



The Impact of Knowledge Management on Employee Performance Case Study: Gaoyang Construction Co., Ltd.

Yangyang Cui

Department of Business Administration, Rajapruk University, Thailand

Corresponding author, E-mail: 60601910002@rpu.ac.th

Abstract

The purposes of this research were to study the level of knowledge management and the level of employee's performance and explore the relationship between knowledge management and employee's performance of Gaoyang Construction Co., Ltd. Two hundred and nineteen employees had completed a questionnaire. The statistics used in this research were frequency, percentage, mean, standard deviation, and Pearson correlation. The results showed that most of the questionnaire respondents were at agree level with knowledge management. The highest mean was knowledge sharing and enrichment; following by knowledge management tools; whereas the lowest mean was knowledge creation and capture. Most of the respondents were at agree level with employee's performance. The highest mean was process performance, and the second was individual performance. The lowest was organization performance. A strong positive correlation was found between knowledge management and employee's performance with statistically significant at .01 level.

Keywords: *Knowledge management, Employee's performance, Knowledge creation and capture, Knowledge sharing and enrichment, knowledge management tools*

1. Introduction

The development of knowledge can be divided into three stages. The first stage was before the end of the 19th century when knowledge was mainly used in tools and production processes, resulting in the industrial revolution, the emergence of which made productivity develop rapidly. The second stage was taken place at the end of the 19th century. At the end of the twentieth century, Taylor put forward the scientific management method, organizing both technical and nontechnical work with the scientific management method of knowledge, which made productivity increase rapidly. The third stage was after the eighties of the twentieth century. With the advent of the knowledge economy, knowledge was systematically used to define what new knowledge was needed. (Drucker, 1999).

Performance is a set of behaviors related to the goals of an organization or organizational unit in which a person works. "Performance should be defined as the outcome of work because these outcomes are most closely related to the organization's strategic objectives, customer satisfaction and investment funds." The definition of employee performance can be divided into two perspectives: employee behavior and employee work outcomes. Employee performance refers to the benefits of the efforts and contributions made by employees within the organization. (Jensen & Murphy, 1990; Bernardin, 1995)

From the perspective of knowledge, in order to achieve sustainable development, enterprises must continuously combine and recombine the knowledge of organizations and individuals to achieve knowledge acquisition, transfer, and innovation, which requires enterprises to improve their knowledge management capabilities. However, to sum up, this article is based on a realistic background to study the knowledge management and employee performance of case study Gaoyang Construction co. LTD. Can the improvement of knowledge management capability really improve employee performance? If employee performance can be improved, how can enterprises improve their knowledge management capabilities? In recent years, these problems have become a hot topic of concern to many experts and scholars. They are also the problems that enterprises hope to solve. It will help enterprises to correctly respond to the challenges of the knowledge economy, guide enterprises to carry out effective knowledge management



through the improvement of knowledge management capabilities, and enhance their competitive advantages.

Therefore, the research is studying focuses on knowledge management and employee performance of Gaoyang construction Co. Ltd. Today, it is the era of the knowledge economy. The concept of knowledge management is particularly important. For enterprises, whether they have a strong knowledge management system or not will affect their employee performance. Based on the literature review, this study will theoretically sort out the correlation between knowledge management and employee performance, and, on this basis, put forward relevant assumptions, that is, there is a positive correlation between knowledge management and employee performance; and then, by asking questions. Volume survey, using a regression analysis method, through empirical analysis is used to verify whether there is a positive correlation between knowledge management and employee performance, to provide relevant decision-making reference for improving enterprise performance.

Uriarte (2008) pointed out that a complete knowledge management system must contain three elements, which are (a) knowledge creation and capture, (b) knowledge sharing and enrichment, and (c) knowledge management tools.

Swanson (1995) points out three levels of performance: (a) organization, (b) process (c) individual performance. Performance can be divided into individual performance, team performance and organizational performance.

