

## ASSESSMENT OF PERFORMANCE COMPETENCY IN THE ORGANIZATION: DIMENSIONALITY ORIENTED ASSESSMENT

Chianchana C., Wichian S.N.\*

**Abstract:** The purposes of this research were to evaluate the dimensionality of performance competency, and to assess the performance competency. The samples were divided into 2 groups, which were, the directors for employees assessment, and employees group. The analysis results were carried out by using statistics, Mean, Standard Deviation, Eigen Value, ANOVA. The research results revealed as follows: 1) the ratio between the Eigen value of factor 1 toward the Eigen value of factor 2 of the assessment by directors was equal to 1.315, and the self-assessment was equal to 0.001. The performance competency was appropriate for multi-dimension assessment and 2) the performance competency assessment categorized by the different pillars, it is found that the method of Assessment by Director and Self-Assessment which has the different pillars had the different performance competency.

**Key words:** performance competency, dimension, assessment

DOI: 10.17512/pjms.2016.13.2.03

### Introduction

The state of society in today's world has always changed which acquires the opportunity of alteration in the organization. The competition among organizations tends to be more intensive; therefore, the organizations in the society have to be handled with the potential changes both internal and external organizations. Hence, it is essential for the organizations to build the immunity for such potential changes. The crucial thing for driving the organizations to catch up with the changes and be considered as the essential strategy towards building sustainably competitive advantages for the organizations is human capitals (Rojniruttikul, 2011; Jardon and Loureiro, 2013). This is because human beings are regarded as the key bone of organizational development. As a result, the human beings have to be developed to catch up with the social changes in order to bring the success to the organizations. This can be done by managing the human capitals systematically to improve the performance results of the critical role employees in the organizations, which means, the core competency employees as required by the organization (Cohan et al., 2012). Thus, the organizations have to acknowledge the core competencies which can build the competitive advantages. It can be seen that human beings are really vital for the organizational success.

---

\***Chaiwichit Chianchana**, Assist. Prof., PhD, King Mongkut's University of Technology North Bangkok, Faculty of Technical Education, **Sageemas Na Wichian**, Assoc. Prof., PhD, King Mongkut's University of Technology North Bangkok, College of Industrial Technology

✉ Corresponding author: [chaiwichit.c@fte.kmutnb.ac.th](mailto:chaiwichit.c@fte.kmutnb.ac.th)

The organizations which are successful by foundation considered as critical within the employees of the organization is called competency (Zingheim and Schuster, 2009). Competency is critical for the operations of the employees in the organizations. The competency is considered as the behavioral characteristics caused by knowledge, skills/abilities, and other qualifications which can make the persons create their master work (Office of the Civil Service Commission, 2005; Savaneviciene et al., 2008). The competency developed to describe jobs or occupations and promotional opportunities should be shared with all managers and staff; employee participation in development of a competency model can assist with providing awareness of the model as well as create acceptance (Montier et al., 2006). This is in accordance with concepts of Koeppen et al. (2008) that the competencies are conceptualized as complex ability constructs that are closely related to performance in real life contexts and that have to be acquired by learning. Moreover, Youn (2006) suggested that the competencies are behaviors that individuals demonstrate when undertaking job-relevant tasks effectively within a given organizational context; therefore, the competency of an employee is regarded as a critical part towards the performance in each organization depending on the different contexts of such organization.

The characteristics of competency are complex to study or assess them have to use the various procedures and methods (Koeppen et al., 2008; Higgins et al., 2010). As Baartman et al. (2006) said that the competency assessment is very complex, so one single assessment method seems not to be sufficient. The challenging points of the research about competency assessment include Psychological Models, Assessment Procedures, and Interpretations of Assessment Results are needed to adequately represent the underlying theoretical structures (Klieme, 2008; Frey and Hartig, 2009). In addition, Delamare Le Deist (2005); Jackson (2007) proposed the challenge in terms of using competency models for measuring or appraising certain areas of performance and providing developmental feedback based on these assessments.

According to the problems background, which is, the complex dimension of competence, only single method of assessment cannot be considered as sufficiently appropriate. It is necessary to assess the competency of the organizational performance by assessing the dimension of competence first as primary in order to get the answer of interpretation of assessment that it should be interpreted in terms of unidimensionality or multidimensionality, as well as assessing in stages to lead to the depth of assessment results by the multi-stage assessment, including assessing by multi-method, to confirm the assessment accuracy in order to lead to the driving of organizational development to achieve success effectively and sustainably.

