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RESEARCH THAT MATTERS!

THE INFLUENCE OF THE BOWL CHAMPIONSHIP SERIES ON COMPETITIVE BALANCE IN COLLEGE FOOTBALL

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Research Problem

The purpose of this study was to assess whether competitive balance within the six founding Bowl Championship Series (BCS) conferences has improved since the implementation of the BCS. Competitive balance in sport has been identified as a predictor of demand for sporting events and leagues. The present study confirms, through empirical results, that within-season competitive balance within all six founding BCS conferences has improved since its creation. However, only three of the six conferences exhibited improved between-season competitive balance, meaning frequent turnover of championship teams was not observed in all conferences. This article would likely be useful to intercollegiate athletic managers in any of the six BCS conference offices as well as their member institutions.

Issue

Scholars in sport marketing and sport economics regularly cite the importance of the uncertainty of outcome as a unique factor in sport, and one which helps dictate demand for the sport product. Spectators would be less inclined to purchase tickets to an event whose outcome was predetermined. As a result, sport leagues and governing bodies often take measures to ensure a level of competitive balance exists within their leagues or bodies.

Humphreys (2002, p. 133) stated competitive balance was “thought to be an important determination of demand for sporting events” because it reflects uncertainty about the outcome. The less certain the outcome of a particular event, the greater the interest or demand for that event.

Sports Illustrated writer Stewart Mandel indicated in his 2008 book *Bowls, Polls & Tattered Souls* that demand for NCAA Division I college football has exploded recently for a variety of reasons. One factor creating increased attention for college football is the Bowl Championship Series (BCS), a coalition of Division I-FBS conferences, the University of Notre Dame, and select bowl game organizations. The BCS emerged from the Bowl Alliance in 1998, with six founding conferences (Atlantic Coast, Big East, Big Ten, Big 12, Pacific-10, and Southeastern) guaranteed an automatic bid to a BCS bowl game for their respective conference champion.

Former Southeastern Conference Commissioner Roy Kramer, the creator of the BCS, told *New York Times* writer Pete Thamel in 2008 that he had three objectives for the BCS at the time of its founding: expand interest

in the sport, work within the bowl structure, and create a title game. At the end of the 2007, *USA Today* writer Jon Sacareno observed that while not a stated objective, the BCS system seems to have also increased competitive balance within college football. Regardless of the objectives of the BCS, the reality is that a fair amount of criticism is leveled against the BCS each year by universities outside the BCS, certain members of the media, and, more recently, publically elected members of Congress.

This controversy is not, however, altogether bad for the BCS. Economics professors Randy Grant, John Leadley, and Zenon Zygmunt wrote in their 2008 book, *The Economics of Intercollegiate Sports*, broadcast networks may actually favor the BCS because the controversial nature drives ratings upward. Further, the possibility of a playoff system similar to what is contested in basketball would weaken the importance of the regular season and drive ratings downward.

Although not a focus of this study, current controversy surrounding the BCS and its process for determining a national champion is worth noting. Individual universities, Congressmen, and even the President of the United States have suggested college football would be better served with a playoff system. An analysis of those opinions is beyond the scope of the current study.

The purpose of this study, therefore, was to assess whether Saraceno's observation of increased competitive balance within the six founding BCS conferences was true and how those findings might affect the landscape of college football.

Summary

This study followed the recommendations of Leeds and von Allmen (2005) by examining both within-season and between-season variation in competitive balance during three five-year periods. The first period studied was the five seasons prior to the formation of the BCS (1993-1997). The second period studied was the five seasons immediately after the creation of the BCS (1998-2002), while the third period included the subsequent five seasons from 2003-2007.

Within-Season Balance

Within-season variance measures how teams in a given conference or league vary in competition in a given year. If all teams were of equal playing strength, it would be assumed that all teams would win half their games and lose the other half, i.e., each team would have a .500 winning percentage. Within-season balance was evaluated by considering the ratio of actual average standard deviation of team winning percentages for each year studied to the idealized standard deviation.

Overall within-season results revealed improved competitive balance in all six conferences following the implementation of the BCS. From 1993-2007, all conferences had decreased ratios of actual standard deviations to idealized standard deviations ranging from highly increased competitive balance in the ACC to slight increased competitive balance in the Big Ten and Pac-10.

While overall competitive balance improved from 1993-2007, only four conferences improved competitive balance from 1998-2002, the immediate five-year period following the BCS's creation. Both the Big East and Pac-10 showed decreased competitive balance during this period. Only the Big Ten exhibited decreased competitive balance from 2003-2007.

Between-Season Balance

While within-season variance measures dispersion from top to bottom within a given conference or league, it does not measure whether the same team wins the conference championship from year to year. To accomplish this, between-season variance was evaluated by calculating the Herfindahl-Hirschman Index (HHI), a measure of the concentration of firms in an industry. The HHI was useful in that it reflects the concentration of championships in a sports league over time by measuring the distribution of championship shares. Championships were defined based on conference standings or outcome of conference championship games, depending on each respective conference's method for determining a champion. Co-champions were awarded a half point based on the recommendation of Eckard (1998).

Unlike the within-season results, overall between-season results showed competitive balance improvement in only three of the six conferences following the implementation of the BCS, meaning frequent turnover of championship

teams was not observed in all conferences. The Pac-10 showed the greatest decrease in competitive balance from 1993-2007, while the ACC and the SEC demonstrated the greatest improvement in competitive balance between 1993-2007. The Big East essentially stayed the same, regardless of whether the University of Miami's 1995 season, during which the institution was ineligible for the conference title, was included or not.

