

Latent Mean Analysis of Donor Motivation in College Sport: Does Contribution Level Matter?

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Due to declining federal and state funding, numbers of athletic programs have become dependent on private support from their alumni and other boosters (Hibbert & Horne, 1996; Stinson & Howard, 2007). In college sport, a donor-supported fundraising program is representing one of the main ways that university athletic departments offset budget shortfalls. As such, it is important for fundraising officers to understand the donor decision process, particularly the fundamental motives underlying donor decisions to give (Bennett & Sargeant, 2005). Accordingly, the purpose of this study was to explore athletic donor motives by focusing on their contribution level. When considering the lack of empirical evidence on this important issue in the donor motivation literature, the current study has great potential to strengthen our understanding of donor motivation and giving decision.

The target population was athletic department donors housed in an NCAA Division I-A (i.e., Football Bowl Subdivision) university. After receiving approval from the university's Institutional Review Board and from the athletic department's development officer to conduct the study, an e-mail invitation to an online questionnaire was sent to the list of athletic department donors approximately 7500 donors. A total of 816 responses were received with an 11% of response rate which is comparable to other studies using online survey (Kaplowitz, Hadlock, & Levine, 2004). A total 725 usable cases were included in the main analyses.

The authors used Ko, Rhee, Walker, and Lee's (in press) 25 items-scale of athletic donor motivation (SADOM) which was developed based on Alderfer's (1969, 1972) ERG theory. In the process of developing a conceptual framework, Ko et al. conducted a critical review of literature of donor motivation studies published in the fields of sport management (e.g., Gladden, Mahony, & Apstlopoulou, 2005; Mahony, Gladden, & Funk, 2003; Staurowsky, Parkhouse, & Sachs, 1996; Verner, Hecht, & Fransler, 1998) and non-profit business literature (e.g., Sargeant & Woodliffe, 2007). The scale measures three main dimensions of the ERG Theory through two or three corresponding sub-dimensions: (1) Existence needs – public recognition, power, and tangible benefits, (2) Relatedness needs – affiliation and social interaction, and (3) Growth needs – philanthropy, vicarious achievement, and demonstration of commitment. All factors have three items except Tangible benefits (4 items).

All statistical analyses were conducted by SPSS 18 and AMOS 18.0. First, a confirmatory factor analysis was conducted to assess the measurement properties of the SADOM. The model fits were acceptable; $\chi^2/df = 994.194/247 = 4.025$, RMSEA = .061, CFI = .92, and TLI = .90. The average variance extracted (AVE) values ranged from .51Tangible Benefits to .82Demonstration of Commitment. Internal consistency of the scale was also acceptable (range: $\alpha = .74$ Tangible Benefits to $\alpha = .89$ Recognition). The correlation among eight factors was ranged from .23 to .78. All factor loadings were greater than .50 (range = .53 → .92). Additionally, AVE values for all constructs were greater than the corresponding squared inter-factor correlations (Fornell & Larcker, 1981).

For the purpose of this study, 725 final cases were categorized into three groups based on their contribution levels: The low contribution group (n = 396) consists of donors contributed from \$100 to \$1,799. The medium contribution group (n = 247) donated from \$1,800 to \$14,499. The high contribution group (n = 82) donated more than \$14,500. The authors employed Latent mean analyses (LMA). To compare latent means of donation motivation factors among the three groups, the authors conducted three separate measurement invariance tests to confirm invariance of metric, scalar and factors of each group. LMA enables us to assess accurate mean differences since LMA are measured based on the factor mean itself (Vandenberg & Lance, 2000). In particular, LAM is useful tool when sample sizes between groups are not similar (Hancock, 1997).

The results of the first (comparison between low and middle contribution groups) and second tests (middle and high contribution groups) were accepted in metric invariance models (the 1st test: $\Delta\chi^2/\Delta df = 16.264/17$; the 2nd test:

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$\Delta\chi^2/\Delta df = 19.752/17$), but scalar and factor invariance models were not accepted. For further tests of substantive analyses, at least one accepted model should be invariant (Steenkamp & Baumgartner, 1998). In particular, mean structures determine partial measurement invariance by testing parameters, given findings of non-invariance at the matrix level (Byrne, Shavelson, & Muthén, 1989). Therefore, LMA can be conducted only based on the results of metric invariance models. However, the third test (comparison between low and high contribution groups) was not invariant in all three measurements; the further LMA test was not preceded.

The first LMA was performed where low contribution group was used as the reference group. When compared to low contribution group, the middle contribution group showed significantly higher latent means in Vicarious Achievement (.159), Philanthropy (.154), Power (.407), and Tangible Benefit (.902). Based on Cohen's *d* effect size index (Cohen, 1986), Tangible Benefit ($d = .955$) has a large effect size while Power ($d = .309$) has a small effect size. Other computed effect sizes of donor motivation factors were insignificant.

The second LMA was conducted by using middle contribution as the reference group. High contribution group showed significantly higher latent means in Socialization (.586), Affiliation (.528), and Tangible Benefit (.499). The calculated effect sizes of them were around .5 (medium effect). Descriptive analysis indicated that, among low contribution group, Vicarious Achievement has the highest mean ($M = 5.85$), while Recognition has the lowest mean ($M = 3.19$).

Theoretically, the current study demonstrated the usefulness of LMA in sport consumer research. The two separate LMAs also implied that donor motives in college athletics can be manifested based on their contribution levels. Therefore, the current study contributes to sport marketing literature specifically fundraising and donor behavior studies. The results also provide college athletics fundraising officers with numerous meaningful implications for developing and implementing effective market(ing) strategies. For example, the main results of LMA suggest that athletic programs should provide highly customized services to their important customers in returning for their giving based on their contribution levels. Affiliation and socialization motives of high contribution donors can be satisfied through special events that provide them unique opportunities to socialize with special interest groups and feel a sense of affiliation. Offering a variety of tangible benefits is found to be very important for both high and medium contribution donors. Further implications for research and practice will be discussed in the presentation.

References

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