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Risk Maturity Measure on Culture Domain among Executive Staff in One of the Government Linked Companies (GLCs) in Malaysia

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Abstract:
Purpose of this study is to determine the risk maturity assessment on the competence of culture domain among executive staff in one of the Government Linked Companies (GLCs) in Malaysia. The research design used in this study is a quantitative, exploratory survey designs. A survey questionnaire (RMS17) used in this study was adapted based on business risk management maturity model. Pilot study reported a reliability of Cranach's Alpha = 0.96 (very high reliability). The study measure and highlighted the questionnaire via focus group face-to-face approach to the respondents among executive staff in the company to manage the risk management maturity survey. It measures four levels of risk maturity namely: beginners, intermediate, progressive and matured focusing on the competence of culture domain. Results of the maturity survey on the competence of culture domain among executive staffs of the company achieved progressive level, with mean = 2.92. The characteristics of competence with progressive level on culture domain in risk maturity level, is where the company involved is prepared to take appropriate risks, have good understanding of the benefits across the company and the strategy is mapped into process implementation. Progression level is a level where most organizations will aspire to and be satisfied. Therefore, this study provides a way to measure risk management capacity against four standard levels of maturity, allowing them to conduct benchmarking and to improve and increase the ability to manage risks.

Keywords: Risk management maturity, culture domain, attributes, Competence

1. Introduction

Risk is defined as "anything that has the potential to prevent the organization from achieving its objectives". Risk assessment therefore involves the identification and analysis of relevant risks and determining how the risks should be managed to achieve predetermined objectives. The environment in which organizations operate today is rapidly becoming more complex and competitive. Major technological changes and constant changes in the business scenario have many opportunities but also many challenges for organizations looking to thrive in a sustainable way (Bouer et Carvalho, 2005). Tomas et Alcantara (2013), risk management has been an important tool with regard to the search for an effective reduction of vulnerabilities and in this context, some researchers have suggested models that can serve as guidelines for the practice of this management. According to Frederico (2012), maturity is a theme extensively explored in recent years by researchers in business management area, focusing on various areas. Siqueira (2005) points out that the company's management maturity has an impact on competitiveness, both for obtaining new contracts and for business continuity, from the ripening of internal initiatives to improve the consistency of planning, implementation and monitoring their processes. In this respect, the management maturity assessment allows objectively identify and plan the three basic types of process improvement actions:

- Improvement of predictability: the first expected result of a mature organization is to decrease the difference between desired and actual outcomes (time, cost and quality).
- Improvement of Control: organizations more mature become more effective in control of your performance within acceptable limits.
- Improvement of effectiveness: with the evolution of maturity, the organization eliminates waste, failures and rework. Cost and time are reduced, quality and productivity grow.

The risk management maturity reflects the sophistication to understand the portfolio risk of an organization and how to manage these risks as well as internal business continuity systems needed to face this eventuality and to recover (Zou et al., 2010). According to Jia et al. (2013), it is considered that the maturity models can effectively help organizations understand

the current level of their risk management practical skills as well as their strengths and weaknesses in relation to future practice of risk management in order to take the appropriate measures to improve its performance in this management process. Therefore, this research is to assess, in a quantifiable fashion, its level of maturity in the area of risk management. In accordance with the current company Risk Management Framework, these surveys identified the levels of organizational competence in the area of business risk management specifically on culture domain and defines this competence in terms of the organization's approach against four attributes which are: Beginners, Intermediate, Progressive and Matured.

2. Methodology

The research design used in this study is quantitative, exploratory survey designs. A survey questionnaire (RMS17) used in this study was adapted based on business risk management maturity model and reviewed by company involved in this study. The reliability survey questionnaire (RMS17) was achieved when the pilot study was tested on 30 respondents using SPSS. It reached the reliability of Cronbach's Alpha = 0.96 (very high reliability). The results suggest that the risk management maturity assessment survey (RMS17) can be used to determine and to evaluate, in a quantifiable fashion, the level of maturity competence on the culture domain in the area of business risk management in one of the government linked companies in Malaysia

The survey questionnaire (RMS17) was administered to all respondents of the study via face-to-face administered and focus group among executives' staff to measure the maturity on the competence of culture domain in the area of risk management. Survey was distributed and divided into 4 Zone as below:

- North (Perlis, Kedah, Penang and Perak)
- Centre (Kuala Lumpur and Selangor)
- South (Negeri Sembilan, Melaka & Johor)
- East (Pahang, Terengganu & Kelantan)

