

THE EFFECT OF FRAUD ON RISK MANAGEMENT IN NOT-FOR-PROFIT ORGANIZATIONS

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Abstract

Not-for-Profit (NFP) organizations have specific organizational characteristics as their objectives are ethically motivated and trust is indispensable. Additionally, NFP organizations are often small sized and do not have the expertise to prevent fraud. As a result, an effective risk management is of substantial importance. We use survey data from NFP organizations in Australia and New Zealand (N = 652) to identify factors that influence fraud prevention strategies. Our findings indicate that organizations that have not experienced fraud rely partially on ineffective prevention measures. The occurrence of fraud seems to trigger a learning process that leads to a more sophisticated understanding of internal controls and a more suitable risk management. Our results are applicable to support fraud prevention strategies and are highly relevant for practitioners.

Keywords: Not-For-Profit, Fraud, Fraud Prevention, Risk Management

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1. Introduction

Not-for-Profit (NFP) organizations today have a wide reach and impact on communities and with substantial global growth, these organizations provide a variety of activities that enhance the lives of many people. Despite their significant contribution to society, NFPs continue to be the targets of unscrupulous individuals, resulting in scandal and disrepute (Hamilton & Slatten, 2013). Consequently, NFP organizations are under constant pressure from governments, regulators, watchdog groups, charity rating agencies, donors and the community to demonstrate accountability and performance (Neely, 2011). In order to successfully fulfil their role in society, NFPs require resilient organizational structures and policies supported by ongoing training to ensure that responsibility is shared by executives, board members, employees and volunteers (Hamilton & Slatten, 2013). Cultivating such a culture is fundamental to their success since donors are only willing to give to organizations that they trust. Volunteers will give their time to causes they believe are being advanced, and the community will engage with NFPs they recognize as being accountable for their actions.

In general, however, fraud is easier to perpetrate in NFP organizations than in their profit-oriented counterparts (Greenlee, Fischer, Gordon, & Keating, 2007). Douglas and Mills (2000) and Owen (2003), for example, cite several factors that make NFP organizations more vulnerable to fraud including: an

atmosphere of trust, the difficulty in verifying certain revenue streams (including cash donations), weaker internal controls, lack of business and financial expertise, and reliance on volunteer boards. As a result it surprises that only little empirical research determines the prevalence of fraud in NFP organizations compared to for-profit organizations (Greenlee et al., 2007). Therefore, this research aims to examine fraud prevention strategies and the organizational aspects that influence them.

Previous research has addressed fraud detection and the underlying mechanisms (e.g., Moyes & Hasan, 1996; Owusu-Ansah, Moyes, Oyelere, & Hay, 2002), the effectiveness of fraud detection measures (Alleyne, Persaud, Alleyne, Greenidge, & Sealy, 2010; Bierstaker, Brody, & Pacini, 2006) and the effectiveness of specific measures (Khondkar & Siegel, 1998). However, due to the unique characteristics of NFP organizations, it is difficult to adopt findings obtained from for-profit organizations directly. In particular, trust is a key requirement for successful NFP organizations. Therefore, we explore factors that influence risk prevention strategies adopted in NFP organizations. Our results provide evidence that the occurrence of fraud initiates a learning process leading to organizational change. NFPs that experience fraud seem to learn from their mistakes as the potential loss is critical for ongoing survival of the organization. As a result, a more realistic assessment of fraud prevention measures

arises that shapes the organization's future risk management.

The remainder of this paper is arranged as follows: Section 2 provides an overview of the relevant literature. In Section 3 the research hypotheses are derived, followed by the research design and an overview of the results in Section 4. Results are discussed in Section 5. Section 6 discusses limitations and offers concluding remarks.

2. Related Literature

NFP organizations personify the qualities of values, passion and ethics and they are sustained by the bonds of trust that develop within and among their members (Rothschild & Milofsky, 2006). The difference between NFPs and their for-profit counterparts is one related to mission. Business (for-profit) firms are motivated by the profit motive. In contrast, NFPs do not distribute profits to their members (Fitzgerald, Trewin, Gordon, & McGregor-Lowndes, 2010). They do not issue shares and their missions are not focused on maximizing profit (Petrovits, Shakespeare, & Shih, 2011). They are diverse in their purpose and operate in sectors such as sports and education, and social or community areas including civil rights and religion. Many do not operate in the market sector and are therefore excluded from measures of economic activity. Consequently, size of the volunteer base provides the best indication of sector activity. Within the Australian context there are approximately 600 000 NFPs employing approximately 900 000 staff and contributing about \$43 billion to GDP. Additionally, over 4.6 million people volunteer with NFPs having a wage equivalent of \$14.6 billion. Of this number only 50% volunteer with NFPs that also employ paid staff (Fitzgerald et al., 2010).

Webster's Dictionary (2001, p. 380) defines fraud as "*the multifarious means which human ingenuity can devise, which are resorted to by one individual, to get an advantage over another by false representations*". Under common law, four elements must exist for a fraud to be present: i) a statement is materially false, ii) knowledge exists that the statement is false, iii) a victim relies on the statement, and iv) the victim suffers damages as a result of relying on the false statement (J. T. Wells, 2011). Occupational fraud is defined as "*the use of one's occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization's resources or assets*" (ACFE, 2012, 6). Occupational fraud is therefore very broad and it encompasses a range of transgressions by employees at all levels of an organizational hierarchy including asset misappropriations, corruption and fraudulent financial statements.

Sutherland (1940) coined the phrase "white-collar crime". He describes the white-collar criminal as a sophisticated professional that principally

violates "delegated or implied trust" (Berle & Means, 1932; Jensen & Meckling, 1976). White-collar crimes are less obvious than violent crimes for several reasons: consequences may be spread over a longer period, many individuals may participate in the act, and victims may be more difficult to identify (Dorminey, Fleming, Kranacher, & Riley Jr, 2012). Cressey, a student of Sutherland, hypothesized three criteria for white-collar offenses (Cressey, 1950). The three key criteria of Cressey's 'fraud triangle' are pressure (an un-shareable need), rationalization (of personal ethics), and opportunity (lack of adequate controls and knowledge to commit a fraud). All three must be present in order for a fraud to be perpetrated (Cressey, 1950).

