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Student Perceptions of Branding Benefits of a New Collegiate Stadium

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As universities engage in high-cost stadium projects, there is a need to understand the benefits these facilities provide to stakeholders. We consider the soundness of collegiate stadiums in terms of benefits they may provide to undergraduate students, as the most immediate university stakeholders. Specifically, their perception that collegiate stadiums improve university brand equity is considered. The purposes of this study were to measure student perceptions of stadium benefits (e.g., brand, tangible, and intangible) and to determine if students' personal characteristics explain perception of brand equity benefits of a stadium. Surveys were distributed to students at a university with a new football stadium. The results show that certain student characteristics (i.e., formal involvement in athletics, team identification, university identification, sport identification, class, personal funding) relate to perception of stadium-derived brand equity benefits. The findings contribute to the limited research on collegiate stadium benefits and suggest that potential benefits of collegiate stadiums are distinct from professional stadiums.

Keywords: stadium, facilities, intercollegiate athletics, public subsidies, branding

College athletics are one of the most visible components of a university's brand image to individuals, whether affiliated with the university (e.g., student, alumni, fan, faculty, staff) or not (e.g., local residents). Because of this prominence, athletics have been labeled as the de facto "front porch" of a university (Watkins & Lee, 2016). The front porch metaphor is particularly applicable to stadiums, which are visible to outsiders and can be part of a university's brand beyond athletics. In some cases, stadiums and arenas become recognizable landmarks that are synonymous with their home institution. For example, Boise State University's Albertsons Stadium's blue turf field or University of Notre Dame's "Word of Life" mural outside the stadium, commonly known as "Touchdown Jesus", contribute to the schools' respective brands (Flory, 2004; Lyell, 2016). While every university cannot expect to have a nationally renowned stadium or arena, new or improved facilities appear to be a priority across collegiate athletics.

New stadiums and renovations are costly and funding may be solicited from multiple sources. For instance, Arizona State University's Sun Devil Stadium's renovations were estimated to be \$307 million by project completion in 2019 (Ryman, 2017). Meanwhile, Syracuse University announced plans for a \$118-million renovation to the Carrier Dome, scheduled for completion by 2022 (Carlson, 2018). These expensive renovation projects underscore the importance that universities and athletic departments place on their facilities. Simultaneously, stadium projects tend to be high-cost ventures that require subsidization. At the professional level, subsidies may come from municipalities and their taxpayers. At the collegiate level, funding for stadium projects may come from the state, donors, or increases to student tuition or fees.

Although university administrators tout the merits of collegiate stadiums and facilities, the perceived value of expensive stadium projects from students' perspectives is not always considered. Students are university stakeholders and their funding contributions through tuition and fees often contribute to these projects. Thus, student perceptions on potential benefits that a stadium provides to a university, such as strengthening a university's brand, should not be overlooked. Researchers have identified and defined many alternative (i.e., not economic) justifications for stadiums (Kellison & Kim, 2017); however, these justifications are more often applied to professional stadiums than collegiate stadiums (Crompton 2004; Howard & Crompton, 2014; Kim & Walker, 2012). With the dearth of research involving collegiate stadiums, this study can contribute to the overall body of knowledge on stadiums and facilities that are funded by and intended to benefit stakeholders. In this study, we examine the extent to which students, as stakeholders of the university, perceive a stadium's ability to benefit the university brand. A brand is the collection of unique components (e.g., name, design, symbol) that are associated and identified with a product or organization (e.g., a university) and distinguish it from competitors (Keller, 1993). If a stadium can make a university more recognizable and distinct, then it may influence the university brand.

Because a collegiate stadium is often at least partially funded by students and is promoted as beneficial to the university brand—and therefore to the students—it is important to understand if students believe that a stadium is beneficial. Furthermore, stadium constructions and renovations are common in collegiate athletics, so it would be useful to understand if certain student status characteristics influence perception of stadium benefits. Therefore, the purpose of

this research is to examine the extent to which students perceive stadiums to be beneficial (i.e., brand equity, intangible, tangible) and if student characteristics (i.e., formal involvement in athletics, team identification, university identification, sport identification, class, personal funding) influence perceptions of a new stadium's brand equity benefits (i.e., awareness, visibility, image).

Review of Literature

Student Perceptions of Intercollegiate Athletics

The role and benefits of intercollegiate athletics on a campus are often debated. The rising expenses and widespread spending by athletic administrators also raise interest. Students are the lifeblood of a university and play a significant role in supporting intercollegiate athletics, by serving as student-athletes, fans, and/or financial supporters via student athletic fees. Most athletic departments receive contributions from students via student athletic fees, which increased by 10% over a five-year span (2000–2015) in 201 public Division I programs (Wolverton, Hallman, Shifflett, & Kahmbhampati, 2015). Researchers and university administrators are often concerned with how intercollegiate sports impact students because of the role students play on campus as fans and funders. The nature of the relationship between intercollegiate athletics and students, and other stakeholders, is complex and multifaceted. For example, intercollegiate athletics have been linked to creating a shared sense of community among student bodies (Clopton, 2007; Clopton, 2008b); however, other research has shown that identification as university sport fan can detract from a student's ability to create new connections with the other members of the student body (Clopton, 2011). At the Division III level, the impact of athletics on students is also complex as team identification plays a significant role in university attachment for newer students, but become less important after students complete their second year of courses (Katz, Dixon, Heere, & Bass, 2017). The effect of new athletics programs on the campus community at larger institutions is also unclear. Past research has been unable to prove a connection between a new Division I college football team and an increased sense of university community (Warner, Shaprio, Soxon, Ridinger, & Harrison, 2001), while others have found a link between new intercollegiate teams and increased university identification among stakeholders (Heere & Katz, 2014; Katz & here, 2016). A student's perception about the benefits of athletics and sport facilities, such as new or renovated stadiums and arenas, is an aspect of intercollegiate sports that needs to be further explored. This information would aid administrators in how they promote athletics and a stadium to students, as well as communicate the benefits to garner support, given the rising costs of stadiums.

