

# **DETERMINANTS OF BEHAVIORAL INTENTION OF FRAUDULENT FINANCIAL REPORTING: USING THE THEORY OF REASONED ACTION**

*Siti Noor Hayati Mohamed Zawawi*

*Faculty of Accountancy, Universiti Teknologi MARA, Malaysia*

*Kamil Md. Idris*

*Faculty of Accountancy, Universiti Utara Malaysia, Kedah, Malaysia*

*Rashidah Abdul Rahman*

*Accounting Research Institute & Faculty of Accountancy  
Universiti Teknologi MARA, Malaysia*

## **Abstract**

*The main aim of this study was to identify factors that determined the behavioral intention of fraudulent financial reporting. Since fraudulent financial reporting involves unacceptable human behavior, the social psychology theory of reasoned action was used to identify the behavioral factors that could explain this behavior. Using the structural equation modeling, the results indicate that the attitude toward behavior and the subjective norm significantly influenced the behavioral intention of fraudulent financial reporting. However, the subjective norm was a more important predictor than the attitude toward behavior. Overall, the results show that the theory of reasoned action was successful in explaining the fraudulent financial reporting behavior.*

**Keywords:** *Fraudulent Financial Reporting, Theory of Reasoned Action, Structural Equation Modeling, Management.*

## **Introduction**

It is reported in the official website of the Malaysian Securities Commission under the enforcement section that in the year 2001, one company was involved with providing false statement to the Securities Commission by inflating the

turnover, trade debtors and profit before tax figures in the audited accounts and this had increased to 6 in the year 2007 ([www.sc.com.my](http://www.sc.com.my)). The number of companies involved in fraudulent financial reporting may seem very few, but the actual number of cases involved may be more. This is because there might be cases that were detected but not reported and were settled out of court, as well as cases that were detected and not prosecuted and cases that are not yet detected (Pothiniker, 2004).

The consequences of the fraudulent financial reporting can be severe and the real cost involved cannot be estimated accurately as it might affect many stakeholders. Sometimes, it is not possible to quantify in monetary terms as the fraudulent financial reporting may incur social and other psychological costs (Krambia-Kapardis, 2002). In reporting fraudulent financial statements, the perpetrator has a clear intent to deceive the users (Shafer, 2002). The fraudulent financial reporting is an unacceptable behavior, engaged by a perpetrator to deceive the users of the financial statements for personal or organization reasons and is motivated for instance due to greed and financial pressures. Therefore, it is necessary to identify and understand the behavioral factors that might influence the perpetrator to intent to engage in fraudulent financial reporting, so that it can be reduced if not avoided.

The empirical study on fraud within a Malaysian context is very little. For instance, Smith, Haji Omar, Sayd Idris, and Baharuddin (2005) examined auditors' perception of fraud risk indicators. Mohamed Zawawi and Abdul Rahman (2006) examined the corporate members' perception on the importance of fraud prevention policies, and in another study, Mohamed Zawawi and Abdul Rahman (2008b) examined the fraud prevention mechanism and responsibility for fraud detection. Finally, KPMG(M) (2005) carried out the general fraud survey among auditors in Malaysia.

Outside the Malaysian context, there were many empirical studies on fraud detection (Barsky, Catanach Jr. and Rhoades-Catanach, 2003; Kaminski and Wetzel, 2004; Kaminski, Wetzel and Guan, 2004; Persons, 1995; Spathis, 2002) and studies to identify factors that correlated with the occurrence of fraudulent financial reporting (Beasley, 1996; Holtfreter, 2005; Lavery, Lindberg and Razaki, 2000; Saksena, 2001; Summers and Sweeney, 1998; Turpen and Messina, 1997; Wells, 2002). However, there were a few studies that examined the behavioral aspect of the perpetrator (Carpenter and Reimers, 2005; Uddin, 2000; Weidman, Curatola and Linnehan, 2004).

Therefore, the main aim of this paper was to identify the behavioral factors that influenced the fraudulent financial reporting behavior of an individual perpetrator. The focus of the fraudulent financial reporting in this paper was pre-billing shipment. This study was part of a series of studies that examined the fraudulent financial reporting. In this study, fraudulent financial reporting was defined as an intentional act by one or more individuals among management, employees, or third parties, which resulted in a misrepresentation of financial statements and, it may comprise manipulation, falsification or alteration of records or documents; misappropriation of assets, suppression or omission of the effects of transactions from records or documents; recording of transactions without substance; misapplication of accounting policies. This definition was based on the International

Standards on Auditing (ISA) (AI 240) on “Fraud and Error” which defines fraud in terms of fraudulent financial reporting.

The conceptual framework of this study was based on the theory of reasoned action. The theory states that the attitude toward behavior for fraudulent financial reporting and subjective norm may influence behavioral intention of fraudulent financial reporting. According to the theory, the attitude toward behavior is the individual’s overall evaluation to perform the said behavior and the subjective norm is the individual’s perception of social pressure to perform or not to perform fraudulent financial reporting. Thus, based on this theoretical framework, this study sought to provide answers to the following questions:

1. Does the attitude toward behavior for fraudulent financial reporting influence the behavioral intention of fraudulent financial reporting?
2. Does the subjective norm influence the behavioral intention of fraudulent financial reporting?
3. Does the attitude toward behavior is the most significant predictor of behavioral intention of fraudulent financial reporting?

This study is important since it provides an awareness of, the information and in-depth understanding on the behavioral factors that might influence an individual’s behavioral intention of fraudulent financial reporting. This study will benefit the management and the regulatory bodies such as the Securities Commission (SC) and the Malaysian Institute of Corporate Governance (MICG) to formulate new policies, procedures and/or guidelines, as well as improve the rules on corporate governance in deterring fraudulent financial reporting. The study will assist the companies to design the change intervention strategy i.e. to develop strategies that can divert the unacceptable positive attitude toward the behavior and positive social pressure so as to instill an environment that can better prevent the occurrence of the fraudulent financial reporting. The findings of this study contributes to the body of knowledge on the theory of reasoned action as applied to the fraudulent financial reporting in a Malaysian context. Finally, it provides local empirical evidence on the behavioral factors that influence behavioral intention of fraudulent financial reporting.

