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# Survival of the Fittest: Online Accountability in Complex Organizational Populations

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# SURVIVAL OF THE FITTEST: ONLINE ACCOUNTABILITY IN COMPLEX ORGANIZATIONAL POPULATIONS

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## ABSTRACT

Online accountability is increasingly becoming a critical issue in contemporary debates over creating more open and transparent organizations. Broadly defined, online accountability refers to the extent that an organization discloses financial and performance data on the organization's Website, and the level of stakeholder interaction supported by the organization's Website. Online accountability is positively correlated with outcome metrics such as organizational success, increased charitable contributions, and enhanced public trust. However, our understanding of the determinants of online accountability is limited. Informed by organizational ecology theory, this research-in-progress seeks to enhance our understanding of this key issue by developing and testing a model of the determinants of online accountability. Our preliminary analysis of secondary data on a regional population of 653 organizations in the Northeast United States revealed that only 12.09% of the organizations have implemented online accountability. We argue that organizations that fail to implement online accountability measures can negatively impact their chances of survival in complex and uncertain environments.

### Keywords

Online accountability, voluntary disclosure, organizational ecology, nonprofit organizations, technological innovation

## INTRODUCTION

The key issue of accountability is at the heart of contemporary debates over creating more open and transparent organizations in the private, public, and social sectors of the American society. Voluntarily disclosing financial and performance information provides a tool for donors and other key stakeholders to determine how effectively and efficiently an organization is operating. More recently, researchers have become interested in the strategic use of the Web in order to demonstrate and enhance accountability online.

Online accountability refers to the provision of inclusive and transparent organizational practices that serve to demonstrate or enhance accountability on the Web (Saxton and Guo, 2011). Prior research demonstrates that online accountability is positively related to organizational success, increased charitable contributions, and enhanced public trust (Bermu´dez-Edo, Hurtado-Torres and Arago´n-Correa 2010; Gandía 2011; Trabelsi, Labelle and Dumontier, 2008). However, too much emphasis on accountability impedes organizational learning (Ebrahim, 2005). While researchers agree on the positive benefits of online accountability, the determinants of online accountability is limited to very few studies (Gandía, 2011; Hackler and Saxton 2007; Saxton et al., 2011).

In order to better understand the determinants of online accountability, this research-in-progress develops and tests a model of the factors that facilitate or constrain online accountability. Informed by organizational ecology theory (Hannan and Freeman, 1977; Hannan and Freeman, 1989), our model is based on the premise that in complex and uncertain environments, organizations that demonstrate high levels of online accountability increase their life chances, whereas organizations that fail to demonstrate online accountability decrease their chances of survival.

In order to test our model, we analyzed secondary data on a regional population of 653 organizations in the Northeast. Preliminary results revealed that only 12.09% of the population had implemented online accountability measures. From an ecological perspective, the remaining 87.91% of the organizations that failed to adopt online accountability decreased their chances of survival and are prone to deselection from the environment.

This study contributes to the field of information systems (IS) in three ways. First, we examine a recent technological innovation (i.e. online accountability) that has received very little attention in IS research. Second, we examine online accountability from an organizational ecology perspective. Finally, we explore these concepts in a nonprofit setting, a context that is under researched and under explored in IS research. We conclude with implications for research and practice.

## NONPROFIT OPERATING ENVIRONMENT

A rich stream of research in organizational theory is concerned with organization-environment relations. As a result of the economic recession, the nonprofit (NPO) operating environment is being severely impacted by economic and political factors. Economic factors include decreased federal funding, decreased charitable contributions, and increased demand for programs and services (GuideStar 2009a; Saxton et al., 2011). Many NPOs have responded by cutting services and decreasing operating hours. Meanwhile, other NPOs are on the brink of shutting their doors.

Political factors consist of actions by the U.S. Senate Finance Committee to reform the nonprofit sector (U. S. Senate, 2004). Fueled by public demand for more oversight and accountability (Hackler et al., 2007; Saxton et al., 2011), the Senate Finance Committee held several hearings aimed at reforming the nonprofit sector. The general approach has been geared towards disclosure-based reform (Reiser 2005; U. S. Senate, 2004). One key outcome of these hearings was the recommendation that NPOs voluntarily disclose financial and performance information on their Websites (Senate, 2004; Wilson, Schweigert and Cleveland, 2009).