Becker's work on the economics of crime provides insights into how organizations may deter fraudulent behavior (Becker, 1974). Becker argues that an individual may be deterred from engaging in criminal activity when a higher fine (penalty) is imposed and there is a greater probability of detection. The crime is only committed if the gain realized far exceeds the expected punishment. Correspondingly, changing expected punishment may fundamentally influence criminal behavior (Levitt, 1997). Furthermore punishment may only act as a deterrent if the expected punishment is close to the gain derived from the crime. Specifically, this approach may fail when wealthy criminals receive a low fine as it is of little significance (Garoupa, 2001). When there is little or no punishment, people have more difficulty basing their decisions on their moral values, especially when others are getting away with the unethical option and receiving personal gains. Seemingly, the presence of punishment supports moral values by giving people a stronger rationale to do what is right and removes the element of rationalization (Gurley, Wood, & Nijhawan, 2007). Hegarty and Sims (1978) established that personal gain significantly increased unethical behaviors while the threat of direct punishment decreased it and work undertaken by Block and Gerety (1995) concluded that individuals' are risk averse in general, indicating that a low probability of punishment would be a major deterrent. Brown and Reynolds (1973) modified Becker's model to include deterrence factors and the economic gain from the criminal activity. Gul, Ng, and Marian Yew Jen Wu (2003) applied the Brown and Reynolds' model to a situation involving unethical behavior and posited that the level of an individual's ethical reasoning influences unethical behavior.

A review of several fraud surveys conducted by large accounting and consulting firms reveals that fraud is a growing crisis that is being faced by organizations internationally (ACFE, 2012; BDO, 2012; EY, 2012, 2013; KPMG, 2012; PwC, 2012). The ACFE survey (2012) estimates that a typical organization loses 5% of its revenues to fraud each year. Applied to the 2011 Gross World Product, this

figure translates to a potential annual fraud loss of more than \$3.5 trillion globally. Upon close examination of the surveys, it is evident that organizations implement several risk reduction

measures to lessen the impact of fraud. Table 1 provides an overview of the techniques used in the surveyed organizations.

Table 1. Fraud Risk Reduction Measures

	ACFE (2012)	BDO (2012)	EY (2012)	KPMG (2012)	PwC (2012)
Sector	Public, Private, Govt., NFP	NFP	Public, Private	Public, Private, Govt.	Public, Private
No. respondents	1388	645	681	281	3877
Region	Global	Australia & NZ	Asia-Pacific	Australia & NZ	Global, Australia
Risk reduction measure	Tip (43%) Management review (15%) Internal audit (14%) Account reconciliation (5%) Document examination (4%) External audit (3%) Police (3%) Monitoring (2%) Confession (2%) Controls (1%) Other (1%)	Tips (34%) Internal controls (33%) Internal audit (12%) Other (11%) External audit (4%) Bank (3%) Police (1%)	Internal audit (33%) Regulation (29%) Technology (13%) Continuous monitoring (9%) Whistle blower policy (7%) Board/committee oversights (3%) External audit (3%) Review by specialists (2%)	Internal controls (41%) Notification by employee (22%) Notification by external party (10%) Other (10%) Fraud detection procedure (8%) Internal audit (6%) Anonymous (4%)	Tip off (including whistle blowing – 35%) Fraud risk management (22%) Suspicious transaction reporting (14%) Internal & external audit (11%) Other (11%) Corporate security (3%) Accident (3%) Law enforcement (3%)

Compared to large organizations, small organizations (those with 100 or fewer employees) differ widely in organizational structure and availability of resources. Small organizations appear to implement far fewer fraud risk management techniques than their larger counterparts. It also appears that smaller organizations are more frequently victimized and they suffer a disproportionately larger median loss (ACFE, 2012). Furthermore, executives employed within the NFP sector appear to exhibit indifference towards the fraud problem, often assuming that due to the nobility of their cause, employees and volunteers would not steal from NFPs (Rothschild & Milofsky, 2006). These misguided beliefs often lead to NFPs being less diligent in implementing appropriate controls for safeguarding their assets (Buckhoff & Parham, 2009; Greenlee et al., 2007). Douglas and Mills (2000) also argue that this atmosphere of trust, the difficulty in verifying certain revenue streams, weaker internal controls, lack of business and financial expertise, and reliance on volunteer boards all contribute to the problem. In order to prevent fraud, NFP organizations should

enforce clear lines of authority and proper procedures for authorization of transactions (Greenlee et al., 2007). NFPs may invest in training and orientation of volunteers about thefts in an effort to boost accountability, create a positive work environment which may help set the “tone at the top” for ethical behavior and create audit committees to help deter or detect financial mismanagement (Greenlee et al., 2007). Regardless of whatever fraud prevention methods NFP organizations choose, they have a wide reach and impact life in communities worldwide, therefore, any publicized case of fraud or accounting error may have significant negative consequences and impact on their operations (Gallagher & Radcliffe, 2002).

3. Hypothesis development

Due to their limited resources, NFPs may be especially devastated by a loss of funds to fraud. Furthermore resource restrictions in most NFPs often translate into less investment in preventive measures, which makes those organizations more susceptible to

fraud. The research model developed in this study investigates the relationship between the occurrence of fraud and implementation of fraud prevention measures. The research design adopts confirmatory as well as exploratory research approaches. In the following discussion we derive suitable constructs to define the research hypotheses based on the extant literature.

3.1 Confirmatory Research Model

First, we will explore the relationship between company size and fraud prevention measures. According to the ACFE (2012), specific fraud risks faced by small organizations typically differ from those faced by larger organizations. For example, corruption was more prevalent in larger organizations, occurring in nearly 35% of the reported cases in organizations with more than 100 employees, compared to 28% of small business cases. In contrast, billing schemes were the most common fraud committed in smaller organizations. Certain industries are often considered to be particularly susceptible to bribery and other forms of corruption.

We speculate that small NFP organizations (< 100 employees) are more common victims of fraud compared to their larger counterparts. The disparity is most likely due in part to the greater propensity of large organizations' implementing more formal risk management systems and internal controls, establishing internal audit processes, and employing professional forensic analysts to formally investigate fraud cases. Nonetheless, smaller organizations (< 100 employees) appear to consistently experience

higher median losses than their larger counterparts (100-999 employees). This reflects the significance of fraud in smaller organizations (ACFE, 2012). Therefore we propose:

H1: The number of employees will be associated with increased perceived importance of fraud prevention measures.

H2: The turnover of an organization will be associated with the perceived importance of implementing fraud prevention measures.