This paper is organized as follows with section 2 on the corporate governance structure in Malaysia; section 3 on the theory of reasoned action and the conceptual framework of the study; section 4 on the development of the hypotheses; section 5 on the research methodology; section 6 on the findings and discussions on the results; and section 7 on the conclusion, the limitations of the study, and the recommendations for future research.

## **Corporate Governance Structure in Malaysia**

Malaysian companies are governed by the Companies Act 1965. One of the provisions of the Act i.e. Section 364 imposes a penalty of imprisonment for 10 years or two-hundred and fifty thousand ringgit or both on those who provided false and misleading

financial statements in a material respect. The 2007 amended Companies Act enhances the regulations and has a direct impact on the business community. It clarifies and reformulates the directors' roles and duties, the auditors' roles and responsibilities ensuring accountability in corporate management and decision-making (<http://www.ssm.com.my/en/docs/CLRCFinalReport.pdf>).

The Malaysian Code on Corporate Governance was first introduced in year 2000. The code sets out the principles and best practices of good governance and described optimal corporate governance structures and internal processes (<http://www.sc.com.my/eng/html/cg/cg2007.pdf>). However, the code allows some flexibility to companies to apply the principles based on their circumstances. It also identifies a set of guidelines or practices intended to assist companies in designing their approach to corporate governance. The code was revised and released by the Securities Commission on 1 October 2007. The main aims of the revision are to strengthen the board of directors and audit committees, and to ensure that they discharge their roles and responsibilities effectively. The amendments set out the eligibility criteria for appointment of directors, the eligibility criteria for appointment as an audit committee members, the composition of audit committee, the frequency of meetings and the needs for continuous training (<http://www.micg.net/brochure/cg2007.pdf>).

Bursa Malaysia, the Malaysian stock exchange that deals with the listing requirements of the listed companies, was introduced in 1973, then known as the Kuala Lumpur Stock Exchange ([http://www.bursamalaysia.com/website/bm/about\\_us/the\\_organisation/history.htm](http://www.bursamalaysia.com/website/bm/about_us/the_organisation/history.htm)), has also revamped its Listing Requirements in 2007. Pursuant to Section 9 of the Capital Market and Services Act 2007, amendments have been made in relation to corporate governance and other areas. The key amendments are to enhance the corporate governance framework by enhancing the effectiveness and independence of audit committee, and mandating the internal audit function by listed companies, which aims at raising the corporate governance standards amongst listed companies and increasing investors' confidence ([http://www.klse.com.my/website/bm/regulation/rules/listing\\_requirements/](http://www.klse.com.my/website/bm/regulation/rules/listing_requirements/)).

The Malaysian Institute of Accountants (MIA) has also approved and adopted the International Standard on Auditing (ISA) AI 240 on 'Fraud and Error'. The AI 240 is concerned with external auditor's responsibilities to consider fraud in an audit of financial statements. In particular, the auditor should consider the risk of material misstatements in the financial statements resulting from fraud and error when planning, designing and performing the audit procedures, and in evaluating and reporting the results thereof. In addition, the auditor should design the audit procedures to obtain reasonable assurance that misstatements arising from fraud and error that are material to the financial statements taken as a whole are detected (Malaysian Approved Standards on Auditing, 2001). Due to enlarged fraud issue, the standard was revised requiring the auditor to be more proactive in searching for fraud during the course of an audit (Lee, Haron, Ismail, Che Haat, Zaini and Ying, 2009). The standard also states the responsibility of management to prevent and detect fraud and error by implementing and continue to operate adequate accounting and internal control systems.

Being a member to the International Federation of Accountants (IFAC), another significant move undertaken by the MIA to address fraud issue among others is the implementation of the International Standard on Quality Control (ISQC) 1 (Lee, 2009). The ISQC 1 requires members of the MIA renewing their audit licenses to comply with a set of standards on quality control, which is specific to them as in a audit profession. The compliance with the ISQC 1 was effective from July 1, 2006. Generally, the standard requires audit firms to conform to certain level of quality and to uphold quality performance in providing their services to ensure quality audit. To refuse to comply with the guidelines might entail the withdrawal of license to practice.

The Institute of Internal Auditors Malaysian has also implemented the International Standards for the Professional Practice of Internal Auditing (IPPF) 1210.A2 (<http://www.theiia.org/guidance/standards-and-guidance/ippf/standards/>) on 'Proficiency'. The IPPF 1210.A2 emphasises the importance for the internal auditor to have sufficient knowledge to identify the indicators of fraud and in assisting companies to prevent fraud. The internal auditor should examine potential areas of fraud and evaluate the adequacy and effectiveness of the client's internal control systems. The standard, however, does not require them to have expertise of a person whose primary responsibility is to detect and investigate fraud. In addition, the internal auditor should initiate investigation when there is a concern over control failures or suspicion of wrongdoings. With respect to fraud detection, the IPPF 1220 requires the internal auditor to exercise due professional care, while the management is responsible to establish and maintain effective control system at a reasonable cost (<http://www.theiia.org/guidance/standards-and-guidance/ippf/standards/>).

Besides enhancing on the present requirements and regulations and implementing new regulation, the government has also formed an Integrity Institute of Malaysia in 2004, registered under the Companies Act 1965 (<http://www.iim.com.my/index.php>). Although not directly addressing the deviant behavior of fraudulent financial reporting, indirectly, the Institute has addressed unethical behavior by implementing the National Integrity Plan (NIP). The main aim of the NIP is to promote and enhance ethics and integrity among all Malaysians, including among businesses (Osman, 2005). To achieve this, the NIP has identified a set of targets, which includes to enhance corporate and business ethics and to reduce corruption, malpractice and abuse of power (Lee et al., 2009).

