The Nonprofit Sector's Two-Tier Accountability System: Is It Optimal? A Game-Theoretical Analysis

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Abstract
Industry practice in the nonprofit sector has evolved towards a two-tier accountability system. The first tier is accounting-based, while the second comprises of more holistic instruments. This study theoretically evaluates welfare conditions and economic costs of compliance in this architecture of accountability. Therefore, it develops a unique model, that is analyzed using comparative statics and game-theory. In the posited one-tier structure underpinned by strict accounting stipulations, it may be strategic for the 'good' nonprofit organization (NPO) not to reveal its true type and, yet, still optimize social welfare. It is found that economic costs of compliance diverge because of difference in types of NPOs, not resources or technology. Further, the 'not-so-good' nonprofit hides its true type in the first-tier accounting system, while the same stipulations penalize its 'good' counterpart. On the other hand, the second accountability instrument enables the good NPO to reveal itself, access more resources and significantly enhance societal welfare. However, this creates a monopolistically competitive nonprofit sector that best optimizes aggregate wellbeing. This study, additionally, finds that the two-tier system better address the anomaly of asymmetric information. Together, they are a communicative system that help stakeholders as well as nonprofits match or self-select themselves according to type. This study buttresses the school of thought that accounting stipulations are a necessary but incomplete accountability requirement.
Keywords: Accounting Costs of Accountability, Economic Costs of Accountability, Non-governmental Organizations, Societal Welfare.

1. Introduction
Misconduct and scandals in the nonprofit sector has stirred significant attention and effort to enhance accountability in the industry (Abouassi and Trent, 2016; Ahmed and Hopper, 2014; Anheier, 2014; Bornstein, 2006; Elbers and Arts, 2011; Trussel, 2003). In academia, it has encouraged much research (Burger and Owens, 2010; Candler and Dumont, 2010; Charnovitz, 2012; O'Dwyer and Boomsma, 2015; O'Dwyer and Unerman. 2007; Pallas and Guidero, 2016; Schmitz and Raggo, 2012; Sedatole, Swaney, Yetman and Yetman, 2013; Tremblay-Boire and Prakash, 2015; Trivunovic, Johnsøn and Mathisen, 2011; Williams and Taylor, 2013). Practitioners and

stakeholders, as a result, have designed and implemented varied accountability instruments to monitor the sector's activities and operations (Benjamin and Campbell, 2015, Benjamin, 2010; Marshall and Suárez, 2013). As a result, accountability for nonprofits has evolved into a two-tier arrangement, with the first level being accounting-based and the second including more holistic instruments that are non-accounting in nature (Agyemang *et al.*, 2009; Awio, Northcott and Lawrence, 2011; Bebbington and Unerman, 2014; Bloodgood, Tremblay-Boire and Prakash, 2013; Boomsma and O'Dwyer, 2014).

Accounting-based accountability instruments are mostly disclosure reports including: balance sheets, cash flow statements and performance reports (Assad and Goddard, 2010; Chapman, Cooper and Miller, 2010; Hall and O'Dwyer, 2017). These must be audited by independent certified accountants in good standing to ensure that they are accurate representations of how the NPO utilized donor funds. Submitted auditor reports of this sort emphasize financial and resource accountability. Further, they are more legalistic and tend to be influenced by the information needs of donors and the state (Agyemang *et al.*, 2009; Davies and Martin, 2015; Deloffre, 2016). Consequently, there is an underlying premise that stricter accounting stipulations may encourage increased reporting of other critical dimensions of accountability (Davies and Martin, 2015; Deloffre, 2016; Nyamori, 2009; Parsons, 2003; Trussel, 2003). As well, it would significantly minimize financial misconduct in the industry.

The second-tier comprises of additional formats developed, partly, to address flaws with the previously mentioned system, comprising of the framework of accounting stipulations (Benjamin, 2008; Benjamin, 2010; Benjamin, 2013; Mir and Bala, 2014; Sloan, 2009; Suarez and Gugerty, 2016). They, however, add another layer of credence to the judicious utilization of proffered funds and resources to NPOs. Such non-accounting mechanisms are not statutorily mandatory but may be required by the donor. Alternatively, the nonprofit may adopt such stipulations voluntarily (Gugerty, 2010, Gugerty and Prakash 2010; Humphreys, Gary and Trotman, 2016; Winkin, Crack and Pies, 2017). These instruments include beneficiary participation assessments, peer reviews and social auditing. Such accountability systems involve additional external stakeholders apart from donors. Underlying second-tier mechanisms is the tenet that nonprofits have a responsibility to all stakeholders, not just their small select group of financiers and related associates.

Despite this two-tier structure, there are relatively few critical studies that evaluate societal welfare and economic costs of compliance. Particularly, one of the research questions this study addresses is: Which of the following maximizes the welfare of society: a one-tier or the current two-level accountability system? Furthermore, what is the nature of economic costs of complying with the accounting code in the one- versus two-level system? Does the accounting system favor particular types of NPOs? Can the two-tier system alter the nature of competition in the nonprofit industry?

Briefly, this study finds that a one-tier system, no matter how strict, does not completely maximize social welfare as does the current two-level arrangement. In relation to this, equilibrium in the accounting stipulations-only framework is sub-optimal. Additionally, the economic cost of complying with accounting requirements is influenced by type of the NPO, particularly whether its interests are appropriately aligned with both internal and external stakeholders. In fact, the study finds that the ‘good’ type of NPO has little incentive to reveal its true type if the accountability instrument fails to address the underlying anomaly of asymmetric information within the one-tier system. Therefore, in such circumstances, it lets stakeholders assume it is similar to the other type. As such, the accounting-based system punishes the ‘good’ NGO for doing what is right, while it enables its contrasting counterpart to hide its divergent interests.

In a two-tier system where the second instrument is more holistic and provides accurate information, aggregate social welfare significantly exceeds the one-level alternative. In this instance, the ‘good’ NGO reveals its true type and produces enormously more public goods and services, while the ‘not-so-good’ NGO is not worse off. The study illustrates that one of the key challenges to maximizing social welfare is not lack of donor funds or high production costs. Rather, it is the cost of finding ‘good’ NGOs.

Moreover, the two-tier mechanism converts the nonprofit sector to a monopolistically competitive industry. Consequently, the price difference of output between the two types of NPOs is a sum of their marginal cost and marginal product differentials. This reflects the per unit cost of finding a ‘good’ NGO. It may also be interpreted as the marginal cost of the second accountability instrument.

Organizationally, the second section of the paper presents a succinct literature review. The third segment answers the foregoing research questions by developing an original model, subsequently analyzed using comparative statics and game theory. The final chapter concludes and summarizes.

2. Literature review

2.1 NGO Accountability: Framework, nature and theoretical foundation

Accountability is a multi-dimensional construct that may be influenced by the underlying particular school of thought (Jacobs and Wilford, 2007; Jordan and Van Tuijl, 2012; Lloyd and de Las Casas, 2006; Merkle-Davies and Brennan, 2017; Radcliffe, Spence and Stein, 2017). From one perspective, it is a mechanism by which organizations report how they utilized resources provided by stakeholders. Legally, they may refer to mechanisms by which entities are held liable for their actions. Accountability, also, encompasses being responsible for one’s conduct (Cordery and Baskerville, 2011; Crack, 2016, Dhanani and Connolly, 2015; Ebrahim, 2003a).

For NGOs, accountability may be downward and / or upward in nature (Ahmed and Hopper, 2014; Unerman *et al*., 2010). Added to this, Lawrence and Nezhad (2009) introduce two additional related dimensions, namely: inward and peer accountability. These concepts mainly refer to the particular stakeholders that the accountable entity is liable to (Agyemang, Aumbila, Unerman and O-Dwyer, 2012).

An associated paradigm categorizes nonprofit accountability into functional, social and strategic forms (Chenhall, Hall and Smith, 2010; Hielscher *et al.*, 2017; Martinez and Cooper, 2017). The first refers to accounting for resource utilization and its consequent effects. This mainly covers accounting stipulations. The social form concentrates on accountability to key stakeholders, including employees and beneficiaries (O'Dwyer and Unerman, 2007). Strategic accountability, similarly, involves liability for the consequent effects of the organization’s actions on stakeholders. However, it includes responsibility to and for externalities on the surrounding environment (Abouassi and Trent, 2016; Elbers and Arts, 2011; Staples, 2008; Unerman, Bebbington and O'Dwyer, 2010; Unerman and O'Dwyer, 2012).

A divergent school of thought develops four key related constructs of accountability (Williams and Taylor, 2013). The first is compliance accountability, referring to actions that are fundamentally reactive to external factors. These are motivated by the intent to comply with explicitly enforced stipulations (Reck and Lowensohn, 2016; O’Dwyer and Boomsma, 2019). This is similar to the previously mentioned functional accountability. The second paradigm, negotiated accountability, is based on dynamic and evolving principles influenced by changing societal norms and values (Mir and Bala, 2014; Mueller-Hirth, 2012). Within this definition, entities strategically negotiate with principals and pertinent stakeholders to determine accountability instruments and requirements. Professional/discretionary accountability is the third tenet. It is more proactive in nature, such that it accepts that agents use their discretion to alter internal behaviour and responses to externally designed requirements, despite potential threats. In this case, the agent is responsible to “do the right thing” even when it may not appear to be possible or is not required. The final type, anticipatory/positioning accountability, describes accountable organizations anticipating future stipulations so as to be compliant in due time (Agyemang *et al.*, 2017).

