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Employee Welfare at PT. Caridea Jaya Lestari in Sumbawa Regency: An Analysis Using BPS Welfare Indicators and the Analytical Hierarchy Process (AHP)

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Abstract

The expansion of aquaculture in coastal and rural areas can create formal employment and raise household income, but employment status alone does not necessarily imply multidimensional welfare. This study analyzes employee welfare priorities at PT. Caridea Jaya Lestari in Sumbawa Regency using four dimensions adapted from the People Welfare Indicators of Badan Pusat Statistik (BPS): income, health, education, and housing. A descriptive design combines a qualitative welfare framework with quantitative Analytical Hierarchy Process (AHP) analysis. The study involves all 24 permanent employees through total sampling. Primary data were collected through structured in-depth interviews, pairwise-comparison questionnaires using Saaty's 1–9 scale, direct observation, and documentation. Respondent judgments were aggregated using the geometric mean, followed by matrix normalization, priority-vector estimation, and consistency testing. The results show that the highest-priority sub-criteria are wage conformity with the Sumbawa minimum wage in the income dimension (38.80%; CR = 0.0274), family health condition in the health dimension (36.53%; CR = 0.0332), access to educational facilities in the education dimension (31.32%; CR = 0.0052), and access to clean water in the housing dimension (35.26%; CR = 0.0338). At the overall goal level, income is the dominant welfare priority (41.83%), followed by health (30.30%), housing (16.46%), and education (11.41%), with a consistent aggregate judgment (CR = 0.0589). These findings indicate that employee welfare policy should prioritize adequate wages while simultaneously strengthening family health protection, educational access, and basic residential infrastructure.

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Keywords: Employee Welfare; Aquaculture; BPS Welfare Indicators; Analytical Hierarchy Process; Sumbawa Regency.

INTRODUCTION

Indonesia possesses extensive marine and coastal resources that create substantial opportunities for fisheries and aquaculture development. Its archipelagic geography, large exclusive economic zone, long coastline, and favorable tropical conditions support the cultivation of high-value commodities, including vannamei shrimp. In regions such as Sumbawa Island, aquaculture has increasingly become an important component of local economic activity because it generates production, business opportunities, and employment for rural and coastal communities (Irwansyah, 2024).

The development significance of aquaculture, however, should not be assessed only through output growth or employment creation. Economic development is meaningful when it improves people's quality of life and expands their ability to meet basic needs. Todaro and Smith (2011) emphasize that development involves improvements in sustenance, self-esteem, and freedom, while Sen (1999) views welfare in terms of substantive capabilities to lead a life that people have reason to value. From this perspective, formal employment in a modern industry is only one component of welfare and does not automatically guarantee adequate health, education, or housing conditions.

Badan Pusat Statistik (BPS) provides an operational framework for assessing people's welfare through measurable social and economic dimensions. The source manuscript applies four dimensions from the BPS welfare framework: income, health, education, and housing (Badan Pusat Statistik, 2023). These dimensions are interrelated. Income determines the financial capacity to satisfy daily needs; health affects productivity and life quality; education contributes to long-term human-capital development; and housing reflects the adequacy of the physical living environment. An assessment that considers these dimensions simultaneously is therefore more informative than a single-income indicator.

The relevance of a multidimensional approach is reinforced by Indonesian labor-market conditions. National wage statistics indicate that average employee earnings do not necessarily capture the distributional realities faced by workers, and public discussion continues to highlight workers whose earnings remain below local minimum-wage benchmarks (Metro TV News, 2023; Tempo.co, 2023). This situation illustrates the working-poor problem: an individual may be employed but still experience constraints in

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satisfying essential household needs. Consequently, the quality of employment and the welfare outcomes attached to that employment require explicit empirical assessment.

Sumbawa Regency presents a particularly relevant context. The regency has experienced declining open unemployment, yet poverty remains a persistent development issue (Badan Pusat Statistik Kabupaten Sumbawa, 2024; Rumah Informasi Samawa, 2023). The local government has used the regency minimum wage as one instrument for protecting workers' purchasing power, but the effectiveness of formal employment in improving multidimensional welfare cannot be inferred from employment statistics alone. A worker may receive regular income while still facing limitations in health protection, educational financing, clean-water access, sanitation, or housing quality.

