

The Role Of Corporate Social Responsibility In Humanitarian Logistics In Indonesia: Study Case Of Pt Kalbe Farma Corporate Social Responsibility At Cianjur Earthquake 2022

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Abstract: The evolving perception of businesses as entities contributing to societal well-being has emphasized the critical role of Corporate Social Responsibility (CSR) in humanitarian logistics. In Indonesia, CSR is legally mandated, encompassing sustainable development, environmental stewardship, and disaster response. The 2022 Cianjur earthquake prompted PT Kalbe to engage in humanitarian logistics as part of its CSR. Humanitarian logistics, involving efficient aid delivery, demonstrates CSR dedication. This study assesses CSR's role in humanitarian logistics, logistic performance, and community engagement. Data collected via questionnaires were analyzed using Path Analysis. The findings reveal significant direct and indirect relationships among CSR, humanitarian logistics, logistic performance, and community engagement. This study thus offers insights into PT Kalbe's CSR in disaster relief on the company's unwavering dedication to societal well-being and highlighting the complexities of CSR in humanitarian logistics.

Keywords: *Community Engagement, Corporate Social Responsibility, Humanitarian Logistics, Logistic Performance, Path Analysis*

1. Introduction

The evolving perception of businesses as entities that contribute significantly to societal well-being, rather than being solely profit-driven, has highlighted the critical role of Corporate Social Responsibility (CSR) within the domain of humanitarian logistics. In Indonesia, CSR is legally mandated as an integral aspect of corporate operations. This mandate encompasses commitments to sustainable development, environmental stewardship, and active participation in disaster response efforts. The legal framework for this mandate is detailed in Law No. 40 of 2007 concerning Limited Liability Companies, particularly in Article 74, which specifies the responsibilities of companies involved in natural resource-related activities. This framework is further supported by Presidential Regulation No. 47 of 2012 on Corporate Social and Environmental Responsibility, the release of ISO 26000 on International Guidance on Social Responsibility in November 2012, and the regulations of the Ministry of State-Owned Enterprises, including the most recent one in 2021, which introduces the concept of Tanggung Jawab Sosial dan Lingkungan (TJSL) (Marthin et al., 2018; Swari et al., 2022). Corporate Social Responsibility is the commitment of businesses to support sustainable economic growth by working with employees, their representatives, families, local communities, and the general public to improve the quality of life in a way that benefits both business and development. Corporate Social Responsibility has been recognized since the business world developed because of its relationship with the company's role in society. However, the academic review of CSR is relatively new (Wibawanti et al., 2017).

On November 21, 2022, the region of Cianjur in West Java, Indonesia, was struck by a catastrophic earthquake, measuring 5.6 on the Richter scale. Owing to its location in the Ring of Fire, Indonesia is particularly prone to natural disasters, with Cianjur being exceptionally

vulnerable due to factors like its soft soil structure, densely populated buildings in slope areas, soil conditions, and the integrity of building structures. The earthquake, occurring at 06:21 UTC, resulted in a tragic loss of life and substantial physical damage, with 321 fatalities, 593 serious injuries, and 59 individuals requiring hospitalization at the Cianjur regional hospital. This event was part of a series of disasters that struck West Java in 2022, causing extensive damage to public infrastructure and numerous buildings (Khaerudin, 2023; Supendi et al., 2023). Increased population density in disaster-prone areas, economic and social disparities, high poverty levels, and increased frequency of hydrometeorological hazards due to climate change are all factors that will increase Indonesia's vulnerability to natural and artificial disasters (Didiet et al., 2017).

An exsiting study by (Idris and Che Soh, 2014) emphasizes the consensus that logistics, coordination, and human resource inputs are crucial success factors in humanitarian aid and disaster relief (HADR) missions. Humanitarian logistics, as a meaningful expression of a company's CSR, involves active participation in disaster relief efforts, including the efficient management of logistics and supply chains to ensure the timely delivery of critical aid to affected communities. By leveraging their logistics expertise and infrastructure, companies provide not only tangible support but also demonstrate their commitment to social and environmental responsibility. Humanitarian logistics, as a CSR endeavor, represents a company's dedication to corporate citizenship, humanitarian values, and contributing to the well-being of disaster-stricken communities. It serves as a tangible demonstration of a company's broader social and environmental responsibilities, fostering goodwill and trust while positively impacting society. Humanitarian logistics encompasses all activities related to planning, executing, and controlling flows to assist disaster victims, with its demand being ever-changing and unpredictable (Anjomshoae et al., 2023; Masudin et al., 2021).