Departing from the afore-stated frameworks, Merkle-Davies and Brennan (2017) argue that accountability, whether accounting-based or not, is a medium to enhance communication between stakeholders. Relevant communication theories include the critical, functionalist, mathematical, symbolic and socio-cultural hypotheses. In this regard, accounting reports are, therefore, a device to communicate with external stakeholders. Accountability, additionally, becomes a multi-faceted communication concept with varying meanings and influences that may be contradictory in nature (Agyemang *et al.* 2017; Bawole and Langnel, 2016; Candler and Dumont, 2010; Crack, 2016; Dhanani and Connolly, 2015). Related to these are the pertinent communication models, comprising the transactional and transmissional concepts (O’Dwyer and Boomsma, 2019; Saxton *et al.,* 2012; Staples, 2008; Unerman and O'Dwyer, 2012). The transmissional model is mainly unidirectional, with information flowing from the sender to the receiver, such as an audited financial report submitted to external stakeholders. Transactional models, in contrast, are interactive, encouraging a continuous flow of information between stakeholders (Littlejohn and Foss, 2011).

Agyemang *et al.* (2009), moreover, recognize that accountability may be hierarchical or holistic. The former refers to a set of legalistic rigid rules focused primarily on the shortterm. It is, generally, narrowly defined, emphasizing responsibility to donors and government (O'Dwyer and Unerman, 2008). As such, it is also referred to as functional accountability. Holistic accountability, on the other hand, is broader in context. They may not be 'legally defined and enforceable, but may be accepted as ethical responsibilities' (Agyemang *et al.,* 2009). These encourage disclosure, organizational and stakeholder learning as well as transparency. Moreover, they foster the reporting of failure as a model for critical review and learning (Ebrahim, 2005; Jacobs and Wilford, 2010; Jordan, 2007; O'Dwyer and Unerman, 2010; O'Leary, 2017).

Although hierarchical accountability is perceived as more restrictive, holistic systems are more adaptable, enabling and flexible. Yet, the former have their place as they deter and prevent untoward conduct. Therefore, they are usually part of an overall management control system (Assad and Goddard, 2010; Grisard, Graham and Annisette, 2017; Hall and O-Dwyer, 2017). Associated empirical studies cite some underlying tension between hierarchical and holistic accountability. Hierarchical accountability, in some cases, discourage holistic systems due to lack of donor feedback, high opportunity costs, inflexible reporting formats and the possibility of having to disclose failures or outcomes not in line with pre-defined objectives (Agyemang *et al.*, 2012; Agyemang *et al.*, 2017; Anderson, 2009; Bawole and Langnel, 2016). On the whole, hierarchical systems are enhanced when combined with holistic alternatives (Breen, Dunn and Sidel, 2016; Burger and Seabe, 2014; Crawford, Morgan, Cordery and Breen, 2018; Dhanani and Connolly, 2012).

From the theory of influence or power, accountability is subjective because it is determined by the nature of the power relation between the parties involved (Anderson, 2009; Andrews, 2014; Beattie, 2011; Bies and Abouassi, 2018; Bornstein, 2006). As such, in the donor-NGO arrangement, disclosure reports, financial statements and performance appraisals are critical. On the other hand, in dealing with beneficiaries, nonprofits focus not on resource utilization but on deliverables and outcomes. These maybe enumerated in qualitative formats using audiovisual recordings, images or peer reviews (Crack, 2016; Murtaza, 2012). Accountability mechanisms may, as a result, be a collaborative design between multiple stakeholders (Biswas, 2009).

Other key theoretical foundations of accountability include the following tenets: agency, ethical, moral, resource, stakeholder and stewardship theories (Breen *et al.*, 2016, Gugerty and Prakash, 2010b; Trivunovic *et al.*, 2011; Williams and Taylor, 2013). These concepts justify accountability from varying aspects. Some of them develop a legally binding relation between the nonprofit and stakeholders, while other concepts belong to the discretionary school of thought where accountability is 'simply the right thing to do' (Acar, Guo and Yang, 2012; Awio *et al.,* 2011; Bell and Aggleton, 2012; Burger and Owens, 2010; Crawford *et al.,* 2018; Dhanani and Connolly, 2015; Ebrahim, 2003b; Thrandardottir, 2015).

Alternative schools of thought define accountability processes as a means of knowledge sharing (Agyemang *et al.,* 2012). Therefore, within this social-purpose context, it may be used to resolve organizational concerns, having cognitive and structural implications. As accounting processes are exceedingly coercive in nature, they facilitate forced knowledge sharing conditions (Ebrahim, 2010; Gent *et al.*, 2015). This contrasts with other forms of accountability that encourage stakeholder creativity, communication, feedback, interactive dialogue, initiative, motivation and trust (Golub, 2012; Jacobs & Wilford, 2007; Kovach, 2012; Murtaza, 2012).

Building on the relation between accountability and trust, it is worth noting that stakeholders desire to find nonprofits to whom they can entrust their scarce resources that will be used in the manner and for stated purposes that maximize welfare (Abouassi and Trent, 2016; Acar *et al.,* 2012; Awio *et al.,* 2011; Bawole and Langnel, 2016; Bell and Aggleton, 2012; Bekkers, 2012; Bies and Abouassi, 2018; Boomsma and O'Dwyer, 2014; Cordery and Baskerville, 2011; Keating and Thrandardottir, 2017). Therefore, the degree of accountability imposed by stakeholders is inversely related to the trust they have in the nonprofit as increased disclosure and transparency encourages trust, thereby decreasing external accountability requirements (Burger and Owens, 2010; Charnovitz, 2012; Chenhall *et al.*, 2010; Crawford *et al.,* 2018; Ebrahim, 2003b; Humphreys *et al.,* 2016; Jordan and Van Tuijl, 2012).

Accountability instruments comprise rational or social framework of trust (Ebrahim, 2010; Lawrence and Nezhad, 2009; Murtaza, 2012). Rational models foster stricter accountability instruments. Their enforcement may lead to greater deviation between objectives and actual outcomes (O'Dwyer and Boomsma, 2019; Pallas and Guidero, 2016; Radcliffe *et al.*, 2017). This may result in significant adverse trade-offs between varying accountability mechanisms (Maier *et al.,*2014; Martinez and Cooper, 2017; Sloan, 2009; Thrandardottir, 2015).

According to the literature, the form of accountability adopted by the nonprofit may be a strategic organizational response. This occurs when NPOs choose their preferred accountability instrument as a response to economic, legal, social, political or regulatory stipulations (Pache and Santos, 2010b). Such factors may compel nonprofits to be accountable for a variety of reasons, such as credibility and legitimacy (Appe, 2016; Bekkers, 2012; Keating and Thrandardottir, 2017; Reck *et al.,* 2016; Saxton *et al.,* 2012; Thrandardottir, 2015; Unerman and O'Dwyer, 2012). According to this school of thought, nonprofits do not passively conform to extenuating influences but tactically acclimatize themselves to such factors, whether within or without (Greenwood *et al*., 2011; Munir *et al*., 2011; Meyer *et al*., 2014). Formally, the three key strategic responses are: balancing, pacifying or bargaining (Burchell and Cook, 2013; Hoberg and Phillips, 2011; Funnell and Wade, 2012; Pache and Santos, 2010b).

2.2 NGO Accountability: Industry trends and practice

Burger and Seabe (2014), Gugerty (2010a) and Gugerty (2010b) trace the evolution of nonprofit accountability in recent years. They illustrate that accountability was initially a demand by donors and statutory authorities. This led to the development of laws and regulations that formed a set of accounting codes or stipulations. In relation to this, one of the key requirements was the submission of accounting reports (Ebrahim, 2010, Hall and O-Dwyer, 2017; Maier, Meyer and Steinbereithner, 2014; Mir and Bala, 2014;

Pallas and Guidero, 2016). The first-tier was deemed necessary to establish an accurate, credible and legitimate monitoring architecture (Agyemang *et al.,* 2012; Assad and Goddard, 2010; Bebbington *et al.*, 2014; Miller and Power, 2013; Peecher and Trotman, 2013). As mandatory requirements, varying accounting reports must be submitted to donors and state agencies. (Mack *et al.*, 2017; Merkle-Davies and Brennan, 2017; Nyamori, 2009; Parsons, 2003; Reck and Lowensohn, 2016; Trivunovic *et al.*, 2011; Trussel, 2003; Unerman and O'Dwyer, 2012).