### **Purposes and Methodology**

The purposes of this research were to assess the dimensionality performance competency from Assessment by Director and by Self-Assessment and to assess

the performance competency from Assessment by Director and by Self-Assessment.

Process of assessment was 1) to assess the dimension of performance competency from the Assessment by Director and by Self-Assessment to decide the competency is in terms of unidimensionality or multidimensionality, 2) To assess the difference of performance competency from the Assessment by Director and by Self-Assessment categorized by the different pillars to decide that whether the competency will interpret the assessment in terms of categorization or not categorization according to the different pillars, and 3) Concerning the data, the stage I and stage II is the assessment of performance competency from the Assessment by Director and by Self-Assessment.

Participants in the self-assessment are the TISCO Company's employees working between 2013-2014. Tisco is a financial institute running the business with the highest standard of good supervision. The Company is considered as the big size company consisting of Tisco Financial Group, Tisco Bank, Tisco Securities, and Tisco Asset. The Company has been numerously rewarded for success, which reflects the quality of organizations, such as the reward of Board of The Year 2013, Top Corporate Governance Report Awards 2013, Outstanding Securities Company Awards 2013 – Retail Investors, Outstanding Securities Company Awards 2013 – Institutional Investors, Outstanding Investor Relations Awards 2013A on Hewitt Best Employers in Thailand 2013 Top Bank in the Secondary Market for Corporate Bonds 2012, etc. (Tisco, 2014). The subjects are from Stratified Random Sampling by having the Strata Pillar, as well as having the employees as the random unit from the assessed employees for 4115 persons categorized by: Assess management business (4.52%), Corporate support (15.53%), Corporate banking business (3.89%), Hiway (12.90%), Retail banking business (45.05%), Securities business (4.23%) and Wealth business (13.88%). The group of assessment by directors got from the purposive sampling. They are the direct superiors of the employees.

There are 2 instruments used to be created by 5 aspects of competency, which are, communication, personnel, logic, business, and leadership. These consist of 24 lists totally. The Volume 1 is about the assessment form of performance competency of the directors. The response is in the form of Rubric score by investigating the quality of instruments in terms of contents validity. The consideration of the experts has the value of index of consistency between 0.6 and 1.00. The form is used by the directors who have to assess 48 employees. The item-total correlation value is between 0.03 and 0.76, the reliability is carried out by using the formula of Cronbach's Alpha Coefficient equal to 0.91, the construct validity is investigated by the inter subtest correlation method between the dimensional or sub-test scores and total-test scores (Cohen and Swerdlik, 2010), the value got was 0.49, 0.41, 0.65, 0.46, 0.44, respectively. For the Volume 2; it is the assessment form of performance competency on Self-Assessment. The investigation of instruments quality in terms of contents validity by consideration of the experts has the value of index of consistency between 0.6 and 1.00. The form was tried out by 52

employees. The value of item-total correlation got was between -0.14 and 0.44, the Reliability was carried out by using the formula of Cronbach's Alpha Coefficient equal to 0.54, and the construct validity was investigated by the correlation analysis between the sub-components and total-component. The value got was equal to 0.80, 0.68, 0.94, 0.89, and 0.87 respectively. The statistics used for the assessment was percentage (%), mean (M), standard deviation (S), One-way Analysis of Variance (One-way ANOVA), and Eigen value.

## Research Results

### *The Assessment of Dimensionality on the Performance Competency*

The analysis results of performance competency dimension by factors analysis was found that the ratio between the Eigen value of factor 1 toward the Eigen value of factor 2 of the assessment by directors was equal to 1.315, and the self-assessment was equal to 0.001. The values were less than the criteria which would be concluded the unidimensionality. According to Morizot et al. (2007) proposed to consider the unidimensionality from the ratio between Eigen value of factor 1 toward the Eigen value of factor 2. If the value was more than or equal to 3.00, it indicated the unidimensionality. With all evidences mentioned above, it can be concluded that the performance competency assessed by the assessment by directors and self-assessment was appropriate for multidimensionality assessment as shown in the Table 1.