## **The Theory of Reasoned Action and Conceptual Framework**

The theory of reasoned action was originally introduced by Fishbein in 1967 and was later improved by Fishbein and Ajzen (1975). It is based on the social psychology theory. The theory has been widely used, is robust and successfully applied in various disciplines. Research across behaviors generally found strong support for the theory of reasoned action (Sheppard, Hartwick and Warshaw, 1988). The meta-analysis carried out by Sheppard et al. (1988) found that the frequency-weighted average correlation between attitude together with subjective norm and intention was 0.66. The theory of reasoned action, for instance, had been applied to examine the behavioral intention for

tax compliance (Hanno and Violette, 1996). Now the theory has been applied in the financial accounting discipline (Carpenter and Reimers, 2005; Uddin, 2000; Weidman et al., 2004). The theory may provide a promising theoretical framework for researchers who wish to examine the relationship between behavioral factors and fraudulent financial reporting behavior (Mohamed Zawawi and Abdul Rahman, 2008a). Carpenter and Reimers (2005) and Weidman et al. (2004) used the extended version of the theory of reasoned action, i.e. the theory of planned behavior in their studies to examine the Chief Financial Officer's intention to report fraudulent financial statements, and an unethical and fraudulent financial reporting, respectively. The theory of reasoned action is able to explain, understand, predict, and influence virtually any human behavior, in applied settings (Ajzen and Fishbein, 1980), however in specific behavior contexts (Ajzen, 1991).

The theory of reasoned action states that the behavioral intention to perform or not to perform a specific behavior can predict, explain or influence the actual performance of the said behavior. The behavioral intention in turn can be predicted, explained or influenced by the attitude toward behavior and the subjective norm. The focal point of the theory is the individual's behavioral intention to perform a given behavior (Ajzen, 1991; Beck and Ajzen, 1991). This is because it is argued that the behavioral intention is a driving factor that influences behavior (Beck and Ajzen, 1991), and it mediates overt behavior (Uddin, 2000).

Behavioral intention is defined as an individual's subjective probability that he or she will perform a given behavior (Fishbein and Ajzen, 1975) and is a behavioral disposition until there is an effort to transform it into behavior at appropriate time and opportunity (Ajzen, 1988). Attitude toward behavior is also one of the behavioral dispositions (Ajzen, 1991) and is defined as a favorably or unfavorably disposition toward an object, person, institution, or event, where the object includes behavior (Ajzen, 1988). It is the individual's overall evaluation of performing the behavior of interest (Ajzen, 2002c). In social psychology studies, attitude plays an important role to explain human behavior (Ajzen, 1988). Attitude cannot be observed directly but can be inferred through its manifestation in a wide variety of observable cues. Sherif and Hovland (1961) have introduced the concept of attitude latitude. This is a situation where an individual has a range of attitudinal positions whether to accept or reject certain social object at issue and during the process of making judgment about the social object, both cognitive and affective elements are considered. Subjective norm is an individual's perception of a social influence or pressure to perform or not to perform a particular behavior (Ajzen, 1988; Beck and Ajzen, 1991). It is a likelihood that an 'important people' will approve or not approve of the performance of the behavior of interest (Ajzen and Madden, 1986; King and Dennis, 2003). An 'important people' is also known as an important referent or a significant referent. They include parents, spouse, close friends, co-workers, tax accountant and physicians (Ajzen, 1988).

This study only focused on the behavioral factors that influenced the behavioral intention of fraudulent financial reporting. The study did not examine the influence of the behavioral intention on the actual fraudulent financial reporting behavior because it was difficult to study actual behavior in real life (Kantor and Weisberg, 2002) and was tough to observe actual behavior (Carpenter and Reimers, 2005) especially if it was a sensitive area

(Mesmer-Magnus and Viswesvaran, 2005). Moreover, the behavioral intention may serve as a good proxy to the actual behavior (Buchan, 2005). This study also did not examine the inter-correlations between predictors. Ajzen (1991) who posits that the predictors are inter-correlated had never tested their correlations. Based on the above, the conceptual framework of the study is shown in Figure 1.

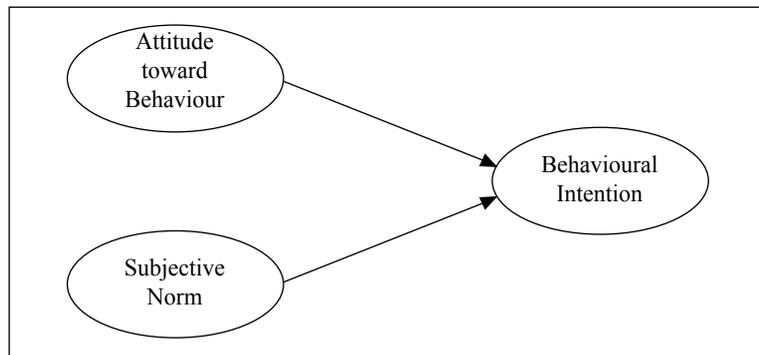


Figure 1: The Conceptual Framework

## Hypotheses Development

As mentioned earlier, attitude is one of the behavioral dispositions and plays an important role in explaining human behavior (Ajzen, 1988). Its importance was consistent with findings from most studies, which revealed that the attitude toward behavior was a significant predictor of behavioral intention (Ajzen, 1991; Buchan, 2005; Carpenter and Reimers, 2005; Chang, 1998; Conner and Armitage, 1998; Sheppard et al., 1988; Uddin, 2000; Weidman et al., 2004). Based on this, the following hypothesis was developed:

H<sub>1</sub> : The attitude toward behavior is a significant predictor of behavioral intention of fraudulent financial reporting.

Subjective norm is another main predictor of behavioral intention of fraudulent financial reporting. Studies found that the contribution of the subjective norm in the prediction of behavioral intention was mixed (Ajzen, 1991). Some studies found subjective norm was a good predictor of behavioral intention (Heath and Gifford, 2002; Sheppard et al., 1988). However, most studies indicate that its predictive power was inferior to the attitude toward behavior (Ajzen, 1991; Ajzen and Fishbein, 1972; Armitage and Conner, 2001; Buchan, 2005; Carpenter and Reimers, 2005; Chang, 1998; Conner and Armitage, 1998; Terry, Hogg and White, 1999; Uddin, 2000; Weidman et al., 2004). In other instances, subjective norm was not significant at all (Buchan, 2005; Chang, 1998; Uddin, 2000).

