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**Submission date:** 05-Dec-2019 04:06PM (UTC+1000)

**Submission ID:** 1227529876

**File name:** 5.\_Benefite\_and\_Performance.doc (660K)

**Word count:** 2737

**Character count:** 15832

# 1 Benefits and Performance Evaluation of the Implementation of Competence Certification of Expertise and Skills for Construction Laborers (Case Study in East Java - Indonesia)

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1 **Abstract:** This study aimed at evaluating benefits and performance of the implementation of competence certification of expertise and skills for construction laborers in East Java province, Indonesia. The respondents consisted of 178 small, medium and large qualified contractor companies. Data were collected by interview using a questionnaire (Likert scale 1-5) with a proportional and purposive sampling method. Analysis of data used qualitative and quantitative methods. The study concluded that commonly benefits and performance of the implementation of competence certification of expertise and skills for construction laborers carried out by the professional associations in East Java province has been running very well. The benefits of implementing the competence certification of expertise and skills for construction laborers in the province of East Java-Indonesia has not been used optimally by contractors, primarily for the requirements of taking and carrying out either the private or government projects. The performance of implementing the competence certification of expertise and skills carried out by the professional associations of contractors in the province of East Java-Indonesia has been running well, except for in the cases: 1) cost of certification was very expensive, 2) time schedule of certification implementation was uncertain, 3) certificate processing time took for a long time, 4) administrative requirements and procedures in implementing certification was still not good.

Keywords: labor, expertise, skills, construction

## INTRODUCTION

3 Efforts by the government of the Republic of Indonesia in developing qualified, timely, efficient, robust and normatively competitive construction services defined by the Law of the Republic of Indonesia Number 18 of 1999 on Construction Services (President RI., 1999) and various laws or other supporting regulations of the government becomes the executor of the Acts. At this time, the number of construction companies in Indonesia has reached around 141.665, with the number of construction laborers has reached about 6.5 million people (Statistics Indonesia, 2015). The quantity of the construction laborers has not been in balance with the number of adequate quality of professional competence (Kesai&Arifin, 2013). Various attempts have been made either by the government through the Ministry of Public Works (MPW) or by the National Construction Services Development Board (NCSDB) and professional associations through training and a wide range of coaching. One of the efforts to improve the quality of competence and professionalism of the laborers in the field of construction services is with a system of quality assurance in the form of competence certification for construction laborers (MPW RI, 2010). But such efforts until now have not yielded significant results.

In the organizational structure of the construction company, construction laborers in Indonesia are grouped into experts, skilled laborers and unskilled laborers. Study of distribution of the working group provided data that an expert group was about 8%, the group of skilled laborers is about 30%, and

unskilled labor groups reach about 42% (Huda, 2015; Huda &Wibowo, 2015). The first of two groups based on the Law of the Republic of Indonesia Number 18 of 1999 (President RI, 1999) and Government Regulation Number 70/2012 stated that every Indonesian construction labor is obliged to have a certificate (President RI., 2012) This means that from about 6.5 million construction laborers around 2.5 million people should have a certificate. In fact, performance of implementing the certification for both the experts and skilled laborers were still poor. Until now, only 107.562 construction laborers (approximately 6.46%) have been certified. It consists of 29.417 people who have certificate of expertise and 78.145 people who have certificate in work skills (NCSDB, 2014). Based on these descriptions, the resources and the ability of construction service business (contractors), especially in terms of human resources is still very low in terms of quality and quantity. Therefore it needs programs that are synergized to the parties involved in the organization to accelerate the implementation of the above competence certification (Pratiwi &Niam, 2010).

East Java province has the highest number of contractors compared to other provinces in Indonesia, which is about 15,000 companies and 60,000 construction laborers (Jelantik, 2014). Based on the background described above, this study aims: 1) to evaluate and analyze the benefits and added value of competence certification of expertise and skills acquired by construction laborers, 2) to evaluate and analyze the process of the implementation of competence certification of

expertise and skills for construction laborers by stakeholders in East Java province, Indonesia.

## MATERIALS AND METHODS

This study used qualitative and quantitative methods (Sugiyono, 2011), carried out in June and November 2016 in the province of East Java, Indonesia. It was categorized as action research as it provided policies which were useful for decision makers (Iriantini et al., 2014). The research objects were small, medium, and large-qualified contractor companies (Ministry of Public Works, 2012) in the province of East Java, Indonesia. The population consisted of about 15,000 directors or managers of contractors. Data were collected by interview using a questionnaire (Likert scale 1-5) with proportional and purposive sampling methods (Sugiyono, 2011). 200 questionnaires were sent out but only 178 were eligible for analysis.