**Table 1. Eigen values, Percentage of variance, and ratio between the Eigen value of the Factors 1 toward the Factors 2 of the performance competency**

Assessment by director			Self-assessment		
Factors(F)	Eigen values	% of Variance	Factors(F)	Eigen values	% of Variance
1	5.580	23.251	1	1.413	5.888
2	4.242	17.674	2	1.405	5.854
3	1.918	7.991	3	1.276	5.317
Eigen value F1 / Eigen value F2 =1.315			Eigen value F1 / Eigen value F2 =.001		

### *The Assessment Results of the Performance Competency from the Assessment by Director and Self-Assessment*

*The assessment results of difference on the performance competency categorized by the different pillars.*

The competency assessment is assessed in terms of multidimensionality, namely, competency of communication, people, logic, business, and leadership. The primary investigation of data for the performance competency assessment categorized by the different pillars, it is found that the method of Assessment by Director and Self-Assessment which has the different pillars had the different

performance competency (as shown in the Table 2). Regarding the mentioned research results for the competency assessment, it should be assessed by categorization according the pillars.

**Table 2. Comparison of difference on the performance competency categorized by different pillars**

Competency	Method of assessment	F	p-value
Communication (COM)	Assessment by director	10.934	0.000
	Self-assessment	3.956	0.000
People (PEO)	Assessment by director	11.223	0.000
	Self-assessment	4.283	0.001
Logic (LOG)	Assessment by director	18.641	0.000
	Self-assessment	8.528	0.000
Business (BUS)	Assessment by director	17.327	0.000
	Self-assessment	2.623	0.015
Leadership (LEA)	Assessment by director	16.594	0.000
	Self-assessment	4.123	0.000

### *Assessment Results of Performance Competency*

The assessment result of performance competency is categorized by the groups of pillars by using the mean as the criteria of assessment. The criteria for assessment and interpretation of the performance competency are categorized by the dimension of competency by considering from the executives of the organizations, criteria of assessment and interpretation as shown in the Table 3.

**Table 3. Criteria of assessment and interpretation of the performance competency categorized by competency dimension**

Criteria of Assessment					Level of Competency
COM	PEO	LOG	BUS	LEA	
18.00-20.00	13.50-15.00	36.00-40.00	22.50-25.00	18.00-20.00	Very good
14.00-17.99	10.50-13.49	28.00-35.99	17.50-22.49	14.00-17.99	Good
10.00-13.99	7.50-10.49	20.00-27.99	12.50-17.49	10.00-13.99	Moderate
6.00-9.99	4.50-7.49	12.00-19.99	7.50-12.49	6.00-9.99	Fair
4.00-5.99	3.00-4.49	8.00-11.99	5.00-7.49	4.00-5.99	Weak

The assessment results of the performance competency categorized by the group of pillar found that:

1. The asset management business; when being assessed by the Assessment by Director and Self-Assessment, the communication competency is at a moderate and a good level, for people competency is at a moderate and a moderate level, for logic competency, it is at a fair and a moderate level, for business competency, it is at a fair and a good level, and for leadership competency, it is at a moderate and a moderate level, respectively.

2. For the group of corporate support; when being assessed from the Assessment by Director and Self-Assessment, the communication competency is at a moderate and a good level, for people competency, it is at a moderate and a moderate level, for logic competency, it is at a fair and a moderate level, for business competency, it is at a fair and a good level, and for leadership competency, it is at a fair and a moderate level, respectively.
3. Concerning the corporate banking business; when being assessed from the Assessment by Director and Self-Assessment, the communication competency is at a moderate and good level, for people competency, it is at a moderate and moderate level, for logic competency, it is at a moderate and moderate level, for business competency, it is at a fair and good level, and for the leadership competency, it is at a fair and moderate level, respectively.
4. Concerning the Hiway Group, when being assessed from the Assessment by director and Self-assessment, the Communication competency, it is at a moderate and a good level, for People competency, it is at a moderate and a moderate level, for Logic competency, it is at a fair and a moderate level, for Business competency, it is at a fair and a good level, and for the Leadership competency, it is at a fair and a moderate level, respectively.
5. For Retail Group; when being assessed from the Assessment by Director and Self-Assessment, the Communication competency is at a moderate and good level, for people competency, it is at a moderate and moderate level, for logic competency; it is at a fair and moderate level, for business competency; it is at a fair and moderate level, and for the leadership competency, it is at a fair and moderate level, respectively. According to the Securities Business Group; when being assessed from the Assessment by Director and Self-Assessment, the communication competency is at a moderate and a good level, for people competency, it is at a moderate and a moderate level, for logic competency, it is at a moderate and a moderate level, for business competency, it is at a moderate and a moderate level, and for the leadership competency, it is at a moderate and a moderate level, respectively.
6. For the Wealth Business Group, when being assessed from the Assessment by Director and Self-Assessment, the communication competency is at a moderate and a good level, for people competency; it is at a moderate and a moderate level, for logic competency; it is at a fair and a moderate level, for business competency, it is at a fair and a moderate level, and for the Leadership Competency, it is at a fair and a moderate level, respectively.

