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TYPES OF RESTATEMENT DECISIONS AND EX-ANTE RED FLAGS OF INTERNAL CONTROL QUALITY

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ABSTRACT

We investigate the association between financial restatements and internal controls by examining whether voluntary restatement decisions are associated with internal control quality. We focus on companies' voluntary restatements because they are more susceptible to the numerous provisions imposed by SOX. Empirical results show that voluntary restatement decisions are associated with internal control deficiencies, particularly when companies of voluntary restatements suffer higher restatement severity. Our findings imply that voluntary restatement decisions may interpret as signals of internal control quality.

JEL: K22, M41, M43, M49

KEYWORDS: Internal Control, Voluntary Restatement

INTRODUCTION

After a series of corporate scandals, SOX has imposed numerous provisions on weaker internal control quality and misstated financial statements to prevent deceptive accounting practices. For example, the SOX imposed increased responsibility on audit committees (Section 301 and 407) and determined that the primary responsibility of audit committees is to oversee financial controls and assure the quality of financial reporting. Prior studies have found that companies that restate, in general, have weaker corporate governance (Abbott et al. 2004; Farber 2005; Efendi et al. 2007; Agrawal and Chadha 2005), and Srinivasan (2005) documented a penalty for audit committee members in companies, which restate, because restatements were seen as a failure of financial reporting. In the post-SOX period, audit committees are closely associated with internal control quality (Krishnan 2005; Zhang 2007; Hoitash et al. 2009). For example, Hoitash et al. (2009) documented that lower internal control quality was associated with relatively fewer audit committee members with accounting or supervisory experience, and a weaker board committee. Internal control quality has improved since the implementation of Section 404, but few studies have investigated whether and how restatement disclose decisions lead to the detection and correction of ex-ante red flags of internal control severity. We argue that not all restatements are implying question internal controls, because restatement announcements have different meanings (e.g., voluntary disclosure, downward restatement, upward restatement, etc.) and may imply various ex-ante implications on internal control quality. For example, we expect that voluntary disclosure of downward restatements is a red flag of internal control severity. Therefore, this study investigates whether originally restatement decisions are implying ex-ante red flags of internal control quality, particularly following voluntary downward restatements.

Our results provide evidence that not all restatements are implying question internal controls. We find that voluntary restatement decisions are more likely to be associated with higher internal control severity only for companies with downward restatements. Our findings imply that voluntary disclosure of downward restatements is a red flag of internal control severity. Our findings provide important public policy implications to the regulators and policy-makers.This study contributes to three important streams of research. First, this investigation extends previous research into the quality of internal controls by examining different types of restatement decisions and the red flags of internal control environments. Second, this study contributes to the literature on the association between internal control quality and restatement decisions by analyzing different restatement decisions. Finally, this study provides important public policy implications that voluntary disclosure of downward restatements is a red flag of internal control severity. The remainder of this study is organized as follows: Section 2 discusses the previous literature most relevant to this study. Section 3 describes the sample selection procedure and research design. Section 4 reports the empirical results and their implications. Conclusions are drawn in Section 5.

LITERATURE REVIEW

After Enron's bankruptcy, SOX has imposed numerous provisions on misstated financial statements to prevent deceptive accounting practices and, therefore, improve the quality of corporate financial reporting. For example, SOX Section 301 directs the SEC to require audit committees to establish procedures to handle complaints involving "accounting, internal accounting controls, or auditing matters" and to provide confidentiality to employees who submit complaints. The SEC (2003a) further states that the audit committee plays a critical role in providing oversight and serves as a check and balance to a financial reporting system of a company. The audit committee of a company provides independent review and oversight of financial reporting processes, internal controls, and independent auditors.

Furthermore, the SEC (2003b) mandates that all written communications, including "reports on observations and recommendations on internal controls", between accountants and management be provided to the audit committee. AICPA (2005) also indicates that the primary responsibility of the audit committee is the system of internal control over financial reporting. Indeed, prior studies have indicated that audit committee members accept responsibility for monitoring internal controls (Carcello et al. 2002; Gong et al. 2009; Barua et al. 2010), and that an effective audit committee can directly engage in overseeing company controls by reviewing with the financial and accounting staff the internal accounting procedures and controls (Gong et al. 2009). In short, the role of Section 301 in the internal control structure is to focus on assuring the internal control over financial reporting are in place and operating effectively.Recently, some studies have demonstrated a link between internal control quality and the likelihood of subsequent financial restatements (Hammersley et al.

2008; Li and Wang 2006; Nagarajan and Carey 2008; Plumlee and Yohn 2010). Ashbaugh-Skaife et al. (2007), Grothe et al. (2007a) and Grothe et al. (2007b) have also indicated that companies with material weaknesses frequently find it necessary to restate earnings, and material weaknesses are often disclosed following restatements. In other words, prior research has suggested that high quality internal controls improve the financial reporting process and reduce the likelihood of restatements. As mentioned above, previous studies on the relationship between internal control quality and restatements focus on the consequences of internal control weaknesses. However, prior research ignores the fact that originally restatement announcements have different types and may imply various implications on internal control quality. This raises the question of whether originally restatement announcements are implying ex-ante red flags of internal control quality, particularly following voluntary downward restatements. Thus, this study differs from previous studies in attempting to examine the association between restatement decisions and internal control quality by examining whether originally restatement announcements reveal ex-ante red flags of internal control quality.

RESEARCH DESIGN

This study investigated financial accounting restatements announced between November 2004 and December 2005, using the probit and regression models. This section first details the data sources and selection methods used to generate the research sample. The research model is then introduced, and the test and control variables discussed.

Data and Sample Selection

To test the research questions, data on restatement announcements and internal control quality were hand-collected. We collect research observations on an annual basis to examine our research questions. All hand-collected data in this study are publicly available.

Quality of Internal Control

This study identified internal control weaknesses by searching each SEC file (e.g., 10-K, 10-K/A, etc.) to ensure disclosure of any material weakness in the internal control. Moreover, this study used the search term "did not maintain effective internal control" to identify internal control weaknesses. This term is frequently used in audit reports on internal control over financial reporting. The search covers 10-Ks from November 2004 through December 2005. Prior studies have mostly focused on the existence of control weakness. However, different types of weakness have different effects. Following Ge and McVay (2005), Doyle et al. (2007a) and Doyle et al. (2007b), this study also classified the disclosure of internal control weakness into two types: account-specific material weaknesses and company-level material weaknesses.

Restatement Announcements

This study hand-collected data on the dates of initial restatement announcements from the *Lexis-Nexis News Library*, which covers all interim and annual restatements announced between November 2004 and December 2005. Identifying precise announcement dates for restatements is challenging. Therefore, this study only considered the first release of the restatement announcement of each company in a given year. Similar to Palmrose et al. (2004) and Kinney et al. (2004), this study used several key words to search for restatements, including "restate," "restatement," "revise," "revision," "adjust," and "error." The event day is determined by the first restatement announcement date identified in the *Lexis-Nexis News Library*. This study also searched the EDGAR database to double-check the correctness of the event days. Finally, this investigation added restating companies mentioned in other sources discussing restatements, such as the GAO (2006) report, *Accounting Today News*, *BNET Today News*, *CFO.com News* and *Compliance Week News*.

Others

Company-level accounting data are obtained from the *Compustat* database. The *Compustat* database includes not only data from balance sheets, income statements, and cash flow statements, but also industry classifications, and audit opinions for U.S. companies. The database contains most variables of interest.

Model Specification－Internal Control Quality Vs. Determinants Of Voluntary Restatements

We constructed research model of internal control quality to assess whether voluntary restatement decisions are associated with internal control quality. The research model is as follows:

$$\begin{aligned} ICW_{i,t} / ICN_{i,t} = {} & \alpha_0 + \alpha_1 VREST_{i,t} + \alpha_2 LOSS_{i,t} + \alpha_3 DEBT_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 QUICK_{i,t} \\ & + \alpha_6 SIZE_{i,t} + \alpha_7 BIGN_{i,t} + \alpha_8 GC_{i,t} + \alpha_9 [Fixed\ \ Effects] + \varepsilon_{i,t} \end{aligned} \tag{1}$$

where *ICW* equals 1 if a company has weak internal control, else 0; *ICN* equals the number of internal control weaknesses; *VREST* equals 1 if restatements are attributed to the companies, else 0; *LOSS* equals 1 if operating income is less than zero, else 0; *DEBT* equals 1 if the company has notes payable, else 0; *ROA* equals net income divided by book value of total assets; *QUICK* equals current assets (less inventories) divided by current liabilities; *SIZE* equals the natural log of total assets; *BIGN* equals 1 if the company's auditor is a Big N firm, else 0; *GC* equals 1 if the company receives a going concern opinion, else 0; and *Fixed Effects* control for fixed effects of industries and years. The variables, *ICW* and *ICN*, capture company internal control quality. This study uses two measurement methods to proxy for internal control quality: (1) occurrence of internal control weakness and (2) number of internal control weakness. Following Ge and McVay (2005), Doyle et al. (2007a) and Doyle et al. (2007b), this study also categorizes the disclosed internal control problems into two major deficiency types: account-specific and company-level in following analyses. Account-specific material weaknesses relate to controls over specific account balances or transaction-level processes. Meanwhile, company-level material weaknesses relate to more macro-level controls such as control environment or overall financial reporting process. To understand degree of internal control deficiency, this study also considers company internal control weaknesses disclosured in their Internal Control over Financial Reporting.

RESULTS AND ANALYSIS

Our research sample is composed of 377 U.S. companies that announced restatements between November 2004 and December 2005. Table 1 presents the descriptive statistics for all the variables used in our analyses, partitioned by two distinct groups: voluntary disclosure restatement subsample (n = 216), and non-voluntary disclosure restatement subsample (n = 161). As such, comparing two subsamples provides evidence as to whether voluntary restatement decisions are associated with internal control quality. We find that companies voluntarily announcing restatements are more likely to have weak internal controls, and involve more internal control weaknesses than restating companies of non-voluntary disclosure. Further, we partitioned the voluntary disclosure restatement subsample into two distinct groups: upward restatement subsample (n = 58), and downward restatement subsample (n = 158). As depicted in this Panel B, downward restating companies voluntarily announcing restatements are more likely to have weak internal controls, and involve more internal control weaknesses than upward restating companies voluntarily announcing restatements. In essence, companies voluntarily announcing restatements suffer higher internal control severity in the downward restating subgroup.

Table 1: Descriptive Statistics (N=377)

Panel A：Voluntary and Non- Voluntary Restatement						
Type Var.	**Voluntary(n=216)**			**Non- Voluntary (n=161)**		
	Mean	**Median**	**Std. Dev.**	**Mean**	**Median**	**Std. Dev.**
ICW	0.43	0.00	0.50	0.35	0.00	0.48
ICN	1.44	0.00	2.94	1.21	0.00	2.58
LOSS	0.31	0.00	0.47	0.28	0.00	0.45
DEBT	0.27	0.00	0.46	0.25	0.00	0.43
ROA	-0.00	0.03	0.17	0.01	0.03	0.15
QUICK	1.82	1.18	2.50	1.70	1.17	1.90
SIZE	6.79	6.66	1.67	7.11	6.98	1.70
BIGN	0.89	1.00	0.32	0.91	1.00	0.28
GC	0.47	0.00	0.50	0.50	1.00	0.50
Panel B：Upward and Downward Restatement						
Type Var.	**Upward(n=58)**			**Downward(n=158)**		
	Mean	**Median**	**Std. Dev.**	**Mean**	**Median**	**Std. Dev.**
ICW	0.26	0.00	0.44	0.49	0.00	0.50
ICN	0.74	0.00	1.57	1.71	0.00	3.27
LOSS	0.26	0.00	0.44	0.34	0.00	0.47
DEBT	0.19	0.00	0.40	0.34	0.00	0.47
ROA	0.00	0.04	0.21	-0.01	0.03	0.15
QUICK	1.76	1.18	2.25	1.84	1.17	2.59
SIZE	6.85	6.78	1.77	6.77	6.60	1.64
BIGN	0.88	1.00	0.33	0.89	1.00	0.31
GC	0.43	0.00	0.50	0.39	0.00	0.49

This table summarizes descriptive statistics for all variables in our regression models. Panel A provides descriptive statistics of voluntary and non-voluntary restatements. Panel B presents descriptive statistics of upward and downward restatements.

Table 2 documents the association between voluntary restatement decisions and internal control quality. The first column of Table 2 reports the results using the preliminary sample of 377 companies. The results did not provide evidence that voluntary restatements are associated with internal control quality (*VREST* is insignificantly positive). Further, we partitioned the voluntary disclosure restatement subsample into upward restatement subsample and downward restatement subsample to perform probit regressions. The second column of Table 2 shows that the coefficient of *VREST* is -0.21, which is insignificantly negative. Notably, the coefficient of *VREST* is significantly positive (z = 2.23, p < 0.05) in the downward restatement subsample (column (3)), suggesting that voluntary restatement announcements of downward restatements are associated with internal control deficiencies.

Table 2: Internal Control Weakness and Voluntary Restatement Decision

Model		(1)		(2)		(3)	
Var.		Total sample		Upward		Downward	
	Pred. Sign	Coef.	*z*-value[1]	Coef.	*z*-value	Coef.	*z*-value
CONSTANT		0.40	0.62	-1.21	-1.00	1.24	1.49
VREST	+/−	0.36	1.51	-0.21	-0.47	0.69	2.23**
LOSS	+	0.89	2.70***	1.95	3.61***	0.23	0.53
DEBT	+	0.41	1.56*	-0.00	-0.00***	0.34	1.07
ROA	−	-1.13	-0.98	0.79	0.53	-2.85	-1.64*
QUICK	−	-0.10	-1.55*	-0.01	-0.10	-0.18	-1.73**
SIZE	−	-0.25	-2.99***	-0.08	-0.48	-0.31	-2.93***
BIGN	−	0.06	0.14	-0.01	-0.01	-0.25	-0.45
GC	+	0.93	3.76***	0.67	1.44*	1.20	3.77***
Fixed Effect		Included		Included		Included	
Wald Test, F(p-value)		62.03(0.00)		22.67(0.00)		51.09(0.00)	
Pseudo R^2		12.28%		14.93%		14.78%	
Nobs.		377		125		252	

*Asterisks *, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. One-tailed for directional expectations, two-tailed for others. This table shows the regression estimates of the equation:* $ICW_{i,t} / ICN_{i,t} = \alpha_0 + \alpha_1 VREST_{i,t} + \alpha_2 LOSS_{i,t} + \alpha_3 DEBT_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 QUICK_{i,t} + \alpha_6 SIZE_{i,t} + \alpha_7 BIGN_{i,t} + \alpha_8 GC_{i,t} + \alpha_9[\text{Fixed Effects}] + \varepsilon_{i,t}$ *. Table 2 summarizes the regression of internal control weaknesses on voluntary restatement decisions, and associated control variables. All models include year and industry fixed effects.*

Panel A of Table 3 details the type of internal control deficiencies of restatement companies. As depicted in Panel A, restating companies with weak internal control system have the highest percentages of company-level material weaknesses (64.19%).

Table 3: Descriptive Statistics for Internal Control Severity

Panel A：Account-Specific and Company-Level Material Weakness

Type / Classification	Voluntary		Non- Voluntary		Total
	Upward	Downward	Upward	Downward	
Account-Specific	8(5.41%)	11(7.43%)	3(2.03%)	31(20.94%)	53(35.81%)
Company-Level	14(9.46%)	23(15.54%)	12(8.11%)	46(31.08%)	95(64.19%)
Total	22(14.87%)	34(22.97%)	15(10.14%)	77(52.02%)	148

Panel B：Number of Internal Control Weaknesses and Restatement

Type / Quantity	Voluntary		Non- Voluntary		Total
	Upward	Downward	Upward	Downward	
1	9(6.08%)	10(6.76%)	4(2.70%)	35(23.65%)	58(39.19%)
2	2(1.35%)	9(6.08%)	4(2.70%)	14(9.46%)	29(19.59%)
3	4(2.70%)	4(2.70%)	3(2.03%)	5(3.38%)	16(10.81%)
4	2(1.35%)	1(0.68%)	1(0.68%)	3(2.03%)	7(4.73%)
5	1(0.68%)	3(2.03%)	1(0.68%)	4(2.70%)	9(6.08%)
6	2(1.35%)	2(1.35%)	1(0.68%)	2(1.35%)	7(4.73%)
7	0(0.00%)	2(1.35%)	1(0.68%)	2(1.35%)	5(3.38%)
8	0(0.00%)	0(0.00%)	0(0.00%)	3(2.03%)	3(2.03%)
9	1(0.68%)	1(0.68%)	0(0.00%)	3(2.03%)	5(3.38%)
10	0(0.00%)	1(0.68%)	0(0.00%)	3(2.03%)	4(2.70%)
11	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
12	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
13	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
14	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
15	0(0.00%)	0(0.00%)	0(0.00%)	1(0.68%)	1(0.68%)
16	1(0.68%)	1(0.68%)	0(0.00%)	0(0.00%)	2(1.35%)
17	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
18	0(0.00%)	0(0.00%)	0(0.00%)	1(0.68%)	1(0.68%)
19	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)	0(0.00%)
20	0(0.00%)	0(0.00%)	0(0.00%)	1(0.68%)	1(0.68%)
Total	22(14.87%)	34(22.97%)	15(10.14%)	77(52.02%)	148

This table summarizes descriptive statistics for internal control severity. Panel A provides descriptive statistics of account-specific and company-level material weaknesses. Account-specific material weaknesses relate to controls over specific account balances or transaction-level processes. Company-level material weaknesses relate to more macro-level controls such as control environment or overall financial reporting process. Panel B presents descriptive statistics for number of internal control weaknesses and restatements.

Notably, downward restating companies have higher percentages of company-level material weaknesses than upward restating companies, no matter whether downward restatements are announced voluntarily or non-voluntarily (31.08% and 15.54%, respectively). Panel B also shows that downward restatements have more internal control deficiencies in their internal control system, no matter whether downward restatements are announced voluntarily or non-voluntarily (52.02% and 22.97%, respectively). Overall, these findings suggest that voluntary disclosure of downward restatements are more likely to be associated with higher internal control severity.

Table 4 documents the results of the number of internal control weaknesses regressed on voluntary restatement decisions. Then we further explore the association between internal control deficiencies and voluntary restatement decisions in the upward restatement subsample and downward restatement subsample. The first column shows that the coefficient of *VREST* is insignificantly positive, and the coefficient of *VREST* is insignificantly negative in the second column (upward restatement subsample). Further, empirical results show that the coefficient of *VREST* is significantly positive in the downward restatement subsample (column (3)), suggesting that voluntary disclosure restatements are more likely to be associated with higher internal control severity only for downward restating companies.

Table 4: Internal Control Severity and Voluntary Restatement Decision

Model		(1)		(2)		(3)	
		Total sample		Upward		Downward	
Var.	**Pred. Sign**	**Coef.**	***t* –value**	**Coef.**	***t* -value**	**Coef.**	***T*-value**
CONSTANT		2.05	2.81***	3.08	3.09***	1.21	1.26
VREST	+/−	0.22	0.82	-0.30	-0.83	0.51	1.35*
LOSS	+	0.82	2.21**	1.53	3.16***	0.46	0.90
DEBT	+	0.42	1.35*	0.15	0.31	0.34	0.86
ROA	−	-2.35	-2.14**	1.99	1.43*	-4.84	-3.27***
QUICK	−	-0.11	-1.74**	-0.10	-1.17	-0.13	-1.58*
SIZE	−	-0.16	-1.70**	-0.16	-1.18	-0.12	-0.99
BIGN	−	-0.43	-0.89	-1.77	-2.90***	0.29	0.43
GC	+	1.16	4.03***	0.82	2.16**	1.30	3.38***
Adj. R^2		13.41%		16.18%		15.68%	
Nobs.		377		125		252	

*Asterisks *, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. One-tailed for directional expectations, two-tailed for others. This table shows the regression estimates of the equation:* $ICW_{i,t} / ICN_{i,t} = \alpha_0 + \alpha_1 VREST_{i,t} + \alpha_2 LOSS_{i,t} + \alpha_3 DEBT_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 QUICK_{i,t} + \alpha_6 SIZE_{i,t} + \alpha_7 BIGN_{i,t} + \alpha_8 GC_{i,t} + \alpha_9[Fixed\ Effects] + \varepsilon_{i,t}$ *. Table 4 summarizes the regression of internal control severity on voluntary restatement decisions, and associated control variables. All models include year and industry fixed effects.*

This study also examines the sensitivity of the reported empirical results by excluding companies of auditor changes, management turnover, and merging. After rerun our research models, this study obtains results similar to those reported in the tables.

CONCLUSIONS

To improve the quality of financial reporting, SOX strengthened audit committee composition and authority, audit committee responsibilities, and the monitoring role of the audit committee (§202, §204, §301, §407). Section 404 aims to enforce strict rules requiring companies and auditors to monitor internal controls to prevent fraud. Internal control quality and financial reporting quality should be improved since the implementation of SOX, but professional institutions and the public press have reported a dramatic increase of voluntary disclosure restatements after SOX. Therefore, this study investigates whether internal control quality is associated with voluntary restatement decisions. By using 377 restating companies during 2004-2005, we employed probit/regression models and found that voluntary restatement decisions are more likely to be associated with higher internal control severity only for companies with downward restatements. Our findings imply that voluntary disclosure of downward restatements is a red flag of internal control severity. One major limitation of our study is that our sample includes data for two year. Internal control systems and external auditors are the important line of defense for quality financial reporting and quality internal controls. Hence, a potentially interesting line of future research is whether auditor changes are associated with internal control failures, particularly when companies of internal control failures suffer higher restatement severity.

REFERENCES

Abbott, L. J., Parker, S., & Park, Y. (2004). Audit committee characteristics and restatements. *Auditing: A Journal of Practice and Theory*, 23(1), 69-87.

Agrawal, A., & Chadha, S. (2005). Corporate governance and accounting scandals. *The Journal of Law & Economics*, 48(2), 371-406.

American Institute of CPAs (AICPA). (2005). *Internal control: A tool for the audit committee*. New York, NY, AICPA.

Ashbaugh-Skaife, H., Collins, D.W., & Kinney, W. R. (2007). The discovery and reporting of internal control deficiencies prior to SOX-mandated audits. Journal of Accounting and Economics, 44(1-2), 166-192.

Barua, A., Rama, D. V., & Sharma, V. J. (2010). Audit committee characteristics and investment in internal auditing. *Journal of Accounting & Public Policy*, 29(5), 503-513.

Carcello, J. V., Hermanson, D. R., Neal, T. L., & Riley, R. A. (2002). Board characteristics and audit fees. *Contemporary Accounting Research*, 19(3), 365-384.

Doyle, J., Ge, W., & Mcvay, S. (2007a). Determinants of Weaknesses in Internal Control Over Financial Reporting. *Journal of Accounting and Economics*, 44(1-2), 193-223.

Doyle, J., Ge, W., & Mcvay, S. (2007b). Accruals Quality and Internal Control over Financial Reporting. *The Accounting Review*, 82(5), 1141-1170.

Efendi, J., Srivastava, A., & Swanson, E. P. (2007). Why do corporate managers misstate financial statements? The role of option compensation and other factors. *Journal of Financial Economics*, 85(3), 667-708.

Farber, D. (2005). Restoring trust after fraud: Does corporate governance matter? *The Accounting Review*, 80(2), 539-561.

Ge, W., & McVay, S. (2005). On the disclosure of material weaknesses in internal control after the Sarbanes-Oxley Act. Working Paper, University of Michigan.

General Accounting Office. (2006). Letter to the Honorable Paul S. Sarbanes regarding the financial statement restatement database. Washington D.C.: GAO-06-1053R.

Grothe, M., Goodwin, J., Iandera, O., Laurion, H., & Freeland, J. (2007a). The materially weak. *Yellow Card Trend Alert*. Glass Lewis & Co., LLC.

Grothe, M., Saban, J., Plachecki, M., Lee, R., & Post, B. (2007b). The errors of their ways. *Yellow Card Trend Alert*. Glass Lewis & Co., LLC.

Gong, G., Ke, B., & Yu, Y. (2009). SOX-mandated internal control deficiency disclosure under Section 302 and earnings quality: Evidence from cross-listed firms. Working Paper, Penn State University.

Hammersley, J., Myers, L., & Shakespeare, C. (2008). Market reactions to the disclosure of internal control weaknesses and to the characteristics of those weaknesses under Section 302 of the Sarbanes-Oxley Act of 2002. *Review of Accounting Studies*, 13(1), 141-165.

Hoitash, U., Hoitash, R., & Bedard, J. C. (2009). Regulatory intent and political reality: Evidence on corporate governance and internal controls in the post-SOX world. *The Accounting Review*, 84(3), 811-838.

Kinney, W. R., Palmrose, Z-V., & Scholz, S. (2004). Auditor independence, non-audit services, and restatements: Was the U.S. government right? *Journal of Accounting Research*, 42(3), 561-588.

Krishnan, J. (2005). Audit committee quality and internal control: An empirical analysis. *The Accounting Review*, 80(2), 649-675.

Li, C., & Wang, Q. (2006). SOX 404 assessments and financial reporting errors. Working paper, University of Pittsburgh and Iowa State University.

Nagarajan, R., & Carey, P. (2008). Effectiveness of internal control over financial reporting and financial statement restatements: The role of management. Working paper, Monash University Australia.

Palmrose, Z-V., Richardson, V. J., & Scholz, S. (2004). Determinants of markets reactions to restatement announcements. *Journal of Accounting and Economics*, 37(1), 58-89.

Plumlee, M. A., &Yohn, T. L. (2010). An analysis of the underlying causes attributed to restatements. *Accounting Horizons*, 24(1), 41-64.

Securities & Exchange Commission. (2003a). Management's report on internal control over financial reporting and certification of disclosure in exchange act periodic reports. Washington, DC, SEC.

Securities & Exchange Commission. (2003b). Strengthening the commission's requirements regarding auditor independence. Washington, DC, SEC.

Srinivasan, S. (2005). Consequences of financial reporting failure for outside directors: Evidence from accounting restatements and audit committee members. *Journal of Accounting Research*, 43(2), 291-334.

Zhang, I. X. (2007). Economic consequences of the Sarbanes-Oxley Act of 2002. *Journal of Accounting and Economics*, 44(1-2), 74-115.

BIOGRAPHY

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HALO EFFECT IN ANALYTICAL PROCEDURE: THE IMPACT OF CLIENT PROFILE AND INFORMATION SCOPE

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ABSTRACT

Many auditors use risk-based audit as a methodology that emphasizes assessing audit risk. A holistic perspective during strategic assessment encourages the auditor to focus on the big picture. They understand the industry and client business and determine the risk of material misstatement asan initial hypothesis about the client. Previous research found that a holistic perspective in strategic assessment causes a halo effect. This study focuses on the phenomena of a halo effect in analytical procedures, the impact of a client's profile and scope of information that be presented to auditor in planning an audit. We propose that auditor judgment is impacted by the client's profile and professional judgment will be different in a holistic perspective. This study is motivated by bounded rationality of individuals and uses representative heuristics to evaluate clients. The holistic opinion of the person tends to be consistent when analyzing detailed diagnostic information about the person. In an analytical procedure context, understanding of the industry and client business influences the extent to which they adjust account-level risk assessment. We propose two hypotheses. The first hypotheses is that the risk of material misstatement after presentation of client's profile is positively correlated with the risk of material misstatement after get financial information of client. The second hypothesis is an auditor who obtains information about a client in the scope of holistic information would determine the risk of material misstatement lower than auditor who obtains information in scope of specific information. Data from laboratory experiment using various levels of auditor were collected. The finding suggest a halo effect is generated during analytical procedures and when auditors obtain information about the client in holistic scope.

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KEYWORDS: Halo Effect, Analytical Procedure, Scope of Holistic Information, Specific Scope Information

INTRODUCTION

Auditors in a business risk audit approach conducts strategic assessments to develop a holistic perspective of their client's business model (Bell et al., 2002). Understanding the client's business and industry is part of the planning step (Arens, Elder and Beasley, 2012) and analytical reviews reveal important insight concerning an auditor's hypothesis test (Luippold and Kida, 2012). Hypotheses are often developed early in the decision process (Koonce, 1993; Weber et al., 1993). Koonce (1992, 1993) stated that hypothesis testing during analytical procedures as a four-step, diagnostic inference processes: hypothesis generation, and information search and hypothesis evaluation. Bell et al. (1997), Bell et al. (2005) stated that strategic assessment approaches influence auditor expectations. The use of a holistic perspective for strategic assessment is useful in identifying various factors threatening a business model.

However, evaluative judgment, when assessing performance in detail based on holistic perspective, potentially causes the emergence of a halo effect (Murphy, Jako and Anhalt, 1993). The halo effect is an individual biases in conducting an assessment on a person or object that generalizes assessment of an attribute to conduct an assessment on other attributes (Szhultz and Szhultz, 2010). The halo effect is defined as a " marked tendency to think of the person in general as rather good or rather inferior and to color the judgments of the person's specific performance attributes by this general feeling (Thorndike, 1920). The impression of information obtained from one experience significantly effects the next judgment (Tetlock, 1983). Specifically, information items entered earlier are considered more important than later items, this phenomenon is referred to as the halo effect (Grcik, 2008), also called the primacy effect (Hunton, 2001; Hogarth and Einhorn, 1992, Pinsker, 2007; 2008).

The halo effect occurs when knowledge for holistic assessment at the beginning a decision alters the next detailed evidence (Slovic et al., 2002). Studies provide evidence supporting the halo phenomenon in a variety of performance evaluation contexts (Nisbett and Wilson, 1977, Cooper, 1981, Balzer and Slusky, 1992), when information is evaluated using a top-down task structure and when one acquires general information before evaluating detailed performance criteria (Murphy et al. 1993). Moreno et al. (2002) stated the halo effect may affect judgment in accounting contexts and stated that holistic impressions alter investment risk assessments.

The halo effect is in the domain of psychology (e.g Thorndike, 1920; Nisbet and Wilson (1977), education (e.g., Pike, 1999), marketing (e.g Leuthesser et al., 1995, Wirtz and Bateson, 1995). Previous research shows that appearance of an object to be evaluated impacts assessment of another attribute of the object. In an audit setting, the halo effect results in auditors interpreting judgment-specific evidence to be consistent with holistic knowledge. O' Donnel and Schultz (2005) find the halo effect, associated with strategic risk assessment, influences auditor judgment by altering their tolerance for inconsistent account fluctuation. Grammling et al., (2010) suggests that auditors were influenced by knowledge of a global judgment not directly related to the evidence they evaluated. The factor that influenced the halo effect was object appearance. The convincing object that covers the bad condition triggers the halo effect and influences to less professional judgment. Past research of the halo effect in auditing focuses on a holistic approach and global knowledge to professional judgment. Previous research in analytical procedures can be investigated especially in initial expectations (Messier, Simon and Smith, 2013).

This study differs from prior research because it focuses on the halo effect in analytical procedures that determines initial risk assessment based on visualization of the client profile. Subjects with convincing profiles will evaluate with high rating in another aspects. We propose that subjects with high (low) assessment on convincing client profile presented will assess high (low) misstatement risk of account balance. We specially address an important question related to the halo effect: will the convincing profile client induce less auditor judgment?

Prior research focuses on how the holistic approach generated during strategic assessment influences judgment by altering auditor tolerance for inconsistent fluctuations of account (O'Donnel and Schultz, 2005; Grammling et al. (2010). When auditors conduct analytical procedures within the scope of holistic information, the complexity and ambiguity of the task require nontrivial commitment of cognitive effort and make their judgment quite salient. Luippold and Kida (2012) provide evidence that information ambiguity and data complexity affect judgment accuracy during analytical reviews.

We posit that individual are more likely influenced by scope of information because representativeness heuristics and cognitive limitation. Subjects will determine low risk of material misstatement when information is presented in a holistic scope rather than in specific scope. We specifically address an important question related to the scope of information: will auditors in the scope of holistic information determine the risk of material misstatement lower than auditors in the scope of specific information.

This study contributes to behavioral auditing literature in two ways. First, it considers the impact of client profiles in directing auditor perception on material risk of assessment decision. Secondly, this research is expected to shed light on analytical procedures to encourage auditors to scope of client financial report information that influence the auditor's professional judgment.

We experimentally examine auditor judgment at various levels (junior, senior, manager, supervisor and partner) with regard to the risk of material misstatement on sales accounts in convincing client profiles and in inconsistent fluctuation of accounts. The result suggests that the appearance of a convincing client profile impact on auditor professional judgment, and will determine a low risk of material assessment if client financial information is presented in the scope of holistic.

The remainder of this paper is organized as follows. The next section presents a literature review that includes theory and hypotheses development. The third section provides an experimental research method used in this study, and the fourth explains the results and implications of the study. The conclusion and limitations of the study are presented in the last section

LITERATURE REVIEW

The halo effect is based on cognitive theory. It explains how humans understand, learn, memorize, and thinks about certain information (Stenberg, 2006). In cognitive psychology, mental processes consisting of attention, memorizing, producing and understanding language, problem solving, and decision making will be learned (Riegler and Riegler, 2009).

Bowditch and Buono (2001) stated that individual perception can be the subject of several distortions and illusions that cause individuals to see a different object from its real presentation. The halo effect is a perception distortion process using assessment of a characteristic from an individual or group to cover other characteristic assessments from the individual or group.

An individual who uses judgment for decision making often has a beginning assessment (anchor) on information that is then adjusted when new information is received. This is called the adjustment and anchoring heuristic (Hogarth, 1987). Auditors tendency to weight the last information received is called the recency effect. Tendency to weigh the first information received is called the primacy effect. A theory that explains the primacy effect and recency effect is known as belief adjustment theory developed by Hogarth and Einhorn (1992). They consider an ordering effect to examine interaction between duty characterization and information process strategy. Belief adjustment models consider direction, power, and type of information that by Bayes' Theorem, explained decision making based on order and pattern of information presentation. The Halo effect, according to Grcic (2008), relates to primacy effect because the impressive anchor assessment is used as the assessment of additional new information. The individual does not revise their belief when additional new information arrives because the impressive anchor still attaches in their memory.

The halo effect can be explained with primacy effect in belief adjustment theory. The primacy effect emerges because simple information at the end of a sequence pattern occurs at the same time as a short evidence series or with a step by step pattern with long evidence series. When information given is complex, a long evidence series, or step by step and end of sequence, primacy effects can also occur (Hogarth and Einhorn, 1992).

Analytical procedures are defined as "evaluations of financial information through analysis of plausible relationships among financial and nonfinancial data (AICPA 2012, AU 520). Analytical procedures are required at the planning and review phases of an audit (SAS No. 56, AICPA 1988). Trompeter and Wright (2010) stated that analytical procedures are valuable because auditors consider the reasonableness of financial results based on expectations and with a broader view (forest for the trees as opposed to the tree-by-tree utilized more traditional audit approaches) (Bell et al. 2002; Jacobson, 2001). Analytical procedure is an important phase in the planning step to determine the nature and scope of the audit test.

Auditors develop and evaluate possible explanations when they have identified a misstatement risk associated with an unexpected change in account balance (Yip-Ow and Tan 2000; Asare and Wright, 1997). Auditors use analytical procedures to assess the risk of material misstatement (ISA 315; SAS 107). Auditors use performance measures to highlight situations where problems may exist in management's strategy that can be a source of audit risk (Kinney and McDaniel, 1996; McDaniel and Kinney, 1995).

Koonce (1992, 1993) presented a cognitive approach based on the four components of a diagnostic, sequential and iterative (DSI) process: mental representation, hypothesis generation, information search and hypothesis evaluation. Messier et al. (2012) stated there are four phases in analytical procedure: (1) develop an expectation, (2) establish a tolerable difference (a difference between the auditor's expectation and the client's reported amount that would not warrant further investigation), (3) compare the expectation to the recorded amount and investigate significant differences (differences greater than the tolerable difference), and (4) evaluate explanations and corroborative evidence. Auditor's performing analytical procedures consider financial and nonfinancial information when formulating mental representations (Blocher and Cooper, 1988; Peters, 1990).

The first researchers to conduct a field study about analytical procedures used by practicing auditors were Hirst and Koonce (1996). They find that most planning work was done by seniors and managers, and auditor's relied on the client for much of the analytical procedure information. Trompeter and Wright (2010) found that analytical procedures practices had changed to include consultation with non-financial personnel when performing analytical procedures. Another finding are auditors' development of expectations exhibited better precision. Technology had positively affected expectations and SOX's focus on internal controls had the potential to lead to more employment of the analytical procedure.

Several behavioral studies conducted on analytical procedures relate to the strategic system approach (SSA) (Bell et al., 1997; Bell et al., 2005) and provide evidence that an SSA approach can influence auditor expectations (Messier et al., 2013). SSA approach can affect auditors' account risk assessments (O'Donnel and Schultz, 2003; 2005) and using a more thorough strategic assessment can lead to more balance in risk assessment (Knechel, Salterio and Kozlowski, 2010).

The scope of holistic information faced by an auditor when conducting analytical procedures could result in the emergence of a halo effect. Ballou, Earley and Rich (2004), O'Donnel and Schultz (2005) explained that when business risk is determined low, auditor's became less sensitive to evidence that reflects a potential problem.

CPA firm's develops a methodology for auditor's to obtain, evaluate, and record evidence during analytical procedures (Hirst and Koonce, 1996; Trompeter and Wright, 2010). Holistic information can be obtained from a client or audit team leader to understand a client's business and given to the senior and junior auditor as a field assignment executor. The auditor may accept holistic information that generally describes the client's condition that is convincing. Then in giving an assessment on risk of material misstatement in analytical procedure, it tends to be in accordance with holistic information and the partner's assessment.

Professional judgment by an experienced auditor would be better than that by a less experienced auditor (Knapp and Knapp, 2001). The auditor as an information provider tends to seek information that is consistent with his/her judgment. Meanwhile, the partner as a reviewer would tend to seek evidence that is inconsistent (Libby and Trotman, 1993). That condition can be explained by a cognitive model of justification process which is manipulated to seek evidence that supports other decisions or judgments (Peecher, 1996). Auditor's combine objective justification in mental representation. That decision taken needs support (Gibbins and Newton, 1994). This condition occurs because in audit methodology, the decision making process is gradual, so the previous decision may affect the next decision.

Research in psychology documents that individuals may be subject to "confirmation biases" or " halo effects (Ballou, Earley and Rich, 2004). Individuals tend to form a hypothesis about a target based on preliminary information and then gather more data about the client by choosing those item of information that will provide evidence to confirm rather than disconfirm their initial hypothesis (Snyder and Swann, 1978; Balzer and Sulsky, 1992; O'Donnel and Schultz, 2005). Halo effect studies primarily focus on the valence of the information and find that a similar confirmatory process occurs (Tan and Jamal, 2001). Research in decision making indicates that individuals tend to confirm their hypotheses and will have a greater response to confirming evidence compared to disconfirming. Church (1990, 1991) and Bedard and Biggs (1991) found that auditor's exhibited confirmatory tendencies in their evaluation.

A client's condition that convinces the auditor of a low business risk as well as a good assessment of the internal control system would cause an auditor to determine low risk of material misstatement. Holistic information has formed a mental representation on the auditor about the client who initially is assessed positive. The limitation of the auditor as an individual would tend to conduct an assessment of the next client generally similar to the beginning assessment. By representative bias, general information is used as a comparison on the similarity of general assessment with detailed attributes of financial reports in analytical assignment. In a detailed assessment of accounting, the auditor would use general information that is easily absorbed in memory.

Syneder and Swann (1978) proposed that decision makers generally employ one of three information search strategies: (1) a search for evidence that confirms the hypothesis under scrutiny, (2) search for disconfirming evidence, or (3) a "balanced" search that invests equal amounts of effort to uncover both confirming and disconfirming facts. Auditors that assess the client profile with good condition tend to confirm their initial assessment after get financial information. McMillan and White (1993) found that auditor's may have a tendency to underweight potentially important error-related evidence when they are not focused on detecting material errors. This may happen because confirmation bias mitigates their sensitivity to material evidence. Based on previous literature and the argumentation, we propose the first hypothesis:

> H1: The risk of material misstatement after assessing the convincing client profile should be positively correlated with the risk of material misstatement after obtaining financial information.

ISA 200, 315 and 330 (IAASB 2006a, 2006b, 2006c), Public Company Accounting Oversight Board AS No. 5 (PCAOB 2007), and SAS Nos. 104-111 (AICPA 2006a, 2006b, 2006c), stated the importance of risk assessments in auditing. Bell et al. (1997) presented the basic concepts underlying what they called strategic-systems auditing (SSA), now more broadly referred to as business risk auditing (BRA; Robson, Humphrey, Khalifa and Jones, 2007). BRA is characterized by a top-down focus on a client's competitive environment strategy for success and critical internal processes (Knechel, 2007). Curtis and Turley (2007) present two critical elements of BRA methodology that are the focus of controls over important business risks within the client's environment and the uses of analytical evidence as a basis for evaluating a client's operations and potential risk of material misstatement. Understanding business and industry client requires use of an analytical procedure to generate an initial hypothesis about client. Research in auditing indicates that hypotheses are developed early in the decision process and then used to guide further data gathering (Koonce, 1993). If an auditor fails to assess client risk appropriately, erroneous conclusions may ensue (Fukukawa and Mock, 2011, Bedard and Biggs, 1991).

The level of material misstatement is considered high if an auditor faces a client with high-risk business. Based on findings in previous research in accounting (Earley, 2002), Ballou, Earley and Rich (2004) examines an auditor who views strategic information indicating that a client company is typical (atypical) of others in its industry. The auditor assesses an additional item of evidence indicating a small problem in a business process to be relatively less (more) risky. Phillips (1999) found that an auditor who evaluates evidence related to a low (high) risk account would be less (more) sensitive on detailed evidence of aggressive financial reports. Thus, the executor auditor, when facing general information and obtaining strong impression on client's condition, would tend to deliver judgment that is consistent with the general assessment when facing detailed transaction assignment. Psychology research has examined differential encoding of typical versus atypical information in memory (Smith and Graesser, 1981; Shapiro and Fox, 2002) affects recall, recognition and processing of additional information (O'Sullivan and Durso, 1984). Based on previous studies, we posit the scope of information may influence the auditor's professional judgment. The specific scope of information will induce more accurate professional judgment than holistic scope if information.

