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US Table Tennis Association: A case study of financial performance using effectiveness indicators and efficiency ratios

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US Table Tennis Association

A case study of financial performance using effectiveness indicators and efficiency ratios

US Table
Tennis
Association

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Abstract

Purpose – The purpose of this paper is to examine the 2004-2015 financial performance (FP) of the national non-profit US Table Tennis Association using financial effectiveness (FE) indicators and financial efficiency (FY) ratios.

Design/methodology/approach – Archival data were used together with a case study method. FP was evaluated by net income; FE was indicated by total assets and total revenues while FY was examined by program services ratios and support services ratios.

Findings – On an average, the FP of the organization was poor (\$6,475.00 net loss per year), FE was moderate (50 percent increases in assets and revenues), and the FY was poor (80 percent revenues spent on program services with a return on asset of 201.5 percent).

Research limitations/implications – By using case study method, the results may not be generalizable to other national non-profit sports organizations with non-financial goals.

Practical implications – The paper suggests that national non-profit organizations can enhance their FP by focusing on both FE and FY.

Originality/value – The study utilized both FE and FY measures to evaluate the FPs – a major shortfall in similar studies.

Keywords Financial performance, Financial effectiveness, Non-profit organization, Financial efficiency

Paper type Research paper

1. Introduction and background

Formed in 1933, the United States Table Tennis Association, Inc. (USTTA) is a tax exempt national non-profit sports organization (NNSO) and is the governing body for the sport of table tennis. USTTA conducts and administrators amateur and professional table tennis by promoting the game, creating opportunities for athletes and coaches through a network of more than 250 clubs and over 350 tournaments annually. USTTA is also involved in the selection and training of US national teams for international competitions, including the Pan American and summer Olympic Games (www.teamusa.org/usa-table-tennis). USTTA, as most NNSOs constantly face crippling budget cuts and unreliable donations while still attempting to fulfill their vision and mission objectives through a variety of programs and services. As a non-profit organization, how is USTTA performing?

In general organizational performance (OP) is the combined assessment and measurement of effectiveness and efficiency so as to ascertain the degree to which desired goals are attained (Kumar and Gulati, 2009; Mouzas, 2006). The components of OP represents an index of both effectiveness and efficiency used to quantify overall performance of organizations. Specific to NNSOs, OP can be divided into two broad categories – on-field and off-field performances (Table I).

As indicated in Table I, on-field performances can be measured by win-loss records, world rankings, and number of medals, amongst others, while off-field performances may be quantified by attendances, TV ratings, and league expansions. As there are multiple ways of measuring OP, this study focuses on the financial performance (FP) of USTTA and not on on-field performances. The aim of this paper is to evaluate the 2004-2015 FP of USTTA using financial effectiveness (FE) indicators and financial efficiency (FY) ratios.



The structure of the rest of the paper is as follows. Section 2 examines the link between FP as a component of both FE and FY. Section 3 proposes a conceptual framework and research question which rationalizes and focuses the study. Section 4 discusses the various approaches/models used to investigate organizational effectiveness (OE) with the help of past sports related studies. Section 5 examines FY using financial ratios, with a focus on program and support services ratios. Section 6 is the methodology which explains data sources, measurement variables and case study method. Section 7 is a collection of results broken down into FP results, FE results, and FY results from 2004 to 2015. Section 8 is the managerial and policy implications. Lastly is Section 9, which provides conclusions and research implications followed by references. What then is FP, FE and FY?

2. FP = FE+FY

FP is the combined evaluation of FE and FY in the realization of desired financial goals of an organization such as attaining a positive income, also known as net profits. FP is formulated as:

$$\text{Financial Performance} = \text{Financial Effectiveness} + \text{Financial Efficiency} \quad (1)$$

FE is the ability of organizations to use the proper choice of activities, efforts, initiatives, strategies and/or policies to generate and maximize long-term sustainable FP. For instance, NNSOs that are financially effective tend to be better at generating additional revenues to build infrastructures through negotiating lucrative contracts for sponsorships, marketing and broadcasting rights. In other words, FE is the realization of financial goals centered on input acquisition (assets and revenues) for outcome attainment (positive financial returns or profits). In sum, FE is the capability of an organization to achieve its financial goals or targeted and is measured by revenues generated and assets accumulated.

FY is concerned with minimizing financial waste as it deals with the optimal allocation and utilization of financial resources. FY is the operational ability of an organization to attain outputs with minimum level of financial costs in the process of achieving targeted financial results. FY aims at boosting productivity with minimal costs and can be evaluated by input-output ratios such as the comparison of revenues against expenses in an attempt to provide economical programs and services. By being financially efficient, a NNSO can save on cost, time and resources - by prioritizing its efforts, initiatives and policies that enhance overall program and services efficiencies. Another purpose of this study is to analyze the FY of USTTA using program service ratios and support services ratios from 2004 to 2015.