Second, we investigate the relationship between importance of perceived fraud prevention and actual fraud prevention measures. It is rational to implement preventive measures for risk management purposes if fraud prevention is regarded as important due to known threats. Therefore we propose:

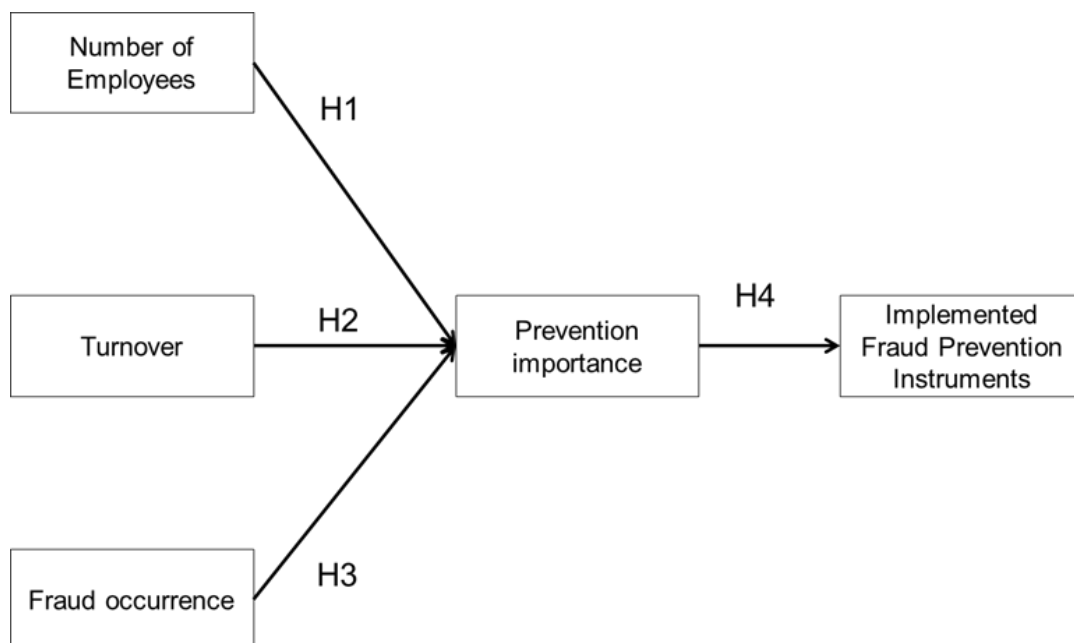
H3: Perceived fraud prevention importance will be associated with an increased number of implemented fraud prevention measures in NFPs.

The occurrence of fraud is particularly critical for NFPs due to the potential loss of reputation and trust which can affect donations on top of the direct damage in relation to the fraudulent behavior itself. Consequently, the occurrence of fraud is a highly severe event for NFP organizations which will shape the future risk management. We propose:

H4: The occurrence of fraud increases the awareness of fraud risks in NFPs.

H1 – H4 explore factors that influence the number of fraud prevention instruments implemented in a NFP organization. The derived research model is presented in Figure 1.

Figure 1. Overview of the examined research model



3.2 Exploratory Research Model

The second part of the research design is an explorative analysis. We speculate in H3 that the occurrence of fraud leads to increased perceived importance of prevention resulting in an increase in the number of fraud prevention measures implemented. In this analysis we explore the effect of fraud occurrence in detail. Reducing the occurrence of fraud is critical for NFP organizations as they rely to a great extent on trust. Trust is a core value within NFP organizations as they rely on external as well as internal supporters such as employees, volunteers and donors. As a result, the occurrence of fraud may damage the reputation of a NFP permanently.

Therefore, we speculate that the occurrence of fraud affects the value system of an organization and subsequently changes it permanently. On an abstract level, Lewin's model of unfreezing, changing, and re-freezing culture explains how values can change permanently within organizations (Armenakis et al. 1999). An understanding of organizational effects that occur due to fraud is relevant as it may trigger a learning process that other organizations may possibly adopt. The following research hypothesis arises:

H5: The occurrence of fraud results in a learning process that changes the perceived importance of selected fraud risk reduction factors.

Table 2. Fraud Risk Reduction Factors

Fraud Risk Reduction factor	Definition	Related References
Fraud risk assessments	Fraud risk assessment assists in recognizing factors that make an organization vulnerable to fraud.	Knapp and Knapp (2001); J. T. Wells (2011); Zimelman (1997)
Ethical/organizational culture	A system of shared norms such as honesty, openness and assistance can reduce the risk of fraud.	Albrecht, Albrecht, and Albrecht (2009); Holtfreter (2008)
External audit function	External audits provide a statutory opinion to shareholders on the material accuracy of an organization's financial statements.	IIA (2014)
Internal audit function	Internal audits are broad based assurance programs set by Management to ensure adequacy of an organization's risk management framework, operational performance of business units, and integrity of management reporting.	IIA (2014)
History of fraudster prosecution	An individual may be deterred from engaging in criminal activity when a higher penalty is imposed.	Becker (1974); Garoupa (2001); Levitt (1997)
Strong internal controls	Internal control is a process enacted by management to provide reasonable assurance regarding the achievement of effective and efficient operations, reliable financial reporting, and compliance with laws and regulations.	Bierstaker et al. (2006); Gallagher and Radcliffe (2002); Holtfreter (2008); McEldowney, Barton, and Ray (1993); Petrovits et al. (2011)
Strong fraud control policy	A fraud control policy provides guidance for employees and managers in dealing with business conduct. These issues may include: general principles for conducting business, ensuring compliance with legal requirements, how to identify and to avoid dishonest and unethical business practices and how to respond to conduct that appears to be in breach of organizational guidelines.	ACFE (2012); Graycar (2000)
Strong top management / board support	Management needs to visibly endorse and support fraud awareness. This includes frequent communication as well as commitments.	Weaver, Trevino, and Cochran (1999); Wood (1997)
Whistleblowing hotline	Employees may become aware of fraudulent activity. A whistleblowing hotline provides a channel for the employee to report the activities.	Bierstaker et al. (2006); Chung, Monroe, and Thorne (2004); Harbord (1993); Paul and Townsend (1996)

In order to test H5, several fraud risk reduction factors are selected. Table 2 provides an overview of these factors. Our exploratory analysis explores the perceived importance of these risk reduction factors among companies that have experienced fraud and those who have not. The research method adopted is discussed in the following section.