Brown and Solomon (1990) argued that domain-specific knowledge is crucial for developing expectations for and demonstrating a priori expectations for configure information processing. Both context-and task-specific knowledge need to be used in determining judgment tasks that are more effectively and efficiently accomplished employing information processing (Brown and Solomon, 1991). The determination of business risk is based on the understanding of holistic client information that includes various internal and external aspects. Auditor's facing holistic information that is convincing on a client would tend to have a high halo bias in determining the level of risk of material misstatement in the analytical procedure. The client considered sound by the partner would make a mental representation that other evidences would be in accordance with the good beginning assessment.

Auditors who conduct strategic assessment at high (low) level would tend to determine the risk of material misstatement to be high (low) (O'Donnel and Schultz, 2005). A positive holistic on a client's condition in the form of high strategic assessment could cause a high halo effect when facing account fluctuation inconsistency. With a high halo effect, the condition of the client is perceived sound by the auditor, whereas the actual condition is that account fluctuation inconsistency occurs. The client's condition that is perceived well and is supported by the assessment from the partner that business risk is low causes the risk level of material misstatement in analytical testing to also be determined low.

Specific information that shows a client's condition in detail indicates the emergence of fluctuation accounting inconsistence could potentially cause a low halo effect. The auditor would be better in grasping the signal of account fluctuation inconsistency in specific information. When facing a partner's assessment that the level of client's business risk is determined low, the auditor with specific information does not easily get tricked with the convincing client's condition. Based on the previous argumentation and research, we can propose the second hypothesis as the following:

> H2: Auditor in scope of holistic information would determine the risk of material misstatement lower than auditor in scope of specific information

METHODOLOGY

The experimental design is a pretest-posttest control group design. Shadish, Cook and Campbell (2002) explained that the advantage of group control design with pretest and posttest is to prevent threats on internal validity. An experiment is done by holding audit simulation in an audit seminar. The experiment in general can be described by the matrix in table 1.

Table 1: Matrix of Experiment

		Financial Information of Client	
		Before	**After**
Scope of	Specific	Cell 1	Cell 2
Information	Holistic	Cell 3	Cell 4

This table shows the experiment matrix.

Table 1 shows a four cell experimental with the first factor, scope of information, consisting of two levels: specific information and holistic information. The second factor, financial information of the client consists of before and after presentation. Cell 1 is a group with specific information scope before getting financial information. Cell 1 is a group with specific information scope after getting the client financial information. Cell 3 is a group with holistic scope information before getting client financial information. Cell 4 is a group with holistic scope information after getting financial information of the client.

Experimental subjects are auditors (junior, senior, manager and partner) in Surabaya City, Indonesia's second biggest city, with a large quantity of CPA firms. The design is by completely randomized design done by dividing a two-type audit simulation module to subjects randomly. Therefore, each subject gets the same opportunity to be in the experimental group or control group.

The information is manipulated by two levels, specific and holistic scope of information. The information consist of quantitative and qualitative client conditions with holistic and specific scope, given from partner to auditor. The specific information scope is adapted from Dilla and Stone (1997) and Booker, Drake and Heitger (2007). Participants with specific information were given sales account information in words only, without mentioning any relative comparison. The words that explain the client situation in specific information contain an explanation with the exact condition. This research uses the term holistic information scope as being opposite of specific information. The holistic information presented sales account information in the form of numbers, words and a relative comparison as in Booker, Drake and Heitger (2007). The words that explain the client situation in the holistic information contain explanations with uncertainty conditions. For example, the holistic scope of information stated that the increase of sales in 2012 is 17.76% relative to the previous year. The specific scope of information stated that sales in 2012 had increased.

The risk of material misstatement on the sales account was measured with an analytical test score 1 (very low) to 7 (very high). Participant also determine the risk of material misstatement on cost of goods sold, but for data processing, only the risk of material misstatement on sales account. The determination of risk of material misstatement for cost of goods sold aims to hide manipulation and reduce demand effects. Neuman (2010) explained that demand effects occurred when participants knew the purpose of manipulation given as well as the research objective, so they behaved the same as expected in the research objective.

Instrument covers case material and lists of general questions (demography), manipulation checking questions and questions related to dependent variables. The whole instrument, measurement, and questions used in this research would be through some processes. Interviews were conducted with practitioners (public accountant), personal interview (manager of retail distribution), focus group discussion/FGD with an audit lecture in a private university that has a good relationship with public accountant firms in Indonesia, and a pilot test in a small group (students in postgraduate program in Central Java and Yogyakarta City at Indonesia).

The experimental instrument is a convincing client profile for a minimarket distributor company that is presented with a short-duration video (5 minutes). The company illustration differs from the previous research because this research has the additional visualization in the form of pictures and video. The use of visualization gives a positive impression that triggers the halo effect. The minimarket distributor company has a similarity with a big minimarket distributor in Indonesia that has a franchise system. We named the minimarket distributor company Jackomart.

The purpose of the manipulation check is to determine that the manipulation given to subjects can be understood and to help increase internal validity (Neuman, 2010). The manipulation check is comprehensive questions of holistic/specific information scope consisting of three questions. The questions relate to the client's information given by choice with an alternate answer. The subject is asked to choose the right answers. If the subject answer 2 of 3 questions correctly, she pass the manipulation check, and the data is used.

At the beginning stage, descriptive statistic of the subject's demographic characteristic are presented. Randomization effectiveness testing based on information scope and mitigation strategy in eliminating individual characteristic differences between groups is done by One Way ANOVA. Halo effect detection on the subject is addressed by questions on the condition of the client including minimarket management, distribution system, and financial performance based on a profile video and booklet of the client's company. Responses were provided on a 7-point scale, (1=strongly very bad to 7=strongly excellent).

Hypothesis 1 testing is done with *Pearson correlation* between the risk of misstatement material on sales account 1 (before getting client financial information) and the risk of misstatement material on sales account 2 (after getting client financial information). Hypothesis 2 testing is done by *independent t-test* that compares average risk of material misstatement on sales account 2 (after getting client financial information) between auditor with holistic scope information and auditor with specific scope information.

RESULTS

The experiment was conducted on February 2nd, 2013 at STIE Perbanas Surabaya City, Indonesia. The subject in this research was junior, senior auditor, manager, supervisor, and partners. They were invited to an International Standard Auditing (ISA) Seminar: Experience and Learning of Auditor's Error Typology. The invitation was sent on January 8th, 2013 through facsimile, email, and mail to CPA firms in Surabaya City and Malang City, Indonesia. The addresses of CPA firms are based on Directorate of the Indonesian Public Accountant Institute. The number of invitation sent was 51; consisting of 43 for CPA firms Surabaya and 8 for CPA firms in Malang. The total number of CPA firms that registered by February 1st, 2013 was 25. The total auditors who registered was 110 people and those who attended the seminar totaled 72. Each CPA firm sent 2-8 people with position of junior, senior auditors, manager or partner.

The participant received a simulation module consisting of module one for halo effect testing and information scope and module 2 for halo effect mitigation testing. The experimental design included two cases. Each module was entitled and covered the same and had the same number of pages. Randomization was done when the module was distributed randomly to the participant, so each participant got the same opportunity to obtain all audit simulation cases.

Characteristic of the research subjects included sex, age, working period, last education, as well as participation in public accountant training and audit training. Table 2 presents the characteristic of the research subjects. Table 2 shows the participants consisted of male (32 person) and female (33 person). The age groups are 22 people in range of 20 to 25 years, 21 people in range 25 to 30 years, 4 people in range of 25 to 40 years old, and 4 people above 45 years old. There are 38 junior auditors, 16 senior auditors, 3 managers, 6 supervisors and 2 partners. The modus of the working period in the range between

1 to 2 years old are 32 people; between 4 and 6 years are 11 persons. Most participants (60 people) have education with an accounting undergraduate.

The risk of material misstatement of sales account 2 is determined after subjects receive the manipulation of holistic or specific information scope. ANOVA testing determines that risk of material misstatement on sales account 2 is not affected by the difference of subject demographic characteristic. The testing result by dependent variable was material misstatement risk on sales account 2 and the independent variable was demographic characteristics including sex, age, position, working period, education, participation in public accountant training and audit training as shown in Table 3.

Table 2: Characteristic of Experimental Subject

Information			Total (people)	Percentage
Age				
	o	Male	32	49.2
	o	Female	33	50.8
Age Group				
	o	20 - < 25 years old	22	33.8
	o	25 - < 30 years old	21	32.3
	o	30 - < 25 years old	9	13.8
	o	35 - < 40 years old	4	6.2
	o	40 - < 45 years old	4	6.2
	o	- > 45 years old	5	7.7
Position				
	o	Junior Auditor	38	58.5
	o	Senior Auditor	16	24.6
	o	Manager	3	4.6
	o	Supervisor	6	9.2
	o	Partner	2	3.1
Working period				
	o	< 1 year	3	4.6
	o	1 - < 2 years	32	49.2
	o	2 - < 4 years	9	13.8
	o	4 - < 6 years	11	16.9
	o	6 - < 8 years	4	6.2
	o	8 - < 10 years	1	1.5
	o	> 10 years	5	7.7
Education				
	o	Accounting Undergraduate	60	92.3
	o	Non-Accounting Undergraduate	2	3.1
	o	Accounting Graduate	2	3.1
	o	Non-Accounting Graduate	1	1.5

This table shows demographic data about the sample.

Table 3: Result of One Way ANOVA test of the Effect of Demographic Characteristic on Risk of Material Misstatement on Sales Account 2

Independent Variable	Df	F-Statistic	Sig
Sex	1	0.154	0.697
Age	5	1.122	0.367
Position	2	0.121	0.886
Working Period	14	0.651	0.803
Education	2	0.658	0.430
Public Accountant Training	1	0.006	0.938
Audit Training	1	0.084	0.773

This table shows the one-way ANOVA analysis results.

Table 3 shows that sex did not affect the risk of material misstatement on the sales account 2 (p=0.697). Age and position in the CPA firm did not affect the risk of material misstatement on sales account 2 with probability value of age (0.367) and position (0.886). Working period did not affect the risk misstatement on sales account 2 with probability value of 0.803. The last education, participation in public accountant training and audit training also did not affect the risk misstatement on sales account 2. The probability value of the last education was 0.430, while public accountant training was 0.938 and audit training was 0.773. Therefore, we conclude that risk of material misstatement on sales account was not affected by differences between subject demographic characteristic.

In the experimental test, we must be careful with experimental error, i.e. accounting and auditing capability of subjects. We test that difference of accounting and auditing proficiency score does not affect risk of material misstatement on sales account 2. Testing of experimental error (score of accounting and auditing proficiency) was done with ANCOVA (analysis of covariate) with dependent variable risk of material misstatement on sales account 2. The independent variable is scope of information and covariate variable is score of accounting and auditing proficiency (Table 4).

Table 4: Testing of Experimental Error (Score of Accounting and Auditing Proficiency) on Scope of Information and Risk of Material Misstatement on Sales Account 2

Independen Variable	**Sum of Square Type III**	**Df**	**Mean of Square**	**F-Statistics**	**Sig**
Corrected Model	15.861[a]	2	7.931	3.185	0.048
Intercept	18.910	1	18.910	7.594	0.008
Scope of information	15.820	1	15.820	6.353	0.014**
Covariate Variable					
Score of Accounting and Auditing Proficiency	0.585	1	0.585	0.235	0.630
Error	154.385	62	2.490		
Total	1491.000	65			
Corrected Total	170.246	64			

*This table shows the ANCOVA tests results. ** Significant on 5%*

Table 4 shows the score of accounting and auditing proficiency is not significant (0.630) and scope of information as a manipulate variable is significant (0.014). The conclusion is risk of material misstatement on sales account 2 will only be affected by scope of information and not by different accounting and auditing proficiency scores or demographic characteristics.

The first hypothesis stated that because the halo forms an impression of client profile, the risk of material misstatement before getting the client financial information should be positively correlated with the risk of material misstatement for the sales account after getting the client financial information. Table 5 shows the result of the Pearson correlation coefficient for halo effects. The strong correlation between risk misstatement on sales account 1 and the risk misstatement on sales account 2 from the result of *Pearson Correlation* was 0, 349 and significant at 0.004.

Table 5 Pearson Correlation for Halo Effect

	Pearson Correlation
Risk of material misstatement on sales 1 (before obtaining information scope)	0.349 P= 0.004**
Risk of material misstatement on sales 2 (after obtaining information scope)	

*Pearson correlation coefficient for the halo effect. **. Correlation is significant at the 0.01 level (2-tailed).*

The second hypothesis stated that auditor's with holistic information about a client, would determine the risk of material misstatement lower than an auditor with specific information. Information scope given by the partner as the manipulation was information that includes condition of the client's industry, sales, selling cost, and comprehensive preview of the profit/loss report. The result of hypothesis 2 testing is shown in Table 6.

Table 6 shows the results of the second hypothesis testing that was done by comparing the average of sales account 2 risk of material misstatement in the group with specific information scope and the average risk of material misstatement on sales account 2 in the group with holistic information scope. The score pretest in cells with specific information is 4.875 and score of posttest is 4.875. The distribution of specific information scope caused the increasing of sales account material misstatement risk of 0.125. The opposite condition occurred in the group with holistic scope, with pretest and posttest scores of 4.818 and 4.030, shows the difference of risk of material misstatement of sales account -0.788. We compare the difference of risk of material misstatement on sales account 2 and risk of material misstatement on sales account 1 between the cell with holistic scope of information and the cell with specific scope of information. The independent t-test shows that significance of that difference is 0.049. This showed that subjects with a high halo effect and given holistic information scope, still had a high halo effect because they still believed the client's condition was in accordance with the convincing beginning assessment.

Table 6: Test of Hypothesis 2

	Average (Std deviation) Score of Halo Effect	Pretest (a)	Posttest (b)	Difference of posttest – pretest c = (b – a)
Cell 1, 2 (N=32)	Specific	4.875 (1.539)	5.000 (1.437)	0.125
Sel 3, 4 (N=35)	Holistik	4.818 (1.776)	4.030 (1.686)	-0.788
Levene Test				F=0.048 Sign=0.827
T-test				t= 2.010 sign= 0.049**

*This table shows the results of the Hypothesis 2 tests. a: Average (standard deviation) of material misstatement on sales account 1 (before obtaining information scope) b: Average (standard deviation) of material misstatement on sales account 2 (after obtaining information scope) c: Difference of Misstatement Risk of Sales Account 2 and Misstatement Risk of Sales Account 1 ** Significant at 0,05*

The test results show that hypothesis 2 was supported by the data in this research. Auditors who obtained holistic information about the client would determine a lower risk of material misstatement compared to those who obtained specific information. This finding supports the occurrence of a halo effect in the auditor receiving partner information about the condition of a client with holistic or specific information scope. Auditors with a high halo effect and obtaining information from the partner with holistic scope was still impressed by the client's sound initial assessment, so the attached halo effect would affect the risk assessment of material misstatement of sales account 2 to be similar to the assessment of sales account 1 material misstatement risk. The opposite condition occurred for an auditor with a high halo effect and obtaining information from partner with specific scope. Although it had a positive impression in the initial assessment of the client, it would determine the risk of material misstatement of sales account 2 higher than the risk of sales account 1 material misstatement.

DISCUSSION

The findings here confirm the result of previous research (O'Donnel and Schultz, 2005; Grammling, O' Donnel and Vandervalde, 2010) that halo effect phenomenon occurred among auditors. O'Donnel and Schultz (2005) found that when an auditor conducted a strategic assessment at the beginning (before analytical procedure) then, the risk of material misstatement was lower than an auditor who conducted strategic assessment at the end (after analytical procedure). Strategic assessment on the risk of the client's business done at the beginning, in the research of O'Donnel and Schultz (2005) caused the emergence of a halo effect, so it affected the risk of material misstatement after obtaining information of other clients. The result of assessment in overall positive business risk of the client created mental representative in memory. It was easily memorized when facing an assignment to conduct the risk of material misstatement on detailed account information.

Auditors with client assessment that is positive and impressive, would use the positive impression to conduct positive initial assessments on other assessment attributes before obtaining other information (financial or non-financial) in more detail. A Positive initial assessment on an object effects positive assessment on other attributes from the halo effect.

Information from the partner as part of a client's business and industry understanding stage could be given in holistic and specific scope. Holistic scope information is overall information containing relative information on client's condition, while specific information is overall information and does not contain information of account balance comparison. Holistic scope information has potential to result in the emergence of a high halo effect that is marked by decreasing accuracy of auditor professional judgment. Specific scope information has the potential to create a lower halo effect than holistic scope information. This condition impacts the accuracy of auditor professional judgment on auditor specific information scope is better compared to the accuracy of auditor professional judgment on auditor of holistic information.

The result of this research indicates that in professional judgment, the auditor as an individual has cognitive limitations. Initial assessments on a convincing condition of the client is used as a comparison (representativeness heuristic) when conducting assessment on detail information of account balance. The instrument of this research presented information of account balance containing misstatements as part of the partner's information of holistic/specific scope. Halo effects emerge when the auditor conducting an initial assessment on the condition of the client, after watching video and reading a booklet from client's company profile, can be seen from a very good initial assessment on the condition management, distribution system and financial performance. This halo effect is brought forward when conducting initial assessments on the risk of material misstatement on sales account 1 and the risk of material misstatement on sales account 2.

This research result confirmed the statement from Hogarth (1987) that a person would remember more the information that reflects more detailed characteristics or information attributes. Holistic scope information may cause auditor professional judgment that is less accurate.

CONCLUSION AND FUTURE RESEARCH

The objective of this study is to examine auditor judgment about the risk of material misstatement on sales accounts in a convincing client profile and in inconsistent fluctuation of account. We use a 2X2 between subjects experimental design to execute the research. The subject in this research was junior, senior auditor, manager, supervisor, and partner that were invited to an International Standard Auditing (ISA) Seminar: Experience and Learning of Auditor's Error Typology.

One key finding of our study is the halo effect phenomenon occurred on auditors, and auditors with holistic information scope would determine the risk of material misstatement that was less accurate compared to auditors with specific information scope. Auditors with the assessment of a client's initial condition that was convincing would have a high halo effect. So, they received information from a partner that was holistic in scope and would encourage the auditor to determine low misstatement risk. This is because the auditor still carried the impressive assessment on condition of client, so they assumed that the client had low misstatement risk. The findings in this research explain that an auditor with a high halo effect and receiving specific scope information from the partner would determine risk of material misstatement higher than an auditor with a high halo effect who receives holistic scope information.

The previous research that investigated halo effects in of psychology or marketing showed that an individual had limitations in receiving and processing information. In the field of auditing, the halo effect investigated by O'Donnel and Schultz (2005) as well as Grammling et al., (2010) showed the profession demanding high professional skepticism, could not be separated from the halo effect. The previous research has not conducted a test of the means of halo effect mitigation that are reflected in inaccuracy of auditor's professional judgment.

The result of this research gave description to the auditor that halo effects could occur, especially on less experience auditors. CPA firms needed to anticipate this matter through various training. A novice auditor who usually received an analytical procedure assignment in the planning stage, was more suitable to be given specific scope information rather than holistic scope information.

This study has three limitations. First, the experimental case materials use a positive halo effect. Further research can include a negative halo effect and determine risk of material misstatement. Second, the context of analytical procedures is in the initial hypothesis. Further research is expected to improve the experiment materials in another audit test, in substantive tests or in analytical procedures in the final evaluation phase. Third, this research focus on individual judgment. Future research may examine group decision making.

REFERENCE

American Institute of Certified Public Accountants (AICPA). (1988). "*Auditing Practice Release: Analytical Procedures.*" New York: AICPA

American Institute of Certified Public Accountants (AICPA). (2012). "*AICPA Professional Standards.*" New York: AICPA

Arens, A.A, Elder, R.J. & Beasley, M.A. (2012). *Auditing and Assurance Services: An Integrated Approach.* Pearson

Asare, S. K & Wright, A. (1997). "Hypothesis Revision Strategies in Conducting Analytical Procedures," *Accounting, Organizations and Society,* Vol.22 (8), p. 737-755

Balzer, W. & Sulsky, M. (1992). "Halo and Performance Appraisal Research: A Critical Examination, " *Journal of Applied Psychology*, p. 975-985

Ballou, B; Earley, C; and Rich, J.S. (2004). "The Impact of Strategic-Positioning Information on Auditor Judgments about Business-Process," *Auditing: A Journal of Practice & Theory.*vol.23(2), September, p.71-88

Bell, T., Marrs, F., Solomon, I and Thomas, H (1997). *Auditing Organizations through as Strategic Systems Lens,* KPMG, LLP.

Bell, T., M. Peecher, and I. Solomon (2002) The Strategic-Systems Approach to Auditing. In Cases in Strategic-Systems Auditing, edited by T. Bell and I. Solomon, 1-34, New York, NY, KPMG

Bell, T., M. Peecher, and I. Solomon (2005) *The 21st Century Public Company Audit.* New York: KPMG

Bedard, J., & Biggs, S (1991) "Pattern Recognition, Hypotheses Generation, and Auditor Performance in An Analytical Task," *The Accounting Review.* 66 (3): p.622-642

Blocher, E., & Cooper, J (1988). "A Study of Auditor's Analytical Review Performance," *Auditing: A Journal of Practice & Theory* (Spring): p.1-28

Bowditch, J.L & Buono, A.F (2001). *A Primer on Organizational Behavior*. John Wiley

Brown, C., & Solomon. I (1991). "Configural Information Processing in Auditing: The Role of Domain-Specific Knowledge," *The Accounting Review.* Vol.66 (1): p.100-119

Brown, C., & Solomon, I (1990). "Auditor Configural Information Processing in Control Risk Assessment, " *Auditing: A Journal of Practice & Theory*. 9 (3): 17-22

Booker, D. M., Drake, A. R. & Heitger, D. L. (2007). "New Product Development: How Cost Information Precision Affects Designer Focus and Behavior in a Multiple Objective Setting," *Behavioral Research in Accounting.* 19: 19-41

Cooper, W. H. (1981). "Ubiquitous Halo," *Psychological Bulletin.* vol.90. no.2: p. 218-244

Curtis, E & Turley, S (2007). "The Business Risk Audit- A longitudinal Case Study of an Audit Engagement," *Accounting, Organizations and Society.*vol 32 (4/5): p.439-462

Church, B.K (1990). "Auditors' use of Confirmatory Processes," *Journal of Accounting Literature.* 9: p.81-112

Church, B.K (1991). "An Examination of the Effect that Commitment to a Hypothesis Has on Auditors' Evaluations of Confirming and Disconfirming Evidence, "*Contemporary Accounting Research* 7: p.513-524

Dilla, W. N., & Stone, D.N (1997). "Representations as Decision Aids: The Asymmetric Effects of Words and Numbers on Auditors' Inherent Risk Judgments," *Decision Sciences 28* (3): p.709-743

Earley, C. E. (2002). "The Differential Use of Information by Experienced and Novice Auditors in the Performance of Ill-Strucured Audit Task," *Contemporary Accounting Research.* 19: 595-614

Fukukawa H. & Mock, T. J (2011). "Audit Risk Assessments Using Belief versus Probability," *Auditing: A Journal of Practice & Theory.* 30 (1): p.75-99

Gibbins, M, & Newton, J.D (1994). "An Empirical Exploration of Complex Accountability in Public Accounting," *Journal of Accounting Research.* (Autumn): p.165-186

Grammling, A., O'Donnel, E., & Vandervalde, S. 2010. "Audit Partner Evaluation of Compensating Controls: A Focus on Design Effectiveness and Extent of Auditor Testing," *Behavioral Research in Accounting*. Vol. 29: p. 175-187

Grcic, J. 2008. "The Halo Effect Fallacy," *Electronic Journal for Philosophy*: p.1-58

Hirst, D., & Koonce, L. (1996). "Audit Analytical Procedures: A Field Investigation," *Contemporary Accounting Research*: 457-486

Hogarth, R.M. (1987). Judgment and Choice.2nd Edition. Singapore: John Wiley & Sons

Hogarth, R.M., & Einhorn, H.J. (1992). "Order Effects in Belief Updating: The Belief-Adjustment Model," *Cognitive Psychology*, Vol. 24: p.278-288

Hunton, J. E. (2001). "Mitigating the Common Information Sampling Bias Inherent in Small-Group Discussion," *Behavioral Research in Accounting.*Vol.13: p.171-193

International Auditing and Assurance Standards Board (IAASB). 2006 a. *Planning an Audit of Financial Statement.* International Standard on Auditing 200. New York: International Federation of Accountants

International Auditing and Assurance Standards Board (IAASB), 2006b. *Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment.*

International Standard on Auditing 315. New York, NY: International Federation of Accountants

International Auditing and Assurance Standards Board (IAASB), 2006c, *The Auditor's Responses to Assessed Risks.* International Standard on Auditing 330. New York, NY: International Federation of Accountants.

Jacobson, M (2001). "Problem Solving, Cognition, and Complex Systems: Differences between Experts and Novices," *Complexity 6* (January/February): p.41-49

Koonce, L. (1993). "A Cognitive Characterization of Audit Analytical Review. *Auditing: A Journal of Practice and Theory,"* 12: p.58-74

Koonce, L. (1992). "Explanation and Counterexplanation during Audit Analytical Review," *The Accounting Review.* 67(1): p.59-76

Kinney, W. R. Jr & McDaniel, L. (1996). How to Improve Effectiveness of Substantive Analytical Procedures. *The CPA Journal.* 66 (4): p.52-54

Knapp, C., & Knapp, M (2001). "The Effects of Experience and Explicit Fraud Risk Assesment in Detecting Fraud with Analytical Procedures," *Accounting, Organization and Society.*vol.26: p.25-37

Knechel, W. R (2007). "The Business Risk Audit: Origin, Obstacles and Opportunities," *Accounting Organizations and Society.* 35 (3): p. 316-333

Knechel, W. R., Salterio, S. E. & Kochetova-Kozlozki, N. (2010). "The Effect of Benchmarked Performance Measures and Stratagic Analysis on Auditor's Risk Assesments and Mental Models," *Accounting, Organizations and Society.*vol.35 (3): p.316-333

Libby, R & Trotman. K.T.(1993). "Audit Review as a Control for Biased Recall of Evidence in Decision Making," *Accounting, Organizations and Society.*18: p.559-574

Leuthesser, L; Kohli, C.S & Harich, K.R (1995). "Brand Equity: The Halo Effect Measure," *European Journal of Marketing*. 29: p. 57

Luippold, B. L., & Kida, T. E (2012). "The Impact of Initial Information Ambiguity on the Accuracy of Analytical Review Judgment," *Auditing: A Journal of Practice & Theory.* 31 (2): p.113-129

McDaniel, L.S & Kinney, Jr. W. R. (1995). "Expectation Formation Guidance in the Auditor's Review of Interim Financial Information," *Journal of Accounting Research.* Vol. 33 (1): p.59-76

Messier, W. F., Prawitt, D. & Glover, S.. 2012. *Auditing and Assurance Services: A Systematic Approach.* 8 th edition. New York, NY: The McGraw-Hill Companies, Inc.

Messier, W.F. Jr, Simon, C. A. & Smith, J. L (2013). "Two Decades of Behavioral Research on Analytical Procedures: What Have We Learned," *Auditing: A Journal of Practice & Theory.* Vol.32 (1): p.139-181

McMillan, J. J & White, R. A. (1993). "Auditors' Belief Revisions and Evidence Search: The Effect of Hypothesis Frame, Confirmation Bias, and Professional Skepticism," *The Accounting Review.* 66 (3): p.443-465

Moreno, K.,T. Kida and J. Smith. (2002). "The Impact of Affective Reaction o Risk Decision Making in Accounting Contexts," *Journal of Accounting Research.* Vol. 40. No.5: p.1331-1349.

Murphy, K., Jako, R. and Anhalt, R (1993). "Nature and Consequences of Halo Error: A Critical Analysis. *Journal of Applied Psychology*," Vol 2: p. 218-225

Nisbet, R. & Wilson, D. T (1977). "The Halo Effect: Evidence for Unconscious Alteration of Judgements," *Journal of Personality and Social Psychology*,": p. 250-256

Neuman, L.W (2010). *Social Research Methods. Qualitative and Quantitative Approaches*. Seventh Edition. USA: Pearson

O'Donnel, E. & Schultz, Jr, J. J (2003). "The Influence of Business-Process-Focused Audit Support Software on Analytical Procedures Judgments," *Auditing: A Journal of Practice & Theory.* Vol. 22 (2): p.265-279

O' Donnel, E. & Schultz, J. J (2005). "The Halo Effect in Business Risk Audits: Can Strategic Risk Assesment Bias Auditor Judment about Accounting Details?" *The Accounting Review* , Vol 80, No 3: p. 921-939

O' Sullivan, C. S., & Durso, F. T. (1984). "Effect of Schema-Incongruent Information on Memory for Stereotypical Attributes," *Journal of Personality and Social Psychology.*47 (July): p.55-70

Peecher, M.E (1996). "The Influence of Auditor's Justification Processes on Their Decisions: A Cognitive Model and Experimental Evidence," *Journal of Accounting Research.* 34(1): p.125 – 140

Peters, J. (1990). "A Cognitive Computational Model of Risk Hypothesis Generation," *Journal of Accounting Research* (Supplement): p.83-103

Philips, F. (1999). "Auditor Attention to and Judgment of Aggressive Financial Reporting," *Journal of Accounting Research.* Vol 37. No.1. Spring

Pike, G. P. (1999). "The Constant Error of the Halo in Educational Outcomes Research," *Research in Higher Education*: p.61-86

Pinsker, R. (2007). "Long Series of Information and Nonprofessional Investors' Belief Revision," *Behavioral Research in Accounting.* 19: p.197-214

Pinsker, R. (2011). "Primacy or Recency? A Study of Order Effects when Nonprofessional Investors are Provided a Long Series of Disclosures," *Behavioral Research in Accounting.* 23: p.161-183

Public Company Accounting Oversight Board (PCAOB). (2007). *Observations on Auditors' Implementation of PCAOB Standards Relating to Auditors' Responsibilities with Respect to Fraud.* Avaliable at: http://pcaobus.org/Inspections/Documents/2007_01-22_Release_2007-001.pdf

Riegler, G. R., & Riegler, B. R. 2009. *Cognitive Psychology. Second Edition.* USA: Pearson Education

Robson, K., Humphrey, C., Khalifa, R, & Jones, J (2007). "Transforming Audit Technologies: Business Risk Audit Methodologies and the Audit Field," *Accounting, Organizations and Society.*32 (4/5): p. 409-438

Schultz, D. & S.E. Schultz. (2010). *Pyschology and Work Today.* Tenth Edition. USA: Pearson Education

Shadish, R.W; Cook, T and Campbell, D.T (2002). *Experimental and Quasi-Experimental Design for Generalized Causal Inference.* Houghton Mifflin Company

Shapiro, M. A., & Fox, J. R (2002). "The Role of Typical and Atypical Events in Story Memory,". *Human Communication Research.* 28 (January): p.109-135

Slovic, P., M. L. Finucane, E. Peters, and D. G. MacGregor. (2002). "Rational Actors or Rational Fools: Implications of the Affect Heuristic for Behavioral Economics," *Journal of Socio-Economic 31:* p.329-342

Smith, T. A., & Graesser, A.C. (1981). "Memory for Actions in Scripted Activities as a Function of Typicality Retention Interval, and Retrieval Task," *Memory and Cognition* 9 (November): p.550-559

Snyder, M., & Swann, W. B. (1978). "Hypothesis-testing processes in Social Interaction. *Journal of Personality Social Psychology,"* 36 (November); 1202-1212

Stenberg, R. J. (2006). *Cognitive Psychology.* USA: Thomson Wadsworth

Yip-ow, J. & Tan, H-T (2000). "Effects of Preparer's Justification on the Reviewer's Hypothesis Generation and Judgment in Analytical Procedures," *Accounting, Organizations and Society.* 25: p.203-215

Tan, H. T., & Jamal, K (2001). "Do Auditors Objectively Evaluate Their Subordinates' Work?" *The Accounting Review.* 76 (January): p. 99-110

Tetlock, P. (1983). "Accountability and Perseverance of First Impressions," *Social Psychology Quarterly* (December): p. 285-92.

Thorndike, E.L. (1920). "A Constant Error in Psychological Ratings," *Journal of Applied Psychological 82* (5): p.665-674

Trompeter, G &.Wright, A (2010). "The World has Changed-Have Analytical Procedure Practices?" *Contemporary Accounting Research*. 27 (2): p. 669-700

Weber, E., Bockenholt, U., Hilton, D. & Wallace, B. (1993). "Determinants of Diagnostic Hypothesis Generation: Effects on Information, Base Rates and Experience," *Journal of Experimental Psychology: Learning, Memory and Cognition*. 19(5): p.1151-1164

Wirtz, J. and Bateson, J.E.G (1995). "An Experimental Investigation of Halo Effects in Satisfaction Measures of Service Attributes," *International Journal of Service Industry Management.* Vol. 6. No.3: p. 84-102

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BRAND MANAGEMENT IN SMALL AND MEDIUM ENTERPRISE: EVIDENCE FROM DUBAI, UAE

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ABSTRACT

The study aims to explore the owner-managers' attitudes and opinions towards branding and brand management in small and medium enterprises across Dubai, UAE. The study also explores the causes that are acting as barriers to brand building. The data collected is through questionnaires from a sample of 62 respondents and interviews with Small and Medium Enterprises owners-managers. The research found that many Small and Medium Enterprises do not practice branding strategies and most of the respondents believe that incorporating branding strategies is insignificant for the success of Small and Medium Enterprises (SME).

JEL: M31

KEYWORDS: Small and Medium Enterprises (SMEs), UAE, Marketing, Branding, Strategies

INTRODUCTION

United Arab Emirates also known as UAE, boarders the Persian Gulf on the Saudi Peninsula is a federation of seven emirates (equivalent to principalities) - Abu Dhabi, Ajman, Dubai, Fujairah, Ras al-Khaimah, Sharjah, and Umm al-Quwain. The capital of UAE is Abu Dhabi. UAE oil and natural gas reserves ranking 7th in the world is one of the most developed economies in Western Asia ranking 7th in the world top nations based on per-capita income. Dubai is a city in the United Arab Emirates, found within the emirate of the same name. Although Dubai's economy was historically built on the oil industry, the emirate's Western-style model of business drives its economy with significant revenues now coming from tourism, real estate development, and financial services.

Small and Medium enterprises (SMEs) play an important role in a nation's job creation, export performance and sometimes contribute significantly to a country's gross domestic product (Culkin & Smith, 2000). SMEs play an important role in the economy of UAE as a whole. In the Emirate of Dubai in particular, 72,000 SMEs exist accounting for 95 percent of enterprises and 40 percent of the workforce. Dubai's SMEs contribute 42 percent of the annual value-added output (DED, 2011). Most of the small to medium sized enterprises within the UAE are family owned. Regional legal regulations require UAE nationals having full or partial ownership of UAE business organizations (D&B South Asia Middle East Ltd, 2008).

Marketing of products and creating value to the customer by managing their brand is important for a SME. Past research proves SME marketing is haphazard and informal because of the way the owners/managers carry out business (Gilmore *et al*., 2001). Owners usually decide on their own by responding to current opportunities and circumstances without planning, therefore, decision-making occurs in a chaotic way. Further, SME marketing is informal, loose, unstructured, spontaneous, reactive, built on conforming to industry norms. Storey (1994) suggested the main characteristic distinguishing small from large firms is the high failure rates of the small businesses. Often, businesses are susceptible to failure when they are still at the start-up stage and are small. According to the 'Enterprise and Small Business' only a small percentage of SMEs make it in a competitive market in the long-term, and over two thirds close a short while after they were opened (Carter and Jones-Evans, 2006).

LITERATURE REVIEW

Carson (1993) and Gilmore *et al* (2001) felt marketing during the life cycle of the SME, will continue to develop because of the demands for new commodities and markets, as customer needs are satisfied, bearing in mind the owners' inherent characteristics and behaviors and the size and life cycle stage of the firm. Stokes (2000) noted that, on the contrary, owners of SMEs focus on the significance of promotion and word-of-mouth communication. Further, he recognized the core of any business' selling strategy is the correlation between the company, customers, and the focus on four I's (Information gathering, Identification of target markets, Innovation and Interactive marketing methods). Gilmore and Carson (1999) agreed 'within the context of marketing decisions, there is an instinctive understanding networking with outside individuals, associations and companies enables entrepreneurs to be successful. Networking for SMEs could mean an array of connections. This revolves around personal contact networks, social networks, business networks, industry (Andersson and Soderlund, 1988) and marketing networks.

Hall (1995) pointed out small to medium sized enterprises are more vulnerable a changing competitive environment than larger firms. Smallbone *et al* (1993) present the opinion small businesses may cope with an unpredictable environment by continuously seeking market prospects and increasing the customer base of their business. Businesses should focus on market development, whereby, the likelihood of the survival rate of the small firm is much larger than those committing to their old habits of marketing. Berryman (1993) recognized marketing management as the fundamental internal factor that supports and sustains the survival of the company. Many owner-managers implied their company was dependent largely on word-of-mouth; therefore, do not have to invest their time and money in carrying out marketing strategies. Inadequate cash flow, marketing incompetence, company size, customer and strategic related issues are factors deterring the marketing role of SMEs (Doole *et al*., 2006; Carson, 1985). SMEs rarely include brand management in their day-to-day activities (Krake, 2005). SMEs place their focus on their products and towards developing a marketing plan that places high turnover as an essential factor rather than the long-term goal of creating brand recognition. The owner of the SME plays a vital role in developing and gaining recognition for a brand. The owner is a representation of the brand; nevertheless, not often do they have the time to implement nor the expert knowledge about 'brand management'. To develop a strong brand in SMEs the concepts needed are brand orientation, brand distinctiveness, brand barriers and brand marketing performance (Ojasalo *et al.*, 2008).

Urde (1999) defined brand orientation as 'an approach in which the processes of the organization revolve around the creation, development, and protection of brand identity in an constant interaction with target customers with the aim of achieving lasting competitive advantages in the form of brands'. In a study, by Sashittal and Tankersley (1997) on SMEs, they found profitable results come from the efficient and effective execution of a brand-oriented strategy. Therefore, competitive advantage is attainable by the brand orientation strategy of the SME, which in turn will lead to further development and growth. Mosmans and van der Vorst (1998) write an SME should focus more on brand-based strategy, which is fundamental in choosing and sustaining a strategic direction.

Brand distinctiveness plays a significant role in brand management. A brand's unique features displayed to attract target consumers are a strategy used by companies. The characteristics and qualities display the distinctiveness, uniqueness and exclusivity of the brand in the market and brand distinctiveness is more than just the name of the brand placed on the product. The brand is less attractive to consumers if it does not entail special and distinctive features. Therefore, customers will not choose a certain brand in place of others if that particular brand is not identified as having different qualities (Aaker, 2003). McQuinston (2004) suggested organizations yearn to produce unique and distinctive products to evade being perceived as undistinguished goods. The vision of the SME needs to be comprehensive to support in planning brand-based strategies, thus, helping in the long-run sustained brand distinctiveness. SMEs could use brand distinctiveness to set them apart from competitors (Wong and Merrilees, 2008; De Chernatomy, 2001; Urde, 1994). It is fundamental for an SME, to prevail brand barriers, to examine what precisely is the role of the brand barriers. Wong and Merrilees (2005) explained SMEs have inadequate resources for building and developing their brands.

Brand Marketing Performance is a measure of how profitable a brand is. Brand awareness, reputation and loyalty are all significant and essential factors in measuring the performance of the brand (Chaudhuri *et al*., 2001). Brand marketing performance is a measure based on its financial value or on its equity (Aaker and David, 1996), or through the brand report card or by the brand building (De Chernatony, 2001). Ghodeswar (2008) argues brand identity is a unique set of brand associations implying a promise to customers and includes a core and extended identity. Core identity is the central, timeless essence of the brand that remains constant as the brand moves to new markets and new products and broadly focuses on product attributes, service, user profile, store ambience and product performance. Extended identity is woven around brand identity elements organized into cohesive and meaningful groups that provide brand texture and completeness, and focuses on brand personality, relationship, and strong symbol association'. An SME would have to create a coherent, comprehensible and dependable brand identity by associating brand attributes conveyed which, without any difficulty be understood by consumers.

Anarnkaporn (2007) argues branding is an important competitive tool available to SMEs. This is true because branding provides the differentiation between the competitive offerings and is one of the critical success factors for companies (Mowle & Merrilees, 2005). Grant (2000), Ratnatunga & Ewing (2009) also believe brands add value and distinguish companies from their competitors. However, branding is a new concept for owners-managers in SMEs (Inskip, 2004). SMEs have many limitations and implementing conventional marketing practices becomes challenging (Uüsitalo, Wendelin, & Mahlamäki, 2010). Limited resources can be finance (Ohnemus, 2009), time and knowledge of marketing; lack of specialist expertise as the owner-manager tend to be generalists rather than specialists with limited impact in the marketplace (Gilmore et al., 2001). Given these limitations and challenges, many SMEs often ponder whether it is worth spending large amount of money, time, and energy in their marketing practices, adopting a strategic marketing approach (Noble, Sinha, & Kumar, 2002) and going through the branding exercise.

Branding and brand management are well-researched topics. Textbooks, research articles by academic researchers and marketing practioners across the world discuss and debate on this topic. However, research in this area is limited to large corporations. Research on branding and brand management in particular to SMEs is limited to a certain extent and this paper is one such attempt. This manuscript aims to study and understand: How brand is managed across SMEs in UAE? (2) What is the owner-managers attitude towards brand building? and (3) what are the barriers if any, for building a strong brand?

METHODOLOGY

Both qualitative and quantitative data is used for this study. The data was gathered using survey questionnaires and by conducting personal interviews with owners-managers of SMEs. The questionnaire is drawn from the theoretical information provided from the literature review and the objectives of the research. The questionnaire was pilot tested to ten respondents and changes suggested by the respondents are incorporated. The questionnaire is divided into seven sections:

Section 1: Questions 1, 2, and 3 intended to collect information about the owner's knowledge on brand management and understanding whether brand management is incorporated in the day-to-day activities of the company. Section 2: Questions 4 to 8 designed to understand fully the strategy the SME uses to create, develop and protect the brand identity. Section 3: comprises of questions from 9 to 14 are designed to identify if SMEs invested towards building brand distinctiveness to attract the target market. Section 4: Questions 15 to 20 measure the profitability of a brand in the SME. Section 5: (Questions 21 to 24) to understand the investment made by SMEs towards building a stronger brand. Section 6: Question 25 seeks to gain information from the SME manager's interpretation of what could be a barrier to build strong brands. Section 7: Question 26 understands the owners-managers attitude toward the importance of incorporating a branding strategy.