Motong Village in Utan District represents a coastal-rural area undergoing economic transformation through shrimp-farming investment. PT. Caridea Jaya Lestari, a vannamei shrimp aquaculture company, has operated in the area since 2018 and directly absorbs local labor (Caridea Group, n.d.). The wider aquaculture sector has also expanded in Sumbawa Regency, where the source manuscript records 27 operating shrimp-farming companies as of April 2024 (Badan Pusat Statistik Kabupaten Sumbawa, 2024). This expansion makes the sector strategically relevant not only for regional production but also for the welfare of employees and their households.

Previous research at the same company by Irwansyah (2024) reported a positive effect of company presence on employee income. Nevertheless, that study concentrated on the income dimension. Other studies on shrimp-farming communities have incorporated broader welfare indicators, including health, education, housing, and social-economic conditions (Hamzah, 2019; Shulhan et al., 2021; Subyantoro et al., 2020). The existing literature therefore establishes the importance of aquaculture for local livelihoods, but it leaves room for a more integrated evaluation of permanent employees using a multidimensional welfare framework.

A second analytical need concerns priority setting. Even when several welfare dimensions are recognized, management and public policy cannot always address all dimensions with equal intensity at the same time. It is therefore useful to identify which dimension employees perceive as most important and which specific indicators within each dimension deserve the greatest attention. The Analytical Hierarchy Process (AHP), introduced by Saaty (1980), is suitable for this purpose because it converts structured pairwise judgments into relative priority weights and includes a consistency test to assess the logical coherence of respondent evaluations.

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This study addresses the research gap by integrating the BPS multidimensional welfare framework with AHP in the context of permanent employees in the shrimp-aquaculture industry. The approach enables the analysis to identify the most important sub-criteria within income, health, education, and housing and to compare the four dimensions at the overall goal level. This combination extends earlier work that examined only income and offers a more decision-oriented perspective for employee welfare management.

Accordingly, the study has two principal objectives: first, to analyze employee welfare through the four BPS-based dimensions of income, health, education, and housing; and second, to determine the relative priority of these welfare dimensions using AHP. The expected contribution is both academic and practical. Academically, the study enriches welfare analysis in coastal aquaculture employment by combining multidimensional indicators with a multi-criteria decision method. Practically, the priority structure can support PT. Caridea Jaya Lestari and relevant local stakeholders in directing welfare interventions toward the aspects employees consider most urgent.

LITERATURE REVIEW

Theoretical Foundation

Welfare is a multidimensional concept that extends beyond material income. Todaro and Smith (2011) identify three core values of development: sustenance, self-esteem, and freedom from servitude. Sustenance refers to the ability to satisfy basic needs such as food, clothing, shelter, health, and security. Self-esteem concerns dignity and social recognition, while freedom refers to greater choice and reduced dependence. These principles imply that employment can contribute to welfare only when it improves the real living conditions of workers and their families.

Sen's (1999) capability approach complements this view by emphasizing what individuals are effectively able to do and to be. Income is an important means, but it is not the final objective of development. Health, educational opportunity, safe housing, and access to essential services determine whether income can be converted into meaningful life opportunities. In the context of company employees, this approach justifies examining welfare outcomes across several dimensions instead of using wages as the sole measure of well-being.

For empirical operationalization, this study adopts the BPS welfare-indicator framework as represented in the source manuscript. Four dimensions are used: income, health, education, and housing (Badan Pusat Statistik, 2023). Together, these

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dimensions capture both immediate material conditions and the household capabilities that support longer-term welfare.

BPS-Based Welfare Dimensions

Income Dimension

Income is the most direct economic resource available to employees for meeting household needs. In this study, the income dimension is represented by four indicators: conformity of wages with the Sumbawa Regency minimum wage, adequacy of income for food expenditure, adequacy for non-food expenditure, and the availability of additional income sources. This operationalization reflects the idea that welfare is influenced not merely by having earnings, but by whether those earnings are sufficient relative to basic living requirements (Badan Pusat Statistik, 2023).

Health Dimension

Health welfare is operationalized through membership in the national health-insurance system (BPJS Kesehatan), ease of access to health facilities, the practice of seeking formal medical treatment when ill, and the general health condition of the employee's family. These indicators represent both access and outcome-related aspects of health. For employees in aquaculture operations, health security is particularly relevant because stable physical condition supports work continuity, household resilience, and productivity.