Perceptions from stakeholder groups—in this case, students—regarding stadiums are important because other legitimations for funding expensive stadium projects are difficult to prove. The economic benefits provided by stadiums alone are inadequate to mitigate professional or collegiate stadium costs (Coates & Humphreys, 2008; Harger, Humphreys, & Ross, 2016; Maxcy & Larson, 2015). If economic benefits are inadequate, then the subjective benefits according to those who fund, and theoretically benefit from, stadium projects are necessary to prove that a stadium project is beneficial. In collegiate athletics, universities often need to supplement their funding for stadium capital projects, which tends to put additional burden on tuition paying students, usually in the form of mandatory athletics fees. In 2014, students at 32 “Power Five” schools paid a combined \$125.5 million in athletic fees (Hobson & Rich, 2015).

According to the Knight Commission, median institutional funding per student athlete at Football Bowl Subdivision (FBS) institutions has gradually increased annually from just over \$10,000 in 2005 to over \$25,000 in 2015 (“Knight Commission Custom Reporting,” 2018).

Institutional funding includes student athletic fees in addition to other sources of athletics funding at FBS institutions. Each of these examples provides some empirical indication that students are contributing a significant amount toward institutional funding used for athletics expenses, such as stadium projects. Based on the premises that a stadium should benefit those who fund it or are affected by it, and that students serve as a major funding source, then students must believe in the benefits provided to students by a stadium project.

Tangible and Intangible Stadium Benefits

Myriad benefits associated with new stadiums have been argued over the years, but these supposed benefits typically have been examined in the context of professional sport (Crompton 2004; Howard & Crompton, 2014; Kim & Walker, 2012). One of the earliest and most persistent potential benefits of a new stadium is the economic impact it may provide for the host community. Economic impact analysis is a preferred tool of stadium proponents to show the empirical economic value that a stadium project will provide to the public. However, a shortcoming of economic impact analysis reports is that they can be manipulated to exaggerate economic impact (Howard & Crompton, 2014). Furthermore, many researchers have examined professional stadiums and demonstrated that economic impact alone is insufficient to justify the necessary capital costs (Coates & Humphreys, 2008; Harger, Humphreys, & Ross, 2016; Maxcy & Larson, 2015). Unlike professional stadiums, collegiate stadiums are not generally touted as drivers of economic impact, but rather as iconic meeting places that signal the vitality, permanence, and modernity of an institution (e.g., Seifried & Tutka, 2016). Therefore, it may be especially important for collegiate stadiums to identify alternative benefits that would justify stadium capital projects.

One approach to identify alternative stadium benefits is to categorize them as tangible or intangible. Tangible benefits at the collegiate level may include positive public relations, improved quality of applicants, and student retention (Maxcy & Larson, 2015). Other tangible benefits are somewhat similar to economic impact and include enhanced regional income, greater tax revenues, new jobs, community impact, and stimulation of development (Coates, 2007; Crompton, 2004; Dehring, Depken, & Ward, 2007; Kellison & Kim, 2017; Maxcy & Larson, 2015; Schwester, 2007). An example of a tangible benefit in collegiate sport is improved quality of athletics (e.g., more wins, higher quality of recruits) or increased alumni donations (Maxcy & Larson, 2015). McGehee, Marquez, Cianfrone, and Kellison's research (2018) showed that some stakeholders perceive a collegiate stadium as capable of providing quantifiable improvements to athletics. Maxcy and Larson (2015) discuss academic-related quantifiable spillover benefits of a collegiate stadium.

Intangible benefits may include increased psychic income, social cohesion, civic pride (Crompton, 2004; Howard & Crompton, 2014; Kellison & Kim, 2017). In particular, stadiums can be intended to contribute to revitalization or renewal of urban areas (Kellison & Kim, 2017; McGehee et al., 2018). These urban renewal benefits are intangible because they are contingent upon people's perceptions that the facility improves their quality of life (Crompton, 2014). Howard and Crompton (2014) also suggest a stadium could improve brand equity or attractiveness of a community to outsiders. Enhanced campus community, or the ability of a

stadium to improve social capital, is another potential intangible collegiate stadium benefit (Maxcy & Larson, 2015). As such, we turn to the impact of a stadium on university branding as another benefit.

Branding Benefits of a Stadium

It can be challenging to identify all potential stadium-derived benefits. The influence of stadiums on community brand equity is another potential alternative stadium benefit. In professional sport, stadiums may influence a city's brand equity, the value of a brand (Keller, 1993). However, in collegiate sport, the university represents the brand that stands to enjoy brand benefits from a stadium. Just as a city with strong brand equity may benefit the community by providing social cohesion and attracting outside business, improved brand equity for a university could benefit students by improving campus community cohesion or improving the value of a degree by attracting and retaining better students (Goff, 2000; Maxcy & Larson, 2015; Roy, Harmon, & Graeff, 2003). Although external university brand equity is ultimately determined by outsiders (e.g., prospective students), stadium status as an asset to student stakeholders is reliant, in part, on current student perception of branding and other alternative stadium benefits. For a stadium to provide the benefit of improved brand equity, it would be reflected in the perceptions of individuals on factors like awareness (does the stadium improve visibility of the university?) and associations.

Brand equity can be understood from a financial-based approach or a consumer-based approach (Mills & Williams, 2016). In a consumer-based perspective, brand equity is the value of a brand in the mind of a consumer (Bauer, Stokburger-Sauer, & Exler, 2008). Thus, we consider student perceptions of brand benefits, rather than the financial approach. Aaker's (1991) concept of consumer-based brand equity is derived from the perceived quality, awareness, associations, and loyalty of a brand. According to Keller (1993), the value of a brand is based on an individual's knowledge about a brand, which is in turn determined by their awareness and image of a brand.

