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Encouraging factors for whistleblowing in public sector: Malaysian case evidence

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Abstract

The objective of this study is to examine the extent of encouraging factors of whistleblowing intention in the public sector organisations in Malaysia, particularly in the selected case study organisation. The survey questionnaire was adopted to explore what are the factors that would encourage whistleblowing in this selected public sector organisation. Research questions such as to what extent do predictive factors such as 1) Consequences of Wrongdoing, 2) Management Reaction to the Report and 3) Witness Protection have to be addressed in understanding the whistleblowing behaviour. The consequences of wrongdoings were found as a predictive variable of whistleblowing intention in this selected case study organisation.

Keywords: Whistleblowing, Whistleblowing Intention, Public Sector, Malaysia

1. INTRODUCTION

Many accounting scandals, such as those involving Enron and WorldCom (Romero and Atlas, 2002) came to light because of the actions taken by the companies' employees (former or present) who believed that misconducts within their organisations should be relayed to the respective authorities for corrective action (Pulliam & Solomon, 2002). The same phenomenon has also occurred in Asian countries, including Malaysia. The financial scandals that occurred in Malaysia during the same time period caused the government to intervene in order to safeguard the majority and minority shareholders of large corporations like Perwaja Steel, Renong Berhad, United Engineers (Malaysia) Berhad and Technology Resources Industries (Mat Norwani, Mohamad & Tamby Chek, 2011; Zainal Abidin & Ahmad, 2007). Since then, the Malaysian government has taken the necessary actions in correcting the wrongdoing or misconduct (Lee, Md Ali & Gloeck 2009; 2008).

Studies regarding whistleblowing are consistently emerging in a Western context (Park et al. 2008) rather than in relation to an Eastern context (Zhang, Chiu & Li-Qun, 2009). According to whistleblowing literature, past studies in Eastern contexts have come from China, South Korea and Hong Kong and studies for a country like Malaysia are hardly ever found (Ponnu, Naidu, & Zamri 2007).

Whistleblowing by public officials is a key means for identifying and rectifying wrongdoing in the public sector (Brown, 2008). The Malaysian Government's commitment to formulate a 'Whistle Blower Act' to encourage the disclosure of misconduct, corruption and other wrongdoings supports the argument that whistleblowing is a key measure in the battle against fraud and corruption (Lehmann, 2010). On 15 December 2010, Malaysian

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Government has enforced the Whistleblower Protection Act 2010 (WPA) and it is intended to provide overall protection of whistleblowers in Malaysia's private and public sectors.

Despite laws such as the WPA, wrongdoing issues still exist (Ab Ghani, Nadzri, 2013). Lim (2012) stated that the Government of Malaysia faced RM250 million worth of mismanagement and corruption with the National Feedlot Centre Project, which in turn, has led Malaysia to suffer a decrease in the rankings of the Transparency International's Corruption Perception Index, from 56 in 2010 to 60 in 2011 (Lim 2012). This leads researchers to the issue of what might be the factors that hold back employees from whistleblowing any wrongdoing or suspected wrongdoing they might have observed. Hence, the purpose of this study is to examine the factors that would encourage whistleblowing amongst employees in the public sector based on the factors that have been found by previous studies. Then in turn, the findings should help organisations, specifically the public sector to improve their existing operations.

The release of Malaysian Service Circular No: 6 in 2013 (Pekeliling Perkhidmatan Bilangan 6/2013) on the establishment of the Integrity Unit is an effort by the public sector's internal control to manage the integrity of the civil service. Among the functions of this unit are to detect and verify criminal behaviour complaints, including breach of organisational ethics and conduct to ensure proper action is taken accordingly and to report criminal activities to related enforcement agencies.

As one of the public sector organisations, the Malaysian Rubber Board (MRB), a leading research and development agency, is responsible to implement all rules and laws instructed by the Federal Government in Malaysia in compliance with the National Integrity Plan. It has already set up an integrity unit in 2014 to assist MRB in accepting, managing and increasing complaints or reports from employees. The MRB desires honesty from its employees and the presence of honesty is important in achieving the MRB's vision and objectives. By encouraging a whistleblowing culture, the MRB promotes transparent structure and effective communication.