Education Dimension

The education dimension covers the employee's highest formal educational attainment, opportunities to participate in human-resource development or training, the ability to finance family education, and access to educational facilities near the place of residence. Education contributes to welfare through knowledge formation, skill development, and intergenerational mobility. The inclusion of family education financing also recognizes that the welfare benefits of employment extend beyond the individual worker to dependent household members.

Housing Dimension

Housing welfare is represented by home-ownership status, the physical condition of the dwelling, access to adequate clean water, and the availability of sanitation and lighting. These indicators reflect the physical environment in which employees and their

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families live. Adequate housing affects health, security, comfort, and the ability of households to maintain a stable quality of life (Badan Pusat Statistik, 2023).

Structural Transformation and Employee Welfare

Structural transformation describes the reallocation of labor from traditional, low-productivity activities toward more modern and productive sectors (Todaro & Smith, 2011). In Motong Village, the presence of a modern vannamei shrimp-farming company represents this process: local residents who previously relied on small-scale fishing, subsistence agriculture, or household activities may move into formal wage employment.

Nevertheless, structural transformation should not be equated automatically with complete welfare improvement. The working-poor phenomenon demonstrates that formal employment can coexist with limited purchasing power and inadequate access to essential services. For this reason, the effect of aquaculture employment should be evaluated through outcomes that include income adequacy, health protection, education, and housing conditions rather than through job absorption alone.

Analytical Hierarchy Process (AHP)

The Analytical Hierarchy Process is a multi-criteria decision-making method developed by Saaty (1980). AHP decomposes a complex decision problem into a hierarchy consisting of a goal and a set of criteria or sub-criteria. Decision makers compare elements in pairs using a 1–9 fundamental scale, after which the judgments are transformed into a priority vector that represents relative importance.

A key methodological advantage of AHP is its consistency test. After the maximum eigenvalue is estimated, the Consistency Index (CI) and Consistency Ratio (CR) are calculated. For a four-element comparison, the Random Index (RI) used in the source study is 0.90. A judgment matrix is considered acceptably consistent when CR is below 0.10. This mechanism is important because it provides an explicit check on whether respondents' pairwise preferences are sufficiently coherent for interpretation.

In this study, AHP is applied at two analytical levels. At the sub-criterion level, indicators within each BPS welfare dimension are compared to identify the most important component of income, health, education, and housing. At the goal level, the four dimensions themselves are compared to establish the overall employee welfare priority structure.

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Previous Studies and Research Gap

Empirical studies provide a foundation for examining welfare in aquaculture communities and for using multi-criteria methods in welfare assessment. The studies summarized below show that earlier research has examined income effects, broader social-economic outcomes, and multi-dimensional welfare, but few studies combine a BPS-based employee welfare framework with AHP at the firm level in Sumbawa Regency.

Table 1. Selected Previous Studies Relevant to the Research

Study	Focus and Method	Relevance to the Present Study
Irwansyah (2024)	Income effects of PT. Caridea Jaya Lestari on employees; descriptive quantitative approach.	Same company context, but limited to the income dimension.
Hamzah (2019)	Welfare of tiger-shrimp farmers using multiple BPS-related indicators.	Supports multidimensional welfare measurement in the shrimp-farming sector.
Pratama (2022)	Community welfare improvement through shrimp farming; qualitative descriptive approach.	Provides a coastal-rural welfare perspective linked to aquaculture development.
Shulhan et al. (2021)	Socioeconomic impacts of shrimp-farming development, including income, employment, and housing.	Supports assessment beyond income and links aquaculture to household welfare.
Kaluku & Pakaya (2020)	AHP-TOPSIS for measuring coastal-community welfare priorities.	Demonstrates the usefulness of AHP-type multi-criteria methods in welfare analysis.

Source: Synthesized from the references, 2026

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The principal research gap lies in the integration of three elements: a firm-level employee focus, a multidimensional BPS welfare framework, and AHP-based priority analysis. The present study therefore does not merely ask whether formal aquaculture employment generates income; it asks which aspects of welfare employees themselves regard as most important and which sub-criteria should be prioritized within each dimension. This decision-oriented perspective is intended to provide a more actionable basis for corporate and local policy design.

RESEARCH METHODOLOGY

Research Design and Approach

The study uses two complementary descriptive approaches. A qualitative descriptive component is used to frame and interpret employee welfare conditions according to the four BPS dimensions, while a quantitative AHP component is used to calculate relative priorities among the welfare dimensions and their indicators. The qualitative component is supported by structured in-depth interviews, observation, and documentation, whereas AHP converts respondents' pairwise comparisons into numerical priority weights. The combination is intended to produce a contextual understanding of welfare together with a systematic priority structure for decision making.

