NCAA College Basketball Television Viewership: Does Consumer Preference for Outcome Uncertainty Change Over Time?

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Introduction
NCAA men’s college basketball is a context where there is a substantial variation in contest quality in comparison to North American professional sports, where spending on playing talent is artificially constrained by one or more mechanisms. As expected, a ‘rich-get-richer’ mechanism takes place, as institutions in Power conferences generate sizable revenues, mostly coming from television broadcasting rights with the value of these contracts increasing substantially in recent years (Gaines & Yukari, 2017). Accordingly, there has been an increased attention to investigating the drivers of television demand for these contests (Salaga & Tainsky, 2015). Meanwhile, one of the most frequently discussed concepts in the field of sport economics is whether such demand is influenced by outcome uncertainty. Since Rottenberg (1956) first identified the uncertainty of outcome hypothesis (UOH), it has become one of the fundamental issues in sport demand studies (Alavy et al., 2010). However, the results of these studies are mixed and unclear, compared with the fairly consistent findings of other determinants (Benz et al., 2009). While previous research implicitly assumes the level of consumer preference for outcome uncertainty is fairly stable throughout the course of a season, this may not be the case in the context of college basketball where consumer interest appears to rise as the regular season progresses toward the NCAA Division I Basketball Tournament. However, the literature is devoid of studies which examine whether consumer preference for outcome uncertainty could possibly change over time. Accordingly, the purpose of this study is twofold. One is to test what drives television demand for NCAA Division I men’s college basketball; two is to test whether consumer preference for outcome uncertainty fluctuates throughout the course of the season.

Relevant Literature
There is a growing line of literature estimating demand for televised sport. In opposition to game day attendance, television viewership figures allow for the ability to capture consumer preferences based on the core product characteristics since nationally broadcast sporting contests reflect a more diverse set of spectators (Brown & Salaga, 2017). Most of these studies, however, have predominantly examined European club football (Alavy et al., 2010; Buraimo, 2008; Buraimo & Simmons, 2009; Feddersen & Rott, 2011; Forrest et al., 2005; Garcia & Rodriguez, 2002) and North American major league sports (Bruggink & Eaton, 1996; Mongeon & Winfree, 2012; Paul & Weinbach, 2007; Tainsky, 2010; Tainsky & McEvoy, 2012; Tainsky et al., 2013). To our knowledge, there are no existing studies estimating television demand determinants in college basketball. Since Rottenberg (1956) first posited that sport fans prefer to watch contests with an enhanced degree of closeness (i.e., competitiveness) a long line of empirical studies have tested this hypothesis by utilizing match attendance (Buraimo & Simmons, 2008; Czarnitzki & Stadtmann, 2003; Lee & Fort, 2008; Pawlowski & Anders, 2012) and television figures (Brown & Salaga, 2017; Chung et al., 2016; Grimshaw & Burwell, 2014; Hausmann & Leonard, 1997; Mongeon & Winfree, 2012; Paul & Weinbach, 2007; Paul & Weinbach, 2015; Tainsky, 2010; Tainsky et al., 2014; Tainsky & McEvoy, 2012). However, the results of whether consumers actually prefer outcome uncertainty are mixed, primarily due to differences in context, sport, and sample. The existing literature also assumes that consumer interest in outcome uncertainty does not fluctuate over time. This leads us to investigate whether preference for outcome uncertainty is stable over the course of a given season.

Data and Model
Television viewership figures utilized in this study are all nationally televised regular season and postseason conference tournament contests from the 2014-15 NCAA Division I college basketball season. The dependent
Results
Our baseline model estimates the determinants of college basketball television viewership and how viewership is influenced by changes in those determinants. We then estimate a series of additional models where the full sample is divided based on the month of the season and the game type (regular season and conference tournament games in March). Our initial results illustrate that teams with higher anticipated absolute contest quality (lower average Pomeroy ratings) and higher winning percentages for past three seasons generate greater consumer interest. Game importance is also significant as viewership is expected to increase substantially when the contest is a conference tournament game and even higher consumer interests are expected in a championship game of the tournament. Conference affiliation has an impact on viewership as viewership is substantially greater for conference games in the ACC, Big 10 and SEC only, but no premium exists for Pac 12, Big 12, and Big East. We also uncover that viewership is significantly lower in the first two months of the season, when viewership of college football may play a role as a partial substitute for basketball. We also find that viewership is sensitive to anticipated scoring since viewership is significantly higher when the closing line over/under total is higher. Preference for higher or lower levels of scoring relative to the closing line over/under total is not supported. Our models uncover that there is mixed support for the UOH. We first find a positive and significant effect on the closing line point spread variable, a result in opposition of the prediction of the UOH. This indicates that consumers have a preference for contests expected to be more certain as viewership is significantly higher when the absolute value of the pre-game closing line point spread is larger. In opposition to anticipated contest uncertainty, our modelling illustrates that viewership increases as when the actual scoring margin of the game is closer than anticipated, a finding which supports the UOH in the context of actual outcome uncertainty. As we hypothesized, our models uncover that consumer preference for actual outcome uncertainty varies throughout the course of the season. Our sub-sample models by month illustrate that consumers only respond at statistically significant levels to the degree of actual outcome uncertainty at the start (November) and the end of the season (March). Our subsequent sub-sample model which limits the sample to March games only verifies that the significant effect is found in postseason games only. The findings illustrate that consumer preference for the UOH varies over time and is tied to contests which play a role in access to the postseason.

Implications
To our knowledge, this is the first study which investigates the possibility of change in consumer preference for outcome uncertainty. We utilize data on NCAA college basketball television viewership which also allows us to estimate the drivers of consumer demand in a setting where value of television broadcasting rights is growing sharply. Given the mixed empirical results with respect to the UOH, this study suggests a new angle of empirically examining consumer preferences with respect to the UOH, one of the most important concepts in sport demand studies.