Brand image and brand awareness are both commonly cited as dimensions of brand equity (Keller, 1993). Therefore, a stadium should theoretically improve brand image and awareness in order to influence brand equity. Brand image is the culmination of various types of brand associations. Traditionally, these brand associations are differentiated as attributes, benefits, and attitudes (Keller, 1993). In terms of brand image, stadium proponents argue that having a professional sports franchise, and a stadium to host the team, affect the city's image, making it a "first tier city" (Crompton, 2004). However, research has been mixed on the effectiveness of stadiums elevating city status in the eyes of public stakeholders and imparting positive affiliations on city image (Mason, Washington, & Buist, 2015).

Stadiums also allegedly increase awareness or community visibility of cities at the professional level (Crompton, 2004) and collegiate level (Maxcy & Larson, 2015). For example, a city that builds a new stadium for its NFL franchise may be rewarded by hosting a Super Bowl that will attract media coverage and increase community visibility. The brand benefits provided by teams and stadiums (e.g., visibility, image) have generally been considered in terms of brand benefits provided by professional franchises to cities; however, given the investment in collegiate stadiums, universities may view stadiums as a means to improve their brand equity. Rather than increasing the visibility or enhancing the image of a city community, collegiate stadiums may have similar effects on a university community. A potential spillover effect of a

collegiate athletics team with a new stadium may be increased visibility for the university due to increased media coverage of the team and stadium (Maxcy & Larson, 2015). Just like professional sports stadiums are promoted as positive influences on a city's brand equity, collegiate stadiums are also intended to influence the brand equity of universities.

Whether a team's stadium is successful in positively affecting brand equity in the eyes of different stakeholder groups may vary case by case; however, collegiate stadiums are intended to benefit the overall university brand through increased exposure and other benefits (Maxcy & Larson, 2015). Students are not the only university stakeholders, but they are a prominent one. Students may be interested in the stadium's influence on brand equity if their funding is used for it and the stadium enhances the university image, prestige, and the value of an academic degree. Consequently, students and alumni were included in a University of South Florida (USF) survey to explore the feasibility of and stakeholder attitudes towards building a new college football stadium. USF football uses Raymond James Stadium, which is the home of the NFL's Tampa Bay Buccaneers and located off campus. Respondents rated their level of agreement with various items, such as "I believe having a new on-campus football stadium will elevate the national profile of USF" (Knight, 2018). Interestingly, there was strong support for a new football stadium, but not the type of stadium recommended by the feasibility study. Students and other respondents favored a larger, more expensive stadium than the proposed one, and preferred to continue playing at Raymond James Stadium rather than settle for a smaller stadium (Pransky, 2018). These findings suggest that university stakeholders (i.e., students and alumni) recognize that there is a link between a stadium and a university's brand.

Influences on Perception of Branding Benefits of a Stadium

Many factors may relate to whether individuals evaluate a stadium as a successful extension and means for improving a university's brand equity. Kellison and Kim (2017) suggest that trust in leadership is one factor for determining support of a financing plan for a publicly subsidized stadium. If citizens trust "civically paternalistic leadership," then they are more likely to support a stadium financing plan that was not put up to a public vote. As with no-vote stadium subsidies, students do not commonly vote on a university's decision to finance a new football stadium. Thus, students' trust in university administration may influence their support for a new stadium and perception of stadium-induced brand benefits.

Identification is another factor that has been shown to influence affective and behavioral response (Trail, Anderson, & Fink, 2000; Trail & James, 2019). Identification with a brand can influence how individuals evaluate brands (Pina, Iversen, & Martinez, 2010; Prados-Peña & del Barrio-García, 2018) and individuals' attitudes towards brand in sport (Boyle & Magnusson, 2007; Underwood, Bond, & Baer, 2001; Wang & Tang, 2018; Watkins, 2014). Several forms of identification variables may affect how students perceive a stadium as improving brand equity. According to identity theory, individual identity is comprised of multiple identities that form a complex network of overlapping and interacting identities (Trail & James, 2019). Identification then, which consists of these multiple identities, is one's orientation towards other objects and entities (e.g., a university, a team) that result in feelings or attachments (Trail, Anderson, & Fink, 2000). In sports, cognitive identification with an organization, such as a university and team, can be comprised of various points of attachment (Trail, Robinson, Dick, & Gillentine, 2003). According to Lock and Heere (2017), numerous researchers have used identity theory to study team identification and points of attachment (e.g. Kwon, Trail, & Anderson, 2005; Laverie &

Arnett, 2000; Shapiro, Ridinger, & Trail, 2013; Trail, Anderson, & Fink, 2005). Different forms of identification (e.g., team identification, university identification, sport identification) could influence student perception of stadium-related brand benefits, as well as other forms of benefits (e.g., intangible and tangible). Researchers have found team identification or university identification influenced student perceptions of sense of community, athletics, and athletic program prestige, with mixed results (Clopton 2007, 2008a). Thus, team identification, university identification, and sport identification were included.

Other forms of characteristics germane to undergraduate college students could also influence if students perceive a stadium as beneficial to university brand equity. Because students are the stakeholders in both a university's academic and athletics environments, their roles and direct involvement in athletics (e.g., as student-athletes, band/cheer members, or athletic department interns) may be influential. Past researchers noted that student perceptions of other university/athletics constructs have differed based on student involvement levels in college athletics, such as between athletes and non-athletes (Knapp, Rasmussen &, Barnhart, 2011), or involvement in the university (Wann & Robinson, 2002).