Research Location and Period

The research was conducted at PT. Caridea Jaya Lestari in Motong Village, Utan District, Sumbawa Regency, West Nusa Tenggara. The location was selected because the company has operated in vannamei shrimp aquaculture since 2018 and directly employs members of the local community. The source manuscript reports that the research process was conducted in 2026, covering instrument preparation, field data collection, data processing, and preparation of the final study report.

Population and Sampling

The population analyzed in the study consists of 24 permanent employees who were active at PT. Caridea Jaya Lestari during data collection. Because this population was small and fully accessible, the study used total sampling, so all 24 permanent employees were included as respondents. The inclusion criteria were active permanent employment, a minimum work period of six months, and voluntary willingness to participate. The same 24 respondents contributed to the welfare assessment and the AHP pairwise-comparison analysis.

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Data Types and Sources

Primary data were obtained directly from employees through structured in-depth interviews and AHP pairwise-comparison questionnaires. Secondary data were obtained from the BPS People Welfare Indicators, BPS Sumbawa Regency publications on poverty, employment, and regional wage conditions, relevant company documents, and the scientific literature cited in the source manuscript. Secondary data were used to provide contextual benchmarks and support interpretation of the employee-level findings.

Data Collection Techniques

Structured in-depth interviews were designed around the four BPS-based welfare dimensions. The interview guide covered wage adequacy, food and non-food needs, health insurance and service access, educational conditions and financing, and housing facilities. The interviews were intended to obtain contextual information about the welfare concerns represented by the study indicators.

AHP questionnaires were used to obtain pairwise judgments. Each respondent assessed the relative importance of welfare criteria using Saaty's 1–9 scale. Observation was used as supporting evidence regarding the work environment, company facilities, and general residential conditions, while documentation was used to collect official and statistical information that could be compared with employee accounts.

Operationalization of Welfare Dimensions

Table 2. Operationalization of the Employee Welfare Dimensions

Dimension	Indicators	Primary Collection Technique
Income	Wage conformity with the Sumbawa minimum wage; adequacy for food needs; adequacy for non-food needs; additional income sources.	In-depth interview and AHP questionnaire
Health	BPJS health-insurance membership; access to health facilities; formal treatment-seeking practices; general family health condition.	In-depth interview and AHP questionnaire
Education	Highest formal education; HR-development/training opportunities; ability to finance family education; access to educational facilities.	In-depth interview and AHP questionnaire

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Housing	Home-ownership status; physical condition of the dwelling; access to clean water; adequate sanitation and lighting.	In-depth interview and AHP questionnaire

Source: Adapted from the BPS welfare dimensions, 2026.

Data Credibility and Triangulation

The qualitative component applied source and method triangulation. Employee interview information was compared with BPS statistics, relevant company documentation, and direct observation. Method triangulation compared information obtained through interviews, observation, and documentation. Where inconsistencies emerged, the research design required rechecking the relevant information with respondents. This procedure was intended to improve the credibility and contextual reliability of the qualitative evidence.

Qualitative Data Analysis

Interview data were processed through three stages: data reduction, data display, and conclusion drawing. Data reduction selected information directly relevant to the four BPS welfare dimensions. The reduced data were organized into descriptive explanations for each dimension, after which conclusions were drawn regarding the welfare issues represented by the indicators. In the source study, these qualitative procedures complement the AHP results rather than replace the numerical priority analysis.

AHP Data Analysis Procedure

The AHP procedure began by structuring the decision problem into an overall goal and welfare criteria. The goal was to determine the priority of employee welfare dimensions at PT. Caridea Jaya Lestari. The four main criteria were income, health, education, and housing. Each dimension was further represented by four indicators. Respondents conducted pairwise comparisons using Saaty's scale, and the 24 individual judgment sets were aggregated using the geometric mean.