3. Conceptual framework and research questions

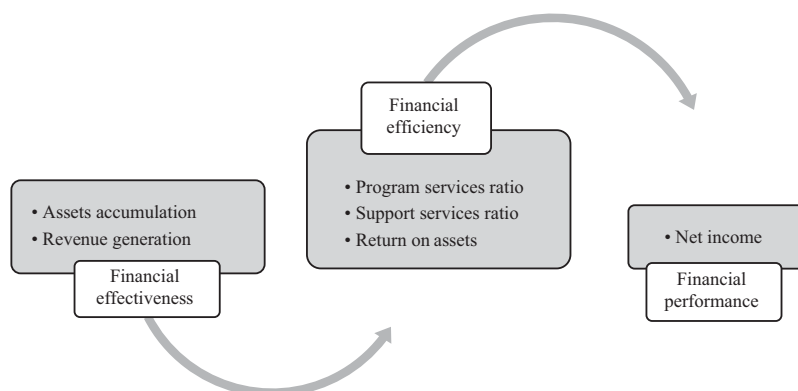
This study argues that sustainable FP is the ultimate goal of most NNSOs as captured by FE and FY in a three-stage conceptual framework (Figure 1). The prescriptive framework stresses the inter-correlation between the two components in assessing the FP of NNSOs based on the following reasons. First, FE relates to the ability of a NNSO to acquire needed but scarce financial resources such as assets and revenues. Second, upon acquiring the

Type of performance	Indicators
1 On-field performance	Win-loss records and number of medals World and league rankings Qualifications for tournaments and championships won
2 Off-field performances	Financial performance Asset performance and infrastructure development

Note: There are many more ways of categorizing organizational performance

Sources: Claessens *et al.* (2014), Omondi-Ochieng (2016)

Table I.
Categories of organizational performances



Source: Designed by author

Figure 1.
Linking financial
performance to
financial effectiveness
and financial
efficiency

scarce financial resources, the resources can be utilized efficiently in providing operational services and programs at low costs – as increasingly demanded by donors who stress financial accountability, thrift and transparency. Additionally, rising competition for revenues, medals and international recognition has pushed NNSOs to attempt to be both effective and efficient – a very difficult endeavor to accomplish. The major issues addressed in this study is to ascertain whether USTTA has been both financial effective and financially efficient from 2004-2015.

Through the development of a conceptual framework that links FP to FY and FE (Figure 1) is a broader way of analyzing, monitoring and adhering to what may lead to the realization of the mission and vision of a NNSO. The framework can enable sports managers to identify the function of each component, thus having the ability to change, adopt or take corrective action/s when needed. The present study attempts to provide answers to the following five research questions:

- RQ1. Was USTTA financially effective as indicated by total revenues from 2004-2015?
- RQ2. Was USTTA financially effective as indicated by total assets from 2004-2015?
- RQ3. Was USTTA financially efficient in delivering its programs as indicated by its program service ratios from 2004-2015?
- RQ4. Was USTTA financially efficient in delivering its services as indicated by its support services ratios from 2004-2015?
- RQ5. Did the FP of USTTA improve as indicated by yearly net income from 2004-2015?

By answering the five questions, this paper presents a framework for the application of FE and FY in measuring the FP of USTTA from 2004-2015. Few studies have seldom evaluated the performance of NNSOs based on the combined impacts of FY and FE, with the majority of studies dealing with the issues of effectiveness but neglecting efficiency (see; Wolfe *et al.*, 2002; Winand *et al.*, 2010). The purpose of this paper is to evaluate the FP of an NNSO using FE indicators and FY ratios from 2004 to 2015.

4. OE approaches

OE is the degree of successfully producing intended, desired, or expected results. The definitions of OE can vary based on specific missions, visions of NNSOs, and the approaches/models utilized (Winand *et al.*, 2014). Other related terms used to describe OE

include achievements, success, excellence, and performance, amongst others. The aim of this section is to explain the six basic approaches/models commonly applied to researching OE, namely – goal, internal process, and systems resources, multiple contingency, competing values and multidimensional approaches (Table II).

4.1 Goal model of OE

The first way of examining OE is the goal model which is the extent to which goals are accomplished (Price, 1968; Scott, 1977). Pertaining to NNSOs, indicators of the goal model are the realization of financial targets and the winning of Olympic medals (Table III).

Previous studies have stressed the advantageous uses and applications of the goal model in sports research as: it helps in clearly communicating the purpose and direction of the organization, it assists in sharpening decision making by providing an unambiguous basis for judging success or failure; and it is a means for self-management as it helps set standards for winning and pay (Frisby, 1986; Wolfe *et al.*, 2002; Omondi-Ochieng, 2013). In the first study, Frisby (1986) examined whether or not there was a relationship between 29 Canadian national sports governing body’s ability to acquire scarce resources and to transform their inputs into desired outputs, using a combination of goal and systems approach. The results indicated a positive and significant relationship between organizational structure and performance, defined as achievement of elite successes

Model/approach	Effectiveness defined as	Indicators/metrics
A. Goal model	Extent to which goals are accomplished	Realization of financial goals Olympic medals won
B. Internal process model	Extent to which employees are satisfied, committed, and motivated Smooth internal functioning of an organization	High employee morale High organizational cohesion Number of strikes coach/team turnover rates
C. Systems resources model	Ability of an organization to acquire scarce resources	Number of professional players Number of stadiums
D. Multiple constituency model	Extent to which all constituents are satisfied	Fairness and equitable diversity Satisfaction with program/services quality
E. Competing values model	Extent to which an organization maintains stability and control while being adoptable and flexible	Innovativeness & R&D Adaptive change and flexibility
F. Multidimensional Model	Success in all the above	Holistic index of all above indicators