Similarly, the number of years a student has been on campus (i.e., class level) may influence the perception of change associated with a new sport facility. Past perceptions and knowledge are possible influencers and the number of years one has been a student would indicate if they had exposure to the announcements about the stadium or other information. Additionally, the tuition funding source may be a personal factor that influences students' evaluation of stadium benefits. A student who pays for most of their tuition (including athletics fees) out of pocket may be less likely to perceive a stadium as beneficial. Due to rising costs of tuition and fees at public and private four-year universities, a greater burden is placed on students from low- and moderate-income families who face more challenges in paying for tuition, fees, and other living expenses that are not grants-in-aid ("Students and Families Pay More." 2017). If students' out-of-pocket tuition funding negatively influences perception of stadium benefits, this could be problematic for universities seeking to legitimize such projects. Our research seeks to understand if students think that a new stadium can improve a university's brand, and if certain student status identities and characteristics influence perception of a stadium's influence on university brand equity.

Research Questions

The aim of this study is to investigate the impact of a stadium on a university's brand as perceived by undergraduate students. The welfare from stadiums could take multiple forms—tangible, intangible, and branding. While stadium impact on university brand equity will ultimately be determined by external consumers in the marketplace, students contribute capital to stadium projects and stand to benefit or not from a new stadium. Understanding the extent of student perception of brand equity benefits provided by a stadium, and other forms of alternative benefits (e.g., intangible stadium benefits and tangible stadium benefits), would also aid university brand managers in communicating the brand benefits of a stadium. Additionally, how individual characteristics may affect perception of the brand benefits provided by a collegiate stadium has yet to be studied. Accordingly, we proposed three questions:

RQ1: Do college students perceive tangible and intangible benefits that a new college stadium provides to the university?

- RQ2: Do college students perceive new stadiums as improving the university brand equity?
- RQ3: Do personal characteristics (i.e., involvement in athletics, team identification, university identification, sport identification, class, personal funding) influence students' perception of the brand equity benefits (i.e., awareness, visibility, image) provided by a new football stadium?

Method

Participants and Procedures

We used a paper-and-pencil survey method to collect data from undergraduate students at a public university in the Division I FBS in the southeastern United States. The university moved its football games from a rented off campus stadium to a newly acquired on-campus venue repurposed for college football. Data were collected during the academic year when the football team started playing in the on-campus stadium. After institutional review board approval, undergraduate students were recruited to complete a paper-and-pencil survey in one of two ways. First, an intercept technique was used to randomly distribute surveys to students at the on-campus student center. Second, surveys were distributed in three on-campus classes. These courses were introductory courses in the university's kinesiology department that consisted primarily of first- and second-year students with various or undeclared majors.

A total of 197 completed surveys were collected. Four surveys were removed due to incompleteness, and another three were removed because the respondents were not undergraduate students. A total of 190 surveys were retained and used in subsequent analysis. The sample was reflective of the university population's demographics. The majority of participants identified their race or ethnic heritage as Black or African American ($n = 155$; 82%), followed by White/Caucasian ($n = 39$; 21%), and Asian ($n = 18$; 9%). Some respondents further identified their race as Hispanic, Latino, or Spanish origin ($n = 29$; 15%). The number of women ($n = 114$; 60%) and men ($n = 67$; 35%) in the sample was also representative of the university population.

Measures

The survey asked students about different potential stadium benefits (tangible, intangible, and branding), student characteristics, and college football consumption. With limited quantitative research on the branding and other potential benefits provided by a collegiate stadium, original items were developed based on past literature or modified from previous scales. Tangible, intangible, and branding benefits were all measured on 7-point Likert-type scale with the anchors "strongly disagree" and "strongly agree." Each variable consisted of multiple items with the mean score used to represent an individual's response. Data were also collected on a number of student characteristics that may impact perception of stadium benefits. The various measures and survey items used in this study are outlined below (see Table 1).

Tangible stadium benefits. Four tangible benefits were measured—impacts of a new stadium on academics, athletics, donations, and community economics. Academic Impact, Athletic Impact, and Donations were each measured with three original items based on Maxcy and Larson's research (2015). Community Economic Impact items were derived from the perceived arena impact construct from Kellison and Kim (2017) that previously had good construct reliability.

Intangible stadium benefits. We assessed three intangible stadium benefits: urban renewal, psychic income, and enhanced campus community. Based on the supposed ability of stadiums to revitalize communities (Kellison & Kim, 2017; McGehee et al., 2018), three original items were used to measure Urban Renewal. Three original items measuring Enhanced Campus Community, or the ability of a stadium to improve social capital, were originally included as an intangible stadium benefit (Maxcy & Larson, 2015). Psychic Income, which is communal pride and excitement derived from a stadium, provided the basis for the final intangible stadium benefit (Crompton, 2004) and was assessed on three original items.

Brand equity benefits of a stadium. Students' perception of stadium brand equity benefits to the university was evaluated using three variables (i.e., awareness, visibility, image). Due to the lack of an existing brand awareness scale for collegiate stadium-derived brand benefits, original items were developed for Brand Awareness. Brand Visibility items were adapted from Kellison and Wendling's (2015) survey about fan and nonfan support for a professional stadium. Three items were used to gauge overall perception of a stadium's influence on brand image, including two original and one adapted from Kellison and Kim (2017).

Individual mean scores for each of the aforesaid brand benefit factors (awareness, visibility, image) were used to create a brand equity benefits of a stadium construct. Each of these potential benefits relates to the overall brand equity of the university. A goal of a stadium, like any branding strategy, is to improve overall brand equity (Ambler & Styles, 1997; Keller & Aaker, 1992).