Four hundred and fifty respondents (450) were assigned in this study aged between 25 until 59 years and are executive's staff. Sampling size used in this study is "Small Sample Techniques," by Krejcie-Morgan, 2005. It is stated that with the company population size of 34,900, samples size needed to be generalize in this study is equivalents to minimum of 381 samples as depleted in Table 1 below:

Sample Size for 95% Confidence Level	
Population Size	Sample Size
Infinity	384
500,000.00	384
100,000.00	383
50,000.00	381
10,000.00	370
5,000.00	357
3,000.00	341
2,000.00	322
1,000.00	278

Table 1: Sample Size for 95% Confident Level by Krejcie-Morgan 2005

Further to that, data analyzing using SPSS. Descriptive Statistics in term of mean and standard deviations was used to summarize and describe the mean difference of culture attributes domain against four competences. The aim at this stage was to describe the general distributional properties of the data, to identify any unusual observations (outliers) or any unusual patterns of observations that may cause problems for later analyses to be carried out on the data and produce plots that visually display distributions of variables (Landau Sabine & Brian, 2004). Statistics measures on One-way ANOVA and Independent t-test answer research objective concerning the comparison of the attribute (independent variable) and the dependent variables namely region, job grade and working experience. Statistics measures on One-way ANOVA was also measured on the Culture attributes domain to answer research gap concerning the difference between region and respondents in risk management maturity level.

In this study, the risk management maturity survey (RMS17) is used to assess the level of maturity in the business risk management. These researches help an organization assess whether their approach to risk management is adequate or not, to compare its approach to the best practices or in contrast to its competitors and create a benchmark accepted for organizational risk management. This model will identify four levels of organizational competence in the area of business risk management:

- Beginners
- Intermediate
- Progressive
- Matured

And defines this competence in terms of the organization's approach against CULTURE attributes domain Thus, it can be seen that for an organization at the Beginners (1) or naïve stage, the attributes are typically all at the lowest level. The culture is unaware of the need for formal management of risks and it therefore follows that there are no processes in place to deal with it, the organization has no experience in managing risk, and there is no process to be applied. At the next level, Intermediate (2) the organization will have recognized the requirement for risk management, and the evidence of this recognition is shown in the organization's culture. Most organizations will aspire to and be satisfied with reaching – Progressive (3) where management of risk is routine and consistent across all projects. However, the model identifies a further, the Matured (4) of maturity where a risk-aware culture drives the organization into proactive risk management, seeking to gain the full advantages of employing best practice processes.

3. Findings

3.1. Descriptive Data Analyses

The descriptive data analyses will describe the respondents' profile, namely age, job grade, gender, working experience, and level of education on the dependent variables, during the study. The first set of analyses examined the impact of the respondents' profiles through descriptive data analysis. The purposes of examining the data in detail were to detect errors in coding during data entry, to screen out any unusual values, to identify outliers, to assess the normality of distribution and homogeneity of variance of the population from which samples were drawn. The aim of this study is to examine 450 subjects (N=450) of TNB/Subsidiary executive staff age ranges between 25 to 59 years.

3.2. Respondents

Four hundred and fifty respondents (450) have participated in this study. All respondents were executive staff in one of the government linked companies in Malaysia. The results obtained from the preliminary analysis of the frequency distribution are shown in Table 2, regarding respondent's region/zone. Four hundred and fifty respondents (450) were assigned in this study. Before the statistical analysis was done, the respondent profile data was examined. As depicted in Table 2, 28.4% respondents were from North zone, 44.7% Centre, and 13.6% South and 13.3% from East Zone.

Variables	Frequency		Percent %
Region/Zone	North	128	28.4
	Centre	201	44.7
	South	61	13.6
	East Cost	60	13.3
	Total	450	100.0

Table 2: Respondent Profile on Frequency and Percentage on Region/Zone

Variables	Frequency		Percent %
Gender	Male	296	65.8
	Female	154	34.2
	Total	450	100.0
Age	< 25	13	2.9
	26 - 35	179	39.8
	36 - 45	124	27.6
	>46	85	18.9
	Undefined	49	10.9
Education Level	Total	450	100.0
	Certificate	5	1.1
	Diploma	27	6.0
	Degree	343	76.2
	Master/PhD	73	16.2
	Undefined	2	.4
	Total	450	100.0

Table 3: Respondent Profile on Frequency and Percentage on the Gender,
Age and Education Level