### **Discussion**

1. The performance competency which was assessed both by Assessment by Director and Self-Assessment was appropriate for assessment in terms of multi-dimension from the appropriation of competency assessment on the multidimensional from the several methods of assessment results. There was the concordant conclusion, which was, the performance competency in terms of

multidimensional by 5 competences, including Communication, People, Logic, Business, and Leadership, which were concordant with the competence assessment aspect considered about the complex competence structures to expand the unidimensional approach to multidimensional approach (Baartman et al., 2006; Koeppen et al., 2008; Frey and Hartig, 2009; Higgins et al., 2010). Moreover, the concepts about competency might be necessary and desirable to model these dispositions as multidimensional constructs (Hartig and Hohler, 2009). According to the mentioned evidences, the performance competency; therefore, had the aspects of multidimensional which the organization had to interpret of assessment results to be the aspect of multidimensional more than the single dimension.

2. The methods of the assessment by directors and self-assessment, the performers who had the different pillars had the different performance competency. When being separated by the pillar group, almost all groups assessed the competency which was assessed by the Assessment by Director was at a fair to a moderate level, and the Self-Assessment approach was assessed at a moderate to a good level, except for the securities business group assessed the competency by the Assessment by Director approach which was assessed at a moderate level, and Self-Assessment approach was at a moderate to a good level from the assessment results of competency. The competency researched was in terms of core competency, which was related to the core values of the organization. These competencies were crucial for everyone but it might have the different significance in each work, thus the organizational executives had to do the development concordant with the work (Fogg, 1999; Bartram et al., 2002; Hoge et al., 2014). This was in concordance with the concept of Kotwal (2015) who suggested that the context of work in the organization, the competency depended on various factors, one of them was that the responsibility in duty; this would make the organization need to develop the different competency according to the job position.

### **Conclusion**

The performance competency assessed by the Assessment by Director and Self-Assessment were appropriate for multi-dimension assessment, and the Assessment by Directors and Self-Assessment. The employees who had the different pillars had the different performance competency. Almost all groups assessed the assessment competencies by the Assessment by Director Approach at a fair level to a moderate level, and for the Self-Assessment, it was assessed at a moderate level to a good level.

For the further research, it should develop the assessment instruments for the performance competency continuously, but it should control the extraneous variables, which is, the variable of knowledge in terms of assessment process by giving knowledge about the assessment from both the Assessment by Director and Self-Assessment approach in order to raise the level of assessment to be accurate and just more. Moreover, it should do the research to develop the necessary competencies for the employees' performance in each pillar by in-depth approach

by focusing on the assessed competencies in a fair and a moderate level. In addition, it should be developed in terms of the assessment system of performance competency by applying computer technology circularly in order to lead into the time reduction of convenience assessment and error reduction caused by the communication of individual assessment, as well as being able to develop the system of assessment continuously.

***The research is financially supported by TISCO, Thailand. We would like to thank TISCO for this fund to the success of this research.***

## References

- Baartman L.K.J., Bastiaens, T.J., Kirschner P.A., Van Der Vleuten C.P.M., 2006, *The wheel of competency assessment: Presenting quality criteria for competency assessment programs*, "Studies in Educational Evaluation", 32.
- Bartram D., Robertson, I. T., Callinan M., 2002, *Introduction: A Framework for Examining Organizational Effectiveness*, [In:] *Organizational Effectiveness: The Role of Psychology*, Chichester, UK, Wiley.
- Cohan C., Kim D., Nieters W., Raghunathan N., Salcido O.S., Sohn A., Thompson M., Ziegmann M., 2012, *Leadership Development Program*, University of California, Berkeley.
- Cohen R.J., Swerdlik M.E., 2010, *Psychological Testing and Assessment: An Introduction to Tests and Measurements*, 7th ed, Boston, McGraw-Hill.
- Delamare Le Deist F., Winterton J., 2005, *What is competence?*, "Human Resource Development International", 8(1).
- Fogg C.D., 1999, *Implementing your strategic plan: How to turn "intent" into effective action for sustainable change*, New York, American Management Association.
- Frey A., Hartig J., 2009, *Assessment of competencies*, "Studies in Educational Evaluation", 35.
- Hartig J., Hohler J., 2009, *Multidimensional IRT models for the assessment of competencies*, "Studies in Educational Evaluation", 35.
- Higgins A., Begley C., Timmons F., McGonagle I., Nevin M., 2010, *Nurse and Midwife Clinical Competency Determination and Competency Development Planning Toolkit*, National Council for the Professional Development of Nursing and Midwifery, Dublin.
- Hoge M.A., Morris J.A., Laraia M., Pomerantz A., Farley T., 2014, *Core Competencies for Integrated Behavioral Health and Primary Care*, Washington, DC, SAMHSA - HRSA Center for Integrated Health Solutions.
- Jackson D., 2007, *Measuring up*, "New Zealand Management", 54(3).
- Jardon C.M.F., Loureiro M.G., 2013, *Human Capital as Source for Sustained Competitive Advantages in SMEs: A Core Competencies Approach*, "Economia. Seria Management", 16(2).
- Klieme E., Hartig J., Rauch D., 2008, *The concept of competence in educational contexts*. [In:] *Assessment of Competencies in Educational Contexts*, Gottingen, Hogrefe & Huber Publisher.
- Koepfen K., Hartig J., Klieme E., Leutner E., 2008, *Current issues in research on competency modeling and assessment*, "Zeitschrift für Psychologie/Journal of Psychology", 216.



