Predicting Financial Vulnerability in the Philanthropic Sport Sector: An Application of the Tuckman-Chang Measures to Sport

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Finance Abstract 2010-225

June 5, 2010 1:25 PM Poster (Audubon)

In recent years, professional sport leagues, teams, and athletes have become increasingly involved in philanthropic activities (Extej, 2004; Robinson, 2005). As the field of sport philanthropy has grown, so too has the public scrutiny of philanthropic sport organizations. Academics and popular media have examined the efficiency of such organizations and found that only a minority meet the standard guidelines for nonprofit management (Knecht, 2007, Tainsky & Babiak, 2007). Recent public criticism prompted the Executive Director of the Sports Philanthropy Project to emphasize the importance of traditional financial metrics, suggesting instead that "the effectiveness of a particular charity in fulfilling its mission" should be given priority in determining the value and impact of an organization (Johnson, 2007). The problem with this approach, however, is that an understanding of an organization's financial condition and vulnerabilities is necessary to determine organizational effectiveness and to ensure that mission-related activities are sustainable over time.

Nonprofit organizations lack ownership claims to earnings, and as a result, behavioral theory posits that these organizations are inherently inefficient (Alchian & Demsetz, 1971; Hansmann, 1987). Because there are no stockholders to realize the financial benefits of efficiency (e.g., increased share price, dividends), managers are not incentivized to minimize costs. The concern with productive inefficiencies may be intensified in philanthropic sport organizations, as the reason for the existence of such organizations may be to realize public relations or tax benefits (Babiak, Tainsky, & Juravich, 2008). Continued high levels of productive inefficiency will eventually lead to failure in both for-profit (Argenti, 1976; Lu & Lo, 2009; Zhu, 2000) and nonprofit organizations (Anheier, 2000; Enjolras, 2009; Krishnan, Yetman, & Yetman, 2002).

While the application of financial vulnerability measures have long been used to study for-profit organizations (Altman, 1968; Beaver, 1966; Jones, 1987; Zavgren, 1983), less attention has been paid to nonprofit organizations. Much of the extant research in this area is based on the seminal work of Tuckman and Chang (1991), which identified four financial ratios that could be used to determine which nonprofit organizations are most vulnerable to financial shocks. Nonprofit organizations that have high equity balances, diversified sources of income, high administrative costs, and high operating margins are considered flexible organizations (i.e., able to withstand financial shocks) (Tuckman & Chang, 1991). The work of Tuckman and Chang has been used to develop predictive financial vulnerability models and to consider financial performance in specific sectors (Greenlee & Trussel, 2001; Hager, 2001; Keating, Fischer, Gordon, & Greenlee, 2005; Trussel & Greenlee, 2002; Trussel & Greenlee, 2004). While this research aids in understanding financial distress in nonprofit organizations as a whole, it is unclear whether the same measures of financial vulnerability are relevant for organizations in the philanthropic sport sector. Thus, the purpose of this study is to determine the value of the Tuckman-Chang variables in predicting vulnerability in philanthropic sport organizations.

For this study, a database maintained by the Sports Philanthropy Project is used to identify philanthropic sport organizations. The database includes organizations at the league, team, and individual athlete level. For each organization, the Internal Revenue Service (IRS) Form 990 is used to obtain financial information. Using this financial data, each organization is classified as either financially vulnerable or not financially vulnerable. For the purpose of this study, an organization is defined as financially vulnerable if they have experienced the reduction of program expenditures in each of 3 consecutive years. A logistic regression analysis is conducted to determine the relationship between financial vulnerability and the Tuckman-Chang measures (i.e., equity balance, revenue concentration, administrative costs, operating margin). One-half of the organizations in the sample were used to develop the model, and the remaining organizations were used as a holdout sample. The significance of the model is addressed using the chi-squared test statistic. The significance of each independent variable is tested using the t-statistic to determine which independent variables significantly impact the probability of financial vulnerability. The logit model is then used to test the predictive ability of the financial vulnerability model.
In this presentation, the relevance of this study for research, theory, and practice will be discussed. This study responds to the call by Hager (2001) for the application of financial vulnerability measures to more types of nonprofit organizations and represents the first effort to systematically examine philanthropic sport organizations using widely accepted financial metrics. In addition to providing a starting point for financial efficiency, this study provides opportunities to compare the financial performance of professional sport organizations with other nonprofit organizations. As our understanding of these similarities and differences improves, we can determine whether sport philanthropy is a sector that requires special consideration or whether these organizations can be better understood based on their programmatic mission. On a practical level, improved understanding of an organization’s financial vulnerability can act as an early warning system for managers and may prove useful in improving their management decisions and behaviors.