The main objective of this study is to examine the extent of encouraging factors to whistleblowing intention in the Malaysian Rubber Board (MRB). In order to accomplish this research objective, the following research question is required to be addressed in understanding the whistleblowing behaviour by considering 'to what extent do predictive factors such as 1) Consequences of Wrongdoing 2) Management Reaction to the Report and 3) Witness Protection have influenced to encourage whistleblowing intention in the MRB?'

Thus, the main contribution of this study is that it would be able to bring out the views and opinions of the staff on how best the MRB's whistleblowing policy and implementation approach could be enhanced or supported in order to achieve its objectives. However, the limitation of this study is that it is based on only one case study, which took place in the MRB. This study is based on the whistleblowing intention and the sample size of this study does not have the strong data to support the conclusiveness of this research. Furthermore, studies that should be based on actual whistleblowing events in the Malaysian environment are mostly not existent (Patel 2003).

2. LITERATURE REVIEW

Whistleblowing intention refers to the likelihood that organisation members will report illegal or unethical activities to parties in the organisation who are willing and able to take action to correct the wrongdoing (Mesmer-Magnus & Viswesvaran 2005). Previous studies claim that the whistleblowing intention construct could be best measured by providing participants with one or more social situations (Zhang, Chiu, & Li-Qun 2009b). The decision to study whistleblowing intention rather than the actual whistleblowing action is justified due to the difficulty of executing investigations of misconduct in the workplace (Victor, Trevino & Shapiro 1993).

Whistleblowing is historically described as reporting through a channel that is external to the organization. In general, companies prefer employees to report wrongdoing through internal rather than external channels because external whistleblowing can lead to negative repercussions such as public embarrassment, legal action against the firm, lessened confidence in management by stockholders, reduced sales, and the release of proprietary information (Berry, 2004; Davidson & Worrell, 1988). In contrast, internal reporting may allow the company to address the wrongdoing in a manner that minimizes such harmful effects and perhaps even allow the company to avoid the involvement of a third party altogether (Barnett, 1992).

This framework consists of the encouraging factors (consequences of wrongdoing, management reaction and witness protection) that represent the independent variables whereby the whistleblowing intention represents the dependent variable.

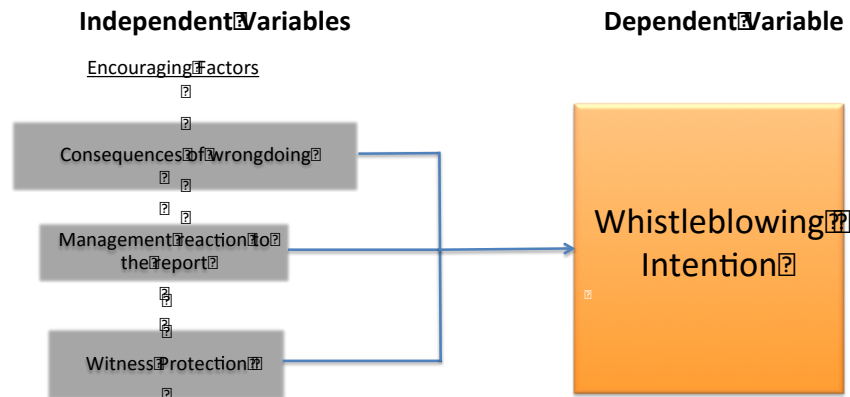


Figure 2.1: Research Framework for Encouraging Factors and Whistleblowing Intention

Kaplan and Shultz (2007) have found that individuals' reporting intentions are influenced by the nature of the wrongdoing, specifically if they are affected by the characteristics of the wrongdoing. Studies also have suggested that potential whistleblowers such as auditors look for "materiality" before taking any actions. Similarly, once employees have convincing evidence, they seem more likely to blow the whistle on wrongdoings or when the transgression personally affects them (Miceli & Near, 1985). While in 2011, data from the U.S. Merit Systems Protection Board's Merit Principles Surveys (US MSPB, 2011) found that the most important consideration for respondents was whether the wrongdoing would endanger people's lives, followed by the risk of a serious cost to the Government. Therefore it is hypothesized that:

H1: There is a significant positive relationship between Consequence of Wrongdoing and Whistleblowing Intention

Studies have found that witness protection, or providing anonymity to whistle-blowers, may increase the likelihood of whistleblowing. The finding from Westin's (1981) study suggested that Whistleblowing Acts should encompass provisions for protecting whistle-blowers in order to encourage whistle-blowing actions. Nonetheless, the US MSPB (2011) report found that eighty percent (86%) of respondents indicated that anonymity would be either important or very important to them. However, it may also reduce the effectiveness of whistleblowing, as anonymity may reduce the credibility of the whistleblower (Near & Miceli, 1994). Therefore, the second hypothesis is derived as follows:

H2: There is a significant positive relationship between Witness Protection and Whistleblowing Intention

Previous research suggest that individuals are preferred to report any wrongdoings when they believed that the organisation will take action upon it (Miceli & Near, 1985 and Miceli & Near, 1992). Financial factors are one of the factors that encourage employees to disclose wrongdoing. Previous studies suggest that workers blow the whistle more frequently when they are being offered financial rewards (Stikeleather, 2013), and it has been claimed to be effective to those in the financial fraud setting (Rapp, 2012). However, there are also studies that have found that financial incentives play no role in employees' decision to blow the whistle (Miceli et al. 2009). Therefore, the third hypothesis is derived as follows:

H3: There is a significant positive relationship between Management Reaction to the Report and Whistleblowing Intention

3. RESEARCH METHODOLOGY

This paper replicated a list of encouragement factors from the study by the U.S. MSPB in their report to the President and the Congress (2011) to illustrate factors that encourage public officials to whistleblowing such as consequences of wrongdoing, management reaction to the report, and preserving anonymity (witness protection).

According to Miceli, Near and Dworkin (2008) and Mesmer-Magnus and Viswesvaran (2005), the survey method is the most common method of generating primary data for whistleblowing intention studies. Similarly, the survey questionnaire was adopted for the selected case study organisation to demonstrate the current situation of whistleblowing activities. This study also attempts to explore the extent to which employees perceive wrongdoing, whether they would report any dishonesty they see, and what factors would encourage their intention to blow the whistle or not.

The respondents of this study were the officers and the support staff and the reason behind this was to obtain a greater degree of representativeness from each level of position of the MRB. To date, the total number of employees at the MRB are 1278, with 218 (17%) of them being senior officers, including the head of unit and top management. A total of 400 sets of questionnaires have been distributed via email and hardcopy in order to get them to respond to the survey. A drop-off and pick-up method was also applied to distribute and collect the questionnaire for this study. This method required the researchers to travel to the respondents' locations to drop off questionnaires that were to be picked up later (Zikmund 2003).

4. DATA ANALYSIS AND FINDINGS

The response rate was about 29.25% (117 respondents) of the 400 distributed questionnaires. All of them are usable for further statistical data analysis purposes. The studied sample has a balanced portion in terms of gender, 42% of the sample is between the ages of 20 and 30 years old, 58% are 31 years old and above, and 13% are near to retirement. Over 69% of the studied sample possesses at least a bachelor degree, and 31% have a higher degree. Those with over five years working experience made up 64% of the sample. 79% of the sample is from the support division, 15% are senior officers and 9%, head management. More responses came from the Licensing, Enforcement & Support Services Division, which covered 50% of the sample, while the other half came from seven other divisions.

To ensure that the measurement of the attributes or variables is valid and trustworthy, the test has been conducted. Although the attribute has been adopted from the previous study, the modification and adjustment may require that this study be retested using Factor Analysis Technique. The statistical results of Factor Analysis explain that the attributes are strongly reliable; a Principal Component Analysis (PCA) is conducted on the 42 items with an orthogonal rotation (varimax). First, this analysis adapts the Kaiser-Meyer-Olkin (KMO), which measures the strength of the relationship among variables. It measures the sampling adequacy, which should be greater than 0.5 for a satisfactory factor analysis to proceed (Field, 2011). The analysis shows that the KMO is 0.821, which is above the acceptable limit of 0.50. While at the same time, Barlett's Test of Sphericity $\chi^2(861)=3314$, $p<0.001$, indicates that the correlation between the items are sufficiently large for PCA. The Varimax Rotated Components Matrix showed the factor loading for each item onto each component using the option to suppress the factor loading of less than 0.4.

The reliability tests were carried out to determine the consistency of the answers given by respondents in answering the questionnaires. The results show that there is a high degree of agreement with regard to specific independent variables tested in this study. Table 1 demonstrates that the Cronbach Alpha, for all variables, are in the magnitude of 0.80 to 0.90

Table 1. Reliability Test

	Cronbach's Alpha	No. Items before deleted	No. Items after deleted
<i>Whistle blowing Intention (WB)</i>	0.833	10	5
<i>Consequences of Wrongdoing (CW)</i>	0.891	9	9
<i>Witness Protection (WP)</i>	0.733	3	3
<i>Management Reaction (MR)</i>	0.893	20	17

Number of observations (117)

Note: Commonly accepted rule of thumb is an alpha of 0.6-0.7, which indicates acceptable reliability, and 0.8 or higher, which indicates good reliability (Cronbach, 1951).