One of the reasons argued for its poor predictive power relates to its definition (Cialdini, Reno and Kallgren, 1990), which leads to its measurements problem (Ajzen, 1991). The earlier version of subjective norm in the theory of reasoned action was based on the concept of injunctive subjective norm (Sheeran and Orbell, 1999). Whereas, it is

argued that subjective norm should not only comprises injunctive norm, but should also includes descriptive norm (Ajzen, 2002c; Cialdini et al., 1990; Sheeran and Orbell, 1999). Injunctive norm is the individual's perception of what important referent expects him or her ought to do, while descriptive norm is the individual's perception of what important referent would normally do (Sheeran and Orbell, 1999). However, in this study, descriptive norm measures were used to measure the subjective norm.

Malaysians are more communal than individualistic (Asma, 1996; Asma and Pedersen, 2003). Anecdotal evidence shows that they have very strong relationships with their families, friends and colleagues. Malaysians are more people focused (Asma, 1996) and their identity is very much influenced by important referents such as parents, relatives and friends (Asma and Pedersen, 2003). It can be argued that they normally sought the opinions of those important to them first before arriving at decisions. Therefore, it is proposed that the subjective norm significantly influences the behavioral intention of fraudulent financial reporting. The hypothesis to test this proposition was given by:

H<sub>2</sub> : The subjective norm significantly influences the behavioral intention of fraudulent financial reporting.

As stated above, the attitude toward behavior is a significant factor that can explain human behavior. In some studies it was found that the attitude toward behavior was the most significant predictor of behavioral intention (Carpenter and Reimers, 2005; Conner and Armitage, 1998; Nejad, Wertheim and Greenwood, 2004; Uddin, 2000; Weidman et al., 2004). Hence, the hypothesis to test this was:

H<sub>3</sub> : The attitude toward behavior is the most significant predictor of behavioral intention of fraudulent financial reporting.

## **Research Methodology**

This study used a self-reported survey questionnaire. As such, it was subjected to social desirability bias. However, this was overcome by giving the assurance of anonymity to the respondents (Kantor and Weisberg, 2002; Weidman, Curatola and Linnehan, 2004). The survey questionnaire consisted of a hypothetical scenario adapted from Uddin (2000) that related to the financial reporting decision, i.e. pre-bill the next quarter's shipments, and items that capture the data for behavioral intention, attitude toward behavior and subjective norm; and items to obtain the respondents demographic details. Since this study also used a hypothetical scenario, the social desirability bias could also be reduced (Weidman et al., 2004).

The behavioral intention in this study was measured by three items using semantic differential scales of 1 disagree to 7 agree. The items used were: I intend to pre-bill the next quarter's shipments, I plan to pre-bill the next quarter's shipments and I will try to pre-bill the next quarter's shipments. The item used to measure the attitude toward behavior, pre-billing the next quarter's shipments to increase this quarter's revenue had four sub-scales, using a semantic differential scale of 1 unpleasant to 7 pleasant; 1

harmful to 7 beneficial; 1 foolish to 7 wise; and 1 bad to 7 good. The subjective norms were measured by three items, where two items: most people who are important to the company pre-bill the next quarter's shipments and most people in the company whose opinion I value pre-bill the next quarter's shipments used semantic differential scale of 1 unlikely to 7 likely. The third item: most people in the company whose opinion I value consider pre-billing the next quarter's shipments is... used a semantic differential scale of 1 bad to 7 good.

The questionnaires were administered to the proxies to the managers and executives' of the organizations during the period June to December 2007. The proxies were students reading for their Master Degree in the accounting disciplines or in Master in Business Administration with accounting concentration studying on a full or part time basis at the National University of Malaysia (UKM), University of Malaya (UM), International Islamic University Malaysia (IIUM), Northern University of Malaysia (UUM) and MARA University of Technology (UiTM). Most of them were within the age range of 24 to 40 years, i.e. the normal age to further studies after completing the undergraduate studies and after being in employment for several years. To ensure the proxies were valid representatives of the actual managers and executives and to ensure they resembled actual fraudsters, they had to meet certain criteria. A study by KPMG (M) (2005) found that the fraudsters were between 24 to 40 years and were in employment between 2-5 years. Similar findings were obtained by PricewaterhouseCoopers (2007) that 44% of the reported frauds were committed by the fraudsters aged between 31 and 40 years, and 27% of the reported frauds revealed that the fraudsters were in employment between 3 and 5 years. Therefore, the participants had to have the work experience and substantial knowledge of accounting to enable them to make certain financial reporting decisions.

Undergraduate students were also used by Loo (2006) in her study that examined the influence of tax knowledge and tax structure on individual's compliance behavior. Kaplan (2001) and Carpenter and Reimers (2005) used MBA students in their studies. Kaplan (2001) argued that the evening MBA students had substantial work experience. Generally they were familiar with the financial statements through their previous coursework, were older than the undergraduate and fulltime MBA students. Sims (1993) who used MBA students as participants in their study. They found a high degree of correlation between cheating in school and unethical behavior at work. Similarly, Nonis and Swift (2001) used business students in their self reported study found that the students who engaged in dishonest behaviors in classes were more likely to engage in dishonest behavior on the job.

The data were analyzed using the structural equation modeling using AMOS graphic version six software, which is a causal modeling (Marcoulides and Heck, 1993). When using the structural equation modeling analysis, opinions on the minimum sample sizes varied with analysis procedures and model characteristics. To ensure stability in the estimates, Hair, Black, Babin, Anderson and Tatham (2006) recommended that the minimum sample sizes needed to be between 100 and 150. Hoyle and Kenny (1999) recommended that the sample size needed to be in the range of 100 to 200, while Chin and Newsted (1999) suggested that the sample size requirements were 10 times per

number of exogenous variables influencing the endogenous variable with the largest number of path.