- Kotwal M., 2015, *Model, and Method for Competency Mapping and Assessment*, Thane, SunRise Management Consulting Service.
- Montier R., Alai D., Kramer D., 2006, *Measuring and evaluating: Competency models develop top performance*, "Training and Development".
- Morizot J., Ainsworth A.T., Reise S. 2007, *Toward modern psychometrics: Application of item response theory models*, [In:] *Handbook of research methods in personality psychology*, New York, Guilford Press.
- Office of the Civil Service Commission, 2005, *Competency Manual of Civil Service*, Bangkok, P.A. Living.
- Rojniruttikul N., 2011, *Human Capital Management: Sustainable Competitive Strategy*, "Journal of Industrial Education", 10(2).
- Savaneviciene A., Stukaite D., Silingiene V., 2008, *Development of strategic individual competences*, "Inzinerine ekonomika Engineering Economics", 3(58).
- Tisco, 2014, Available at: <http://www.tisco.co.th/en/aboutus/awards.html>, Access on: 29.9.2014.
- Youn C.S., Stepich D., Cox D., 2006, *Building a competency-based curriculum architecture to educate 21st-century business practitioners*, "Journal of Education for Business", 81(6).
- Zingheim P.K., Schuster J.R., 2009, *Competencies replacing jobs as the compensation/hr foundation*, "Worldat Work Journal", 18(3).

### OCENA KOMPETENCJI WYDAJNOŚCI W ORGANIZACJI: OCENA ZORIENTOWANA WYMIAROWO

**Streszczenie:** Celem niniejszego badania była ocena wymiarowości kompetencji wydajności, a także oszacowanie kompetencji wydajności. Próby zostały podzielone na 2 grupy, do jednej grupy należeli dyrektorzy do oceny pracowników, do drugiej grupy należeli pracownicy. Wyniki analizy przeprowadzone zostały za pomocą statystyk, średniej, odchylenia standardowego, wartości własnych, analizy wariancji ANOVA. Wyniki badania wykazały, co następuje: 1) stosunek pomiędzy wartością własną czynnika 1 w kierunku wartości własnej czynnika 2 oceny przez dyrektorów był równy 1,315, asamoocena była równa 0,001. Kompetencja wydajności była odpowiednia dla wielowymiarowej oceny, oraz 2) ocena kompetencji wydajności podzielona na kategorie według różnych filarów, wykazała, że metoda oceny przez dyrektora i samoocena, która ma różne filary, miały inną kompetencję wydajności.

**Słowa kluczowe:** kompetencja wydajności, wymiar, ocena

### 評估性能合格本組織：維為本評估

**摘要：**本研究的目的是評估性能的能力的維度，並評估性能的能力樣品被分為2組，分別為員工考核董事和僱員群體。分析結果通過使用統計，平均值，標準偏差，本徵值，方差分析進行。研究結果顯示如下：1) 因子1對董事的考核因子2的特徵值的特徵值之比等於1.315,而自評等於.001.能力表現得適合於多維度的評估，以及2) 能力的表現，根據各支柱分成類別的評估，結果表明，評價由導演和自尊，裡面有各種各樣的支柱，該方法具有不同的能力表現。

**關鍵詞：**表現能力，尺寸，評估。