The second-tier evolved with a greater need for more holistic accountability and to address limitations of the first-tier (Gugerty, 2010a; Staples, 2008; Trussel, 2003; Williams and Taylor, 2013). (Agyemang *et al.,* 2017; Harsh*et al.,* 2010). They were developed to lend greater credence and credibility to non-profits (Andrews, 2014; Bawole and Langnel, 2016; Bornstein, 2006; Candler and Dumont, 2010; Dhanani and Connolly, 2015; Ebrahim, 2003a; Gent *et al.,* 2015). However, globally, they are not mandatory, except in some jurisdictions. Also, they may be required by particular donors. Some nonprofits, also, chose to voluntarily comply with these additional accountability requirements (Jacobs and Wilford, 2010; Jordan and Van Tuijl, 2012; Lawrence and Nezhad, 2009; Marshall and Suárez, 2014; Nyamori, 2009). The prevalent instruments include: outcomes-based reports, peer accreditation, performance appraisals, participation by beneficiaries, self-regulation and social auditing. It is worth noting that the second-tier includes accountability to non-donor or government stakeholders (Agyemang *et al.,* 2009; Andrews, 2014; Benjamin, 2013; Jacobs and Wilford, 2010; Jacobs and Wilford, 2007; Kim and Trotman, 2014; Lee and Clerkin, 2017).

Current industry practice in the non-profit industry embraces both sets of accountability instruments (Jacobs and Wilford, 2007; Kim and Trotman, 2014; Lloyd and de Las Casas, 2006; Murtaza, 2012; O'Dwyer and Unerman, 2008; O'Dwyer and Unerman, 2010; Pallas and Guidero, 2016; Schmitz and Raggo, 2012). This study refers to their combined use as the two-tier structure.

While the foregoing literature review recognizes the seminal work and inestimable contribution of current and past studies, there appears to be a literature gap illustrated by a dearth of studies on whether the current two-tier system optimizes societal welfare. Added to this, there are relatively few research studies evaluating the costs of accounting compliance in a one versus two-tier accountability system. This study, inspired and motivated by past studies, contributes to addressing the mentioned literature gap.

3. Social Welfare and Costs of Complying with Accounting Stipulations

3.1 Properties of a One-Tier System

This study is premised on the tenet that accountability instruments are developed to address asymmetric information between stakeholders and NGOs. Such mechanisms are a signaling device, congruent with the communication concept (Agyemang *et al.,* 2012, Jacobs and Wilford, 2010; Littlejohn and Foss, 2011; Merkle-Davies and Brennan, 2017). As already stated, the first-tier is primarily concerned with accountability for financial and associated resources. Also, NPOs are assumed to produce public goods and services with resources provided by donors. Therefore, nonprofits, in and of themselves, are not financially independent. Donors, however, prefer NPOs with similar interests as theirs in order to minimize agency and related transaction costs (North, 1990; Williamson, 1993). By extension, this study presumes that the ideal accountability system reveals the true type or underlying interests of a nonprofit to stakeholders.

Let $\sum \vartheta(Q_{NPOs})$ represent the demand function for goods and services produced by NPOs. Alternatively, it represents aggregate societal satisfaction or welfare derived from such goods and services (Mas-Collel, Whinston and Green, 1995). The related costs incurred by nonprofits are: $c(Q_{NPOs})$. Let all variables contained within the following closed brackets, $f'[\ .\ ]$, denote the first derivative of the embedded function or indicator. The objective function, therefore, is to optimize:

$$\text{Max. } \sum \vartheta(Q_{NPOs}) - c(Q_{NPOs}) \qquad (1)$$

subject to the condition:

$$f'[c\ (Q_{NGOs})] = f'[\sum \vartheta\ (Q_{NGOs})] \qquad (2)$$

According to Equations (1) and (2), the prime objective of society is to maximize output of public goods subject to the constraint that marginal cost equals marginal satisfaction.

Suppose that there are two types of NPOs, namely: NPO_i and NPO_j. The former type, NPO_i, has interests that are not completely in harmony with donors, beneficiaries and other stakeholders. The interests of NPO_j are optimally aligned with stakeholders. Through the accountability system, NPO_j may report itself as $NPO_{j,L}$, which is identified by stakeholders as similar to NPO_i. Alternatively, it may reveal its true type, $NPO_{j,H}$. Consequently, the type set of NPO_j is: {$NPO_{j,L}$, $NPO_{j,H}$}. Stakeholders cannot determine the type of NPO they are dealing with.

Presume that the existing accountability system, δ_L, is a universal strict one-tier accounting code. It is mandatory and both nonprofits use it. There are no other accountability mechanisms. A limitation of δ_L is that nonprofits cannot use it to reveal their interests or true type. As such, in the eyes of donors and associated stakeholders, $NPO_{j,L} = NPO_j = NPO_i$.

Let ψ represent total donor funds such that: $\psi \cong \infty$. Further assume that λ_i, λ_j^L and λ_j^H are the fraction of donor funds provided to NGO_i, $NGO_{j,L}$ and $NGO_{j,H}$ respectively. Since NGO_j cannot reveal its true type in the one-tier structure, $\lambda_j^H = 0$. Consequently:

$$\lambda_i = \lambda_j^L \tag{3}$$
$$\lambda_i + \lambda_j^L + \lambda_j^H = 1$$

With $\lambda_j^H = 0$, the total donor funds provided in this economy, ψ_L, is:

$$\psi_L = \lambda_i \psi + \lambda_j^L \psi \tag{4}$$

The cost of using δ_L is $c(\delta_L)$. Also, the production cost of NPO_i is c_i, while that of NPO_j is c_H. Let $c_H = c_i + \tau_i$, where τ_i is the cost of the divergent interests between stakeholders and NPO_i. The limitations of the accounting system, δ_L, imply that τ_i is a hidden economic cost to stakeholders as it is the only available accountability instrument. As already mentioned, stakeholders cannot determine the type of the nonprofit when using only δ_L.

If Q_i and Q_j^L represent the respective outputs of NPO_i and $NPO_{j,L}$, then:

$$Q_i = \lambda_i \psi - c_i - \tau_i - c(\delta_L) \tag{5}$$
$$Q_j^L = \lambda_j^L \psi - c_H - c(\delta_L)$$

Corollary 1: At equilibrium: $Q_i = Q_j^L$. (6)

According to Corollary 1, in the one-tier system, NPO_j internalizes its higher production costs such that: $Q_j^L = Q_i$. The resulting payoff matrix is depicted in Figure 1. It indicates that the optimal strategy for NPO_j is not to reveal its true type, letting donors assume it is the same as the other type, NPO_i. The next best strategy is to shut down as $c(\delta_H) > c(\delta_L)$. Therefore, the optimal payoff is the highlighted payoff cell on the left-hand side in Figure 1.

Figure 1. Payoff matrix with only δ_L

	NPO_j	
	$NPO_{j,L}$	$NPO_{j,H}$
NPO_i	$\lambda_i \psi - c_i - \tau_i - c(\delta_L)$; $\lambda_j^L \psi - c_H - c(\delta_L)$	$\lambda_i \psi - c_i - c(\delta_L)$; 0

According to Equations (1), (3) - (5):

$$\sum \vartheta(Q_{NPOs}) >> \sum \vartheta_{i,j}(Q_{NPOs}) = \psi_L - [c_i + c_H + 2c(\delta_L)] \tag{7}$$

Equation (7) states that in a first-tier only system, total equilibrium output of public goods and services produced by both nonprofits is less than half the quantity demanded. Consequently, even though this is an equilibrium, it is sub-optimal.

Corollary 2: $\sum \vartheta_{i,j}(Q_{NPOs})$ *is the only optimal social welfare* (8)

Proof**:** Corollary 2 establishes that although Equation (7) is sub-optimal, it is the only possible equilibrium. To prove this, suppose that there is a payoff ($Q_{i,}^{*}$, Q_j^{*L}) for NPO_i and $NPO_{j,L}$ respectively that is strictly preferred ($\succ$) to $\sum \vartheta_{i,j}(Q_{NPOs})$. If all other assumptions hold, then: $Q_i^{*} \succ Q_i$ and $Q_j^{*L} \succ Q_j^{L}$. This would imply that $\psi^{*}{}_{L} > \psi_L$. Nevertheless, $\psi^{*}{}_{L}$ is not feasible as it is not on the optimal welfare frontier (Mas-Collel *et al.*, 1995). Also, the payoff of NPO_i is $\lambda_i \psi - c_i$ - *c(*δ_L*),* regardless of whether $NPO_{j,L}$ reveals its true type or not. Therefore, NPO_i is indifferent of the type of $NPO_{j,L}$, confirming that no entity is made worse off as a consequence (Gibbons, 1995; Kreps, 1990).

According to prior assumptions, for NPO_i and $NPO_{j,L}$ respectively:

$$\begin{gathered} \lambda_i \psi - c_i \\ \lambda_j^L \psi - c_H \end{gathered} \tag{9}$$

However, $\lambda_i \psi - c_i > \lambda_j^L \psi - c_H$. This implies that NPO_j, identified as $NPO_{j,L}$, bears a higher economic cost when using the accounting system because it uses best practices and appropriate processes. As well, it works assiduously to ensure that its activities and output are optimally beneficial to all concerned stakeholders. This cannot be communicated through the first-tier accounting-based stipulations Even though both nonprofits submit accurate accounting reports, NPO_i is only interested in doing the barest minimum in order to meet required conditions. This assumption accords with the findings of Krishnan *et al.* (2011); Miller (1996) and Radcliffe *et al.* (2017). Using quantitative metrics based on audited accounting reports, NPO_i will appear to be more efficient, presenting an anomaly. For instance:

$$\frac{Q_i}{c_i} > \frac{Q_j^L}{c_H} \tag{10}$$

Equation (10) suggests that NPO_i is more productive than NPO_j because the former's operating costs are lower by τ_i, while the costs of NPO_j is greater by the same amount. Consequently, the one-tier accountability system 'punishes' NPO_j for 'going beyond the barest minimum'. This original finding accords with the already mentioned weaknesses of accounting codes and its potential adverse effects (Abouassi and Trent, 2016;

Benjamin, 2008; Chenhall *et al.*, 2013; Dhanani and Connolly, 2015; Ebrahim, 2010; Gray *et al.,* 2006; Hall and O'Dwyer, 2017; Jordan and Van Tuijl, 2012; Kovach, 2012; Lee and Clerkin, 2017; Mack *et al.,* 2017; Nyamori, 2009).