A second key outcome was the introduction of The New Form 990 in 2008. Part IV of The New Form 990 includes subsections on governance, management, and disclosure. The disclosure section specifically reminds NPOs that Section 6104 of the U. S. Tax Code requires an organization to make its financial forms available for public inspection. In addition, the disclosure section includes three checkboxes to indicate how NPOs make these forms available: (1) own Website; (2) another's Website; or (3) upon public request.

In light of current economic and political factors, strategic use of the Web provides new ways for NPOs to adapt and respond to the complex challenges faced by their current operating environment. For example, recent research suggests that increased levels of online accountability is the ideal organizational response to the current environmental challenges (Bermu´dez-Edo et al., 2010; Hackler et al., 2007; Saxton et al., 2011; Trabelsi et al., 2008). While some organizations have complied with the Senate recommendation by voluntarily disclosing financial and performance information on the Web, many others have not (Gandía 2011; GuideStar, 2009b; Kang and Norton, 2004; Saxton et al., 2011). Therefore, it becomes increasingly important to understand the determinants of online accountability in order to facilitate broader diffusion of online accountability among NPOs and thus help to preserve an important sector of society.

## ACCOUNTABILITY DEFINED

Accountability is a multidimensional concept that involves both financial and performance components. Financial accountability "concerns tracking and reporting on allocation, disbursement, and utilization of financial resources, using the tools of auditing, budgeting, and accounting" and "deals with compliance with laws, rules, and regulations regarding *financial control* and *management* [italics added]" (Brinkerhoff, 2001, p. 10).

Performance accountability "refers to demonstrating and accounting for performance in light of agreed-upon performance targets" with its focus on "services, outputs, and results" (Brinkerhoff, 2001, p. 10). Often referred to as managerial accountability, this dimension of accountability is primarily concerned with the outcomes and results of the organization's programs and services.

## ORGANIZATIONAL ECOLOGY THEORY

The theory of organizational ecology focuses on explaining the life chances of smaller and more numerous organizations in certain populations (Hannan et al., 1977; Hannan et al., 1989). Theories of inertia and organizational change are key aspects of research on organizational ecology (Hannan and Freeman, 1984). From an inertia and organizational change perspective, research on organization-environment relations is based on the assumption that organizations are subject to strong inertial forces (Hannan et al., 1984). In particular, this argument suggests that organizations face difficulty making radical changes to strategy, structure, and standard operating procedures fast enough to respond to threats and opportunities in the environment. Those organizations that can adapt and respond to environmental threats and opportunities are better able to survive turbulent environments. On the other hand, those organizations that are resistant to changes in strategy, structure, and standard operating procedures are subject to a higher rate of mortality.

## AN ORGANIZATIONAL ECOLOGY PERSPECTIVE ON ONLINE ACCOUNTABILITY

Recent technological innovations, in particular Web 2.0 technologies, have led to the emergence of online accountability. Online accountability consists of two core dimensions: disclosure and dialogue. The first dimension, which is voluntary disclosure, consists of two components: financial and performance disclosure. Financial disclosure is defined as the extent of financial information that an organization voluntarily discloses on its Website (Saxton et al., 2011). The public disclosure of financial statements provides a tool for assessing the overall financial health of the organization and is an indicator of organizational efficiency. Performance disclosure is defined as the extent of goal- or outcome-oriented information that an organization discloses on its Website (Saxton et al., 2011). The disclosure of performance data provides a tool for funders and donors to determine how effectively an organization is operating.

Dialogue, which is the second dimension, also consists of two distinct components: solicitation of stakeholder input and interactive engagement. Solicitation of stakeholder input is defined as the extent to which an organization uses the Web to obtain meaningful stakeholder feedback, input, and preferences (Saxton et al., 2011). Interactive engagement is defined as the extent to which an organization uses the Web to facilitate intense interaction between core stakeholders (Saxton et al., 2011).

From an organizational ecology perspective, online accountability is a process of natural or social selection. Social selection favors organizational forms that exhibit high levels of accountability (Hannan et al., 1984). For instance, those that exhibit high levels of online accountability are favored and selected while others are rejected and become prone to deselection.

## THEORETICAL FRAMEWORK

In this section, we develop an ecological model of online accountability and present our hypotheses. Based on insights from organizational ecology and technological innovation theories, five factors are expected to impact online accountability: asset size, personnel size, organizational age, organizational density, and community wealth (see Figure 1).