Student characteristics and consumption. Team Identification, University Identification, and Sport Identification items from Trail et al. (2003) were utilized. The Trust factor, which measured level of trust in the administration, was another proposed student characteristic relevant to perception of stadium benefits. Four trust items were adapted from the trust in civically paternalistic leadership construct from Kellison and Kim (2017). One original item was created for Involvement (i.e., Are you involved in athletics at [university name] as: (a) student-athlete (football); (b) student-athlete (non-football); (c) cheerleader or dance; (d) athletic band; (e) fan group; (f) an intern, trainer, volunteer, or manager for a team; (g) none of the above; (h) other). To understand the impact of personal funding on perceptions of stadium benefits, Personal Funding was measured with one item (i.e., How much do scholarships, waivers, or financial aid contribute to your tuition?). We included student class (i.e., Freshman, Sophomore, Junior, Senior) as a personal variable that may influence student perception of stadium-based brand equity benefits. Finally, we measured consumption using past home game attendance (number of games attended last year) and future home game attendance intentions (number of games intended to attend) as proxies.

Table 1
Descriptive Statistics and Reliability for Stadium Benefits

Variables	α	CR	AVE	M	SD
Brand Equity Benefits of a Stadium					
<i>Brand Awareness</i>	.71	.84	.63	5.04	1.13
<The stadium> increases awareness of <university> as a large public research university				4.93	1.51
I think that more people will be familiar with the <university> brand because of the new <stadium>				5.09	1.37
More people will be aware that <the university> has an FBS level football program because of <the new stadium>				5.11	1.40
<i>Brand Visibility</i>	.73	.85	.65	5.55	0.96
The new <stadium> will make <the university> more visible to outsiders				5.70	1.20
Because of <the stadium>, <the university> will be visible to more people than before				5.59	1.15
The new <stadium> will give <the university> more media exposure compared to its status before the stadium				5.36	1.22
<i>Brand Image</i>	.71	.68	.77	5.18	1.17
<The stadium> will elevate the university's status compared to other universities				5.19	1.43
I think that <the stadium> will have a positive impact on how most people view <the university>				5.18	1.25
Brand Equity	.87		.80	5.26	0.97
Tangible Stadium Benefits					
<i>Academic Impact</i>	.71	.84	.64	5.15	1.07
I think that <the stadium> can benefit <university's> academic reputation				4.67	1.47
The new <stadium> will make <university> more attractive to prospective students				5.49	1.19
Having a home football stadium will make <university> more attractive to quality students				5.28	1.37
<i>Athletic Impact</i>	.80	.88	.71	5.03	1.20
Because of <stadium>, <university> athletics will be more competitive				4.93	1.42
I believe <stadium> will make <university> will be more competitive in recruiting athletes				5.05	1.47
<Stadium> will improve the <university> athletics program overall				5.10	1.38
<i>Donations</i>	.89	.74	.88	4.62	0.93
<Stadium> will lead to increased alumni donations				4.96	1.37
Alumni will be more likely to donate because of <stadium>				4.87	1.45
<i>Financial Impact</i>	.81	.89	.73	5.40	1.08
<Stadium> will be a money maker				5.34	1.38
<Stadium> will lead to increased revenue for <university>				5.52	1.15
I think that <stadium> will have a positive financial impact on <university>				5.36	1.29
<i>Community Economic Impact</i>	.80	.88	.72	5.01	1.17
Because of <stadium>, the communities near the stadium will grow				4.66	1.52
<Stadium> will bring business to the local communities near the stadium				5.28	1.34
<Stadium> will create jobs for the community				5.08	1.27
Intangible Stadium Benefits					
<i>Urban Renewal</i>	.87	.92	.79	4.83	1.32
<Stadium> will help make the local neighborhoods more vibrant				4.62	1.51
<Stadium> should help with urban renewal in the community				4.99	1.48
<Stadium> will contribute to a revitalization of nearby areas				4.88	1.47
<i>Psychic Income</i>	.82	.89	.74	4.99	1.25
I feel a greater sense of school spirit because of <the new stadium>				4.75	1.64
<Stadium> makes me proud to be a <athletics team's name>				4.92	1.49
<Stadium> will generate more excitement on campus				5.32	1.20

Note: CR = Composite reliability; AVE = Average Variance Extracted. Brand Equity factor is a composite of the Brand Awareness, Brand Visibility, and Brand Image factors

Data Analysis

Prior to responding to RQ1, RQ2, and RQ3, the quality of the measures in the survey instrument was analyzed. Cronbach's alpha, composite reliability (CR), average variance extracted (AVE) values, and correlations were calculated to examine evidence of the internal consistency, reliability, and validity. Items or factors were removed if they did not meet the thresholds ($\alpha > .70$; $CR > .70$; $AVE > .50$; correlations $< .85$; Hair, Black, Babin, & Anderson, 2010; Kline, 2005). To assess RQ1 and RQ2, we calculated descriptive statistics on the stadium benefit variables, student characteristics, and attendance items. Multiple regression analysis was conducted to determine if student status variables influenced students' perception of brand benefits provided by a new stadium, as surmised in RQ3. Initial analysis included all seven student status constructs (Team ID, University ID, Sport ID, Trust, Class, Involvement, Personal Funding) as independent variables and the Brand Equity construct as the dependent variable. Categorical data were dummy coded as follows: Class (freshman, sophomore, junior, senior), and Involvement (involved, not involved). Other student status variables were entered as continuous data. Following the multiple regression analysis, subsequent simple regressions were run to determine the variance in perception of brand equity benefits by each of the independent variables. Descriptive statistics and regression analyses were conducted using SPSS 24.

Results

Psychometric Properties of the Scale

The scale required slight modification after conducting a reliability and validity assessment. Based on Cronbach's alpha, two items were removed to improve the psychometric reliability of the Brand Image and Donations factors. Consequently, Brand Image and Donations were each measured by two items. Additionally, the Enhanced Campus Community factor showed low reliability and was not significantly improved by removing any single item. Therefore, it was omitted from later analysis. After removing items and a factor, Cronbach's alpha for all but one factor met or exceeded the recommended .70 threshold. Although Cronbach's alpha for the University ID factor was .66, it was retained because of its close proximity to the .70 threshold. In this instance, University ID was also retained due to its theoretical merit based on use in prior research (Trail et al., 2013).