This has implications on the influence of the accounting code on the conduct of organizations and aggregate welfare. These results suggest that nonprofits with interests not completely in tandem with both external and internal stakeholders may hide within the accounting system. Therefore, accounting and associated requirements are the only accountability mechanism they will use because of its limitations and weaknesses. Since $\tau_i = c_H - c_i$ and output is assumed to be homogeneous*,* NPO_i cannot use a more revealing accountability system. Such divergent interests may be demonstrated in deeds of omission, especially where quality of the output cannot or is not, particularly, a measure of performance. An instance may be illustrated when donors provide resources to enhance numerical literacy of beneficiaries in a community. The nonprofit purchases and delivers actual books and equipment as specified in the donor-NGO contract. However, the one-tier system is deficient in evaluating whether beneficiaries really become 'numerically literate' as a result. Therefore, this study finds that a one-tier accountability mechanism premised on a rigorous accounting code is a necessary but incomplete requirement. This conclusion affirms those of O'Dwyer and Unerman (2008); O'Dwyer and Unerman (2010); Pallas and Guidero (2016); Parsons (2003); Radcliffe *et al.* (2017); Schmitz and Raggo (2012) and Unerman and O'Dwyer (2012).

Another unique finding of this study is that economic costs of complying with accounting stipulations is different for each nonprofit depending on its type. Common compliance costs highlighted in exiting literature include administrative expenditure, auditing fees as well as technology (Agyemang *et al.,* 2012; Assad and Goddard, 2010; Grisard *et al.,* 2017; Nyamori, 2009). However, the not-so-good NGO type loses more by using a more revealing accountability framework. As a result, the opportunity costs of compliance for the two NPOs differ not because they have different locations, resources or technologies, but because of divergent interests. Their types determine their actions, how they strategically respond to stakeholder objectives as well as selected reporting formats, risks and transaction costs. This finding confirms that nonprofits strategically respond to imposed accountability requirements and that they are not completely passive in their compliance (Agyemang *et al.*, 2017; Beattie, 2011; Benjamin, 2008; Candler and Dumont, 2010; Dhanani and Connolly, 2015; Ebrahim, 2003b; Elbers and Arts, 2011). Even in a strict accounting framework where bargaining and negotiation is not allowed, nonprofits can be tactical in their accountability reporting. Therefore, the accounting code, in and of itself, presents a dichotomous objective function to reporting entities dependent on their underlying type. Inherently, this may create other anomalies such as adverse selection.

3.2. Properties of a Two-tier System

In a two-tier system, the second accountability instrument is δ_H. Therefore, both δ_L and δ_H are available. Unlike δ_L, this enables NPO_j to disclose its true type as it is a more holistic. The associated total donor funds, $\psi_{L,H}$, is posited as:

$$\psi_{L,H} = \lambda_i \psi + \lambda_j^H \psi \quad (11)$$

Corollary 3: $\psi_{L,H} = 2\psi_L$. (12)

Based on Corollary 3 and Equation (3):

$$\lambda_j^H \psi - c_H - c(\delta_H) \succ \lambda_j^L \psi - c_H - c(\delta_L) \quad (13)$$

This means that when it can signal its true type, significantly more funds, twice the value of resources in the one-tier system, are made available to NPO_j. Figure 2 presents the resulting payoff matrix:

Figure 2. Payoff matrix with δ_H and δ_L

	NPO_j: $NPO_{j,L}$	NPO_j: $NPO_{j,H}$
NPO_i	$\lambda_i \psi - c_i - \tau_i - c(\delta_L)$; $\lambda_j^L \psi - c_H - c(\delta_L)$	$\lambda_i \psi - c_i - \tau_i - c(\delta_L)$; $\lambda_j^H \psi - c_H - c(\delta_H)$

Equilibrium is attained when: $\sum \vartheta_{i,jH}(Q_{NPOs}) = \lambda_i \psi + \lambda_j^H \psi - 2c_H - c(\delta_L) - c(\delta_H)$. The equilibrium payoff in a two-tier framework offers significantly more social welfare relative to the one-tier alternative because:

$$\lambda_i \psi + \lambda_j^H \psi - c(\delta_H) >> \psi_L - c(\delta_L) \quad (14)$$

Proof**:** Suppose that there is a payoff (Q_i^{**}, Q_j^{**L}) for NPO_i and NPO_j respectively that is strictly preferred ($\succ$) to that depicted in Figure 2. *Ceteris paribus,* $Q_i^{**} \succ [\lambda_i \psi - c_i - c(\delta_L)]$ and $Q_j^{**L} \succ [\lambda_j^H \psi - c_H - c(\delta_H)]$. However, this means that $\psi^{**}{}_L > \psi_{L,H}$, which is not possible. Similar to the prior situation, NPO_i has the same payoff regardless of whether NPO_j reports itself $NPO_{j,L}$ or $NPO_{j,H}$ (Mas-Collel *et al.,* 1995).

As a result, $\sum \vartheta_{i,jH}(Q_{NPOs}) >> \sum \vartheta_{i,j}(Q_{NPOs})$ leading to the following Corollary 4:

Corollary 4: $\psi(\lambda_j^H - \lambda_i) >> c(\delta_H) - c(\delta_L)$ (15)

Corollary 4 concludes that when both δ_L and δ_H are available, the size of societal welfare, $\sum \vartheta_{i,jH}(Q_{NPOs})$, is a function of the type of the NPO, not costs. This means that the main impediment to optimizing $\sum \vartheta(Q_{NPOs})$ is not production costs but the costs of determining the type of the nonprofit, a significant information and transaction cost (Benjamin, 2008; Benjamin, 2010; Cordery and Baskerville, 2011; Keating and

Thrandardottir, 2017; Lloyd and de Las Casas, 2006). The ideal two-tier system is supposed to resolve the anomaly of asymmetric information.

Furthermore:

$$c(\delta_L) = 2c_i + 2\tau_i + c(\delta_H) - \lambda_j^H \psi - \lambda_j^L \psi \qquad (16)$$

Equation (16) demonstrates that the economic cost of compliance with the accounting code is magnified in a two-tier system. This is further illustrated in Equation (17), where the economic value of τ_i in the two-tier structure, on the left-hand side, exceeds the same variable when accountability is based only on accounting laws as denoted on the right-hand side.

$$\frac{\psi(\lambda_j^H + \lambda_j^L) + c(\delta_L) - c(\delta_H)}{2} - c_i > c_H - c_i \qquad (17)$$

It is worth noting that so far, the study is silent on the nature of the cost functions. Suppose now that they are all variable costs. Consequently, at equilibrium, the marginal cost of the second-accountability instrument, $f'[c(\delta_H)]$, is equal to its marginal product, $f'[\sum \vartheta_{i,jH}(Q_{NPOs})]$, less the same indicator in the first tier plus the marginal cost of complying with accounting stipulations. This is illustrated in Equation (18). Conversely, the sum of the first two terms on the right-hand side is the marginal product differential.

$$f'[c(\delta_H)] = f'[\sum \vartheta_{i,jH}(Q_{NGOs})] - f'[\sum \vartheta_{i,j}(Q_{NGOs})] + f'[c(\delta_L)] \qquad (18)$$

For the ‘good’ nonprofit, in a two-structured accountability model, the economic cost of compliance with the accounting stipulations becomes significantly larger because of an increased opportunity cost. If it uses only accounting laws as a medium to communicate accountability when the second more holistic model is also available, it is perceived as similar to the ‘not-so-good’ NPO. As a result, it loses hundred percent of the resources it was offered within the one-tier arrangement. This has implications for the accounting profession as well as statutory policy makers. The stated conclusion implies that economic or opportunity costs should be additionally considered when considering total costs of compliance (Chapman *et al.,* 2010). Moreover, relevant authorities may need to evaluate how the ‘letter of the law’ influences the ‘spirit of the law’ in order to encourage holistic accountability (Peecher and Trotman, 2013). It may be inferred that the varying discussed facets of accountability affect organizational behavior and response, emphasizing that accountability is not only about submitted financial reports (Mir & Bala, 2014; North, 1990; Radcliffe *et al.*, 2017; Reck and Lowensohn, 2016; Saxton *et al.,* 2012; Thrandardottir, 2015; Williams and Taylor, 2013; Williamson, 1993).