Referring to the government regulations of the Republic of Indonesia and the previous study (MPW RI., 2012; Pratiwi et al., 2012; Pratiwi&Wibowo, 2010), the questionnaire consisted of 35 questions. It was divided into two groups; namely, group 1) The benefits of competency certificate of expertise and skills for construction laborers consisted of 14 questions, 2) The performance of implementing the certification consisted of 21 questions. Data analysis was done using the average mean and mean standard deviation calculated from the data of each group of respondents using the formula:

$$\bar{X} = \frac{\sum f_i \cdot X_i}{\sum f_i} \quad \text{dan} \quad \bar{Y} = \frac{\sum f_i \cdot Y_i}{\sum f_i}$$

Where

$\bar{X}$  = mean of respondents answers

$\bar{Y}$  = standard deviation of the mean of respondents answers

$f_i$  = number of respondents (contractors)

$$\bar{X} = \frac{\sum f_j \cdot \bar{X}_j}{\sum f_j}, \quad \text{dan} \quad \bar{Y} = \frac{\sum f_j \cdot \bar{Y}_j}{\sum f_j}$$

Where

$\bar{X}$  = mean of number of respondents

$\bar{Y}$  = mean of standard deviation of the mean of respondents questions

$f_j$  = number of respondents questions

The results of average respondent answers were mapped to 4 criteria in the four quadrant Cartesian diagram, based on the average data value of the mean and standard deviation of the mean of each group respondent as follows:

Quadrant I:  $\bar{X} \geq \bar{X}$  and  $\bar{Y} \leq \bar{Y}$  : (very good)

Quadrant II:  $\bar{X} \geq \bar{X}$  and  $\bar{Y} > \bar{Y}$  : (good)

Quadrant III:  $\bar{X} < \bar{X}$  and  $\bar{Y} \leq \bar{Y}$  : (bad)

Quadrant IV:  $\bar{X} < \bar{X}$  and  $\bar{Y} > \bar{Y}$  : (very bad)

Each of the four quadrants of Cartesian diagram is a representation of research results that needs to be discussed further.

## RESULTS AND DISCUSSIONS

Preliminary research conducted by distributing questionnaires to 25 respondents. Table r obtained  $r = 0.355$  (with  $\alpha = 5\%$ ,  $df = n-2$ ,  $n = 24$ ). An insight gained from the analysis using SPSS was all indicator variable Corrected Item-Total Correlation had a value  $> 0.355$ , which means that all indicators were declared valid. All indicator variables of Cronbach's Alpha if an item deleted had a value  $> 0.600$ , which means that all indicators were declared reliable, so it could be used as an instrument to collect further data.

The analysis showed as many as 19 respondents (54.29%) were in quadrant I, 2 answers (5.1%) were in quadrant II, 3 answers (8.57%) were in quadrant III and 10 answers (28.57%) were in quadrant IV. These mapping results on a Cartesian diagram are shown in Figure 1.

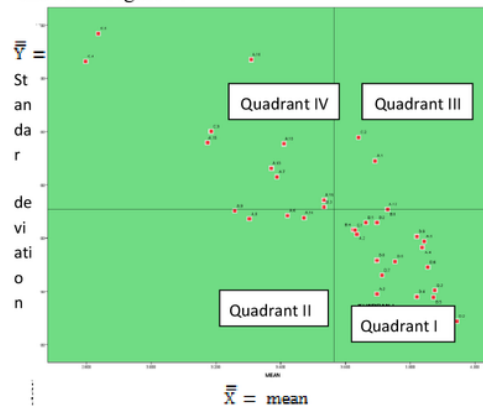


Figure 1. Mapping Benefits and Performance of Certification Implementation in East Java

Quadrant I was the research result that had mean value of answers  $\bar{X} \geq \bar{X}$  and mean standard deviation  $\bar{Y} \leq \bar{Y}$ , with the category of result was very good. It means that the aspects included in this category were the very good contractor perceptions and they needed to be maintained. These aspects included in this category as follows:

- 1) The benefits of competency certificate for expertise and skills :
  - (1) Guarantee for work easily
  - (2) Guarantee for having better salaries
  - (3) Guarantee for the increasing of expertise/ skills

- (4) Guarantee for the increasing of salary
- (5) Certificates are useful for the requirements of new business establishment
- 2) The performance of certification implementation:
  - (1) Socialization of implementation was carried out very well by the organizers.
  - (2) Implementation of certification was carried out very well by the organizers
  - (3) Cost of certification was relatively expensive
  - (4) Fee rates of inter-association were different
  - (5) The certificate validity period took a short time
  - (6) There were written guidelines
  - (7) There were standard operating procedures
  - (8) Working was based on the guidelines
  - (9) Working was based on SOP
  - (10) There were written fee rates
  - (11) Cost of implementation was based on the rates
  - (12) Implementation services were good
  - (13) Implementation was based on the rules
  - (14) The extension could be done at any time.