A simple random sampling method is used for this research. A list of SMEs was obtained from The Dubai Chamber of Commerce and Industry (DCCI). The researchers contacted the owner-manager of the SMEs during September-December 2011, introduced the research, and asked their permission to participate. Once the owner-manager agreed to take part in the research, the questionnaire was mailed in January and February of 2012. In total, 120 questionnaires were mailed with a request to return the completed questionnaire by April of 2012 to the researchers. There were a total of 62 returned completed questionnaires. These 62 SMEs were approached with a request for a personal interview with either the owner or manager. Because of scarcity of time and resources, four respondents interviewed on a first-come-first serve basis. The details of the interviewed sample respondents are as follows:

Lighting Fixtures Industry - Interviewee 1 is the Sales Manager of a SME distributing designer lighting fixtures. The company is two years old. Food Chain Industry - Interviewee 2 is the General Manager of an SME that is a part of the food chain industry. The company had exclusivity to franchise a Canadian café within the Middle East and North Africa (MENA) Region. Steel Industry - Interviewee 3 is the Divisions Manager of a five-year-old SME in the steel industry. Entertainment Industry - Interviewee 4 is Marketing Manager of a SME that is a distributing company for media players and recorders.

DATA ANALYSIS AND RESULTS

The participants were interviewed and asked about the relevance of branding and brand management. The respondents were asked to rate the significance of incorporating branding strategies in their SME, using a Likert type scale with one being insignificant and five being most significant. Eighty three percent of the sample respondents think branding is important for the success of any business. All interviewees agreed that brand management and branding are vital for the survival of SME and it helps in launching and stabilizing the business, and to eventually grow the business.

Qualitative Data Analysis

The interviewees were asked questions revolving around topics essential in developing stronger brands and the attitude of owners towards the role and relevance of branding in SMEs. To build a strong brand the SME should have enough resources. Therefore, the interviewees were asked about the resources and their limitations. Respondents stated they included the strategy of building stronger brands in their corporate strategy, but each expressed their views of doing it differently. The respondents agreed financial limitations restricted them from investing towards building a strong brand. Interviewee 1 stated since SMEs are small it is hard to get financial aid from banks. He also mentions the company was a family business and the owner has complete control over decision-making. There were limitations to staff with expertise and professionalism. Interviewee 1 responded they were looking into building stronger brands by targeting high-end clientele and supplying quality products. Interviewee 2 agrees availability of cash is always a constraint to SMEs, making it hard to aggressively market and brand their products. Increased competition is another limiting reason. According to Murray (1981), when handling SME marketing, the main concern is the market positioning of the SME within the competitive environment. The existing competitors have found good locations, established loyal customers, created awareness and employed aggressive marketing strategies. Building stronger brands incorporated in the company's corporate strategy by buying new brands (stronger brands) and adjusting existing brands (diversifying the product lines).

Interviewee 3 stated they were not financially sound enough to invest towards aggressive marketing. The limit is the industry itself. The SME is the steel rolling company and there is low differentiation within the industry. The steel industry is an open market, which makes it difficult to brand their products. Brand distinctiveness is an important strategy a firm uses for its future growth and direction Brand distinctiveness is also important in clarifying the direction about the role of the brand in the firm with an aim to achieving long-term strategic and financial growth. Interviewee 4 expressed the owner of the company is not aware of the benefits of brand management. Since the company had started, they have not invested towards launching any of their products. They advised the owner to advertise through radio stations, magazines, sponsorships of music/dance performances and barter but their suggestions faced complete rejections. Further, the employees were unprofessional and do not have necessary experience to market the brands the company carries. This confers to the opinion of Grant *et al* (2001), who states the core of the SME marketing is the continuous improvement of the owners expertise gained from carrying out the business and as a result, the marketing characteristics of the SME are consequential to both the knowledge of the owner and the company's characteristics (Carson and McCartan-Quinn, 1995).

Brand orientation is one of the good strategies that can establish competitive advantage for an SME. It constitutes customer orientation, competitor orientation and inter-functional coordination. Thus, the questions posed to the interviewees revolved around these topics to identify if SMEs had brand orientation. Interviewee 1 claimed because of a limited budget the company does not have the ability to invest towards identifying and understanding their target customers and the strengths and weaknesses of their competitors. To gain such information, the SME should hire an expensive specialized market research company. The owner of the SME in the past worked with many of the competing companies and has necessary knowledge of competition and the knowledge and information was used to the SME's advantage to gain customers.

Interviewee 2 said that their SME does many activities to increase their performance. The staff of the company periodically approach potential customers seeking their feedback on service and quality of the product, and propose changes to the SME's offerings. They also send ghost shoppers to all their cafes to collect the customers' perceptions and opinions. The interviewee expressed understanding their competitors' takes time and effort. The SME compares their service quality while continuously monitoring their own performance. All this information can create a competitive advantage. To create superior value, the interviewee explained they are renovating the outlet, reconsidering the seating plan to increase customer comfort, and by continuously updating and maintaining service and food quality.

Interviewee 3 mentioned personal meetings with their customers are used in identifying and understanding consumer needs. The reason for such actions is the steel industry in Dubai is small and there is no product differentiation. In the interviewee's words, 'there is no need to analyze the competitors' strengths or weaknesses as long as feedback is collected from clientele.' Such feedback is used to keep a proper inventory and to have awareness about market prices of their competitors. Interviewee 4 claimed it is not financially possible to conduct market research because of their limited financial resources. However, they had enough information about their existing customers from one-on-one interaction with them. Information is gathered from the market on pricing, product features, packaging, and accessories. This information is then analyzed to determine if a competitive advantage can be obtained. The SME provides extra value to the customers by installing free software and movies in their products and sometimes overlook the warranty due dates and provide the service free to their clients. This is in line with earlier findings a SME can compete aggressively by the continuous improvement of their products, which is dependent on precise market and customer information (O'Dwyer et al., 2009; Forrest, 1990; Low and MacMillan, 1988).

Brand distinctiveness plays a vital role in the branding strategy of an SME. It is what makes the product of the SME unique and desirable to the consumers. Interviewee 1 stated they distinguished their brands by introducing new designer products and offering competitive prices. Interviewee 2 explained the atmosphere of the café; the quality of service and the food are the factors that distinguish them from competitors. Interviewee 3 mentioned because of their industry and its product (steel) differentiation was not viable. Interviewee 4 said they depend on displaying the strong features of their products as well as providing demonstrations to customers. Brand associations help brands in building a strong brand identity. Interviewee 1 stated knowing brand image is the customers' perception of the brand and its associations; they still did not achieve it as their company is a new start-up. Interviewee 2 stated by increasing the market share and diversifying they would gain a stronger brand image. Interviewee 3 mentioned because of competition they have not reached anywhere close to creating a brand image. Interviewee 4 stated a stronger brand image is achieved by building stronger customer relations.

Brand performance will measure the profitability and strategic performance of the brand. Interviewee 1 stated by providing quality service, high-end and prestigious products the name of the brand itself creates awareness. The company has not yet carried out any strategies to position their brand competitively because of their recent entry into the market. Interviewee 2 said location of the store, advertising in magazines and newspapers, reaching all the markets, networking, developing good relations with vendors, staff training, and quality control are used to position their brand competitively within the market. Their main strategy though consisted of reaching all target customers (such as Red Crescent, universities, retail stores and other public and private organizations in proximity to the café). Interviewee 3's company focused on quality and origin of product, plus performance and durability of the product. Interviewee 4 said their company competed aggressively by offering bundled packages with competitive pricing, as well as advertising in many of their retail stores. Their main activities to create brand awareness include networking, exhibitions, and distributing through powerful retailers.

Perceived quality is the consumer's judgment about the product's excellence. Interviewee 1 stated they influenced the consumer's choices by affecting perceived quality through supplying designer light fixture brands to their clients. Interviewee 2 stated it is vital to do so because quality portrays good service in their field of business. This is achieved by introducing a wide array of healthy food and services. Interviewee 3 mentioned most of their clients knew the product in their market; therefore, there is no need to instill their customers with a perceived quality which they should already be aware of. Interviewee 4 said it is achieved by providing magazines with their products to test and compare with the competitors' products. Then, printing an issue addressing their strongest features and recommendations. Narver and Slater (1990) argue market orientation consists of customer orientation; competitor orientation and inter-functional coordination. All in coordination with each other will help the SME create superior value for customers. During the early stage of planning a marketing strategy, gaining competitive advantage will rely significantly on the important role of brand orientation; whereby it will help in deciding whether a certain brand is to be used. Therefore, brand orientation is a strategy that can establish the SMEs competitive advantage, which results in a long-term, improved survival (Wong and Merrilees, 2005).

Quantitative Data Analysis

When the respondents were interviewed and asked about the relevance of 'branding' and 'brand management' it was clear they think it was an important strategy for the success of the business. The respondents were asked to rate the significance of incorporating branding strategies in their SME, 1 being insignificant and 5 being most significant. The probability standard normal distribution was used. Table 1 represents the frequency of the significance level selected, the mean (μ), variance (σ^2) and standard deviation (σ).

Table 1 : Measuring Mean, Standard Deviation & Variance

Level of Significance (x)	Frequency (F)	Relative Frequency F(x)	Mean (μ)= x f(x)	(x-μ)	$(x-\mu)^2$	Variance (σ^2) = $f(x)(x-\mu)^2$
1	3	0.048	0.048	-3.095	9.58	0.46
2	4	0.066	0.132	-2.095	4.39	0.29
3	6	0.097	0.291	-1.095	1.2	0.12
4	20	0.321	1.284	-0.095	0.09	0.003
5	29	0.468	2.34	0.95	0.902	0.422
	Total = 62		μ= 4.095			σ^2 = 1.295

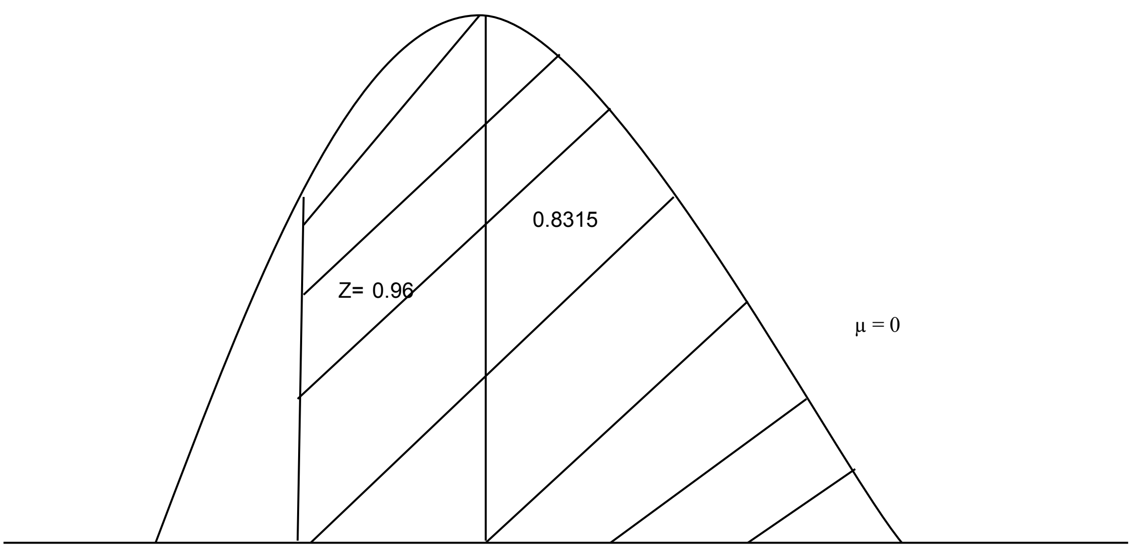
This table shows descriptive statistics.

Standard deviation (σ) = $\sqrt{\sigma^2}$ = 1.14; x bar = (1 + 2 + 3 + 4 + 5) / 5 = 3. In summary the sample size is 62, as per the central limit theorem, it can be estimated to probability standard normal distribution whereby the mean is 4 and standard deviation of 1.14. The standard deviation would assist in finding how densely connected the replies are to the mean or if they are highly dispersed. The next step is to examine the possibility of the confidence level for the significance level.

P (Z ≥ x bar -μ/σ) = P (Z ≥ 3 – 4.1/1.14) = P (Z ≤ 0.96) = Θ (0.96) = 0.8315.

This shows the area under the curve whereby Z= 0.96 from the standard normal distribution table is 0.8315. The shaded area represents the percentage of candidates that voted high significance for implementation of branding.

Figure 1 : Standard Normal Distribution Graph



This figure shows the standard normal distribution.

The area under the graph equals one and the value of 0.831, which implies that 83.1 percent of the respondents believe the incorporation of branding in SMEs is significant. This suggests the issues revolve mainly on how SMEs apply the branding strategies and handle the barriers limiting most of the SMEs aim at building stronger brands and achieving success.

Brand Barriers

Out of 62 respondents, 32 percent incorporate brand management in their marketing activities and 68 percent do not. This indicates that a majority of respondents do not have knowledge about branding and brand management. Many barriers can limit the SME from creating a brand. When asked why they did not incorporate brand management in their company activities, their responses include the following. Over dependence on the owner (23%) is the most popular barrier. This is followed by scarcity of financial resources (19%); lack of experienced staff (limitations of human resources) (15%); lack of experience in creating awareness among the customers about their product or service (13 %); shortage of organizational systems and control procedures (11%); inadequate marketing strategies (10%); and lack of technological skills (9%). The respondents when asked if their owners had enough knowledge about branding and brand management. Twenty-four percent of respondents stated they have enough knowledge. On the other hand, 53 percent respondents mentioned they lacked the knowledge and 23 percent noted they had partial knowledge.

Brand Orientation

Market Research is an important ingredient of branding. A question is asked whether their SME carries out market research about their customers. Only 39 percent carry out market research to foresee the opportunities of gaining new prospective customers and information about existing customers and 61 percent of the SMEs do not invest towards market research. When asked whether the SME conducts market research about their competitors, 73 percent said they have invested towards collecting competitor information; while, 27 percent admitted not being fully committed to collecting competitive information. From this, it is clear the participating SMEs spend time and effort towards conducting marketing research identifying the strengths and weaknesses of their competitors. When asked whether their SME allocates enough resources towards adding superior value to their customers, 53 percent said they invested resources towards adding value to their customers. Thirty-four percent of respondents did not invest their resources and 13 percent said they did add value, but not consistently.

Brand Distinctiveness

When asked whether the SMEs product has any unique and special features, 66 percent stated they do have products with special features. Only 11 percent stated they did not have special features and 23 percent stated it depended on the product. A question whether SMEs display and present their product's unique features in their marketing efforts was asked. Sixty-six percent of the respondents actively implement strategies identifying the product's unique features. Eleven percent does not put in any effort, 23 percent respondents admitted to display their features depending on their customer needs and market needs on a case-to-case basis.

Does the product and service associate with the ownership and represent, a symbol of their SME was asked. Eighty-nine percent stated their product did not represent a symbol of ownership while 11 percent responded otherwise. On understanding the respondents' strategy to create brand distinctiveness, it is noted 55 percent of respondents incorporate brand distinctiveness as a strategy and 45 percent of respondents do not implement it.

Brand Marketing Performance

When asked about the consumer's ability to recall the respondents brand and the popularity of the brand, 47 percent stated their customers recalled their product because of recognition. Twenty-six percent said it was because of recollection, 16 percent said their brand was top of mind recall and 11 percent stated their brand is the only brand that came to the consumers mind. The respondents are asked to choose -

identification, innovation, information and interaction - that best explained their marketing strategies. Innovation (incremental adjustments to existing products) was 39 percent; identification (of target markets) was 18 percent; interaction (ability to stay in touch with customers) was 23 percent; and information (informal information gathering for example, external market) 20 percent. When asked whether networking is used as a marketing tool, 68 percent admitted to using networking to market their products, 21 percent of the respondents stated they sometimes use networking but it is not a main tool and 11 percent did not use networking as a tool.

The respondent SMEs were asked to select the most popular marketing tool currently used to promote their products. Fourteen percent focused on customer relations; 16 percent on sales to promote their products; 6 percent implemented market research to seek available opportunities and mitigate threats in the marketplace. Ten percent focused on training their salespeople; 13 percent worked towards gaining good dealer relations; 11 percent worked towards providing good products and services; 6 percent participants focused on the packaging as a unique selling preposition; 6 percent promote their products through advertising; 10 percent adjust their prices to gain more customers; and 8 percent implement quality control. Seventy-three percent of respondents did not invest towards building stronger brands, while 27 percent do invest. Eighty-nine percent of respondents review their performances regularly, while 11 percent admitted that they do not. Forty-seven percent of respondents believe that building strong brands in SME is significant, and others believe it is of least significance.

CONCLUSIONS

It is evident from the findings of the study there exist many barriers limiting the owner-manager of the SME from investing towards building stronger brands. Scarcity of finances is a significant barrier, which prevents the SME from aggressively competing in the fast changing and competitive Dubai market. Unlike larger firms, SMEs do not have the ability to obtain enough financial support from banks to compete. Further, the interviews conducted reveal most of the owner-managers have limited knowledge on what brand management is and the importance of branding. The managers/owners admitted their strategy is to focus on networking, sales and dealer relations to build stronger brands. Market research is important in gaining information about the market, customers and competitors. There should be a change in the mind-set of the owners-managers of the SME about importance of branding and its right positioning in the minds of the consumers. Wynarczyk (1993) explained SMEs are susceptible to the changing environments because of lack of market control and positioning, besides, their reliance on few customers.

Many of the SME owners-managers presume in order to build stronger brands, large investments are necessary; however, it is all about how the SME implements strategies to build and develop stronger brands. Obviously, SMEs in Dubai, UAE need to invest towards market research to understand and know their competitors' strategies, in particular, their strengths and weaknesses. It is not necessary the SME employ large research agencies to perform the study, on the contrary, by employing a qualified market researcher (internally) for the company to conduct the market research is necessary. The values, beliefs and assumptions of the firm are barriers of market orientation (Messikomer, 1987). It is essential and important to gain the full support and commitment of the members of the company to earn higher levels of market orientation (Harris, 1996). These theories speculated knowledge, internal resource limits, external factors, belief and dedication are the major sources of barriers of an adaptation of a business approach. The SME can implement many strategies with minimal investment, such as the owner could focus on one brand, which gains competitive advantage, highlight and focus on one or two unique and distinguished features and relate them to the brand. The company should employ well-informed and skilled personnel who would be responsible for brand management tasks and the owner could always associate their brand with a stronger brand (co-branding). For an SME to be able to reposition their brand in the market it is essential to implement the four main strategies: work towards providing unique and distinctive characteristics, experiences and image; guiding the company towards brand management; identifying the superior performance of the products; besides, distinguishing the barriers that may limit the branding efforts. These factors proved effective in the form of increased sales and revenues. This in turn may work toward building a stronger image for the brand in the market.

Three factors influence branding in an SME. First, the influence of the owner on the SME should be better, clearer and more direct than in a larger company as brand needs to have a direct relationship with the owner. Second, the market plays a fundamental role in affecting brand management in an SME and the third is the number of competitors the SME has (Krake, 2005). To develop a successful brand, the owner's attitude and vision should be clear and direct. In addition, the manager should understand and internalize there is a direct link between the brand and the owner. The results of the study suggest SMEs do benefit from branding however, SMEs are more careful about the activity given their limitations. However, SMEs do marketing and branding activities given their resources by being innovative, using affordable means of communication, and focusing on the right segments (Vidic & Vadnjal, 2013).

Study makes a significant contribution in understanding branding in SMEs in Dubai. This study clarifies the existing attitudes, opinions of the owner-managers of SMEs towards branding. It also explains how the SMEs do the branding activity and the implications of the same in their competitive position. This will contribute towards designing successful marketing and branding programs for owner-managers of SMEs. This study is limited only to selected industries and further research should be conducted across the spectrum of SMEs to better understand the implications and to narrow down the factors that are crucial for the successful implementation of branding strategies by SMEs.

REFERENCES

Aaker, David A (1996). "Measuring Brand Equity across Products and Markets." *California Management Review*, 38 (3): pp. 102.

Aaker, David A (2003). "The Power of the Branded Differentiator." *MIT Sloan Management Review*, 45(1): pp. 83-7.

Andersson, P & Soderlund, M (1988). "The Network Approach to Marketing." *Irish Marketing Review*, 8: pp. 310-323.

Berryman, J (1983). "Small Business Failure and Bankruptcy: A Survey of the Literature." *European Small Business Journal*, 1(4): pp. 47-59.

Carson, D. (1985). "The Evolution of Marketing in Small Firms." *European Journal of Marketing*, 5: pp. 7-16.

Carson, D. (1993). "A Philosophy for Marketing Education in Small Firms." *Journal of Marketing Management*, 9: pp. 189-204.

Carson, D., and McCarton-Quinn, D. (1995). "Non-practice of Theoretically based Marketing in Small Business – Issues Arising and their Implications." *Journal of Marketing Theory and Practice*, 3(4): pp. 24-31.

Carter, S., and Jones-Evans, D. (2006). Enterprise and Small Business, (2e) Pearson Education Limited, England.

Chaudhuri, A., and Holbrook, B. Morris. (2001). "The Chain effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty." *Journal of Marketing*, 65(2): pp. 81-93.
D&B South Asia Middle East Limited, 2008.

DED (Dubai Economic Department), at Dubai World Trade Center, 2011.

De Chernatomy, Leslie. (2001). From Brand Vision to Brand Evaluation: Strategically Building and Sustaining Brands, Butterworth-Heinemann: Oxford.

Doole, I., Grimes, T., and Demack, S. (2006). "An Exploration of the Management Practices and Processes most Closely Associated with High Levels of Export Capability in SMEs." *Marketing Intelligence and Planning*, 24(6): pp. 632-47.

Forrest, J.E. (1990). "Strategic Alliances and the Small Technology-based Firm." *Journal of Small Business Management*, 28(3): pp. 37-45.

Ghodeswar, B. (2008). "Building Brand Identity in Competitive Markets: A Conceptual Model." *Product and Management*, 17(1): pp. 4-12.

Gilmore, A., and Carson, D. (1999). "Entrepreneurial Marketing by Networking." *New England Journal of Entrepreneurship*, 12(2): pp. 31-38.

Gilmore, A., Carson, D., and Grant, K. (2001). "SME Marketing in Practice." *Marketing Intelligence and Planning*, 1: pp. 6-11.

Grant, K., Gilmore, A., Carson, D., Laney, R., and Pickett, B. (2001). "Experiential Research Methodology: An Integrated Academic-Practitioner 'team' Approach." *Qualitative Marketing Research: An International Journal*, 4(2): pp. 66-75.

Hall, Chris. (1995). "APEC and SME Policy: Suggestions for an Action Agenda", mimeo, University of Technology, Sydney.

Harris, C. Harris. (1996). "Cultural Obstacles to Market Orientation." *Journal of Marketing Practice: Applied Marketing Science*, 2(45): pp. 36-52.

Krake, F. (2005). "Successful Brand Management in SMEs: A New Theory and Practical Hints." *Product and Brand Management*, 14(4): pp. 228-238.

Low, M.B., and MacMillan, I.C. (1988). "Entrepreneurship: Past Research and Future Challenges." *Journal of Management*, 14: pp. 139-161.

McQuiston, H. Daniel. (2004). "Successful Branding of a Commodity Product: The Case of RAEX LASER Steel." *Industrial Marketing Management*, 33(4): pp. 345-354.

Messikomer, E. Edwin. (1987). "Marketing Changes the Corporate Culture." *Journal of Business and Industrial Marketing*, 2(4): pp. 53-58.

Mosmans, A., and van der Vorst, R. (1998). "Brand-based Strategic Management." *The Journal of Brand Management*, 6(2): pp. 99-110.

Murray A. John. (1981). “Marketing is Home for The Entrepreneurial Process.” *Industrial Marketing Management*, 10(2): pp. 93-99.

Narver, J.C., and Slater, S.F. (1990). "The Effect of a Market Orientation on Business Profitability." *Journal of Marketing*, 54: pp. 20-35.

O’Dwyer, M., Gilmore, A., and Carson, P. (2009). “Commentary: Innovative Marketing in SMEs.” *Marketing*, 43(1-2): pp. 46-61.

Ojasalo, J., Natti, S., and Olkkonen, R. (2008). “Brand Building in Software SMEs: an Empirical Study.” *Product and Brand Management*, 17(2): pp. 92-107.

Sashittal, H.C., and Tankersley, C. (1997). “The Strategic Market Planning-Implementation Interface in Small and Mid-sized Industrial Firms: An Exploratory Study.” *Journal of Marketing Theory and Practice*, 5(3): pp. 77-92.

Smallbone, D., North, D., and Leigh, R. (1993). “The Use of External Assistance by Mature SMEs in the UK: Some Policy Implications.” *Entrepreneurship and Regional Development*, 5: pp. 279-285.

Stokes, D. (2000). “Putting Entrepreneurship into Marketing: The Processes of Entrepreneurial Marketing.” *Journal of Research in Marketing and Entrepreneurship*, 2(1): pp. 1-16.

Storey, D.J. (1994). “Understanding the Small Business Sector.” 1e, Routledge: London.

Urde, M. (1994). “Brand Orientation – A Strategy for Survival.” *Journal of Consumer Marketing*, 11(3): pp. 18-32.

Urde, M. (1999). “Brand Orientation: A Mindset for Building Brands into Strategic Resources.” *Journal of Marketing Management*, 15(1-3): pp. 117-33.

Wong, H., and Merrilees, B. (2005). “A Brand Orientation Typology for SMEs: A Case Research Approach.” *Product and Brand Management*, 14(3): pp. 155-162.

Wong, H., and Merrilees, B. (2008). “The Performance Benefits of being Brand Orientated.” *Product and Brand Management*, 17(6): pp. 372-383.

Wynarczyk, P., Watson, R., Storey, D., Short, H., and Keasey, K. (1993). Managerial Labour Markets in Small- and Medium-Sized Enterprises, Routledge: London.

BIOGRAPHY

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KNOWLEDGE MANAGEMENT ADOPTION AND DIFFUSION USING STRUCTURAL EQUATION MODELING

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ABSTRACT

Knowledge management facilitates the firms and employees to deliver better products and services and hence achieve competitive advantages and profits. The issues of knowledge management have drawn much attention form industry and academia. However, few reports have been found available investigating how knowledge management is adopted and diffused in organizations. This paper adopts structural equation modeling to investigate employees' cognitions pertaining to knowledge management and their impacts on knowledge management activities based on Innovation Diffusion and Technology Acceptance Model with empirical data collected among the life insurance enterprises in Taiwan. The results indicate that perceived usefulness and subjective norm significantly influence the employees' attitudes toward knowledge management, and the attitudinal factor significantly affects knowledge management practice. The findings assist organizations to recognize the value and associated obstacles of knowledge management. This paper also presents the instrument and comprehensive model which provides directions for future research.

JEL: D83, M10

KEYWORDS: Knowledge Management, Structural Equation Modeling, Life Insurance

INTRODUCTION

Knowledge can be the essential resources to create sustained competitive advantages since it is closely related to specific organizational structure and culture, and intrinsically difficult to imitate (Alavi and Leidner, 2001). Davenport and Prusak (1998) define knowledge as a fluid of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. The knowledge-based view argues that firms are the enablers of knowledge creation and applications, and organizational capabilities or competencies are seen as clusters of knowledge sets and routines that are translated into distinctive activities (Grant, 1996; Teece, Pisano and Shuen, 1997). Much research views knowledge management (KM) as a matter of extracting the right knowledge from employees' memories and storing it in networked computers for later distribution (Kuo, 2008; Tiwana, 2001). However, hoards of information or knowledge are of little worth (Alavi and Leidner, 1999). Yang and Wu (2008) indicate that people owing specific knowledge could enjoy some benefits and unique positions and people who share their knowledge with others might lose their unique positions accordingly.

A hallmark in the contemporary knowledge-intensive economy is the ability of organizations to realize the economic value from their collection of knowledge and the associated assets (Gold and Segars, 2001). Whereas a number of organizations have launched extensive KM efforts, many of their projects are simply information projects in reality, and when these projects yield some consolidation of data but little innovation in products and services, the value of KM is cast in doubt (Gold and Segars, 2001). Yang (2004) signifies that the life insurance industry in Taiwan mostly put emphases on developing IT for supporting KM, whilst the recognition among the employees, who play important roles in embarking on KM, has not been reached extensively.

Consumers could purchase life insurance as a means of managing risk (Omar, 2007). Ostaszewski (2003) advocates that life insurance is designed to protect individuals against the risks of premature death and superannuation. Different from other industries, the products sold by the life insurance business are relatively "invisible" and "untouchable" (Hsiao, 2003). The employees play an important role in conveying the knowledge and services to the customers in the life insurance industry. Life insurance services possess experience and credence properties due to a large amount of expertise and professional knowledge (Chen, 2009). Bargas-Avila, et al. (2009) reported validation of Intranet satisfaction questionnaire implementing online survey in cooperation with an international insurance company employing about 6000 people. Yang (2004) conducted case studies in two major life insurance companies in Taiwan to explore their practical operations in applying KM. The two companies were chosen since they represented the leading companies in local life insurance companies and foreign life insurance companies respectively. Nevertheless, few researchers have examined the processes and main factors in KM adoption and diffusion, particularly in the life insurance sector.

In comparison with other business, the life insurance industry in Taiwan can be seen as in the infant stage of KM applications. As innovation is suggested by Rogers (1995) as an idea, practice, or object that is perceived as new by an individual or another unit of adoption, KM is viewed in this research as an innovation for the life insurers and their employees. The theory of Innovation Diffusion (ID) has been widely discussed in several areas, e.g., internet (Wolcott, et al., 2001), electronic commerce (Kendall, 2001) and KM system (Xu and Quaddus, 2005). However, there is a genuine lack of literature on addressing KM adoption and practice utilizing ID. This study thus lays emphasis on the adoption and diffusion of innovation to develop a KM model identifying motivations and barriers among the employees in accepting the concepts of KM and related methods, as well as in undertaking KM activities. Our main concerns are as follows: (i) what are the employees' cognitions regarding KM? (ii) what would motivate the employees to adopt and apply KM? (iii) what should hinder the employees from KM adoption and implementation? and (iv) how the cognitions affect employees behavior in KM activities.

The next section presents the literature review with theoretical background and related research. Followed are the hypotheses development section and methodology, in which research procedures and instrument development are described. The data analysis and results section presents the measurement model assessment and the structural model assessment. Finally, discussion and conclusion with limitation and future research directions are presented.

LITERATURE REVIEW

The Theory of Reasoned Action (TRA), drawn from social psychology, has been proposed as a primary theoretical foundation and gone through rigorous testing in diverse disciplines predicting human behaviors (Ajzen and Fishbein, 1980; Sheppard, Hartwick and Warshaw, 1988; Venkatesh, et al., 2003). Ajzen and Fishbein (1980) suggest that a person's behavior is a function of the person's intention determined by the attitude toward the act and the beliefs about the expectations of others, namely social normative beliefs. The person's attitude toward the behavior is affected by the beliefs that the behavior will lead to certain outcomes and by his or her evaluation of the outcomes. The subjective norms are influenced by the beliefs that specific referents that the person should or should not perform the behavior and by the motivations to comply with the specific referents (Ajzen and Fishbein, 1980). Davis's (1986) Technology Acceptance Model (TAM) proposes that a person's intention to use technology is determined by perceived usefulness and perceived ease of use. Perceived usefulness refers to the degree to which a person believes that using a particular system would enhance his or her job performance, while perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort (1989). Davis, Bagozzi and Warshaw (1992) suggest that an individual's intention to use computers is influenced by extrinsic motivations, perceiving an activity to be instrumental in achieving valued outcomes, as well as intrinsic motivations, referring to the performance of an activity for no apparent reinforcement other than the process of performing the activity per se. TAM has been extensively used and accepted as a robust model to investigate IT acceptance and usage (Venkatesh, et al., 2003). Cheng and Yeh (2011) utilized a revised TAM and demonstrated that perceived ease of use, perceived usefulness and the social norm had effects on acceptance intention.

Alavi and Leidner (1999) defined KM as "a systemic and organizationally specified process for acquiring, organizing and communicating both tacit and explicit knowledge for employees so that other employees may make use of it to be more effective and productive at work". The activities of KM included knowledge capture, documentation, retrieval and reuse, creation, transfer and sharing of its knowledge assets integrated in its operational and business processes (Dayan and Evans, 2006). In this study, KM is defined as "the process of identifying, managing and leveraging individual and collective knowledge to support the firm becoming more competitive" (Carlsson, 2001).

Abril (2007) examined a global consulting organization, DataCon, and indicated that a successful implementation of a knowledge enablement program involving agents as facilitators of attitudinal change, including action research components that were of help harvesting knowledge assets from tacit knowledge, and perceived value that would moderate the motivation of associates to participate in the knowledge enablement program. Hung, Chou and Tzeng (2010) adopted Multiple Criteria Decision Making (MCDM) approaches, ranking the gaps of the KM aspects in control items to achieve the aspired level of performance, found that the KM gaps within the service industry were higher than the gaps within the IC (Integrated Circuit) and banking industries. Tan and Lim (2010) suggested the critical success factors (CSFs) that influences KM processes in small and medium enterprises (SMEs) are culture, leadership, employee participation, information and communications technology, as well as organizational structure.

Although the topic of KM and its adoption has been discussed by some researchers, why the employees would accept KM and how their attitudes affect KM practice are not well examined in the past studies. The TRA helps explaining why an employee would accept and employ KM. The suggestions of TAM can be applied in examining what benefits KM would bring to the employees in increasing their job performance and whether KM projects with relevant IT usage are easy or complicated for the employees. According to Rogers's (1995) ID, the role of KM in the life insurance industry can be examined by five characteristics of innovations, i.e., relative advantage, compatibility, complexity, trialability and observability. This study adopted the TRA, TAM and ID as the theoretical background and extended the applications to knowledge management adoption and diffusion via reviewing the relevant KM studies.

HYPOTHESES DEVELOPMENT

Figure 1 presents the research conceptual model developed according to the above theoretical background. This research suggests that, employees' perceptions of KM will influence their attitudes toward KM adoption, and the attitudinal factor will have effects on the practice of KM vie their activities pertaining to KM.

A person's beliefs that the behavior leads to certain outcome and his or her evaluation of the outcome would influence his or her attitude toward the behavior (Ajzen, 1980). Davis, Bagozzi and Warshaw (1992) referred extrinsic motivation to the performance of an activity because it was perceived to be instrumental in achieving valued outcomes that are distinct from the activity itself, such as improved job performance, pay, or promotions. Davis, Bagozzi and Warshaw (1989) indicated that perceived usefulness was a major determinant of people's intention to use computer. Gefen and Straub (1997) reported that perceived usefulness played an essential role in the intended use and self-reported usage by stating that people's intentions to use computers in an organization were based mainly on a cognitive appraisal of how the systems would help them achieve enhanced performance.

Figure 1: Research Conceptual Model of Knowledge Management Adoption and Practice

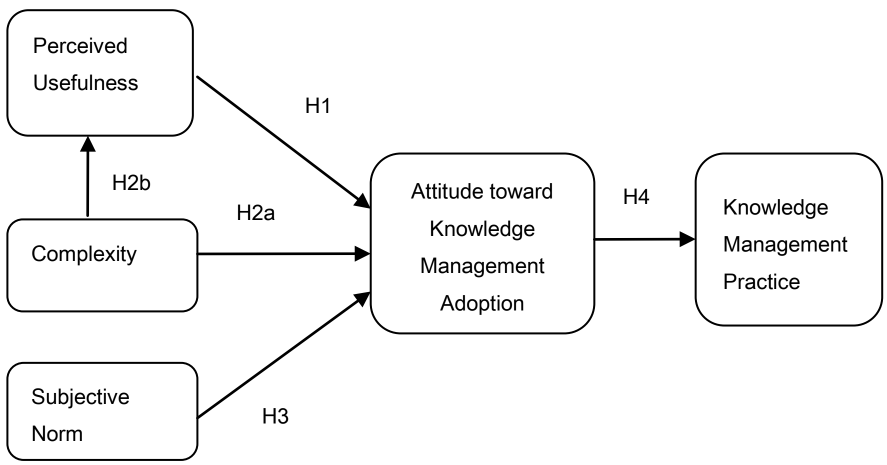

Figure 1 presents the research conceptual model of KM practice identifying the perceptive factors that influence KM practice via attitude toward KM adoption. Perceived usefulness refers to the perception that employees believe that KM will lead to certain outcome. Complexity is the degree to which KM is perceived as difficult to understand and use. Subjective norm is an employee's beliefs that other people (e.g. colleagues and managers) think that he or she should adopt and apply KM.

Moore and Benbasat (1991) identified relative advantage as "the degree to which using an innovation is perceived as being better than using its precursor". People would tend to adopt KM when they perceived that KM was better than it superseded (Rogers, 1995). According to Davis (1989), and Davis, Bagozzi and Warshaw (1989), the dimensions of perceived usefulness can be as follows: using a system would (i) enable an individual to accomplish tasks more quickly; (ii) improve his or her job performance; (iii) increase his or her productivity; (iv) enhance his or her effectiveness on the job; (v) make it easier to do his or her job; and (vi) let the individual find the system useful in his or her job. Venkatesh, et al. (2003) reported that outcome expectations, consisting of performance expectations (job-related) and personal expectations (individual goals), were related to the consequences of the behavior. Thus, this study proposes the first hypothesis as follows:

H1: Perceived usefulness positively influences the attitude toward knowledge management adoption.

Complexity is defined in this study as "the degree to which KM is perceived as difficult to understand and use" (Rogers, 1995). Some innovations are readily understood by most members of a social system, while others are more complicated and will be adopted more slowly. According to Rogers (1995), new ideas that are simpler to understand are adopted more rapidly than innovations that require the adopter to develop new skills and understandings.

Complexity was also used by Thompson, Higgins and Howell (1991) to identify the degree to which a system was perceived as relatively difficult to understand and use. The opposite of the concept of complexity can be referred to the perceived ease of use widely used in TAM studies. Perceived ease of use was defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1993). Moore and Benbasat (1991) addressed that the concept of complexity in the theory of Innovation Diffusion and perceived ease of use in TAM resembled each other in referring to the perceptions regarding how difficult or easy an innovation was to understand, learn and use.

Considering that complexity is an essential determinant in innovation adoption and diffusion, and perceived ease of use has been shown to have direct effects on the actual use, this research model proposes that complexity has negative influences on the attitude toward KM adoption. Complexity in the theory of Innovation Diffusion is adopted in this study and considered more appropriate for explaining the complicatedness involved in KM. Thompson, Higgins and Howell (1991) used the following items to measure the construct of complexity: (i) using the system takes too much time from my normal duties; (ii) working with the system is so complicated; it is difficult to understand what is going on; (iii) using the system involves too much time doing mechanical operations (e.g., data input); and (4) it takes too long to learn how to use the system to make it worth the effort. The hypothesis is thus suggested as follows:

H2a: Complexity negatively influences the attitude toward knowledge management adoption.

Davenport and Glaser (2003) pointed out that the programs which were especially designed for knowledge sharing often failed for the reason that those schemes made it harder, rather than easier, for people to perform their tasks. The direct impact of perceived ease of use on the perceived usefulness have been commonly reported in the previous research, such as Adams, Nelson and Todd (1992), Davis (1986, 1989, 1992), Davis, Bagozzi and Warshaw (1989, 1992), as well as Venkatesh and Davis (2000), among many others. It was indicated that, the easier a system was to use, the less effort was required to perform a particular job tasks and then the more effort could be contribute to other tasks and result in better performance at job (Davis, Bagozzi and Warshaw, 1989). The perceived ease of use was also proved to have positive effect on users' perceived usefulness toward the electronic system in a study of IT diffusion in the life insurance company (Liu, 2004).

To be useful, it should be easy to retrieve and capture knowledge (Alavi and Leidner, 2001). Knowledge emerges and evolves over time and today's knowledge may become tomorrow's ignorance. As a result, creation of easy to use and easy to remember retrieval mechanisms is the important aspect of organizational KM strategies. Accordingly, the following hypothesis is suggested:

H2b: Complexity negatively influences the perceived usefulness.

Subjective norm was defined as "the person's beliefs that specific individuals or groups think he should or should not perform the behavior" (Ajzen and Fishbein, 1980). A person who believed that most referents with whom the person was motivated to comply thought he or she should perform the behavior would perceive social pressure to do so (Ajzen and Fishbein, 1980). According to Ajzen and Fishbein (1980), subjective norm and the person's attitude toward the behavior, which referred to the person's judgment that performing the behavior was good or bad, determined a person' behavior intention. Rogers (1995) also identified that social system was an element in the diffusion of innovations. A social system was a set of interrelated units that were engaged in joint problem solving to accomplish a common goal. Therefore, the subjective norm in an organization is proposed to have impacts on people's adopting and applying KM.

Regarding who or what establishes the subjective norm for the members of a social system, Ajzen and Fishbein (1980) developed a standard question as follows: "most people who are important to me think I should…" Venkatesh, et al. (2003) used the question that, "people who influence my behavior think that I should …", to observe subjective norm. Examining the construct of subjective norm in an organizational scenario, Thompson, Higgins and Howell (1991) adopted the following items: "(i) I use the system because of the proportion of co-workers who use the system; (ii) the senior management of this business has been helpful in the use of the system; (iii) my supervisor is very supportive of the use of the system for my job; and (iv) in general, the organization has supported the use of the system." Hence, the following hypothesis is proposed.

H3: Subjective norm positively influences the attitude toward knowledge management adoption.