The price per unit of public goods produced by NPO_j and NPO_i are presented in Equations (19) and (20) respectively:

$$P_j = f'[\sum \vartheta_{i,jH}(Q_{NPOs})] - f'[\sum \vartheta_{i,j}(Q_{NPOs})] + f'[c(\delta_H)] + f'[c_H] \qquad (19)$$

$$P_i = f'[c_i] + f'[c(\delta_L)] \qquad (20)$$

From Equations (19) and (20), it may be inferred that: $P_j > P_i$. While the study does not consider nature or type of donors, if they are assumed to be of two types similar to the hypothesized nonprofits; eventually donors and NPOs will self-select themselves to match their respective kinds. This may explain why some donors still continue to donate to the 'not-so-good' type of nonprofits in the real world (Acar *et al.,* 2012; Agyemang *et al.,* 2017; Awio *et al.*, 2011; Benjamin, 2010; Benjamin, 2013; Chenhall *et al.,* 2010; Crack, 2016; Crawford *et al.,* 2018; Kim and Trotman, 2014; Kovach, 2012; Northcott and Lawrence, 2011). This is only possible in the two-tier system, where the second accountability instrument enables stakeholders to better address the anomaly of asymmetric information.

The price differential between NPO_j and NPO_i, as demonstrated in Equation (21), is comprised of two key components. The first of these is the marginal product differential denoted by the sum of the first two terms. This may, alternatively, be interpreted as the quality gap of marginal products between the two NPOs. The second key constituent of the price differential is the marginal cost differential. It is represented as sum of the last two terms. For donors, Equation (21) may represent the marginal cost of finding the 'good' nonprofit. For such NPOs, on the other hand, it is the marginal cost of accessing donor funds greater than what was provided in the one-tier system, $\psi_{L,H} - \psi_L$. A third interpretation of Equation (21) is that it is the cost incurred by NPO_j to reveal its true type. Another implication of the foregoing is that the nonprofit sector is monopolistically competitive (Mas-Collel *et al,* 1995). The basis of differentiation, in this model, is the type of nonprofit.

$$P_j - P_i = f'[\sum \vartheta_{i,jH}(Q_{NGOs})] - f'[\sum \vartheta_{i,j}(Q_{NGOs})] + f'[c_H] - f'[c_i] \qquad (21)$$

The remaining portion of the third segment considers the aggregated welfare of society. Suppose there exists a social welfare function (SWF), where beneficiaries have the same utility function. Let the SWF be represented as: $W_{NPO1}(u_1, u_2, \ldots, u_n)$. It has a linear form with ϕ^i_{NPO} denoting the weight of the utility function of beneficiary *i* in the SWF. Aggregating $W_{NPO1}(u_1, u_2, \ldots, u_n)$ for total societal welfare may be denoted as:

$$\sum_{i=1} \phi^i_{NPO} u^i_{NPO} \quad \forall \; i = 1, \ldots, n \qquad (22)$$

According to the axiom of symmetry: $\phi^i_{NPO} = \phi^2_{NPO} = \ldots = \phi^n_{NPO}$. Since $\sum \vartheta_{i,jH}(Q_{NPOs}) \succ$

$\sum \vartheta_{i,j}(Q_{NPOs})$, it may be concluded that:

$$W_{NPO1}(\sum \vartheta_{i,jH}(Q_{NPOs})) \succ W_{NPO1}(\sum \vartheta_{i,j}(Q_{NPOs})) \qquad (23)$$

Proof**:** Suppose there exists $W^{***}{}_{NGO1}$ $(u^{***}{}_1,\ u^{***}{}_2,\ \ldots,\ u^{***}{}_n)$. This is defined in a manner where: $W^{***}{}_{NPO1}$ $(u^{***}{}_1,\ u^{***}{}_2,\ \ldots,\ u^{***}{}_n) \succ W_{NPO1}$ $(\sum \vartheta_{i,jH}(Q_{NPOs}))$, then the former maximizes the concerned SWF as it presumes that: $u^{***}{}_1 > u_1\ \forall\ i = 1, \ldots, n$ where $u^{***}{}_1 \neq u_1$. This would constitute a social welfare optimum. This, however, is unattainable because it exceeds: $\lambda_j^H\,\psi + \lambda_i\,\psi_L$. Therefore, W_{NPO1} $(\sum \vartheta_{i,jH}(Q_{NPOs}))$ is the solution to the SWF problem in a two-tier system (Gibbons*,* 1995; Kreps, 1990).

The game-theoretic model constructed and analyzed herein cannot be empirically tested due to lack of appropriate data. Firstly, actual data cannot be obtained on the postulated types of NPOs. Attempts at collecting needed data were unsuccessful as no nonprofit was willing to categorize itself in any of the mentioned categorical types. Added to this, it was difficult gathering data on the estimated economic costs of compliance with accounting requirements for accountability. Estimates of the implicit and opportunity costs of compliance are subjective. As well, there are relatively few accurate records on such expenditures by nonprofits.

Moreover, estimating the demand and supply of public goods and services produced by NPOs is constrained by several challenges. One of these concerns relates to identifying relevant variables that appropriately measure the indicators mentioned. Furthermore, the construct and definition of the said variables, be it demand or supply, are subject to certain weaknesses as there are underlying concerns about whether selected benchmarks estimate actual, equilibrium or potential demand (or supply).

Also, it may be difficult to find a universally accepted global measure of demand and supply in the NPO sector as estimated values are specific to the local currency being used in the examined domestic jurisdictions. Even when these values are converted to an individual benchmark currency, the exchange rates used may themselves include other economic and market information that distort estimates for the empirical analysis. Added to the foregoing, the complex nature of accounting systems and their enforcement in less developed countries where most of the NPOs operate hamper the use of a uniform measure of compliance opportunity costs. As such there is no existing accurate and valid secondary data that can be appropriately used for an empirical analysis. As well, gathering primary data is impaired by the same aforementioned limitations.

4. Conclusion, summary and recommendations

4.1 Conclusion and Summary

The study addresses an existing literature gap resulting from paucity of studies examining economic costs and welfare properties of the current two-tier accountability system in the nonprofit industry. The main research questions included whether a stricter one-tier accounting-based system would enhance social welfare better than a two-tier structure. Also, the study considers the economic costs of compliance.

Additionally, it examines whether accountability instruments alter behavior. Consequent to this, the study develops a unique theoretical model and answers the stated research questions using comparative statics and game theory.

The study finds that in a strict accounting-based reporting system without holistic accountability, the ‘not-so-good’ nonprofit may hide its divergent interests from stakeholders by using only first-tier systems. On the other hand, the same system penalizes the ‘good’ nonprofit for doing the right thing. However, due to limitations in accounting stipulations, the latter kind of NGO cannot reveal its true type. The study, demonstrates that the economic costs of complying with accounting requirements diverge because of their contrasting types, not because of differing operating costs or resources. This influences their economic behavior.

As well, if a strict accounting system is enforced without other holistic facilities, a sub-optimal equilibrium is attained, characterized by less nonprofit output. This is as a result of donors providing fewer resources. In reiteration, differences in location, resources, strategy or technology do not explain the variation in compliance costs. Rather, it is the type of the nonprofit that is most relevant.

With a more holistic second-tier mechanism, social welfare is significantly enhanced. The quantity of public goods and services is enlarged. Therefore, a key factor limiting maximization of social welfare is inability of donors and other stakeholders to appropriately identify nonprofits that are credible, legitimate and can be trusted. While accountability systems, such as accounting stipulations are developed with such objectives in mind, they are unable to completely resolve existing anomalies, especially asymmetric information.

As such, the accounting code or first tier is a necessary but incomplete requirement for holistic accountability. It is found that, even with very strict accounting stipulations, asymmetric information is not appropriately addressed. One reason is that accountability is a multi-dimensional construct. Yet, the accounting system primarily focuses on a key but incomplete facet, financial and resource accountability. It ignores other more qualitative aspects.

Further, in the two-tier system, for stakeholders intent on maximizing social welfare, the economic or opportunity costs of depending on only the first level of accountability is high. Also, for the ‘good’ NGO such costs increase significantly, validating that it must change the preferred accountability instruments utilized in order to signal its type. This enhances its credibility and legitimacy. As such, accountability is a form of communication.

Another key finding is that in the two-level structure, there will exist a price differential based on diverging marginal costs as well as output. This culminates in a monopolistically competitive nonprofit sector. This industrial structure is most optimal. A perfectly competitive industry would be sub-optimal. It is worth noting that the monopolistically competitive nonprofit sector is created as a result of the two-tier accountability system and the two main types of NGOs and not because of a difference in resources, strategy or technology.

While the two-level system enhances social welfare, it is reinforced by a self-selection process where nonprofits and stakeholders that are similar in type align with each other. Consequently, this structure optimizes social welfare and stakeholder satisfaction relative to a strict stand-alone accounting code.

4.2 Recommendations

The study recommends that the accounting profession take into account the potential economic costs, namely opportunity costs, incurred by reporting entities. This may help shape a more informative, multi-dimensional and pragmatic accountability framework to underpin the accounting code. As already mentioned by prior studies, accounting is more than the submitted financial statements. It influences the costs, risks and tradeoffs between possible actions and strategies, thereby influencing eventual conduct. Most importantly, it affects social welfare.

Another recommendation is harmonizing second-tier accountability systems. Currently, there are a plethora of such instruments. Each has its own reporting formats and indicators. If these can be categorized into a few more adept and revealing mechanisms, it may enhance performance in the industry. For instance, there is a differentiation between advocacy and development nonprofits. The first produce public goods that are intangible in nature and can only be measured qualitatively. Outcomes for the second are physical goods. It is not certain whether both types of nonprofits can be evaluated using similar holistic instruments.