Table 3. Saaty Pairwise-Comparison Scale Used in the Study

Value	Interpretation
1	Equal importance
3	Slightly more important
5	More important

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7	Very strongly more important
9	Absolutely more important
2, 4, 6, 8	Intermediate values between adjacent judgments

Source: Saaty, 1980

After aggregation, each comparison matrix was normalized by column and the row averages were used to obtain the priority vector. Consistency was evaluated by calculating the maximum eigenvalue (λmax), the Consistency Index (CI), and the Consistency Ratio (CR), where CR = CI/RI and CI = (λmax − n)/(n − 1). For n = 4, the study uses RI = 0.90. A matrix is accepted as consistent when CR < 0.10. The criterion or dimension with the largest priority weight is interpreted as the highest employee welfare priority.

RESULTS AND DISCUSSION

Research Context and Respondents

PT. Caridea Jaya Lestari is a vannamei shrimp-aquaculture company located in Motong Village, Sumbawa Regency. The analysis covers all 24 permanent employees included through total sampling. The AHP questionnaire was structured around the four BPS welfare dimensions and their respective sub-criteria. All reported matrices satisfy the required consistency threshold, which means the employee judgments are sufficiently coherent for the priority weights to be interpreted.

Income Dimension

The income dimension compares four concerns: wage conformity with the Sumbawa minimum wage, adequacy of income for food needs, adequacy for non-food needs, and the availability of additional income. The aggregated pairwise-comparison matrix is presented in Table 4.

Table 4. Aggregated Pairwise-Comparison Matrix for the Income Dimension

Criterion	A	B	C	D
A. Wage conformity with minimum wage	1.0000	1.6263	3.6432	1.7453
B. Adequacy for food needs	0.6149	1.0000	5.0033	1.4528
C. Adequacy for non-food needs	0.2745	0.1999	1.0000	0.4656
D. Additional income	0.5730	0.6883	2.1479	1.0000

Source: processed data, 2026

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Table 5. Priority Weights and Consistency for the Income Dimension

Criterion	Priority Weight	Percentage	Rank
Wage conformity with minimum wage	0.3880	38.80%	1
Adequacy for food needs	0.3175	31.75%	2
Additional income	0.2063	20.63%	3
Adequacy for non-food needs	0.0882	8.82%	4

Consistency: λmax = 4.073916; CI = 0.024639; RI = 0.90; CR = 0.027376 (consistent).

Source: processed data, 2026

Wage conformity with the regional minimum wage is the dominant income priority at 38.80%, followed by adequacy for food needs at 31.75%. Additional income contributes 20.63%, while non-food adequacy receives the lowest priority at 8.82%. The CR of 0.0274 is well below 0.10. The pattern indicates that employees attach greatest importance to the adequacy and formal fairness of their primary wage and to the ability of income to secure basic food consumption. This hierarchy is consistent with the sustenance principle described by Todaro and Smith (2011), where fulfillment of essential economic needs precedes less immediate consumption objectives.

Health Dimension

The health dimension evaluates BPJS membership, ease of access to health facilities, the practice of seeking formal medical treatment, and the general health condition of the employee's family.

Table 6. Aggregated Pairwise-Comparison Matrix for the Health Dimension

Criterion	A	B	C	D
A. BPJS membership	1.0000	1.9531	3.4568	0.6666
B. Access to health facilities	0.5120	1.0000	3.5539	0.6573
C. Formal treatment-seeking	0.2893	0.2814	1.0000	0.2861
D. Family health condition	1.5002	1.5211	3.4956	1.0000

Source: processed data, 2026

Table 7. Priority Weights and Consistency for the Health Dimension

Criterion	Priority Weight	Percentage	Rank
Family health condition	0.3653	36.53%	1
BPJS membership	0.3174	31.74%	2

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Access to health facilities	0.2315	23.15%	3
Formal treatment-seeking	0.0858	8.58%	4

Consistency: λmax = 4.089754; CI = 0.029918; RI = 0.90; CR = 0.033242 (consistent).

Source: processed data, 2026

Family health condition receives the largest health priority (36.53%), followed closely by BPJS membership (31.74%). Access to health facilities accounts for 23.15%, while formal treatment-seeking has the smallest relative weight (8.58%). The result suggests that employees view health not only as an individual work-capacity issue but also as a household-security issue. Formal health insurance therefore remains strategically important because it can reduce financial exposure when employees or family members require treatment.

Education Dimension

The education dimension compares educational access and human-capital concerns at both employee and household levels. The sub-criteria are the employee's highest formal education, opportunities for HR-development training, the ability to finance family education, and access to educational facilities.