"Attitude toward the behavior" was identified by Ajzen and Fishbein (1980) to be the personal factor that played an essential role in influencing a person's intention which was viewed to be good predictors of behavior. The attitudinal factor was the individual's positive or negative evaluation of performing the behavior. A person's attitude referred to his or her judgment that performing the behavior was good or bad and that he or she was in favor of or against performing the behavior (Sheppard, Hartwick and Warshaw, 1988). Davis, Bagozzi and Warshaw (1992) suggested that the potential user's attitude using an information system determined the system's actual use. "Affect toward use" (i.e., the feelings of joy, elation, or pleasure associate by an individual with a particular act) was adopted by Thompson, Higgins and Howell (1991) in examining personal computing utilization. Ajzen and Fishbein (1980) proposed the measurement format for attitude as follows: (i) harmful/beneficial; (ii) good/bad; (iii) rewarding/punishing; and (4) unpleasant/pleasant." The "attitude toward technology usage" was examined by asking: "(i) using the system is a bad/good idea; (ii) the system makes work more interesting; (iii) working with the system is fun; and (iv) I like working with the system (Venkatesh, et al., 2003).

KM processes, including acquisition, conversion, application, and protection, along with a knowledge infrastructure of technology, structure and culture, were identified as critical organizational capabilities that would positively and significantly influence the organizational effectiveness (Gefen and Straub, 1997). Santos (2003) suggested one possible organizing framework according to different knowledge processes, i.e., processes of sourcing, transfer and integration of knowledge. Knowledge sourcing refers to the mechanisms for identification and obtaining access to relevant new knowledge. Knowledge transfer signified the mechanisms through which tacit or complicated knowledge was transferred to the organizational group. Knowledge integration indicated the mechanisms via which specialized knowledge was combined within or across organizations, enabling the application of knowledge into new products and processes (Eisenhardt and Santos, 2002). Shin, Holden and Schmidt (2001) proposed a KM value chain, which consisted of four major activities: knowledge creation, knowledge storage, knowledge distribution and knowledge application. Accordingly, this study proposes the following hypothesis.

H4: The attitude toward knowledge management adoption positively influences knowledge management.

METHODOLOGY

Research Procedures

By using the mixed method (Tashakkori and Teddlie, 2003), this research was carried in the following steps. First, we identified the factors and associate variables pertaining to KM adoption and diffusion via comprehensive literature review. Second, a qualitative field study with ten interviews was conducted to modify the factors via content analysis (Huang, et al., 2011). The research questionnaire was then designed combining the literature and the results from the field study. Third, back translation, pre-test and pilot test were administered to refine the research instrument (Cooper, 1995). An empirical pilot study was undertaken to detect any errors, oversights and problems in design and instrumentation of the revised questionnaire (Copper, 1995). This study employed an empirical pilot study among 40 employees who possessed various positions and worked in different sections of a life insurance company in Taiwan. The results from the pilot study showed that the internal consistency of the scales were acceptable with relatively high Cronbach's alpha values. Only minor amendments were undertaken for the research instrument to be further utilized in the main survey.

Finally, the nation-wide survey was administered to 605 subjects in Taiwan's life insurance companies in 2005. With the approach of cross-sectional studies, various segments of Taiwan life insurance industry were sampled at a single point in time and the selected companies varied in terms of history, size and location (Zikmund, 2000). The participating companies were approached via phone to obtain their approvals and identify the contact persons. The contact persons were then given the information regarding the purpose of the study, the instruction and the target sample before they distributed the questionnaires. They were requested to distribute the questionnaires randomly across departments and divisions and the research subjects were the office managers and staff, who worked full time and were involved in knowledge work to some extent in the company. In the main survey, 362 valid responses were collected, yielding a 59.8% effective response rate, and considered satisfactory.

Table 1: Measurements of the Constructs

Constructs and Items		Sources	
		Literature	Field Study
Perceived Usefulness			
PU1	Work and service quality	Compeau and Higgins, 1995; Compeau, Higgins and Huff, 1999; Hung, 2004	✓
PU2	Making it easier to work	Gefen and Straub, 1997; Glazer, 1998; Gold and Segars, 2001	✓
PU3	Meeting the needs at work	Gefen and Straub, 1997; Glazer, 1998; Venkatesh and Dais, 2000	✓
PU4	Effectiveness	Compeau and Higgins, 1995; Compeau, Higgins and Huff, 1999; Gold and Segars, 2001; Gefen and Straub, 1997; Hung, 2004	✓
PU5	Professional competency	Compeau and Higgins, 1995; Compeau, Higgins and Huff, 1999	✓
PU6	Reducing the duplicate work		✓
Complexity			
CM1	Not friendly to use	Rogers, 1995; Thompson, Higgins and Howell, 1991; Glazer, 1998	✓
CM2	Not simple, clear and short enough	Glazer, 1998	✓
CM3	No assistance in time		✓
CM4	Lack of accessibility		✓
Subjective Norm			
SN1	Senior management	Thompson, Higgins and Howell, 1991; Venkatesh and Davis, 2000	✓
SN2	Opinion leader	Rogers, 1995	✓
SN3	Requirement of company	Thompson, Higgins and Howell, 1991; Venkatesh and Davis, 2000	✓
Attitude toward KM Adoption			
AT1	Interesting	Thompson, Higgins and Howell, 1991; Venkatesh and Davis, 2000	✓
AT2	Fun	Thompson, Higgins and Howell, 1991; Venkatesh and Davis, 2000	✓
AT3	Likes	Compeau and Higgins, 1995; Compeau, Higgins and Huff, 1999; Venkatesh and Davis, 2000	✓
KM Practice			
KP1	Gathering knowledge	Hung, 2004; Teece, 1998	✓
KP2	Organizing knowledge	Hung, 2004; Teece, 1998	✓
KP3	Sharing knowledge	Shin, 2001; Thompson, Higgins and Howell, 1991	✓
KP4	Converting knowledge		✓

Table 1 shows the measurement items and their sources from literature and the field study. The source column presents the literature supporting the measurement item. The check in the field study indicates that the item that is verified or collected from the field study.

Instrument Development

The survey instrument was designed to contain three main parts: opening, middle and ending components (Neuman, 2000). The opening part provided the respondents with the survey instructions (e.g., the aims of the research project, the nature participants' involvement and protection for all responses). The middle part was composed of the instrument items that were measured on a seven- point (1-7) Liker scales, in which 1 indicated "strongly agree" and 7 indicated "strongly disagree" respectively. The respondents were requested to provide demographic information in the last part of the questionnaire. As suggested by Neuman (2000), the questions in the instrument were arranged in such a sequence so as to minimize the discomfort and confusion of respondents. The items for measuring the factors in KM adoption and diffusion were adapted from the literature and enriched vie the field study to better present the factors in the operational version.

The measure items for each construct and their sources are presented in Table 1. A confirmatory factor analysis (CFA) is performed to specify the structure between observed indicators and latent constructs. Structural equations among latent constructs are then examined to test the conceptual structural equation model (SEM). The CFA and SEM procedures are conducted utilizing AMOS software Amos 7.0.

DATA ANALYSIS AND RESULTS

Demographic Characteristics

The respondents' demographic characteristics are presented in Table 2. The majority of them were in the age group of 31 to 40 (53.0%) and only 0.6% were 20 or below. 59.9% of the respondents had over five year's seniority, in which 21.5% had 5-10 year's seniority and 6.9% had seniority of more than 15 years.

Table 2 Demographic Profile

Characteristics	Frequency	Percentage (%)
Gender		
Male	131	36.2
Female	229	63.6
Age		
20 or below	2	0.6
21-30	108	29.8
31-40	192	53
41-50	58	16
51 or above	1	0.3
Seniority		
Less than 2 years	77	21.3
2+ to 5 years	68	18.8
5+ to 10 years	114	31.5
10+ to 15 years	78	21.5
More than 15 years	25	6.9
Title		
Office manager	94	23.5
Staff	277	76.5

Table 2 presents the characteristics of the respondents who participate in the main survey. The 94 office managers include 1 vice president or above, 3 assistant vice presidents, 3 office directors, 8 department managers, 31 associate manager, 18 assistant manager, 4 division chief and 17 supervisor.

Assessments of the Measurement Model

A confirmatory factor Analysis (CFA) was first used to confirm the factor loadings of the five constructs (i.e. perceived usefulness, complexity, subjective norm, attitude towards KM adoption and KM practice) and to assess the model fit. The fit indices of the measurement model were summarized in Table 3. This study used the following seven values recommended by literature to assess model fit: ratio $\chi2/d\ f \leq 3.0$ (Hayduck, 1987); CFI ≥ 0.9 (Bagozzi, 1988); RMSEA ≤ 0.06 (Bagozzi, 1988; Bentler, 1999); GFI ≥ 0.9 (Scott, 1991); AGFI ≥ 0.8 (Scott, 1991); NFI ≥ 0.9 (Bentler, 1980) and NNFI ≥ 0.9 (Bentler, 1980). As presented in Table 3, the overall model indicated that $\chi2/d.f.=1.72$ (i.e. 269.98/157) and was significant at $p < 0.001$. Furthermore, other indicators of goodness of fit were CFI=0.98, RMSEA=0.05, GFI=0.93, AGFI=0.91, NFI=0.95 and NNFI=0.97. All the model-fit indices exceeded the respective common acceptance levels suggested by previous research, demonstrating that the measurement model exhibited a good fit with the data collected. Therefore, we proceeded to evaluate the psychometric properties of the measurement model.

Table 3: Fit Indices for Measurement and Structural Model

Fit indices	Recommended Value	Measurement Model	Structural Model
x^2/df	≦3.0	1.72	2.27
CFI	≧0.9	0.98	0.96
RMSEA	≦0.08	0.05	0.06
GFI	≧0.90	0.93	0.91
AGFI	≧0.80	0.91	0.88
NFI	≧0.90	0.95	0.93
NNFI	≧0.90	0.97	0.95

Table 3 presents the fit indices for measurement model and structural model respectively. Hair, et al. (1998) argued that the model-fit indices should reach accepted standards before judging model fitness. It is shown in Table 3 that every model-fit index exceeded the recommended value suggested by previous studies.

Table 4: Convergent Validity

Constructs	Items	Items Reliability	Construct Reliability	Average Variance Extracted
Perceived Usefulness	PU1	0.82	0.67	0.93
	PU2	0.81		
	PU3	0.87		
	PU4	0.82		
	PU5	0.82		
	PU6	0.79		
Complexity	CM1	0.84	0.77	0.93
	CM2	0.91		
	CM3	0.89		
	CM4	0.87		
Subjective Norm	SN1	0.79	0.63	0.83
	SN2	0.79		
	SN3	0.79		
Attitude toward KM Adoption	AT1	0.89	0.72	0.88
	AT2	0.84		
	AT3	0.82		
KM Practice	KP1	0.82	0.70	0.90
	KP2	0.87		
	KP3	0.82		
	KP4	0.84		

Table 4 shows the item reliability, construct reliability and average variance extracted (AVE) of the measurement model. It indicates that the convergent validity is satisfactory and thus the hypothesized measurement model is reliable for further examination of structural relationships among the constructs.

Hair, et al. (1998) suggested that convergent validity of CFA results should be supported by item reliability, construct reliability, and average variance extracted (AVE). As shown in Table 4, all of the construct reliability values, ranging from 0.63 to 0.77, exceeded the recommended cut-off value of 0.6 (Fornell and Larcker, 1981). The AVE of all constructs range between 0.83 and 0.93 which are above the suggested value of 0.5 meaning that the variance accounted for by each of the constructs was greater than the variance accounted for by the measurement error (Fornell and Larcker, 1981; Hair, et al., 1998). These indicated that the measurement model had good convergent validity. Therefore, the hypothesized measurement model was reliable and meaningful to test the structural relationships among the constructs.

Assessments of the Structural Model

The seven recommended fit indices were also applied to assess the structural model (see Table 3). Comparison of all fit indices with their corresponding suggested values, provided evidence of a good model fit ($\chi2$/d.f.=2.27, CFI=0.96, RMSEA=0.06, GFI=0.91, AGFI=0.88, NFI=0.93 and NNFI=0.95). We could thus proceed to examine the path coefficients of the structural model. This study examines the structural model with one exogenous construct (i.e. KM practice) and four other constructs (i.e. perceived usefulness, complexity, subjective norm and attitude toward KM adoption). Figure 2 displays the properties of the casual paths, including the standardized path coefficients, path significances, and variance explained (R2) by each path. As expected, perceived usefulness (β= 0.72, $P < 0.001$) had direct and positive effects on the attitude toward KM adoption significantly. Thus, H1 was supported. However, the suggested impact of complexity on the attitude toward KM adoption was shown to be insignificant. H2a was rejected. The influence of complexity on perceived usefulness was found to be significant, whilst the coefficient value was positive (β=0.41, $P < 0.001$). The results did not support the hypothesis H2b, which was proposed that complexity negatively influences the perceived usefulness. Subjective norm was revealed to be the other significant factor in determining the attitude toward KM adoption (β=0.17, $p < 0.001$), supporting H3. Finally, the attitude toward KM adoption appeared to significantly affect KM practice (β=0.63, $p < 0.001$) and thus H4 was supported.

Figure 2: Hypotheses Testing Results Based on All Valid Samples (n=362)

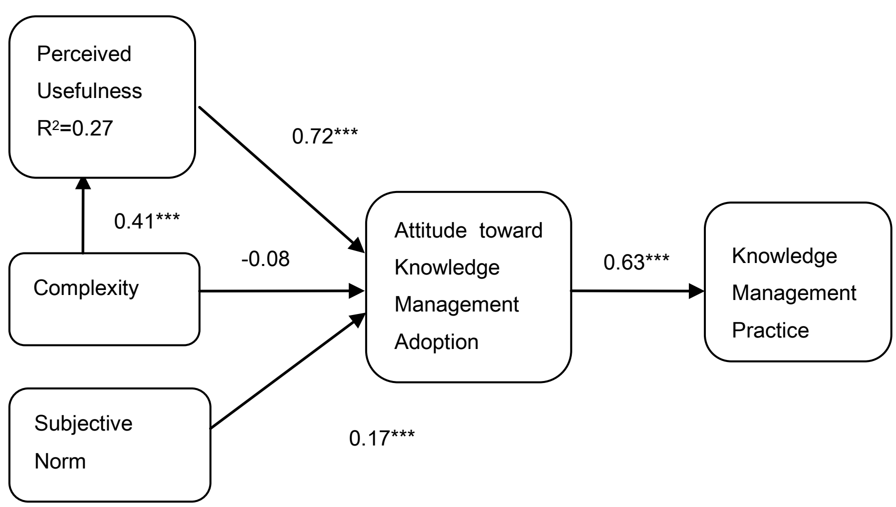

Figure 2 presents the properties of the casual paths, including the standardized path coefficients, path significances, and variance explained by each path, in the structural model. It is shown that complexity significantly influences perceived usefulness. Subjective norm and perceived usefulness significantly affects the attitude toward KM adoption, which in turn influences KM practice.

Research regarding new technology acceptance often addresses gender difference, among all personality features (Lin and Lu, 2011; Sanchez-Franco, 2006; Venkatesh, Morris and Ackerman, 2000). It is suggested that men and women have different views in measuring value and benefit (Morre and Benbasat, 1991; Venkatesh, Morris and Ackerman, 2000). Therefore, this study further applies the Amos 7.0. Multiple-Group Analysis to discover whether male and female subjects (i.e., 131 male and 229 female) have difference in the cause and effect of the model constructs in this research. The indices of fit for the two groups are consistent with the required values, thus entitling us to verify a high degree of goodness of fit between the model and the sample data. Figure 3 and Figure 4 show the estimates of path coefficients and the results of variance explained (R2) between the constructs. The results indicate that gender groups have significant difference in the paths "complexity to the attitude toward KM adoption" and "subjective norm to the attitude toward KM adoption". Complexity had a negative and significant effect on men's attitudes toward KM adoption, while such an effect was shown to be insignificant for women. On the other hand, the significant effect of subjective norm on women was not revealed to be significant on men's attitude in adopting KM.

Figure 3: Hypotheses Testing Results for Men Samples (n=131)

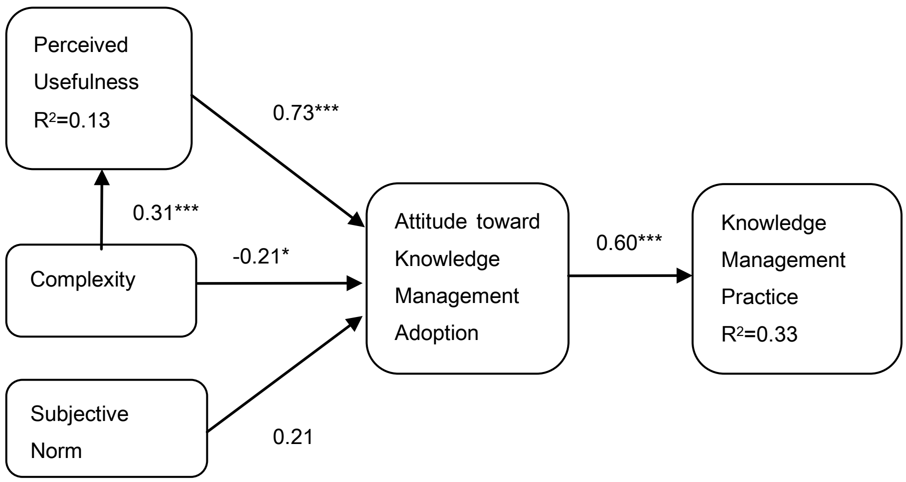

Figure 3 presents the hypotheses testing results from the men respondents. The findings reveal that complexity significantly influences perceived usefulness positively, while affects attitude toward KM adoption negatively in the men group. The effects of perceived usefulness on KM practice via attitude toward KM adoption are significant and positive for men samples.

Figure 4: Hypotheses Testing Results for Women Samples (n=229)

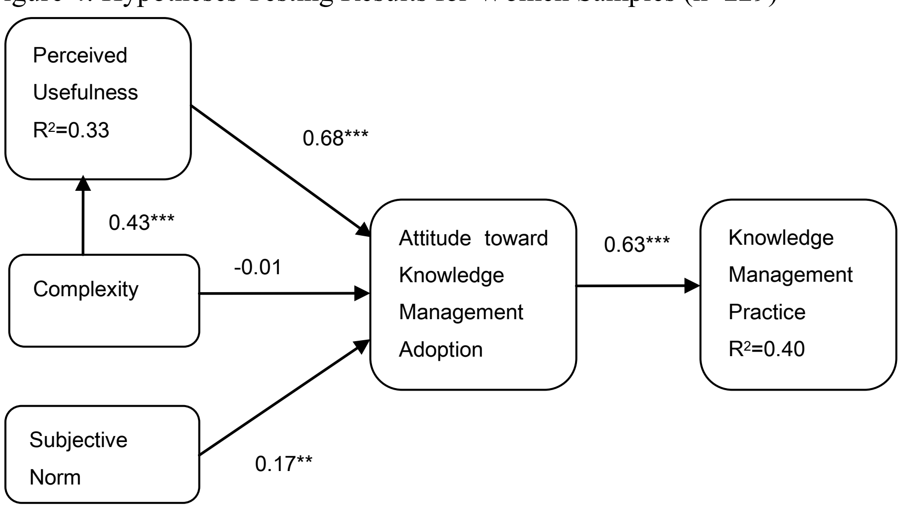

Figure 3 presents the hypotheses testing results from the women respondents. The findings reveal that complexity has significant effects on perceived usefulness in the women group. Different from the men group, the results indicate that subjective norm significantly influences attitude toward KM adoption, which has impacts on KM adoption.

DISCUSSION

This study empirically validated existing theories within the context of life insurance business by investigating the effects of perceived usefulness, complexity and subjective norm, on KM practice through the attitudinal factor. Combining the theories of Innovation Diffusion, TRA and TAM, the present research advanced our understanding of the perceptive constructs and their linkage to employees' attitudes and behaviors in the process of adopting and implementing KM. The results indicated that perceived usefulness and subjective norm were significant in determining the employee's attitudes toward KM adoption, which in turn affected their behaviors in KM practice.

According to the path coefficients, perceived usefulness exhibited the significant and direct effect on the attitude toward KM adoption. This research verified the influence of perceived usefulness on people's adopting KM in the life insurance sector. For the managers of the life insurance enterprises, this study suggests that they should enlighten the employees on the worth and significance of KM for them, such as increasing productivity, enhancing efficiency, and making it easier, more convenient and flexible at work, etc., and thus the employees would be more willing to accept KM and realize that applying KM is not only important for the organizations, but also beneficial for themselves.

Subjective norm was posited to be essential in affecting an individual's behavior in the past research. This study extended the notion by indicating that subjective norm had positive impacts on the practice of KM via employees' attitudes toward KM adoption. In the literature, Dishaw and Strong (1999) presented that social norm played a more significant role in an organizational background. The participants in the field study agreed that the employees were very likely to be affected by others in adopting and applying KM. The empirical evidence shows that senior management, opinion leader and requirement of company play important roles in influencing the employees' attitudes toward KM acceptance. As suggested by Wong and Aspinwall (2005), successful KM requires proactive entrepreneurial support and leadership from top management. Top management and leaders should contribute to promote a corporate mindset that emphasizes cooperation and knowledge sharing across the organization, create an environment in which knowledge creation and cross-boundary learning can flourish, as well as provide continual support and commitment to sustain the effort for KM.

This study identified attitude toward KM adoption as the employees' overall affective reaction to the acceptance of KM, and found that such an attitudinal factor had significant impacts on the employees in conducting KM activities. This study supported previous research that suggested attitude as a crucial factor in predicting an individual's behavior. Little empirical research was found in the literature to consider the attitudinal factor in investigating KM adoption and applications. This study presented the research framework and associated items for examining the employees' feelings regarding accepting KM. From the interviews in the field study, attitude was recognized as the primary factor in deciding a person's performance in KM practice. Consequently, how to increase the employee's interests to accept KM (e.g., introducing the benefits of KM and encouragements from top management), would be the focal point for the life insurance companies to put KM into place.

However, the proposed negative influence of complexity on perceived usefulness was not supported in this study. This study suggested that complexity negatively influence perceived usefulness based on the previous studies, and the opinions from several interviewees, who described that, if they needed to spend too much time on learning and applying KM, they would recognize KM as a burden, rather than benefits. Complexity in this study was found to have a significant effect on perceived usefulness, but such an effect was positive (β=0.41). The possible explanation for the results might be unearthed from some unique opinions collected from the qualitative field study. One interviewee mentioned that, "if a KM system is not "complicated" enough, it means that it is not satisfactory to deal with the various tasks in the practical operations." It is interesting to realize that the employees would somewhat assume that, if a KM project or system is too easy to execute or use, it is probably a project or system which could not really solve the employees problems and thus is not useful for them.

The relationship from complexity to the attitude toward KM adoption was insignificant statistically. While Rogers (1995) suggested that complexity was one of the determinant factors in influence the diffusion of an innovation, its impacts on the attitude toward KM acceptance were not found to be significant in this empirical study. Most of the interviewees in the field study stressed that the complexity of KM would decrease the employees' interests to adopt it. Nonetheless, one interviewee did not agree such an argument. On the contrary, she said that, "as long as KM is useful for me at work, I will try my best to learn it". It can be inferred that when KM was perceived to be useful in improving job performance, the employees would be willing to overcome any difficulties and accept KM. Actually, some earlier research has questioned the overall significance of perceived ease of use in IT adoption (Straub, Limayem and Karahanna, 1995; Keil and Beranek, 1995), and indicated that in many cases a new IT was adopted primarily for its perceived usefulness. That is, the users was paying more attention to whether the new IT was instrumental in accomplishing tasks that were not inherent in the use of the IT itself. Hence, this study provided managerial implications that, though the life insurance enterprise should try to make KM as easy as possible for the employees in adopting and applying KM, the employees cared more about what were the exact benefits that KM could bring to them in their daily tasks.

This study discovered that gender makes a difference in the effects of complexity and subjective norm on the attitude toward KM adoption. Figure 3 and Figure 4 present the results of structural model analysis with men and women respectively. First, in the paths of influence on the attitude toward KM adoption, complexity had a significant effect with the male subjects, but not with the female subjects. The reason could be that women cares more about the benefits that KM would bring to them (i.e., perceived usefulness) and thus disregard the complexity and associated difficulties involved in adopting KM. Second, coinciding with the previous research (Venkatesh and Morris, 2000; Venkatesh and Morris, 2003;), we found that women are more susceptible to other's opinions and susceptible to the influence of colleagues and management in accepting KM, while men are not so sensitive to the subjective norm in deciding whether or not to adopt KM. The results validated that both men and women subjects are affected by perceived usefulness in forming their attitudes which influence behaviors in KM implementation, whilst women tend to be affected by others' thoughts and opinions in their workplace and not so concerned regarding how complex the KM project might be.

CONCLUSION

Researchers have applied the theory of ID in various areas during the last decades. However, little is known about the adoption and practice of KM in the life insurance sector. This paper fills this gap in the literature by examining the perceptive and attitudinal factors of KM adoption and practice. We collect qualitative data from a field study to fine-tune the proposed model developed from extensive literature review, and then conduct a survey collecting 362 responses for further analyses via confirmatory factor analysis and structural equation model techniques.

The results show that perceived usefulness significantly affects the employees' attitudes toward KM adoption and the attitudinal factor plays a significant role in influencing the employees in undertaking KM activities. Subjective norm is found to be the other significant factor in shaping the employees' attitudes toward KM adoption. To generate an environment in which opinion leaders, senior management and companies' requirements can be fully utilized to promote KM concepts and processes would be essential in having KM into place successfully. The findings from the field study provide not only amendments of the key constructs in the research model, but also fruitful information for probing into how the employees think about KM adoption and diffusion. We unearth the phenomenon that employees would consider a KM project or system not useful if it is not complicated. The past research suggested that people's recognitions on usefulness might be delimitated when a new system or technology was too difficult to learn or operate. However, this empirical study presents the other viewpoints that KM would not be useful if it involves little complexity. The differences between male and female subjects are also presented in this paper. The results show that women are more sensitive to subjective norm, while men lay fewer emphases on others' opinions. The findings also imply that women would be more willing to conquer the hindrances involved in KM if they feel that adopting and applying KM will enhance their job efficiency and is worthwhile the efforts.

In this paper, the selection of the participant companies and respondents were not purely random and thus there could be some risk of sample bias. While the questionnaire was developed in such a way that the respondents were provided with the definitions of knowledge and KM, some respondents might not be able to give their real opinions for having little understanding or experience of KM in their companies. Therefore, the use of an oral instruction before distributing the questionnaire would be preferable, wherever possible. With the research conducted in the context of Taiwan's life insurance industry, the conclusions reached in the current study were not of universal applications. Future research can extend the applications of this study to different geographical contexts and other industry sectors, such as banking, security and financial holding companies. Further studies might investigate the external factors that influence the perceptive factors and the impact of KM practice on the organization's performance.

REFERENCES

Abril, R.M (2007) "The Dissemination and Adoption of Knowledge Management Practices Behavioural Model," *Electronic Journal of Knowledge Management,* Vol. 5(2), p. 131-142.

Adams, D.A., Nelson, R.P. and Todd, P.A. (1992) "Perceived Usefulness, Ease of Use, and Usage of Information Technology: A Replication," *MIS Quarterly*, vol. 16(2), p. 227-247.

Ajzen, I. and Fishbein, M. (1980) *Understanding Attitudes and Predicting Social Behavior*, Englewood Cliffs, NJ.

Alavi, M. and Leidner, D.E. (1999) "Knowledge Management Systems: Issues, Challenges, and Benefits," *Communications of the AIS*, vol. 1(7), p. 1-37.

Alavi, M. and Leidner, D.E. (2001) "Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues," *MIS Quarterly*, vol. 25(1), p. 107-146.

Bagozzi, R.P. and Yi, Y. (1988) On the Evaluation of Structural Equation Models," J*ournal of Academy of Marketing Science*, vol. 16(1), p. 74-94.

Bargas-Avila, A.J., Lötscher, J., Orsini, S. and Opwis, K. (2009) "Intranet Satisfaction Questionnaire: Development and Validation of a Questionnaire to Measure User Satisfaction with the Intranet," *Computers in Human Behavior*, vol. 25(6), p. 1241–1250.

Bentler, P.M. and Bonett, D.G. (1980) "Significant Tests and Goodness of Fit in the Analysis of Covariance Structures," *Psychological Bulletin*, vol. 88(3), p. 588–606.

Carlsson, S.A. (2001) "Knowledge Management in Network Contexts," in 9th European Conference on Information Systems, Bled, Slovenia.

Chen, M.F. and Wang, L.H. (2009) "The Moderating Role of Switching Barriers on Customer Loyalty in the Life Insurance Industry," *The Service Industries Journal*, vol. 29(8), p. 1105–1123.

Cheng, Y.H. and Yeh, Y.J. (2011) "Exploring Radio Frequency Identification Technology's Application in International Distribution Centers and Adoption Rate Forecasting," *Technological Forecasting & Social Change*, vol. 78(4), p. 661-673

Compeau, D., and Higgins, C.A. (1995) "Computer Self-Efficacy: Development of a Measure and Initial Test," *MIS Quarterly*, vol. 19(2), p. 189-211.

Compeau, D., Higgins, C.A. and Huff, S. (1999) "Social Cognitive Theory and Individual Reactions to Computing Technology: A Longitudinal Study," *MIS Quarterly*, vol. 23(2), p. 189-211.

Cooper, D.R. and Emory, C.W. (1995) *Business Research Methods*, 5th ed., Irwin, Chicago.

Davenport, T.H. and Glaser, J. (2002) "Just-in-time Delivery Comes to Knowledge Management," *Harvard Business Review*, vol. July, p. 107-111.

Davenport, T.H. and Prusak, L. (1998) "Working Knowledge: How Organizations Manage What They Know," Boston: Harvard Business School Press.

Davis, D.F. (1986) *A Technology Acceptance Model for Testing New End-User Information Systems: Theory and Results*, PhD thesis, Massachusetts Institute of Technology.

Davis, D.F. (1989) Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Quarterly*, vol. 13(3), p. 319-340.

Davis, D.F. (1993) "User Acceptance of Information Technology: System Characteristics, User Perceptions and Behavioral Impacts," *International Journal of Man-Machine Studies*, vol. 38(3), p. 475-487.

Davis, D.F., Bagozzi, R.P. and Warshaw, P.R. (1989) "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," *Management Science*, vol. 35(8), p. 982-1002.

Davis, D.F., Bagozzi, R.P. and Warshaw, P.R. (1992) Extrinsic and Intrinsic Motivation to Use Computers in the Workplace," *Journal of Applied Social Psychology*, vol. 22(14), p. 1111-1132.

Dayan, R. and Evans, S. (2006) "KM Your Way to CMMI," *Journal of Knowledge Management*, vol. 10(1), p. 69-80.

Dishaw, M.T. and Strong, D.M. (1999) "Extending the Technology Acceptance Model with Task-technology fit Constructs," *Information & Management*, vol. 36(1), p. 9-21.

Eisenhardt, K.M. and Santos, F.M. (2002) "Knowledge-based View: A New Theory of Strategy?" in: A. Pettigrew, H. Thomas, R. Whittington (Eds.), H*andbook of Strategy and Management*, Chapter 7, Sage Publications, London, p. 139–164.

Fornell, C. and Larcker, D.F. (1981) Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research*, vol. 18(1), p. 39–50.

Gefen, D. and Straub, D.W. (1997) "Gender Differences in the Perception and Use of Email: An Extension to the Technology Acceptance Model," *MIS Quarterly*, vol. 21(4), p. 389–400.

Glazer, R. (1998) Measuring the Knower: Towards a Theory of Knowledge Equity," *California Management Review*, vol. 40(3), p. 175-194.

Gold, A.H. and Segars, A.H. (2001) "Knowledge Management: an organizational Capabilities Perspective," *Journal of Management Information Systems*, vol. 18(1), p. 185-214.

Grant, R.M. (1996) "Toward a Knowledge-Based Theory of the Firm," *Strategic Management Journal*, vol. 17(winter), p. 109–122.

Hair, J.F. and Anderson, R.E., Tatham, R.L. and Black, W.C. (1998) *Multivariate Data Analysis,* Prentice Hall, New Jersey.

Hayduck, L.A. (1987) *Structural Equation Modeling with LISREL.* Baltimore, MD: Johns Hopkings University Press.

Hsiao, C.N. (2003) *To Probe Deeply into the Customer Relationship Management Strategy and Operation Flow of Life Insurance - ex. Nan Shan Life Insurance Co, LTD*, Master's thesis, Sun Yat-Sen University, Taiwan.

Hu, L. and Bentler, P.M. (1999) "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives," *Structural Equation Modeling*, vol. 6(1), p. 1-55.

Huang, L.S., Quaddus, M., Rowe, A.L. and Lai, C.P. (2011) "An Investigation into the Factors Affecting Knowledge Management Adoption and Practice in the Life Insurance Business," *Knowledge Management Research & Practice*, vol. 9(1), p. 58-72.

Hung, H.C. (2004) *An ISO 9000-based Knowledge Management System for Small and Medium-sized Enterprises*, Ph.D. Dissertation, National Cheng Kung University, Taiwan.

Hung, Y.H., Chou, S.C.T. and Tzeng, G.H. (2011) "Knowledge Management Adoption and Assessment for SMEs by a Novel MCDM Approach," *Decision Support Systems,*vol. 51(2), p. 270–291.

Keil, M., Beranek, P.M. and Konsynski, B.R. (1995) "Usefulness and Ease of Use: Field Study Evidence Regarding Task Considerations," *Decisions Support Systems,* vol. 13(1), p. 75-91.

Kendall, J.D., Tung, L.L., Chua, K.H., Ng, Dennis Ng, C.H. and Tan, S.M. (2001) "Receptivity of Singapore's SMEs to Electronic Commerce Adoption," *Journal of Strategic Information Systems*, vol. 10(3), p. 223-242.

Kuo, F.Y. and Young, M.L. (2008) "Predicting Knowledge Sharing Practices through Intention: A Test of Competing Models," Computers in Human Behavior, vol. 24(6), p. 2697-2722.

Lin, K.Y. and Lu, H.P. (2011) "Why People Use Social Networking Sites: An Empirical Study Integrating Network Externalities and Motivation Theory," *Computers in Human Behavior*, vol. 27(3), p. 1152–1161.

Liu, W.T. (2004) *A Study of Diffusion of Information Technology in the Organization-to Discuss on TAM and TTF*, Masters thesis, Soochow University, Taiwan.

Moore, G.C. and Benbasat, I. (1991) "Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation," *Information System Research*, vol. 2(3), p. 192-222.

Neuman, W.L. (2000) *Research Methods: Qualitative and Quantitative Approaches*, 4th ed., Allyn and Bacon, Boston.

Omar, O.E. and Owusu-Frimpong, N. (2007), "Life Insurance in Nigeria: an Application of the Theory of Reasoned Action to Consumers' Attitudes and Purchase Intention," *The Service Industries Journal*, vol. 27(7), p. 963-976.

Ostaszewski, K. (2003) "Is Life Insurance a Human Capital Derivatives Business?" J*ournal of Insurance Issues*, vol. 26(1), p. 1-14.

Rogers, E.M. (1995) *Diffusion of innovations*, 4th ed., New York: Free Press.

Sanchez-Franco, M.J. (2006) "Exploring the Influence of Gender on the Web Usage via Partial Least Squares," *Behaviour & Information Technology*, vol. 25(1), p. 19–36.

Santos, F.M. (2003) "The Coevolution of Firms and their Knowledge Environment: Insights from the Pharmaceutical Industry," *Technological Forecasting & Social Change,* vol. 70(7), p. 687-715.

Scott, J. (1991) "The Measurement of Information Systems Effectiveness: Evaluating a Measuring Instrument, in Proceedings of the Fifteenth International Conference on Information Systems, Vancouver, BC.

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*, vol. 15(3), p. 325-343.

Shin, M., Holden, T. and Schmidt, R.A. (2001) "From Knowledge Theory to Management Practice: Towards an Integrated Approach," *Information Processing and Management,* vol. 37(2), p. 335-355.

Straub, D.W., Limayem, M. and Karahanna, E. (1995) "Measuring System Usage: Implications for IS Theory Testing," *Management Science*, vol. 41(8), p. 1328-1342.

Tan, C.N.L and Lim, Y.S. (2010). "Knowledge Management Adoption among Malaysia's SMEs: Critical Factors," in the Proceedings of Knowledge Management 5th International Conference 2010, Kuala Terengganu, Terengganu.

Tashakkori, A. and Teddlie, C. (2003) *Handbook of Mixed Methods in Social and Behavioral Research*, Sage Publ. Inc., Thousand Oaks, California.

Teece, C. (1998) Capturing Value from Knowledge Assets: The New Economy, Markets for Know-How and Intangible Assets," *California Management Review*, vol. 40(3), p. 55-79.

Teece, D.J., Pisano, G. and Shuen, A. (1997) "Dynamic Capabilities and Strategic Management," *Strategic Management Journal,* vol. 18(7), p. 509–533.

Thompson, R.L., Higgins, C.A. and Howell, J.M. (1991) "Personal Computing: Toward a Conceptual Model of Utilization," *MIS Quarterly*, vol. 15(1), p. 125-143.

Tiwana, A. (2001) *The Knowledge Management Toolkit: Practical Techniques for Building Knowledge Management System*, Prentice Hall, Englewood Cliffs, NJ.

V. Venkatesh, Morris, M.G., Davis, G.B. and Davis, F.D. (2003) "User Acceptance of Information: Toward a Unified View," *MIS Quarterly*, vol. 27(3), p. 425-478.

Venkatesh, V. and Davis, F.D. (2000) "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies," *Management Science*, vol. 46(2), p. 186-204.

Venkatesh, V. and Morris. M.G. (2000) "Why Don'T Men Ever Stop to Ask for Directions? Gender, Social Influence, and their Role in Technology Acceptance and Usage Behavior," *MIS Quarterly*, vol. 24(1), p. 115–139.

Venkatesh, V., Morris, M.G. and Ackerman, P.L. (2000) "A Longitudinal Field Investigation of Gender Differences in Individual Technology Adoption Decision-Making Process," *Organizational Behavior and Human Decision Processes*, vol. 83(1), p. 33-60.

Wolcott, P., Press, L., McHenry, W., Goodman, S. and Foster, W. (2001) "A Framework for Assessing the Global Diffusion of the Internet," J*ournal of the Association for Information Systems*, vol. 2(6), p. 1-52.

Wong, K.Y. and Aspinwall, E. (2005) "An Empirical Study of the Important Factors for Knowledge-management Adoption in the SME Sector," *Journal of Knowledge Management*, vol. 9(3), p. 64-82.

Xu, J. and Quaddus, M. (2005) "A Six-stage Model for the Effective Diffusion of Knowledge Management Systems," *Journal of Management Development*, vol. 24(4), p. 362-373.

Yang, C.H. (2004) "The Practical Operation of Knowledge Management on Life Insurance: Model Building and Cases Study," *Commerce & Management Quarterly*, vol. 5(1), p. 1-23.

Yang, H.L. and Wu, T.C.T. (2008) "Knowledge Sharing in an Organization," *Technological Forecasting & Social Change,* vol. 75(8), p. 1128-1156.

Zikmund, W.G. (2000) *Business Research Methods*, 6th edn, Dryden Press, Forth Worth.

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SOUTHERN AFRICAN DEVELOPMENT COMMUNITY FREE TRADE AGREEMENT IMPACT ON SOUTH AFRICA STOCK RETURNS

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ABSTRACT

This paper examines the impact of the Southern African Development Community free trade agreement on the stock returns on South Africa Stock returns. The free trade area was officially implemented on August 18th 2008. The available literature shows that free trade areas create positive returns for investors. In this study, the author examined daily data and used an OLS regression. The Event Window covered 90 days. The results showed that the free trade area had a positive impact on the stock returns in South Africa.

JEL: F13, F15, F36

KEYWORDS: South Africa, Event Studies, Free Trade Agreement

INTRODUCTION

This paper examines impact of the Southern African Development Community (SADC) free trade agreement on the stock returns in South Africa. The SADC is a regional organization that includes 15 southern African nations (Angola, Botswana, Republic Democratic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Swaziland, Tanzania, Zambia, Zimbabwe, South Africa, Seychelles and Madagascar). The organization aims at implementing economic and social integration amongst its member countries. The SADC `s regional integration process will introduce a Common Market in 2015 and a Monetary Union in 2016. The SADC free trade area negotiations started in 1996 with the Protocol on Trade. The implementation (full removal of tariffs) was officially launched on August 18th 2008 and marked a new step in the region`s economic integration. The free trade agreement eliminated tariffs and trade barriers among the member countries. South Africa joined the SADC in August 1994 and was one of the original members of the free trade area in 2000 (along with Swaziland, Botswana, Lesotho and Namibia). Since joining the SADC free trade area, South Africa has enjoyed higher exports to SADC members. The following Table 1 shows the South African exports over the years. The table shows that the trade has increased by 31% in 2007 and by 34% in 2008.

Table 1: South Africa`S Exports to SADC Countries, EU Countries And NAFTA Countries (In Millions Of Rands)

Countries	Year 2006	Year 2007	Year 2008
SADC countries	49,040	71,936	110,090
EU countries	283,522	334,328	410,591
NAFTA countries	85,125	108,391	137,178

This table shows South Africa`s exports to other SADC countries, EU countries and NAFTA countries over the years (in Millions of South African Rands). The table shows that the trade has increased by 31% in 2007 and by 34% in 2008. This data was pulled from the website www.sadctrade.org.

The change of Trade volumes led to the development of the study`s ex ante hypothesis. Given that the trade volumes have increased, we anticipate that the SADC free trade area had positive returns on the stock returns in South Africa. The Johannesburg Stock Exchange (JSE), one of the largest and oldest stock market in Africa, was established in 1887. During the last two decades, the JSE has grown to be a premier securities exchange in Africa. The JSE offers modern trading platforms for equities and derivatives. The following Table 2 shows the market indicators of JSE for the last 3 years. The JSE listed 400 companies in 2010, 406 companies in 2011 and 407 companies in 2013.

Table 2: Market Indicators of the JSE

Indicator	Year 2010	Year 2011	Year 2012
Number of Companies listed	400	406	407
Market Capitalization (Billions of Rands)	8,383.6	6,908.5	6,698.7
Trade Volume (Millions)	71,252	71,464	61,844
Trade Value (Millions of Rands)	2,990,123	3,286,828	3,431,584
Foreign Trading Purchases	485,495	462,985	43,227
Foreign Trading Sales	449,085	480,169	37,937
Equity Capital raised (Millions of Rands)	78,059	87,549	80,857

This table shows the market indicators of the JSE. The Market Capitalization is the number of listed shares multiplied by the Market Price at End of Year. The JSE listed 400 companies in 2010, 406 companies in 2011 and 407 companies in 2013. This historical data was pulled from the website www.jse.co.za

The motivation of this paper is to examine the impact of the SADC free trade area on the stock returns in South Africa. The available literature showed that Free Trade Areas (FTAs) create positive returns for investors. This study is also a contribution to the literature on this topic. This study used an OLS regression and the daily data was retrieved from DataStream. The Event Windows covered 90 days around the SADC implementation data. The regression result showed that the SADC had a positive impact on the Stock Returns in South Africa.

