Predicting Athlete Brand Equity: An Econometric Approach Integrating Psychometric Measures

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Athlete endorsement industry continues to expand fast. Top 100 highest-paid athletes raked in over $924 million through endorsements last year, according to Opendorse based on Forbes data (Weber, 2016). Athlete brand has become an effective marketing tool, whether athletes are associated with other brands as endorsers, forming a co-brand with certain companies, or developing own individual brands (Akiko et al, 2014; Keller, 1993). Many firms sign famous athletes wishing to transfer the athletes’ brand attributes, images, or attitudes to their brands (Gwinner, 1997). Under Armour’s wise alliances with Stephen Curry and Jordan Spieth have certainly played an important part in its brand growth (Heitner, 2016). Some companies choose to collaborate with athletes to create co-designed brands. Nike not only co-branded with Michael Jordan for the Air Jordan sneakers, but also cooperated with Roger Federer for “RF” tennis shoes (Telegraph Sport, 2014). Furthermore, more and more athletes are building their own brands. Maria Sharapova launched her candy brand Sugarpova in 2012, and sold 1.3 million bags of candy in 2013 (Adams, 2014). With the growing marketing potential in athlete brand, how to measure the brand equity of athlete brand is of great significance for both the endorsees and the athletes themselves.

Two approaches have been used to study brand equity. The financially based approach aims at estimating the value of a brand in terms of asset valuation (Kapferer, 2008; Keller, 1993). The customer-oriented approach aims at improving marketing productivity (Keller, 1993), focusing on the relationship between customers and the brand (Kapferer, 2008). Two notable brand equity models were developed by Aaker (1991,1996) and Keller (1993). In Aaker’s seminal brand equity framework, brand equity comprises five elements: (a) brand awareness, (b) perceived quality, (c) brand associations, (d) brand loyalty, and (e) other proprietary brand assets. Keller’s (1993) consumer-based brand equity is based on the premise that the brand resides in the minds of individual consumers as a cognitive construal (Heding, Knudtzen, & Bjerre, 2009) and focuses solely on the brand’s relationship with its consumers (Batra, Myers, & Aaker, 1997). In Keller’s conceptualization, consumer-based brand equity is “the differential effect of brand knowledge on consumer response to the marketing of the brand” (p. 2), and brand knowledge comprises brand awareness (e.g., brand recall and recognition) and brand image (i.e., a set of associations linked with the brand’s attributes, benefits, or attitudes toward it). As such, consumers’ familiarity and knowledge of a brand in terms of favorability, strength, and uniqueness determine a brand’s equity.

Both Aaker’s and Keller’s models have been the frequently adopted or adapted in sport brand equity and athlete endorsement research. Spry et al (2011) combined associative network memory model from cognitive psychology and brand signaling theory from information economics. Their study explained the relationship between endorser credibility and brand equity. Based on the premise that intangible human brands have a brand personality just like tangible brands (Carlson & Donavan, 2013), Carlson and Donavan (2013) formulated a Conceptual Model of Athlete Identification (MAI) to measure the brand personality of athletes, which is considered as the non-product-related attributes of brand association (Keller, 1993). Based on the premise that product-related attributes are linked to desirable benefits for the consumer, Arai et al (2014) focused on product attributes to build up a Model of Athlete Brand Image (MABI), which suggests three dimensions (e.g. attractive appearance) of athlete brand image and ten sub dimensions (i.e. physical attributes). And a scale of athlete brand image was developed to assess the brand image dimensions of individual athletes (Arai et al, 2014)

These previous studies primarily used a psychometric approach to evaluate brand value of an athlete, and their predicative validity is often questionable. The current study will utilize an econometric approach integrating both objective measures and psychometric measures to estimate the value of an athlete brand. The econometric model is motivated by previous studies (Spry et al, 2011; Carlson & Donavan, 2013; Arai et al, 2014) as well as general marketing literature (Lieven & Hildebrand, 2016; Yasin et al, 2007; Sanyal & Datta, 2011). For instance, Lieven &
Hildebrand (2016) argued that brand gender influences brand equity. Studies also stated country of origin has impact on brand equity (Yasin et al, 2007; Sanyal & Datta, 2011). Therefore, our empirical model will incorporate these variables which have not yet discussed in sport management literature. The focal model to be estimated is:

\[ ABE = \alpha + \beta_x + u \]

where ABE is an athlete brand equity, which is financially represented by endorsement value. \( x \) is the vector of independent variables, including athlete expertise, rivalry, trustworthiness, physical appearance and distinctiveness, country of origin (Yasin et al, 2007; Sanyal & Datta, 2011), gender (Lieven & Hildebrand, 2016), brand personality (Keller, 1993; Aaker, 1997; Carlson & Donavan, 2013), marketable lifestyle (Arai et al, 2014), and social media engagement (Arai et al, 2014).

The ABE will use data from Openhorse and Forbes on the top 100 highest-paid athletes and 20 highest-paid female athletes in 2016 and will include all 118 athletes to its athlete pool. We will then gather quantitative information on IVs that can be measured by actual information (i.e. use prize money to measure performance, GDP per capita to country of origin, twitter followers and value per tweet to Social Media Engagement etc.) In case that there is no adequate objective, we will use psychometric measures adopted or adapted from previous studies to measure the rest IVs (e.g. physical attractiveness). Finally, regression analysis will be conducted using STATA 14.

The study is still in progress. At the presentation, the author will show the results of the quantitative information and survey answers, and test the validity of this model. The study will contribute to brand equity literature in an econometric approach.