Table 2 shows the normality test and refers to the thumb rules which state that data are normal if the standard Skewness is within (+/-ve) 1.96 and has a standard Kurtosis of (+/-ve) 2.00. Thus, all variables in this study are under the thumb rules, which indicate that all the variables are normally distributed.

Table 2. Normality Test

	Skewness	Std. Error	Kurtosis	Std. Error
Whistleblowing Intention (WB)	-0.314	0.224	-0.721	0.444
Consequences of Wrongdoing (CW)	-0.125	0.224	-0.727	0.444
Witness Protection (WP)	-0.307	0.224	-0.833	0.444
Management Reaction (MR)	-0.666	0.224	0.410	0.444

Number of observations (117)

The Pearson's Correlation Coefficient Test was used to measure the strength between attributes or variables as presented in Table 3. Thus, Whistleblowing Intention (WB) has a high correlation with Consequences of Wrongdoing (CW), and has low correlation with Witness Protection (WP) and Management Reaction to the Report (MR). As for Consequences of Wrongdoing, it has a low association with Witness Protection and Management Reaction to the Report. Also, Witness Protection has a low association with Management Reaction. All variables in this study have a significant association at the level of confidence of $p < 0.05$ and $p < 0.01$.

Table 3. Pearson's Correlation Coefficient Test

	WB	CW	WP	MR
WB	1.000			
CW	0.790**	1.000		
WP	0.163*	0.291**	1.000	
MR	0.343**	0.416**	0.243**	1.000

Number of observations (117)

* $p < 0.05$, ** $p < 0.01$

Table 3 presents the results of multiple regression analysis for this study. The Adjusted R-Square is sufficiently high (61.9%), with the variance in intention to whistleblowing is explained by the variance and influence of Consequences of Wrongdoing, Witness Protection, and Management Reactions to the Report. The results show that F. Change is significant with $p < 0.01$, with Consequences of Wrongdoing being positive and strongly significant (with t -statistic 12.406 and having significance with $p < 0.01$ level) to Whistleblowing Intention. This indicates that the characteristics of wrongdoings such as strong evidence of wrongdoing, and its seriousness and materiality, encourage MRB employees to make reports of wrongdoing (Miceli & Near, 1985; Near et al. 2004; Curtis, 2006; Taylor & Curtis, 2010).

Table 4.10. Multiple Regressions (Dependent Variable: Whistleblowing Intention)

	Unstd. Coeff.		Std. Coeff.	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			VIF	Tolerance (1/VIF)
Consequences of Wrongdoing	0.647	0.052	0.800	12.406	0.000*	1.269	0.788
Witness Protection	-0.070	0.055	-0.077	-1.270	0.207	1.115	0.897
Management Reaction	0.033	0.074	0.028	0.445	0.657	1.234	0.810
Constant	1.519	0.233		6.524	0.000*		
Adjusted R ²	61.9%						
F. Change	63.933						
Sig.	0.000*						

Number of observations (117)

* $p < 0.01$

VIF < 10, Tolerance (1/VIF) 0.2 – 0.9 (Multicollinearity Test)

Notwithstanding, Witness Protection, which has a negative relationship to whistleblowing intention (with t -statistic -1.270 and have insignificance with $p > 0.10$ level, 0.207), showed that it does not influence the intention to report any wrongdoing. This indicates that the factor of legal job protection for whistleblowers reflects insignificant encouraging factor in MRB.

The result demonstrates that the encouraging factor such as Management Reaction to the Report, is also found statistically insignificant in relation to the MRB's employees' willingness to whistleblow (with t -statistic 0.445 and have insignificance with $p > 0.10$ level, 0.657) This indicates that the action taken by the management could not increase whistleblowing intention and this result supports the study by Brown, 2007. Nevertheless, this factor still has a positive relationship with the intention to whistleblow (Miceli & Near, 1985; Graham, 1986; Blackburn, 1988; Keenan, 1990; Miceli & Near, 1992).