The necessity for a comprehensive assessment of humanitarian logistics within the context of CSR is particularly evident in the case of PT Kalbe's response to the 2022 Cianjur earthquake. This assessment can be approached by examining logistic performance, carried out by the company's human resources (Rutaba, 2022), and its impact on the community and its engagement (Opdyke et al., 2018). Therefore, this study aims to elucidate the complex interrelationships among key variables within PT Kalbe's operational framework in the context of humanitarian logistics as part of its CSR initiatives. The study will assess the role of CSR in humanitarian logistics, logistic performance, and community engagement and impact. Evaluating the role of humanitarian logistics in PT Kalbe's CSR initiatives during the Cianjur earthquake is crucial for understanding the company's commitment to disaster relief and its broader social and environmental responsibilities, offering valuable insights into the effectiveness of PT Kalbe's response and its contribution to the welfare of the affected communities.

2. Literature Review

2.1 Corporate Social Responsibility

Corporate Social Responsibility (CSR) is defined as the obligation of corporations to undertake actions that further social good beyond their own interests and legal requirements. It encompasses a range of practices and policies reflecting a firm's commitment to society and includes economic, social, and environmental performance considerations. Logistics plays a critical role in realizing CSR objectives, especially in sectors like humanitarian aid and sustainable development. Efficient logistics ensure responsible resource use, minimize environmental impacts, and enable effective disaster response and aid delivery. Thus, logistics functions not only as a business necessity but also as a vital component in fulfilling a company's broader social and environmental commitments, aligning operational efficiency with ethical

responsibilities (Chen et al., 2023; Swari et al., 2022). On the other hand, an effective CSR program can also positively impact the level of service provided to frontline employees (Rahmat et al., 2020).

2.2 Humanitarian Logistic

Humanitarian logistics is a critical aspect of disaster relief operations, involving the organization, management, and execution of processes to provide timely and effective aid. This field requires the coordination of procurement, transportation, warehousing, and distribution of supplies, with the overarching aim of supporting affected communities, minimizing the impact of disasters, and enhancing resilience. It encompasses managing resources and information, addressing infrastructure challenges, and navigating complex political and social landscapes. Reliable delivery of materials in the correct quantity and quality is essential, as is responsiveness in the supply chain to rapidly respond to emergencies (Piecyk & Björklund, 2015; Roh et al., 2022). Fundamentally, the humanitarian logistics process differs from the commercial logistics process as humanitarian logistics focuses on search and rescue response, sustaining or saving lives, and restoring self-reliance (Dewi et al., 2021)

2.3 Logistic Performance

Logistic performance can be defined as the effectiveness with which personnel engaged in logistics manage and execute various tasks within the supply chain. This aspect is critical as it directly impacts the efficiency, effectiveness, and overall success of logistics operations. It encompasses the readiness of personnel, reinforced by supportive logistics policies, to efficiently handle and execute tasks within the supply chain (Rutaba, 2022). One essential tool to determine Indonesia's logistics performance is understanding the logistics performance index (LPI). Therefore, we can evaluate and plan for the benefit of the industry and regulatory decision-makers (CHAIRUDDIN STMT Trisakti, 2015).

2.4 Community Enggegment and Impact

Community engagement in Corporate Social Responsibility (CSR) is centered on empowering and building the capacity of communities to effectively respond to environmental and social changes. It involves active participation and collaboration of community members, using their collective resources and adaptive capabilities to create a resilient and sustainable community. The essence of this engagement is to enable communities to manage and evolve amidst changing circumstances, fostering an environment where both the community and the CSR initiatives can thrive (Opdyke et al., 2018; Rela et al., 2020).

2.5 Influence of Humanitarian Logistics, Logistic Performance, Community Engagement, and Impact on Corporate Social Responsibility in Natural Disasters

In the context of measuring Corporate Social Responsibility (CSR) in natural disasters, study by (Twigg, 2001) suggested the assessment focuses on how a company's vision shapes its disaster management approach, decision-making processes that prioritize social responsibility, the efficiency of disaster relief efforts, and their tangible impact on affected communities. Humanitarian logistics variables (X1) play a pivotal role in determining CSR success (Y) during natural disasters. Effective logistics ensures timely aid delivery, including resource planning, transportation, and distribution. Excelling in this area enhances CSR effectiveness and the company's crisis management reputation (Roh et al., 2022). Thus, improvements in logistics directly influence CSR outcomes, leading to the hypothesis: H1: Humanitarian logistics significantly influences CSR.