Structural equation modeling is a powerful multivariate analysis. It is able to assess a series of relationships (Hair et al., 2006) and assess the relative importance of each variable included in the theory (Marcoulides and Heck, 1993). It is a powerful tool to test the adequacy of the proposed models (Marcoulides and Heck, 1993) In the structural equation modeling, measurement errors are explicitly modeled. Therefore, the estimates produced by the structural equation modeling are more accurate. The Cronbach's Alpha reliability test was carried out to determine that the measured items are internally consistent and measure the respective constructs. Once this is determined, the exploratory factor analysis was performed to determine whether that the items were valid measures of the construct. That is, the measured items actually represent the respective constructs. Reliability and validity are two important properties to evaluate the psychometric quality of behavioral measurements (Marcoulides and Heck, 1993). The items that represented the construct need and to be confirmed and this was done by performing the confirmatory factor analysis using the structural equation modeling. Once confirmed, the second stage of the structural equation modeling followed i.e. to carry out the structural equation modeling analysis on the structural model of the present study.

## **Findings and Discussion of the Results**

One hundred and thirty six responses (136) out of 231, representing 58.9% response rate, were usable for analysis. This complied with the minimum sample size for using the structural equation modeling, as discussed above. The demographic profile of the respondents reveals that 78.7% were following the Master of Accountancy and Master of Forensic Accounting and 92.6% of the respondents were in the first three semesters. About 44% of the respondents were males and 86% were Malays, 6.6% were Chinese, 2.9% were Indians and 4.4% were others. There were 25.6% managers and 63.2% executives. The average age of the respondents was 31 years, and they had 5 years working experience, where 61.7% have 5 years or less working experience. As mentioned above, KPMG (M) (2005) found that most of the fraudsters were in the age range of 24 to 40 years and were in employment between 2 and 5 years, while PricewaterhouseCoopers (2007) found that 44% of the reported frauds were committed by the fraudsters aged between 31 and 40 years, and 27% of the fraudsters were in employment within 3 to 5 years. Based on these, to a certain degree, the respondents of the present study reflect the real fraudsters. Hence, the use of the students as proxies to represent the managers and executives was suitable and appropriate.

All constructs, the attitude toward behavior, subjective norm and behavioral intention are normally distributed as revealed in Table 1 and all had reliability coefficients greater than 0.8, as shown in Table 2. This indicates that the items measuring the constructs were internally consistent.

Table 1: Construct Descriptive Statistics

Latent Variable	N	Mean	S.D.	Min	Max	Kurtosis	Skewness
Attitude	136	3.397	1.451	1	7	-0.759	0.005
Subjective Norm	136	4.221	1.323	1	7	0.233	-0.572
Behavioral Intention	136	3.475	1.900	1	7	-1.207	0.165

Table 2: Correlations between Constructs

Construct	Attitude	Subjective Norm	Behavioral Intention
Attitude	0.896		
Subjective Norm	***0.361	0.858	
Behavioral Intention	***0.420	***0.433	0.949

Note: Cronbach's alpha coefficient is on the diagonal  
 \*\*\* Significant at the 0.001 level (2-tailed).  
 N = 136

The results from the exploratory factor analysis using principal axis factoring extraction method and direct oblimin rotational method show that the measured items for the behavioral intention, attitude toward behavior and subjective norm constructs all formed into a single factor with percentage of cumulative variance explained 90.763%, 76.365% and 78.010% respectively. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) for behavioral intention was 0.759, attitude toward behavior was 0.837 and subjective norm was 0.704. This suggests that each and every construct is valid. To confirm, the confirmatory factor analysis was carried out on the measurement model using the structural equation modeling analysis and the result is shown in Table 3.

Table 3: Summary of Model Fit

	Measurement Model Fit Index	Structural Model Fit Index
Chi-Square badness of fit	42.473	57.569
Df	32	33
p-value	0.102	0.005
Chi-Square/ df	1.327	1.745
Root Mean Square Error of Approximation (RMSEA)	0.049	0.074
Goodness-of-Fit (GFI)	0.942	0.925
Comparative Fit Index (CFI)	0.989	0.975
Tucker Lewis Index (TLI)	0.985	0.966
Incremental Fit Index (IFI)	0.990	0.976

The results indicate that the measurement model fit the data adequately. This is demonstrated by the Chi-Square badness of fit, which was equal to 42.473 where 32

degrees of freedom was not significant with p value equals to 0.102. Moreover, the following fit indices, the relative Chi-Square to degrees of freedom was 1.327 which was below 2.0 and Root Mean Square Error of Approximation (RMSEA) was 0.049 which was below 0.10 cut-off, which suggest acceptable model fit (Hair et al., 2006). The Goodness-of-Fit (GFI) 0.942, Comparative Fit Index (CFI) 0.989, Tucker Lewis Index (TLI) 0.985 and Incremental Fit Index (IFI) 0.990 were all greater than 0.9, which indicates an adequate model fit (Hair et al., 2006; Hu and Bentler, 1995).

As revealed in Table 4, the constructs' composite reliabilities were all greater than 0.8 and the average variance extracted were all greater than 0.6. The results indicate that the constructs were highly reliable and they measured the desired concepts. The results also indicate that the constructs were significantly inter-correlated, but they were discriminated, as shown in Tables 2 and 5 respectively. Hence, it can be concluded that the measurement model was valid.

Table 4: Construct Composite Reliability and Average Variance Extracted

Construct	Composite Reliability	Average Variance Extracted
Attitude	0.898	0.690
Subjective Norm	0.864	0.680
Behavioral Intention	0.947	0.856

Table 5: Construct Discriminant Validity

Correlation	(Correlations Estimates) <sup>2</sup>	Average Variance Extracted		
		ATT	SN	BI
		0.690	0.680	0.856
BI <—> ATT	0.176	/		/
SN <—> BI	0.187		/	/
SN <—> ATT	0.130	/	/	

Note: BI - Behavioral Intention, ATT - Attitude toward Behavior, SN - Subjective Norm

Based on these findings, the structural model analysis was carried out. The results as given in Table 3 shows that the Chi-Square badness of fit was equal to 57.569 with 33 degrees of freedom and p value equals to 0.005, which was significant. This indicates that the structural model did not fit well. However, the p value was sensitive to sample size and to the number of observed variables (Hair et al., 2006). Thus, other fit indices were used to assess the model fit and these were the relative Chi-Square to degrees of freedom, which was equal to 1.745, RMSEA 0.074, GFI 0.925, CFI 0.975, TLI 0.966, and IFI 0.976. All of these fit indices indicate adequate structural model fit. Hence, the results obtained can be used to provide answers to the research hypotheses.