5. CONCLUSION AND RECOMMENDATIONS

The objective of this study is to examine the extent of encouraging factors of whistleblowing intention in the Malaysian public sector, specifically in the MRB. Findings from this study failed to support two hypothesised

relationship between management reaction to the report and witness protection and whistleblowing intention, while there was only one encouraging factor, i.e. the consequences of wrongdoings was found as a predictive variable of whistleblowing intention in this case study organisation.

The multiple regression model of this study showed that Consequences of Wrongdoing such as the strong evidence of wrongdoing and the seriousness and materiality of wrongdoing had a positive and strong significance effect on the intention of MRB's employees for whistleblowing. Both encouraging factors 1) Witness Protection and 2) Management Reaction to the Report are found statistically insignificant to MRB's employees for whistleblowing.

Several recommendations may be applicable for future and further research. Extended research should be carried out for other types of Malaysian public sector organizations such as the federal agency, state government, statutory bodies and local authority or government enforcement agency. This would support the Malaysian Government's succession plan in enhancing ethics and integrity in the public sector through its establishment of the National Integrity Plan (2008) and Malaysian WPA (2010). Secondly, future research might also need a mixed-method approach by combining a survey research and focus group interviews to gain a better understanding of the hypothesised relationships.

REFERENCES

- Ab Ghani, N. (2013). *Predicting Whistle-Blowing Intention in Malaysia: Evidence from Manufacturing Companies*. Unpublished Dissertation (PhD). Curtin University, Curtin Graduate School of Business.
- Barnett, T. (1992). A Preliminary Investigation of the Relationship between Selected Organizational Characteristics and External Whistleblowing by Employees. *Journal of Business Ethics*, 11(12), pp. 949-959.
- Berry, B. (2004). Organizational Culture: A Framework and Strategies for Facilitating Employee Whistle-Blowing. *Employee Responsibilities and Rights Journal* 16, pp. 1-11
- Brown, A. J. (2007). Privacy and public interest disclosures – when is it reasonable to protect whistleblowing to the media? *Privacy Law Bulletin* 4(2), pp. 19-28.
- Curtis, M. B. (2006). Are Audit-Related Ethical Decisions Dependent Upon Mood? *Journal of Business Ethics*, 68(2), 191-209.
- Davidson, III, W. N. & Worrell, D. L. (1988) The Impact of Announcements of Corporate Illegalities on Shareholder Returns. *Academy of Management Journal*, 31, pp. 195-200.
- Kaplan, S. E., & Schultz, J. J. (2007.) Intentions to Report Questionable Acts: An Examination of the Influence of Anonymous Reporting Channel, Internal Audit Quality, and Setting. *Journal of Business Ethics*, 71, pp. 109-124.
- Lee, T. H., A. Md Ali, & J. D. Gloeck. (2008). A Study of Auditors' Responsibility for Fraud Detection in Malaysia Southern African. *Journal of Accountability and Auditing Research* 8, pp. 27-34.
- Lee, T. H., A. Md Ali, & J. D. Gloeck. (2009). the Audit Expectation Gap in Malaysia: An Investigation into Its Causes and Remedies. *Southern African Journal of Accountability and Auditing Research* 9, pp. 57-88.
- Lehmann, D. (2010). Whistleblowing Won't Work in Malaysia. Retrieved July 13, 2014 from [http://www.deloitte.com/view/en_my/my/myii/2e375ecf32fd5210vgnvcm200000bb42f\)arcrd.htm](http://www.deloitte.com/view/en_my/my/myii/2e375ecf32fd5210vgnvcm200000bb42f)arcrd.htm).
- Lim, G. E. (2012). How Effective Has the Enforcement of the Whistleblower Protection Act 2010 (WPA) Been In Malaysia? Kuala Lumpur: The 4th Annual Corporate Governance Summit.
- Mat Norwani, N., Z. Z. Mohamad, & I. Tamby Chek. (2011). Corporate Governance Failure and Its Impact on Financial Reporting Within Selected Companies. *International Journal of Business and Social Science* 2(21), pp. 205-213.
- Mesmer-Magnus, J. R. & Viswevaran, C. (2005). Whistleblowing in Organisations: An Examination of Correlates of Whistleblowing Intentions, Actions, and Retaliation. *Journal of Business Ethics*, 62, pp. 277-97.
- Miceli, M. P. & Near, J. P. (1985). Characteristics of Organizational Climate and Perceived Wrongdoing Associated with Whistle-Blowing Decisions. *Personnel Psychology* 38, pp. 525-544.
- Miceli, M. P., & Near, J.P. (1992). Situational Variables Affecting the Whistle-Blowing Decision: A Review of the Literature. *Advances in Management Accounting*, 1, pp. 109-140.
- Miceli, M. P. & Near, J. P. (1994). Relationships among Value Congruence, Perceived Victimization, and Relation against Whistle-Blowers. *Journal of Management*, 20, pp. 773-94.
- Miceli, M. P., Near, J. P. & Dworkin, T. M. (2008). *Whistle-Blowing in Organizations*. New York: Routledge
- Miceli, M. P., Near, J. P., & Dworkin, T. M. (2009). A Word to the Wise: How Managers and Policy-Makers Can Encourage Employees To Report Wrongdoing. *Journal of Business Ethics*, 86, pp. 379-396.
- Near, J. P., Rehg, M. T., Van Scotter, J. R., & Miceli, M. P. (2004). Does Type of Wrongdoing Affect the Whistle-Blowing Process? *Business Ethics Quarterly*, 14(2), pp. 219-242.
- Park, H., M. T. Rehg, & D. Lee. (2005). The Influence of Confucian Ethics and Collectivism on Whistleblowing Intentions: A Study of South Korean Public Employees. *Journal of Business Ethics* 58, pp. 387-403.
- Park, H., Blenkinsopp, J., Oktem, M. K. & Omurgonulsen, U. (2008). Cultural Orientation and Attitudes Toward Different Forms of Whistleblowing: A Comparison of South Korea, Turkey, and the UK. *Journal of Business Ethics* 82, pp. 929-939.
- Patel, C. (2003). Some Cross-Cultural Evidence on Whistle-Blowing as an Internal Control Mechanism. *Journal of International Accounting Research* 2, pp. 69-96.
- Ponnu, C. H., K. Naidu, & W. Zamri. (2007). Whistle-Blowing as Planned Behaviour: A Survey amongst Executives in the Banking Sector In Malaysia. Retrieved September 2, 2014 from [http://eprints.um.edu.my/992/1/ponnu_et_al_\(138\).pdf](http://eprints.um.edu.my/992/1/ponnu_et_al_(138).pdf).
- Pulliam, S., & D. Solomon. (2002). *How Three Unlikely Sleuths Exposed Fraud at Worldcom*. The Wall Street Journal October 30 (2002)
- Rapp, G. C. (2012). Mutiny by the Bounties? The Attempt to Reform Wall Street by the New Whistleblower Provisions of the Dodd Frank Act. *Brigham Young University Law Review*, 1, pp. 73-152.
- Romero, S. & Atlas, R. D. (2002). *Worldcom's Collapse: The Overview; Worldcom Files for Bankruptcy; Largest U.S. Case*. The New York Times, July 22