The study recognizes that market anomalies magnify the need for more accurate accountability systems to determine the qualitative properties of organizations. Furthermore, considering the economic costs faced by NGOs dependent on the accountability system, there are concerns about the contractual relation between stakeholders and how these influence the nature of accounting. It is hoped that this study will stimulate further research, in the same vein as it was inspired and motivated by current and past literature.

Another suggestion by this study concerns the fact that accounting stipulations appear to ignore the social contract between organizations and the communities within which they operate. These norms, although unwritten, are expected and implied. They create responsibilities to be completed by these organizations in their home and operating communities. The accounting framework may be extended to help encourage organizations to be better legal citizens of their societies. This may require that the accounting profession critically consider the integration of these implicit obligations as part of the needed set of annual financial reports.

Although there is increasing use of more qualitative measures of accountability by NPOs, it is highly concentrated among the larger and more internationally recognized organizations. Perhaps, the argument may be made that they have more resources to fund such expenditures. As well, they may have more to lose as the scope and variety of their activities requires that they are constantly enhancing and expanding their reputation. This is ever more critical with the growing scrutiny of the public and world at large through advanced social media and telecommunication technologies. Considering this, it is suggested that stakeholders in the industry refine second-tier accountability requirements such that they can be inexpensively completed by less well-resourced NPOs. This would decrease the associated economic burden and make the sector more competitive.

In some jurisdictions, both first and second-tier forms of accountability are required by law. This is highly commendable. Some stakeholders recommend that this be a universal requirement. This study makes a similar suggestion for NPOs operating in economies where the second-prong of stipulations are not mandatory. When nonprofits in these jurisdictions adopt such measures, they raise the standards of quality in their activities and operations as a whole. Generally, this would significantly benefit society. Instances of this are demonstrated when nonprofits educating farmers on organic production methods include more holistic and qualitative reporting instruments such as pictures. Firstly, the format would highlight whether they used child labor or not. As well, if the second-tier included certification for ethical and fair production, it may provide more information on whether there was any form of exploitation in the process.

References:

Abouassi, K. and Trent, D. L. 2016. NGO accountability from an NGO perspective: Perceptions, strategies, and practices. *Public Administration and Development* 36 (4), 283-296. https://doi.org/10.1002/pad.1764

Acar, M., Guo, C. and Yang, K. 2012. Accountability in voluntary partnerships: To whom and for what? *Public Organization Review* 12 (2), 157-174. https://doi.org/10.1007/s11115-011-0169-0

Agyemang, G., O' Dwyer, B., Unerman, J. and Awumbila, M. 2009. *NGO accountability and aid delivery*. Research Report 110. Association of Certified Chartered Accountants, Retrieved from: http://research-repository-.st-andrews.ac.uk/bitstream/handle/10023/3795/ACCA-2009-NGO--Accountability.pdf, Accessed in: November 2017.

Agyemang, G., O' Dwyer, B., Unerman, J. and Awumbila, M. 2017. The nature of knowledge sharing in NGO accounting and accountability processes. *Working Paper Series,* Retrieved from: http://repository.royalholloway.ac.uk/items.pdf, Accessed in: June 2017.

Agyemang, G., O' Dwyer, B., Unerman, J. and Awumbila, M. 2017. Seeking ‘conversations for accountability’: Mediating the impact of non-governmental organization (NGO) upward accountability processes. *Accounting, Auditing and Accountability Journal* 30 (5), 982-1007. https://doi.org/10.1108/AAAJ-02-2015-1969

Ahmed, Z. and Hopper, T. 2014. Politics, development and NGO accountability. *Performance Management in Nonprofit Organizations* 17 (17), 39-62. http://DOI.ORG/sro.sussex.ac.uk/id/eprint/54023

Anderson, K. 2009. What NGO accountability means: And does not mean. *The American Journal of International Law* 103 (1), 170-178. https://doi.org/10.2307/20456745

Andrews, A. 2014. Downward accountability in unequal alliances: Explaining NGO responses to Zapatista demands. *World Development* 54, 99-113. https://doi.org/10.1016/j.worlddev.2013.07.009

Anheier, H. K. 2014 *Nonprofit organizations: Theory, management, policy*. London and New York, USA: Routledge.

Appe, S. 2016. NGO networks, the diffusion and adaptation of NGO managerialism, and NGO legitimacy in Latin America. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 27 (1), 187-208. https://doi.org/10.1007/s11266-015-9594-y

Assad, M. J. and Goddard, A. R. 2010 Stakeholder salience and accounting practices in Tanzanian NGOs. *International Journal of Public Sector Management* 23 (3), 276-299. https://doi.org/10.1108/09513551011032482

Awio, G., Northcott, D. and Lawrence, S. 2011. Social capital and accountability in grassroots NGOs: The case of the Ugandan community-led HIV/AIDS initiative. *Accounting, Auditing and Accountability Journal* 24 (1), 63-92. https://doi.org/10.1108/09513571111098063

Banks, N., Hulme, D., and Edwards, M. 2015. NGOs, states, and donors revisited: Still too close for comfort? *World Development* 66, 707-718. https://doi.org/10.1016/j.worlddev.2014.09.028

Baur, D. and Schmitz, H. P. 2012. Corporations and NGOs: When accountability leads to co-optation. *Journal of Business Ethics* 106 (1), 9-21. https://doi.org/10.1007/s10551-011-1057-9

Bawole, J. N. and Langnel, Z. 2016. Downward accountability of NGOs in community project planning in Ghana. *Development in Practice* 26 (7), 920-932. https://doi.org/10.1080/09614524.2016.1210094

Bebbington, J., Unerman. J. and O'Dwyer, B. (Ed.s) 2014. *Introduction to sustainability accounting and accountability*. Sustainability, Accounting and Accountability. Taylor & Francis Publishing, U.K. ISBN 9781315848419

Beattie, K. 2011. *Whose accountability? A case study of NGO accountability to recipients of aid in South Sudan.* Retrieved from: http://dspace.lib.cranfield.ac.uk/handle/1826/7232, Accessed in: September 2017.

Bekkers, R. 2012. Trust and volunteering: Selection or causation? Evidence from a 4-year panel study. *Political Behavior* 34 (2), 225-247. https://doi.org/ 10.1007/s11109-011-9165-x

Bell, S. A. and Aggleton, P. 2012. Integrating ethnographic principles in NGO monitoring and impact evaluation. *Journal of International Development* 24 (6), 795-807. https://doi.org/10.1002/jid.2868

Benjamin, L. 2008. Account space: How accountability requirements shape nonprofit practice. *Nonprofit and Voluntary Sector Quarterly* 37 (2), 201-223. https://doi.org/10.1177/0899764007301288

Benjamin, L. 2010. Mediating accountability: How nonprofit funding intermediaries use performance measurement and why it matters for governance. *Public*

Performance & Management Review 33 (4), 594-618. https://doi.org/10.2753/PMR1530-9576330404

Benjamin, L. 2013. The potential of outcome measurement for strengthening nonprofits' accountability to beneficiaries. *Nonprofit and Voluntary Sector Quarterly* 42 (6), 1224-1244. https://doi.org/10.1177/0899764012454684

Bies, A. and Abouassi, K. 2018. Relationships and resources: The isomorphism of nonprofit organizations' (NPO) self-regulation. *Public Management Review, 20*(11), 1581-1601. https://doi.org/10.1080/14719037.2017.1400583

Biswas, S. N. 2009. NGO accountability: Issues and possibilities. *KIIT Journal of Management* 6 (1), 1-25. https://doi.org/10.1278/120459744512971314.z

Bloodgood, E.A., Tremblay-Boire, J. and Prakash, A. 2013. National styles of NGO regulation. *Nonprofit and Voluntary Sector Quarterly* 30, 1-21. https://doi.org/10.1177/0899764013481111

Boomsma, R. and O'Dwyer, O. 2014. *The nature of NGO accountability: Conceptions, motives, forms and mechanisms.* In 'Sustainability, Accounting and Accountability'. Taylor & Francis Publishing, U.K. https://doi.org/hdl.handle.net/11245/1.418168

Bornstein, L. 2006. Systems of accountability, webs of deceit? Monitoring and evaluation in South African NGOs. *Development* 49 (2), 52–61. https://doi.org/10.1057/palgrave.development.1100261

Breen, O. B., Dunn, A. and Sidel, M. 2016. *Regulatory waves: Comparative perspectives on state regulation and self-regulation policies in the nonprofit sector*. Cambridge, UK: Cambridge University Press.