The rest of this paper is as follows: Section 2 reviews the literature on the topics of this paper. Section 3 describes the data and methodology used in the study. Section 4 provides the results and Section 5 concludes the study.

LITERATURE REVIEW

The current Global arena suggests that countries can approach international trade through an international approach or a regional approach. The international approach is through the General Agreement on Tariffs and Trade (GATT). It is an international organization of about 88 countries and promotes international trade and reduction of trade barriers. GATT members periodically meet to talk about tariff concessions. The reductions agreed upon by any two or more partners are then extended to all member nations. The Unconditional Most Favored Nation Principle is helpful against discrimination in international trade. The lengthy GATT rounds of talks typically end up with new tariffs reductions. The regional approach includes examples like the European Union, the East African Community, the SADC and others.

Paul Krugman (1991), a prominent economist and Nobel Prize winner, formulated an extensive explanation on the move towards free trade zones. He attempted to explain why numerous trading blocs were being formed in the 1980`s and the benefits of those trading blocs. In another study, Krugman (2001) says that the benefits of trade liberalization cannot be neglected. FTAs have widely been researched by economists. Tadesse and Fayissa (2007) said that free trade agreements, whether unilateral or bilateral, are historically expected to raise trade flows among the partners to the agreement and contribute to economic growth. The North American Free Trade Agreement (NAFTA) went into effect in 1994 after lengthy negotiations. It was very difficult to see how two industrialized economies (US and Canada) would match up with the Mexican economy. The NAFTA created the largest free trade area in the world (444 million people producing about $17 trillion of goods and services). Burfisher (2001) developed a macroeconomic analysis on the impact of NAFTA on the United States. He concluded that the NAFTA had small positive effects on the US economy and relatively large positive effects on Mexico. Gould (1998) also concluded that NAFTA did not significantly increase the trade volume between the US and Mexico. After long negotiations, Canada and the US finally signed a Canada-US Free Trade Agreement (CUSTA) in 1988. The negotiations took approximately 7 years because of the various changes of political administrations in the US and Canada. Beaulieu (2000) studied the impact of the CUSTA on the Canadian labor market. He found a significant impact of tariffs elimination on the less-skilled labor market. His economic explanation was that less-skilled intensive industries were more protected before the implementation of CUSTA.

Europe is a continent that has been committed to regional economic integration for a long time. The European Union (EU) is now a political and economic group of 27 countries. The EU is a single market in which people, goods and services can move freely. The monetary union has also been implemented and the "Euro" currency is now in circulation. Member countries agreed to share the same trade and economic policies. Cappelen (2003) found a significant positive impact of the EU in the growth performance of European regions. In 2004, Seven South East Asian formed the South Asia Free Trade Agreement (SAFTA) in an effort to promote trade and economic development. Banik (2006) examined the potential future benefits of SAFTA. While noting that most member nations` economies are agricultural-based, he concluded that these nations will benefit from increased trade. The Greater Arab Free Trade Area (GAFTA) was created in 2006 by 17 Arab nations. The GAFTA nations are very wealthy because of oil revenues. Mahmoud (2008) examined the impact of GAFTA on Syrian Trade after its implementation. He mentioned that GAFTA created more opportunities for the private sector in the Arab region.

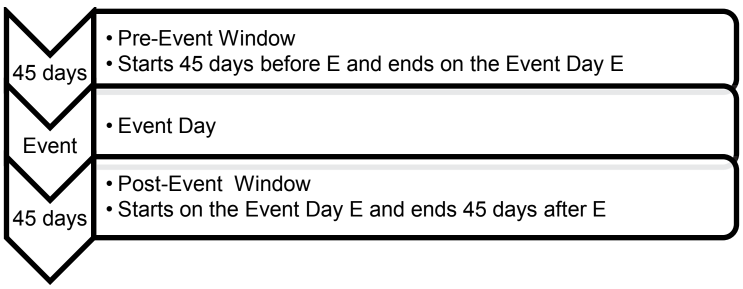
In Africa, there are numerous FTAs such as the American Growth Opportunity Act (AGOA), the East African Community (EAC), the SADC and others. The AGOA provided free trade benefits for selected African products to the United States. Most of the available literature on the AGOA is on the changes in trade volumes between the US and African eligible countries. Ikiara and Ndirangu (2003) noted that, within only two years of qualifying for AGOA, Kenya`s exports of clothing and investments in the textile sector have experienced remarkable growth. Shapouri and Trueblood (2003) also found that many African countries were successful in taking advantage of the US market opportunities through AGOA. Nove (2003) analyzed if the AGOA would indeed increase the African agricultural exports to the US. The evidence of his study showed that the predicted increase of agricultural exports is unlikely. The EAC, a regional bloc of 5 east African countries, is already a common market since 2010. As a fairly recent trade agreement, the EAC has a small literature available on its impact. Khorana (2007) suggested that the EAC trade liberalization increased the benefits for Uganda. The literature on SADC free trade area is dominated by the trade benefits. Lewis and Robinson (2003) mentioned that the SADC free trade area will create more trade between countries. The 2009 SADC Annual Report (2009) noted that South Africa`s exports have increased after the implementation of the SADC Free Trade area.

Some studies have reviewed the Impact of FTAs on stock returns. Aggarwal (1998) studied the impact of NAFTA on the valuation of US companies. The study covered various industries on the US stock market and some of the results were surprising. The telecommunication and auto industries, predicted as NAFTA beneficiaries, experienced stock price declines at the signing of the treaty. The impact of NAFTA was different across industries. Rodriguez (2003) and Thompson (1994) analyzed the impact of NAFTA and the Canada-Free Trade Agreement on equities in the US and Canada. The results could not establish a direct relationship between trade liberalization and profits. Hanson and Song (1998) conducted a detailed research on NAFTA and its impact on US and Mexican stockholders. They found that US stockholders experienced abnormal returns and that Mexican stockholders experienced positive abnormal returns. At the industry-level, the agricultural, textile and apparel industries showed positive abnormal returns. The communication, equipment and financial services industry were actually harmed by the NAFTA agreement. The research economic conclusion was that value-added growth firms and labor intensive firms gained from the trade liberalization with Canada and Mexico. Labor is cheaper in Mexico and it was expected that labor-intensive firms would benefit from NAFTA. As reviewed in this section, we do not have an extensive literature on the impact of FTAs on stock returns. This study is therefore a contribution to the available literature on this topic.

DATA AND METHODOLOGY

This study used a standard event methodology, similar to Floros (2008), in examining the impact of the SADC free trade area on the JSE index. The JSE index data was pulled from DataStream. This study analyzed August 18th 2008 (removal of all tariffs – fully liberalized trade) as an event. The event window starts 45 days before the event and ends 45 days after the event. The following figure 1 shows the event window:

Figure 1: Event Window Used in the Study (90 Days)



This figure shows the Event Window and covers a total of 90 days. The Pre-event window starts 45 days before E and ends on the Event day E. The Post-Event window (45 days) starts on the Event day E and ends 45 days after E.

The daily return was calculated as:

$$Rt = \log(Pt) - \log(Pt - 1) \qquad (1)$$

Where *Rt* is the return of the JSE index on day *t*; Pt is the price of the JSE index on day t; Pt-*1* is the price of the index on day t-1.

An ordinary least square (OLS) model was used. The OLS model was as follows:

$$Rt = a + bDt + \varepsilon t \qquad (2)$$

Where R_t is the return of the index on day *t* and ε_t is an error term.

The Dummy variable *Dt* shows how the JSE index changes as a result of the event. This Dummy variable was named “SADC effect”. The “SADC effect” is equal to 0 when there is no SADC event. The “SADC effect” is equal to 1 when there is a SADC event. T-tests were performed to assess the significance of the “SADC effect” Table 3 shows the data around the Event. The Event was the implementation of the fully liberalized trade area (August 18th 2008). On August 18th 2008, the JSE index gained 2.2% from the previous trading day. On August 19th 2008, the JSE index fell by 3% from the previous trading day.

Table 3: Selected JSE Data around SADC Free Trade Area Implementation (August 18th 2008)

Date	JSE index
August 13th 2008	4,880
August 14th 2008	5,025
August 15th 2008	5,220
August 18th 2008	5,340
August 19th 2008	5,175
August 20th 2008	5,020
August 21st 2008	5,140
August 22nd 2008	5,100

This table shows the data around the SADC Event. The Event was the implementation of the fully liberalized trade area (August 18th 2008). On August 18th 2008, the JSE index gained 2.2% from the previous trading day. On August 19th 2008, the JSE index fell by 3% from the previous trading day.

The daily data was pulled from DataStream. The window period starts on June 12th 2008 and ends on September 30th 2008. Table 4 shows Summary Statistics of the data used used in the study. There are 122 observations and the different statistics were calculated using the Excel program. The skewness measures the asymmetry of the series` distribution around its mean. A negative skewness shows that the series is skewed to the left. The kurtosis measures the peakedness of the distribution of the series.

Table 4: Summary Statistics

	JSE index
Observations	122
Mean	0.0010
Median	0.0002
Standard Deviation	0.0143
Skewness	-0.5401
Kurtosis	2.0378

This table 4 shows Summary Statistics used in the study. There are 122 observations used. The skewness measures the asymmetry of the series` distribution around its mean. A negative skewness shows that the series is skewed to the left. The kurtosis measures the peakedness of the distribution of the series.

RESULTS

The regression analysis was performed for the daily data of the event window. Table 5 shows the regression estimates of the equation: $Rt = a + bDt + \varepsilon t$. The dummy variable takes the value of 0 on non-event days and the value of 1 on the event. The second column represents the different coefficients (Dummy Coefficient and α Coefficient). The third column represents the coefficient values. The last column shows the T-Test.

Table 5: Regression Results on SADC Event (August 18th 2008)

Event	Coefficient	Coefficient Value	T-Test
August 18th 2008	Dummy	0.0135	0.1730
	A	0.0800	1.1005*

This table shows the regression estimates of the equation: $Rt = a + bDt + \varepsilon t$. The dummy variable takes the value of 0 in non-event days and the value of 1 on the event. The second column represents the different coefficients (Dummy and α). The third column represents the coefficient values. The last column represents the T-Test. indicates the significance at 5% level.*

The results show that the SADC free trade area had a positive impact on the Stock Returns in South Africa. The T-Test showed a statistical significance (at the 5% level).The ex ante hypothesis has been confirmed by the study`s results. Some implications could be derived from this study:

1. The SADC agreement created Trade and a positive impact on the stock returns in South Africa. South African policy-makers could use this study`s results in negotiating future FTAs.

2. This study is a contribution to the existing literature in Asset Pricing and International Trade.

CONCLUSIONS

The purpose of the study was to examine the impact of the SADC free trade agreement on the stock returns in South Africa. The SADC free trade area was fully implemented on August 18th 2008. This study is a contribution to the available literature on the relationship between free trade agreements and Stock Returns. The study used an OLS regression and the daily data was pulled from DataStream. The results showed that the SADC implementation had a positive impact on the stock returns in South Africa. South Africa has several other active FTAs such as the American Growth Opportunity Act (AGOA) and the Common Market of Eastern and Southern Africa (COMESA). Future research studies may look into the impact of these FTAs on the stock returns and trade patterns in South Africa. Also, we noted that this study focused on the JSE at the market-level. Future studies may focus on the impact of the SADC on JSE`s different industries.

REFERENCES

Aggarwal (1998), Industry Differences in NAFTA Impact on Valuation of US Companies, *International Review of Financial Analysis*, Vol 7, 2, pg 137-153

Banik (2006), How promising is SAFTA?, *Asia Pacific Trade Investment Review* 2006, Vol 2, 143-150

Beaulieu (2000), "The Canada-U.S. Free Trade Agreement and labor market Adjustment in Canada," *Canadian Journal of Economics*, 33(2), pp. 540-563.

Burfisher (2001), Impact of NAFTA on the United States, *Journal of Economic Perspectives*, Vol 15, 1, pg 125-144

Cappelen (2003) The Impact of the European Union Regional Support on Growth and Convergence of European Union. *Journal of Common Market Studies*. Vol 41, pp 621-644

Floros (2008) The Influence of the Political Elections on the Course of the Athens Stock Exchange. *Managerial Finance*, Vol. 34 (7), p.479 – 488

Gould (1998) "Has NAFTA changed North American Trade", *Federal Reserve Bank of Dallas paper*

Hanson & Song (1998), Shareholder Wealth Effects of Free Trade: US and Mexican Stock Market Response to NAFTA, International Review of Economics and Finance, Vol. 7 (2), pp 209-224

Ikiara & Ndirangu (2003), "Prospects of Kenya`s clothing exports under AGOA after 2004", *AGOA policy paper*

Internet Research: www.jse.co.za, www.sadctrade.org

Khorana & Kimbugwe (2007), The Impact of Tariff Reductions under the East African Community Customs Union: Intra-trade effects on Uganda, *International Conference on Policy Modeling Policy paper*

Krugman (1991) The Move towards Free Trade Agreements: Policy Implications of Trade and Currency Zones, *Federal Reserve Bank of Kansas City paper*

Krugman (2001) Trade Creation and Trade Diversion in the Canada – United States Free Trade Agreement, *Canadian Journal of Economics*, Vol 34, 3, pg 677-696

Lewis & Robinson (2001), Free Trade Agreements and the SADC economies, Journal of African Economies

Mahmood & Hajar (2008), The Impact of GAFTA on Syrian Trade after its full Implementation, *National Agricultural Policy Centre policy paper*.

Nove (2003) The African Growth Opportunity Act and the Latent Agricultural Exports response in Sub-Saharian Africa, *Conference paper Michigan State University*

Rodriguez (2003) Investors Expectations and NAFTA, *Review of International Economics*, Vol 11, 1, pg 206-218

SADC 2009 Annual Report (2009)

Shapouri & Trueblood (2003) The African Growth Opportunity Act: Does it really Present Opportunities, *USDA document*

Tadesse & Fayissa (2007), Assessing the Impact of the Development Cooperation: The Case of AGOA and US Imports from Africa. *University of Minnesota Conference paper*

Thompson (1994), Canada- United States Free Trade and Investment, *The World Economy*, Vol 17 (1), pp 63-74

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THE IMPACT OF SIGNIFICANT NEGATIVE NEWS ON CONSUMER BEHAVIOR TOWARDS FAVORITE BRANDS

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ABSTRACT

This research examines how negative corporate news in the form of a significant product related crisis impacts consumer behavior towards the company's brand. This study analyzed changes in consumer behavior towards favorite brands after a significant product related news event happened to the makers of those brands. The research found that negative corporate news had some adverse impact on aspects of consumer affinity towards favorite brands, as well as other consumer behavior variables including, brand perception, price levels willing to pay, and willingness to purchase..

JEL: M31, M300

KEYWORDS: Brand Equity, Brand Attachment, Brand Image, Consumer Behavior, Negative Corporate News

INTRODUCTION

Brands are comprised of more than a product's name logo, symbol, or slogan. Branding also has an intangible nature that serves as a set of promises to consumers regarding trust, consistency, expectations (Davis, 2002) and performance (Kotler, 1999) of a product or service. So key in consumer behavior, brands are considered the second most important asset of a company – only behind customers (Ambler, 2000; Doyle, 2001; Jones, 2005). Brands can also protect consumers by serving as identifiers of the producers of the products (Bhakar, Bhakar & Bhakar, 2013). A brand's strength has been found to be influenced by consumer perceptions and understanding about what they have learned, observed, understood, and heard about the brand (Keller, 2003). Keller and Lehmann (2006) found that "for customers, brands can simplify choice, promise a particular quality level, reduce risk, and/or engender trust" (p. 74).

However, news about brands and businesses is not always positive. Consumers receive a consistent flow of news about businesses that is less than flattering. Various studies have indicated that negative news about a company can affect consumer perceptions and behavior (Griffin, Babin & Attaway, 1991; Menon, Jewel & Unnava, 1999; Ahluwalia, Burnkrant & Unnava, 2000; Ahluwalia, 2002).

This study focuses on the impact of negative corporate news on consumers whose favorite brands are produced by the businesses that are the focus of the negative publicity. This article includes relevant literature on branding before outlining the research sample and methodology, analyzing the survey results, and finally discussing the findings, research limitations and opportunities for future research.

LITERATURE REVIEW

Brands serve as reminders of a customer's overall past experience with a product (Keller & Lehmann, 2006). As such, past brand experience can serve as an influence on consumer willingness to pay for brands (Bronnenbrg, Dube & Gentzkow, 2012). However, research has found that favorable brand experiences that have developed into brand preference do not always increase a customer's purchase intention of that brand (Mishra & Datta, 2011).

Marketing literature defines the relationship between customers and brands as "brand equity" (Wood, 2000). Silk (2006) defines brand equity as "the positive effect that the brand has on a potential customer of a product – it reflects how much more consumers are willing to pay for a particular brand compared with a competing brand (or with a generic product)" (p. 100). Farquhar (1998) identified that an increase in brand equity also increased the value of the product to the brand holder/maker. From the consumer perspective, the strength of brand equity is determined by the level of consumer reaction to the brand name (Shocker & Weitz, 1994; Keller, 1993). Brand equity is significantly influenced by the level of consumer brand loyalty held towards a product (Khan & Mahmmod, 2012), affects consumer purchase behaviors (Aaker, 1991), and has a positive relationship with brand purchase intention (Aaker, 1991; Chen, Chen & Huang, 2012).

However, levels of brand equity held by consumers towards products and services can and do change. Product problems are related to a lowering of brand equity (Aaker & Joachimsthaler, 2000). Such product problems negatively impact corporate image and consumer attitudes towards the firm. Since brand image drives brand equity (Chen, 2010; Chen, Chen & Huang, 2012; Heidarzadeh & Asadollahi, 2012), consumers attitudes are changed by their perceptions about the causes and extent of the company's crisis and can severely damage a company - or brand – image (Siomkos & Malliaris, 1992). Brand image can influence a firm's profits and cash flow (Yoo & Donthu, 2001) as brand image influences purchase intention (Chen, Chen & Huang, 2012).

Brand image is used by consumers as a cue in the purchase decision process (Richardson, Dick & Jain, 1994) that affects and is a factor in consumer behavior (Burmann, Schaefer & Maloney 2008). Brand image has been defined as cognitive and affective based perceptions consumers have towards a brand (Dobni & Zinkham, 1990; Roy & Banerjee, 2007) and consists of symbolic and functional beliefs about the brand (Low & Lamb, 2000). Research by Keller (1993) identified brand image as an association consumers' hold in their memories regarding a product.

Research studies have recognized brand image to have relationships with other aspects of branding and product attributes. Grewel, Krishnan, Baker & Borin (1998) found a positive relationship between brand image and the level of consumer perception of a product's quality. A positive relationship has been also found between brand image and the level of brand loyalty displayed by consumers (Yoo, Donthu & Lee, 2000). Keller (1993 & 2003) identified that brand image and brand awareness are key in the perceived levels of brand knowledge held by consumers.

The importance of branding and brand association has become an important key to modern marketing (Bhakar, Bhakar & Bhakar, 2013). Aaker (1991) defined brand association as "anything linked in memory to a brand" (p. 109). As such, brand associations can be created by consumer perceptions toward a brand in the areas of attitudes, attributes and benefits (Keller, 1998). Brand associations increase the memorability of a brand (Aaker, 1991), impact brand equity (Severi & Ling, 2013), can influence a brand's level of differentiation over competitors (Aaker, 1996; Rio, Vazquez & Iglesia, 2001), and can act as a method of information gathering for consumers (van Osselaer & Janszewski, 2001).

Various research studies indicate consumers develop attachments to brands (Fournier, 1998; Keller, 2003; Schouten & McAlexander, 1995). Brand attachment describes the strength of connection between the customer and a brand, and affects consumer buying habits to such an extent as to impact a brand's profitability (Thompson, MacInnis & Park, 2005).

The levels of attachment consumers have towards a brand and the attitudes regarding the brand are psychological constructs that impact their consumer behavior including purchases (Park, et al, 2010). Park, et al (2010) defined the degree to which a brand is positively or negatively evaluated by the consumer is termed "attitude valence" (p. 1). Research has shown that the strength of brand attitude is an indicator of multiple consumer behaviors including brand preference (Bass & Talarzyk, 1972), brand consideration, brand choice, intention to purchase, and actual purchase behaviors (Petty, Haugtuedt & Smith, 1995; Preister, et al, 2004; Fazio & Petty, 2007).

DATA AND METHODOLOGY

This study focuses on the impact on consumer behavior towards favorite brands when significant negative corporate news regarding the maker of the favorite brand arises. The following research question (RQ) was investigated among traditional age university students:

RQ: What is the impact of negative corporate news on consumer behavior towards consumers' perception of their favorite brands related to willingness to shop for competing brands, amount willing to pay for favorite brands, and willingness to buy favorite brands?

The research instrument consisted of a self-administered survey that was responded to by 116 university students. The sample consisted of 74 (64%) females and 42 (36%) males from a variety of liberal arts and professional undergraduate majors. The ages ranged from 18 to 23 years with an overall mean of 20.26 years (SD = 1.13).

Students were randomly invited to complete the survey over 3 day period in spring 2013. Surveys were distributed on campus in areas that would be frequented by both on-campus and off-campus students from numerous majors and all levels of traditional aged undergraduate students – freshman, sophomores, juniors and seniors.

The survey dealt with the respondents' favorite brands and any changes in their consumer behavior towards those brands after significant negative corporate news for the company that produces the brand was introduced. Students were asked to identify their favorite brands over a range of product categories – clothing, shampoo and personal electronics. A scenario was then introduced that highlighted significant negative corporate news for the product manufacturer of those favorite brands. Students were then asked a series of questions to determine their perceptions of the favorite brands and consumer behavior reactions towards those favorite brands if the company that produced their favorite brands was the firm that the negative corporate news was the focus of.

RESULTS AND DISCUSSION

The analysis of the Research Question (RQ) identified the relationship between the levels of brand perception and selected aspects of consumer behavior towards favorite brands – time willing to shop for competing brands, amount willing to pay, and willingness to buy – after learning of negative news regarding those favorite brands. The analysis examined these aspects of consumer behavior across three product types – clothing, shampoo, and personal electronics.

The results displayed in Table 1 show various positive and negative relationships at medium and high levels of strength of correlation between negative corporate news regarding favorite brands of consumers and consumer behavior towards those brands. The impact of negative news on brand perception of favorite brands was shown to have medium negative correlations to the willingness to spend time shopping for competing brands of both clothing and shampoo for males. This means that as male perceptions of their favorite brands decrease, willingness to shop for competing brands increases. However, no such findings were found for females.

The effect on brand perception brought on by negative corporate news results in no significant correlations for females between the amount they are willing to pay for their favorite products in the categories tested and any change in brand perception brought on by negative news. However, males displayed medium positive correlation strengths between the prices they were willing to pay across all product categories and changes in brand perceptions resulting in adverse news.

Medium and high levels of correlation strength indicate changes in brand perception from negative news regarding favorite brands had a significant relationship on the willingness to buy those brands in both females and females.

RQ: What is the impact of negative corporate news on consumer behavior towards consumers' perception of their favorite brands related to willingness to shop for competing brands, amount willing to pay for favorite brands, and willingness to buy favorite brands?

Table 1: The Relationship between Consumer Perceptions of Favorite Brands after Negative Corporate News on Selected Aspects of Consumer Behavior over Various Product Types

		Clothing	**Shampoo**	**Personal Electronics**
Brand perception of favorite brand to time willing to shop for competing brands	Females	-0.029	0.003	-0.010
	Males	-0.372**	-0.477***	-0.137
Brand perception of favorite brand to amount willing to pay for favorite brand	Females	0.193*	0.143	-0.143
	Males	0.487***	0.308**	0.336**
Brand perception of favorite brand to willingness to buy favorite brand	Females	0.336***	0.315***	0.278**
	Males	0.567***	0.338**	0.590***

*This table shows correlations (Pearson r value) between consumer perceptions of favorite brands and various aspects of consumer behavior after consumer becomes aware of negative corporate news related to the maker of their favorite brands. *, **, *** indicate significance at the 10, 5, and 1 percent levels respectively.*

Table 2 shows a series of t-tests for differences in means between females and males respondents was calculated for 12 variables. The analysis indicated no distinctions between the means of female and male samples at any .10, .05 or .01 level across the 12 means analyzed. Therefore, the null hypothesis which stated that there were no distinctions between the samples was accepted.

The objectives of this research were to understand the impact on consumer behavior towards consumers' favorite brands after becoming aware of negative corporate news regarding the manufacturers of those brands. The study examined four aspects of consumer behavior: brand perception, shopping habits, price sensitivity, and willingness to purchase. The findings of this research indicate that in times of negative publicity businesses should institute proactive marketing measures to bolster consumer sentiment and counter the negative news.

A finding of this research is the breadth across product types and gender of the positive relationship between changes in brand perception of favorite brands brought about by negative corporate news of those brands and consumer willingness to buy favorite brands. As displayed in Table 1, 8 of 9 categories between females and males over three product categories show medium and strong correlations. Males indicate the strongest impact on buying behavior as high correlations between lowered brand perception caused by bad news and the willingness to buy favorite brands of clothing and personal electronics. Males also show a medium strength correlation in this area towards favorite brands of shampoo. Female willingness to buy favorite brands of clothing and personal electronics is also impacted at a medium correlation level. These results demonstrate that consumer buying behavior, even for favorite brands, is influenced by adverse news about the businesses that produces those brands.

Another finding of this study is that fluctuations in brand perception brought on by negative news influences the amount males are willing to pay for favorite brands. Results from Table 1 shows medium level correlations between the perception of the brand after poor corporate news and the amounts males are willing to pay (clothing, shampoo, and personal electronics). This research found that damaging corporate news makes males more price sensitive than females across product categories.

Table 2: T-test for Differences in Means between Female and Male Samples
Null hypothesis: There are no distinctions between samples

	Clothing	Shampoo	Personal electronics
Change in brand perception for favorite brand of:	0.0053 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels	0.0110 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels	0.0076 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels
Change in time willing to shop for competing brands of:	0.8572 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels	0.6307 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels	0.7453 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels
Change in amount willing to pay for favorite brand of:	0.0090 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels	0.0316 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels	0.0234 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels
Change in willingness to buy favorite brand of:	0.0014 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels	0.0007 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels	0.0063 Null hypothesis accepted at 0.10, 0.05 & 0.01 levels

*This table shows two-tailed t-tests for difference in means. *, **, *** indicate significance at the 10, 5, and 1 percent levels respectively.*

An additional finding shows that negative business news surrounding favorite brands have a significant impact on the willingness of males to spend time shopping for competing products of those favorite brands. Specifically, males indicated (Table 1) that negative news surrounding their favorite brands of clothing and shampoo increased their willing to spend time shopping for competing brands. In situations of negative corporate news – especially concerning when males are significant target audiences – brand managers of brands damaged by negative news should take measures to counter the effects of the negative news, while competing brands have an opportunity to proactively market to males as that consumer segment is more open to considering brands beyond their favorites in such situations.

CONCLUSION

The objective of this research is to examine the impact of negative corporate news on the perceptions and consumer behavior towards consumer favorite brands. After identifying their favorite brands of clothing, shampoo and personal electronics, 116 undergraduate university students were given a scenario detailing significant negative news about the corporation that produced their favorite brands. The students then were surveyed regarding changes in brand perceptions of their favorite brands, their willingness to shop for competing brands, amount willing to pay for favorite brands, and willingness to purchase their favorite brands.

This research found that negative corporate news impacts consumer behavior – even towards consumers' favorite brands. Businesses would benefit from contingency plans developed to proactively address negative corporate news. Such actions could counter potential adverse changes in brand perceptions and related alterations to consumer shopping and buying behaviors that can result from negative business news. However, timely reactions by competing brands could take advantage of consumer openness to other products that result from favorite brand perception changes by negative business news.

Limitations of this research include the regional nature of the sample of university students used in the sample. This limitation could be minimized by multiple samples taken from universities throughout the nation. Another limitation was this research only offered one scenario of a very serious nature. An opportunity for future research would be to introduce variety to the seriousness levels of the corporate negative news. This would allow examination if consumer affinity for brands differed based on the level of bad news. Another opportunity for future research would be to expand the age ranges and geographic locations of the sample populations.

REFERENCES

Aaker, D. (1991). *Managing Brand Equity.* New York: The Free Press.

Aaker, D. (1999). *Managing Brand Equity: Capitalizing on the Value of the Brand Name.* New York: The Free Press.

Acker, D. & Joachimsthaler, E. (2000). *Brand Leadership.* New York: The Free Press.

Ambler, T. (2000). *Marketing and the Bottom Line.* London: Pearson Press.

Ahluwalia, R. (2002). How prevalent is the negativity effect in consumer environments? *Journal of Consumer Research*, 29, 270-279.

Ahluwalia, R., Burnkrant, R.E. & Unnava, H.R. (2000). Consumer response to negative publicity: The moderating role of commitment. *Journal of Marketing Research*, 37(2), 203-214.

Bass, F., & Talarzyk, W. (1972). An Attitude Model for the Study of Brand Preferences. *Journal of Marketing Research*, 9(February), 93-96.

Bhakar, S.S., Bhakar, S. & Bhakar, S. (2013). Relationship between country of origin, brand image and customer purchase intentions. *Far East Journal of Psychology and Business*, 11(1), 50-71.

Bronnenberg, B., Dube, J.-P., & Gentzkow, M. (2012). The Evolution of Brand Preferences: Evidence from Consumer Migration. *American Economic Review*, 102(6), 2472-2508.

Burmann, C., Schaefer, K. & Maloney, P. (2008). Industry image: Its impact on the brand image of potential employees. *Journal of Brand Management*, 16(3), 159-176.

Chen, C., Chen, P., & Huang, C. (2012). Brands and bonsumer behavior. *Social Behavior and Personality*, 40(1), 105-114.

Chen, Y. (2010). The Drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics*, 93, 307-319.

Davis, S. (2002). *Brand Asset Management.* San Francisco: John Wiley & Sons, Inc.

Dobni, D. & Zinkham, G.M. (1990). In search of brand image: A foundation analysis. In Goldberg, M.E., Gorn, G. & Pollay, R.W. (EDS). *Advances in Consumer Research*. Provo, UT: Association for Consumer Research, 110-119.

Doyle, P. (2001). Shareholder-Value-based Strategies. *Journal of Brand Management*, 9(1), 20-30.

Farquhar, P.H. (1989). Managing brand equity. *Journal of Marketing Research*, 1, 24-33.

Fazio, R., & Petty, R. (2007). *Attitudes: Their Structure, Function, and Consequences.* New York: Psychology Press.

Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research*, 24(March), 343-373.

Grewel, D., Krishnan, R., Baker, J. & Borin, N. (1998). The effects of store name, brand name and price discounts on consumers' evaluation and purchase intentions. *Journal of Retailing*, 74(3), 331-352.

Griffin, M., Babin, B.J. & Attaway, J.S. (1991). An empirical investigation of the impact of negative publicity on consumer attitudes and intentions. *Advances in Consumer Research*, 18, 334-341.

Heidarzadeh, K., & Asadollahi, A. (2012). Investigating the effect of brand equity and brand preference on purchase intention. *Research Journal of Applied Sciences, Engineering and Technology*, 4(10), 1414-1423.

Jones, R. (2005). Finding sources of brand value: Developing a stakeholder model of brand equity. *Journal of Brand Management*, 13(1), 10-32.

Keller, K. (1993). Conceptualizing, measuring and managing customer based brand equity. *Journal of Marketing*, 57, 1-22.

Keller, K. (1998). *Strategic Brand Management: Building Measuring and Managing Brand Equity.* London: Prentice Hall International.

Keller, K. (2003). *Strategic Brand Management 2nd.* New York: Prentice Hall.

Keller, K. L. (2006). Brands and branding: Research findings and future priorities. *Marketing Science*, 25(6), 740-759.

Khan, M., & Mahmood, Z. (2012). Impact of brand loyalty factors on brand equity. *International Journal of Academic Research*, 4(1), 33-37.

Kotler, P. (1999). *Kotler on Marketing.* New York: The Free Press.

Low, G.S. & Lamb, Jr., C.W. (2000). The measurement and dimensionality of brand association. *Journal of Product & Brand Management,* 9(6), 350-368.

Menon, G., Jewell, R.D. & Unnava, H.R. (1999). When a company does not respond to negative publicity: Cognitive elaboration vs. negative affect perspective. *Advances in Consumer Research*, 26, 325-329.

Mishra, P. (2011). Perpetual asset management of customer-based brand-equity - the PAM evaluation. *Current Research Journal of Social Sciences*, 3(1), 34-43.

Park, C., MacInnis, D., Priester, J., Eisingerich, A., & Iacobucci, D. (2010). Brand attachment and brand attitude strength: Conceptual and empirical differentiation of two critical brand equity drivers. *Journal of Marketing*, 74(November), 1-17.

Petty, R., Haugtuedt, C., & Smith, S. (1995). Elaboration as a determinant of attitude strength: Creating attitudes that are persistent, resistent, and predictive of behavior. In Petty, R. E. and Krosnick J. A. (EDS), *Attitude Strength: Antecedents and Consequences* (pp. 93-130). Mahwah, NJ: Lawrence Erlbaum Associates.

Priester, J., Nayakankuppam, D., Fleming, M., & Godek, J. (2004). The A2SC2 model: The influence of attitudes and attitude strength consideration and choice. *Journal of Consumer Research*, 30(March), 574-587.

Richardson, P.S., Dick, A.S. & Jain, A.K. (1994). Extrinsic and extrinsic cue effect on perceptions of store brand quality. *Journal of Marketing Research*, 58(4), 28-36.

Rio, A., Vazquez, R. & Iglesias, V. (2001). The role of the brand name in obtaining differential advantage. *Journal of Product & Brand Management*, 10(7), 452-465.

Roy, D. & Banerjee, (2007). Caring strategy for integration of brand identity with brand image. *International Journal of Commerce and Management*, 17(1/2), 140-148.

Schouten, J., & McAlexander, J. (1995). Subcultures of consumption: An ethnography of the new bikers. *Journal of Consumer Research*, 22(June), 43-61.

Severi, E. & Ling, K.C. (2013). The mediating effects of brand association, brand loyalty, brand image and perceived quality on brand equity. *Asian Social Science*, 9(3), 125-137.

Shocker, A.D. & Weitz, B. (1994). A perspective on brand equity principles and issues. In Leuthesser, L. (ED) *Report Number 88-104*, Cambridge, MA: Marketing Science Institute.

Silk, A. (2006). *What is Marketing?* Boston: Harvard Business School Press.

Siomkos, G., & Malliaris, P. (1992). Consumer response to company communications during a product harm crisis. *Journal of Applied Business Research*, 8(4), 59-65.

Thomson, M., MacInnis, D., & Park, C. (2005). The ties that bind: Measuring the strength of consumers' attachments to brands. *Journal of Consumer Psychology*, 15(1), 77-91.

van Osselaer, S.M.J. & Janiszewski, C. (2002). Two ways of learning brand associations. *Journal of Consumer Research*, 28(September), 202-223.

Wood, L. (2000). Brands and brand equity: definition and management. *Management Decision*, 38(9), 662-669.

Yoo, B., & Donthu, N. (2001). Developing and validating a multi demensional consumer-based equity scale. *Journal of Business Research*, 52(1), 1-14.

Yoo, B., Donthu, N. & Lee, S. (2000). An examination of selected markeitng mix elements and brand equity. *Journal of the Academy of Marketing Science*, 28(2), 195-221.

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AGENCY LEVEL MANAGEMENT OF ROADS MAINTENANCE LEVY FUND: EVIDENCE FROM KENYA

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ABSTRACT

The Road Maintenance Levy Fund came into existence in 1993 through an Act of Parliament, to facilitate the maintenance of public roads. The Kenya Roads Board administers the Fund and works in collaboration with various implementing agencies. However, anecdotal information suggests that the management of the fund at the agency level is constrained by various challenges, which no systematic academic investigation had ever documented. This study sought to identify key challenges experienced by road agencies to justify reforms towards better management and utilization of the Fund. We applied the cross-sectional survey design to source information from 146 key informants. The study found that political interference (71.9%), procurement malpractices (67.1%), funding inconsistency (64.4%), understaffing (54.1%), inconsistent communication (28.8%) and delay in auditing (40.4%) were the key challenges affecting operations of road agencies. Initiating appropriate institutional and procedural reforms targeting the Board and road agencies is likely to address the issues. The study recommends the need for new clearer rules, regulations and procedures to curb political interference, linkage between road agencies and enforcement agencies for the procurement law, electronic transfer of funds directly to agency accounts, human resource needs assessment to justify recruitment and rationalization.

JEL: O16

KEYWORDS: Road Maintenance Levy Fund, Kenya Roads Board, Road Agency, Political Interference, Procurement Malpractices, Funding Inconsistency

INTRODUCTION

Kenya's *Vision 2030* is the national development blueprint, initiated by the Government of Kenya (GoK) to guide development activities with a view to transforming the country into a newly industrializing and globally competitive middle-income economy by the year 2030. The *Vision* anchors on three pillars of economic, social and political development. The economic pillar aims at improving the living standards for all Kenyans through an economic development program. In this regard, the country should achieve an average gross Domestic Product Growth (GDP) rate of at least 10% per annum during the next seventeen years, to build a just and cohesive society with equitable social development as well as a clean secure environment (GoK, 2007; 2012).

The economic pillar identifies six key sectors that have the highest potential for economic growth, including tourism, agriculture, manufacturing, wholesale and retail trade, business process off-shoring and financial services. Infrastructural development stands out as the main bridge for full exploitation of the growth potential from these sectors (GoK, 2007). The road network is a key element of infrastructural development, representing a significant portion of the Government's investments in fixed assets.

Road transport is the most widely used means of transportation for people and freight in the Sub-Saharan Africa (SSA). In Kenya, road transport accounts for over 80% of land freight and passenger traffic

(Kenya Institute of Public Policy Research and Analysis [KIPPRA], 2001; World Bank, 2011; GoK, 2012). Its importance stems from the fragmentary nature of the railway system and the limitations of inland water transport (KIPPRA, 2001). Although Kenya's road network covers about 160,886 kilometres, only about 11,197 kilometres (7%) is paved (World Bank, 2011). According to a World Bank report, Kenya's stock of road infrastructure, measured by the ratio of paved roads to total roads, falls below that of regional competitors such as Rwanda and Uganda, with much lower GDP per capita. In addition, South Africa has more than double, while Egypt has ten times more paved road density than Kenya (World Bank, 2011).

Road construction is a capital-intensive investment; therefore, initiating a proper maintenance back-up plan is not only logical but also important in the economic sense. Prior to the 1990s, SSA countries prioritized road construction, but did not accord as much value in the establishment of maintenance programs (KIPPRA, 2001). As a result, paved roads degenerated at a faster rate than resources available to support the maintenance budget (World Bank, 2011). In the same vein, Brushett (2005) notes many SSA countries have not been able to meet the recurrent road maintenance costs from budgetary resources, let alone the construction of new roads to accommodate bulging traffic and serve the expanding national and regional markets.

The scarcity of routine maintenance has left over 50% of paved roads and 80% of unpaved roads in the SSA in poor condition. As for rural feeder roads, the picture may be gloomier with up to 85% of such roads estimated to be in poor condition and in most cases, only passable during dry seasons (Brushett, 2005). The poor state of rural feeder roads connecting agricultural zones and market centres is a critical gap that may undermine the realization of economic growth as envisioned in national development blueprints such as Kenya's *Vision 2030* (World Bank, 2011).

Regular road maintenance is vital for users' comfort, safety and national economic growth. Un-maintained roads increase vehicle operating costs and overall transportation costs, which in turn, affect all sectors of the economy, much to the disadvantage of low income-earners. Bad roads also portend a high risk of accidents, resulting to loss of livelihoods and human capital (Heggie, 1994; KIPPRA, 2001). Being a capital-intensive undertaking, road network is the single most expensive asset in the SSA countries. By 2007, multilateral development agencies estimated the asset value of the road network in SSA at about US$ 300 billion. This is a huge asset by any standards and requires adequate routine maintenance to sustain its stability for long-term service, as a catalyst for socio-economic development (KIPPRA, 2001).

The search for a sustainable mechanism for road maintenance, particularly in developing countries, started back in the 1970s and 1980s. In Africa, the notion of a "road fund" was pilot-tested in countries such as Burundi, Senegal and Gabon, following the success of similar projects in Europe and Asia (Brushett, 2005). However, due to legal and institutional capacity challenges such as poor financial management, absence of independent audits, extensive use of funds for unauthorized expenditures and weak oversight, the "first generation" road fund initiatives were largely unsuccessful. As part of solution, a reforms process championed by leading development agencies in the early 1990s paved the way for "second generation" road fund initiatives, set by specific legislative and institutional frameworks, to assure proper management of the funds and accountability to stakeholders (Benmaamar, 2006).

The second-generation road fund mechanisms sprouted in many developing countries between 1990 and 1999 (Heggie, 1995; Zietlow & Bull, 2002; Kumar, 2002; Brushett, 2005). In Kenya, the Road Maintenance Levy Fund (RMLF) came into existence in 1993 through an Act of Parliament, to facilitate the maintenance of public roads. The Kenya Roads Board (KRB) administers the Fund, which replenishes from fuel taxes and transit toll collections, a state agency mandated to oversee and coordinate the development and maintenance of public roads in the country (Nyangaga, 2007; GoK, 2012).

The legislation designates road agencies to support the management and utilization of road funds. The mandate of road agencies includes programming, procurement and management of contracts and funds for settling contractor's bills. Road agencies deal directly with contractors and suppliers; in this regard, they prioritize, manage and account for the utilization of road funds at the community level (Benmaamar, 2006).

In Kenya, section 18 (parts 1-4) of the Kenya Roads Board Act, 1999 designates specific road agencies, with which KRB works to carry out the actual maintenance of roads, as provided for under (Nyangaga, 2007; GoK, 2012). At the time of the study, designated road agencies included the Roads Department at the Ministry of Roads and Public Works (MoRPW), District Roads Committees (DRCs), Kenya Wildlife Service (KWS) and local government authorities across the country (GoK, 2006; KACC, 2007).