In the context of humanitarian logistics, logistic performance (X2) is a critical aspect influenced by human resources. This performance relies on the expertise of logistics personnel, emergency preparedness, and the effectiveness of strategic planning. These elements collectively determine the capacity of humanitarian organizations to execute efficient and impactful logistics operations during crises (Rutaba, 2022). This encompasses overall logistics system efficiency, reliability, and responsiveness. High logistic performance ensures resource optimization, quick crisis response, and effective aid delivery, enhancing the impact and perception of CSR. Therefore, the second hypothesis, H2, posits that logistic performance directly impacts CSR success in natural disasters.

Community engagement (X3) plays a crucial role in influencing the success of CSR initiatives. Active participation of the community ensures that CSR efforts align with the actual needs and priorities of disaster-affected individuals. Engagement can take various forms, such as feedback loops and collaborative projects. When a company involves the community, it fosters trust and ensures targeted and effective CSR activities (Opdyke et al., 2018). Therefore, the 3rd hypothesis posits that, H3: Active community engagement significantly and positively impacts CSR outcomes in natural disaster management, highlighting the importance of aligning CSR initiatives with community needs and active participation.

The combined impact of humanitarian logistics (X1), logistic performance (X2), and community engagement (X3) on CSR success (Y) is synergistic. While each factor individually contributes to CSR effectiveness, their integration forms a holistic approach to disaster relief and resource management. This comprehensive strategy ensures well-planned and efficient CSR initiatives that align with community needs, significantly enhancing their success and impact in natural disaster contexts. The hypothesis posits that H4: Effective humanitarian logistics, high logistic performance, and strong community engagement together enhance CSR success in disaster relief, emphasizing the synergistic effect of these factors.

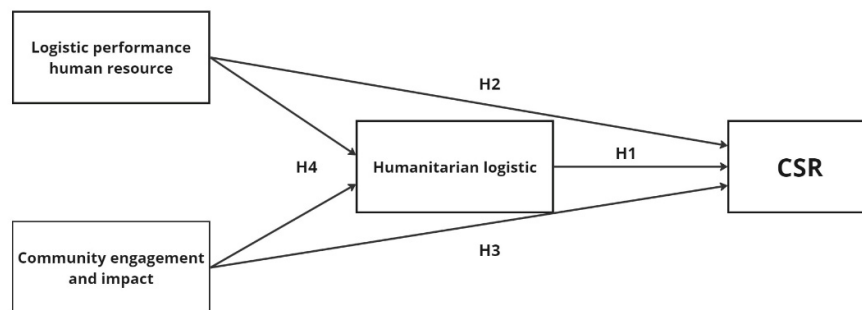


Fig. 1. Research Model Hypothesis.

3. Research Method

The research approach primarily employs a quantitative analysis to investigate the correlation between Corporate Social Responsibility (CSR) and humanitarian logistics, particularly in the context of PT Kalbe's response to the 2022 earthquake in Cianjur. To capture relevant insights, data were gathered through a Likert scale questionnaire. The sampling strategy employed was purposive, strategically selecting participants based on their involvement in the Corporate Social Responsibility initiatives related to the Cianjur earthquake in 2022. The population criteria for this study comprised companies actively engaged in the CSR process tied to the earthquake in Cianjur. To ensure the robustness of the data, the questionnaire underwent rigorous assessment for both validity and reliability. A reliability test,

with a minimum criterion of 0.6 Cronbach's alpha, was applied to affirm the reliability and validity of the measurement tools (Taber, 2018).

The collected data were then subjected to statistical analysis using Path Analysis, employing Smart-PLS 4 software. Path Analysis is a statistical method employed to evaluate and measure the relationships between various variables in research (Valenzuela & Bachmann, 2018). A total of four variables and 14 indicators were employed to develop a structural equation model that aims to identify both direct and indirect relationships among CSR, humanitarian logistics, logistic performance, and their impact on community engagement.

Table 1

Measurement of variables.

Variables	Indicators	Source
Corporate Social Responsibility	CSR1. Vision CSR2. Decision Making CSR3. Implementation	(Twigg, 2001)
Humanitarian Logistic	LH1. Reliability LH2. Responsiveness LH3. Cost Management LH4. Agility LH5. Dialog with Authorities	(Roh et al., 2022)
Logistic Performance	LP1. Experts LP2. Preparedness LP3. Effective Planning	(Rutaba, 2022)
Community Engagement and Impact	CE1. Community Participation and involvement CE2. Training and Capacity Development CE3. Longterm Sustainability of Aid Efforts CE4. Resilience Enhancement	(Opdyke et al., 2018)

4. Results and Discussion

4.1 Validity and Reliability Testing

An analysis of Averagr Variance Extracted (AVE) and its squred root of variables are presented in Tabel 2. The AVE values represent the average variance that a variable explains, indicating the extent of explained variance in the constructs. The square root of AVE, on the other hand, is used to assess the discriminant validity in a latent variable model. It suggests that if the square root of AVE for each construct is greater than the correlation between the construct and other constructs in the model, discriminant validity is established.