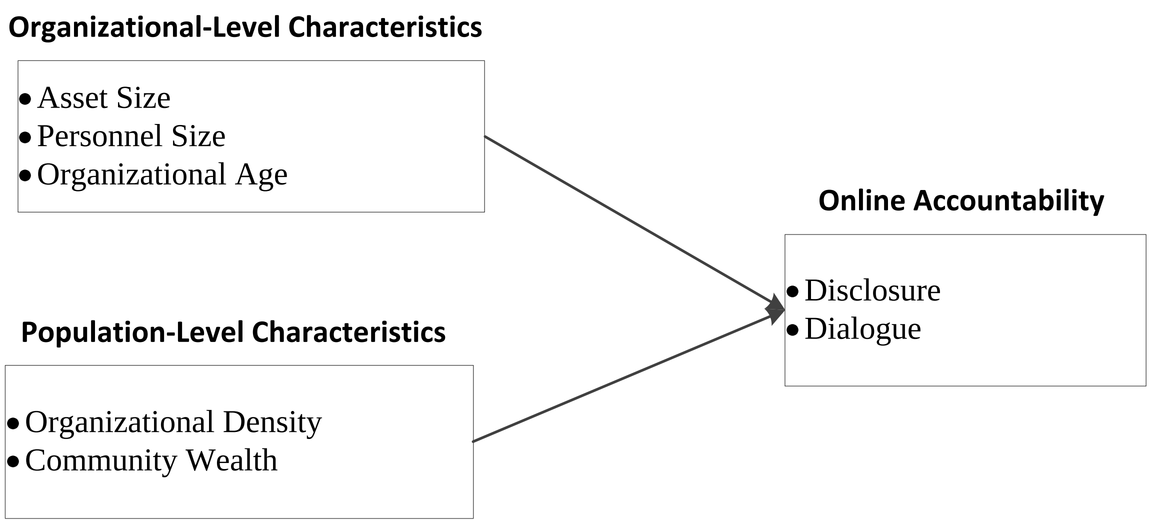


**Figure 1. Ecological Model of Online Accountability**

### Online Accountability

The dependent variable in the model is online accountability. Online accountability is defined as the extent to which the Web is used to demonstrate and enhance both core dimensions of online accountability: disclosure and dialogue. We theorize that over time, organizations that demonstrate higher levels of online accountability are more likely to survive and thrive in uncertain, turbulent environments. On the other hand, those organizations that fail to implement online accountability measures decrease their life chances and may become prone to deselection from the environment.

### Organizational-Level Characteristics

Similar to research on technological innovation, a central stream of research in the organizational ecology literature is the effect of organizational size and age on organizational outcomes. However, size has been traditionally measured by the size of the assets in the research on organization ecology. In the technological innovation literature, size has been measured by the size of assets and the number of employees (Kimberly and Evanisko 1981). Therefore, our model consists of three organizational-level variables: asset size, personnel size, and organizational age.

#### *Asset Size*

At the organizational level, researchers have reported a positive relationship between organizational asset size and online accountability (Saxton et al., 2011). Organizational assets refer to the total assets that are reported on the IRS Form 990. In general, larger organizations have access to more resources that may be applied to produce changes in strategy, structure, and standard operating procedures faster than those organizations that are resource deprived. Therefore, we posit that larger organizations in terms of total assets will exhibit higher levels of online accountability than smaller organizations.

*Hypothesis 1: Asset size is positively related to online accountability*

#### *Personnel Size*

Personnel size refers to the total number of employees reported on the IRS 990. In general, larger organizations are more likely to employ more professional and skilled workers. As such, they are more likely to benefit from increased levels of management capital and technical expertise than smaller organizations. Therefore, we posit that larger organizations in terms of the total number of employees will exhibit higher levels of online accountability than smaller organizations.

*Hypothesis 2: Personnel size is positively related to online accountability*

#### *Organizational Age*

Organizational age refers to the chronological age of the organization. Research has shown that the age of an organization is related to online accountability (Saxton et al., 2011). The traditional line of argument has suggested that younger organizations were prone to the *liability of newness* (Stinchcombe 1965). However, from a strategic management perspective, organizational age increases inertia and reduces discretion (Hambrick and Finkelstein 1987). Therefore, older organizations are prone to the *liability of aging*. The liability of aging suggests that the structure, processes, and standard operating procedures of older organizations tend to reflect their founding environment. As such inertia makes it difficult for older organizations to keep pace with environmental changes.

From an accounting perspective, younger organizations are more likely to provide relevant information online in order to bridge the *information asymmetry gap* (Trabelsi et al., 2008). In addition, younger organizations are more flexible and better able to adapt and respond to environmental changes. Therefore, we posit that younger organizations will exhibit higher levels of online accountability than older organizations.

