahl Hirscman meaasure of CB [HICB] measure as it is one of the commonly used measure and relatively easy to compute seasonal CB.

Herfindahl-Hirschman Index and the Herfindahl Index of Competitive Balance

The Herfindahl index looks at inequalities between all the firms in an industry. When applied to football it captures inequalities between all the clubs that make up a league. In an industry context the index is based on a calculation of the market share of every firm. These shares are then summed into a weighted average index for the industry using each firm's market share as its weight. We can translate this into an indicator of competitive balance for the football industry by looking at each club's share of points in a season and aggregating these into an index using each club's share of points as weights, to give: [Michie & Oughton, 2004]

$$HHI = \sum_{i=1}^{N} s_i^2$$

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Where si is club i's share of points in a season, and i = 1, 2 …N, where N is the number of clubs in the league. The HHI is a function of the number of clubs that make up the league and the inequalities between those clubs in terms of winning power. The H index reflects the degree of competitive balance between teams. A rise in the index signifies an increase in inequality and therefore a decline in competitive balance. In a standard industry context, the Herfindahl index lies between 0 (with an infinite number of firms) and 1 (pure monopoly): however, in football, restrictions on the number of teams in a league and constraints imposed by the points scoring system mean the index lies well within this range. In a 20-team league, the lower bound of the H-index would be 0.05 (the value attained in a perfectly balanced league) and the upper bound would be 0.07 (the value attained in a perfectly unbalanced league with the most unequal distribution of points attainable). : [Michie & Oughton, 2004]

However, the HHI is sensitive to changes in the league size. This can be corrected for by dividing the index by the value of HHI that would be attained in a perfectly balanced league to give the Herfindahl index of competitive balance [HICB] as shown below.

$$HICB = \left(\frac{HHI}{(1/N)}\right)*100$$

Where N is the number of teams in the League. In a perfectly balanced league of any size the HICB would take the value of 100. A decline in CB is reflected by an increase in the index.

Data used

Secondary data obtained from the valid documents of the Ethiopian Football Federation and [www. Soccerway.com] were used to analyze the degree of CB of the EPL. In addition, the data used in this study is base on the end ranking of the league. The analysis takes into consideration only the Ethiopian top flight football competition held between 1997/98 [inception of the EPL] to 2018/19 Seasons. Hence, a data set of 17 seasons [excluding the 1997/98, 1998/1999, 2002/03 season where the researcher had faced problem of finding the relevant data, the 2006/07 season where championship was abandoned after 12 clubs including all 7 from the capital Addis Ababa boycotted the tournament, and the 2007/08 season where championship was organized by the federation between 25 premier league and national league teams to clear the mess created in the previous season (which is out of the premier league format)] were used to determine the degree of seasonal uncertainty.

III. RESULTS

Information obtained from the Ethiopian Football Federation had suggested that one reason that led to the inception of the premier league was to achieve greater competitive balance among teams from different parts of the country through a system of home and away match. With this in mind, the purpose of this study was to investigate the trends of seasonal competitive balance in the EPL. Data obtained from the EFF [1999/2000 – 2009/10 seasons] and www.soccer way.com [2010/11-2017/2018 seasons] were used to compute the degree of seasonal competitive balance using the Herfindahl-Hirschman index of CB [HICB]. The result of the computation is summarized and presented in the following table.

Table: 1 The HHI and HICB of the Ethiopian premier league.

Season in G.c	Season in E.C	League size	HHI	HICB
1999/2000	1992	12	0.0895	107.40
2000/2001	1993	14	0.0785	109.9
2001/2002	1994	14	0.0763	106.84
2003/2004	1996	14	0.0759	106.3
2004/2005	1997	14	0.0804	112.6
2005/2006	1998	15	0.0739	109.6
2008/2009	2001	16	0.076	121.6
2009/2010	2002	18	0.0598	107.67
2010/2011	2003	16	0.0693	110.82
2011/2012	2004	14	0.0794	111.86
2012/2013	2005	14	0.0817	113.96
2013/2014	2006	14	0.0806	112.8
2014/ 2015	2007	14	0.0754	105.6
2015/2016	2008	14	0.0775	108.46
2016/2017	2009	14	0.0664	106.2
2017/2018	2010	16	0.0648	103.63
2018/2019	2011	16	0.0666	106.66

Average: 108.99

Source: own calculation according to formula in text from data

IV. DISCUSSION

The primary purpose of this study was to analyze competitive balance in the EPL results from 1999/2000 to 2017/18 seasons in an effort to better understand the trends of competitiveness in the league. As presented in the above table, it was found that there was an average 9% decline in CB in the study seasons. The worst Competitive imbalance was found in the 2008/09 season where a 21% imbalance was calculated between the teams. On the other hand, a relatively more balanced league competition was observed in the 2017/ 18 premier league season where there was only a 3% disparity between teams.

In addition to this, further analysis shows that in seasons where a two digit imbalance observed [i.e., 2004/05, 2008/09, 2010/11, 2011/12, 2012/13,2013/14], it was found that 50% [7clubs] of the league was constituted by teams from the capital city. Moreover, a change in the league size does not seem to affect CB. However, highest imbalance was observed when the league size was 14 Compared to a 12, 16 and even 18 size.

In recent seasons, CB seems to be improved in the league. This may be accounted because of an improvement in the composition of the league. Specially, the promotion of teams who have stronger social base

from the northern part of the country to the premier league had been more competitive enough even to finish at top.

V. CONCLUSION

In this study, the researcher tries to analyze the trends of seasonal competition balance in the Ethiopian topflight football competition. Based on the findings and discussion of the data, its generalized that there was a decline and negative trend of competitive balance in the EPL.

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