Table II.
Approaches/models of organizational effectiveness

Note: Alternative words as approaches, models, and/or perspective have been used to describe OE
Sources: Papadimitriou and Taylor (2000), Shilbury and Moore (2006), Rocha and Turner (2008), Wolfe *et al.* (2002), Omondi-Ochieng (2013)

Type of goal	Indicators
1 On-field performance goals	Win-loss records and increased number of Olympic medals
2 Financial goals	Boost match day revenues from ticket sales, food and hospitality
3 Public interest goals	Raise media coverage and social media interest
4 Game development goals	Develop new and existing amateur players, clubs and teams

Table III.
Goals of national sports organizations

Notes: The goals of NNSOs may differ based on business model, global rankings and resources
Sources: Winand *et al.* (2013), O’Boyle and Hassan (2014)

and the amounts of operating budget and increases in financial support. Additionally, the researcher reported that the organizations that were able to develop larger operating budgets tend to be more successful in international competitions. In the second study, Wolfe *et al.* (2002) qualitatively evaluated the perceptions of OE in intercollegiate athletics by interviewing ten stakeholders who revealed that college tend to judge their effectiveness through on-field performance, graduation rates, program ethics, image building, resource acquisitions, and institutional enthusiasm. Lastly, Omondi-Ochieng and Stewart (2012) applied both the goal and systems model to examine the OE of 53 African national football governing bodies that participated in the Africa Cup of Nations. The findings indicated a positive and significant correlation between the governing bodies that set the goal of qualifying for the African Cup of Nations and the amount of resources utilized. Omondi-Ochieng (2013), also reported similar results with Asian national football governing bodies. The Asian nations with the goal of qualifying for the Asia Cup of Nations and FIFA World Cup, do tend to invest substantially more resources targeted towards the production of on-field success relative to those who did not qualify.

However, despite the promise of using the goal model to evaluate OE, some critics have cited three weaknesses: it is often difficult to set standards and predicting what is achievable, especially if there are too many stakeholders working in an environment of political interference and scarce resources, it ignores intangible, often shifting and non-goal dimensions of OE such as national pride, love of the game and satisfaction, and goals can also be inconsistent, contradictory, or incoherent (Omondi-Ochieng, 2013; Winand *et al.*, 2010; Bayle and Madella, 2002). However, one goal that is common to all NNSOs is to improve national performance at both the Olympics and world championships.

4.2 Internal process model of OE

The second way of evaluating OE is the internal process model, which is the extent to which an organization is cohesively and smoothly run with satisfied, committed, and motivated employees (Pfeffer, 1977; Steers, 1977). The indicators commonly used here are coach/team turnover and the number and frequency of league strikes and/or lockouts.

Previous studies have stressed that for organizations to be successful externally, they must first be successful internally (Fabianic, 1984; Chelladurai *et al.*, 1987; Chelladurai and Haggerty, 1991; Winand *et al.*, 2010). The first study by Fabianic (1984), evaluated the association between managerial turnover and succession on OE in major league baseball from 1951-1980, in view of franchise additions and relocations. OE was measured as win percentage and correlated to the average number of managers employed by a team. The researchers reported that there was no association between OE and the rate of managerial effectiveness. The second study was conducted by Chelladurai *et al.* (1987), who sourced data from 48 Canadian NNSOs with the help of 150 questionnaires. They concluded that OE (measured as results from elite programs and increases in mass sports participation) was derived from the combination of inputs (revenues and human resources) and throughput and output factors. In another study, Chelladurai and Haggerty (1991) expanded their previous findings by accessing the OE of 51 Canadian national sports organizations by interviewing 153 volunteers and 84 professional administrators. The results indicated that volunteer administrators were more satisfied than professional administrators, with decision making and personal relations positively correlating to higher levels of job satisfaction. Finally, Winand *et al.* (2010), evaluated the strategic objectives (sport results and customer engagement) and operational goals (communication and image, finance and organization) of 56 sports governing bodies and 27 Olympic sports governing bodies to report that the later was a key factor in OE.

4.3 *Systems resources model of OE*

The third way of appraising OE is the systems resources model which is the extent to which an organization acquires scarce resources from its environment (Yuchtman and Seashore, 1967; Lawrence and Lorsch, 1967). Previous researchers have cited the following advantages of using the systems resource model in OE studies of sports organizations: it treats the organization itself as a frame of reference, it takes into account the organization's relations to the environment and, it is ideal for comparison of organizations with different goals (Koski, 1995; Papadimitriou, 2002; Omondi-Ochieng, 2014). In the first study, Koski (1995) analyzed the OE of voluntary amateur Finish sports clubs by surveying 835 respondents to report that the ability to obtain resources, efficiency of throughput process, realization of aims, and general levels of activity were the key contributors to organizational success. The strength of this study was that the relationships between input, throughputs, output and environmental variables were examined. In another study, Papadimitriou (2002) used a combination of goal and systems resource model to examine local voluntary sports organizations and reported that they were loosely structured, less bureaucratic, dependent on external resources, and target moderate performances. In this study, performance was only indicated as number of athletic programs and number of sports offered by the clubs. Finally, Omondi-Ochieng (2014) examined how Asian national football teams acquired economic resources to advance their national teams through the Asia Cup. The results indicated that nations that regularly qualified for the tournament tend to apportion larger financial resources towards national football success through the construction of training facilities and the building of expensive stadiums to host major football tournaments.