4. Method

4.1 Data collection

The data used in this study was collected as part of a not-for-profit fraud survey (BDO, 2012). The survey was available online to all NFP organizations in Australia and New Zealand, and was promoted directly via various professional associations. In total 645 responses were collected. 99.23% percent of the participating NFP organizations are located in New Zealand or Australia. The majority of these organizations have between 1 and 20 employees and an annual turnover of less than \$500,000 (see Table 3). Of the 645 participating organizations, 75 discovered fraud within the last two years (11.62%).

Table 3. Overview of participating NFP organizations

Location	Percentage (absolute numbers)
New Zealand	60.25 % (388)
Australia	38.98 % (251)
Others	0.77 % (4)
Employees	
> 100	12.25 %
51 – 100	6.82 %
21 – 50	8.53 %
1 – 20	57.05 %
None	15.04 %
No response	0.31 %
Turnover	
> \$10,000,000	12.87 %
\$1,000,000 – \$9,999,999	22.33 %
\$500,000 – \$999,999	11.78 %
\$100,000 – \$499,999	23.10 %
< \$100,000	29.46 %
No response	0.47 %

A comprehensive survey containing 76 questions was used to obtain responses from participants. Descriptive results have already been published in BDO (2012), however, this study is distinctive as it statistically analyses the data to identify and establish significant relationships among organizational characteristics, fraud risk reduction factors and fraud occurrence. The majority of the survey questions provided predefined answers along with an ‘other’ for respondents to provide alternative answers. Table 4 provides an overview of the questions used in this analysis.

First, we investigate the relationship among the following organizational characteristics: *Number of Employees*, *Turnover*, *Prevention Importance* and the *Number of Implemented Fraud Detection Instruments (FDIs)*. *Number of Employees*, *Turnover* and *Prevention Importance* use a Likert-like scale while the *Number of FDIs* is interval scaled. Next, the effect

of binary variable *Fraud Occurrence and Prevention Importance* is investigated. Finally, the relationship between fraud occurrence and perceived risk reduction factors is explored. These variables are nominal scale.

4.2 Data analysis

The data analysis was performed in IBM SPSS 22. The Shapiro-Wilk test indicates that none of the continuous variables are normally distributed (all tests are significant). Consequently, only non-parametric tests were used. In order to investigate the relationship between two rank-ordered continuous variables, the Spearman’s Rank Correlation is used. Table 5 outlines the results.

Table 4. Overview of the questions used in this analysis

Variable	Question	Categories
Fraud occurrence	Has your organization suffered a fraud in the past two years?	(1) Yes; (2) No
Number of Employees	How many employees (excluding volunteers) does your organization have?	(1) None; (2) 1 to 20; (3) 21 to 50; (4) 51 to 100; (5) 100 and more
Turnover	What is the annual turnover (gross income) of your organization?	(1) Less than \$100,000; (2) \$100,001 to \$500,000; (3) \$500,001 to \$1,000,000; (4) \$1,000,001 to \$10,000,000; (5) Greater than \$10,000,000
Prevention importance	Does your organization consider fraud prevention to be an important issue?	(1) Not important; (2) Slightly important; (3) Important; (4) Very important; (5) Extremely important)
Fraud prevention measures	Which of the following fraud prevention and detection measures does your organization currently have? (Select as many as appropriate)	(1) Conduct regular fraud risk assessments (2) Code of conduct (covering fraud) (3) Fraud control plan (4) Fraud control policy (5) Fraud prevention / awareness training (6) Fraud risk register (7) Review of internal controls (8) Whistleblower policy (9) None
Number of Implemented FDIs	Calculated based on the number of FDIs in place	0-8 (interval scale)
Risk reduction factors	What do you consider are the main factors that reduce the risk of fraud in your organization?	(1) Conducting fraud risk assessments; (2) Ethical/organizational culture; (3) External audit function; (4) Internal audit function; (5) Previous history of prosecuting employees that commit fraud; (6) Strong controls; (7) Strong fraud control policy; (8) Strong top management / board support; (9) Whistleblowing hotline; (10) Other

Table 5. Correlation between model variables

Variable		Number of Employees	Turnover	Prevention importance	Implemented Instruments
Number of Employees	Correlation Coefficient (CC)	1			
	Sig. (two-tailed)				
Turnover	Correlation Coefficient (CC)	0.75**	1		
	Sig. (two-tailed)	0.00			
Prevention Importance	Correlation Coefficient (CC)	0.21**	0.23**	1	
	Sig. (two-tailed)	0.00	0.00		
Implemented Instruments	Correlation Coefficient (CC)	0.43**	0.45**	0.44**	1
	Sig. (two-tailed)	0.00	0.00	0.00	
	n	643	642	641	645

** Correlation is significant at the 0.01 level (two-tailed).

The results indicate strong correlations between the variables: Number of Employees, Turnover, Prevention Importance and Implemented Instruments. In H1 we speculate that the number of employees will be positively associated with increased perceived importance of fraud prevention measures. The results support our hypothesis by a Spearman coefficient of 0.21 ($p < 0.01$). The results also indicate a strong positive correlation between turnover and perceived importance of fraud prevention measures. H2 is supported as well. Turnover and Number of employees also correlates significantly indicating that both variables reflect the company size. Consequently, we conclude that company size is highly related to fraud prevention importance i.e. the

larger the company the greater the relevancy of fraud prevention measures. In H3 we speculate that perceived importance of fraud prevention will be associated with an increased number of implemented fraud prevention measures. A correlation coefficient of 0.44 ($p < 0.01$) supports this assumption. Perceived importance of fraud prevention translates into the actual implementation of a variety of fraud prevention instruments.

To explore the relationship between the independent binary variable *Fraud* and the variable *Prevention Importance*, we compare the means of the two independent groups using a non-parametric Mann-Whitney u-test. The results are provided in Table 6.