Table 6 shows that the attitude toward behavior significantly influenced the behavioral intention and explained 32% variation in the behavioral intention. Hence, the hypothesis

H1 that the attitude toward behavior was a significant predictor of behavioral intention of fraudulent financial reporting was supported. This finding is consistent with studies by Ajzen (1991), Buchan (2005), Carpenter and Reimers (2005), Chang (1998), Conner and Armitage (1998), Sheppard et al. (1988), Uddin (2000) and Weidman et al. (2004). The table also shows that the subjective norm significantly influenced the behavioral intention and was able to explain 34% variation in the behavioral intention. Therefore, the hypothesis H2 that the subjective norm significantly influences the behavioral intention of fraudulent financial reporting was also supported. This finding is consistent with Heath and Gifford (2002), Carpenter and Reimers (2005) and Weidman et al. (2004). However, it contradicts with Uddin (2000), Chang (1998) and Buchan (2005) who found that subjective norm was not a significant predictor.

Table 6: Regression Weights

	Estimate	S.E.	C.R.	P	Standardized Estimate
BI ← SN	0.472	0.119	3.971	***	0.342
BI ← ATT	0.440	0.116	3.799	***	0.323

Note: BI - Behavioral Intention, ATT - Attitude toward Behavior, SN - Subjective Norm  
 \*\*\* Significant at 0.001 level (two-tailed).

As shown in Table 6, the result also indicates that the subjective norm can explain higher variation in the behavioral intention than the attitude toward behavior. This suggests that the subjective norm is a more important predictor than the attitude toward behavior. This finding is not consistent with the previous studies that generally indicate that the attitude toward behavior is the most significant predictor of behavioral intention (Carpenter and Reimers, 2005; Conner and Armitage 1998; Nejad et al., 2004; Uddin, 2000; Weidman et al., 2004). Finally, overall the theory of reasoned action was able to explain 22% variation in the behavioral intention of fraudulent financial reporting.

The result implies that the attitude toward behavior and subjective norm can explain for the fraudulent financial reporting behavior. Therefore, in order to reduce the incidence of fraudulent financial reporting, the change intervention strategy should consider changing the positive attitude to negative attitude toward such behavior, so that the individual perpetrator believes that it is not favorable to engage in fraudulent financial reporting behavior. For instance, to change from the positive to negative attitude toward behavior, it is important to instill beliefs that pre-billing the next quarter's shipments to increase this quarter's revenue are unpleasant, harmful, foolish and bad. The strategy should also consider changing the individual's perception about the social influence that reporting fraudulent financial statements are not favorable among those who have influence on the individual.

Since the subjective norm is a more important predictor than the attitude toward the behavior, the change strategy should focus more on the subjective norm than on attitude toward behavior.

One of the ways is to make the important people also believe that fraudulent financial reporting is unpleasant, harmful, foolish and bad, that is, not desirable, has serious consequences and caused more problems than benefits. Another suggestion is to instill good moral values in significant people so that they properly behave, observe the code of ethics, are ethical, honest and trustworthy. This can be done by setting proper tone at the top that emphasise integrity, honesty and good ethical conduct by the management. This is important because evidence indicates that the collapsed of Enron was partly attributed to the unethical practices (Culpan and Trussel, 2005) and these were also highlighted in WorldCom and Tyco (Appelbaum, Deguire and Lay, 2005). It is hoped that once these good moral values reside within the cognition of important people they will indirectly display their good moral values, which then might influence the individual to perceive that fraudulent financial reporting is bad.

## **Conclusion, Limitations and Recommendations for Future Research**

This study shows that the attitude toward behavior and subjective norm can explain the behavioral intention of fraudulent financial reporting. Thus, it can be concluded that the theory of reasoned action is successful in explaining the behavioral intention of fraudulent financial reporting behavior. It can also be used as a tool to predict behavioral intention of any other deviant financial reporting. In the local context, this result is important, as it is able to assist the regulators and the management of organization to identify and understand the behavioral factors that influence the individual's behavioral intention of fraudulent financial reporting. In order to reduce the occurrence of fraudulent financial reporting, the regulators and the management can develop strategies that target at these significant predictors.

Although the theory of reasoned action was successfully applied in this study, however, there were some limitations. The first limitation was the use of a scenario that relates to pre-bill shipment and the second limitation was the respondents were mostly Malays. With these limitations, the findings of this study need to be interpreted with caution and should not be generalized to the whole population of managers and executives of the organizations, to other types of fraudulent financial reporting and to other ethnic groups.

According to the theory of reasoned action, it is the individual's accessible beliefs that ultimately influence the actual performance of the behavior. However, this paper did not examine the type of beliefs that might influence the behavioral intention of fraudulent financial reporting. It is proposed that future studies be undertaken to investigate the influence of beliefs on the behavioral intention of fraudulent financial reporting. As mentioned, this study used a scenario that was related to revenue financial reporting decision. It is suggested that future studies on fraudulent financial reporting focus on other area of financial reporting decisions.