However, critics of the systems resources model do point that real OE may be camouflaged in organizations that benefit from guaranteed government funding, such as national sports federations, and that some resource-rich organizations may still fail due to misuse of resources or corruption (Chelladurai and Haggerty, 1991; Omondi-Ochieng, 2014).

4.4 *Multiple constituency model of OE*

The fourth way of gauging OE is the multiple constituency model, which is the extent to which all stakeholders or clients' needs are satisfied (Connolly *et al.*, 1980). Indicators of the uses of this approach include diversity programs and gender equity initiatives.

Previous researchers have noted that sports organizations cannot work in a vacuum as they must positively engage their stakeholders (attendees, social media fans, the government, corporate sponsors, teams, clubs and governing bodies) to become effective (Vail, 1986; Papadimitriou and Taylor, 2000). In the first study, Vail (1986) evaluated thirty three national sports organizations with the help of one-hundred and forty questionnaires to report that OE was largely due to adaptability, communication, finance, human resources, and organizational planning. The study ignored sports results. Similarly, Papadimitriou and Taylor (2000) utilized a sample of twenty Greek national sports organizations to report that OE was due to: quality and stability of board members, long-term planning, sport science support, interest in athletes, and internal procedures. The study measured satisfaction levels of various stakeholders but neglected goal and FP.

4.5 *Competing values approach (CVA) of OE*

The fifth way of measuring OE is the CVA, which is the extent to which an organization maintains stability and control while being adoptable and flexible (Quinn and Rohrbaugh, 1983).

Past researchers have noted that sports organizations ought to be flexible and adoptive to change so as to remain competitive (Shilbury and Moore, 2006; Balduck, 2009; Wemmer, *et al.*, 2016). In the first study, Shilbury and Moore (2006), used both qualitative and quantitative data to examine ten non-profit Australian national Olympic sport governing bodies.

Two hundred and eighty nine stakeholders from ten national Olympic sports organizations were surveyed and the data analyzed using factor analysis. The results showed that the primary indicator of OE were the ability to produce goals, followed by planning, flexibility and stability. The CVA allows managers to quickly ascertain strengths and weaknesses of their sport governing bodies. Additionally, Balduck (2009) examined non-profit sports clubs to assess program and management effectiveness of board members. The results were that the competing goals of management and participants were solved by adopting, changing and expanding existing programs. Lastly Wemmer *et al.* (2016) examined the effect of collaborations with competitors on the OP of non-profit sports clubs via use of outside knowledge and the adoption of new services, processes, and business models. The study used an online survey of 292 members of the board of directors in Germany sports clubs. Results indicated that engagement in cooperation and outside knowledge had a positive effect on OP.

4.6 Multidimensional approach to OE

The last way of determining OE is the multidimensional approach (Cameron, 1978). That OE is an all-in-one approach comprising goal, internal processes, systems resources, multiple stakeholders and competing values models (Madella *et al.*, 2005; Rocha and Turner, 2008; Nowy *et al.*, 2015). In the first study, Madella *et al.* (2005) examined national swimming federations and reported that OE was due to multiple factors – human resources, finances, communication, partnerships and inter-organizational relations, volume and quality of services, and athlete's international performances. In another study, Rocha and Turner (2008) examined intercollegiate athletic programs and concluded that athletic achievement, graduation rates, social and FP were the key contributors to OE. The researchers surveyed 241 coaches from NCAA division I universities and also reported that coaches' commitment and citizenship behaviors were insignificant in predicting the OE of athletic departments. Lastly, Nowy *et al.* (2015) evaluated the differences in OE of 1,640 non-profit and 732 for-profit sport organizations in German using an online surveys. The results indicate that for-profits outperform nonprofits in overall FP with the latter attaching more importance to program quality, employee qualifications and strategies.

5. FY using financial ratios

FY is the cost effective use of the financial resources of a NNSO so as to accomplish its programs and services objectives, as indicated by financial ratios. The origins and uses of financial ratios can be traced back to the need for sound financial management pertaining to credit valuation, the business transactions and negotiations between and amongst lenders, rating agencies, and investors. To date various types of financial ratios have been adopted to assess and measure the overall financial efficiencies of NNSOs to detect the efficient use or misuses of revenues, donations and other monetary resources. In a competitive, resource scarce environment, the uses, applications and value of financial ratios have evolved to be the premier FY measure – both for-profit and NNSOs. The contribution of financial ratio analysis theory in this area is significant. Previous studies indicate that the uses and applications of financial ratios to ascertain FY have the following advantages: simplification of complex financial data, enabling easier comparison, easing trend analysis, and highlighting important financial information (Trussel and Greenlee, 2004; Zietlow *et al.*, 2011; Winand *et al.*, 2012). Financial ratios can be classified according to the information they provide and the specific goal of assessment (Greenlee and Bukovinsky, 1998). As such, the aim of this study is to utilize financial ratios that are specific to evaluating the financial efficiencies of NNSOs such as program services ratio and support service ratio.