The success of a road fund initiative largely depends on the effectiveness of road agencies. However, previous studies show that the effectiveness of road agencies, particularly with a decentralized system, is constrained by issues such as political interference, lack of proper financial management systems, delay in funding, financial indiscipline, lack of sound procurement systems and procedures, as well as collusion between agency staff and contractors to approve poor workmanship, among others (Heggie, 1995; Kumar, 2002; Benmaamar, 2006; Bengtsson, Duvall, Magid & Palter, 2011).

In Kenya, there is a dearth of systematic and comprehensive literature regarding the challenges experienced by road agencies in managing and accounting for road funds. However, available anecdotal information suggests that the effectiveness of road agencies is constrained by various challenges, which no systematic academic process had ever documented. Consequently, the purpose of this study was to identify and document key issues that may justify reforms to improve the fund's management, utilization, accountability and sustainability. The study covered Kisumu, Siaya, Nyando, Kisii and Migori Districts of Nyanza province, Kenya. The remainder of this paper covers sections on literature review, data and methodology used in the study, results and discussions as well as conclusions.

LITERATURE REVIEW

Road transport is essential for socio-economic development world over, as it provides necessary links between production and market centres; making it valuable to the agricultural, mining and industrial sectors. Road transport also facilitates access to work places, as well as educational, health, recreational and social facilities (Heggie, 1995; Brushett, 2005). The quality of the road network determines the affordability of transportation costs, prices of basic commodities and the quality of life, especially for low income-earners. In this regard, an efficient transport system minimizes transportation costs, thereby supporting economic growth by promoting production and trade. Therefore, the development and maintenance of appropriate road network remains a fundamental recipe for economic growth and poverty reduction in the SSA (Heggie, 1994; 1995; Brushett, 2005).

Road construction is a capital-intensive undertaking, which most developing countries cannot handle without external funding support. Although the road sub-sector competes for budgetary resources against other more visible sectors such as health and education, the competition has not improved funding, as most countries accord priority to the development of human capital (KIPPRA, 2001).

Pressed by budgetary constraints, developing countries responded to the situation by earmarking selected road use taxes and establishing special off-budget accounts to support road maintenance (Benmaamar, 2006). Development partners supported the trial of this approach in a number of SSA countries, including Burundi, Senegal and Gabon, following success of various European and Asian countries. Brushett (2005) points out that these funds were not entities as such, but national budget line items managed by sectoral ministries to support road maintenance.

Though considered important first steps towards a sustainable mechanism for financing road maintenance, Benmaamar (2006) notes that the initiative yielded mixed results, with most countries involved in the pilot test performing below expectation. Challenges arising from the initiative included poor financial management, absence of independent audits, extensive use of funds for unauthorized expenditures, diversion of funds and weak oversight. Benmaamar (2006) calls the initiative the "first generation" road fund. To address the weaknesses of the first generation road fund initiative, the Sub-Saharan Africa Transport Policy Program (SSATP), a World Bank supported program, spearheaded reforms towards the end of 1980s, to enhance management efficiency of the road fund (Brushett, 2005).

In the 1990s, development partners promoted the idea of a sustainable road fund extensively, this time as part of a comprehensive approach to road sector reforms. Under the new initiative, developing countries were required to adopt a business approach to manage and maintain public roads, with road users playing a stronger role than hitherto in road maintenance (Brushett, 2005). In this regard, users were required to pay on a fee-for-service basis for the use of roads. The baseline premise was that road users are likely to pay charges of reasonable amount if assured that proceeds thereof would be used to improve the condition of roads, thereby, reduce vehicle maintenance costs (Brushett, 2005; Benmaamar, 2006).

The new initiative culminated to the birth of the so-called "second generation'' road fund, particularly in the 1990s. For instance, the Ghana Road Fund came into existence in 1996, with a purpose of financing routine maintenance and rehabilitation of public roads (Bahl, 1992). In Honduras, the Road Maintenance Fund came into existence in 1993, while Costa Rica did so in 1998. In Armenia, the Roads Fund Legislation was passed in 1998, in Tanzania, the Road Fund was initiated in 1992, to finance the maintenance of urban and district roads; while in Kenya, the Road Maintenance Levy Fund (RMLF) was established in 1993 (Zietlow & Bull, 2002; Kumar, 2002; Central Bank of Nigeria, 2003; Heggie, 1995).

The distinctive feature of the second-generation road fund initiatives included specific legislative and institutional frameworks for proper management of road funds and accountability. The founding legislative frameworks outline the roles and responsibilities of a management board to oversee operations and a secretariat to manage the road fund business on a day-to-day basis (Benmaamar, 2006).

As noted by Heggie and Vickers (1998), the second-generation road fund became a landmark feature of sectoral reforms and strategies for improving road maintenance in more than half of the SSA countries. The initiatives exhibit the following attributes: sound legal basis, separation of roles between the board and service providers; strong oversight and executive authority, sound financial management systems, lean and efficient administrative structure as well as regular technical and financial audits (Heggie & Vickers, 1998; Benmaamar, 2006).

To facilitate operations of the management boards, founding legislative frameworks designate separate road agencies to deal directly with contractors and suppliers as well as manage the utilization of road funds at the community level (Benmaamar, 2006). More specifically, road agencies are responsible for programming, procurement and management of road maintenance contracts and road funds for the payment of contractor's bills. In view of this, many SSA countries are increasingly reviewing their road fund institutional structures to divorce the implementation, utilization and accountability roles from the financing and oversight duties of the boards.

In Kenya, the management board, KRB works in collaboration with various agencies and sub-agencies to carry out the actual maintenance of roads. At the time of the study, the Department of Roads was dealing with international and national highways as well as trunk roads (Classes A, B and C, respectively), DRCs was handling rural access and feeder roads (Classes D and E), while KWS was focusing on the construction and maintenance of the roads in national parks and game reserves (GoK, 2006; KACC, 2007; Nyangaga, 2007; GoK, 2012).

As noted by Brushett (2005), the success of road fund initiatives manifests through indicators such as good quality roads, standard workmanship, sound procurement procedures, minimal maintenance backlog, a high level of transparency and accountability, as well as increased community participation, among others. The effectiveness of road agencies is perhaps the most crucial parameter in the success of road fund initiatives.

Various studies such as those done by Heggie (1995), Kumar (2002) and Benmaamar (2006) have indicated that various factors constrain the effectiveness of road agencies within a decentralized system of road management. Benmaamar (2006) singles out political interests as the key factor derailing procurement procedures, leading to poor workmanship and loss of public resources.

The political interference at the agency level has also constrained the participation of community members (Kumar, 2002). As noted by Bengtsson *et al.* (2011), lack of sound financial management systems affects the accuracy of agency returns, in some cases leading to time and budgetary overruns. Lack of proper analytical systems for prioritization creates room for political interests to guide the choice of roads to maintain, which in most cases may be of low economic value to communities.

DATA AND METHODOLOGY

We applied the cross-sectional survey design, with both quantitative and qualitative approaches to source, process and analyze the requisite information. The study targeted key informants, which included staff at MoRPW, DRC members, contractors, suppliers, consultants and local authority staff. Inclusion in the sample depended on voluntary participation. We successfully interviewed all the 146 key informants, which we contacted. We collected primary data in May 2009 and the process involved identification of eligible participants, consenting and interviewing. We applied purposive sampling to select participants based on their incumbency at the time of the study. Identification and appointments with the targeted groups was facilitated was District Roads Engineers and District Public Works Officers.

We also applied a key informant interview guide with structured and semi-structured questions to source the data. In social sciences, the intensity of a social problem within an institutional setting is determinable through the perception of staff members. Frequent encounter with such problems inform and shape staff perceptions. In view of this, we gauged the seriousness of the challenges experienced by road agencies by requesting participants to rate their perceptions on a three-point scale of ‘not serious’, ‘serious’ or ‘very serious’. The intention was to source information that would facilitate prioritization of the challenges and justify the need for mitigative interventions.

Furthermore, we employed quantitative and qualitative techniques to process and analyze the data. In this regard, quantitative analysis that we obtained frequency distributions with percentages and cross-tabulation with Chi-square tests, we also transcribed, clustered into nodes and explored qualitative data for patterns and meaning to the flow of the funds. Detailed description of the design and approaches that we used in this study are available in following publications (Nachmias & Nachmias, 1996; Bryman & Cramer 1997; American Statistical Association, 1999; Owens, 2002; Rindfleisch, Malter, Ganesan & Moorman, 2008).

RESULTS AND DISCUSSIONS

The study covered 146 key informants, including 29 (19.9%) staff of the Ministry of Roads and Public Works (MoRPW), 6 (4.1%) engineer consultants, 22 (15.1%) members of District Roads Committees (DRCs), 10 (6.8%) contractors, 16 (11.0%) suppliers and 63 (43.2%) staff of local authorities. Political interference, procurement malpractices, funding inconsistency, understaffing, inconsistent communication and delay in auditing were the challenges affecting operations of road agencies. We have presented and discussed details in the subsequent paragraphs.

Table 1 shows that 105 (71.9%) out of 146 participants said political interference was a key challenge affecting road agencies. The challenge manifested itself through diversion of funds to non-prioritized roads with the aim of rewarding specific communities perceived to be politically loyal; as well as influence of the procurement process to favour political loyalists, business associates or family members. In some cases, political leaders harassed, intimidated, assaulted and even manipulated the system to have Government officers standing on their way transferred to other stations. Based on this, out of the 105 participants, 24 (22.9%) described political interference as a serious challenge, while 79 (75.2%) felt it was very serious.

Table1: Challenges Experienced by Road Maintenance Agencies

Challenge	Perceptions	Frequency	Percent
Political interference	Yes	105	71.9
	No	41	28.1
	Total	**146**	**100.0**
	Not serious	2	1.9
	Serious	24	22.9
	Very serious	79	75.2
	Total	**105**	**100.0**
Procurement malpractices	Yes	98	67.1
	No	48	32.9
	Total	**146**	**100.0**
	Not serious	7	7.1
	Serious	60	61.2
	Very serious	31	31.6
	Total	**98**	**99.9**
Funding inconsistency	Yes	94	64.4
	No	52	35.6
	Total	**146**	**100.0**
	Not serious	6	6.4
	Serious	29	30.9
	Very serious	59	62.8
	Total	**94**	**100.1**
Understaffing	Yes	79	54.1
	No	67	45.9
	Total	**146**	**100.0**
	Not serious	10	12.7
	Serious	43	54.4
	Very serious	26	32.9
	Total	**79**	**100.0**
Irregular communication from Kenya Roads Board	Yes	42	28.8
	No	104	71.2
	Total	**146**	**100.0**
	Not serious	8	19.0
	Serious	23	54.8
	Very serious	11	26.2
	Total	**42**	**100.0**
Delays in auditing	Yes	59	40.4
	No	87	59.6
	Total	**146**	**100.0**
	Not serious	5	8.5
	Serious	33	55.9
	Very serious	21	35.6
	Total	**59**	**100.0**

This Table presents information on the types of challenges affecting the operations of road agencies. The Table shows that political interference (71.9%), procurement malpractices (67.1%) and funding inconsistency (64.4%) were the three top challenges experienced by road maintenance agencies. The figure also shows participants' perception regarding the seriousness of each challenge, based on their experiences with the system.

Under such circumstances, agency staff found it extremely difficult to fulfil the interests and expectations of political leaders without breaching formal operational procedures or overrunning their budgets, resulting to low motivation and lack of enthusiasm. Again, the transfer of key staff such as engineers affected project continuity, as new comers took some time to grasp institutional dynamics.

Table 1 also shows that 98 (67.1%) participants mentioned procurement malpractices, which included issues such as conflict of interest, where some tender committee members acted in favor of particular candidates, tendering documents designed in favor of particular bidders, emergency procurement, single-sourcing of providers, as well as some politically-connected bidders colluding with tender committee officials to overprice materials and works. In this regard, up to 60 (61.2%) participants felt that procurement malpractices was a serious challenge, while 31 (31.6%) were of the view that the challenge was very serious.

Table 1 further shows that 94 (64.4%) participants identified funding inconsistency as one of the challenges constraining the operations of road agencies. Participants attributed the inconsistent flow of funds to various factors, among them being a lengthy disbursement channel and lack of a proper tracking system. In this regard, participants pointed out that KRB disburses funds to the districts through cheques upon receiving revenue collections from Kenya Revenue Authority (KRA).

The district treasury, which coordinates all public funds at the district level, receives disbursements and issues new cheques to various agencies as per the Authority to Incur Expenditure (AIE) from the chief finance officer, MoRPW headquarters. Sometimes disbursements stagnated at the district treasury, while awaiting AIEs from the Ministry headquarters. In view of this, 29 (30.9%) described the challenge as serious, while the majority, 59 (62.8%) rated it as very serious.

Furthermore, some agencies did not receive their disbursements in time due to lack of follow-up communication from KRB headquarters. Quite often, agencies were not aware of disbursement schedule at KRB headquarters. Without follow-up communication, funds stagnated at the district treasury for longer than necessary, even when AIEs came in time. Other factors causing inconsistent flow of funds included delay in auditing, weak financial management system and delay in the requisition and remittance of AIEs.

Again, Table 1 indicates that 79 (54.1%) participants identified understaffing as one of the challenges resulting from delayed replacement of officers leaving through transfers, as well as those absent due to prolonged illness or natural attrition. Particularly missing were special skills such road construction engineers and technicians, accountants, auditors and administrative staff. For this reason, available staff coped with the resultant heavy workload through multi-tasking, sometimes performing tasks for which they had no training. In some districts, the public works officers doubled as roads officers, in addition to administrative, bookkeeping and procurement activities. In one agency, an office cleaner was also performing the roles of an accounts clerk, albeit without any formal training. Consequently, 43 (54.4%) participants felt that understaffing was a serious challenge, while 26 (32.9%) described the challenge as very serious.

The findings presented in Table 1 further show that 42 (28.8%) participants identified inconsistent communication between KRB and road agencies as one of the challenges affecting activities of the latter. Participants indicated that most agencies were often not aware of disbursement schedules at KRB headquarters, leading to funds overstaying at the district treasury. In this regard, they cited cases where some agency staff colluded with treasury officials to siphon out stagnating funds. Due to communication inconsistency, some agencies received their disbursements towards the end of fiscal periods or towards wet seasons, when they could do very little work. Based on this, 23 (54.8%) participants opined that the challenge was serious, while 11 (26.2%) described it as very serious.

The results in Table 1 further show that 59 (40.4%) participants identified delay in external auditing as among the challenges constraining operational efficiency and consistency among road agencies. Participants hinted that some districts did not have resident auditors and each year, the government mobilized auditors from other stations to evaluate the financial accounts of road agencies. In some instances, the agencies could wait for up to four months for auditing services in order to qualify for subsequent funding. The timeliness of external auditing remains crucial for the redress of issues arising, continuation of funding and staff motivation. Consequently, 33 (55.9%) participants indicated that delay in external auditing was a serious challenge, while 21 (35.6%) described it as a very serious challenge.

Across the districts, Table 2 shows that the seriousness of political interference was nearly universal, with most participants stating that the challenge was very serious. Among those saying that political interference was serious, 8 (33.3%) were in Nyando, 7 (29.2%) in Kisii and 5 (20.8%) in Kisumu. Those indicating that the challenge was very serious included 22 (27.8%) participants in Siaya, 18 (22.8%) in Migori and 16 (20.3%) in Kisumu Districts. The cross tabulation analysis obtained a computed χ^2 value of 3.056, with 8 degrees of freedom and a p-value of 0.121, which was not significant. This suggests that the districts were not significantly different regarding perceptions on the seriousness of political interference.

Table 2: Perceived Seriousness of the Challenges across the Districts

Challenges	Not serious		Serious		Very serious	
	Frequency	*Percent*	*Frequency*	*Percent*	*Frequency*	*Percent*
Political interference						
Migori	0	0.0	2	8.3	18	22.8
Kisumu	1	50.0	5	20.8	16	20.3
Nyando	0	0.0	8	33.3	13	16.5
Siaya	0	0.0	2	8.3	22	27.8
Kisii	1	50.0	7	29.2	10	12.7
Total	**2**	**100.0**	**24**	**100.0**	**79**	**100.0**
Procurement malpractices						
Migori	1	14.3	14	23.3	5	16.1
Kisumu	1	14.3	11	18.3	9	29.0
Nyando	2	28.6	17	28.3	2	6.5
Siaya	2	28.6	9	15.0	8	25.8
Kisii	1	14.3	9	15.0	7	22.6
Total	**7**	**100.0**	**60**	**100.0**	**31**	**100.0**
Funding inconsistency						
Migori	2	33.3	6	20.7	12	20.3
Kisumu	0	0.0	3	10.3	8	13.6
Nyando	2	33.3	7	24.1	11	18.6
Siaya	1	16.7	8	27.6	15	25.4
Kisii	1	16.7	5	17.2	13	22.0
Total	**6**	**100.0**	**29**	**100.0**	**59**	**100.0**
Understaffing						
Migori	2	20.0	7	16.3	6	23.1
Kisumu	4	40.0	7	16.3	3	11.5
Nyando	1	10.0	10	23.3	9	34.6
Siaya	1	10.0	14	32.6	6	23.1
Kisii	2	20.0	5	11.6	2	7.7
Total	**10**	**100.0**	**43**	**100.0**	**26**	**100.0**
Inconsistent communication						
Migori	4	50.0	8	34.8	1	9.1
Kisumu	0	0.0	3	13.0	1	9.1
Nyando	1	12.5	1	4.3	3	27.3
Siaya	2	25.0	6	26.1	4	36.4
Kisii	1	12.5	5	21.7	2	18.2
Total	**8**	**100.0**	**23**	**100.0**	**11**	**100.0**
Delay in auditing						
Migori	1	20.0	10	30.3	4	19.0
Kisumu	0	0.0	7	21.2	2	9.5
Nyando	2	40.0	4	12.1	7	33.3
Siaya	2	40.0	8	24.2	6	28.6
Kisii	0	0.0	4	12.1	2	9.5
Total	**5**	**100.0**	**33**	**100.0**	**21**	**100.0**

This Table indicates that perception of participants regarding the seriousness of the challenges across the five districts. Notably, the perception that political interference was a very serious challenge was nearly universal. Regarding procurement malpractices, most participants indicated that it was a serious challenge, with Nyando, Migori and Kisumu Districts taking the lead. Whereas funding inconsistency was a very serious challenge according to 25.4% of participants in Siaya, 22.0% in Kisii and 20.3% in Migori Districts, 34.6% of the participants in Nyando, 23.1% in Migori and another 23.1% in Siaya said that understaffing was very serious.

The results presented in Table 2 indicate that among those saying that procurement malpractices was a serious challenge, 17 (28.3%) were in Nyando, 14 (23.3%) in Migori and 11 (18.3%) in Kisumu Districts. Those affirming that the challenge was very serious included 9 (29.0%) participants in Kisumu, 8

(25.8%) in Siaya and 7 (22.6%) in Kisii Districts. Based on this, the analysis obtained a, which was significant at 0.05 error margin. This suggests up to 95% chance that the districts were significantly different in terms of perception about the seriousness of procurement malpractices.

Furthermore, Table 2 presents participants' perceptions regarding the seriousness of funding inconsistency across the five districts, with most participants describing the challenge as very serious.

Among those saying that funding inconsistency was a serious challenge were 8 (27.6%) participants in Siaya, 7 (24.1%) in Nyando and 6 (20.7%) in Migori Districts. In the category of those describing funding inconsistency as a very serious challenge were 15 (25.4%) participants in Siaya, 13 (22.0%) in Kisii and 12 (20.3%) in Migori Districts. Based on this, the study found that the five districts were significantly different in terms of perceptions regarding funding inconsistency (computed χ^2 value = 8.397, df = 8 and p-value = 0.052). This suggests that the districts varied significantly in terms of perception regarding funding inconsistency, implying that funding was more consistent in some districts than in others, which by extension points at the efficiency of the disbursement channel.

In addition, Table 2 indicates that understaffing was a serious challenge across the districts. In this regard, 14 (32.6%) participants in Siaya felt that the challenge was serious, and so were 10 (23.3%) others in Nyando Districts. Those saying that understaffing was a very serious challenge included 9 (34.6%) participants in Nyando and 6 (23.1%) in Migori and Siaya, each. The analysis found that the districts were not significantly different in terms of perception about the seriousness of understaffing (computed χ^2 value = 1.991, df = 8 and p-value = 0.452), suggesting that understaffing was a universal challenge across the districts.

Table 2 further indicates that among those who felt that inconsistent communication from KRB was a serious issue, 8 (34.8%) were in Migori, 6 (26.1%) were in Siaya, while 5 (21.7%) were natives of Kisii. In the category of those indicating that the challenge was very serious, 4 (36.4%) participants were in Siaya, 3 (27.3%) were natives of Nyando, while 2 (18.2%) were in Kisii. Based on this, the analysis obtained a computed χ^2 value of 3.815, with 8 degrees of freedom and a p-value of 0.427, which was not significant. This suggests that the districts were not significantly different in terms of perception regarding the inconsistency of communication from KRB to road agencies. Consequently, interventions to address the challenge should apply universally across all districts.

In addition, Table 2 shows that among those describing delay in external auditing as a serious challenge, 10 (30.3%) were in Migori, 8 (24.2%) were in Siaya and 7 (21.2%) were natives of Kisumu District. Those describing the challenge as very serious were 7 (33.3%) participants in Nyando, 6 (28.6%) in Siaya and 4 (19.0%) in Migori Districts. Based on this, cross tabulation analysis obtained a computed χ^2 value of 1.237, with 8 degrees of freedom and a p-value of 0.146, which was not significant. This suggests that the districts were not significantly different in terms of the perceptions regarding delay in external auditing of agency accounts, further implying that delay in external auditing occurred in all the districts.

CONCLUSIONS

The aim of this study was to identify and document key issues that may justify reforms at the agency level to improve the management, utilization and accountability for road funds. The study found that political interference (71.9%), procurement malpractices (67.1%), funding inconsistency (64.4%), understaffing (54.1%), inconsistent communication (28.8%) and delay in auditing (40.4%) were the challenges affecting operations of road agencies.

The Road Maintenance Levy Fund is one of the funds, which the Government of Kenya decentralized to the district level to spur economic development at the community level. In this regard, up to 16% of the fund goes to constituencies through DRCs; consequently, the involvement of political leaders in decisions on the utilization of road funds is inevitable. For instance, members of the national assembly were involved in DRCs. Hence, the decisions and activities of such committees are prone to political influence. In Kenya, political leaders wield a lot of influence and in most cases, their word is unquestionable. This poses a lot of challenge to public officers managing road funds. Without proper checks on political interference, road agencies may not live up to the expected standards of prudent resource use, quality workmanship and accountability.

In view of this, KRB in collaboration with the Government should formulate clear rules, regulations and procedures for all road agencies in the country. The document should be clear on the separation of roles between committees such as DRCs and Government officials, a definition of political interference, reporting channel, dispute resolution office and sanctions, among other provisions. KRB should sensitize all agencies on the new rules, regulations and procedures and empowered to seek administrative opinion from a definite higher office to curb political interference.

Transparency and accountability are the pillars of public procurement process and effective governance of public institutions. Whereas transparency deals with issues of clarity, accountability deals with answerability to all contenders. In managing public procurement, the application of either concept in isolation creates opportunity for malpractices, which weaken financial management discipline and compromise cost control measures as well as quality workmanship. Efficiency of the procurement process depends on the extent of adherence to procurement regulations and procedures, institutional culture, political will, as well as the competence and integrity of the staff in-charge.

Kenya enacted the law governing public procurement in 2005; however, enforcement remains a key challenge, particularly due to inadequate political will. This suggests that instituting appropriate legislation and establishing the institutional frameworks are not enough to entrench transparency and accountability into the procurement process. There is need for political will right from top leadership to effectively curb procurement malpractices. However, as a short-term measure, linking road agencies and sensitization about the roles of enforcement agencies, viz. the Public Procurement Oversight Authority and Kenya Anti-Corruption Commission, is likely to discourage the incidence of malpractices at the agency level.

Regular communication between KRB and road agencies facilitates reporting, enhances managerial accountability, motivates staff, improves financial management and most importantly, expedites the flow of disbursements. Without follow-up communication from KRB, funds stagnating at the district treasury for longer than necessary may be at risks of diversion or siphoning by public officials. Developing and implementing an appropriate communication strategy is an option that KRB should consider to improve the management of road funds. Follow-up communication with road agencies is particularly necessary from the time of disbursements to ensure that funds reach the agencies as per schedule. The introduction of electronic transfer of funds directly to agency accounts is a viable option that KRB should explore, safeguard against possible abuse and adopt to avoid the bureaucratic bottlenecks inherent in the current system.

Of all resources in an organization, human resource is the most critical because it organizes, plans and manages the utilization of other resources in pursuit of organizational goals. The loss of staff through natural attrition, illness or transfers creates gaps, increases workloads and undermines performance. There is no doubt that coping measures such as multiple tasking affected the accuracy of financial accounts and reporting. In view of this, KRB in collaboration with the Government should consider undertaking a human resource needs assessment to establish staffing gaps and overlaps to justify recruitment and rationalization with a view to enhancing the capacity of road agencies.

External auditing of the agency financial accounts adds credibility to the annual financial reports shared with stakeholders. During the exercise, auditors collect evidence to obtain reasonable assurance that disclosures in the financial statements are free of material misstatements. The timeliness of external auditing remains crucial for the redress of issues arising, continuation of funding and staff motivation. Given the national scope, external auditing of agency accounts is a demanding exercise, requiring the Government to recruit more auditors for expeditious results.

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REFERENCES

American Statistical Association (1999). *Survey Research Methods Section Information*.

Bahl, R. 1992. *The Administration of Road User Taxes in Developing Countries*. Working Paper Series 986. Washington DC: World Bank.

Bengtsson, K., Duvall, T., Magid, S. and Palter Robert (2011). *Releasing the Pressure on Road Agencies.* Stockholm: McKinsey & Company.

Benmaamar, M. (2006). *Financing of Road Maintenance in Sub-Saharan Africa: Reforms and Progress towards Second Generation Road Funds*. Discussion Paper No. 6. Washington DC: Sub-Saharan Africa Transport Policy Program.

Brushett, S. (2005). *Management and Financing of Road Transport Infrastructure in Africa*, SSATP Discussion Paper No 4. Washington DC: The Sub-Saharan Africa Transport Policy Program.

Bryman, A. and Cramer, D. (1997). *Quantitative Data Analysis with SPSS for Windows: a guide for Social Scientists*. London: Routledge

Central Bank of Nigeria (2003). *Highway Maintenance in Nigeria: Lessons from Other Countries*. Research Department Occasional Paper No. 27). Abuja: Research Department.

Government of Kenya (2001). *Kenya Poverty Reduction Strategy Paper, 2002-2007*. Nairobi: Ministry of Planning and National Development.

Government of Kenya (2006). *Management of the Roads Sub-sector for Sustainable Economic Growth, Sessional Paper No. 5 of 2006.* Nairobi: Ministry of Roads and Public Works.

Government of Kenya (2007). *Kenya Vision 2030: Abridged version*. Nairobi: Ministry of Planning and National Development.

Government of Kenya (2012). *Policy on Aligning the Roads Sub-Sector with the Constitution*.

Nairobi: Ministry of Roads and Public Works.

Heggie, I.G. (1994). *Commercializing Africa's Roads: Transforming the Role of the Public Sector.* SSATP Working Paper 10. Washington DC: World Bank, Africa Technical Department.

Heggie, I.G. (1995). *Management and Financing of Roads: an Agenda for Reform*. Technical Paper No. 275. Washington DC: World Bank.

Heggie, I.G. and Vickers. P. (1998). *Commercial Management and Financing of Roads*, Technical Paper No 409. Washington DC: World Bank.

Kenya Anti-Corruption Commission (2007). *Examination Report into the Systems and Policies, Procedures and Practices of the Roads Sub-Sector*. Nairobi: Directorate of Preventive Services.

Kenya Public Policy Research and Analysis (2001). *Road Infrastructure Policies in Kenya: Historical Trends and Current Challenges*. KIPPRA Working Paper No. 1. Nairobi: Infrastructure and Economic Services Division.

Kumar, A. (2002). *A Review of Road Sector Reforms in Tanzania, Sub-Saharan Africa.* SSATP Discussion Paper, No. 2. Washington DC: World Bank.

Nachmias, C.F and Nachmias, D. (1996). *Research Methods in the Social Sciences, 5th Edition*. London: Arnold.

Nyangaga, F. (2007). *International Seminar on Road Financing and Investment Road Fund Management: Best Practices*. Nairobi

Owens, K.L. (2002). *Introduction to Survey Research Design*. SRL Fall 2002 Seminar Series http://www.srl.uic.edu

Rindfleisch, A., Malter, A.J., Ganesan, S. and Moorman, C. (2008). "Cross-Sectional Versus Longitudinal Survey Research". *Journal of Marketing Research*, Vol. 45, No. 3, pp. 1-23.

World Bank (2011). *A Bumpy Ride to Prosperity Infrastructure for Shared Growth in Kenya*. Washington DC: Poverty Reduction and Economic Management Unit, Africa Region.

Zietlow, G. J. and Bull, A. (2002). *Reform of Financing and Management of Road maintenance. A New Generation of Road Funds in Latin America*.

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FINANCIAL LITERACY AND RETIREMENT PLANNING: EVIDENCE FROM PUERTO RICO

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ABSTRACT

This study evaluates knowledge regarding financial and retirement planning in Puerto Rico. Most people seem to be unprepared to take charge of financial decisions and retirement. Lusardi and Mitchell (2006) study shows that many households are unfamiliar with even the most basic economic concepts needed to make savings and investment decisions. This study uses a questionnaire to evaluate financial knowledge and retirement planning in Puerto Rico. For the most part, this questionnaire was developed using Lusardi and Mitchell (2007, 2001a, 2011b) questionnaires. The results suggest a lack of knowledge in these matters; although respondents answered they get informed about financial and retirement matters. Most of them state they prepare a household budget but results suggest they do not use them appropriately. Many respondents are unfamiliar with even the most basic economic concepts needed to make savings and investment decisions. When asked about retirement, near 60 percent have tried to estimate the amount needed for retirement but less than 50 percent of them have tried to design a plan for their retirement. Of those who have made plans, less than 40 percent have met their goals and only 14 percent are very confident that they will have enough resources at retirement.

JEL: D140, J260

KEYWORDS: Retirement Planning, Financial Literacy

INTRODUCTION

In March of 2006, the Special Commission on Puerto Rico Government Pension Systems published a report that describes how knowledgeable government employees are about the services and benefits of the retirement system. Some questions in the survey asked whether the employees knew about financial planning, pension benefits, social security benefits and health costs during retirement. Between 64 and 79 percent of the employees assured they did not have information about these matters. Years later, in October 21, 2010 the Commission on Puerto Rico Government Pension Systems Reform submitted for the consideration of the Governor of Puerto Rico a report on the situation of the Puerto Rico Government Retirement Systems. It discussed issues such as the actual funding and cash flow situation, factors that are contributing to the actuarial liability cash flow problem and their recommendations.

The members of the Commission included recommendations such as changes in the employers and employees contribution requirements, modifications to special laws that enhanced retiree benefits, changes to the benefit structure and retirement age, to stop temporarily early retirement programs, to modify personal and mortgage loans made against the retirement savings funds, changes in governance and other ideas. Ironically, in the last section, the section called "Other Ideas"; the commissioners recommended that education for retirement planning should be given on a regular basis to employees.
This suggestion made clear that there is a need to educate people about retirement and other financial matters. This study evaluates knowledge regarding financial and retirement planning in Puerto Rico. First, past literature about the existence and effectiveness of retirement planning programs in Puerto Rico, the United States and other countries are reviewed. Also, studies presenting a model on how to evaluate knowledge concerning financial and retirement planning was reviewed. Then, based on the results and suggestions of past studies, a questionnaire was be design and distributed to the employees of the University of Puerto Rico-Río Piedras to assess their knowledge in financial and retirement related matters. Based on those results, a description on the level of knowledge is be presented and analyzed.

At this stage of the study, the results suggest a lack of knowledge in this matters, although respondents answered they look for information regarding financial and retirement matters. The results and findings of this study can be used as starting point for a more comprehensive endeavor, a study of the governmental and private sector employees' knowledge about planning for retirement. The results of this study may help in the recollection of part of the data that will serve as evidence to support or not the development of a personal finance education project. The paper proceeds as follows: first, there is a presentation of the relevant literature regarding this topic. Second, after the literature review, there is a description of the sample selection procedure, data analysis and methodology. Finally, the conclusion and a list of references are presented.

RELATED LITERATURE

Retirement Systems Evolution and Issues

This study is born out of real concerns regarding the future of retirement plans, especially in Puerto Rico. There are five main groups of employees targeted separately under our retirement systems: employees of the University of Puerto Rico, teachers working for the Department of Education of Puerto Rico, employees working for the Justice Department, employees working for the Electric Energy Authority and the rest of the government employees. The Employees Retirement System of the Commonwealth of Puerto Rico is a trust created by Act 447 of May 15, 1951 to provide pension and other benefits to retired employees of the government of Puerto Rico and its instrumentalities. Since its creation, this system and the decisions made to maintain or improve its funding status have reflected a lack of appropriate planning. On the one hand, the Center for the New Economy (CNE) (2010) argues that the main problem has been that the level of employer and employee contributions has been relatively low and was not actuarially determined. On the other hand, the level of benefits was statutorily defined with no relation to employee contributions or to the investment yield of the systems assets.

In a review of the decisions made throughout the years regarding the retirement systems, the CNE summarizes part of the obviously wrong path that it was taking. In 1973 the benefit structure was changed to increase benefits without enacting a corresponding increase in contribution levels. Adding to this decision, during the next years the number of government employees increased partly in response to the general economic slowdown. As a result, funding levels began to decrease and deteriorate. Almost two decades later, a decision that seemed to be going partially in the right direction emerged. In 1990 the Puerto Rico legislature enacted Act 1 of 1990, it mandated a reduction in some benefits (a decision that might be two-fold because it might diminish retirees quality of life) and increased the retirement age from 55 to 65. Other changes also emerged, for example Act 447 of 1951was amended to require that any future proposals to increase benefits be supported by an actuarial analysis and to include a financing source for the benefits proposed. These few changes prove to be insufficient and by the year 2000 the large accrued unfunded actuarial liability of the system required a very difficult and not necessarily positive decision for future employees. The defined benefits plan was closed to new employees joining after January 1, 2000. New employees will participate in a defined contribution plan known as System 2000. The government will continue making contributions but are intended to fund the defined benefit liability that has been accumulated. Under System 2000, the employees are funding the system by themselves. This change transfers the risk from the employer to the employee.

Those new employees are at risk that the funds that will accumulate through their working years are appropriately managed and invested to accumulate the amounts necessary to live during their retirement. So, they bare the risk of accumulating sufficient funds. There are no guarantees as to the amount they will receive at retirement. Hence the importance of saving and managing other sources of funds wisely.

After the changes mentioned above the retirement systems can be described in three types of plans. The first type is described in Act 447 of 1951 as a contributory and defined benefits plan. This plan covers employees of the Government of Puerto Rico (excluding teachers), employees of public corporations (except employees of the Puerto Rico Electric Power Authority and the University of Puerto Rico), municipal employees and mayors, employees of the Puerto Rico Police Department, employees of the Puerto Rico Fire Department, and irregular personnel fulfilling the requirements of a regular employees, who were hired prior to April 1, 1990.

The second type is described in Act 1 of 1990 as a contributory and defined benefits plan. This plan covers employees of the Government of Puerto Rico (excluding teachers), employees of public corporations (except employees of the Puerto Rico Electric Power Authority and the University of Puerto Rico), municipal employees and mayors, employees of the Puerto Rico Police Department, employees of the Puerto Rico Fire Department, and irregular personnel fulfilling the requirements of a regular employees, who were hired on or after April 1, 1990 and before January 1, 2000. This plan changes retirement age to 65 and modifies some benefits. The third type, called System 2000, is described as a hybrid plan and defined contribution plan. This plan covers employees of the Government of Puerto Rico (excluding teachers), employees of public corporations (except employees of the Puerto Rico Electric Power Authority and the University of Puerto Rico), municipal employees and mayors, employees of the Puerto Rico Police Department, employees of the Puerto Rico Fire Department, and irregular personnel fulfilling the requirements of a regular employees, who were hired on or after January 1, 2000.

These changes have proved to be insufficient since the system's unfunded actuarial obligation continues to increase. Factors such as the continuous increase in the pensioner population, the increased longevity of beneficiaries, and the fact that incoming pensioners have higher salaries and are entitled to even higher annuities, negatively impacts and neutralizes any measures taken to battle the funding problem of the systems. The future of the system seems gloomy and at the present moment the government is to change dramatically the existent system by changing the benefits and contributions structure. It is important for government employees to understand the characteristics of the system, how it works, its status, the alternatives to improve its situation and also other alternate plans that they can put into action in case their future pension proves to be inadequate to fund their retirement living expenses.

Financial Literacy and Retirement Planning Programs

Studies have found that retirement planning is lacking among different groups. Not just among Puerto Ricans but among people around the world. Most people seem to be unprepared for the future. Lusardi and Mitchell (2006) study shows that many households are unfamiliar with even the most basic economic concepts needed to make saving and investment decisions. They found that this is not a matter of age. Young and older people in the United States and other countries appear inescapably under informed about basic financial computations necessary to make savings, retirement planning, mortgages and other decisions. They also point out that governments and non-for-profit organizations are starting to play an important role in developing initiatives regarding financial education.

In a recent study Lusardi and Mitchell (2011a) report on a purpose-built survey module on planning and financial literacy for the Health and Retirement Study. It measures how people make financial plans, collect the information needed to make these plans, and implement the plans. They show that there is a lack of knowledge among older Americans. Women, minorities and the least educated tend to be the most lacking but the financially savvy are more likely to plan and succeed in their planning. They found that this last group relies on formal methods such as retirement seminars, retirement calculators and financial experts not family or co-workers.

Using the National Financial Capability Study, Lusardi and Mitchell (2011b) examine financial literacy in the United States by ethnicity and demography. They demonstrate that financial literacy is particularly low among the young, women, and the less-educated. Two groups, Hispanics and African-Americans score least well on financial concepts. Interestingly enough, before answering the study's questions, these groups assured they had vast knowledge in financial matters. In addition, the authors found a relation between higher scores and the probability of retirement planning. In an earlier study they also found similar results but for older groups of women. Lusardi and Mitchell (2008) examine the level of financial literacy in women and how they plan for retirement. They found evidence that shows that older women demonstrate much lower levels of financial literacy than the older population as a whole. Also, women who are less financially educated are less likely to plan for retirement and be successful planners.

As for other countries, Bucher-Koenen (2011) examines financial literacy in Germany. Results seem similar. They found that knowledge of basic financial concepts is deficient among women, less educated, and those living in East Germany. Compared to West Germans, East Germans have little financial literacy, especially those with lower income and low education. Differences based on gender were not observed in the East. They also found a positive impact of financial knowledge on retirement planning. Alessie, Lusardi and Van Rooij (2011) results for the Netherlands concur. Also, Almenberg and Säve-Söderbergh (2011) found similar results for a study conducted in Sweden.

The current state of the economy and its impact on future retirees raises concerns about financial planning and security, but especially for those who are not aware of the implications that it may have in the future and how to address them today. For this reason other studies examine financial literacy and retirement planning programs structures and effectiveness.Hathaway and Khatiwada (2008) provide a comprehensive critical analysis of past studies that examine the impact of financial education programs on consumer financial behavior. Of what they examined, they recommend that for these types of programs to be highly targeted towards a specific audience and area of financial activity (e.g. credit card counseling, retirement planning). About the timing of this training, they suggest it should be offered before the related financial event. Finally and as an integral part of any developed program, they suggest a program evaluation and for it to be included as part of the design of the program.

Lusardi and Mitchell (2007) introduce a new dataset called the Rand American Life Panel that offers a set of features for the analysis of literacy and retirement planning. It helps in assessing financial knowledge during workers' prime earning years. This period might be characterized key financial decision making. So they offer detailed financial literacy and retirement planning questions to better identify or asses their financial knowledge. An important finding is related to financial literacy as a key determinant of retirement planning. Adding to this finding, respondents that were exposed to economics in school and to company-based financial education programs seem to have a better understanding of retirement planning than other respondents. Garman, Kim, Kratzer, Brunson and Joo (1999) found that employees who attended financial education workshops sponsored by the employer reported positive changes in their financial behavior and stated that their financial decision making had improved.

Accordingly, Martin (2007) reviews past literature on the effectiveness of financial education. The author found that in general financial education is necessary and that the programs available at the time were effective. The findings suggest that some households make mistakes with personal finance decisions, specifically, low income and less educated households. The author identifies areas that benefit of financial education and that include retirement planning, savings, homeownership, and credit use. In particular, they expand on the importance of stressing financial planning for retirement because of the impact or implications and changes to defined contribution plans. Schuchardt, Hanna, Hira, Lyons, Palmer and Xiao (2009) discuss what financial literacy and education research priorities should be. Along with twenty-nine scholars from public and private universities, non-for-profit organizations, and the federal government participated in identifying critical research questions that could inform outcomes-based financial education, relevant public policy and effective practice leading to personal and family financial literacy. Huston (2010) outlines the meaning and measurement of financial literacy and its limitations to assist researchers in determining or creating a standardized financial literacy and measurement instruments. Dvorak and Hanley (2010) designed and administered a financial literacy test designed specifically for a particular contribution plan and found that participants show fairly good knowledge of the basic mechanics of the plan but are unable to differentiate among various investment options. Specifically, women, low income and low education employees were the most deficient. Apparently, personal contributions lead to more knowledge. Finally, they suggest that plans should be design with few investment options and encourage personal contributions.

