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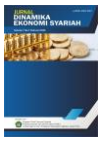

SKILLS AS A DETERMINING FACTOR OF WAGE LEVELS IN THE CONSTRUCTION SECTOR

Nur Mawadda[1], M. Arif Musthofa[2], Nurjali, Wandi[3]

[1] Institut Islam Al-Mujaddid Sabak Jambi, Indonesia
[2] Institut Islam Al-Mujaddid Sabak Jambi, Indonesia
[3] Institut Islam Al-Mujaddid Sabak Jambi, Indonesia

Email: nurmawaddaaida@gmail.com

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ABSTRACT

This study aims to examine the influence of skills on wage levels among construction workers in Rano Village. Employing a quantitative research approach, the study involved a population of 75 construction workers, with a sample of 63 respondents selected through purposive sampling and determined using the Slovin formula. Data were collected via structured questionnaires and analyzed using simple linear regression with the assistance of SPSS version 25 to ensure statistical accuracy. The findings reveal a significant relationship between workers' skills and their wage levels. This is evidenced by the coefficient of determination (R^2) value of 0.595, indicating that 59.5% of the variation in wage levels can be explained by skill-related factors. The remaining 40.5% is attributable to other variables not included in this study, such as work experience, educational attainment, and prevailing labor market dynamics. These results underscore the critical role of skill enhancement in improving the economic well-being of construction workers. The study provides valuable insights for policymakers and stakeholders in formulating targeted interventions, particularly in the development of training and upskilling programs to foster human capital within the construction sector.

Keywords: *Labor Skills, Wage Determination, Construction Sector, Human Capital, Regional Workforce Development*

INTRODUCTION

Economics constitutes a crucial aspect of human life that must be fulfilled to ensure well-being and survival. The drive to meet economic needs compels individuals to exert considerable effort in improving their quality of life. Nevertheless, these economic pursuits often give rise to various social and structural challenges, including poverty, unemployment, and crime, addressing such issues involves not only individual agency but also the

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participation of broader stakeholders such as the government, capital owners, resource holders, and workers. [1] Economic hardship, particularly poverty, is a multifaceted and multidimensional phenomenon. It is not merely defined by insufficient income or lack of basic necessities such as food, clothing, and shelter but also by limited access to education, information, and natural resources. Poverty thus presents itself as a complex issue that demands a holistic approach involving all societal actors, rather than relying solely on governmental intervention.[2]

As economic beings, humans are inherently motivated to seek satisfaction and avoid discomfort. One fundamental means of fulfilling their daily needs and improving life standards is through work. Work, by nature, is an activity that engages both physical and mental faculties and results in the production of goods or services for oneself or others. Whether performed voluntarily or under employment, this labor is typically compensated by wages or equivalent forms of remuneration. This concept is clearly emphasized in the Qur'an, specifically in Surah At-Taubah, verse 105:

> *"And say, 'Do [as you will], for Allah will see your deeds, and [so will] His Messenger and the believers. And you will be returned to the Knower of the unseen and the witnessed, and He will inform you of what you used to do.'" (Q.S. At-Taubah: 105)*

This verse serves as a divine injunction encouraging individuals to engage in productive work as a means of fulfilling their worldly responsibilities, one such form of labor is construction work a profession typically undertaken by individuals known as day laborers or builders. Construction labor does not necessarily require high levels of formal education, as it is largely driven by physical capacity and practical skills (such as masonry, carpentry, and structural installation). These competencies are essential for constructing buildings such as houses, shops, and offices.

Unfortunately, construction work is often undervalued by society due to its association with lower socioeconomic status and perceived instability, construction workers are generally categorized into two groups based on their level of skill: the skilled workers (e.g., masons or carpenters) and unskilled assistants (*kenek*), who help by preparing materials and tools.

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[1] Murni Ngurawan "Sistem Pengupahan Buruh Bangunan dalam Prespektif Ekonomi Islam dan Implikasinya Terhadap Kesejahteraan Keluarga (studi kasus Perumahan Mapanget Griya Indah) , hal. 116.

[2] Kiswa Badran Al-mahlah, "Peran Buruh Bangunan Terhadap Kesejahteraan Keluarga Di Kelurahan Laikang Kecamatan Biringkanaya Kota Makassar". UIN Alauddin Makasar, 2019,

Skilled construction workers possess specialized capabilities that are essential for delivering high-quality building outcomes and directly influence the wages they receive.[3]

The construction industry typically divides tasks based on workers' competencies. Various roles exist, including painters, carpenters, bricklayers, electricians, and ironworkers. Payment systems also vary and may be based on daily rates, weekly wages, or contract-based (lump-sum) agreements. In Islamic economic jurisprudence, this form of employment aligns with the *ijarah al-'amal* contract, in which services are rented in exchange for mutually agreed-upon compensation creating legal and ethical obligations between the employer and the labor provider. In Indonesia, the average daily wage for a skilled construction worker in Jambi Province ranges between IDR 100,000 and IDR 250,000. For contract-based work, wages may range from IDR 3,000,000 to IDR 5,000,000 per square meter, depending on the project's scope. In stark contrast, construction workers in developed countries such as the United Kingdom may earn up to £12.26 per two hours, equivalent to approximately IDR 1,600,000 per day. This wage disparity reflects the broader differences in labor markets, living costs, and policy regulations across countries.