Results of the study presented in the first quadrant of the group concluded that all aspects evaluated were running very well and in accordance with the provisions. There were three things becoming stakeholders' attention, namely: the rates of certification implementation fees determined by professional associations were quite expensive and diverse, and the certificate validity period took a short time, only for 3 years.

Quadrant II was the research result that had an average value of respondent  $\bar{X} \geq \bar{X}$  and mean standard deviation with the result category was good. It means that the aspects included in this category were the contractor's perceptions with good enough category. They were as follows:

- 1) The benefits of competency certificate were used to register for the certificate of business. It means that the competency certificate of expertise and skills for construction laborers were used much enough as complement for registration requirements of business entities certification.
- 2) The information of certification implementation process was good enough carried out by the organization. But it could be improved to be better.

Results of the study presented in quadrant II concluded that the benefits of certificate for most of the construction companies were for requirements for registration of business entities certification. The socialization of implementation it could be improved to be better.

Quadrant III was the research result that had an average value of respondents  $\bar{X} < \bar{X}$  and the mean

of standard deviation  $\bar{Y} \leq \bar{Y}$ , with the result category was bad. It means that the aspects included in this category was a bad answer and needed to be improved. The aspects included in this category were as follows:

- 1) The benefits of competency certificate of expertise and skills for construction laborers were for the requirements of taking the government projects. It concluded a bad answer. It means that the competency certificate of expertise and skills for construction laborers had not been required in the tender of government projects.
- 2) The performance of implementing the certification :
  - (1) The fee rates of implementing the certification determined by each certification organizer was more expensive compared to fee determined previously.
  - (2) Procedure to get certificate was considered difficult by most contractors and construction laborers who had taken it
  - (3) Time schedule of certification implementation was not determined surely.

Study result presented in quadrant III concluded that the benefits of competency certificate based on construction companies had not been used for the requirements for taking the private projects. The rates of implementation were more expensive determined by associations and certification procedures were considered to be quite difficult, and time schedule was uncertain.

Quadrant IV was the research result that had an average value of answers  $\bar{X} < \bar{X}$ , and the mean standard deviation  $\bar{Y} > \bar{Y}$ , with the result category was very bad. It means that the aspects included in this category were not corresponded to their perception. The aspects included in this category were as follows:

- 1) The benefits of competency certificate for expertise and skills
  - (1) On loan to the tender requirements
  - (2) Be traded to participate in the tender
  - (3) Be traded to other companies for requirements for establishing new business entities.
  - (4) Guarantee to accelerate the increasing of salary employment.
  - (5) The requirements for certification management
  - (6) The requirements for a private project tender
  - (7) The requirements for a government project tender
  - (8) The requirements for the implementation of private sector projects

- 2) The performance of certification implementation:
- (1) Time-level processes in professional associations took a long time and it was not fixed with the regulation provided.
  - (2) Time-level processes in Organization-Development Construction Services Region East Java 8 province took a long time and it was not in accordance with applicable regulations

The results of the study were shown in quadrant IV to the conclusion that the benefits of experts who had competency certificate of expertise and skills based on the contractor companies had not been used for the requirements for taking tender in private projects and for the requirements for carrying out the private and government projects. Time of process to obtain certificates from the association and the Institute of Regional Construction Services Development took a long time and it did not match with the applicable regulations.

### CONCLUSION

The benefits of the expertise and skills competency certificate for construction laborers in East Java-Indonesia are very well in accordance with applicable regulations. But there are some things that are not in accordance with the regulations, that the certificate has not been used as the requirements in taking tender and doing the private and government projects. While the performance of the organization that carried out by professional associations of contractors has been running very well except for in the cases such as the cost is very expensive, the schedule implementation is uncertain, the certificate processing time takes a long time, and the requirements and procedures for implementation are still bad.

### ACKNOWLEDGMENT

Researchers like to thank the University of Wijaya Kusuma Surabaya and Construction Service Development Agency East Java-Indonesia, which has facilitated this study.

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