Stawski, Hershey and Jacobs-Lawson (2007) examine the extent to which goal clarity and financial planning activities predict retirement savings practices. The models used, path analysis techniques, were design to predict savings contributions. The results support the notion that retirement goal clarity is a significant predictor of planning practices, and planning, and as a result, helps predict savings tendencies. Age and income were found to be important variables. They suggest age-based models may be useful for retirement planning. Elder and Rudolph (1999) examine the level of satisfaction of retired individuals that spent time thinking about retirement and attended retirement planning seminars during their productive years. The evidence suggests that it had a positive impact on satisfaction even when income, wealth, marital status and health are included as explanatory variables. The importance, effectiveness and the appropriate design of financial and retirement planning seminars or workshop might be supported by past studies. They concur in that there is a lack of knowledge about basic financial concepts appropriate for healthy retirement planning. Based on these results, this study expects to find similar results for Puerto Rico.

RESEARCH DESIGN

Sample and Methodology

One of the main objectives of this study is the assessment of financial literacy in Puerto Rico. It required the collection of data regarding peoples' knowledge about basic financial and retirement matters. As a consequence, a questionnaire was design. It includes the necessary questions for discovering how knowledgeable people are about financial concepts and retirement planning. As a starting point in evaluating the degree of knowledge among Puerto Ricans, the intended audience was composed of the employees of the University of Puerto Rico-Río Piedras (UPRRP). A random sample of 300 out of 3,133 employees was selected out of the total number of employees working for the campus between August 2012 and March 2013. A total of 146 questionnaires have been collected and tabulated. Regarding the questionnaire, some of the studies mentioned above (Lusardi and Mitchell 2007, 2011a, 2011b) offer some guidelines as to the appropriate questions that should be included in this type of questionnaire. These studies have been published as a series of papers regarding financial literacy by the Organisation for the Economic Cooperation and Development (OECD). The questionnaire that was used in this study consists of 37 questions. It includes 11 questions that are used to design a profile of the participants, 17 questions regarding their knowledge about general financial matters and 9 questions related to retirement and retirement planning. These questionnaires were handed to employees personally. After collecting the questionnaires, they were tabulated and the results were summarized for the purpose of analysis. The next section describes the sample and discusses the results.

RESULTS

Sample Description

A total of 146 questionnaires were tabulated at this point of the investigation. Out of the people surveyed, 25.5 percent are men and 74.5 percent are women. When they were asked about how they describe the community they live in, 34.9 percent answered that they live in a city that has a population between 100,000 and a million inhabitants; 20.5 percent lives in a town with a population between 15,000 and 100,000 people; 16.4 percent lives in a rural area that has less than 3,000 inhabitants; 11 percent lives in a city that has more than a million inhabitants; 6.8 percent lives in a town that has between 3,000 and 15,000 residents; 5.5 percent answered they do not know how to describe the place where they live; and 4.8 percent refused to answer. About 39 percent of the sample is married, 32.2 percent is single, 17.1 percent is separated from their spouse or divorced, 6.2 percent has a partner, 0.7 percent answered they do not know their marital status and 4.8 percent refused to answer this question.

Regarding their household composition, 64.4 percent of the households have 0 members under 18 years old; 15.8 percent have 1 member under that age; 12.3 percent have 2 members; 2.7 percent have 3 members and 4.8 percent refused to answer. When asked how many members are more than 18 years old, including their spouse or partner, 15.7 percent of the households have 0 members over 18 years old; 31.5 percent have 1 member under that age; 28.8 percent have 2 members; 17.8 percent have 3 members; 2.7 percent; 17.8 percent have 3 members; 2.7 percent have 4 members; 0.7 percent, respectively have 5 and 6 members; and 2.1 percent refused to answer. On average, these households are composed of 2 to 4 people. The average age of the people surveyed is 43.3 years old. About 13.7 percent is between 20 and 29 years old; 17.1 percent is between 30 and 39; 26 percent is between 40 and 49; 34.2 percent is between 50 and 59; 2.1 percent is between 60 and 69; and 0.7 percent is between 70 and 79. Some refused to answer this question, 4.8 percent. Others left it blank.

In terms of educational level, most of the sample has a bachelor's degree, about 42 percent. About 24 percent has a master's degree, about 11 percent has a doctorate, 1.4 percent finished high school and has technical or vocational education, 4.9 finished high school, the rest of the sample refused to answer, left it blank or their response was irrelevant as for this question. The majority of the sample, almost 69 percent, owns the house they live in, either by themselves or jointly with their partner. About 22 percent of the people surveyed lives in a house that is owned by their parents, grandparents or other member of their family. About 4 percent lives in a rented house, 1.4 percent lives in a house that there are planning on buying, 0.7 lives in a house that is not owned by a family member, government, employer or a private owner. The rest of the sample refused to answer.

Concerning their main source of income, 84 percent considers salaries or wages as their main source; 5.5 percent from salaries, wages and pension or retirement funds; 2.7 percent pensions or retirement funds; 1.4 percent from their business or from self employment; 1.4 percent from other sources; 0.7 percent from government subsidies; the rest of the sample left it blank or refused to answer. Question 30 asked about the number of years left for the respondents to retire. On average, they can retire in 13.2 years. About 14 percent can retire between less than a year and 5 years. Almost 7 percent can retire between 6 and 10 years from now. About 25 percent can retire in between 11 and 15 years. Approximately, 34 percent can retirement between 16 and 20 years, 9 percent in between 21 and 25 years, 0.7 can retire between 26 and 30 years from now and 1.4 percent in more than 30 years. The rest chose not to answer. Interestingly, three respondents answer that they will never retire. This can be interpreted as an answer that reflects real financial needs and that for that reason they will not be able to retire. The next two sections present the results for questions related to financial literacy and retirement planning. For the complete version of the questionnaire and the results, please see the Appendix.

Financial Literacy Questions

The questionnaire included 17 questions related to general financial knowledge. The questions that are included in the survey are related to household budget, knowledge, ownership and selection of financial products, conduct and attitude towards financial decisions, expense and debt management, savings and financial calculations. First, in question 6 participants were asked about who was responsible for making daily financial decisions in their household. Around 40 percent indicated that they make those decisions by themselves and 39 percent make decisions with their partner. About 11 percent make those decisions with a family member other than their partner, almost 9 percent answered that other members of the household make those decisions and 0.7 percent answered that other people make those decisions. The majority of the respondents either decide by themselves or with a partner.

Then, in question 7, participants were asked if they have a family budget. Near 64 percent states they have a family budget. However, about 31 percent do not have one. Some of the participants, 3.4 percent, do not know if they have a budget and the rest refused to answer. Questions 8, 9 and 10 ask questions regarding knowledge, ownership and selection of financial products. Question 8 asked if the participant has heard of any of the financial products that were in the list (e.g. pension fund, mortgage, bonds, stocks, and others). About 72 percent of the participants have heard of pension funds, near 75 have heard of mortgages, about 82 percent knows about credit cards, savings accounts and cellular phone accounts, about 80 percent have heard about checking accounts, about 77 percent about insurance accounts and 73 percent knows about non-bank financial loans. Near 63 percent have heard of prepaid cards and between 50 and 60 percent of the sample have heard of loans with collateral (other than home mortgages), loans without collateral, corporate stocks and bonds. Concerning investment accounts, such as trusts, only about 47 percent have heard about them.

Question 9 asked about ownership of any of these instruments. Near 80 percent have a checking account and a cellular phone account. About 69 percent have a savings account and 66 percent have a credit card. Near 54 percent have a mortgage and/or insurance account. About 43 percent have a pension fund. Near 18 percent have shares in a business and about 8 percent owns bonds. In regards to the other financial instruments less than 12 percent of the participants own them. Question 10 inquired if they have owned or chosen these financial products in the past two years. About 42 percent has chosen or owned a cellular phone account. About 30 percent has chosen or owned a credit card, savings or current account. About 21 percent has chosen or owned a mortgage or an insurance account. Around 10 percent of the participants has owned or chosen the rest of the products in the list.

Question 11 asked how the participants would describe the way they chose the financial products listed in questions 8 through 10. Most of them, about 62 percent, considered different alternatives from different institutions or companies. About 14 percent considered different products offered by one institution, near 7 percent did not considered product alternatives, 0.7 percent did not find other products that could have been considered and 4.8 did not know the answer. The rest of the participants refused to answer, answered that the question did not apply or left it blank. Question 12 asked the participants about information sources that influenced their decisions the most. About 50 percent of the participants were influenced by newspaper articles. Near 45 percent states that family or friends that are not working for financial institutions influenced their decisions. About 44 percent were influenced by a representative working for the financial institution selling those products. Near 43 were influenced mostly by newspaper advertisement. Between 29 and 33 percent of the participants answered that radio and television programs, information found in the Internet about the best financial instruments, information obtained at the branch and guidance from family or friends that are working for financial institutions, influenced their decisions. Question 13 tries to assess the participant's conduct and attitude towards financial decisions. They are presented 8 statements and were required to indicate the degree of agreement with the statement. The participant was given a range or score from one to five, one meaning "completely agree" and five meaning "completely disagree". About 77 percent agrees with the statement: "Before I buy something, I carefully consider if I have enough money to buy it". Only 1.4 percent completely disagrees with it. About 49 percent completely disagrees with the statement: "I live in the present; the future will take care of itself". Only 6.2 percent completely agrees with it. More than 47 percent completely disagrees with the statement: "I prefer to spend my money than saving it". Only 4.1 percent completely agrees with it. About 74 percent agrees with the statement: "I pay my expenses and debts on time". Only 4.1 percent completely disagrees with it. About 36 percent completely disagrees with the statement: "I am ready to risk my money saving or investing". Near 14 percent completely agrees with it. ". About 60 percent agrees with the statement: "I paid attention to my financial matters". Only 2.7 percent completely disagrees. Near 32 percent agrees with the statement: "I establish financial goals for the long-term and I try to reach them". Only 8.2 percent completely disagrees. About 37 percent completely disagrees with the statement: "Money exits to spend it".

About 10 percent completely agrees with it. Questions 14 and 15 asked about expense and debt management. When the participants were asked if they consider that their income is not sufficient to cover their living expenses and if they have been in the situation of not being able to cover them in the past 12 months, about 64 percent answer "YES". About 28 percent did not agree and 2.7 percent did not know. The rest of the participants refused to answer, left it blank or their response was irrelevant. Then, in question 15, they were asked how they dealt with the most recent situation in which they were not able to cover their basic needs. About 67 percent cut their expenses or do not incurred in those expenses, 35 percent used their savings to cover them. Near 29 percent worked additional hours, about 23 percent applied for a loan from their retirement savings. About 22 percent made late payments or do not made them. Near 21 percent used their credit cards to make payments or to by food. Around 15 percent took a loan from a savings and loans institution, bank or other financial institution. About 10 percent sold some belongings and 6.2 percent pawned them. Some other participants, about 6 percent respectively, used a line of credit, a bank overdraft or took a loan from an informal source.

Lastly, question 28 asked about home mortgage debt. Only those who had a home mortgage were asked to answer this question. Out of 146 participants, 59 answered it. This group represents about 40 percent of the sample. About 19 percent of the respondents state that they can pay the balance of their mortgage today using their savings. Another 19 percent thinks they will not be able to pay out their mortgage in their lifetime. Near 14 percent makes additional payments other than the monthly payment to reduce the balance of their mortgage. About 10 percent have solicited a reduction on their monthly payment or the postponement of the next monthly payment.

There are two different groups of respondents that separately represent 3.4 percent of those having a mortgage, which failed to make a mortgage payment and did not ask the bank for a special arrangement or stated that if they were to sell their home they might not be able to pay out the balance. Approximately, 34 stated that none of the alternatives applied to their home mortgage situation. Questions 16 and 17 address savings. The former asks the participant whether during the past 12 months he or she has saved in any of the listed alternatives. About 58 percent deposited in their savings account but about 22 percent have not saved. Near 21 percent saved money but keeps them in their house or wallet. Around 8 percent saved in an informal savings club. Only 4 percent invested in financial instruments such as stocks or bonds and 3 percent reinvested their income from their savings. About 2 percent gave money to family members so the save it in their name. Of the rest, 5.5 percent refused to answer and 0.7 percent was not aware of this matter.

In question 17, the participants were asked for how long they might be able to cover their basic needs without borrowing money or leaving their home if they were to lose their job or main source of income. Almost 29 percent stated that they might cover those expenses for at least one month but for less than three months. About 16 percent might cover them for less than one week. Around 15 might cover those expenses for at least three months but for less than six months. Another 15 percent assures that they might cover them for more than six months. Approximately, 10 percent can cover their expenses for at least one week but not for a month. Near 10 percent of the participants do not for how long they can cover them. The rest refused to answer or left it blank.

A series of questions were included in order to test the financial skills of the participants. Question 18 tested basic mathematical skills, in this case division. Around 80 percent of the participants answered correctly. Almost 8 percent refused to answer. About 3 percent stated that that they do not know the answer. The rest offered wrong or irrelevant responses. Question 19 addressed their knowledge about inflation and its effect on the value of money. Approximately 29 percent answered that if inflation goes up 4 percent, in one year, the value of money will decrease and, as a consequence, less can be bought. About 21 percent answered that they do not know the answer. There is almost 16 percent of the respondents that answered that the can buy the same and another 16 believes that it will depend on the kind of things that you want to buy. A small group of 5.5 percent answered that they will be able to buy more things. The rest of them refused to answer, left it blank or offered an irrelevant response.

Question 20 also addressed financial skills from the standpoint of calculating interests. Near 75 percent of the respondents answered it correctly. Almost 14 percent answered that they do not know. About 8 percent refused to answer and the rest left it blank or offered an irrelevant question. However, question 21 is also related to the calculation of interests and its accumulation in a savings account and the results indicate a lack of knowledge in this matter. Just 46 percent answered it correctly. Near 26 percent stated that they do not know the answer. About 16 percent refused to answer; near 3 percent offered an irrelevant response; and 10 percent offered an incorrect answer. The last question that assessed their financial skills was related to compounded interest. Approximately, 30 percent answered it correctly. Another 25 percent selected an alternative that might be considered correct if the respondent rounded to the nearest dollar. However, about 21 percent responded that they do not know the correct answer. Almost 7 percent answered it incorrectly or thinks there is not enough information to answer it. Around 14 percent refused to respond and the rest left it blank or offered an irrelevant response.

Retirement Planning Questions

Questions 29 to 37 asked about the appropriate age to start planning financially on retirement, time left for their retirement and different aspects to consider when planning for retirement. Question 29 asked about the ideal age to start planning for retirement. On average, the respondents believe that a person should start when they are 25 years old. About 26 percent that people should start planning before they are 20 years old. Approximately, 34 percent thinks that a person should start between 21 and 25 years old. Another 9 percent considers that the appropriate age is between 26 and 30 years old. Near 15 percent answered that they do not know. Interestingly, 4.8 percent thinks that a person should start planning after they are 46 years old. About 4.2 percent believes that starting between 31 and 45 is adequate. Near 7 percent refused to answer and the rest left it blank.

Question 31 asked the respondent if he or she and/or their family have tried to determine how much they need to save for retirement. Almost 58 percent responded that they have not tried and only 28 percent have tried. About 6 percent do not know and another 6 percent refused to answer. Less than 1 percent did not understand the question and less than 3 percent did not answer. Respondents may skip questions 32 to 36 if they chose an alternative other than the one that reflects that they have tried to calculate how much to save for retirement. Questions 32 asked how they tried to estimate that amount. Of the respondents to these question, about 31 percent used calculators, computer based spreadsheets or tools available through the Internet. Another 20 percent talked to family members or relatives. Near 11 percent asked friends or co-workers and another 11 percent consulted a financial planner, consultant or accountant. Some used different sources, 4.4 consulted family, relatives, friends and co-workers.

Another 2.2 percent asked family and relatives, used financial tools (calculators and spreadsheets), and consulted specialists (financial planners and accountants). About 2 percent consulted family, relatives, friends and co-workers and used financial tools. The rest do not know how to do it, do not want to know, refused to answer or left it blank. Out of these respondents, only 43 percent answered in question 33, that they have developed a plan for retirement. More than 51 percent have not. And the rest either refused to answer or left it blank. In question 34, of those who have developed a plan, 38 percent answered that they have achieved their goals. Almost 46 percent answered that they have met their retirement plan goals most of the time. However, about 10 percent have met them occasionally and almost 5 percent have never met them. The rest refused to answer the question.

Question 35 inquired about the elements that are included in the respondent's plan. Almost 86 percent includes a governmental retirement plan or benefits for the elderly. About 21 percent considers a retirement plan from an employer in the private sector. Near 37 percent have personal savings for retirement. Approximately, 8 percent plan on taking a reverse mortgage. That same percent plans on having a business. More than 6 percent plans on moving to a smaller place and 3.2 percent on moving to a cheaper place. Near 6 percent plans on depending on their partner and another 6 percent plans on earning an income during retirement. About 3.2 percent plans on selling their non financial possessions (cars, jewelry, collections, etc.) and about 5 percent plans on selling their financial assets. Near 2 percent will depend on their descendents. The rest answered that they include other things such as renting some properties they have and live insurance.

Question 36 required for the respondent to consider his or her response to question 35 in order to answer it. It inquired about the respondent's confidence in relation to maintaining their desired standard of living during retirement. Only 14 percent are very confident, around 60 percent are more or less confident, almost 18 percent are not very confident and almost 5 percent are not confident at all. About 1.6 percent does not know and the rest of the respondents refused to answer or left it blank. Finally, in question 37, all the participants were asked what factors are necessary if anyone is trying to plan on retirement. About 77 percent thinks that the time left for retirement is important. About 59 percent included current savings, near 47 percent included eligibility for a government sponsored plan, about 22 percent included return on investments, near 68 included benefits on retirement plans, about 21 percent included working during retirement, almost 49 percent included the desired standard of living, 63 percent included the costs expected to incur during retirement, almost 45 included life expectancy, another 27 percent included the value of assets at the time of retirement, 42 percent included current costs of living and about 45 percent included whether you own a property or not. About 2 percent answered that other elements should be included but did not offer examples. Near 4 percent refused to answer.

CONCLUSION

This study evaluates knowledge regarding financial and retirement planning in Puerto Rico. Most people seem to be unprepared to take charge of financial decisions and retirement. The results suggest a lack of knowledge in financial and retirement planning, although respondents answered they look for information regarding financial and retirement matters. These results concur with Lusardi and Mitchell (2006). This study uses a sample of public employees working for the University of Puerto Rico between August 2012 and March 2013. Results show that they prepare a household budget but when asked if they have covered their living expenses during the past 12 months, most answered they have not. They had to cut expenses or used part of their savings. Incongruous results are observed when asked about savings. The majority answered they have saved in the last year. But when asked how long will they be able to keep covering their living expenses if they were to lose their jobs, about 80 percent will be able to do it for less than three months. Many respondents are unfamiliar with even the most basic economic concepts needed to make savings and investment decisions.

When asked about retirement, near 60 percent have tried to estimate the amount needed for retirement but less than 50 percent of the respondents have tried to design a plan for their retirement. Of those who have made plans, less than 40 percent have met their goals and only 14 percent are very confident that they will have enough resources at retirement. Most of them expect to depend on their government sponsored pension plan. These results reflect lack of knowledge and planning and/or mistaken plans. Apparently, there is a need to create conscience about the importance of knowing how to adequately manage financial matters and how to prepare for the years to come during retirement. As an observation, while administering the questionnaire, when the respondents were asked to perform basic mathematical operations, they just refused. They did not want to think about how to solve the operation.

This attitude towards analytical or mathematical operations made us think about the possibility that people do not want to engage in simple or elaborate calculations, and if this was the same attitude when signing a debt contract or when making their budget. The results are worrisome. If people think they know how to manage their financial and retirement matters but they are actually not being successful, who is going to care of them during retirement? The government, future generations, or will they live in poverty? No cross tabulation was performed but future research will include it. The next steps will include a sample of employees working in the private sector, an examination of relationships between gender, age, educational levels and financial and retirement knowledge (Lusardi and Mitchell 2008, 2011a, 2011b and Bucher and Koenen, 2011).

REFERENCES

Alessie, R.J.M., Lusardi, A. and Van Rooij, M.C.J. (2011), “Financial Literacy and Retirement Planning in the Netherlands”, Journal of Economic Psychology, Vol. 32, p. 593-608.

Almenberg, J. and Säve-Söderbergh, J. (2011) “Financial Literacy and Retirement Planning in Sweden”, Netspar Discussion Paper 01/2011-018, January 2011.

Bucher-Koenen, T., (2011) “Financial Literacy and Retirement Planning in Germany”, National Bureau of Economic Research Working Paper 17110, June 2011.

Center for the New Economy, “Puerto Rico’s Pension System: Knocking on Heaven’s Door”, Policy Brief, 2010, available at http://grupocne.org/publications/Policy_Brief_ERS.pdf

Special Commission for the Retirement Systems of the Commonwealth of Puerto Rico, “Public Employees’ Knowledge about the Services and Benefits of the Retirement System”, March 2006.

Dvorak, T. and Hanley, H., (2010) “Financial Literacy and the Design of Retirement Plans”, The Journal of Socio-Economics, Vol. 39, p. 645-652.

Elder, H.W. and Rudolph, P.M., (1999) “Does Retirement Planning Affect the Level of Retirement Satisfaction?”, Financial Services Review, Vol. 8, p. 117-127.

Hanna, S.D., Hira, T.K., Lyons, A.C., Palmer, L., Schuchardt, J. and Xiao, J.J., (2009) “Financial Literacy and Education Research Priorities”, Journal of Financial Counseling and Planning, Vol. 20 (1).

Hathaway, I. and Khatiwada, S., (2008) “Do Financial Education Programs Work?, Research Department at the Federal Reserve Bank of Cleveland Working Paper 08-03, 2008.

Huston, S.J., (2010) “Measuring Financial Literacy”, The Journal of Consumer Affairs, Vol. 44 (2), p. 296-316.

Lusandi, A. and Mitchell, O.S., (2006) "Financial Literacy and Retirement Preparedness: Education and Implications for Financial Education Programs", Michigan Retirement Research Center and the Pension Research Council at the Wharton School Working Paper, November 2006.

Lusandi, A. and Mitchell, O.S., (2007) "Financial Literacy and Retirement Preparedness: New Evidence from the Rand American Life Panel", Michigan Retirement Research Center Working Paper 2007-157, October 2007.

Lusandi, A. and Mitchell, O.S., (2008) "Planning and Financial Literacy: How Do Women Fare", National Bureau of Economic Research Working Paper 13750, November 2008.

Lusandi, A. and Mitchell, O.S., (2011a) "Financial Literacy and Planning: Implications for Retirement Wellbeing", National Bureau of Economic Research Working Paper 17078, May 2011 (a).

Lusandi, A. and Mitchell, O.S., (2011b) "Financial Literacy and Retirement Planning in the United States", National Bureau of Economic Research Working Paper 17108, June 2011 (b).

Martin, M., (2007) "A Literature Review on the Effectiveness of Financial Education", Federal Reserve Bank of Richmond Working Paper 07-3, June 2007.

Romero, M. (Chairman of the Commission), "Report of Commission on Puerto Rico Government Pension Systems Reform to the Governor of Puerto Rico, Honorable Luis G. Fortuño", Commission on Puerto Rico Government Pension Systems Reform, October 21, 2010.

Stawski, R.S., Hershey, D.A. and Jacobs-Lawson, J.M., (2007) "Goal Clarity and Financial Planning Activities as Determinants of Retirement Savings Contributions", International Journal of Aging and Human Development, Vol. 64, No. 1, p. 13-32.

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ECONOMIC GOALS RANKING APPROACH INCOMPARATIVE ANALYSIS OF ECONOMIC SYSTEMS

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ABSTRACT

Three main economic systems that have coexisted during last 100 years: pure market, pure command, and mixed economies, have the same mission: to satisfy unlimited human needs and wants using a set of limited economic resources. Each of them is pursuing the same major economic goals: economic efficiency, economic growth, economic stability, economic equality and economic self-sufficiency. But these systems are very different. One reason why they are different, in our opinion, is the difference in the priorities and ranking order of these five major economic goals. This ranking order is different for every system. As a result, each system has established its own economic structure, has determined its own role for the government, and has used a different strategy for its function and economic development. In this paper I will compare the correlation of the perceived priorities in the ranking orders of economic goals of selected countries of the world: USA, China, Russia and Costa Rica, with ranking orders of so-called "pure" market, "pure" command, and "ideal" mixed economies using the Kendall rank correlation coefficient as the instrument for measuring the correlation between "ideal" orders and perceived real orders of economic goals.

JEL: P5, P51, C40

KEYWORDS: Economic Systems, Comparative Analysis, Ranking Approach

INTRODUCTION

All economic systems have the same mission: to satisfy peoples' unlimited needs and wants using limited economic resources. But there are important differences between all of these systems' structures determined by the difference in property rights and in methods of organizing processes of manufacturing and distribution of products and services among people. As I discussed in my earlier publication (Katkov, 2012), the identity of economic systems' missions defines the identity of the list of major economic goals. But the priorities of those goals' realization would be different for every economic system. As result, each system will design and use a different strategy for its function and development. So, if we were able to find a tool that would allow us to compare the ranking orders of those economic goals for every economic system, we would be able to establish the "ideal" ranking orders of each one of them. Using those "ideal" orders as "standards" we would be able to find a correlation between the recent goals ranking order and those standards for any country and to arrive at some conclusions about that country's developmental strategy.

This paper offers a new approach to the comparative analysis of economic systems that is based on evaluating the correlation between the so called "ideal" orders of economic goals: efficiency, growth, stability, equality and self-sustainability, and the real orders of economic goals of selected countries ranked according to the priorities declared by their leaders. These ranking orders would not be considered the perfectly correct orders because for the present paper we are introducing a new approach, not presenting precisely correct coefficients of the correlation.

LITERATURE REVIEW AND RESEARCH DEVELOPMENT

The idea of using an economic goals ranking method to analyze the efficiency of economic planning and the performance of economic systems at the level of the single enterprise or a particular industry belongs to the Soviet economist Ivan Syroezhin , 1980, 1981). Unfortunately his research ended abruptly because of his early death in 1983 and the following demise of the Soviet planning system in the late 1980s. I am familiar with very few further attempts to develop this idea in other areas of economic research, and these only in Russia (Parfenova, 1994).

I implemented the idea of ranking of economic goals for the first time in my comparative study of government regulation in selected economic systems (Katkov, 2012). In that article I selected three economic systems: pure market, pure command and mixed economies, and four major economic goals: economic efficiency, economic growth, economic stability, and economic equality. I built the ranking orders for each of them using my analysis of the historical developments of British and American capitalism in the 19th and 20th centuries (pure market economy), of Soviet socialism before 1956 (pure command economy), and my understanding of general trends in the emergence and spread of the mixed economic system during the 20th century all over the world. This work was based on my earlier analysis of the three economic systems and their economic goals (Katkov, 2011).

The goal of economic efficiency (efficiency) has been defined as the highest possible level of productivity applied to the best allocation of available resources according to the existing combination of needs and wants. The goal of economic growth (growth) has been explained as the desirable increase in the produced output and the controlled market share locally or globally. The goal of economic stability (stability) has been described as the maintenance of minimal levels of unemployment and inflation. The goal of economic equality (equality) has been formulated as the level of equal accessibility of products and services to the people.

In my paper of 2012, I considered the “ideal” ranking order for prioritizing economic goals for all three economic systems as follows:

- pure market economy: 1. Efficiency, 2 Growth, 3. Stability, 4. Equality;
- command economy: 1. Equality, 2. Stability, 3. Growth, 4. Efficiency;
- “ideal” mixed economy: 1. Stability, 2. Efficiency, 3. Equality, 4. Growth.

Every country has its own order in the prioritization of economic goals. We can measure the differences between the “ideal” order and the particular order as it is observed in any given country. To measure those differences we can use the idea of ranking correlation. The ranking correlation approach was developed by the British mathematician Maurice Kendall (1930, 1955). We can take the determined order of economic goals for the given country and compare it with the “ideal” order. The received coefficient of correlation can be used to compare how close the specific country’s economic goal order comes to the “ideal” ranking orders of the pure market or pure command economy. The hypothesis used in this case was very simple: the higher the value of the Kendall tau coefficient of correlation between two orders— the given country and the pure market economy— the closer the economic goals ranking order of the specific country to the pure market economy economic goals ranking order and therefore the more market and freedom of choice options are left for the private sector. But if the correlation coefficient value is higher when the country’s goals order is compared to the command economy’s economic goals ranking order, then this economy has a very substantial government involvement in economic matters (Katkov, 2012).

According to Herve Abdi (2007), when we are comparing two ordered sets we should look at the number of different pairs between the two sets to allow us to get what is called the "symmetric difference distance" between the two sets.

$$\tau = 1 - \frac{2 \times [\, d_{\Delta}\ (\mathcal{P}_1, \mathcal{P}_2\ )]}{N\ (N-1)} \tag{1}$$

Here the symmetric difference distance between two sets of ordered pairs $\mathcal{P}_1$ and $\mathcal{P}_2$ is presented as d_{Δ} ($\mathcal{P}_1, \mathcal{P}_2$) and N is the number of ranked objects (goals); in our case N = 4. The Kendall coefficient can have values between -1 and +1: $-1 \leq \tau \leq +1$ where -1 is the largest possible distance and +1 is the smallest one.

According to H. Abdi (2007), the Kendall coefficient τ can be interpreted in a probabilistic context (see Hays, 1973) as the difference between the probability for these objects to be in the same order P (same) and the probability of these objects to be in a different order P (different). In our case the difference is between the probability that goals are in the theoretically "ideal" order and the probability that they are in a different order:

$$\tau = P\ (\text{same}) - P\ (\text{different}). \tag{2}$$

We used the Kendall tau rank correlation coefficient between two ordered sets for selected leading economies: USA, China, Germany, Japan and Russia. The result of that analysis was published in 2012 (Katkov, 2012). Recently we came to the conclusion that the selected list of major economic goals needed to be expanded. The obvious choice of the first additional goal is the goal that also is common for every economic system: the goal of economic self-sustainability.

In this paper we are analyzing a more complex list of economic goals: efficiency, growth, stability, equality and self-sustainability for four selected countries: USA, China, Russia and Costa Rica. The choice of goals has been determined by our personal opinion about leading economic goals associated with the main mission of any economic system of satisfying peoples' unlimited needs and wants using a limited set of economic resources and by the opinions of some experts on the economy of the USA (Higgs 1987) and China (Fishman, 2006). These opinions have been formed by long experience in the teaching of a course on comparative economic systems. The choice of countries for the comparative analysis is quite obvious: two largest economies (USA and China), the country where the command economy had been created and more or less worked for a70-year period – Russia, and Costa Rica – one of the few countries in the world declaring the goals of self-sustainability and environmental protection as the most important economic goals for the last few decades.

After the goals ranking orders for the pure market, pure command, and the "ideal" mixed economies have been determined, we built the respective goals orders for each selected country based on our understanding of recent priorities. Using multiple sets of goals ranks for each country: the "recent" set and three theoretically "ideal" sets of goals of three economic systems, we calculated three Kendall coefficients of ranking correlation tau for every country. Results have been summarized in Table 1, showing that the coefficients could be substantially different and that this difference can be interpreted as confirming the hypothesis that the method of the dynamic standard using the correlation of goals ranking can be used in comparative analysis of economic systems.

METHODOLOGY

The goal of economic self-sustainability became one of the leading economic goals for any country now that the problem of resource scarcity has grown almost exponentially as the result of population growth during the 20th century from 1.65 billion people in 1900 to 7.1 billion now. The ability of each country to use its own resources in the most efficient way and to develop new technologies that will allow an increase in the usage of renewable resources should be considered among the most important priorities of every country. Self-sustainability is a key of future growth and also a factor of political stability and peace because dependence on imported resources makes countries economically vulnerable and forces them to use a large share of their resource endowment on the development of the military sector.

The aforementioned order of goals ranking for all three main economic systems will change with the addition of the economic goal of self-sustainability. We understand and accept that other economists can have different opinions both about the goals lists and about their "ideal" ranking. The purpose of this publication is to get some feedback from colleagues to see the future perspectives of the approach presented here. The new modified economic goals ranking orders for three economic systems are as follows:

A pure market economy's goals ranking order is*: efficiency, growth, stability, equality, self-sustainability*. We placed the goal of sustainability in the last position because in the 19th century most developed economies expanded their resource bases either by acquiring neighboring territories (USA, Russia), or by taking political and economic control over less developed countries converting them into colonies (Britain, France). The resource base grew through this expansion, and the goal of self-sustainability was accomplished as a consequence of economic expansion into new territories.

A pure command economy's goal ranking order would be different: *equality, stability, growth, self-sustainability, efficiency.* As we see, the goal of self-sustainability has a low priority for this system also. The Soviet Union had probably the largest natural resource base in the world and had the third largest population after China and India. Because of the low standard of living the level of consumption could be satisfied by mostly local resources.

A mixed economy's "ideal" ranking order of economic goals is the most debatable. One of the possible reasons would be in the permanent changes in the global economic environment that would affect the process of the prioritization of economic goals. For example, during the phase of economic expansion the goal of economic stability should take the leading position because of the inflation that traditionally will be the consequence of economic growth. At the same time during the recession phase the goal of economic growth should became the leading one. The suggested "ideal" order for the abstract mixed economy could be the following: *efficiency, self-sustainability, equality, stability, growth*.

The next step would be the development of economic goals ranking orders for selected countries. Our choice of countries for this paper is as follows: USA, China, Russia, and Costa Rica. To get the economic goals ranking orders for each country we should collect experts' opinions. After those opinions are analyzed and summarized, we can build these orders on the basis of generalizations of those opinions. Because in our case we are discussing not the perfection of the ranking orders but the application of the ranking method, we can build ranking orders based upon our own understanding of the economic situation in each selected country.

USA*: stability, growth, efficiency, self-sustainability, equality.*
China: *growth, stability, efficiency, equality, self-sustainability.*
Russia: *stability, efficiency, self-sustainability, equality, growth.*
Costa Rica: *self-sustainability, stability, efficiency, equality, growth*.

Now we can find Kendall tau rank correlation coefficients for each country using as our standards the economic goals ranking orders for pure market, pure command, and mixed economic systems. Let assign the following ranks to five main economic goals based upon our understanding of their importance to the modern mixed economy: Efficiency – 1, Self-Sustainability – 2, Equality – 3, Stability - 4, Growth – 5. In this case the economic goals order for the mixed economy would be: [Efficiency, Self-Sustainability, Equality, Stability, Growth] with the ranking: $\mathcal{R}_1$ = [1, 2, 3, 4, 5].

Then the economic goals order for the pure market economy would be: [Efficiency, Growth, Stability, Equality, Self-Sustainability] with the following ranking: $\mathcal{R}_2$ = [1, 5, 4, 3, 2].

The economic goals order for the pure command economy will look like: [Equality, Stability, Growth, Self-Sustainability, Efficiency] with the following ranking: $\mathcal{R}_3$ = [3, 4, 5, 2, 1].

When we are comparing two ordered sets we should look at the number of different pairs between two sets. It will allow us to get what is called the "symmetric difference distance" between two sets.

$$\tau = 1 - \frac{2 \times [\, d_\Delta\ (\mathcal{P}_1, \mathcal{P}_2\ )]}{N\ (N-1)} \qquad (1)$$

Where the symmetric difference distance between two sets of ordered pairs $\mathcal{P}_1$ and $\mathcal{P}_2$ is presented as d_Δ ($\mathcal{P}_1, \mathcal{P}_2$). N is the number of ranked objects (goals); in our case N = 4. The Kendall coefficient can have values between -1 and +1: $-1 \le \tau \le +1$ where -1 is the largest possible distance and +1 is the smallest one.

Knowing this coefficient we can conclude how close the particular country's recent economic policy comes to the declared list of economic goals outlined by the new leader or the new government after being elected and declaring economic policy priorities. Those priorities can be ranked, and this "ideal" declared rank order could be compared with the factual results of the prioritization of economic goals' realization after one, two, and more years of the leader's or the government's administration. We also can use this approach to illustrate the differences in economic goals priorities when discussing the different economic systems in a general Macroeconomics course or in specialized courses on comparative economic systems. Each country traditionally formulates major economic goals and establishes the rank of their priorities. This rank can be compared with ranks that could be established for the particular standard that we are calling "the pure market," "the pure command," and "the ideal mixed" economies. The results of this comparison are shown below.

RESULTS AND DISCUSSION

Let Kendall tau rank correlation coefficients be found for the U. S. economy. The U.S. economy economic goals order is [Stability, Growth, Efficiency, Self-Sustainability, Equality] with the following ranking:

$\mathcal{R}_4$ = [4, 5, 1, 2, 3].

The Kendall coefficient of rank correlation of economic goals for the U.S. economy and the mixed economy would be -0.2.

$\mathcal{P}_1$ = {[1, 2], [1, 3], [1, 4], [1, 5], [2, 3], [2, 4], [2, 5], [3, 4], [3, 5], [4, 5]}. (3)
$\mathcal{P}_4$ = {[4, 5], [4, 1], [4, 2], [4, 3], [5, 1], [5, 2], [5, 3], [1, 2], [1, 3], [2, 3]}.

The set of pairs which are in only one set of ordered pairs is {[1, 4], [1, 5], [2, 4], [2, 5], [3, 4], [3, 5], [4, 1], [4, 2], [4, 3], [5, 1], [5, 2], [5, 3]}. So, the value of d_Δ ($\mathcal{P}_1, \mathcal{P}_4$) = 12. That means that the value of Kendall tau rank correlation coefficient between two orders of economic goals is:

$$\tau = 1 - \frac{2 \times 12}{5 \times 4} = 1 - \frac{6}{5} = -\frac{1}{5} = -0.2 \quad (4)$$

The Kendall tau coefficient of rank correlation of economic goals for the U.S. economy and the pure market economy would be 0.2.

$\mathcal{P}_2$= {[4, 5], [4, 1], [4, 2], [4, 3], [5, 1], [5, 2], [5, 3], [1, 2], [1, 3], [2, 3]}. (5)
$\mathcal{P}_4$= {[1, 5], [1, 4], [1, 3], [1, 2], [5, 4], [5, 3], [5, 2], [4, 3], [4, 2], [3, 2]}.

The set of pairs which are in only one set of ordered pairs is {[4, 5], [4, 1], [5, 1], [2, 3], [1, 5], [1, 4], [5, 4], [3, 2]}. So, the value of d_Δ ($\mathcal{P}_2, \mathcal{P}_4$) = 8. That means that the value of the Kendall tau rank correlation coefficient between two orders of economic goals is:

$$\tau = 1 - \frac{2 \times 8}{5 \times 4} = 1 - \frac{4}{5} = \frac{1}{5} = 0.2 \quad (6)$$

The Kendal tau coefficient of rank correlation of economic goals for the U.S. economy and the pure command economy would be -0.4

$\mathcal{P}_3$= {[3, 4], [3, 5], [3, 2], [3, 1], [4, 5], [4, 2], [4, 1], [5, 2], [5, 1], [2, 1]}. (7)
$\mathcal{P}_4$= {[1, 5], [1, 4], [1, 3], [1, 2], [5, 4], [5, 3], [5, 2], [4, 3], [4, 2], [3, 2]}.

The set of pairs which are in only one set of ordered pairs is {[3, 4], [3, 5], [3, 1], [4, 5], [4, 1], [5, 1], [2, 1], [1, 5], [1, 4], [1, 3], [1, 2], [5, 4], [5, 3], [4, 3]}. So, the value of d_Δ ($\mathcal{P}_3, \mathcal{P}_4$) = 14. That means that the value of the Kendall tau rank correlation coefficient between two orders of economic goals is:

$$\tau = 1 - \frac{2 \times 14}{5 \times 4} = 1 - \frac{7}{5} = -\frac{2}{5} = -0.4 \quad (8)$$

We can do the same computation for the Chinese economy . China: [Growth, Stability, Efficiency, Equality, Self-Sustainability] with the ranking: $\mathcal{R}_5$= [5, 4, 1, 3, 2].

China's Kendall tau coefficient of rank correlation of economic goals with the "ideal" mixed economy is -0.6.

$\mathcal{P}_1$ = {[1, 2], [1, 3], [1, 4], [1, 5], [2, 3], [2, 4], [2, 5], [3, 4], [3, 5], [4, 5]}. (9)
$\mathcal{P}_5$= {[5, 4], [5, 1], [5, 3], [5, 2], [4, 1], [4, 3], [4, 2], [1, 3], [1, 2], [3, 2]}.

The set of pairs which are in only one set of ordered pairs is {[1, 4], [1, 5], [2, 3], 2, 4], [2, 5], [3, 4], [3, 5], [4, 5], [5, 4], [5, 1], [5, 3], [5, 2], [4, 1], [4, 3], [4, 2], [3, 2]}. So, the value of d_Δ ($\mathcal{P}_1, \mathcal{P}_5$) = 16. That means that the value of the Kendall tau rank correlation coefficient between two orders of economic goals is:

$$\tau = 1 - \frac{2 \times 16}{5 \times 4} = 1 - \frac{8}{5} = -\frac{3}{5} = -0.6 \quad (10)$$

China's Kendall coefficient of rank correlation of economics goals with the pure market economy is 0.6:

$\mathcal{P}_2$= {[4, 5], [4, 1], [4, 2], [4, 3], [5, 1], [5, 2], [5, 3], [1, 2], [1, 3], [2, 3]}. (11)
$\mathcal{P}_5$= {[5, 4], [5, 1], [5, 3], [5, 2], [4, 1], [4, 3], [4, 2], [1, 3], [1, 2], [3, 2]}.

The set of pairs which are in only one set of ordered pairs is {[4, 5], [2, 3], [5, 4], [3, 2]}. So, the value of d_Δ ($\mathcal{P}_2$, $\mathcal{P}_5$) = 4. That means that the value of the Kendall tau rank correlation coefficient between two orders of economic goals is

$$\tau = 1 - \frac{2 \times 4}{5 \times 4} = 1 - \frac{2}{5} = \frac{3}{5} = 0.6 \quad (12)$$

China's Kendall coefficient of rank correlation of economics goals with the pure command economy is 0.

$\mathcal{P}_3$= {[3, 4], [3, 5], [3, 2], [3, 1], [4, 5], [4, 2], [4, 1], [5, 2], [5, 1], [2, 1]}. (13)
$\mathcal{P}_5$= {[5, 4], [5, 1], [5, 3], [5, 2], [4, 1], [4, 3], [4, 2], [1, 3], [1, 2], [3, 2]}.