Contract-based work in construction entails a fixed payment for completing a project within a specified timeframe, in some cases, the payment is distributed equally among workers, while in others, a primary contractor bears all risks and compensates laborers at fixed daily rates. Additionally, many workers express dissatisfaction with their current wages, feeling that their earnings do not reflect their level of skill or meet their daily expenses especially amidst rising costs of living.[4] This situation is exacerbated when employers set wage standards without considering workers' competencies or performance levels, leaving laborers with no choice but to accept substandard pay to remain employed.

This study aims to examine the extent to which skills influence wage levels among construction workers in Rano Village, by identifying the impact of skill on income, the research seeks to provide empirical evidence that can guide policies and programs related to skill development and labor welfare in the construction sector.

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[3] Giantoro, Raharjo, & Pramana, I. M. B. "Visualisasi Buruh Bangunan Dalam Karya Fotografi Ekspresi". Retina Jurnal Fotografi, vol.2,no.1, 2022, hal 6

[4] M. I. Subekti, T. Yulianto, T. Sundari & M. W. Nugroho, *Analisis komparatif penerapan metode pengupahan harian dan borongan pada proyek renovasi gedung Sekolah Dasar*, Media Konstruksi: Jurnal Ilmiah Teknik Sipil, 9(3) (2024). https://doi.org/10.33772/medkons.v9i3.66

RESEARCH METHOD

This study employs a quantitative research approach, which is characterized by the use of numerical data in the processes of data collection, analysis, and presentation.[5] The primary objective of this approach is to statistically analyze the relationship between variables using measurable indicators. Specifically, the research adopts a descriptive quantitative method, aiming to describe patterns, tendencies, and correlations within the collected data through statistical tools such as frequency tables, percentages, and simple regression analysis.[6] The population in this study includes all construction workers in Rano Village, based on preliminary observations and interviews with several neighborhood heads (RT) in the area, the total number of construction workers identified was 75 individuals. Due to limitations in time, resources, and access, the study did not involve the entire population but instead selected a sample to represent the population's characteristics.

To determine the sample size, the Slovin formula was applied, which is commonly used to estimate sample size when the characteristics of the entire population are unknown with certainty, based on the calculation, the resulting sample size was 63 respondents. The sampling technique used in this study is purposive sampling, which involves selecting individuals who meet specific criteria deemed relevant to the research objectives. This non-probability sampling method is appropriate when not all members of the population are suitable for inclusion.[7] The sample criteria were as follows:

a. Respondents were between 30 to 55 years old, based on the assumption that individuals within this age range are more likely to provide informed and reflective responses.
b. Respondents had a minimum of 3 years of work experience in the construction sector, which is assumed to reflect a relevant level of skill and knowledge for the purposes of this study.

The data collection instruments included observation**,** questionnaires (surveys), and documentation. Observation was conducted through direct and systematic monitoring of activities at construction sites, allowing the researcher to record behavioral and situational phenomena relevant to workers' skills and wage structures. The questionnaire was structured

[5] Sidik Priadana and Denok Sunarsi, Metode Penelitian Kuantitatif (Tangerang Selatan: Pascal Books, 2021), hal. 41.

[6] Ma'ruf Abdullah, "Metodologi Penelitian Kuantitatif", (Yogyakarta : Aswaja Pressindo, 2015),hal. 280

[7] Hardani, Andriani, dkk, Metode penelitian kualitatif & kuantitatif. (Yogyakarta: CV Pustaka Ilmu 2020), hal, 364-365.

and distributed to respondents to collect data on demographic characteristics, work experience, skill indicators, and wage levels. This instrument was designed to ensure clarity, objectivity, and alignment with the study variables. Documentation involved the use of secondary data such as official records, books, articles, and institutional reports related to labor conditions and wage structures in the construction sector. This method complements primary data and serves as a source of triangulation to strengthen the validity of the findings.[8]

The collected data were processed using simple linear regression analysis with the assistance of SPSS version 25, enabling the researcher to examine the extent to which skills influence the wage level of construction workers. This method was chosen to determine the strength and direction of the relationship between the independent variable (skills) and the dependent variable (wage level).