Burger, R. and Seabe, D. 2014. *NGO accountability in Africa. The Handbook of Civil Society in Africa*. Springer, USA. https://doi.org/10.1007/978-1-4614-8262-8_6

Burger, R. and Owens, T. 2010. Promoting transparency in the NGO sector: Examining the availability and reliability of self-reported data. *World development* 38 (9), 1263-1277. https://doi.org/10.1016/j.worlddev.2009.12.018

Candler, G. and Dumont, G. 2010. A non-profit accountability framework. *Canadian Public Administration* 53 (2), 259-279. https://doi.org/10.1111/j.1754-7121.2010.00126.x

Chapman, C. S., Cooper, D. J. and Miller, P. B. 2010. *Accounting, organizations, and institutions: Essays in honor of Anthony Hopwood.* Oxford University Press, U.K. https"//doi.org/10.1093/acprof.oso/9780199546350.001.0001

Charnovitz, S. 2012. *Accountability of non-governmental organizations in global governance.* NGO accountability, 33-54, Taylor & Francis Publishing, U.K. https://doi.org/10.4324/9781849772099-7

Chenhall, R.H., Hall, M. and Smith, D. 2010. Social capital and management control system: A study of non-governmental organization. *Accounting, Organizations and Society* 35 (8), 737-756. https://doi.org/10.1016/j.aos.2010.09.006

Chenhall, R. H., Hall, M. and Smith, D. 2013. Performance measurement, modes of evaluation and the development of compromising accounts. *Accounting, Organizations and Society* 38 (4), 268-287. https://doi.org/10.1016/j.aos.2013.06.002

Cordery, C. J. and Baskerville, R. F. 2011. Charity transgressions, trust and accountability. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 22 (2), 197-213. https://doi.org/10.1007/s11266-010-9132-x

Crack, A. M. 2016. Reversing the telescope: evaluating NGO peer regulation initiatives. *Journal of International Development* 28 (1), 40-56. https://doi.org/10.1002/jid.3010

Crawford, L., Morgan, G. G., Cordery, C. and Breen, O. B. 2014. *International financial reporting forthe not-for-profit sector.* A Study Commissioned by Consultative Committee of Accountancy Bodies, London, Retrieved from: http://:www.ccab.org.uk/documents/IFRNPOFullReport-Final-07022014.pdf, Accessed in: January 2018.

Crawford, L., Morgan, G. G., Cordery, C. and Breen, O. B. 2018. Should NPOs follow international standards for financial reporting? A multinational study of views. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 29 (6), 1330-1346. https://doi.org/10.1007/s11266-018-0040-9

Davies, N. and Martin, R. 2015. Companion guide for not-for-profits to the international financial reporting standard for small and medium-sized entities (IFRS for SMEs). Association of Chartered Certified Accountants, Retrieved from: http://www.accaglobal.smb, Accessed in: January 2018. https://doi.org/10.1007/s11266-018-0040-9

Deloffre, M. Z. 2016. Global accountability communities: NGO self-regulation in the humanitarian sector. *Review of International Studies* 42 (4), 724-747. https://doi.org/10.1017/S0260210515000601

Dhanani, A. and Connolly, C. 2012. Discharging not-for-profit accountability: UK charities and public discourse. *Accounting, Auditing and Accountability* 25 (7), 1140-1169. https://doi.org/10.1108/09513571211263220

Dhanani, A. and Connolly, C. 2015. Non-governmental organizational accountability: Talking the talk and walking the walk? *Journal of Business Ethics* 129 (3), 613-637. https://doi.org/10.1007/s10551-014-2172-1

Ebrahim, A. 2003a. Accountability in practice: Mechanisms for NGOs. *World Development* 31 (5), 813-829. https://doi.org/10.1016/S0305-750X(03)00014-7

Ebrahim, A. 2003b. Making sense of accountability: Conceptual perspectives for northern and southern nonprofits. *Nonprofit Management and Leadership* 14 (2), 191-212. https://doi.org/10.1002/nml.29

Ebrahim, A. 2005. Accountability myopia: Losing sight of organisational learning. *Nonprofit and Voluntary Sector Quarterly* 34 (1),56-87. https://doi.org/10.1177/0899764004269430

Ebrahim, A. 2009. Placing the normative logics of accountability in “thick” perspective. *American Behavioral Scientist* 52 (6), 885-904. https://doi.org/10.1177/0002764208327664

Ebrahim, A. 2010. *The many faces of nonprofit accountability*. Boston, MA, USA.

Elbers, W. and Arts, B. 2011. Keeping body and soul together: Southern NGOs’ strategic responses to donor constraints. *International Review of Administrative Sciences, 77*(4), 713-732. https://doi.org/10.1177/0020852311419388

Gent, S. E. & Crescenzi, M. J. C and Menninga, E. J. 2015. The reputation trap of NGO accountability. *International Theory* 7 (3), 426-463. https://doi.org/10.1017/51752971915000159

Gibbons, R. 1995. *A primer in game theory.* Boston: Prentice Hall-Financial Times.

Golub, S. 2012. *NGO accountability and the Philippine council for NGO certification: Evolving roles and issues*. In "NGO Accountability", London and New York, Taylor & Francis Publishing. https://doi.org/www.untag-smd.ac.id/files/Perpustakaan_Digital_2/NON%20GOVERNMENT%20ORGANIZATION%20NGO%20Accountability%20Politics,%20Principles%20and%20Innovations.pdf

Gray, R., Bebbington, J. and Collison, D. 2006. NGOs, civil society and accountability: Making the people accountable to capital. *Accounting, Auditing and Accountability Journal*19 (3), 319-348. https://doi.org/10.1108/09513570610670325

Grisard, C., Graham, C. and Annisette, M. 2017. *Negotiations of accounting figures and the individualizing effects of hierarchical accountability*. Paper Presented at the 40th Annual Congress of the European Accounting Association, Retrieved from: https://strathprints.strath.ac.uk/id/eprint/65581, Accessed in: June 2018.

Gugerty, M. K. 2010a. The emergence of non-profit self-regulation in Africa. *Nonprofit and Voluntary Sector Quarterly, 39*(6), 1087-1112. https://doi.org/10.1177/0899764010372972

Gugerty, M. K. & Prakash, A. (Eds.) 2010b. *Voluntary regulation of NGOs and nonprofits: An accountability club framework.* Cambridge University Press.

Hall, M. and O'Dwyer, B. 2017. Not because they are nonprofit: The importance of nonprofit organizations to understanding accounting, organizations and society. *Accounting, Organizations and Society* 63 (3), 1-5. https://doi.org/10.1016/j.aos.2017.11.001

Harsh, M., Mbatia, P. and Shrum, W. 2010. Accountability and inaction: NGOs and resource lodging in development. *Development and Change* 41 (2), 253-278. https://doi.org/10.1111/j.1467-7660.2010.01641.x

Hielscher, S. Winkin, J., Crack, A and Pies, I. 2017. Saving the moral capital of NGOs: Identifying one-sided and many-sided social dilemmas in NGO accountability. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 28 (4), 1562-1594. https://doi.org/10.1007/s11266-016-9807-z

Humphreys, K. A., Gary, S. S. and Trotman, K. T. 2016. Dynamic decision making using the balanced scorecard framework. *The Accounting Review* 91, 1441 – 1465. https://doi.org/10.2308/accr-51364

Huyse, H., & De Bruyn, T. 2015. *New trends in governmental funding of civil society organisations: A comparative study of 9 OECD-DAC donors*. Leuven: Austria, HIVA.

Jacobs, A. and Wilford, R. 2007. *Putting new approaches to NGO accountability into action*. Paper for the Development's Futures Conference, https://pdfs.semanticscholar.org/2b12/951b81f44a568a3f3b0f56c8e3272d5f75bb.pdf

Jacobs, A. and Wilford, R. 2010. Listen first: A pilot system for managing downward ccountability in NGOs. *Development in Practice* 20 (7), 799-811.https://doi.org/10.1080/09614524.2010.508113

Jordan, L. 2007. *A rights-based approach to accountability*. In A. Ebrahim, &E. Weisband (Eds.), Global accountabilities: Participation, pluralism, and public ethics, Cambridge, UK: Cambridge University Press.

Jordan, L., and Van Tuijl, P. (Eds.). 2012. *NGO accountability: Politics, principles and innovations.* London: Earthscan, U.K.

Keating, V. C. and Thrandardottir, E. 2017. NGOs, trust and the accountability agenda. *The British Journal of Politics and International Relations* 19 (1), 134-151. https://doi.org/10.1177/1369148116682655

Kim, S. & Trotman, K. T. 2014. The comparative effect of process and outcome accountability in enhancing professional skepticism. *Accounting & Finance* 55, 1015 – 1040. https://doi.org/10.1111/acfi.12084

Kovach, H. 2012. *Addressing accountability at the global level: The challenges facing international NGOs*. NGO Accountability, Taylor & Francis Publishing U.K.

Krishnan, R., Yetman, M. and Yetman, R. 2006. Expense misreporting in nonprofit organizations. *The Accounting Review* 81 (2), 399-420. https://doi.org/10.2308/accr.2006.81.2.399

Krishnan, R., Yetman, R. and Yetman, M. 2011. Institutional drivers of reporting decisions in non-profit hospitals. *Journal of Accounting Research* 49 (4), 1001-1039. https://doi.org/10.1111/j.1475-679X.2011.00413.x

Kreps, D. M. 1990. *Game theory and economic modelling*. Stanford, USA: Oxford University Press.

Lawrence, P. G. and Nezhad, S. 2009. Accountability, transparency, and government co-option: A case study of four NGOs. *International NGO Journal* 4 (3), 076-083. https://doi.org/ 10.5897/INGOJ/8821E5237466.x

Lee, C. & Clerkin, R. M. 2017. Exploring the use of outcomes measures in human services nonprofits. Targeting. *Public Performance & Management Review* 40 (3), 601-624. https://doi.org/10.1080/15309576.2017.1295872

Lehman, G. 2007. The accountability of NGOs in civil society and its public spheres. *Critical Perspectives on Accounting* 18 (6), 645-69. https://doi.org/10.1016/j.cpa.2006.04.002

Littlejohn, S. W. and Foss, K. A. 2011. *Theories of human communication*. 100th ed., Illinois, USA, Waveland Press.