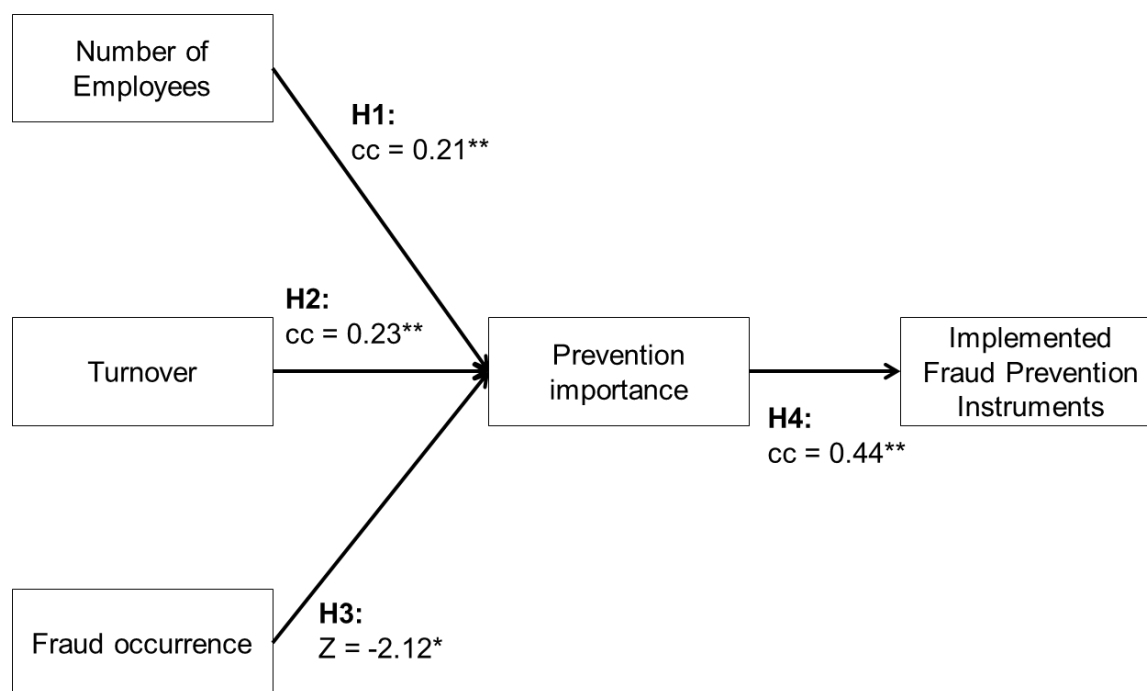
Table 6. Results of the Mann-Whitney u-test

Variable	Fraud	N	Mean	Mean Rank	Sum of Ranks
Prevention Importance	No	566	3.54	315.56	178607.00
	Yes	75	3.87	362.05	27154.00
	Total	643			
Mann-Whitney U	18146.00				
Wilcoxon W	178607.00				
Z	-2.12				
Effect size (r)	0.08				
Asymp. Sig. (2-tailed)	0.03				

The results provide evidence that the occurrence of fraud within a NFP organization changes the perceived importance of fraud prevention. Organizations that experienced fraud rated fraud prevention as more important (mean = 3.87) when

compared to organizations that did not experience fraud within the last two years (mean 3.54). The Mann-Whitney U test is significant ($p < 0.05$). H4 is supported. Figure 2 summarizes the results.

Figure 2. Factors influencing the implemented fraud prevention instruments



Finally, we perform a set of contingency analyses to gain insights into the relationship between Fraud occurrence and perceived Risk Factors. Each hypothesis is translated into a 2 x 2 contingency table

that compares the occurrence of Fraud and No Fraud in relation to whether specific Risk Factors are perceived as relevant (see Table 7). 9 contingency tables are produced.

Table 7. Contingency table of Fraud occurrence and Risk Factor perception

	Fraud discovered – Yes (F)	Fraud discovered – No (NF)
Risk Factor – Yes (R)	Risk Factor is perceived as important & fraud was discovered within the last two years (R&F)	Risk Factor is perceived as important & fraud was not discovered within the last two years (R&NF).
Risk Factor – No (NR)	Risk Factor is not perceived as important & fraud was discovered within the last two years (NR&F).	Risk Factor is not perceived as important & fraud was not discovered within the last two years (NR&NF).

The following parameters are calculated to explore the relationship between fraud occurrence and risk factors: The relative risk (RR) in the 2 x 2 contingency table, is an estimate of the relative incidence of the outcome associated with exposure (assuming data are error-free) (Ferruz, Ortiz, & Vicente, 2005).

$$RR = \frac{R\&F/(R\&F + NR\&F)}{R\&NF/(R\&NF + NR\&NF)}$$

For small expected frequencies in 2 x 2 contingency tables, Fisher's Exact Test is recommended for the calculation of p-values (Everitt,

1992). Additionally, the Pearson Chi-square is reported as an aggregate measure based on the entire contingency table (Ferguson, 1966). The chi-square statistic is only approximated by the chi-square distribution, and that approximation worsens with small expected frequencies. Continuity Correction overcomes the limitations of the chi-square statistic by adding an additional correction term (Yates, 1934). Together the three measures (Fisher's Exact Test, Chi-square and Continuity Correction) provide reliable evidence whether the differences are significant. Additionally, Phi is used as an indicator for the strength of a relationship (Sheskin, 2004, p. 535). Table 8 summarizes the results.

Table 8. Relationship between fraud risk perception and fraud detection

Risk Reduction Factor	R&F	NR&F	R&NF	NR&NF	RR	Fishers p-value (2-sided)	Pearson Chi-sq	Continuity Correction	Phi
External Audit	32	43	434	136	0.56	0.000***	0.000***	0.000***	0.24
Strong Internal control	59	16	398	172	1.13	0.137	0.113	0.147	-0.062
Ethical organisational culture	40	35	411	159	0.74	0.001***	0.001***	0.001***	0.131
Strong management board support	36	39	387	183	0.71	0.001***	0.001***	0.001***	0.134
Internal audits	47	28	327	243	1.09	0.455	0.382	0.454	0.382
Fraud risk assessment	30	45	143	427	1.59	0.008**	0.006**	0.009**	-0.108
Strong fraud control policy	18	57	154	416	0.89	0.677	0.579	0.677	-0.022
Whistleblower Hotline/Tip offs	13	62	42	528	2.35	0.007**	0.004**	0.007**	0.114
Prosecution of offenders	12	63	35	535	2.61	0.007**	0.002**	0.004**	0.122

Results suggest that six risk factors are perceived differently after the occurrence of fraud. An **external audit** is regarded by 76.14 % of NFP organizations that have not discovered fraud as a risk reduction factor. This value declined to only 42.67% in the group that experienced fraud. A relative risk of 0.56 reflects this effect with a value substantially below 1 while Phi is 0.24. These results indicate a negative relationship between fraud detection and the

perception of external audits as a risk reduction factor. All three significance tests support the effect with a p-value < 0.001.