Table 2

Square Root of AVE and Correlation Between Variables

Variables	AVE	Root of AVE
Community Engagement and Impact	0,707	0,841
Corporate Social Responsibility	0,643	0,802
Humanitarian Logistic	0,641	0,800
Logistics Performance Human Resource	0,707	0,870

Source: Processed Data (SmartPLS 4.0), 2023

All variables have a square root of the Average Variance Extracted (AVE) that is higher than the correlation coefficients between each construct and other constructs, indicating that these values exhibit good discriminant validity. Table 2 demonstrates that the variables Corporate Social Responsibility, Humanitarian Logistics, Logistics Performance Human Resource, and Community and Engagement Impact accurately reflect each respective valid variable, as their AVE values are greater than 0.50.

4.1.1 Reliability Testing

Reliability test in research evaluates the consistency of a measurement instrument. It determines if the instrument produces stable and consistent results over repeated trials. Cronbach's Alpha is a commonly used statistical measure in reliability testing. a high Alpha value (considered desirable at 0.70 or above) indicates that the test items is reliable to measure variables (Taber, 2018).

Table 3
Reliability Indicator

Variabel	Composite Reliability	Cronbach's Alpha	Result
Community Engagement and Impact	0,906	0,862	Reliable
Corporate Social Responsibility	0,843	0,721	Reliable
Humanitarian Logistic	0,899	0,860	Reliable
Logistics Performance Human Resource	0,904	0,840	Reliable

Source: Processed Data (SmartPLS 4.0), 2023

Based on the results in Table 3 indicate that each of the variables—Community Engagement and Impact, Corporate Social Responsibility, Humanitarian Logistic, and Logistics Performance Human Resource—has high values of Composite Reliability and Cronbach's Alpha, all marked as "Reliable". This suggests that the instruments used to measure these variables demonstrate strong internal consistency, with each set of items reliably measuring their respective constructs.

4.1.2 Validity Testing

In this study, validity testing was conducted using two criteria: convergent validity and discriminant validity. Convergent validity refers to a test of multi-item scale validity where items measuring the same construct exhibit a variance greater than 70% (Hair et al., 2018). This type of validity determines the degree of correlation between measures of the same concept, enabling conclusions to be drawn from a concept and subsequently linked to the summation scale. Figure 2, which displays the PLS Algorithm, shows that the validity test results indicate the loading factor value for each dimension exceeds 0.70, thereby satisfying the criteria for convergent validity.

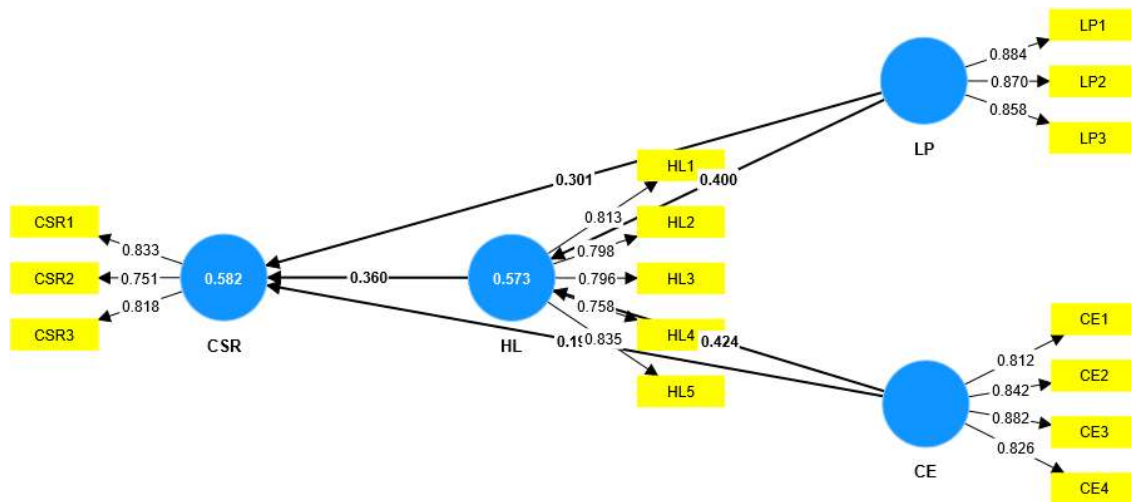


Fig. 2. PLS Algorithm.