The remaining subscales were also checked for composite reliability and validity. The CR values exceeded the threshold of .70 (Hair et al., 2010; Tables 1 and 2). AVE values for all factors exceeded the minimum requirement of .50 (Hair et al., 2010). The correlations between the independent variables used in the regression were acceptable levels (e.g., $< .85$; Kline, 2005; Table 2). The AVE values were greater than the squared correlations, further indicating validity (Fornell & Larcker, 1981). Finally, data was checked for normality and during the regression, the variance inflation factor (VIF) results were appropriate indicating no multicollinearity concerns among variable ($< .10$; Hair et al., 2010).

Individual mean scores for the brand benefit factors (awareness, visibility, image) were used to create a Brand Equity construct. Each of these potential benefits relates to the overall brand equity of the university. The Brand Equity construct showed good reliability ($\alpha = .87$, $AVE = .80$). Additionally, the Brand Equity construct, which was the dependent variable in regression analysis, demonstrated normality per the Shapiro–Wilk test ($p > .05$).

Table 2
Means, Standard Deviations, Reliability, and Correlation Matrix of Student Characteristics

	<i>M</i>	<i>SD</i>	<i>α</i>	<i>CR</i>	<i>AVE</i>	1	2	3	4
1. Sport Identification	3.76	1.94	.89	.93	.82	-			
2. Team Identification	3.33	1.55	.83	.90	.75	.57**	-		
3. University Identification	5.08	1.21	.66	.82	.60	.23**	.45**	-	
4. Trust in University Administration	4.86	1.23	.87	.91	.72	.22**	.48**	.55**	-

Note. *CR* = Composite reliability; *AVE* = Average Variance Extracted. ** $p < .01$.

Participant Descriptives

The descriptive results of the data analysis provided some insight into the nature of sample in this study. For class level, the sample was 24% Freshmen, 33% Sophomores, 22% Juniors, and 20% Seniors. The sample included an academically diverse grouping of 28 majors and academic disciplines. For other student characteristic variables, descriptive results showed that overall Team ID ($M = 3.33$) and Sport ID ($M = 3.76$) were fairly low, as both were below the midpoint, while University ID ($M = 5.08$) was moderate. Participants' Trust in the university officials ($M = 4.86$) was also moderate. Overall, the sample was largely uninvolved directly in the campus athletics community, with 88% of participants indicating that they did not have any formal involvement with campus athletics (i.e., as a student-athlete, cheerleader, dance team member, athletic band, fan group, intern, trainer, volunteer, or manager for a team). For Personal Funding, 26.5% ($n = 48$) of students indicated that their tuition was fully funded (i.e., tuition entirely covered by scholarships, waivers, or financial aid), 61.3% ($n = 111$) received some tuition aid, and 11.5% ($n = 22$) received no tuition aid. Overall, the sample had low levels of university football attendance ($M = .57$ games attended in the previous year) and future attendance intention ($M = 2.13$ games intended to attend in next year).

To address RQ1–2, descriptive results were computed and are reported in Table 1. Financial Impact ($M = 5.40$) was the highest tangible stadium benefit perceived by the students, while Donations ($M = 4.91$) was the lowest. For intangible stadium benefits, Urban Renewal ($M = 4.83$) had the lowest average perception by students, while Psychic Income ($M = 4.99$) had the highest. Respondents' average scores for each of the factors that comprised the brand equity construct were as follows: Brand Awareness ($M = 5.04$), Brand Image ($M = 5.18$), and Brand Visibility ($M = 5.55$). Averaging these factors together yielded the composite perception of Brand Equity benefits provided by the stadium ($M = 5.26$). The sample's descriptive results of the dependent variable (brand equity) and the independent variables (student characteristics) were then used to produce results from regression analyses.

Regression Results

In response to RQ3, multiple regression analysis was conducted to assess the overall impact of the student characteristic variables on student perception of brand equity benefits provided by the stadium. The results of this full model were significant ($R^2 = .636$, $F(9, 105) =$

20.37, $p < .05$) and indicated that all of the characteristics variables combined explained 63.3% of variance in perceived brand equity.

Simple regression analysis was conducted with each of the student characteristics variables acting as the lone independent variable influencing perception of brand equity. Seven regressions were run to determine the variance explained by each independent variable. The results of each regression analysis, including the full model, are shown in Table 3.

Sport ID, Team ID, and University ID were each significant ($p < .05$) in the amount of variance they explained in brand equity perception when serving as the only independent variable. Of these, Sport ID explained the least variance (8.1%) in brand equity perception. Meanwhile, Team ID and University ID explained 21.9% and 27.4% of variance in brand equity perception, respectively. Other than University ID, only one other student characteristic variable had a greater impact on perception of stadium-derived brand equity benefits. Trust, which measured students' level of trust in the administration's benevolence, was significant and explained 49.6% of variance in perception of brand equity benefits. Involvement was also statistically significant, although it only explained 4.6% of variance in brand equity perception. The results indicate that student characteristics variables do, to varying extents, influence whether students perceive a new stadium as benefiting the university brand. The meaning behind these findings is discussed in the proceeding section.

Personal Funding was not significant and explained 0.2% of variance in brand equity perception. The Class variable included four class levels, none of which significantly affected perception of brand equity. Freshmen status explained the most variance (4.7%) but was still not statistically significant.

Table 3
Regression Results of Student Characteristics on Perceptions of Brand Equity

	R^2	<i>Standardized β</i>	<i>SS</i>	<i>df</i>	<i>F</i>	<i>p</i>	<i>VIF</i> ^a
Full Model	.636		63.88	9, 105	20.37	.000***	
Team ID	.219	.468	39.17	1, 188	52.77	.000***	1.96
University ID	.274	.524	49.05	1, 188	71.12	.000***	1.59
Sport ID	.081	.285	14.54	1, 188	16.65	.000***	1.54
Trust	.496	.704	88.69	1, 188	185.2	.000***	1.74
Class ^b	.047	.211	5.68	3, 131	2.15	.098	2.00
Involvement	.046	-.215	6.98	1, 165	7.98	.005**	1.08
Personal Funding	.002	.040	.284	1, 179	.291	.591	1.10

* $p < .05$. ** $p < .01$. *** $p < .001$.