Table 8. Aggregated Pairwise-Comparison Matrix for the Education Dimension

Criterion	A	B	C	D
A. Highest formal education	1.0000	0.9968	0.5047	0.6259
B. HR-development training	1.0032	1.0000	1.3838	0.6044
C. Financing family education	1.9813	0.7227	1.0000	0.9423
D. Access to educational facilities	1.5977	1.6546	1.0613	1.0000

Source: processed data, 2026

Table 9. Priority Weights and Consistency for the Education Dimension

Criterion	Priority Weight	Percentage	Rank
Access to educational facilities	0.3132	31.32%	1

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Financing family education	0.3077	30.77%	2
HR-development training	0.1971	19.71%	3
Highest formal education	0.1820	18.20%	4

Consistency: λmax = 4.013950; CI = 0.004650; RI = 0.90; CR = 0.005167 (consistent).

Source: processed data, 2026

Access to educational facilities is ranked first at 31.32%, only slightly above the ability to finance family education at 30.77%. Training opportunities account for 19.71%, while the employee's own formal educational attainment is ranked fourth at 18.20%. This result indicates that current employees are more concerned with continuing access to education and the educational prospects of household members than with their already-completed formal schooling. The near equality of the top two priorities also shows that accessibility and affordability should be treated as complementary education-welfare issues.

Housing Dimension

The housing dimension evaluates ownership status, the physical condition of the dwelling, access to clean water, and adequate sanitation and lighting.

Table 10. Aggregated Pairwise-Comparison Matrix for the Housing Dimension

Criterion	A	B	C	D
A. Home-ownership status	1.0000	2.5171	0.5033	0.4525
B. Physical building condition	0.3973	1.0000	0.3548	0.4589
C. Access to clean water	1.9870	2.8187	1.0000	1.0920
D. Sanitation and lighting	2.2098	2.1790	0.9158	1.0000

Source: processed data, 2026

Table 11. Priority Weights and Consistency for the Housing Dimension

Criterion	Priority Weight	Percentage	Rank
Access to clean water	0.3526	35.26%	1
Sanitation and lighting	0.3285	32.85%	2
Home-ownership status	0.2016	20.16%	3

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Physical building condition	0.1173	11.73%	4

Consistency: λmax = 4.091232; CI = 0.030411; RI = 0.90; CR = 0.033790 (consistent).

Source: processed data, 2026

Access to clean water has the highest housing priority (35.26%), followed by sanitation and lighting (32.85%). Home ownership accounts for 20.16%, and the physical condition of the building receives 11.73%. The ranking shows that employees place essential residential services ahead of formal ownership and structural appearance. From a welfare perspective, this is understandable because clean water, sanitation, and lighting directly affect daily health, safety, and household functioning.

Overall Priority among Welfare Dimensions

At the overall goal level, employees directly compared income, health, education, and housing. The combined matrix and derived priority weights are shown below.

Table 12. Aggregated Pairwise-Comparison Matrix at the Overall Goal Level

Dimension	A	B	C	D
A. Income	1.0000	1.8138	2.9904	2.6248
B. Health	0.5513	1.0000	2.2478	2.9894
C. Education	0.3344	0.4449	1.0000	0.4656
D. Housing	0.3810	0.3345	2.1479	1.0000

Source: processed data, 2026

Table 13. Overall Welfare-Dimension Priority Weights

Dimension	Priority Weight	Percentage	Rank
Income	0.4183	41.83%	1
Health	0.3030	30.30%	2
Housing	0.1646	16.46%	3
Education	0.1141	11.41%	4

Consistency: λmax = 4.159123; CI = 0.053041; RI = 0.90; CR = 0.058935 (consistent).

Source: processed data, 2026

Income is the dominant overall priority at 41.83%, substantially above health at 30.30%. Housing occupies the third position at 16.46%, while education receives the

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lowest relative weight at 11.41%. The aggregate CR is 0.0589, indicating a consistent overall comparison. The ranking does not imply that education is unimportant; rather, it shows that employees perceive more immediate economic and health concerns as relatively more urgent. In other words, AHP captures priority intensity, not the absolute value of each welfare dimension.

Integrated Discussion

The combined results reveal a coherent welfare hierarchy. At the goal level, income dominates. Within the income dimension, conformity of wages with the Sumbawa minimum wage is the leading sub-criterion. This alignment between the overall and sub-criterion levels strengthens the interpretation that wage adequacy is the central employee welfare concern. The result extends Irwansyah (2024), which found that company employment positively affected income but assessed welfare largely from the earnings perspective. The present priority structure demonstrates that, even in formal employment, employees continue to evaluate welfare strongly in relation to wage adequacy and essential consumption needs.