5.1 Program services ratio

Program services ratio measures how a NNSO is efficient at delivering its programs, with the benchmark being – lower is better (equation 2) (www.demonstratingvalue.org). For instance, a program service ratio of 0.2 or 20 percent is better than 0.9 or 90 percent, as the latter indicates risky and wasteful use of hard-to-get revenues:

$$\text{Program Services Ratio} = \frac{\text{Total Program Services}}{\text{Total Revenues}} \quad (2)$$

Similar ratios have been previously used by (Greenlee and Bukovinsky, 1998; Baber *et al.*, 2001; Schmidgall and DeFranco, 2004; Cordery *et al.*, 2013; Ritchie and Kolodinsky, 2003; McLaughlin, 2016; Omondi-Ochieng, 2016). Program services include such expenses as camps, competitions and coaching fees amongst others.

5.2 Support Services Ratio

Support services ratio measures how a NNSO is efficient at using its supporting services, with the benchmark being – lower is better (www.demonstratingvalue.org) (Equation 3). For instance, a support services ratio of 0.3 or 30 percent is better than 0.7 or 70 percent. The former (30 percent) indicates that the NNSO economizes the use of hard-to-get revenues for its support services:

$$\text{Support Services Ratio} = \frac{\text{Total Supporting Services}}{\text{Total Revenues}} \quad (3)$$

Similar ratios have been previously used by (Greenlee and Bukovinsky, 1998; Baber *et al.*, 2001; Schmidgall and DeFranco, 2004; Cordery *et al.*, 2013; Ritchie and Kolodinsky, 2003; McLaughlin, 2016; Omondi-Ochieng, 2016). Such support services include contract labor, equipment rentals and IT Support amongst others.

5.3 Net income

Net income is also known as net profit and measures the amount of total revenue that exceeds total expenses, given as (Equation 4) (www.myaccountingcourse.com):

$$\text{Net income} = \text{Total Revenues} - \text{Total Expenses} \quad (4)$$

Net income measures how efficient the company is at producing profits, with higher profits almost always preferable and is also used by donors, creditors and the board members to gauge the financial position and ability to efficiently managed assets. The advantages of a NNSO having a positive net income is that it can be used to offset loans, initiate or improve programs and services, save for future emergencies and/or add additional permanent professional staff (www.myaccountingcourse.com/financial-ratios/net-income).

5.4 Return on assets (ROA) ratio

ROA, also known as asset utilization ratio and is commonly used as a profitability ratio that measures the net income produced by total assets during a period – by comparing net income to average total assets (www.myaccountingcourse.com/financial-ratios/return-on-assets). However, it also increasingly applied in measuring how efficient an organization can generate revenues or produce profits from using its assets. The ratio can help managers and stakeholders to evaluate how well the organization converts its investments in the form of assets into revenues or profits. In short, the ratio measures how efficient an organization utilizes its assets to gain a net profit – with a higher ratio being better. For instance, a ROA of 0.8 or 80 percent is excellent compared to a 10 percent. Depending on the size of the NNSO,

assets may include: administrative offices, cars, training facilities such as gym and fields, stadium, and office furniture amongst others (Table IV). ROA has been previously used in the following studies (Dimitropoulos, 2010; Winand *et al.*, 2012; Ecer and Boyukaslan, 2014; Sakinç, 2014).

6. Methodology

This section contains data sources, measurement variables (dependent and independent) and the case study approach.

6.1 Data sources

This study used archival data from audited financial reports and form 990 sourced from www.teamusa.org/usa-table-tennis/usatt/financial-reports for the period 2004-2015. Audited financial reports are examinations of an entity's financial statement and accompanying disclosures by an independent auditor. From the audited reports, the author examined the following statements: statement of financial position, statement of activities and changes in net assets, and the statement of cash flows to access the financial health of USTTA. Form 990 is an Internal Revenue Service form that is filed by tax exempt organizations and is intended to give the government and the public a clearer picture of the organization's activities annually. Form 990 also had information pertaining to mission, number of employees, expenses, revenues, and assets.

6.2 Measurement variables

The study variables were divided into two categories – dependent variables and independent variables. Dependent variable was FP measured as net profits from 2004-2015. Independent variables were FE (quantified as annual total asset and total revenues) and FY calculated as program services ratios and support services ratios over the same period.