Strong Internal controls are regarded by 69.82 % of NFP organizations without fraud as a risk reduction factor. This percentage increases after the occurrence of fraud (78.67 %). The relative risk indicates an increase of 13 % after occurrence of fraud (RR = 1.13). However, Phi is low (-0.010) and

none of the p-values in relation to the three tests are significant.

An unexpected result emerged regarding **ethical organizational culture**. While 72.11 % of NFP organizations that did not experience fraud regarded ethical organizational culture as a risk reduction factor, only 53.33% that experienced fraud selected this factor. The relative risk is 0.74 indicating a reduction of 26%. Phi is 0.131. This effect is significant in all three tests ($p < 0.001$).

Strong support by the management board is perceived as less relevant once fraud was discovered. The percentage of participants that selected this factor declined from 67.89 % in the group without fraud to 48.00 % in the group that experienced fraud. The relative risk is 0.71 indicating a reduction of 29 %. The difference is significant ($p < 0.001$) in all three tests. Phi shows a moderate strength of 0.134.

Internal audit is perceived to be more relevant when fraud has been discovered. 62.67 % of participants perceived this factor as useful after the discovery of fraud as compared to 57.37 % without fraud discovery. The differences are not significant in any of the three tests and phi is relatively low with 0.382.

The perceived usefulness of **fraud risk assessment** increases after the occurrence of fraud. 25.09 % of NFP organizations without fraud selected this factor as compared to 40.00 % that experienced fraud. This is an increase of 59 % (relative risk 1.59). The difference is significant ($p < 0.01$) and phi is - 0.108.

The perception that **strong fraud control policy** is a fraud reduction factor is nearly unaffected by the occurrence of fraud. The proportion of participants that selected this factor decreased from 27.02 % to

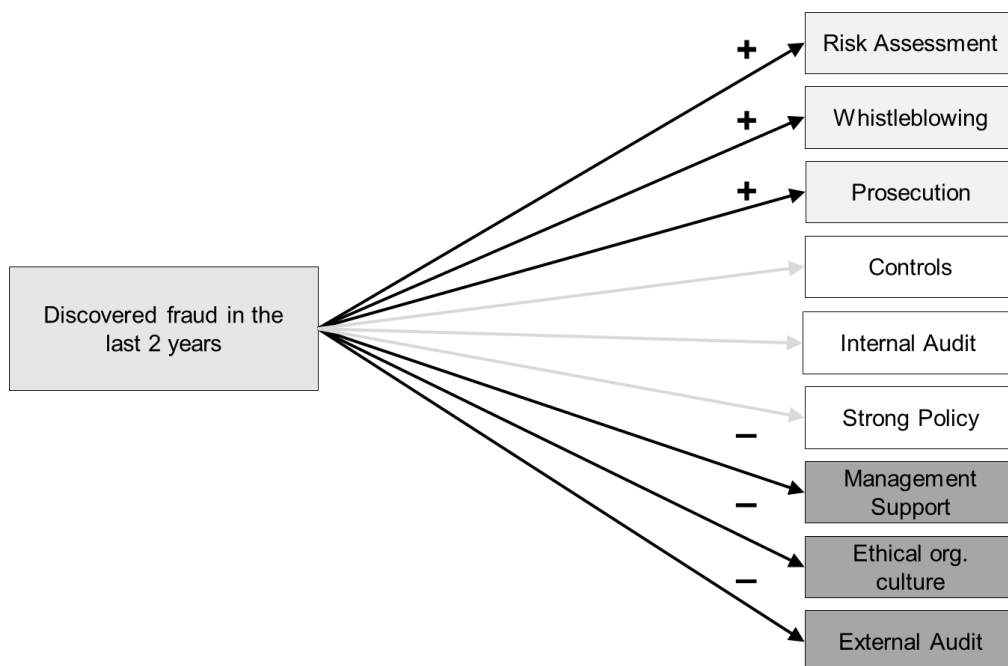
24.00 %. The relative risk is 0.89 and Phi is relatively low at -0.022. The significance tests do not suggest a relationship between the variables.

Whistleblower hotline/tip offs are risk reduction factors that are only rarely selected. Only 7.37 % of NFP organizations that had no fraud within the last two years regard this factor as useful in reducing the risk of fraud. However, this percentage increases significantly if fraud occurs (17.33 %). This is a substantial increase of 235 %. The difference is significant ($p < 0.01$) and Phi is 0.114.

Prosecution of offenders is similar to whistleblower hotline/tip offs. In both instances the proportion of participants that selected these risk reduction factors increased by about 10 % after the occurrence of fraud. 6.14 % of participants in the group without fraud selected this factor compared to 16.00 % in the group with fraud. The difference is significant ($p < 0.01$) with Phi 0.122. However, whistleblower hotline/tip offs as well as prosecution of offenders remain the least selected factors in both groups.

The above findings indicate that NFP organizations change their perception of risk reduction factors after the occurrence of fraud. Some risk reduction factors are implemented less often while others more often. However, the results of the contingency analysis conclusively indicate that a positive effect is only significant for fraud risk assessment, whistleblower hotline/tip offs and prosecution of offenders. In contrast a negative effect was found with regards to external audits, ethical organizational culture and support from upper management and board. Figure 3 summarizes the results.