Further to that, Table 3 explained the respondent profile on frequency and percentage on the categories of gender, age, and job grade and education level. Table 4 describes the respondent profile on working experience, awareness and

involvement in the area and scope of risk management. As depicted in Table 3, 65.8% respondents were male and 34.2% female. Majority age group 39.8% in category 26 – 35 years old and the lowest 2.9% are in category below 25 years old. Further to that, 76.2% respondents have degree qualification and 16.2% possess Master/PhD. Table 4 explained the respondent profile on frequency and percentage of respondents working experiences, awareness on risk management and their involvement directly in the area and scope of risk management. As depicted in Table 4, the respondent's experiences working in TNB / Subsidiary are in the range from 5 to 21 years of working experience. More than 90% of the respondents are aware about risk management in TNB/Subsidiary and 46% involved in the area and scope of risk management.

Variables		Frequency	Percent %
Working Experience	< 5 years	84	18.7
	6 - 10 years	122	17.1
	11 – 15 years	90	20.0
	16 - 20 years	63	14.0
	> 21 years	89	19.8
	Undefined	2	.4
Awareness	Not Aware	2	.4
	Somewhat Aware	42	9.3
	Aware	242	53.8
	Very Aware	120	26.7
	Fully understand & apply	42	9.3
	Undefined	2	.4
Nvolvement	Yes	209	46.4
	No	179	39.8
	Undefined	62	13.8
	Total	450	100.0

Table 4: Respondent Profile on Frequency and Percentage of Working Experience, Awareness and Involvement in Risk Management

3.3. Risk Maturity Assessment

Through this research, the researcher wishes to assess, in a quantifiable fashion, its level of maturity in the area of risk management. In accordance with the current company's Risk Management Framework, these surveys identified four levels of organizational competence in the area of business risk management, namely: Beginners (Low level), Intermediate (Moderate level), Progressive (High level) and Matured (Very High level), it defines this competence in terms of the organization's approach against Culture attributes domain. Table 5; describe the levels of competence against culture attribute domain. Culture mean=2.92, SD=.523, The assessment results is stated in the Table 5 as below:

Attributes	Competence	Frequency	Percent	Mean	Std. Deviation
Maturity Culture	Beginners	0	0	2.92	.523
	Intermediate	82	18.2		
	Progressive	324	72.0		
	Matured	44	9.8		
	Total	450	100		

Table 5: Levels of Competence against Culture Attribute Domain

Risk maturity assessment is to identify four levels of organizational competence in the area of business risk management namely: Beginners, Intermediate, and Progressive and matured, it defines these competences in terms of the organization's approach against Culture attributes domain. The attributes result reported the maturity culture mean = 2.92. According to scale by Wiersma, 1995, it indicates 1- 1.75 low (beginners), 1.76 – 2.50 moderate (intermediate), 2.51 – 3.25 (high) progressive and 3.26 – 4 Very high (matured). Result of the competence on culture domain is 2.92 mean high or progressive. Table 6 describes details on the scale by Wiersma, 1995.

Scale by WIERSMA, 1995		
1- 1.75	Low	Beginners
1.76 – 2.50	Moderate	Intermediate
2.51 – 3.25 (2.92)	High	Progressive
3.26 – 4	Very high	Matured

Table 6: Mean Levels of competence scale

The risk maturity on culture attribute domain of the company indicates that mean 2.92 received high or progressive competences as showed in Table 6. Therefore, as stated in the High Level Organizational Maturity Characteristics in Table 7, below are the characteristics of competence with mean 2.92 = progressive. Most organizations will aspire to and be satisfied with reaching Level 3 – Progressive, where organization are prepared to take appropriate risks, have good understanding of the benefits across organization, strategy mapped into process implementation.

Level of Maturity	
Attribute:	Competence: Progressive
Culture	Prepared to take appropriate risks Good understanding of the benefits across the company Strategy mapped into process implementation

Table 7: Levels of Competence against Culture Attribute Domain

4. Conclusion

The (RMS17) is an instrument developed to address the question of how one of the government linked companies in Malaysia could evaluate, in a quantifiable fashion, its level of maturity in the area of business risk management among their executive staff. The (RMS17) was adapted based on business risk management maturity model and accordance to the company's reviews. The reliability was achieved when the pilot study tested on 30 respondents using SPSS. It reached the reliability of Cronbach's Alpha = 0.96 (very high reliability). The results suggest that the risk management maturity assessment survey (RMS17) can be used to determine and to evaluate, in a quantifiable fashion, the level of maturity in the area of business risk management in the company. The pilot study reported that the overall level of the company risk maturity survey 2017 among executive staff is at a progressive (mean = 2.92) level.