Analysis

Within-Season Balance

The ACC showed the greatest overall increase of within-season competitive balance during the study period. This is largely attributable to the introduction of three new schools—Boston College, Miami (Fla.), and Virginia Tech—during the study period. The presence of these football programs effectively balanced out the dominance of schools such as Florida State and Georgia Tech and created more overall uncertainty of outcome in conference games.

Results from the Big East were mixed with a strong overall increase in competitive balance from 1993-2007, despite a decrease in competitive balance from 1998-2002. Of note is that, during the end of that period, Boston College, Miami (Fla.) and Virginia Tech were still in the Big East. The 2003-2007 period included conference newcomers Cincinnati, Connecticut, Louisville, and South Florida. This realignment appears to have created an overall more competitive conference.

While the ACC and Big East were improving within-season competitive balance, the Big Ten was moving in the opposite direction, showing greatly reduced competitive balance from 2003-2007. This decrease moved the Big Ten from the conference with the most balance between 1998-2002 to the conference with the least balance from 2003-2007, which suggests that teams in the Big Ten experienced very little outcome uncertainty in their conference games. Given that all six conferences showed improved within-season competitive balance between 1993-2007, arguing that the Bowl Championship Series has hurt competitive balance in college football becomes difficult.

Between-Season Balance

The ACC was the only conference that became increasingly competitive in terms of between-season balance with the passing of each period of measurement. Several factors likely led to the ACC's display of increased between-season competitive balance during the periods under consideration. First, Florida State dominated the ACC upon joining the conference in 1992, winning at least a share of the conference title every season between 1992-2000. The ACC's increase in between-season competitive balance from 2003-2007 is likely attributable to the addition of new members Boston College, Miami, and Virginia Tech during 2004, which gave the conference 12 members, permitting it to hold a championship game per NCAA mandates. Accordingly, the conference's championship point could no longer be split because an outright conference champion could be crowned via the championship game. Finally, the ACC had much room for improvement, as the conference sported the worst between-season competitive balance of any of the founding BCS conferences from 1993-2002.

Conversely, the Pac-10 was the only conference to exhibit a decrease in between-season competitive balance with each passing period. The continual decline of between-season competitive balance in the Pac-10 can likely be attributed to two related factors: first, USC reemerged as a dominant program from 2003-2007; and second, the Pac-10 permits for the possibility of co-champions, which allowed USC to share a claim to the conference championship without winning the conference outright in 2006 and 2007. Consequently, USC was able to earn at least a share of a championship point during every season from 2003-2007.

Finally, another interesting note is that for each of the three periods under consideration, the respective founding BCS conferences with the best and worst HHI figures were conferences whose champions were not determined by championship games. Thus, for the periods under consideration, those conferences without championship games were at neither an advantage nor a disadvantage for between-season competitive balance due to their lower number of conference members.

Discussions/Implications

The study supports the notion that overall competitive balance in the founding BCS conferences has improved since the beginning of the BCS in 1998. All six founding BCS member conferences scored higher on the within-

season measure of competitive balance, and three of the six member conferences showed improved competitive balance using the between-season measure.

Several conclusions and implications emerge from these findings.

First, given that demand for sport product is attributable in part to the closeness of the competition (or the level of uncertainty of game outcomes), according to results of this study, intercollegiate conferences may be in a position to leverage this increased competitive balance for greater revenues in various contract negotiations. In late 2008, the SEC, a conference which showed steady within-season improvement in competitive balance and overall improvement in between-season competitive balance, signed a 15-year, \$2.25 billion multimedia contract with ESPN. Conferences seeking to increase revenues through enhanced rights agreements similar to the SEC could point to competitive balance and uncertainty of outcome as a selling tool.

Second, despite the finding that all six conferences showed improved *within*-season competitive balance between 1993 and 2007, four of the six conferences witnessed decreased *between*-season competitive balance between 2003 and 2007. This trend should alarm those associated with the conferences as it suggests that, while overall competitive balance is improving, the top teams remain strong from season to season. Nowhere was this more pronounced than the Pac-10, where within-season competitive balance improved from 2003 to 2007 while between-season balance simultaneously decreased significantly in the same period as USC captured three conference championships outright and shared two others (2006 with California and 2007 with Arizona State).

Failure to achieve between-season competitive balance, such as within the Pac-10, may have the opposite effect of increasing demand for the product. While demand may increase for games in which the outcome may not be known (e.g., Oregon State vs. Stanford), the repeated championships for USC may actually decrease demand for its games within the Pac-10 as consumers become less motivated to attend/consume games in which the outcome may not be as uncertain.

Finally, recent conference realignment seems to have positively impacted competitive balance in the ACC and Big East, the only founding BCS conferences to expand during the study period. Given NCAA rules regarding conference championship games, it seems unlikely that conferences with 12 members (SEC, ACC, and Big 12) would add members. However, for the remaining three BCS conferences (Big East, Big Ten, and Pac-10), both room and motivation to grow exist, according to results of this study. Previous research has suggested that conference realignment will have the effect of grouping members with similar drawing power. This grouping could create uncertainty in conferences outside of the BCS. As sports economist James Quirk noted in 2004, "There is evidence of considerable amount 'churning' in conference memberships, for those major conferences below the top level, and there might be a link between this churning and competitive balance problems within the conference."

Essentially, according to results of this study, the Big East, Big Ten, and Pac-10 would benefit from adding additional schools from non-founding BCS conferences such as the Mountain West, Conference USA, and Mid-American. While this would improve the fortunes of the BCS conferences, it would likely further hurt the non-BCS conferences.