- Stikeleather, B. R. (2013). Relying on Goodwill Alone Versus Financial Self-Interest to Induce Whistleblowing on Internal Misconduct. Joseph M. Katz Graduate School of Business University of Pittsburgh Working Paper.
- Taylor, E. Z., & M. B. Curtis. (2010). An Examination of the Layers of Workplace Influences In Ethical Judgment: Whistleblowing Likelihood and Perseverance In Public Accounting. *Journal of Business Ethics* 93, pp. 21-37
- U.S. Merit Systems Protection Board (2011). *Blowing the Whistle: Barriers to Federal Employees Making Disclosures*.
- Victor, B., Trevino, L. K. & Shapiro, D. L. (1993). Peer Reporting of Unethical Behaviour: The Influence of Justice Evaluations and Social Context Factors. *Journal of Business Ethics*, 12(4), pp. 253-263.
- Zainal Abidin, N. A., & H. Ahmad. (2007). Corporate Governance in Malaysia: The Effect of Corporate Reforms and State Business Relation in Malaysia. *Asian Academy of Management Journal* 12(1), pp. 23-34.
- Zhang, J., Chiu, R. K., & Wei, L.-Q. (2009). On Whistleblowing Judgment and Intention: The Roles of Positive Mood and Organizational Ethical Culture. *Journal of Managerial Psychology*, 24(7), pp. 627-649.
- Zikmund, W. G. (2003). *Business research methods*. Edited by S. Hazelwood, M. Draper and R. Drears. 7th ed. Oklahoma State: Thompson South-Western.