Mengmeng Chen (2018) studied the level of knowledge management and employee's performance and the relationship between knowledge management and employee's performance of HeNan DeXuan Commercial and Trading Co., Ltd. A questionnaire was used to collect data from 92 employees. The statistics used to analyze the data were frequency, percentage, mean, Standard Deviation and Pearson Correlation. Results showed that the respondents disagree with knowledge management. The highest score was knowledge creation and capture, while the lowest was knowledge management tools. The respondents also disagree with the employee's performance. Both work efficiency and work effectiveness were at the level of disagree. However, there was a strong positive correlation between knowledge management and employee performance with statistically significant at .05 level.

Yan Yan (2018) studied employee development and employee performance of Jiujiang Xinhua (group) Property service Co. Ltd. The results had shown that employee development in the overview was at an agreed level. While the highest level was formal education at an agreed level, the second level was an interpersonal relationship at an agreed level, and the lowest was the assessment at an agreed level. The employee performance in the overview was at an agreed level. While the highest was teamwork at an agreed level, the second was communication at an agreed level, and the lowest was creativity at an agreed level. The employee development and employee performance had a very strong positive relationship level with statistically significant at .01 level.

Danish (2012) studied on Impact of Knowledge Management Practices on Organizational Performance: An Evidence from Pakistan. This research tries to study the influence of organizational change, organizational and knowledge sharing on knowledge management to measure its impact on organization performance. In this research paper, it is obvious that knowledge management can help the organization to develop. In practice, an organization needs to make a sure system of the right information, organizational agility, innovation rate, employee growth and learning, and improved team communication. The organization also meets challenges such as integrated database, Interoperability, and others. The organization must focus on its internal system, try to remove the obstacle and build up a kind of culture that willing to share knowledge.

Suryaningrum (2012) studied on knowledge management and performance of Small and Medium Entities in Indonesia. This research uses the quantitative study to test how knowledge management effect the Small and Medium Entities (SMEs) performance by collecting data from SMEs in Surabaya-East Java, Indonesia. Depends on the result of research, there are two influences. First, SMEs can use some ways to



enrich their knowledge management (KM) capability by organizational learning (OL) which is based on the person. Because of a lack of resources, SMEs seem to like to get information from externals of the company to grow and get competitive advantages in the global market. Therefore, SMEs need information about technology, quality assurance, marketing, distribution and training for workers to help them. Because knowledge management is based on individuals, owners of SMEs can build-up environment and culture to encourage information sharing and discussion between employees and managers. Second, developing KM capability can be maintained or enhance the performance of SMEs. SMEs which want to become a big company or expand to the global market can ally with big companies in Indonesia or international corporations. Thus, SMEs can share global value-chain, niche-market and networking.

2. Objectives

- 2.1 To study the level of knowledge management of Gaoyang Construction Co., Ltd.
- 2.2 To study the level of employee performance of Gaoyang Construction Co., Ltd.
- 2.3 To explore a relationship between knowledge management and employee performance of Gaoyang Construction Co., Ltd.

3. Materials and Methods

3.1 Population and Sample

This research takes Gaoyang Construction Co., Ltd. as the research object. The company is a typical construction company that faces typical development problems. It is entirely consistent with the research theme. There are 480 employees and managers. In this study, respondents were scored with the current Likert scale 5. The table shows that with 480 populations, the sample size would be 219 employees.

The sample size is calculated using Taro Yamane (1973) as follows:

$$n = \frac{N}{1+Ne^2}$$

n = Sample size

N = Sample population

e = Error used in research

$$\begin{aligned} n &= \frac{N}{1+Ne^2} \\ &= \frac{480}{1+480(.05)^2} \\ &= 218.18 \end{aligned}$$

$$\text{Sample size} = 219 \text{ employees}$$

3.2 Research Data Collection

The process of collecting data:

- 3.3.2.1 Asked the company for permission to collect data.
- 3.3.2.2 Sent the questionnaire to the company.

3.3 Research Design

A questionnaire was used as a data collection tool in this research. The language of the questionnaire was Chinese. The questionnaire's items were three parts as follows: knowledge creation and capture, knowledge sharing and enrichment, and knowledge management tools affecting organizational performance.



3.3.1 Background

This part was the basic information about gender, age, duration of employment, educational background, department of company and position which items might influence the results.