## References

- Ajzen, I. (1988). *Attitudes, Personality and Behavior*. Milton Keynes: U.K: Open University Press.
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 2: 179-211.
- Ajzen, I. (2002c). Constructing a TpB Questionnaire: Conceptual and Methodological Considerations. Retrieved 25 January, 2006, from <http://people.umass.edu/aizen/pdf/tpb.measurement.pdf>.
- Ajzen, I. and Fishbein, M. (1972). Attitudes and Normative Beliefs as Factors Influencing Behavioral Intentions. *Journal of Personality and Social Psychology*, 21, 1: 1-9.
- Ajzen, I. and Madden, T. J. (1986). Prediction of Goal-Directed Behavior: Attitudes, Intentions, and Perceived Behavioral Control. *Journal of Experimental Social Psychology*, 22, 5: 453-474.
- Appelbaum, S. H., Deguire, K. J. and Lay, M. (2005). The Relationship of Ethical Climate to Deviant Workplace Behaviour. *Corporate Governance*, 5, 4: 43-55.
- Armitage, C. J. and Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: A Meta-Analytic Review. *British Journal of Social Psychology*, 40, 471-499.
- Asma, A. (1996). *Going Glocal: Cultural Dimensions in Malaysian Management*. Kuala Lumpur: Malaysian Institute of Management.
- Asma, A. and Pedersen, P. B. (2003). *Understanding Multicultural Malaysia: Delights, Puzzles and Irritations*. Petaling Jaya: Pearson Prentice Hall.
- Barsky, N. P., Catanach Jr, A. H. and Rhoades-Catanach, S. C. (2003). Analyst Tools for Detecting Financial Reporting Fraud. *Commercial Lending Review*, 18, 5.
- Beasley, M. S. (1996). An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud *The Accounting Review*, 71, 4: 443-465.
- Beck, L. and Ajzen, I. (1991). Predicting Dishonest Actions using the Theory of Planned Behavior. *Journal of Research in Personality*, 25, 285-301.
- Buchan, H. F. (2005). Ethical Decision Making in the Public Accounting Profession: An Extension of Ajzen's Theory of Planned Behavior. *Journal of Business Ethics*, 61, 165-181.

- Carpenter, T. D. and Reimers, J. L. (2005). Unethical and Fraudulent Financial Reporting: Applying the Theory of Planned Behavior. *Journal of Business Ethics*, 60, 2: 115-129.
- Chang, M. K. (1998). Predicting Unethical Behavior: A Comparison of the Theory of Reasoned Action and the Theory of Planned Behavior. *Journal of Business Ethics*, 17, 16: 1825-1834.
- Chin, W. W. and Newsted, P. R. (1999). Structural Equation Modeling Analysis with Small Samples using Partial Least Squares. In R. H. Hoyle (Ed.), *Statistical Strategies for Small Sample Research* (pp. 307-341). Thousand Oaks: Sage Publications.
- Cialdini, R. B., Reno, R. R. and Kallgren, C. A. (1990). A Focus Theory of Normative Conduct: Recycling the Concept of Norms to Reduce Littering in Public Places. *Journal of Personality and Social Psychology*, 58, 6: 1015-1026.
- Conner, M. and Armitage, C. J. (1998). Extending the Theory of Planned Behavior: A Review and Avenues for Further Research. *Journal of Applied Social Psychology*, 28, 1429-1464.
- Conroy, S. J. and Emerson, T. L. N. (2004). Business Ethics and Religion: Religiosity as a Predictor of Ethical Awareness among Students. *Journal of Business Ethics*, 50, 383-396.
- Culpan, R. and Trussel, J. (2005). Applying the Agency and Stakeholder Theories to the Enron Debacle: An Ethical Perspective. *Business and Society Review*, 110, 1: 59-76.
- Fishbein, M. and Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.
- Hair, J. J. F., Black, W. C., Babin, B. J., Anderson, R. E. and Tatham, R. L. (2006). *Multivariate Data Analysis* (6 ed.). Upper Saddle River, New Jersey 07458: Pearson, Prentice Hall.
- Hanno, D. M. and Viollette, G. R. (1996). An Analysis of Moral and Social Influences on Taxpayer Behavior. *Behavioral Research in Accounting*, 8.
- Heath, Y. and Gifford, R. (2002). Extending the Theory of Planned Behavior: Predicting the Use of Public Transportation. *Journal of Applied Social Psychology*, 32, 10: 2154-2189.
- Holtfreter, K. (2005). Is Occupational Fraud "Typical" White-Collar Crime? A Comparison of Individual and Organizational Characteristics. *Journal of Criminal Justice*, 33, 4: 353-365.

Hoyle, R. H. and Kenny, D. A. (1999). Sample Size, Reliability, and Tests of Statistical Mediation. In R. H. Hoyle (Ed.), *Statistical Strategies for Small Sample Research* (pp. 195-222). Thousand Oaks: Sage Publications.

[http://www.bursamalaysia.com/website/bm/about\\_us/the\\_organisation/history.htm](http://www.bursamalaysia.com/website/bm/about_us/the_organisation/history.htm)

<http://www.iim.com.my/index.php>).

[http://www.klse.com.my/website/bm/regulation/rules/listing\\_requirements/](http://www.klse.com.my/website/bm/regulation/rules/listing_requirements/)

<http://www.micg.net/brochure/cg2007.pdf>.

<http://www.sc.com.my>

<http://www.sc.com.my/eng/html/cg/cg2007.pdf>

<http://www.ssm.com.my/en/docs/CLRCFinalReport.pdf>.

<http://www.theiia.org/guidance/standards-and-guidance/ippf/standards/>

Hu, L.-T. and Bentler, P. M. (1995). Evaluating Model Fit. In R. H. Hoyle (Ed.), *Structural Equation Modeling: Concepts, Issues, and Applications* (pp. 76-99). Thousand Oaks: Sage Publications.

Kaminski, K. A. and Wetzel, T. S. (2004). Can Financial Ratios Detect Fraudulent Financial Reporting. *MISSING*, 19, 1: 15.

Kaminski, K. A., Wetzel, T. S. and Guan, L. (2004). Can Financial Ratios Detect Fraudulent Financial Reporting? *Managerial Auditing Journal*, 19, 1: 15.

Kantor, J. and Weisberg, J. (2002). Ethical Attitudes and Ethical Behavior: Are Managers Role Models? *Journal: International Journal of Manpower*, 23, 8: 687-703.

Kaplan, S. E. (2001). Ethically Related Judgments by Observers of Earnings Management. *Journal of Business Ethics*, 32, 285-298.

King, T. and Dennis, C. (2003). Interviews of Deshopping Behaviour: An Analysis of Theory of Planned Behaviour. *International Journal of Retail and Distribution Management*, 31, 3: 153-163.

KPMG(M). (2005). *KPMG Fraud Survey 2004 Report*. Kuala Lumpur.

Krambia-Kapardis, M. (2002). A Fraud Detection Model: A Must for Auditor *Journal of Financial Regulation and Compliance*, 10, 3: 266-278.