Ratio types and formulas	Uses and interpretations
Program Services Ratio = $\frac{\text{Total program services}}{\text{Total Revenues}}$	Measures how a non-profit organization is efficient at delivering its programs Benchmark – lower is better Rating – high (1-32%) medium (33-65%) and low (66-100%)
Supporting Services Ratio = $\frac{\text{Total supporting services}}{\text{Total Revenues}}$	Measures how a non-profit organization is efficient at using its supporting services Benchmark – lower is better Rating – high (1-32%) medium (33-65%) and low (66-100%)
Net Income ratio = Total Revenues – Total Expenses	Measures how profitable a non-profit organization is Benchmark – the higher the better Rating – above average (good) and below average (poor)
Return on Assets = $\frac{\text{Net income}}{\text{Average Total Assets}}$	Measures how efficient a non-profit organization is at utilizing its assets to generate revenues or profits Benchmark – the higher the better Rating – high (66-100%) medium (33-65%) and low (1-32%)

Note: The three ratios have been selected based on their suitability to NNSOs

Sources: Cordery *et al.*, 2013, Ritchie and Kolodinsky, 2003, McLaughlin, 2016, Omondi-Ochieng, 2016

Table IV.
Financial efficiency
ratio formulas

6.3 Case study method

According to (Hancock and Algozzine, 2016; Yin, 2017; Tight, 2017), in the case study method, the findings are the basis of the data collected with a focus on the unique features of a particular individual and/or organization. The authors further add that the advantages of the case study method are: suitability in researching a unique phenomenon, in this case financial management of a single organization, effectiveness and reliability as its biasness provides intuitive and insinuated findings; it fully depicts the depth of particularities within an organization, and is often done to make practical improvements. However, the authors also add that disadvantages of case study method may include lack of generalizeability to larger populations, time consumption, and that it represents depth of information, rather than breadth.

7. Results

The following section pertains to the calculated results of FP, FE and FY (Table V).

7.1 FP results

Overall, the 2004-2015 FP of USTTA was weak with seven of the 12 years analyzed recorded losses. The mean net loss was \$6,475, the worst loss was 183,838 in 2015 and the highest net profit was 100,556 in 2007 (Table V).

7.2 FE results

USTTA was quite effective in accumulating assets and revenues (Table VI). Mean total assets was 764,669, the organization accumulated a maximum total assets of 944,540 in 2013 and the lowest total assets was 565,814 – occurring in 2004. Total revenues increased in 6 out of the 12 years, with a mean of 1,324,855. 2013 was a good year with the highest revenues increases of 1,794,555 and the worst revenue generation year was 2009 with 1,084,761 raised (Table VII).

7.3 FY results

FY was measured in three ways – program services ratio, support services ratios, return on asset ratio. USTTA was very ineffective by spending over 81 percent of all its revenues

	Year	Net income	Increments/reductions	Above/below average
1	2004	12,605	Unknown	Above
2	2005	98,738	Positive (+)	Above
3	2006	556	Negative (-)	Above
4	2007	100,556	Positive (+)	Above
5	2008	-19,297	Negative (-)	Below
6	2009	33,708	Positive (+)	Above
7	2010	-6,414	Negative (-)	Below
8	2011	-1,481	Negative (-)	Below
9	2012	-42,365	Negative (-)	Below
10	2013	10,011	Positive (+)	Above
11	2014	-80,490	Negative (-)	Below
12	2015	-183,828	Negative (-)	Below
		Minimum = -183,828		
		Maximum = 100,556		
		Mean = -6,475		

Table V.
Net income
results, 2004-2015

Notes: Data prior to 2004 and after 2015 was not available. Currencies in US\$
Sources: USTTA, Independent Audited Reports (2004-2015)

	Year	Total assets	Increments or reductions	Total revenues
1	2004	565,814		1,244,463
2	2005	623,204		1,272,104
3	2006	710,049		1,145,040
4	2007	836,021		1,126,515
5	2008	779,489		1,098,774
6	2009	777,301		1,084,761
7	2010	797,026		1,242,302
8	2011	833,564		1,342,636
9	2012	839,802		1,738,888
10	2013	944,540		1,794,555
11	2014	708,507		1,489,236
12	2015	619,248		1,476,404
		Minimum = 565,814		Minimum = 1,084,761
		Maximum = 944,540		Maximum = 1,794,555
		Mean = 764,669		Mean = 1,324,845

Note: Data prior to 2004 and after 2015 is not available, currencies in US\$
Sources: USTTA, Independent audited reports (2004-2015)

Table VI.
Financial effectiveness
results (2004-2015)

	Year	PSR	SSR		ROA
1	2004	0.73	0.20	Same	2.2
2	2005	0.76	0.23	Above	15.8
3	2006	0.74	0.18	Below	-7.8
4	2007	0.74	0.17	Below	12.0
5	2008	0.79	0.23	Above	-2.5
6	2009	0.70	0.27	Above	4.3
7	2010	0.88	0.28	Above	-0.8
8	2011	0.83	0.18	Below	-0.2
9	2012	0.89	0.13	Below	-5.0
10	2013	0.85	0.14	Below	1.1
11	2014	0.86	0.19	Below	-11.4
12	2015	0.89	0.24	Above	-29.7
		Minimum = 0.70	Minimum = 0.13		Minimum = -29.7
		Maximum = 0.89	Maximum = 0.28		Maximum = 15.8
		Mean = 0.81	Mean = 0.20		Mean = -201.48%

Notes: PSR, program service ratio; SSR, support services ratio; ROA, Return on assets. Data prior to 2004 and after 2015 is not available, currencies in US\$

Sources: USTTA, independent audited reports (2004-2015)

Table VII.
Financial efficiency
results (2004-2015)

on programs on average. The organization was most ineffective in 2015 when they spent 89 percent of all revenues on programs and suffered a 29.7 percent ROA. However, 2009 was the most effective with 70 percent revenues spent on program services and a high ROA of 4.3 percent. In 2007, the organization utilized their assets well with a ROA of 12 percent (Table VIII).