RESULTS AND DISCUSSION

Statistical Analysis of Skill Influence on Construction Wages

This study employed several statistical tests to examine the influence of workers' skills on their wage levels. The validity test aimed to determine whether each questionnaire item accurately measured the intended construct. The results showed that all items for both the skill variable (X) and the wage variable (Y) had corrected item-total correlation values greater than the r-table value of 0.2480. This indicates that each statement was valid and appropriate for inclusion in further analysis. Instrument reliability was assessed using *Cronbach's alpha*, with values of 0.937 for the skill variable and 0.866 for the wage variable. Both exceed the commonly accepted threshold of 0.60, demonstrating that the instruments used in this study were consistent and reliable for measuring the constructs.[9]

To test the assumption of normality, the Kolmogorov-Smirnov test was conducted on the residuals. The resulting significance value was 0.096, which is greater than 0.05. This confirms that the residuals were normally distributed, fulfilling the normality assumption necessary for regression analysis. Linearity was tested through the Deviation from Linearity statistic, which produced a significance value of 0.369. This result is also greater than 0.05, indicating that the relationship between the skill and wage variables can be considered linear.

[8] Sandu Siyoto dan Ali Sodik, Dasar Metodologi Penelitian (Yogyakarta: Literasi Media Publishing, 2015),hal . 79.

[9] Author’s primary data processing, 2024

The simple linear regression analysis revealed a coefficient of determination (*R square*) of 0.574. This suggests that 57.4 percent of the variation in wage levels among construction workers can be explained by their level of skill. The remaining 42.6 percent is likely influenced by other variables not included in this study, such as work experience, education, type of construction project, or local labor demand and supply conditions. The t-test results supported the significance of the skill variable's influence on wages. The calculated *t-value* was 9.457, exceeding the critical t-table value of 2.000, and the significance level was 0.000, which is less than 0.05. Therefore, the null hypothesis was rejected, and the alternative hypothesis accepted, confirming that skills have a significant positive effect on wages.[10]

The regression equation derived from the analysis is:

$$Y = a + bX = constant + 0.574X$$

This means that for every one-unit increase in skill, a worker's wage increases by 0.574 units, assuming other factors remain constant. In practical terms, skilled construction workers are more likely to earn higher wages than unskilled or less-skilled workers. These findings emphasize the role of skills as a determining factor in wage determination within the informal construction sector. They suggest that investments in skill development, such as vocational training and certification programs, could serve as a strategic approach to improving the economic welfare of construction workers, particularly in regions where wage inequality remains a persistent issue.

These results offer compelling evidence that skills are a significant determinant of wage disparities among construction workers in Rano Village. The strength of the relationship, as indicated by the high R^2 *value* and the significant *t-test* result, confirms that workers with higher levels of skill tend to receive proportionately higher wages. This finding aligns with the theoretical framework of human capital theory, which posits that individuals who invest in education and skill acquisition enhance their productivity and, consequently, their earnings potential. In the context of labor economics, skills function not only as a means to increase productivity but also as a form of bargaining power, enabling workers to negotiate better compensation for their labor contributions.

Moreover, the statistical robustness of the data demonstrated through reliable instruments, normally distributed residuals, and linear variable relationships reinforces the

[10] Author's primary data processing, 2024

validity of the research findings. This supports the broader claim that upskilling workers is a key pathway to income improvement, especially in labor-intensive sectors like construction. Future research could expand on these findings by incorporating additional explanatory variables such as formal education level, years of experience, or industry-specific certifications to further refine our understanding of wage dynamics. Nonetheless, this study has laid a strong empirical foundation, highlighting the measurable economic benefits of skill acquisition for informal-sector workers.

Implications for Labor Economics and Workforce Development

The results of this study have meaningful implications for labor economics, especially regarding wage disparities among low-income construction workers. In Kelurahan Rano, as in many other informal labor sectors in developing regions, wages are often determined not by formal qualifications but by perceived and demonstrated skills. The finding that skills significantly affect wage levels highlights a critical challenge faced by many construction workers: the inability to command higher wages due to limited or unrecognized competencies.

The labor market for construction work is largely informal and lacks institutional mechanisms for skill verification, resulting in wage compression between skilled and unskilled labor. Workers with higher levels of practical skills and construction-specific expertise, such as bricklaying, tiling, or plumbing, are more likely to receive better compensation. However, many workers remain trapped in low wage categories due to the absence of structured training or certification pathways. This situation emphasizes the importance of expanding vocational education and technical training tailored to the construction sector.

In this regard, the findings of this research align with the Human Capital Theory, which posits that individuals can enhance their economic value and productivity through investment in education, training, and experience. According to Becker (1993), skills acquired through formal or informal means contribute to higher productivity, which in turn leads to increased earnings.[11] Applying this framework, construction workers who receive targeted training or upskilling programs would theoretically be able to negotiate for better wages, reduce underemployment, and improve their long-term economic security.