3.3.2 Knowledge Management

The questionnaire was conducted to investigate the level of knowledge management in the company. All questions were in close-ended form. The knowledge management questionnaire was used to test whether knowledge creation and capture, knowledge sharing and enrichment, and knowledge management tools had a significant relationship with employee performance. The whole project of knowledge management divided into three parts: (1) knowledge creation and capture, (2) knowledge sharing and enrichment, (3) knowledge management tools.

3.3.3 Employee Performance

The questionnaire was used to measure the employee performance of the company. All questions were in close-ended form. The knowledge management factors questionnaire was designed to test the level of employee performance. The whole project of items of the employee performance was divided into three parts: (1) organization performance, (2) process performance, (3) individual performance.

3.4 Research Tools

3.4.1 Validity and Reliability

Validity refers to the fact that indicators can truly measure the authenticity of what people want to measure. It includes content validity and structural validity. Content validity refers to the degree of recognition of the validity of the questionnaire by experts and scholars. The index commonality can express the structural validity. If the index commonality is greater than 0.50, the structural validity of the questionnaire is acceptable.

3.4.2 Reliability

Three experts determined the validity of questionnaires. The average score of IOC is 0.95, more than 0.50. The score was accepted to issue a questionnaire. The reliability (Try Out) of the questionnaire was tested using a group of non-response bias. The reliability value was calculated by using Cronbach's alpha to ensure whether there was internal consistency within the items. George and Mallery (2010) illustrated the value of Coefficient Cronbach's Alpha as the following: 0.90 = Excellent, 0.80 = Good, 0.70 = Acceptable, 0.60 = Questionable, 0.50 = Poor, lower than, 0.50 = Unacceptable.

According to the questionnaire trial, the total Cronbach's alpha was 0.99, with the Cronbach's alpha value of knowledge management at 0.99 and the Cronbach's alpha value of employee's performance at 0.99. The questionnaire was highly reliable.

3.5 Data Analysis

Descriptive statistical analysis was used to describe the level of knowledge management and the level of organizational performance. These data were described by frequency, percentage, mean and standard deviation. Likert's scale (1932) referred in Wambrod (2014) was used as follows:

Interpret the average of the mean scale

4.50-5.00 = Strongly Agree

3.50-4.49 = Agree

2.50-3.49 = Neutral

1.50-2.49 = Disagree

1.00-1.49 = Strongly Disagree

The relationship between knowledge management and employee performance was analyzed using Pearson correlation standard.

Level of the correlation (Evans, 1996)

[1173]



.00 -0.19 = Very Weak
 .20 -0.39 = Weak
 .40 -0.59 = Moderate
 .60 -0.79 = Strong
 .80 -1.00 = Very Strong

4. Results and Discussion

Table 4.1 – 4.3 illustrate the Pearson correlations results as follows:

Table 4.1 Pearson correlations of knowledge management and employee performance

Knowledge Management	Employee Performance			
	r	Sig. (2-tailed)	Level	Rank
Knowledge Creation and Capture	.876**	.000	Very strong positive correlation	1
Knowledge Sharing and Enrichment	.854**	.000	Very strong positive correlation	3
Knowledge Management Tool	.860**	.000	Very strong positive correlation	2
Total	.874**	.000	Very strong positive correlation	

** . Correlation is significant at the .01 level (2 -tailed)

Table 4.2 Pearson correlations of knowledge management and organization performance

Knowledge Management	Organization Performance			
	r	Sig. (2-tailed)	Level	Rank
Knowledge Creation and Capture	.621**	.000	strong positive correlation	3
Knowledge Sharing and Enrichment	.788**	.000	strong positive correlation	1
Knowledge Management Tool	.624**	.000	strong positive correlation	2
Total	.748**	.000	Strong positive correlation	

** . Correlation is significant at the .01 level (2 -tailed)

Table 4.3 Pearson correlations of knowledge management and process performance

Knowledge Management	Process Performance			
	r	Sig. (2-tailed)	Level	Rank
Knowledge Creation and Capture	.736**	.000	strong positive correlation	3
Knowledge Sharing and Enrichment	.789**	.000	strong positive correlation	1
Knowledge Management Tool	.787**	.000	strong positive correlation	2
Total	.758**	.000	Strong positive correlation	

** . Correlation is significant at the .01 level (2 -tailed)

[1174]

