Identification of the inhibiting factors for skilled labour in the construction sector to obtain competency certification

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Abstract. The purpose of competency certification can be seen from two complementary aspects, namely to assess a person's ability and expertise in his profession and convincing the user about the competency of the labour which fulfills the requirements in carrying out the task. However, the number of construction labour certified is only about 3% of all construction labour in Indonesia. This study aims to identify inhibiting factors of competency certification in the perspective of construction labour, especially skilled labour. This study uses a quantitative model with descriptive analysis. This research was conducted on skilled labour in three high-level building projects. The method of collecting data by survey through questionnaires, observation, and literature study. The results of this study indicate several factors which interfering skilled labour to obtain competency certification: 1) the complexity of competency certification implementation, 2) The expensive cost to get the competency certification, 3) There is no difference in wages between certified labours and uncertified labours, 4) The certificate does not guarantee the work quality of labours.

1. Introduction
Certification can be used as a tool to improve work methods [1]. Certification is a work tool that has an effect on two complementary factors: the internal aspects of the company and organization (internal work) and external aspects in relation to the labor market (external work) [2]. The objectives of competency certification can also be seen from two aspects, namely to assess a person's abilities and expertise in his profession and to convince the user that the competence of the workforce fulfills the requirements in carrying out the task [3].

Workers are the primary resource in construction projects, as they are largely determined by workers' performance [4]. In Indonesia, the average growth in construction value during 2004-2015 is 19.9% (Figure 1). However, growth in construction value is not balanced with Growth of construction labour (Figure 2). Moreover, the number of certified construction workers is only around 3% of all construction workers in Indonesia [5,6] or there are 66,648,353 uncertified construction labor (Figure 3)

To find out the causes of the lack of skilled workers who are competently certified, it is necessary to find the main factors that hinder in getting the certification. This obstruction factors are observed from the perceptions of skilled workers as objects of work competency certification activities. The expectation of knowing these obstruction factors are recommendations for the government to overcome the lack of skilled workers who have work competency certification.
Figure 1. Growth of construction value.

(Source: Directorate General of Construction Development Ministry of Public Works and Housing)

Figure 2. Growth of construction labour in Indonesia (2010 – 2017).

(Source: BPS, 2017)

Figure 3. Existing condition.
2. Methods
This study uses a quantitative method with descriptive analysis. The method of collecting data by survey through questionnaires, observation, and literature study. Data and information will be collected for quantitative data, namely data in the form of numbers or qualitative data that are planned / scoring [7]. The sampling technique that will be used is incidental sampling. The technique to determine this sample is to get the sample of the population based on chance, that is, anyone who accidentally / incidentally meets at the time of the research can become a sample, if viewed by the person who happened to be found suitable as a source of data [7]. can be used as a source of research data are skilled workers in high-rise building projects. Research flowchart can be seen on Figure 4.

![Figure 4. Research flowchart.](image)

3. Results
This research was conducted in three high-rise building projects. Respondents obtained in each project were project A with 79 respondents, project B with 25 respondents and project C with 25 respondents. In this study respondents' perceptions were measured through four indicators, namely:

3.1. Perspective of competency certification process
Based on the results of the survey (Figure 5) it shown that the respondents did not have free time to carry out certification activities. This is because the respondent's working time is very dense and the job demands are high. In addition, if the respondent skip one workday to obtain the certification, they will not get a full wage [8].

![Figure 5. Perspective of competency certification process.](image)
3.2. Perspective of competency certification cost
The results of the analysis regarding the perception of certification costs can be seen in Figure 7. It explains that the respondent has the perception that the minimum cost to make the specified work competency certificate is considered too expensive. The respondents agree more if the cost to get work competency certificates was below the set price or IDR 100,000. Respondents can afford to pay the certification if the price offered is IDR 100,000.

3.3. Perspective of certified labour wages
The results of the study of respondents' perceptions of the wages of builders who are certified competencies are in the Figure 6.

From Figure 6, it can be explained that respondents have a perception if the wages they receive will be more than the usual given if they do work more than the previous working hours or do overtime work. Meanwhile, respondents did not really believe that having a certificate would increase wages [9].

Figure 6. Perspective of certification cost.

Figure 7. Perspective of certified labour wages.

3.4. Perspective of quality assurance
From Figure 8, the perceptions of respondents, by conducting work competency certification cannot guarantee the respondents in terms of productivity and quality of work. Respondents assume that the quality and productivity of the work produced is due to their own work experiences. Respondents said that if a builder has a long experience in the construction world, of course, he will add the skills and knowledge of the builder himself. Long experience will teach the labor of various problems that exist [10].
3.5. The obstruction factors to obtain competency certification

From the four perspectives above, it was then reprocessed to get the most dominant obstruction factors to obtain competency certification for construction labour, with the results as shown in Figure 9.

It can be seen that, the most dominant obstacle for respondents in carrying out work competency certification activities is the cost to get the competency certification. The conclusion can be seen from the score of the percentage of indicators that get a figure of 27.60%. This is caused by the majority of respondents objected to the fees set for processing the certificate, so that respondents are reluctant to carry out work competency certification. The results of this study are in line with the research conducted by Kulemeka [11], which is the cost of certification is still considered too expensive.

![Figure 8. Perspective of quality assurance.](image)

![Figure 9. The perspective of skilled labour for competency certification](image)

4. Conclusion

Based on the results of the study, it can be concluded that the respondents still refuse getting the competency certification activities due to many factors, including the unavailability of free time and the consideration of the high cost to get the competency certification.
In this study respondents' perceptions were measured through four indicators, specifically the implementation of certification, the cost of work competence certification, certified labor wages and work quality assurance. From the four indicators, the cost of work competency certification is the most dominant reason with a percentage of 26.59% for the respondents to still refuse participating in work competency certification activities.

The results of the study show that respondents have a poor perception of work competency certification. Respondents consider that the cost of certification is too expensive so that they reluctant to take work competency certification. Also in terms of the wages, it does not refer to ownership of certification but rather refers to the work quality and the experience of the respondent.

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