- Lavery, C. A., Lindberg, D. L. and Razaki, K. A. (2000). Fraud Awareness in a Small Business. *The National Public Accountant*, 45, 6: 40-42.
- Lee, J. (2009). *Leadership Responsibilities for Quality within the Firms and Ethical Requirement*. Paper presented at the Seminar on Implementing ISQC 1.
- Lee, M., Haron, H., Ismail, I., Che Haat, M. H., Zaini, N., Ying, T. S., et al. (2009). Principles and Contemporary Issues in Internal Auditing (2 ed.). Kuala Lumpur: McGraw Hill (M) Sdn. Bhd.
- Loo, E. C. (2006). Tax Knowledge, Tax Structure and Compliance: A Report on a Quasi-Experiment. *New Zealand Journal of Taxation Law and Policy*, 12, 2: 117-140.
- Marcoulides, G. A. and Heck, R. H. (1993). Organizational Culture and Performance: Proposing and Testing a Model *Organization Science*, 4, 2: 209-225.
- Mesmer-Magnus, J. and Viswesvaran, C. (2005). Whistleblowing in Organizations: An Examination of Correlates of Whistleblowing Intentions, Actions, and Retaliation. *Journal of Business Ethics*, 62, 3: 277-297.
- Mohamed Zawawi, S. N. H. and Abdul Rahman, R. (2006). *Fraud Prevention from the Perspective of Corporate Members: Malaysian Evidence* Paper presented at the The 10th World Congress of Accounting Educators and the Third Annual International Accounting Conference.
- Mohamed Zawawi, S. N. H. and Abdul Rahman, R. (2008a). Behavioural Intention for Fraudulent Financial Reporting using Cognitive Theory. *Asian Social Science*, 4, 7: 43-47.
- Mohamed Zawawi, S. N. H. and Abdul Rahman, R. (2008b). Fraud Prevention Mechanism and Responsibility for Fraud Detection. *Accountants Today*, 21, 14-16.
- Nejad, L. M., Wertheim, E. H. and Greenwood, K. M. (2004). Predicting Dieting Behavior by Using, Modifying, and Extending the Theory of Planned Behaviour. *Journal of Applied Social Psychology*, 34, 10: 2099-2131.
- Nonis, S. and Swift, C. O. (2001). An Examination of the Relationship Between Academic Dishonesty and Workplace Dishonesty: A Multicampus Investigation. *Journal of Education for Business*, 77, 2: 69.
- Osman, S. (2005). *Welcome Remarks by Chairman, Integrity Institute of Malaysia*. Paper presented at the World Ethics and Integrity Forum 2005: Building Trust and International Cooperation in Strengthening Integrity, Integrity Institute of Malaysia, Kuala Lumpur.

- Persons, O. S. (1995). Using Financial Statement Data to Identify Factors Associated with Fraudulent Financial Reporting. *Journal of Applied Business Research*, 11, 3: 38-46.
- Pothiniker, K. (2004). Fraud. In M. Lee (Ed.), *Internal Audit Practices in Malaysia* (pp. 308). Kuala Lumpur: Prentice Hall Pearson Malaysia Sdn. Bhd.
- PricewaterhouseCoopers. (2007). *Economic Crime: People, Culture and Controls, The 4th Biennial Global Economic Crime Survey*.
- Saksena, P. (2001). The Relationship between Environmental Factors and Management Fraud: An Empirical Analysis. *International Journal of Commerce and Management*, 11, 1: 120-139.
- Shafer, W. E. (2002). Effects of Materiality, Risk, and Ethical Perceptions on Fraudulent Reporting by Financial Executives. *Journal of Business Ethics*, 38, 3: 243-262.
- Sheeran, P. and Orbell, S. (1999). Augmenting the Theory of Planned Behavior: Roles for Anticipated Regret and Descriptive Norms. *Journal of Applied Social Psychology*, 29, 10: 2107-2142.
- Sheppard, B. H., Hartwick, J. and Warshaw, P. R. (1988). The Theory of Reasoned Action: A Meta-Analysis of Past Research with Recommendations for Modifications and Future Research. *Journal of Consumer Research*, 15, 3: 325-343.
- Sherif, M. and Hovland, C. I. (1961). *Social Judgment: Assimilation and Contrast Effects in Communication and Attitude Change*. New Haven: Yale University Press.
- Sims, R. L. (1993). The Relationship between Academic Dishonesty and Unethical Business Practices. *Journal of Education for Business*, 68, 4: 207.
- Smith, M., Haji Omar, N., Sayd Idris, S. I. Z. and Baharuddin, I. (2005). Auditors' Perception of Fraud Risk Indicators: Malaysian Evidence *Managerial Auditing Journal*, 20, 1: 73-85.
- Spathis, C. (2002). Detecting False Financial Statement using Published Data: Some Evidence from Greece. *Managerial Auditing Journal*, 17, 4: 179-191.
- Summers, S. L. and Sweeney, J. T. (1998). Fraudulently Misstated Financial Statements and Insider Trading: An Empirical Analysis *The Accounting Review*, 73, 1: 131-146.
- Terry, D. J., Hogg, M. A. and White, K. M. (1999). The Theory of Planned Behaviour : Self-identity, Social Identity and Group Norms. *British Journal of Social Psychology*, 38, 225-244.

- Thorne, L. (2000). The Development of Two Measures to Assess Accountants' Prescriptive and Deliberative Moral Reasoning. *Behavioural Research in Accounting*, 12, 139-169.
- Turpen, R. A. and Messina, F. M. (1997). Fraud Prevention and Management Accountant. *Management Accounting*, 78, 8.
- Uddin, N. (2000). *CFO Intentions to Report Fraudulently on Financial Statements*. Unpublished Doctoral Dissertation, The State University of New Jersey, Newark, New Jersey.
- Weidman, S. M., Curatola, A. P. and Linnehan, F. (2004). *A Behavioral Model of Decisions to Accrue and Disclose Environmental Liabilities*. Paper presented at the American Accounting Association 2004 Mid-Atlantic Region Meeting Paper.
- Wells, J. T. (2002). Occupational Fraud: The Audit as Deterrent. *Journal of Accountancy*, 193, 4: 24-28.