8. Discussions of managerial and policy implications

This paper examined the FP of USTTA using FE indicators and FY ratios, for the period 2004-2015.

FP from 2004 to 2015, the overall net income of USTTA was dismal, with an average annual loss of \$6,475. The best year was 2007 when the organization made 100,556 and the

worse year was 2015 with a net loss of -183,828. To maintain their donations and achieve financial sustainable growth in a highly competitive environment, NNSOs have been forced to incessantly reorient and redesign their operational strategies by increasingly offering innovative products and services, constantly improving engagement with clients to attract new clients and to retain the existing once (Wemmer Emrich and Koenigstorfer 2016). Financial ratios can therefore be a good judge of what the NNSO has achieved, and not what they plan to do, especially when administrators keep and maintain regular and accurate financial statements (Schmidgall and DeFranco, 2004). However, as of 2015, USTTA was heavily dependent on two main revenue sources – 70.2 percent in all, making it at great risk for default, bankruptcy and/or services and program cancelations. The goal of NNSOs is to manage their financial resources so as to continue surviving and possibly gain financial independence – by striving to generate revenues while reducing expenditures (Ozawa *et al.*, 2004; Panagiotis, 2009).

FE was examined from two fronts, as the ability of USTTA to assemble needed assets and generate additional revenues – measured as total assets and total revenues. In regards to total assets, USTTA had a maximum of 944,540 in 2013, a minimum of 565,814 in 2004 and an average of 764,669 worth of total assets. Total revenues were highest in 2013 when the assets were also at maximum. The minimum revenue was 1,084,761 in 2009, possibly due to the effects of the global financial crisis. The mean revenues generation capacity was average at 1,324,845. Either through government mandate or internal policies that are robust, targeted and transparent, the organization can become more financial effective by finding additional opportunities that raise revenues and building infrastructure (Nowy *et al.*, 2015). Adequate finances can therefore go a long way in promotions and marketing (to help attract corporate sponsors), recruit and train quality coaches, administrators and players, as well as build facilities for training, hosting tournaments and for administration (Musso *et al.*, 2016). Managers, administrators and policy makers may therefore find it to their advantage to aggressively lobby for more government funds, negotiate corporate sponsorship as it is increasingly obvious that financial resources are required before performance excellence (Mathieu *et al.*, 2012; Miragaia *et al.*, 2016).

FY was examined using program service ratio, support service ratios and ROA as commonly used in previous studies (Hamil and Walters, 2010; Mathieu *et al.*, 2012). USTTA, on average from 2004 to 2016 spent over 81 percent of its revenues on programs, with a minimum of 70 percent in 2009 and a maximum of 89 percent in 2012 and 2015 respectively. USTTA spent much less on support services with the maximum being 28 percent of revenues in 2010, minimum 13 percent in 2012 while averaging 20 percent from 2004 to 2016 respectively. The best ROA was 15.8 percent in 2005 while the worst was 29.7 in 2015. This indicates that USTTA needs to shed some assets or become more innovative in its programs and services so as to increase usage and revenues (Omondi-Ochieng, 2014; Hoeber *et al.*, 2015). What USTTA needs to do is to reduce their membership fee – this is so because as of 2017, membership

	Problem	Possible solution
1	High cost of human capital	Use of more volunteers
2	High cost of program services	Cut “underperforming” programs
3	High costs of support services	Reduce R&D and marketing budget
4	General inefficiency	Cost cutting by selling idle buildings Leasing instead of building
5	General ineffectiveness	Advertising, promotions, & marketing

Note: Poor financial performance may also be rooted in embezzlement, scarcity, corruption, etc

Sources: Omondi-Ochieng (2016), Scheerder *et al.* (2014)

Table VIII.
Possible solutions
to poor financial
performance

coasted \$75 per year for adults and \$45 for kids and college students, which could still be unaffordable for potential participants (www.teamusa.org/usa-table-tennis/usatt).

In sum, most NNSOs have neglected the combined uses of effectiveness and efficiency indicators by narrowly focusing on medals (Madella *et al.*, 2005; Bayle and Robinson, 2007). Although FP is of interest to NNSOs, it is increasingly becoming of particular interest to managers who must address multiple concerns of stakeholders, public and private donors and fans who demand international recognition from winning Olympic medals (Bayle and Robinson, 2007; Balduck, 2009). Moreover, NNSOs are always competing against other private entities with bigger budgets and offering similar services and programs (Claessens *et al.*, 2014). Moreover, in a difficult economic climate, NNSO are often faced by constant thorny dilemmas; fierce competition, shrinking budgets, yet they are still expected to produce positive results (Cordery *et al.*, 2013). Essentially NNSOs have two options; either to reduce costs or increase FE and FY. In reality, however, no NNSO can offer all services and programs that they wish or their clients want. However, archiving revenue growth and general long-term growth would be overall performance enhancement, within the limitations of human and financial resources (Omondi-Ochieng, 2013; Omondi-Ochieng, 2016). Such organizations may therefore need to continuously engage in marketing activities in order to attract and retain customers. Sometimes NNSOs may seem effective due to favorable climate. For instance years prior to the Olympics, NNSO tend to receive increases in revenues.