Figure 3. Effect of Fraud on Perceived Risk Reduction Factors



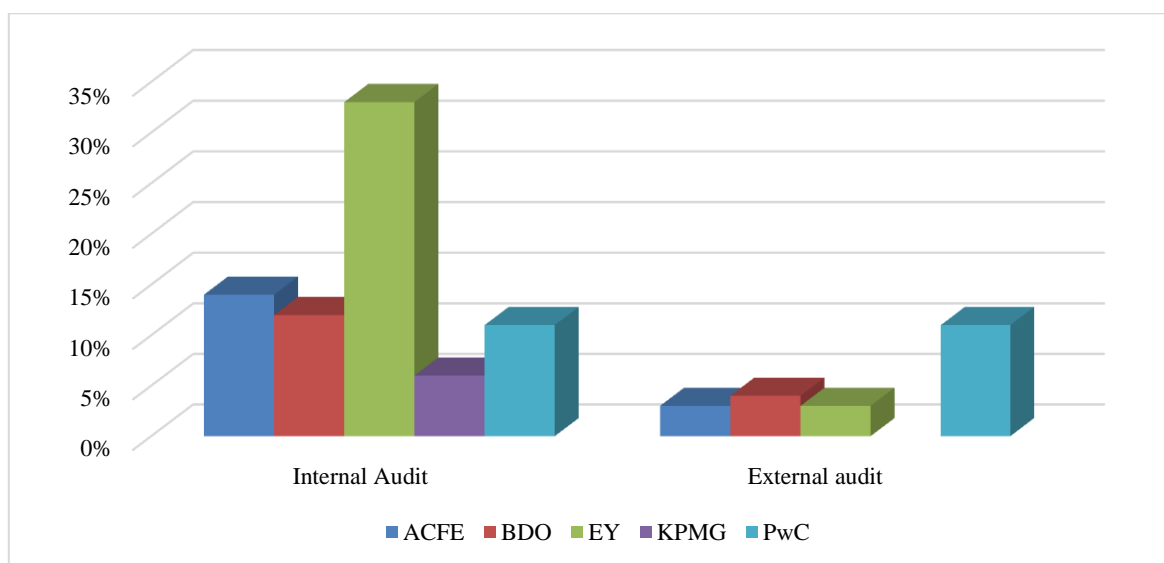
5. Discussion

The study provides evidence that NFP organization size and occurrence of fraud significantly influences perceived importance of risk reduction factors which subsequently translates into greater implementation of fraud prevention measures. Consequently, smaller organizations are more vulnerable towards fraud. In order to prevent fraud, smaller NFP organizations ought to consider more sophisticated risk reduction strategies. We speculated that NFP organizations that experience fraud learn from their mistakes and improve their fraud prevention strategy. Therefore smaller NFP organizations in particular, with fewer resources, may learn from them. Results support our assumption to a limited extent. Some fraud prevention measures are perceived to be more important after the occurrence of fraud while others are perceived as less important. However, we also established that some measures are unaffected by the occurrence of fraud.

5.1. Instruments that are perceived less important after the occurrence of fraud

Results clearly indicate that **external audits** are perceived as less relevant by organizations that have experienced fraud. These results are in-line with previous findings regarding this measure in relation to its effectiveness to discover fraud. A review of fraud surveys conducted by large accounting and consulting firms confirm that internal and external audits do not significantly contribute to fraud detection (Figure 4) in the surveyed organizations (ACFE, 2012; BDO, 2012; EY, 2012, 2013; KPMG, 2012; PwC, 2012). With the exception of EY (2012), fraud discovery attributed to internal audits was 11% and 5% for external audits. (*Note: KPMG did not report any findings for external audits*). This is in particular relevant as external audits of the financial statements were commonly utilized as many organizations are required by regulators to implement these controls (ACFE, 2012). This, however, is not the case in Australia and New Zealand.

Figure 4. Internal and external audits for fraud discovery



External audits provide a statutory opinion to shareholders on the accuracy of an organization's financial statements. They identify risks and assess controls over financial reporting and place reliance on controls to the extent practicable, with an emphasis on gaining sufficient audit evidence to express an opinion on whether the financial statements present a true and fair view (IIA, 2014). Their primary purpose is not to detect fraud. Consequently, NFPs should not rely on external audits to detect fraud.

Management support is also considered less relevant after the occurrence of fraud. According to the accountability hypothesis (Peterburgsky, 2012), since NFPs are known to provide below-average compensation, individuals who ascribe great importance to personal wealth are less likely to take a

position with an NFP organization. NFPs are therefore more likely to attract individuals who are motivated by rewards other than financial ones. Peterburgsky (2012) also noted that CEOs employed in NFPs are more likely to be engaged in reckless behavior than their for-profit counterparts. It may be the case that an apparent lack of management support and management commitment encourages in this environment an elusive feeling of security. Consequently, NFP organizations should not rely on management support and management commitment alone.

Organizational cultures that foster ethical values such as honesty, openness and assistance appear to be in a similar situation to external audits and management support. Although such values may

help reduce the risk of fraud, many workplaces fail to foster such a culture of integrity (Rhode & Packer, 2009). Common ethical problems involve grey areas or activities on the fringes of fraud, such as conflicts of interest, misallocation of resources or inadequate accountability. Situations where “bending the rules” offer significant rewards, may place individuals under substantial pressure to put their moral convictions on hold. In the 2007 National Nonprofit Ethics Survey, nearly 40 percent of NFP employees who observed misconduct failed to report it, mainly because they believed that reporting it would not lead to corrective action or they feared retaliation (ERC, 2008). ‘Soft’ factors such as management support and an ethical organizational culture are both perceived as less relevant by organizations that experienced fraud. Certainly, ‘soft’ factors can have positive effects for organizations (e.g., in order to establish a specific work atmosphere), however, additional measures are essential to prevent fraud.

5.2. Instruments that are unaffected by the occurrence of fraud

The following measures appear to be unaffected by the occurrence of fraud suggesting that perceived importance is a good indicator of effectiveness. **Internal audits** are broad based assurance programs set with the Board and Senior Management to ensure adequacy of an organization’s risk management framework, operational performance of business units, integrity of management reporting and other areas as requested by the Board and Senior Management. They review the adequacy of control design to ensure that risks are effectively managed, and assess operation of key controls to ensure they are operating as intended and therefore are effective in managing risk. Although they are not intended to detect fraudulent activity (IIA, 2014), our findings clearly indicate that internal audits can detect fraud (Figure 3). Therefore, internal audits ought to be conducted regularly to prevent fraudulent behavior.

Internal control is a process enacted by management to provide reasonable assurance regarding the achievement of effective and efficient operations, reliable financial reporting, and compliance with laws and regulations (Petrovits et al., 2011). A good system of internal controls minimizes opportunities to commit fraud (Bierstaker et al., 2006; Gallagher & Radcliffe, 2002; Holtfreter, 2008; McEldowney et al., 1993). Internal controls are an effective mechanism in reducing fraud (BDO, 2012; EY, 2012; KPMG, 2012). Our results support this finding. It is essential for NFP organizations to implement appropriate internal controls to prevent fraud.

Fraud control policies were regarded as an important risk reduction factor by about 25% of the participating organizations. Fraud control policies help employees and managers understand and take

responsibility of issues relating to business conduct. These issues may include general principles for conducting business, ensuring compliance with legal requirements, how to identify and to avoid dishonest and unethical business practices and how to respond to conduct that appears to be in breach of organizational guidelines (Graycar, 2000). Organizations implementing fraud control policies reported a reduction in frauds (ACFE, 2012). It appears that fraud control policies are a reliable risk reduction factor for some organizations. Further research is required to determine under what conditions this factor is most effective.