Therefore, as stated in the "High Level Organizational Maturity Characteristics", the characteristics of competence with mean 2.92 = progressive level, is a level where most organizations will aspire to and be satisfied. At this level 3, results indicate that the management of risk is routine and consistent across all projects in the company. In all the four (4) regions culturally are prepared to take appropriate risks, achieved good understanding of the benefits across the company with strategy mapped into process implementation, consistent approach but scalable and are tailored to specific needs. This company have consistently applied risk management and is adequately resourced over all regions / zones.

It is concluded that this research on one of the GLC in Malaysia received high level of maturity on culture attribute domain Therefore, as stated in the "High Level Organizational Maturity Characteristics", the characteristics of competence progressive level, is a level where most organizations will aspire to and be satisfied. At this level progressive, results indicate that the management of risk is routine and consistent across all projects in the company in all the 4 regions are culturally prepared to take appropriate risks.

5. References

i. American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1985). Standards for educational and psychological testing. Washington, DC: Authors.
ii. Bouer; R., de Carvalho, M. M. (2005). "Metodologia singular de gestão de projetos: condição suficiente para a maturidade em gestão de projetos?" Depto. de Eng. Produção - Escola Politécnica da USP. Production, Prod. vol.15 no.3 São Paulo Sept./Dec. Print version ISSN 0103-6513. (http://dx.doi.org/10.1590/S0103-65132005000300006)
iii. Blalock, H. M., Jr. (1970). Estimating measurement error using multiple indicators and several points in time. American Sociological Review, 35(1), 101-111. , P.C. (2001). Measurement Concepts. Methods in Behavioral Research (7th ed.). California: Mayfield Publishing Company.
iv. Carmines, E. G., & Zeller, R. A. (1979). Reliability and validity assessment. Thousand Oaks, CA: Sage.
v. Cronbach, L. J. (1971). Test validation. In R. L. Thorndike (Ed.). Educational Measurement (2nd ed.). Washington, D. C.: American Council on Education.
vi. Frederico, G. F. et Martins, R. A. (2012). "Model for alignment between performance measurement systems and maturity of supply chain management". Gest. Prod. vol.19 no.4 São Carlos out./dez.

vii.   George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.). Boston: Allyn & Bacon.

viii.   https://www.linkedin.com/company/tenaga-nasional-berhad

ix.   Jia, G., Ni, X., Chen, Z., Hong, B., Chen, Y., Yang, F., and Lin, C. (2013). "Measuring the maturity of risk management in large-scale construction projects." Automation in Construction, 34, 56-66. Online publication date: 1-Sep- 2013.

x.   Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30, 607-610.

xi.   Likert, R. (1931). A technique for the measurement of attitudes. Archives of Psychology. New

xii.   York: Columbia University Press.

xiii.   McIver, J. P., & Carmines, E. G. (1981). Unidimensional scaling. Thousand Oaks, CA: Sage. Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). New York: McGrawHill.

xiv.   Spector, P. (1992). Summated rating scale construction. Thousand Oaks, CA: Sage.

xv.   Moskal, B.M., & Leydens, J.A. (2000). Scoring rubric development: Validity and reliability. Practical Assessment, Research & Evaluation, 7(10). [Available online: http://pareonline.net/getvn.asp?v=7&n=10].

xvi.   Siqueira, J. (2005). O Modelo de Maturidade de Processos: Como Maximizar o Retorno dos Investimentos em Melhoria da Qualidade e Produtividade.

xvii.   Tomas, R. N. et Alcantara, R. L. C. (2013). "Models for risk management in supply chains: review, analysis, and guidelines for research". Gest. Prod., São Carlos, v. 20, n. 3, p. 695-712.

xviii. Warmbrod, J. R. (2001). Conducting, interpreting, and reporting quantitative research.

xix.   Research Pre-Session, New Orleans, Louisiana.

xx.   Wiersma, W. (1995). Research methods in education: An introduction (Sixth edition). Boston:

xxi.   Allyn and Bacon

xxii.   Zou, P. X. W., Chen, Y., Chan and Tsz-Ying. (2010). "Understanding and Improving Your Risk Management Capability: Assessment Model for Construction Organizations". Journal of Construction Engineering and Management © ASCE / August.