[11] Gary S. Becker, *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*, 3rd ed. (Chicago: University of Chicago Press, 1993), hlm. 15–18.

From a policy standpoint, the findings of this study underscore the urgent need for stronger engagement by local governments, industry stakeholders, and vocational education providers in addressing the skill gaps that persist among construction laborers. Government agencies, particularly at the regional or municipal level, can play a pivotal role by designing and funding inclusive skill development initiatives tailored to the construction sector. These programs should prioritize accessibility, affordability, and relevance to real labor market demands. One practical approach could involve the establishment of community-based apprenticeship schemes, whereby skilled senior workers mentor younger or less-experienced laborers directly on construction sites.

Mobile training units could be deployed to reach workers in remote or underserved areas, ensuring that geography does not remain a barrier to human capital enhancement. For low-income or unemployed workers, financial support mechanisms such as training subsidies, vouchers, or conditional cash transfers could be introduced to incentivize participation in certified programs. Collaboration with industry associations can further align curriculum content with current market standards and introduce recognition frameworks for informal skills, allowing workers to formally validate their competencies. These strategies are not only necessary for improving wage outcomes but also for enhancing employment security and overall labor mobility within the construction industry.[12]

Additionally, collaboration between construction firms and public institutions could help standardize wage benchmarks based on verified skill levels, ensuring fairer compensation across projects. Moreover, workforce development strategies should not only focus on technical skills but also include soft skills such as communication, safety awareness, and project planning, aholistic approach to training can empower workers to transition from casual labor to more stable employment or even self-employment within the construction sector.

In conclusion, the strong and statistically significant correlation between skill levels and wage outcomes, as demonstrated in this study, highlights the critical role of skill development in shaping equitable labor market dynamics. This relationship reinforces the argument that workforce upskilling should be a central component of broader labor and economic policy agendas. Enhancing workers' technical competencies not only improves individual income

[12] Darma, I. M. D. S., Atmojo, Y. P., Rini, E. S., & Suradarma, I. B. G. (2021). *Implementasi Teknologi Mobile untuk Pelaporan Kemajuan Kerja Proyek Jasa Konstruksi*. Jurnal Sistem dan Informatika, 15(2), 122–133. https://doi.org/10.30864/jsi.v15i2.349

levels and job security, but also generates wider social and economic benefits such as increasing regional productivity, strengthening the resilience of informal labor sectors, and contributing to long-term poverty alleviation.

To achieve these goals, a coordinated, multi-stakeholder effort is essential. Local governments, private sector actors, vocational institutions, and civil society organizations must collaborate in designing sustainable frameworks for continuous skill acquisition and certification. Policies must be inclusive, targeting marginalized and low-income laborers, while ensuring alignment between training curricula and evolving market needs. By embedding skill development within labor market institutions, policymakers can create pathways for upward mobility and support a more just distribution of economic opportunities in the construction sector and beyond.

CONCLUSION

This study investigated the influence of construction workers' skills on wage levels in Kelurahan Rano using a quantitative approach with simple linear regression analysis. The findings confirmed that skills have a statistically significant and positive impact on wage outcomes. Validity and reliability tests demonstrated that all questionnaire items used to measure both skills (X) and wages (Y) were valid and reliable, with *Cronbach's alpha* values of 0.937 and 0.866 respectively. The Kolmogorov-Smirnov test indicated that the residuals followed a normal distribution, while linearity tests confirmed a linear relationship between the two variables.

The regression analysis yielded a coefficient of determination (R^2) of 0.574, indicating that 57.4% of the variance in wage levels among construction workers could be explained by their skill levels. The remaining 42.6% is likely influenced by other variables such as education, work experience, labor market dynamics, and type of project engagement. The regression coefficient of 0.574 further suggests that a one-unit increase in skill level corresponds to an average wage increase of 0.574 units, assuming other variables remain constant. These results were reinforced by the t-test, where the calculated *t-value* of 9.457 exceeded the critical value, and the significance level was well below 0.05.

In practical terms, this study affirms that skilled workers earn substantially higher wages than their unskilled counterparts in the construction sector. The findings emphasize the critical role of skills in wage determination and the broader implications for labor market

equity, improving workers' technical competencies through training and certification can serve as a strategic response to wage stagnation and low-income vulnerability among informal laborers.

From a policy standpoint, the study highlights the need for greater institutional investment in workforce development, particularly for low-income and informal workers. Local governments, vocational institutions, and construction industry stakeholders are urged to design accessible, demand-driven skill training programs that reflect real market needs. By doing so, not only will workers gain the means to increase their earning potential, but regional economies may also benefit from a more productive and resilient labor force. Overall, the results of this study underscore that addressing wage disparities in the construction sector must begin with the fundamental step of skill enhancement, strengthening the link between worker capability and compensation is not merely a matter of fairness, but a key driver of inclusive economic growth.

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