^aVariance Inflation Factors for each variable from the full model

^bClass variable shows results for Freshmen, which was the most significant of the class levels

Discussion

With the increased frequency and costs of new college stadiums, the impact of stadiums on improving the university brand is often questioned. In this study, we sought to examine whether students perceive a collegiate stadium as beneficial to themselves and the university based on their perception of different stadium benefits (brand equity, tangible, intangible). Additionally, a purpose of this research was to determine if student characteristics could predict student perception of stadium branding benefits to the university.

Although the focus of our analysis was on student perception of branding benefits, and the relationship of student characteristics with those perceptions, our findings regarding student perception of tangible and intangible benefits are also of consequence. Because of the scarcity of collegiate stadium research, past studies have not measured student perceptions of tangible and intangible benefits, which are usually applied to professional stadiums. Our findings support Maxcy and Larson's (2015) claim that the supportive arguments (i.e., tangible and intangible impacts) for collegiate stadiums are similar to, but not the same as arguments used to support new professional stadiums. However, the results also suggest that gaps exist in current theoretical conceptualizations about collegiate stadium benefits, which are distinct professional stadium benefits. Enhanced Campus Community (Maxcy & Larson, 2015) was included as a type of collegiate stadium intangible benefit to represent the social capital and urban revitalization intangible benefits applied to professional stadiums (Kellison & Kim, 2017). However, the omission of the Enhanced Campus Community factor highlights the need to build the body of knowledge on collegiate stadiums.

The results show that, in the context of this study, undergraduate students do not strongly perceive stadiums to be beneficial to university/athletics brand equity. While students do perceive a collegiate stadium as providing brand benefits, tangible stadium benefits, and intangible stadium benefits, the extent of the benefit is only moderate. Average student perception for all dimensions of each type of stadium benefit (brand equity, tangible, intangible) were between 4.84 and 5.55 on a 7-point scale. The similarity of student perceptions for each type of stadium benefit is evident based on the marginal difference between the lowest perceived dimension of each type of benefit. For example, undergraduate perception of the lowest brand equity benefit (Brand Awareness $M = 5.04$), lowest tangible stadium benefit (Donate $M = 4.91$), and lowest intangible stadium benefit (Urban Renewal $M = 4.83$) are all similar.

Universities may be reluctant to promote tangible and intangible benefits to students (McGehee et al., 2018); however, the marginally positive student perceptions of brand, tangible, and intangible benefits suggests students may be receptive to university administrators upselling these benefits. Still, the student body at the university used in this study may also have affected results. For instance, student tickets to football games are free aside from student athletic fees, which many students are not aware of, and the fees are among the highest in the NCAA. Student body characteristics will always vary from institution to institution; therefore, findings about undergraduate perceptions could differ at other universities.

Given the apparent similarity and moderately high perceptions of stadium benefits across the entire sample, it would be useful to understand what student characteristics might make one more likely to perceive a stadium as providing brand, tangible, or intangible stadium benefits. Individuals' self-identifications are tied to attitudes toward products and behavioral intentions in consumer behavior (Shapiro, Ridinger, & Trail, 2013). Furthermore, the importance of identification appears to be particularly important in sport (Heere, James, Yoshida, & Scremin,

2011). The results of our research appear to support the notion that how individuals feel about or identify with something relates to their perceptions of it. In fact, five of the seven student characteristic variables chosen for this study predicted a significant amount of variance in perception of brand equity benefits provided by a stadium. Of those, identification with the university and trust in the university administration were most important in predicting whether a student would perceive the stadium brand benefits to the university's brand equity.

Trust predicted the most variance (49.6%) of any of the characteristic variables despite marginally high levels of trust for the sample ($M = 4.86$). Trust in leadership is important in garnering support for stadium plans in professional sport (Kellison & Kim, 2017), and would appear to be important for universities as well. Practitioners in collegiate sports, and other areas of the sport industry, should recognize the importance of building trust with students. Having strong trust with students may make organizations more successful in their brand management efforts.

The next most important student characteristic was their identification with the university. The sample was more highly identified with the university ($M = 5.08$) than the team ($M = 3.33$) or the sport of football ($M = 3.76$). The higher levels and the greater significance of University ID in explaining perception of stadium benefits over the other points of attachment (Team, Sport) is consistent with Clopton's (2011) work on the role of university ID in explaining overall social capital perceptions by college students. The university may be the overarching identity that influences students' perceptions. This finding could be particularly important for practitioners, as universities could argue that a stadium will improve perceptions of the university brand among students, even if the student body is not interested in athletics. Nevertheless, the importance of University ID still demonstrates the importance of attachments. For instance, in another situation, Team ID could be higher than University ID and may better explain perception of stadium benefits. The hierarchy of these points of attachment may vary from case to case, but the overall importance of attachments to the university in some form is unlikely to vary. Even in our case, Team ID and Sport ID were still significant predictors of perception of stadium brand equity benefits to the university despite the sample showing lower levels of Team ID and Sport ID. It is likely that the existence of a campus community (where students show some university- or athletics-related attachment) is a prerequisite for student perceptions of a collegiate stadium being beneficial. Trust, University ID, Team ID, and Sport ID were the most statistically significant predictors. Taken together, the findings suggest that these are some factors that university administrators can focus to improve perceptions, that is, gaining trust of the student population and developing student cognitive attachment.

