

(SP) MEASURING COMPETITIVE BALANCE IN INDIVIDUAL SPORTS: AN APPLICATION FOR WTA AND ATP TENNIS

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Introduction

Most sports have distinct competitions for both men and women. Still, in few cases the parallelism is so explicit as in tennis: large tournaments organise a competition for each sex. Both typically attract much attention from the public and the media. However, the 'game' is not identical. From a consumer's perspective it may thus be the case that the nature of a men's tennis match differs from a women's match. These differences may translate into differences in interest by the public and thus appreciation by both the media and the organizers. The latter has been a matter of heated debate as there has been a long-standing tradition that prize money for women is significantly lower than for men. Only since 2006 the French Open has closed the pay gap. At Wimbledon it is still the case that women earn less. The overall time trend, however, is for prizes to be equalised reflecting a relatively increasing appreciation of female tennis by the organisers. In this, the organisers follow the general public: whereas women's tennis used to attract less attention, has now about equal TV-ratings. Differences in attention (and possibly the disappearance of such differences) may be explained by differences (and evolutions) in the very nature of the game.

In a seminal article, Laband (1990) demonstrates how the structure of sports competitions affects performance. Using a structure-conduct-performance model from industrial organization, he compares golf and tennis and shows how the way and context in which golf tournaments are organized lead to a lack of dominance by one or a few players. In contrast, the nature of tennis tournaments is such that domination is a 'natural' outcome. More specifically, he shows that the match play in tennis versus the open play in golf is responsible for this difference. Laband (1990) documents these differences by showing that concentration of winning is indeed much larger among top tennis players.

In general, the popularity of a sport among the public depends on both sport-specific and non-sport-specific determinants. Among the former, so-called *competitive balance* has received much attention in the economics of sports. Recently, a special issue of *the Journal of Sports Economics* was published on the subject (Journal of Sports Economics, 2003, vol. 4). The intuition is that unpredictability of a sports game (the uncertainty of outcome) is a crucial ingredient of the product. Many authors have analysed competitiveness of team sports and discussed (and empirically demonstrated) its relationship to attendance and – more generally – popularity [DeSchrivver en Jensen (2002); Garcia en Rodriguez (2002); Winfree et al (2004); Owen en Weatherspoon (2004); Patton en Cook (2005)].

We analyse structural differences in the nature of the tennis game as played by men and women respectively. We review the concepts and methods used for measuring competitive balance in team sports and apply these to an individual sport: tennis. Comparing the competitiveness for both WTA- and ATP-tennis allows us to better understand structural evolutions and the dominance of certain star-players.

Methods

We make a systematic comparison of the male (ATP) and female (WTA) professional tennis circuits. As a methodological framework we use the structure-conduct-performance model from industrial economics. This model has been proven a fruitful approach to systematically compare Golf and Tennis competitions (Laband, 1990). The methods for measuring competitive balance have been well-developed in the literature on sports economics. We apply the existing methods to an individual sport: tennis. We distinguish

between match-specific, seasonal, inter-seasonal and long-term uncertainty' (Cairns et al, 1986).

Results

The structure of women's tennis competitions leads to less balanced games than is the case for men. Competitive balance in both ATP and WTA tennis is studied over the period 1970-2005. Different indicators to measure the balance of the international tennis competitions are compared (spearman rank correlation, coefficient of variation of ranking points, CR. – indicators, ...). We find that as a general rule, men's tennis is more competitively balanced than women's tennis.

Discussion

An analysis of competitive balance in tennis allows to see how a crucial aspect of the spectator-value has changed over the years. This is relevant for both the federation and the organisers (as, indeed, the public's interest is a crucial determinant of their revenues). Building on the findings in the sports economics literature, we will discuss how the federation could respond to potentially threatening evolutions.

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