**Table 4.4** Pearson correlations of knowledge management and individual performance

Knowledge management	Individual Performance			
	r	Sig. (2 tailed)	Level	Rank
Knowledge Creation and Capture	.652**	.000	strong positive correlation	3
Knowledge Sharing and Enrichment	.754**	.000	strong positive correlation	2
Knowledge Management Tool	.758**	.000	strong positive correlation	1
Total	.754**	.000	Strong positive correlation	

** . Correlation is significant at the .01 level (2 -tailed)

4.1 Pearson correlation between knowledge management and employee performance

The variable of knowledge management and employee performance had been analyzed. The variables of knowledge management were found related significantly to employee performance. The statistic showed that there was a strong positive correlation between knowledge management and employee performance. The highest was knowledge creation and capture. The second was knowledge management tools, and the lowest was knowledge sharing and enrichment with statistically significant at .01 level.

4.2 Pearson correlation of knowledge management and organization performance

The variable of knowledge management and organization performance had been analyzed. There was related significantly between the variables of knowledge management and organizational performance. The statistic showed that there was a strong positive correlation between knowledge management and organization performance. The highest was knowledge sharing and enrichment. The second was knowledge management tools, and the lowest was knowledge creation and capture, with statistically significant at .01 level.

4.3 Pearson correlation of knowledge management and process performance

The variables of knowledge management and process performance had been analyzed. The variables of knowledge management were found related significantly to process performance. The statistic showed that there was a strong positive correlation between knowledge management and process performance. The highest was knowledge sharing and enrichment. The second was knowledge management tools, and the lowest was knowledge creation and capture, with statistically significant at .01 level.

4.4 Pearson correlation between knowledge management and individual performance.

The variables of knowledge management and individual performance had been analyzed. There was related significantly between the variables of knowledge management and individual performance. The statistic showed that there was a strong positive correlation between knowledge management and individual performance.. The highest was knowledge management tools. The second was knowledge sharing and enrichment, and the lowest was knowledge creation and capture, with statistically significant at .01 level.

4.5 Discussion

4.5.1 Knowledge Management

Most of the respondents were agreed on the level with knowledge management. The level of knowledge management in this study was totally the same as the other research, such as Suryaningrum (2012), which studied on knowledge management and performance of small and medium entities in Indonesia. The result showed that most of the respondents were at agree level with knowledge management. Danish (2012) also studied on impact of knowledge management practices on organizational performance; evidence from Pakistan. The statistic of the study showed that knowledge management was at the agreed



level. However, the result of this research was different from related research, such as Mengmeng Chen (2018), which studied on knowledge management and employee performance, and a case study of Henan Dexuan Commercial and Trading Co. Ltd. The results showed that most of the respondents were at disagree level with knowledge management.

4.5.2 Employee Performance

The result showed that most of the respondents were at agree level with employee performance. The result of this research was the same as related research, such as Yan Yan (2018), which studied employee development and employee performance. However, the result of this research was different from related research, such as Mengmeng Chen (2018), which studied on knowledge management and employee performance. The results showed that most of the respondents were at disagree levels with employee performance.

4.5.3 Correlation

There was a positive correlation between knowledge management and employee performance which was the same as the related research such as Mengmeng Chen (2018), which studied on knowledge management and employee performance, and a case study of Henan Dexun Commercial and Trading Co., Ltd. The result showed that there was a positive correlation between knowledge management and employee performance significantly at .05 level.

5. Conclusion and Suggestion

5.1 Recommendation for this study

The level of knowledge management and employee performance in Gaoyang Construction Co., Ltd was at an agreed level. Knowledge management and employee's performance had a strong positive correlation. If the company wants to increase its performance, the company can focus on increasing the knowledge management level.

Some related researches used innovation as an intermediary factor to study the relationship between knowledge management and performance. It was worth to study the mediating effect of innovation between knowledge management and performance. The company can do something in innovation, such as developing a new processor or designing new products to improve employee performance.

5.2 Recommendation for future research

This research just used one company as a cause. The result can be used as a guide for the Gaoyang Construction company, but it cannot be a guide for all companies. Future researches were required to find a universal result for all kind of company to build up their knowledge management systems. Future researches can not only focus on China but also focus on other countries.

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7. References

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