The set of pairs which are in only one set of ordered pairs is {[3, 4], [3, 5], [3, 1], [4, 5], [2, 1], [5, 4], [5, 3], [4, 3], [1, 3], [1, 2]}. So, the value of d_Δ ($\mathcal{P}_3$, $\mathcal{P}_5$) = 10. That means that the value of the Kendall tau rank correlation coefficient between two orders of economic goals is

$$\tau = 1 - \frac{2 \times 10}{5 \times 4} = 1 - \frac{5}{5} = 0 \quad (14)$$

The next country is Russia. The Russian economy's goals order is [Stability, Efficiency, Self-Sustainability, Equality, Growth] with the ranking order: $\mathcal{R}_6$= [4, 1, 2, 3, 5].
Russia's Kendall coefficient of rank correlation of economics goals with the "ideal" mixed economy is 0.4.

$\mathcal{P}_1$ = {[1, 2], [1, 3], [1, 4], [1, 5], [2, 3], [2, 4], [2, 5], [3, 4], [3, 5], [4, 5]}. (15)
$\mathcal{P}_6$= {[4, 1], [4, 2], [4, 3], [4, 5], [1, 2], [1, 3], [1, 5], [2, 3], [2, 5], [3, 5]}.

The set of pairs which are in only one set of ordered pairs is {[1, 4], [2, 4], [3, 4], [4, 1], [4, 2], [4, 3]}. So, the value of d_Δ ($\mathcal{P}_1$, $\mathcal{P}_6$) = 6. That means that the value of the Kendall tau rank correlation coefficient between two orders of economic goals is:

$$\tau = 1 - \frac{2 \times 6}{5 \times 4} = 1 - \frac{3}{5} = \frac{2}{5} = 0.4 \quad (16)$$

Russia's Kendall coefficient of rank correlation of economics goals with the pure market economy is 0.6:

$\mathcal{P}_2$= {[4, 5], [4, 1], [4, 2], [4, 3], [5, 1], [5, 2], [5, 3], [1, 2], [1, 3], [2, 3]}. (17)
$\mathcal{P}_6$= {[4, 1], [4, 2], [4, 3], [4, 5], [1, 2], [1, 3], [1, 5], [2, 3], [2, 5], [3, 5]}.

The set of pairs which are in only one set of ordered pairs is {[5, 1], [5, 2], [5, 3], [2, 5], [1, 5], [3, 5]}. So, the value of d_Δ ($\mathcal{P}_2$, $\mathcal{P}_6$) = 6. That means that the value of the Kendall tau rank correlation coefficient between two orders of economic goals is:

$$\tau = 1 - \frac{2 \times 6}{5 \times 4} = 1 - \frac{3}{5} = \frac{2}{5} = 0.4 \quad (18)$$

Russia's Kendall tau coefficient of rank correlation of economics goals with the pure command economy is -0.2:

$\mathcal{P}_3$= {[3, 4], [3, 5], [3, 2], [3, 1], [4, 5], [4, 2], [4, 1], [5, 2], [5, 1], [2, 1]}. (19)
$\mathcal{P}_6$= {[4, 1], [4, 2], [4, 3], [4, 5], [1, 2], [1, 3], [1, 5], [2, 3], [2, 5], [3, 5]}.

The set of pairs which are in only one set of ordered pairs is {[3, 4], [3, 2], [3, 1], [5, 2], [5, 1], [2, 1], [4, 3], [1, 2], [1, 3], [1, 5], [2, 3], [2, 5]}. So, the value of d_Δ ($\mathcal{P}_{3,}$ $\mathcal{P}_6$) = 12. That means that the value of Kendall tau rank correlation coefficient between two orders of economic goals is:

$$\tau = 1 - \frac{2 \times 12}{5 \times 4} = 1 - \frac{6}{5} = -\frac{1}{5} = -0.2 \tag{20}$$

The last country in our analysis is Costa Rica. The Costa Rican economy's goals order is [Self-Sustainability, Stability, Efficiency, Equality, Growth] with ranking order: $\mathcal{R}_7$= [2, 4, 1, 3, 5].

Costa Rica's Kendall coefficient of rank correlation of economics goals with the "ideal" mixed economy is 0.4:

$\mathcal{P}_1$ = {[1, 2], [1, 3], [1, 4], [1, 5], [2, 3], [2, 4], [2, 5], [3, 4], [3, 5], [4, 5]}. (21)
$\mathcal{P}_7$= {[2, 4], [2, 1], [2, 3], [2, 5], [4, 1], [4, 3], [4, 5], [1, 3], [1, 5], [3, 5]}.

The set of pairs which are in only one set of ordered pairs is {[1, 2], [1, 4], [3, 4], [2, 1], [4, 1], [4, 3]}. So, the value of d_Δ ($\mathcal{P}_{1,}$ $\mathcal{P}_7$) = 6. That means that the value of the Kendall tau rank correlation coefficient between two orders of economic goals is:

$$\tau = 1 - \frac{2 \times 6}{5 \times 4} = 1 - \frac{3}{5} = \frac{2}{5} = 0.4 \tag{22}$$

Costa Rica's Kendall coefficient of rank correlation of economics goals with the pure market economy is 0:

$\mathcal{P}_2$= {[4, 5], [4, 1], [4, 2], [4, 3], [5, 1], [5, 2], [5, 3], [1, 2], [1, 3], [2, 3]}. (23)
$\mathcal{P}_7$= {[2, 4], [2, 1], [2, 3], [2, 5], [4, 1], [4, 3] [4, 5], [1, 3], [1, 5], [3, 5]}.

The set of pairs which are in only one set of ordered pairs is {[4, 2], [5, 1], [5, 2], [5, 3], [1, 2], [2, 4], [2, 1], [2, 5], [1, 5], [3, 5]}. So, the value of d_Δ ($\mathcal{P}_{2,}$ $\mathcal{P}_7$) = 10. That means that the value of the Kendall tau rank correlation coefficient between two orders of economic goals is

$$\tau = 1 - \frac{2 \times 10}{5 \times 4} = 1 - \frac{5}{5} = 0 \tag{24}$$

Costa Rica's Kendall coefficient of rank correlation of economics goals with the pure command economy is -0.2:

$\mathcal{P}_3$= {[3, 4], [3, 5], [3, 2], [3, 1], [4, 5], [4, 2], [4, 1], [5, 2], [5, 1], [2, 1]}. (25)
$\mathcal{P}_7$= {[2, 4], [2, 1], [2, 3], [2, 5], [4, 1], [4, 3], [4, 5], [1, 3], [1, 5], [3, 5]}.

The set of pairs which are in only one set of ordered pairs is {[3, 4], [3, 2], [3, 1], [4, 2], [5, 2], [5, 1], [2, 4], [2, 3], [2, 5], [4, 3], [1, 3], [1, 5]}. So, the value of d_Δ ($\mathcal{P}_{3,}$ $\mathcal{P}_7$) = 12. That means that the value of Kendall tau rank correlation coefficient between two orders of economic goals is:

$$\tau = 1 - \frac{2 \times 12}{5 \times 4} = 1 - \frac{6}{5} = -\frac{1}{5} = -0.2 \tag{26}$$

The interpretation of these coefficients is a separate task which is outside the scope of this paper. But we can offer in this paper some very general conclusions that we can draw after performing a the comparative analysis of coefficients for four selected countries (Table 1.).

Table 1: Kendall Coefficients of Rank Correlation of Economic Goals for Selected Countries

System\Country	USA	China	Russia	Costa Rica
Pure Market	0.2	0.6	0.4	0.0
Pure Command	-0.4	0.0	-0.2	-0.2
Mixed Economy	-0.2	-0.6	0.4	0.4

The columns of this table represent four selected countries: USA, China, Russia and Costa Rica, and rows reflect three selected economic systems. Each cell of this table shows the value of the Kendall coefficient of ranking correlation between two sets of economic goals: the given country's "recent" goals ranking order and the given system "ideal" ranking order. The positive coefficients indicate the "closeness" of two sets and could be interpreted as the close approximation of the recent economic policy to the specific economic system economic mission interpretation.

Table 1, which includes all coefficients, shows that Russia and especially China are closer to the pure market economy than the USA and Costa Rica. It can be explained by the drastic structural changes in the Russian and Chinese economies during the last 25-30 years when both countries tried to build market economies as soon as possible. At the same time, the Chinese economy is a little closer to the former command approach than Russia because of the greater control of the national economy in the capital goods sector by the Chinese government. At the same time the Chinese economy shows the lowest correlation with an "ideal" mixed economy because of the very high level of dependence of Chinese economic growth on exported raw materials. Because the goal of self-sustainability, in our opinion one of the highest priorities in a modern ideal "mixed" economy, now has the lowest priority for China, the Kendall tau coefficient of rank correlation shows the largest difference from the "ideal" mixed economy. The great dependence of the U.S. economy on imported energy resources also pushes the goal of self-sufficiency for that country to the end of the goals priorities ranking and as the result the coefficient of rank correlation of economic goals with the "ideal" mixed economy is also negative.

CONCLUSIONS

We believe that the approach introduced in this paper of the comparative analysis of different economic systems and selected countries based upon the rank correlation of their economic goals can open a discussion about the ability to compare directions of the economic development of any specific country with the declared directions of that development. The coefficients calculated above show different prioritization of economic goals in different countries. Some countries are following a more market-oriented economic course of economic development, while others are using more government regulation. The goal of this paper was to show that the presented method can be used to analyze differences between countries. We understand that the method itself could be improved, and that orders of economic goals ranks should be built upon pools of expert opinion. We are looking for constructive criticism that can stimulate the future improvement and expansion of our method.

As a future venue for the application of this method, we propose to analyze the correlation between a specific country's economic policy upon election of new leadership and the final results of economic development after that leader's term has ended.

REFERENCES

Katkov, A. (2012) "Use of Ranking Method in Comparative Analysis of Government Regulation in Selected Economic Systems," *Asian Journal of Social Sciences & Humanities*, Vol. 1, Number 1, February 2012, p. 47-54

Syroezhin, I (1980) "Improvement of the System of Indicators of Efficiency and Quality", 1980, Moscow, Economica. In Russian: "Совершенствование системы показателей эффективности и качества", М. Экономика, 1980.

Syroezhin I. (1981) "Theoretical Foundation of the Analysis of the Efficiency of Business Systems", 1981, Leningrad. In Russian: "Теоретические основы анализа работоспособности (эффективности) хозяйственных систем., Ленинград, 1981.

Parfenova V. (1994) "The Model of the Ideal Strategy of the Business System", *Vestnik of the Sankt Petersburg University,* Series 5, Economics, Number 1, 1994, p.77-82.

Katkov, A. (2011) "Government Regulation: Comparative Analysis," *Conference Proceedings Papers. Knowledge Globalization Conference, Boston, Massachusetts, October 16-17, 2011*, Vol. 5, No. 1, p. 285- 293

Kendall M. G. (1938) "A New Measure of Rank Correlation". *Biometrika*, 30 (1–2), p. 81–89

Kendall M. G. (1950) "Rank Correlation Methods". New York. 1955, Hafner Publishing Co.

Abdi, H. (2007) "The Kendall Rank Correlation Coefficient," In N. Salkind (Ed.) *Encyclopedia of Measurement and Statistics*, 2: p. 508-510. Thousand Oaks (CA): Sage

Hays,W.L. (1973). Statistics. 1973. New York, Holt Rinehart &Winston.

Higgs R. (1987). Crisis and Leviathan. Critical Episodes in the Growth of American Government. 1987, New York. Oxford University Press.

Fishman T.C. (2006). China Inc. How thw Rise of the Next Superpower Challenges America and the World.2006. New York. Scribner.

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BIOGRAPHY

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GOVERNMENT INITIATIVES TOWARD ENTREPRENEURSHIP DEVELOPMENT IN NIGERIA

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ABSTRACT

Government policies and programs promote entrepreneurship and investing in new ventures. This paper examines various government policies and programs towards the development of entrepreneurship in Nigeria. A random sample of 1,159 beneficiaries of EDP-NDE programs were selected and structured questionnaires were used to obtain information from the selected EDP-NDE beneficiaries. The result shows that government credit policies and programs have no significant effect on the development of entrepreneurial beneficiaries of the EDP-NDE program. We recommend that governments enforce laws and regulations that link institutional development and the entrepreneurial endeavor and to create an environment that will encourage entrepreneurs to develop business and new ventures.

JEL: L26

KEYWORDS: Government; Initiatives; Entrepreneurship Development; Nigeria

INTRODUCTION

Over the last decades, Nigeria has undergone a conceptual reorientation of social policies followed by dramatic changes in institutional mechanisms traditionally akin to social policies. These processes have been imposed by multilateral agencies, pushing a structural adjustment agenda in addressing the complex relationship between state, market and society with respect to poverty reduction and employment generation. The global economic crisis which is manifested in balance of payment deficits and high levels of inflation and poverty, calls for coordinated efforts by all, especially the youth, to overcome societal shocks and financial imbalances (Burns, 2001:31).

All Nigeria post-independence National Development Plans and National Budgets emphasize employment generation and promotion of gainful employment among their cardinal objectives (Bello, 1995; Damachi, 2003). Some policies designed to generate employment include short-term monetary and fiscal measures aimed at stimulating the domestic supply of goods and services, reducing inflation pressures, and preventing the balance of payments deterioration. Medium and long-term intervention programs and projects were meant to raise production levels and generate employment.

An enduring claim in the field of entrepreneurship is that entrepreneurial activity promotes economic growth and development. This realization, in turn, generated a significant amount of interest in how government policies may be instrumental in fostering entrepreneurial activity, and whether their effects may be consistent across countries. In 1934, Schumpeter stressed the role entrepreneurship plays in the development and spreading of innovation.

Entrepreneurial development has been conceived by successive governments as a program of activities to enhance the knowledge, skill, behavior and attitudes of individual and groups to assume the role of entrepreneurs. They have put in place confidence for building successful programs in different parts of Nigeria (Owualah, 1999). In this regard the Federal Government has adopted several strategies and policies towards entrepreneurial development in Nigeria, by establishing Institutions and Agencies, which provide support services to entrepreneurs. Some of these Institutions and Agencies and their' contributions are discussed in this paper. The policy implementation resulted in the introduction of entrepreneurship development programs (EDP) in Nigeria. These programs are usually targeted at owner-managers of small business firms as well as those possessing potential for self- employment (Owualah, 1999). For instance, participants in Nigeria's National Directorate of Employment (NDE) and similar programs in the country are expected to undergo EDP training. This usually includes entrepreneurial tools ranging from the preparation of a business plan with emphasis on finance, marketing, management and production, identification of new business opportunities, alternative suppliers and market, sources of finance, cash flow analysis and record keeping to training people to think and act in an entrepreneurial way (Amaeshi 2005).

The fact remains that in the last twenty years, governments in developing countries have introduced a number of policies and interventions aiming at promoting entrepreneurship through small and medium enterprise (SME) development. The main impetus for these "interventions" are specific constraints encountered by SMEs. Burns (2001:32) argued that though the SME sector can be much more responsive and flexible to changes in the marketplace, it is also less able to influence such developments. Limited access to finance, a low degree of professionalism, difficulties in recruiting qualified personnel, dependency on clients and suppliers and the absence of economics of scale are identified as core SME sector weaknesses and the main areas where SMEs may require special attention (Burns, 2001). In this respect, understanding the problems faced by SMEs in the specific context of development could provide the necessary background to develop policies for SME support and hence generation of employment.

The paper seeks to answer the following research questions: 1) How does a government credit policy enhance the development of entrepreneurship in Nigeria? 2) Does government effort in creating enabling environment for entrepreneurship help its development?, and 3) Do government policies have significant effect on the development of EDP-NDE in Nigeria?

LITERATURE REVIEW

Entrepreneurial development has been defined in various dimensions (Ameashi, 2006). However, common threads run through each definition: the ability to identify business opportunities, the ability to be able to harness the necessary resources to use opportunities identified, the ability and willingness to initiate and sustain appropriate actions towards the actualization of business objectives. Entrepreneurship Development refers to the process of enhancing entrepreneurial skills and knowledge through structured training and institution-building programs. ED aims to enlarge the base of entrepreneurs in order to hasten the pace at which new ventures are created. This accelerates employment generation and economic development. Entrepreneurial development focuses on the individual who wishes to start or expand a business. Furthermore, entrepreneurship development concentrates on growth potential and innovation. Essentially this means the acquisition of skills that will enable an entrepreneur to function appropriately and adequately in terms of: 1) Attaining present result based on previous decisions and planning for the future, based on present circumstance, 2) Maintaining and developing the organized capability which makes achievement possible, and 3) Coordinating the specialist functions that should enable a firm to perform the technical task in marketing, personnel, research and development, manufacturing, finance and control, especially in the face of changing technology and dynamic industry trend.

To perform these functions, the entrepreneurial development process, procedures and skill acquisition must entrench certain skills. These include conceptual skills, human skills and technical skills, which will transform the entrepreneur into a taskmaster, mediator and motivator. This study examines Government Initiatives toward Entrepreneurship Development to encourage the development of entrepreneurship in Nigeria. The seriousness of unemployment has attracted government attention over the years. Employment generation featured prominently in the post medium-term National Development Plans (1962-1985) and this led to the establishment of several government parastatals in addition to the creation of institutions such as the Industrial Training Fund (ITF), to drastically reduce the problem of underemployment. For the effective implementation of government programs and policies towards entrepreneurship and small business enterprises, various Nigerian governments have established some agencies and policies including: Various credit guidelines prescribed by government for loans and advances which banks should make available to Nigerian small business firms; National Directorate of Employment (NDE); Industrial Development Canters (IDC); National Economic Reconstruction (NERFUND); Nigeria Export Promotion Council (NEPC); Nigeria Agricultural Cooperative and Rural Development Bank (NACRDB), formed in the year 2000 from the merging of People's Bank of Nigeria (PBN), Family Economic Advancement Program (FEAP), and the Nigeria Agricultural Cooperative Bank (NACB); The National Poverty Eradication Program (NAPEP); and Research Institutes, among others, (Osuagwu, 2006).

Various Nigerian governments have designed fiscal and monetary policies and incentives for entrepreneurs and small-scale sub-sectors of the economy. For example, the federal government of Nigeria adopted a strategy of training and motivating unemployed graduates, in addition to out-of-school entrepreneurship development and training programs. Through these programs, and on the presentation of viable business project proposals, the National Directorate of Employment (NDE) disbursed approved loans through pre-selected commercial banks. The federal government of Nigeria has been reasonably involved in assisting, developing and promoting small business enterprises in Nigeria (Philip, 1992).

According to Collier (1998), there are certain policies that are peculiar to the Nigerian economy for its growth and development. These policies include good governance, privatization and commercialization of public utilities, export-oriented manufacturing emphasis, reduction of poverty, illiteracy and empowering Nigerians through the reduction of unemployment (Osuagwu, 2006). The adoption of Structural Adjustment Program (SAP) ushered in the NDE whose primary responsibility is to generate employment opportunities with emphasis on the development of entrepreneurship and self-employment. Besides NDE, other programs with employment implications established by the government include: the Directorate of Food, Roads and Rural Infrastructure; the Better Life for Rural Women/Family Support Program; the Development of Small-Medium Scale Enterprises; the Raw Materials Research and Development Council; the Peoples' Bank of Nigeria and the Community Banks.

The current poverty alleviation program also focuses on the unemployed. In spite of these efforts, unemployment remains a grave problem in Nigeria. According to Owualah (1999), quoted by Osemeke (2012), the policy implementation saw the introduction of entrepreneurship development programs (EDP) in Nigeria. These programs are usually targeted at owner-managers of small business firms as well as those identified as paving potential for self-employment. For instance, participants in Nigeria's National Directorate of Employment (NDE) and similar programs in the country are expected to undergo EDP training. This usually include entrepreneurial tools which range from the preparation of a business plan with emphasis on finance, marketing, management and production, identification of new business opportunities, alternative suppliers and market, sources of finance, cash flow analysis and record keeping to training people to think and act in an entrepreneurial way (Amaeshi 2005).

An analysis of these agencies showed that NDE, established in 1987, has the main task of creating job opportunities and implementing government polices directed at solving the growing unemployment problem of the economy. It also serves as a vehicle for promoting entrepreneurship. The directorate has four programs viz. (i) Small-scale Industries and Graduate Employment Program, (ii) National Youth Employment and Vocational Skills Development Program, (iii) Agricultural sector Employment program, (iv) Special Public Works programs (Nigeria Rural Development Sector Strategy Main Report, 2004).

Furthermore, SMEDAN, was established by the small and medium industries development Act, 2003 to facilitate and promote micro, small and medium enterprises access to resources required for their growth training and Development. It also lays down a structured medium and small industrial enterprises sector which encourages and enhances sustainable economic development of Nigeria (Osemeke, 2012). Rather than examining policies individually to determine their effects on specific entrepreneurial activities the need to examine entrepreneurship policies from a more strategic perspective exists. This strategic perspective considers the fit (Lawton, 2002:9) of these policies with the needs of the firms operating in entrepreneurial environments and examines how government policies may serve as a linking mechanism between the network of actors throughout the various stages of an entrepreneurial venture's lifecycle.

According to (Waziri, 2012), the Nigerian government promotes entrepreneurial culture through initiatives that builds business confidence, positive attitude, pride in success, support and encouragement of new ideas, social responsibility, providing technological supports, encouraging inter-firm linkages and promotion of Research & Development. Others considerations are cheap financial resources, free access to market, prompt registration/advisory service to businesses, promotion of entrepreneurial skills acquisition through education and manpower development, production of infrastructure, export incentives, stable macroeconomic environment, security of investment, stable political climate *et cetera*.

To further, develop SMEIS, the central Bank of Nigeria in 2010, established a N200billion Small and Medium Scale Enterprises Guarantee Scheme. The main objectives of the scheme were to: fast track the development of the SME/Manufacturing sector of the Nigerian economy; set the pace for the industrialization of the economy; and increase access to credits by promoters of SMEs and manufacturers. The scheme provides guarantees on loans by banks to the sector in order to absorb risks that had inhibited banks from lending to the real sector. Activities covered under the scheme include: manufacturing, the agricultural value chain, educational institutions, and any other activity as may be specified by the CBN. Also at end- December, 2010 two applications valued at N7.5million and N100 million had been processed under the scheme. The applications were awaiting management approval (Osemeke, 2012).

Most policies and incentives designed to promote entrepreneurship focus primarily on activities central to the first two years of a firm's existence (NDE, 2007). Perhaps a more interesting and illustrative case of the impact of entrepreneurship is the case of France. Despite government efforts to liberalize the operating environment for venture capital firms, reducing capital gains taxes and instituting a number of policies to facilitate the creation of new businesses (Dubocage and Rivaud-Danset, 2002:25), France does not rank highly on either of the measures used to classify the countries participating in the Global Entrepreneurship Monitor (GEM) studies (Reynolds *et al.*, 2004).

The economic and institutional contexts are key drivers of entrepreneurship and economic development (Leff, 1979). Economic context includes industrial infrastructures, economic growth, and capacity for innovation as important determinants of entrepreneurial activity (Furman, Porter, and Stem, 2002). Recent behavioral research in entrepreneurship suggests that institutions play an important role in entrepreneurial activity. For example, Bruton and Ahlstrom (2002) compared the roles of venture capitalists in different economic contexts. Similarly, George and Prabhu (2002) highlight the role of developmental financial institutions in fostering entrepreneurship in emerging economies through lending policies and prioritizing of national industrial-development goals. They all agreed that the economic and institutional contexts play a causal role in creating a climate for innovation and entrepreneurship.

Both directly and indirectly, governments affect the development of an environment that could support entrepreneurship. Literature also suggests that, "the need for the development of a conducive environment may be greater in emerging market economies and in developing countries" (El-Namaki, 1988:98). This is because "there is sufficient evidence that environmental forces ranging from purely cultural and social factors go quite a long way towards straining the driving force behind entrepreneurs", (El-Namaki, 1988:100). Furthermore, compared to large-scale enterprises, the need for a conducive environment could be greater in the case of small-scale enterprises because such enterprises may have little control over the environment in which they operate (Dubocage and Rivaud-Danset, 2002:25). These enterprises may lack resources and 'political clout' that usually are needed to influence an enterprise's environment. However, this submission has stirred a debate.

Environmental conditions have been discussed in five dimensions (Fogel and Gnyawati, 1994); government policies and procedures, socioeconomic conditions, entrepreneurial and business skills, financial support to businesses, and nonfinancial support to businesses. Governments can influence the market mechanism and make them function efficiently by removing conditions that create market imperfections and administrative rigidities. They can also create an "enterprise culture" that enables firms to take reasonable risks and seek profits.

Entrepreneurs may be discouraged to start a business if they have to follow many rules and procedural requirements; if they have to report to many institutions, and if they have to spend more time and money in fulfilling the procedural requirements (Young and Welsch, 1993). Examples of similar types of effects of rules and regulations can be found in many countries including Nigeria.

A favorable attitude of the society towards entrepreneurship and a widespread public support for entrepreneurial activities are both needed to motivate people to start a new business. In fact, social factors may be equally important as availability of loans, technical assistance, physical facilities and information. Certain infrastructural elements seem to make substantial impact on the entrepreneurial environment. These elements include the existence of universities and research and development programs, a well-educated and technically skilled labor force, and modern transport and communication facilities that provide easy access to suppliers and customers (Gartner, 1990).

Without having some business opportunities in the environment, and without having motivated and capable entrepreneurs in starting a business, any amount of government financial assistance may not increase entrepreneurial activity.

DATA AND METHODOLOGY

This study covers the 10 years between 2001 and 2010. The research work covers graduate youth in Nigeria. However, the study will be limited to two states in each of the geo-political zones in Nigeria. There are six geo-political zones. Each has common characteristics, especially in terms of cultural inclination. The entire beneficiaries of the Entrepreneurship Development Program (EDP) of National Directorate of Employment (NDE) training program is the population of the study. It is however, impossible to undertake such a task because the population is quite large, which made sampling inevitable. NDE beneficiaries were the focus of the study because NDE is accepted as a credible employment generating agency. At the end of 2010, 7,878 youths benefited from the NDE training program (NDE Report, 2011). To select the sample size, the 36 states of the federation were grouped according to their respective geopolitical zones. Then, a random number table was used to select two representative states for each geopolitical zone. In all, twelve states were covered in this study. Table 1 shows the sampled states, the number of beneficiaries, sample size and the percentage response rate of the study. Out of the 7,878 EDP-NDE beneficiaries, 1,576 respondents were surveyed on EDP-NDE but only 1,159 responded, resulting in a response rate of approximately 73.54 percent.

RESULTS

To access the level of government program and policies on the development of EDP-NDE development in Nigeria, a sample of 1,159 beneficiaries of the EDP-NDE Programs in Nigeria were randomly selected. Data were collected through a structured designed questionnaire and extracted for analysis. Reliability or internal consistency of the items within the structure of this study was assessed by Cronbach's alpha and gives the value of 0.76 for the questionnaire. The data were analyzed using frequency analysis and non-parametric chi-square test ∝ =0.05 aided with the use of SPSS for windows 17.

Table 1: Population and Sample of the Study (EDP-NDE Beneficiaries & Trainees)

		Population			Sample Size			Response Rate			
Regions	**Sampled States**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Response %**
North Central	Nasarawa & Niger	838	347	1,185	169	68	237	135	47	182	76.7
North East	Adamawa & Borno	975	327	1,302	195	65	260	117	71	188	72.3
North West	Kaduna & Sokoto	1,047	308	1,355	2107	61	271	104	89	193	71.2
South East	Imo & Enugu	882	247	1,129	177	49	226	106	65	171	75.7
South South	Rivers & Delta	837	236	1,073	168	47	215	89	76	165	76.7
South West	Lagos & Ekiti	1,437	397	1,834	289	78	367	167	93	260	70.8
Total		6,016	1862	7,878	1,208	368	1,576	452	707	1,159	73.54

Source: Field Survey, 2011

The research starts by soliciting information on the sex of the respondents. A majority of participants in the program are male. Males are more involved in the entrepreneurship development program than their female counterparts. These results are presented in Table 2. The result in Table 2 shows that out of the 1159 beneficiaries, 74% of the respondents are Male while 26% are Females.

Table 2: Sex of EDP-NDE Beneficiaries

	Frequency	**Percent**	**Valid Percent**
Valid			
Male	861	74.3	74.3
Female	298	25.7	25.7
Total	1159	100.0	100.0

Source: Filed Survey, 2012

The response here is on the duration of the training program undergone by the NDE beneficiaries. The essence is to identify the numbers of years or months it takes the NDE agency to train it beneficiaries on entrepreneurship development. It therefore expects that beneficiaries can either spend 3 months or 6 months or 1 year or 1-3 years in the course of training. Table 3 presents the results of the respondents on duration of training program. The result in Table 3 show that 18% of the respondents attended training program for 3 months, 28% for 6 month, 46% of the respondent attended training for 1 year and about 7% of the respondents attended training between 1-3 years

Table 3: Duration of Training Program

	Frequency	**Percent**	**Valid Percent**
Valid			
3months	210	18.1	18.1
6month	326	28.1	28.1
1 year	538	46.4	46.4
1-3 years	85	7.3	7.3
Total	1159	100.0	100.0

Source: Field Survey, 2012

Government programs and policies toward incentives for EDP of NDE is a crucial factor that determines economic development and employment generation development in Nigeria. Several policies targeting entrepreneurship have typically focused on specific programs targeting tax incentives or venture capitalists (Dubocage, Rivaud-Danset, 2002; Harding, 2002: Lawton, 2002; Keuschnigg and Nielsen, 2003) promote entrepreneurship across wider range (Verheul, Wennekers, Audretsch, and Thurik„ 2002: Storey, 2003; OECD, 2004; Acs, Arenius, Hay, and Minniti, 2005). Table 4 presents the results on level of satisfaction of beneficiaries on the government policies. From the 1159 respondents who are beneficiaries of EDP-NDE Programs, the result in Table 4 shows that about 18.2% of respondents rated the government program and policies toward the incentives for EDP-NDE development in Nigeria as Average, 46.2% rated it low, 15% high and 4% of the respondents rated it as satisfactory.

Table 4: Government Programs and Policies toward the Incentives for EDP-NDE Development in Nigeria

	Frequency	Percent	Valid Percent
Valid			
Satisfactory	243	21.0	21.0
High	169	14.6	14.6
Average	211	18.2	18.2
Low	536	46.2	46.2
Total	1159	100.0	100.0

Source: Field Survey, 2012

Credit policies as well as funding of entrepreneurial ventures from business angles, micro-lending facilities can promote and/or dissuade as the sources are often subject to many government policies, directly or indirectly. The federal government of Nigeria has been reasonably involved in assisting, developing and promoting small business enterprises in Nigeria (Philip, 1992). Table 5 shows whether there is satisfaction among beneficiaries of the NDE entrepreneurship development program on government policies affect their business credit follow. Table 5 shows satisfaction with government credit policies for entrepreneurship, about 52% of the respondents rated it as Average, 25% low, 14% high and about 9% of the respondents rated it as satisfactory.

Tale 5: Government Credit Policies for Entrepreneurship Development

	Frequency	Percent	Valid Percent
Valid			
Satisfactory	109	9.4	9.4
High	161	13.9	13.9
Average	601	51.9	51.9
Low	288	24.8	24.8
Total	1159	100..0	100..0

Source: Field Survey, 2012

An institutional framework comprises both formal rules and informal constraints. Formal rules or institutional arrangements include political and judicial rules, economic rules and contracts. Political rules define the hierarchical structure of the policy and its basic decision structure. Economic rules on the other hand define property rights while contracts contain the provisions which are specific to a particular agreement in exchange. Table 6 presents beneficiaries observation on government institution framework for entrepreneurship development in Nigeria. The Table shows how this framework is rated by the beneficiaries on the scale of; Satisfactory, High Average and Low.

On the government institutional framework for entrepreneurship development rate in Nigeria, Table 6 shows that 46% of respondents rated the government framework policies to entrepreneurship development in Nigeria as satisfactory, about 3% rated it low, 27% high and about 24% rated the institutional framework as average.

Table 6: Government Institutional Framework for Entrepreneurship Development

	Frequency	Percent	Valid Percent
Valid			
Satisfactory	531	45.8	45.8
High	316	27.3	27.3
Average	281	24.3	24.3
Low	31	2.7	2.7
Total	184	100.0	100.0

Source: Field Survey, 2012

Government policy aimed at creating an enabling environment in terms of security and economic stability is examined next. Table 7 provides information on the how respondents view the activities of government toward creating enabling environment for entrepreneurship development. Table 7 shows, 24% of respondents rated the effort of the government toward creating an enabling environment in terms of security and stability for entrepreneurship development as low, 53% average, about 18% high and only about 6% rated it satisfactory.

Table 7: Effort of the Government toward Creating an Enabling Environment in Terms of Security and Stability for Entrepreneurship Development

	Frequency	Percent	Valid Percent
Valid			
Satisfactory	64	5.5	5.5
High	203	17.5	17.5
Average	619	53.4	53.4
Low	273	23.6	23.6
Total	1159	100..0	100..0

Source: Field Survey, 2012

Analyses of the hypotheses are based on respondents who are beneficiaries of the EDP-NDE training perception on government program and policies. A non-parametric chi-square statistic at $\propto = 0.05$ is applied. The test analysis is given in Table 8.

Hypothesis 1: Ho: Government credit policies have no significant effect on the development of entrepreneurial beneficiary of the EDP-NDE Program.

Table 8: Test Statistic

Government credit policies have no significant effect on the development of entrepreneurial beneficiary of the EDP-NDE Program	
Chi- Square	6.97
Df	4
Asymp. Sig	0.096

Source Author Analysis

The test result in Table 8 shows that Government credit policies have no significant effect on the development of entrepreneurial beneficiary of the EDP-NDE Program, since the p-value (.096) is greater than the alpha level (0.05), we therefore accept the Ho. The test statistic result is also supported with the result in Table 5, as 52% of the respondents rate the Government credit policies as average on the development of entrepreneurial beneficiary of the EDP-NDE Program.

Hypothesis Two**:** H_0: Government Policies and Program have no significant effect on the development of EDP-NDE in Nigeria

Table 9 shows that government program and policy has no significant effect on the development of EDP-NDE in Nigeria, since the p-value (.07) is greater than the alpha level, we therefore accept the Ho. The test statistic result is also supported with the result in Table 4, as 46% of the respondents rate the government program and policies as low to the development of EDP-NDE in Nigeria.

Table 9: Test Statistics

Government Policies and Program has no significant effect on the development of EDP-NDE in Nigeria	
Chi- Square	8.07
Df	4
Asymp. Sig	0.071

Source: Author Calculations

The result of the analysis shows that a majority of EDP-NDE beneficiaries attended training for less than a year (i.e. 6 months) and the government program and policies towards the incentives for the EDP-NDE development was rated low by the beneficiaries. The credit policy and creating enabling environment for entrepreneurship development stability was rated as average. The result of the hypothesis therefore shows that the government credit policies and government programs has no significant effect on the development of entrepreneurial beneficiaries of the EDP-NDE program.

CONCLUDING COMMENTS

This study examines government initiatives toward entrepreneurship development in Nigeria and evaluates the job creation capacity of the entrepreneurship development programs on Nigerians. Government program and policies are designed to promote entrepreneurship activity including the establishment of a business or investing in a new venture. The methodology was design to examine the subject matter to investigate the level of government programs and policies on the development of EDP-NDE development in Nigeria, a sample of 1,159 beneficiaries of EDP-NDE Programs in Nigeria were randomly selected. Data were collected through a structured questionnaire and extracted for analysis. Reliability or internal consistency of the items within the structure of this study was assessed by Cronbach's alpha giving a value of 0.76 for the questionnaire. The data were analyzed using frequency analysis and non-parametric chi-square test $\propto = 0.05$.

The study found that government credit policies have no significant effect on the development of entrepreneurial activities in the country and mostly EDP-NDE beneficiaries do not derived maximum satisfaction from government programs and policies. Often the government policies are compromised by other policies, thereby negating the intended positive effects for entrepreneurs and the economy, both the mid-term and long term effect. The problems faced by SMEs necessitated the background for the development of policies to support SMEs.

A major limitation of this research relied largely on the opinions and views of beneficiaries whose contact addresses were given by NDE officials. Secondly, lack of a data base from NDE and frequent changes of addresses by beneficiaries make contact a little bit difficult. Data limitations also made it difficult to study in-depth the impact of government policies towards entrepreneurship development in Nigeria. However, the generalization of available data clearly indicates reliability of the data within the established boundaries of the study.

Based on the research work, we recommend that governments should enforce laws and regulations that link institutional development and the entrepreneurial endeavor and to create an environment that will encourage entrepreneurs to develop business and new ventures.

Further research is required to study other variables not covered in this study. An investigation of the nature and characteristics of a set of institutional arrangements that accounts for successful entrepreneurial events in the Nigerian small business sector would be beneficial. More specifically, there is a need to investigate how potential and existing small-scale entrepreneurs in various economic sectors respond to change in institutional arrangements. There is need for further investigation on successful entrepreneurial behaviors to be included in the EDPs curriculum. The entrepreneurial success is a function of specific entrepreneurial behaviors and in different economic environments, different types of entrepreneurial behaviors will be effective.

REFERENCES

Acs, Z., Arenius, P., Hay, M. and Minniti, M. (2005) Global Entrepreneurship Monitor 2004 Executive Report. Babson College and London Business School: Babson Park.

Amaeshi, U.F (2005) *Entrepreneurship,* Enugu. Publishers Ltd.

Bello, J.A. (1995) 'Behavioral Considerations in the management of SMEs in Nigeria', in Ojo, A.T. (ed.), *Management of Small and Medium Scale Enterprises in Nigeria*, Ikeja: Pumark Nigeria Limited.

Bruton, G. & Ahlstrom, D. (2002) An Institutional View of China's Venture Capital Industry: Explaining the Differences between China and the West. *Journal of Business Venturing*.

Burns, P. (2001) *"Strategies for Success and Routes to Failure",* in Business P. and Dewhurst, J. (eds), Small Business and Entrepreneurship, London: Macmillan, 32-67

Collier, P., (1998) `Poverty Alleviation in Nigeria: The Role of the Private Sector`, *Lagos Business School (LBS) Management Review,* 2, pp. 85-88.

Damachi, N. A. (2003) "Evaluation of Past Policy Measures for Solving Unemployment Problems", in Unemployment in Nigeria: *CBN Bullion* Vol. 25, No. 4, October/December.

Dubocage, E. and Rivaud-Danset, D. (2002) Government Policy on Venture Capital Support in France, *Venture Capital* 4(1): 25-43.

El-Namaki, M.S.S. (1988) Encouraging Entrepreneurship in Developing Countries. *Long Range Planning*, 21(4), 98-106

Fogel, D. S. and Gnyawati, D.R. (1994) "Environments for Entrepreneurship Development: Key Dimensions and Research Implications. Entrepreneurship: *Theory and Practice*. Vol. 21(4) Issue: 4.

Furman, J. L., Porter, M.B. and Stem, S. (2002) The Drivers of National Innovative Capacity. *Research Policy*, 31(6).

Gartner, W.B. (1990) What are We Talking About When We Talk About Entrepreneurship? *Journal of Business Venturing*, 5(1), pp. 15-28.

George, G. and Prabhu, G. (2002) Developmental Financial Institutions as Technology Policy Instruments: Implications for Innovation and Entrepreneurship in Emerging Economies. *Research Policy*. 31(6)

Harding, R. (2002) Plugging the Knowledge Gap: An International Comparison of the Role for Policy in the Venture Capital Market, *Venture Capital* 4(1): 59-76

Keuschnigg, C. and Nielsen, S.B. (2003) Taxes and Venture Capital Support, *European Finance Review* 7:515-539.

Lawton, T. C., (2002) Missing the Target: Assessing the Role of Government in Bridging the European Equity Gap and Enhancing Economic Growth, *Venture Capital* 4(1): 7-23.

Leff, N. (1979) Entrepreneurship and Economic Development: The Problem Revisited. *Journal of Economic Literature*, 17 (March).

Nigerian Agricultural Cooperative and Rural Development Bank Ltd (2003, July 1) Managing the Transition, the Journey so far, Lagos: *Guardian*, p 102

NDE (2007) *Report of the Registration of Unemployed Persons*, PRSC Dept. Abuja NDE (2006) Brochure, PRSD Dept. Abuja.

OECD (2004) Venture Capital: Trends and Policy Recommendations. *OECD Papers*. Paris: 4(10).

Osemeke, M. (2012) Entrepreneurship Development and Intervention Agencies in Nigeria. *International Journal of Business and Social Sciences*, Vol. 3, No. 8, (Special Issued – April, 2012), pp. 255-.

Osuagwu, L., (2006) *Small Business and Entrepreneurship Management*, Lagos: 2nd Edition, Grey Resource Limited, pp. 58-56

Owualah S.I (1999) *Entrepreneurship in Small Business Firms*, Lagos, GMAG Investment Ltd

Owualah S.I (1999, June) “Bankers and Consultants in Nigeria’s Job Creation Programmers” *Small Business Economic*, Vol. 12 Nov, 321-330

Phillips, T., (1992) “Government Policies and Incentives for Small and Medium Scale Business”, in Ojo, A. T. (ed.), *Banks and Small-Scale Business*, Lagos: F & A Publishers Ltd.

Reynolds, P., Carter, N., Gartner, W., and Greene, P. (2004) The Prevalence of Nascent Entrepreneurs in the United States: Evidence from the Panel Study of Entrepreneurial Dynamics. *Journal of Small Business Economics*, 23:263-284.

Storey, D. J. (2003) Entrepreneurship, Small and Medium Sized Enterprises and Public Policies, In Z. J. Acs & D. B. Audretsch (eds). *Handbook of Entrepreneurship Research* (pp. 473 – 511). Heidelberg, Germany: Springer Science + Business Media.

Verheul, I., Wennekers, S., Audretsch, D. and Thurik, A. R. (2002) An Eclectic Theory of Entrepreneurship. In *Entrepreneurship: Determinants and Policy in a European-US Comparison*

Audretsch, D. B., Thurik, A. R. Verheul, I., Wennekers, A.R.M. (eds). Kluwer Academic Publisher: Babson/Dordrecht; pp. 11-82.

Waziri, K.M. (2012) Industrial Property Rights Protection and Entrepreneurship Development in Nigeria: The Economic Implication. *Journal of Politics and Laws*, Vol. 5, No. 1, pp. 93-99.

Young, E. C. and Welsch, H. P. (1993) Major Elements in Entrepreneurial Development in Central Mexico. *Journal of Small Business Management*, October.

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