Health is the second overall priority, and the highest health sub-criterion is the condition of the employee's family, followed by BPJS membership. This pattern highlights the household character of worker welfare. An employee's sense of security depends not only on his or her own health but also on whether family members are protected against medical risks. For company welfare policy, maintaining health-insurance coverage and facilitating access to health services can therefore have benefits that extend to employment stability and household resilience.

Housing priorities are concentrated on basic infrastructure rather than ownership. Clean water and sanitation/lighting together account for more than two-thirds of the housing priority weight. This result is consistent with a multidimensional welfare perspective because essential residential services directly affect health and day-to-day living conditions. The finding also resembles broader aquaculture-community studies that consider housing and basic facilities alongside income as meaningful components of welfare (Hamzah, 2019; Shulhan et al., 2021; Subyantoro et al., 2020).

Education is ranked fourth at the goal level, but its internal structure is informative. Employees prioritize access to educational facilities and the ability to finance family education over their own completed formal education. This pattern suggests an intergenerational orientation: employees may view education primarily as an opportunity for family members and as a means of improving future mobility. Thus, a lower overall

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AHP weight should not be interpreted as a lack of educational value; it reflects relative urgency compared with income, health, and housing.

The results also demonstrate the usefulness of AHP for corporate welfare planning. All five matrices sincome, health, education, housing, and the overall goal comparison have CR values below 0.10. The consistency results mean that the derived weights can function as a structured basis for prioritization. This methodological contribution is related to the work of Kaluku and Pakaya (2020), who applied multi-criteria techniques to coastal welfare assessment, but the present study applies the logic specifically to permanent employees of a shrimp-aquaculture company.

From a management perspective, the priority structure suggests a sequential but integrated intervention strategy. Wage conformity and adequacy should be examined first because income is the leading dimension. Health protection should remain a parallel priority through BPJS and family-oriented health support. Housing interventions can focus on clean water, sanitation, and lighting, while educational support can emphasize access and family financing as well as employee training. Such an approach responds directly to the relative priorities expressed by employees rather than assuming that one standardized welfare program will address all needs equally.

A methodological caution is necessary when interpreting these findings. The numerical results reported in the source manuscript are AHP priority weights. They show which welfare dimensions and indicators employees regard as relatively more important; they are not direct measures of the absolute magnitude of deprivation or welfare attainment. Accordingly, the weights are best used for priority setting and should be read together with the qualitative interview, observation, and documentary evidence collected under the research design.

Table 14. Summary of the Highest-Priority Sub-Criterion in Each Welfare Dimension

Dimension	Highest-Priority Sub-Criterion	Weight	CR
Income	Wage conformity with minimum wage	38.80%	0.0274
Health	Family health condition	36.53%	0.0332
Education	Access to educational facilities	31.32%	0.0052
Housing	Access to clean water	35.26%	0.0338

Source: processed data, 2026.

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CONCLUSION

The study shows that employee welfare priorities at PT. Caridea Jaya Lestari are clearly differentiated across the four BPS-based dimensions. Income is the highest overall priority with a weight of 41.83%, followed by health at 30.30%, housing at 16.46%, and education at 11.41%. The overall comparison is methodologically consistent (CR = 0.0589). This ranking indicates that employees place the greatest immediate emphasis on economic adequacy, while health security remains a substantial second priority.

Within the individual dimensions, wage conformity with the Sumbawa minimum wage is the most important income indicator (38.80%); family health condition is the leading health indicator (36.53%); access to educational facilities is the leading education indicator (31.32%); and access to clean water is the leading housing indicator (35.26%). All dimension-level matrices have CR values below 0.10, confirming acceptable consistency of the pairwise judgments.

The findings provide a practical basis for welfare policy. PT. Caridea Jaya Lestari should prioritize review of wage adequacy and conformity with minimum-wage standards, while maintaining health-insurance protection and family-oriented health support. Residential welfare initiatives should focus on clean water, sanitation, and lighting, whereas education-related programs can improve access to facilities, support family education, and strengthen employee training. Future research can broaden the number and type of respondents and combine AHP with additional quantitative or qualitative measures of actual welfare attainment so that relative priorities can be evaluated together with absolute welfare outcomes.

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