*Hypothesis 3: Organizational age is negatively related to online accountability*

### Population-Level Characteristics

The second facet of our model focuses on two conditions in the organization's external environment: organizational density and community wealth.

#### *Organizational Density*

Organizational density is defined as the ratio of organizations per the total population of citizens in a specific environment. The density of organizations has important implications for legitimacy (Saxton et al., 2011). For example, when few organizations occupy a niche, there is less competition for resources. However, as the density of organizations increases, organizations face more intense competition for financial and human resources. We propose that organizations operating in highly dense organizational populations are more likely to employ online accountability in order to increase the legitimacy of the organization in the environment. Therefore, we posit that NPOs operating in highly dense organizational populations are more likely to exhibit higher levels of online accountability.

*Hypothesis 4: Organizational density is positively related to online accountability*

#### *Community Wealth*

Community wealth refers to the extent of human and financial resources that are available in a community (Corbin 1999; Saxton et al., 2011). In this model, the poverty level is used as surrogate for community wealth. The poverty level of a community is the percentage of persons that are living at or below the poverty-income level. We propose that wealthier communities are more likely to demand greater use of the organization's Website than those communities that experience high rates of poverty. Therefore, we posit that NPOs operating in wealthier communities are more likely to exhibit higher levels of online accountability.

*Hypothesis 5: Community wealth is positively related to online accountability*

## RESEARCH METHODOLOGY

In order to investigate the four dimensions of online accountability, we have begun to analyze secondary data on 653 NPOs located in a Northeast Regional Area of the United States. The initial data was obtained from GuideStar in the fall of 2010. The dataset contained information that was obtained from the most recent IRS 990 filing (2008 – 2010).

These organizations include pubic charities such as human service agencies, educational institutions, health institutions, religions groups, and other social groups. We will use regression analysis in order to identify the relationship between the five independent variables and the dependent variable – online accountability. The data for the three independent variables: asset size, personnel size, and organizational age are all extracted directly from the GuideStar dataset. The first population level, independent variable – organizational density, was extracted from the National Center for Charitable Statics database and the U. S. Census. The fifth, independent variable – community wealth is extracted from the Census Bureau.

Finally, the constructs of the dependent variable – online accountability is collected from a website content analysis of each organization's Website. All hypotheses will be tested.

## DISCUSSION AND IMPLICATIONS

Online accountability can serve as the signal to stakeholders and external entities that a NPO is transparent and trustworthy. Through their web presence NPOs can reduce the divide between the internal and external environments by bringing more of their financial and performance data into the public domain, and encourage more direct interaction with stakeholders. The issue of online accountability is particularly relevant in the nonprofit sector where public perception can greatly affect donations. Failure to share critical information online may erode trust and reduce gifts and contributions to the organization. In fact, when NPOs communicate and share information with donors, this builds trust and results in greater beliefs that the NPO is serving a worthy cause and using their funds appropriately (MacMillan, Money, Money and Downing 2005). NPOs that fail to communicate effectively with donors can potentially lose significant revenue particularly in challenging economic environments.

From a research perspective, this study examines a specific set of independent variables that affect online accountability. Further analysis will be needed to determine if other variables should be included in this model. Based on the outcomes of our hypothesis testing, confirmatory findings provide a basis for others to test and validate the model under other conditions such as NPOs in other regions, private sector businesses, and other types of institutions such as government agencies. This research will also provide an empirical basis for analyzing online accountability, both from disclosure and dialogue perspectives.

This research also has implications for practitioners. For managers and stakeholders of a NPO, this research outlines the factors that affect online accountability. Given that we hypothesize that larger organizations are more likely to engage in online accountability, smaller organizations can be more proactive and take measures to present information online, despite their inherent limitations. For NPOs that face challenges resisting inertia and relying on the status quo, this research highlights the value and need for effective online accountability. Ultimately, the theory and findings from this study has implications for both researchers and practitioners interested in online accountability.

## CONCLUSION

This work-in-progress examines the state of online accountability among a regional population of NPOs. The research is relevant from both a theoretical and practical perspective. From a theoretical perspective we use organizational ecology theory to understand the underlying factors that affect online accountability and ultimately the impact on the eventual survival or removal of the organization from a complex, uncertain environment. As resource availability is constrained by economic, political, technical, and social factors, NPOs are aggressively employing innovative strategies to remain relevant in the environment. As matter of practical relevance, understanding online accountability can serve to benefit all relevant stakeholders in a specific environment.

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