5.3. Instruments that are perceived more important after the occurrence of fraud

Shibano (1990) recommends conducting a **fraud risk assessment** as a first step in reducing fraud risks. Zimelman (1997) and Knapp and Knapp (2001) found evidence that performing a fraud risk assessment increases an auditor’s attention to fraud cues. Our results support these results as well. A good fraud risk assessment assists in recognizing factors that make an organization vulnerable to fraud. It must become part of the organizational culture and be supported by all stakeholders. In order to be effective the entire organization must embrace it and use it to monitor and change factors that create risk. Its success depends on how effective the results are reported and what follow up action is taken by the organization (Knapp & Knapp, 2001; J. T. Wells, 2011; Zimelman, 1997). A substantial increase of 19% in perceived importance indicates that this factor may be currently underestimated by NFP organizations that have not experienced fraud. For this reason, we recommend that every NFP organization conduct a fraud risk assessment as an initial step prior to implementing other fraud risk reduction measures.

Whistle-blowing is arguably an effective mechanism to combat fraud (ACFE, 2012; BDO, 2012; Daugherty & Neely, 2012; Lee & Fargher, 2013; J. T Wells & Gill, 2007). Employees may become aware of fraudulent activity but not necessarily report it. Organizations that implement effective whistle-blower systems may potentially detect fraud more easily (Bierstaker et al., 2006; Chung et al., 2004; Harbord, 1993; Paul & Townsend, 1996) and therefore take corrective action and minimize costs associated with fraud. However, our results indicate that only a marginal number of organizations perceive this risk reduction factor as important. A substantial increase in perceived importance once fraud has been detected infers that the potential of this risk reduction factor has not been fully realized. Therefore, we recommend that more NFP organizations use this factor. This is particularly relevant as implementing a whistle-blowing hotline requires minimal organizational resources.

Prosecution of offenders is perceived as more important once fraud has been detected. Becker's work on the economics of crime provides insights into how organizations may deter fraudulent behavior (Becker, 1974). Becker argues that an individual may be deterred from engaging in criminal activity when a higher fine (penalty) is imposed and there is a greater probability of detection. The crime is only committed if the gain realized far exceeds the expected punishment. Correspondingly, changing expected punishment may fundamentally influence criminal behavior (Levitt, 1997). Furthermore punishment may only act as a deterrent if the expected punishment is close to the gain derived from the crime. Specifically, this approach may fail when wealthy criminals receive a low fine as it is of little significance (Garoupa, 2001). Furthermore, this factor requires trivial resources as organizations can easily create an awareness of the consequences of fraudulent behavior among employees and management. Additionally, citing cases of prosecution of fraudsters from other organizations may be used to deter fraudulent behaviour.

6. Conclusion

The extant literature suggests that NFP organizations are more vulnerable to fraud as they rely on trust, have weaker internal controls, and lack business and financial expertise. Therefore, it is relevant to identify factors that reduce fraud risk and to provide direction to NFP organizations seeking instruments to reduce the risk of fraud occurrence. This study makes the following contributions to the extant literature. We establish that organization size and fraud occurrence is significant factors that influence fraud risk management. Perceived prevention importance is a key construct in this context as it directly affects fraud prevention measures that are implemented. Moreover, the majority of organizations in the NFP sector are small. In our sample the majority of organizations had between 1 and 20 employees (57.05%). Such organizations rarely use fraud detection instruments suggesting that they are most susceptible to fraud. These organizations may gain substantial benefits from this study as they lack expertise in identifying suitable and effective fraud detection instruments.

We speculate that fraud initiates a learning process which culminates in implementation of suitable fraud risk reduction instruments. Within this context we investigated nine scenarios: 1.) Three of the instruments were perceived as less significant by organizations that had experienced fraud (external audits, ethical organizational culture and top management support). Despite the fact that these factors may prevent and/or detect fraud in certain cases, we recommend that organizations not rely on them alone. Furthermore, we recommend that smaller NFP organizations, in particular, focus on other instruments in order to prevent fraud. 2.) Three

instruments exhibited no effect in relation to the occurrence of fraud. We conclude that organizations that have not experienced fraud perceive them as relatively important. Hence, internal audits and internal controls are considered as highly relevant and ought to be adopted by all organizations. Fraud control policies are considered useful in about 25% of the participants. Further research is required to understand when this instrument should be used. 3.) Three instruments were perceived as more important after the occurrence of fraud. We conclude that this indicates a substantially higher importance than originally assigned. In particular, fraud risk assessment appears to be underestimated and ought to be included in every fraud risk reduction strategy. Whistle-blowing and prosecution of offenders have received very low importance within NFP organizations that have not experienced fraud. However, a substantial increase in their relevance after the occurrence of fraud indicates that this risk reduction factor may be useful. We recommend that smaller organizations especially consider these instruments as they require relatively little resources.

We identify the following limitations in relation to the research design. Firstly, the analysis is based on an assumption that the perceived importance of fraud risk reduction factors in organizations that have experienced fraud reflects actual usefulness. This seems plausible as such organizations evaluate why fraud has occurred and seek opportunities to prevent recurrence. Furthermore, it is assumed that the importance of all risk reduction factors are equal among all organizations in the sample. However, it may be the case that NFP organizations in a specific sector, for example culture and recreation or social services, rely on specific instruments that are not relevant in other sectors. Nevertheless, the effect of this limitation has been reduced by focusing only on NFP organizations. Data about the industry in which the organization operates was also collected in the survey. This data did not indicate differences in terms of fraud risk or fraud detection measures among the various sectors. We also need to mention that sample sizes for NFP organizations that had discovered fraud in each industry category were relatively small. Therefore, further research is required in this area to determine industry-specific differences. Additionally, this study is, to some degree, based on nominal scale variables. This is appropriate as existing fraud detection measures and fraud discovery require Yes/No responses. Likert scales were used when psychological factors such as perceived importance were explored.

Fraud prevention depends on implementing appropriate measures. The contributions made by this study provide new stimulus for research in this field. The study provides new perspectives into investigating the relevance of fraud prevention instruments. The results provide evidence that internal audits, internal control and fraud risk assessment are

particularly good fraud prevention measures. Whistle-blowing and prosecution of offenders appear to be affordable mechanisms that may further prevent fraudulent behavior within NFP organizations.

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