Lloyd, R. and de Las Casas, L. 2006. *NGO self-regulation: Enforcing and balancing accountability*. One World Trust, Retrieved from: http://www.oneworldtrust.org/lloyd-lascasas-ngo-self-regulation.pdf, Accessed in: December 2017.

Mack, J., Morgan, G. G., Breen, O. B. and Cordery, C. J. 2017. Financial reporting by charities: A matched case study analysis from four countries. *Public Money and Management* 37 (3), 165-172. https://doi.org/10.1080/09540962.2017.1281638

Maier, F., Meyer, M. and Steinbereithner, M. 2014. Nonprofit organizations becoming business-like: A systematic review. *Nonprofit and Voluntary Sector Quarterly* 45 (1), 64-86. https://doi.org/10.1177/0899764014561796

Marshall, J. H. and Suárez, D. 2014. The flow of management practices: An analysis of NGO monitoring and evaluation dynamics. *Nonprofit and Voluntary Sector Quarterly* 43 (6), 1033-1051. https://doi.org/10.1177/0899764013494117

Martinez, D. E., and Cooper, D. J. 2017. Assembling international development: Accountability and the disarticulation of a social movement. *Accounting, Organizations and Society* 63 (3), 6-20. https://doi.org/10.1016/j.aos.2017.02.002

Mas-Collel, A., Whinston, M. D. and Green, J. R. 1995. *Microeconomic theory.* New York, Oxford University Press.

Merkle-Davies, D. M. & Brennan, N. 2017. Theoretical framework of external accounting communication: Research perspectives, traditions, and theories. *Accounting, Auditing and Accountability Journal* 30 (2), 433-469. https://doi.org/10.1108/AAAJ-04-2015-2039

Miller, P. 1996. *Dilemmas of accountability. The limits of accounting*. London and New York, Blackwell Publishers. http://eprints.lse.ac.uk/id/eprint/21153

Miller, P. and Power, M. 2013. Accounting, organizing and economizing: Connecting accounting research and organization theory. *The Academy of Management Annals* 7 (1), 557-605. https://doi.org/10.5465/19416520.2013.783668

Mir, M. and Bala, S. K. 2014. NGO accountability in Bangladesh: Two contrasting cases. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 26 (5), 1831-1851. https://doi.org/10.1007/s11266-014-9513-7

Mueller-Hirth, N. 2012. If you don't count, you don't count: Monitoring and evaluation in South African NGOs. *Development and Change* 43 (3), 649-670. https://doi.org/10.1111/j.1467-7660.2012.01776.x

Murtaza, N. 2012. Putting the lasts first: The case for community-focused and peer-managed NGO accountability mechanisms. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 23 (1), 109-125. https://doi.org/10.1007/s11266-011-9181-9

North, D. C. 1990. Institutions and a transaction-cost theory of exchange. *Perspectives on Positive Political Economy*11*,* 182-194. https://doi.org/ /stable/1942704

Nyamori, R. 2009. Making development accountable: A critical analysis of the systems of accounting and accountability for the constituency development fund in Kenya. *Journal of Accounting and Organizational Change* 5 (2), 197-227. https://doi.org/10.1108/18325910910963436

O'Dwyer, J. & Boomsma, A. 2015. The co-construction of NGO accountability: Aligning imposed and felt accountability in NGO-funder accountability relationships. *Accounting, Auditing & Accountability Journal* 28 (1), 36-68. https://doi.org/10.1108/AAAJ-10-2013-1488

O'Dwyer, J. & Boomsma, A. 2019. Constituting the governable NGO: The correlation between conduct and counter-conduct in the evolution of funder-NGO accountability relations. *Accounting, Organizations and Society*, 72 (4), 1-20. https://doi.org/10.1016/j.aos.2018.05.012

O'Dwyer, B. and Unerman. J. 2007. From functional to social accountability: Transforming the accountability relationship between funders and non-governmental development organizations. *Accounting, Auditing and Accountability Journal* 20 (3), 446-471. https://doi.org/10.1108/09513570710748580

O’Dwyer, B. and Unerman, J. 2008. The paradox of greater NGO accountability: A case study of Amnesty Ireland. *Accounting, Organizations and Society* 33 (7), 801-824. https://doi.org/10.1016/j.aos.2008.02.002

O'Dwyer, B. & Unerman, J. 2010. Enhancing the role of accountability in promoting the rights of beneficiaries of development NGOs. *Accounting and Business Research* 40 (5), 451-471. https://doi.org/10.1080/00014788.2010.9995323

O’Leary, S. 2017. Grassroots accountability promises in rights-based approaches to development: The role of transformative monitoring and evaluation in NGOs. *Accounting, Organizations and Society* 63 (3), 21-41. https://doi.org/10.1016/j.aos.2016.06.002

Pallas, C. L. and Guidero, A. 2016. Reforming NGO accountability: Supply vs. demand-driven models. *International Studies Review* 18 (4), 614–634. https://doi.org/10.1093/isr/viw027

Parsons, L. M. 2003. Is accounting information from non-profit organizations useful to donors? A review of charitable giving and value relevance. *Journal of Accounting Literature* 22, 104-129. https://doi.org/ doi:10.1016/j.jacclit.2006.09.002.z

Peecher, M. E. and Trotman, K. T. 2013. An accountability framework for financial statement auditors and related research questions. *Accounting, Organizations and Society* 38(8), 596-620. https://doi.org/10.1016/j.aos.2013.07.002

Radcliffe, V. S., Spence, C. and Stein, M. 2017. The impotence of accountability: The relationship between greater transparency and corporate reform. *Contemporary Accounting Research* 34 (1), 622-657. https://doi.org/10.1111/1911-3846.12277

Reck, J. L. and Lowensohn, S. L. 2016. *Accounting for governmental & nonprofit entities*. 17th ed., USA, McGraw-Hill Education.

Saxton, G. D., Kuo, J. and Ho, Y. 2012. The determinants of voluntary financial disclosure by nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly* 41 (6), 1051–1071. https://doi.org/10.1177/0899764011427597

Schmitz, H. P. S. and Raggo, P. 2012. Accountability of transnational NGOs: Aspirations vs. practice. *Nonprofit and Voluntary Sector Quarterly* 41 (6), 1175-1194. https://doi.org/10.1177/0899764011431165

Schulpen, L. 2016. *The NGO funding game: The case of The Netherlands*. Nijmegen: Radboud University.

Sedatole, K. L., Swaney, A., Yetman, M. H. and Yetman, R. J. 2013. Accounting-based performance metrics and executive compensation in nonprofit organizations. *Working Paper,* Retrieved from: http://pdfs.semanticscholar.org/sedaolte-yetman-swaney.pdf, Acccessed in: February 2018.

Sloan, M. F. 2009. The effects of nonprofit accountability ratings on donor behavior. *Nonprofit and Voluntary Sector Quarterly* 38 (2), 220-236. https://doi.org/10.1177/0899764008316470

Staples, J. 2008. *Attacks on NGO 'accountability': Questions of governance or the logic of public choice theory?* In “Strategic Issues for the not-for-profit sector”, J. Bracket (ed.), Australia, New South Publishing Limited.

Suarez, D. and Gugerty, M. K. 2016. Funding civil society? Bilateral government support for development NGOs. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 27 (6), 2617-2640. https://doi.org/10.1007/s11266-016-9706-3

Thrandardottir, E. 2015. NGO legitimacy: Four models. *Representation* 51 (1), 107-123. https://doi.org/10.1080/00344893.2015.1023102

Tremblay-Boire, J. and Prakash, A. 2015. Accountability. org: Online disclosures by US nonprofits. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 26 (2), 693-719. https://doi.org/10.1007/s11266-014-9452-3

Trivunovic, M., Johnsøn, J. and Mathisen, H. 2011. Developing an NGO corruption risk management system: Considerations for donors. *U4 Issue 9*, 1-30. http://hdl.handle.net/11250/2474688

Trussel, J. 2003. Assessing potential accounting manipulation: The financial characteristics of charitable organizations with higher than expected program-spending ratios. *Nonprofit and Voluntary Sector Quarterly* 32 (4), 616-634. https://doi.org/10.1177/0899764003257459

Unerman, J., Bebbington, J. and O'Dwyer, B. (Eds.) 2010. *Sustainability, accounting and accountability*. 2nd ed., London and New York: Routledge.

Unerman, J. and O'Dwyer, B. 2012. Accounting and accountability for NGOs. *Handbook of Accounting and Development,* New York, Wiley & Sons Incorporated.

Williams, A. P. and Taylor, A. J. 2013. Resolving accountability ambiguity in nonprofit organizations. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 24 (3), 559-580. https://doi.org/10.1007/s11266-012-9266-0

Williamson, O. E. 1993. Transaction cost economics and organization theory. *Industrial and Corporate Change* 2 (2), 107-156. https://doi.org/10.1093/icc/2.2.107