The last of the significant predictors, direct involvement with athletics, only explained 4.6% of variance in perception of stadium-derived brand equity benefits. Despite the comparatively low variance explained, the importance of involvement should not be overlooked. Direct involvement in any activity related to athletics was very low, as 88% of the sample indicated no involvement. Of the 12% who were involved with athletics, they are more likely to be informed on and have opinions in the stadium. Therefore, the significance of the involvement characteristic can be attributed to students involved with athletics (e.g., student athletes, band members) having stronger opinions on the stadium. However, collegiate stadiums affect all students, including those who are not involved with athletics, who would represent most of the student body. Therefore, the sample in this study is representative of the student body that is not involved with athletics. Nevertheless, due to the lack of research on student perceptions about the value of collegiate stadiums, further inquiry is needed to determine how involvement in other

campus activities (i.e., not athletic involvement) could relate to student perceptions of brand equity benefits.

The academic class level (e.g., freshmen) of the students and the students' personal funding sources did not significantly influence their perceptions of stadium brand benefits. Although first-year students were the most likely to perceive stadium benefits, there was not a significant relationship between any class level and perception of stadium-derived brand benefits. The students' levels of personal funding were also not a significant predictor. Due to the high cost of athletics fees, which could rise due to a new stadium, we expected that students who pay for most of their tuition would be less receptive of proposed stadium benefits. While this may be the case, our findings did not support this relationship. Personal funding was represented by one original item. Bolstering the number of items and including them on the same scale as most of the other student characteristic variables could improve the predictive power of how students fund their tuition.

Implications

This study adds to the limited body of stadium research focusing on collegiate stadiums and branding. As such, the findings come with implications for future research and sport practitioners. The college environment is unique, in that many college stadium-related benefits of for students (e.g., academic impact, donations, campus community) do not apply to stakeholders of professional teams/stadiums. Similarly, benefits related to professional stadiums (e.g., stimulation of development, job creation, civic pride) may not apply to students. In other words, the stakeholders and potential stadium benefits differ in a collegiate context. Collegiate stadiums are subsidized in part by their students just as professional franchises are by their stakeholders (e.g., taxpayers); therefore, collegiate stadiums should provide benefits desired by students. These findings suggest that these potential collegiate stadium benefits are not necessarily comparable to professional stadium benefits and should be examined in their own lens.

A second implication from our findings is that students apparently do perceive a stadium as providing brand equity benefits. Although perception of stadium brand benefits to the university was not overwhelmingly strong, it occurred despite low levels of Involvement, Team ID, and Sport ID. These findings are potentially useful for stadium proponents and brand managers. As an effective means for improving the university's overall brand equity, student evaluation of a stadium helps legitimize stadiums as a brand extension tool. Stadium proponents may be able to argue that students perceive the benefits provided by a stadium regardless of certain variables. As indicated by these results, student perception of stadium benefits can occur even when students do not identify with the team or sport related to the stadium. However, more research is needed to determine the veracity and generalizability of this implication.

University administrators should consider whether students perceive the proposed stadium as beneficial in advance of building a stadium. By collecting data from students about their perception of brand (and other) stadium benefits, administrators could identify where they might face issues in winning over student support. By identifying stadium benefits that students are not receptive toward, marketing managers could strategically focus their communication efforts toward students on the merits of those stadium benefits.

This research attempts to advance knowledge about perception of stadium benefits in general. More specifically, it contributes to the limited research on collegiate stadiums and how stadiums can potentially act as brand extensions that improve a university's brand equity.

Student perceptions of the proposed brand benefits provided by a stadium are important as students are among a university's primary stakeholder groups that subsidize collegiate stadiums. The results from this research show that student characteristics variables can predict student perception of stadium-derived brand equity benefits. The results also suggest that, at least in the context of this study, students do perceive a stadium as providing brand benefits.

Limitations and Future Research

As with any research, there are limitations to our findings. Because this study surveyed undergraduate students from one university, due to the university's recent stadium acquisition, there may be limitations related to the sample. Our findings could have been strengthened by a larger sample size. However, the nature of the sample itself may be a greater limitation. Our sample had relatively low Team ID and Sport ID, which could have influenced the results and the relative importance of those student characteristics in predicting perception of stadium-based brand equity benefits. The results could be different at a university with a more established athletic tradition, where Team ID and Sport ID may have been higher. Yet, even with low Team ID and Sport ID, students still had positive perceptions, suggesting programs with high Team ID and Sport ID would have even more inflated perceptions.

This study also used many original and adapted items in the survey instrument. This approach was largely unavoidable due to the lack of research on collegiate stadiums and the lack of relevant existing scales. Based on this limitation and the implication of collegiate stadiums/stakeholders being different from professional stadiums/stakeholders, there are several directions for future research. Researchers could seek to specify the alternative benefits of collegiate stadiums more explicitly and identify the qualities that differentiate students from professional sports stakeholders. In addition to undergraduate students, researchers could compare student stadium benefit perceptions to different groups of collegiate stadium stakeholders (e.g., local residents). Future research could also build upon this study to develop and validate a measurement scale for collegiate stadium benefits perception. A qualitative, exploratory study that asks students to identify what they see as potential stadium benefits may be a useful first step in the eventual creation and validation of a scale to empirically measure perception of collegiate stadium benefits. Following such an exploratory study, other moderating factors such as the pre-stadium academic prestige of a university, or the proximity of a stadium to the campus community could be studied to determine how they influence the realization of stadium-derived benefits. The academic reputation could be measured as a control for comparing the influence of a stadium on university brand equity for multiple universities/stadiums. Stadiums can serve as physical markers that communicate some meaning about communal identity and reputation (Kellison & Mondello, 2012). However, the communal proximity and longstanding existence of a physical marker like a stadium is related to the salience of the venue as a point of attachment to a place, like a university (Charleston, 2009). Therefore, whether a stadium is on or off campus may mediate student perception of stadium-based benefits to the university's brand equity and other factors such as economic impact and urban renewal.

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