9. Conclusion and research implications

Performance measurements are fundamental to management planning and control activities and accordingly have received considerable attention by both management practitioners and sports theorists (Panagiotis, 2009; Omondi-Ochieng, 2016). The present study aimed to evaluate the FP of USTTA from 2004-2015 based on FE and FY using a case study method. FE and efficiency are central terms for assessing and measuring the FP of NNSOs such as USTTA. Despite the value of assessing and measuring overall FP, the present study indicated the difficulty of achieving a balance between being both financially efficient and financially effective simultaneously. The study offers three important lessons.

One, the study demonstrates that USTTA failed at being both financially effective and financially efficient, as dealing with one and neglecting the other means ignoring the creation and development of new sources of revenues possible for sustainable financial development. Most NNSOs focus too much on fundraising and tend to neglect organic growth through efficient service and program delivery (Baber *et al.*, 2001; Baruch and Ramalho, 2006; Balduck, 2009). USTTA particularly faces the problem of idle assets, which tend to slow overall FP as shown by negative net income. One possible solution to idle assets such as training fields and facilities is to sell, offer external rentals or leasing out to local schools.

Two, the study provides evidence that improving overall FP requires extraordinary managerial capabilities based on sound organizational policies directed at prudent financial practices. Efficiency involves financial discipline and control over operations and working capital requirements (Bull, 2007; Ecer and Boyukaslan 2014; Whereas effectiveness requires the NNSO ability to develop their own strategies for sustainable growth, in a manner that can differentiate themselves and be creatively innovative, especially focused on revenue generation (Wemmer *et al.*, 2016; Winand and Anagnostopoulos, 2017). Nevertheless, non-profit organizations can only sustain their operations if revenues far exceeds expenses (Omondi-Ochieng, 2016). NNSO, therefore need to see efficiency as a necessary, but not sufficient condition and to consider effectiveness not just as an output but as a continuous process of resource acquisition.

Three, this research outcome could stimulate a research agenda in three themes: First, imperial investigation is needed as to how NNSO perceive or define their performance.

Are performance standards dictated by US Olympic committee, funders or stakeholders? For USTTA constantly performs dismally at the Olympics compared to the US basketball association and so may choose to define their performance differently. Second, there is a need to learn more if NNSO abide by or comply with efficiency requirements possibly set by themselves or by funders. In other words are NNSOs required to be financially efficient? If so by who and to what extent? For example for every tax dollar allocated by the government, what percentage needs to go into services and programs? If so who decides on the amount? How do NNSO know that they are financially efficient? Do the NNSOs prefer the use of financial ratios as indicators of FY? Lastly, is the need to improve our understanding about why most NNSOs are ineffective? Is it that they do not see the need? Or is there no regulatory, legal or policy mandates for them to do so. Or is it that they are faced with too many financial constraints such as depending almost entirely on donation and handouts. Apart from the need for managerial effectiveness, we can also pose the question of who will discipline the management for poor FP. Table tennis was first played at the 1988 Olympic Games, with Asian nations dominating the possible 12 medals available. USA is yet to win any medal. Future research could investigate the possible reasons for the dismal performance. Could it be funding, talent, facilities or any other hidden factors? The research did not consider off-field factors that may influence on-field performance on the national teams managed by USTTA.

10. Research limitations

The study did also have its limits. First, NNSOs tend to receive direct government services which may falsely indicate that the organization is efficient (Bayle and Robinson, 2007). Moreover, some donors may also restrict the uses of their monies to certain services or programs, thereby preventing the proper productive allocations of such funds (Baruch and Ramalho, 2006; Cordery *et al.*, 2013). Moreover, NNSOs often have strategic objectives that are intangible and challenging to measure as they are shaped by the multiple expectations of public stakeholders – which may further constrain finances (Musso *et al.*, 2016). Human resources include both paid and volunteers – all making their internal functioning less clear compared to that of a private business (Papadimitriou, 2002; Omondi-Ochieng, 2017). Another research issue, generally with NNSOs is that they only avail short term data to the public, with majority of sports organizations still do not have their financial information publicly accessible. If and when the financial information is available, most are usually disorganized, unclear and too short for longitudinal research. Despite these potential drawbacks, the researcher made all efforts to obtain audited financial reports from the organization and from the website www.guidestar.org/, which offers mostly free accurate and updated financial information of thousands of nonprofits. As NNSOs start striving to be effective, we also have to bear in mind that financial ratios are not the only way of measuring success. Financial ratios may also have other possible disadvantages such as: there could be differentials in operating environments due to regulations and market structure, may be affected by estimates and assumptions based on different accounting policies, and are usually based on past information which may neglect current and future information (Bull, 2007; Zietlow *et al.*, 2011; Omondi-Ochieng, 2017).

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