4.2 Discriminant Validity

The discriminant validity results (Table 4), which are essential in confirming that distinct constructs in a study are truly different. The table lists various items (CE1 to CE4, CSR1 to CSR3, HL1 to HL5, and LP1 to LP3) associated with four constructs: Community Engagement and Impact, Corporate Social Responsibility, Humanitarian Logistic, and Logistics Performance Human Resource.

Table 4
Discriminant Validity

	Community Engagement and Impact	Corporate Social Responsibility	Humanitarian Logistic	Logistics Performance Human Resource
CE ₁	0.812	0.556	0.544	0.610
CE ₂	0.842	0.571	0.622	0.584
CE ₃	0.882	0.549	0.678	0.596
CE ₄	0.826	0.507	0.489	0.516
CSR ₁	0.504	0.833	0.584	0.560
CSR ₂	0.524	0.751	0.527	0.549
CSR ₃	0.535	0.818	0.575	0.529
HL ₁	0.530	0.547	0.813	0.547
HL ₂	0.470	0.562	0.798	0.499
HL ₃	0.533	0.552	0.796	0.559
HL ₄	0.573	0.567	0.758	0.561
HL ₅	0.675	0.579	0.835	0.596
LP ₁	0.530	0.564	0.605	0.884
LP ₂	0.554	0.543	0.584	0.870
LP ₃	0.699	0.663	0.614	0.858

Source: Processed Data (SmartPLS 4.0), 2023

Each item's loading factor on its own construct is notably higher compared to its loading on other constructs. For instance, the loading factors for items under Community Engagement and Impact (CE1 to CE4) are substantially higher on their own construct than on Corporate Social Responsibility, Humanitarian Logistic, or Logistics Performance Human Resource. This pattern is consistent across all constructs, indicating that each set of items is more strongly related to its corresponding construct than to others. Such results confirm good discriminant validity, as each construct is measured distinctly and does not overlap significantly with others. This distinctiveness is crucial for the integrity and interpretability of the research findings.

4.3 Direct Effect

The criterion for hypothesis testing is set such that if the T-count exceeds 1.97 (T-table), the hypothesis is considered at a 5% significance level. This method of hypothesis testing determines whether the observed relationships between variables are statistically significant. The significance level of 5% implies that there is a 5% chance of concluding that a relationship exists. To test the hypotheses between the variables and quantify the magnitude of their effects, this study employs the Smart PLS 4.0 Bootstrapping approach. Bootstrapping is a resampling technique used to estimate the distribution of a statistic by repeatedly sampling with replacement from the data.

Table 5
Path Coefficients and T-Values

Path	Original Sample (O)	T Statistics	P Values	Result
Community and Engagement → Corporate Social Responsibility	0,192	2,023	0,043	Significant
Community and Engagement → Humanitarian Logistic	0,424	4,303	0,000	Significant
Humanitarian Logistic → Corporate Social Responsibility	0,360	2,973	0,003	Significant
Logistics Performance Human Resource → Corporate Social Responsibility	0,301	2,805	0,005	Significant
Logistics Performance Human Resource → Humanitarian Logistic	0,400	3,740	0,000	Significant

Source: Processed Data (SmartPLS 4.0), 2023

Based on the results in Table 5, all the direct relationships tested are statistically significant, demonstrating meaningful associations between the constructs of Community and Engagement, Humanitarian Logistics, Corporate Social Responsibility, and Logistics Performance Human Resources. The path from Community and Engagement to Corporate Social Responsibility has a coefficient of 0.192, a t-statistic of 2.023, and a p-value of 0.043. The p-value being less than 0.05 and the t-statistic exceeding the critical value of 1.97 indicate that this relationship is statistically significant, suggesting that changes in Community and Engagement meaningfully impact Corporate Social Responsibility. Regarding the path from Community and Engagement to Humanitarian Logistics, the coefficient is 0.424, with a t-statistic of 4.303 and a p-value of 0.000. The high t-statistic and the p-value of zero clearly denote a significant relationship, implying a strong and significant influence of Community and Engagement on Humanitarian Logistics.

The Humanitarian Logistics to Corporate Social Responsibility path shows a coefficient of 0.360, a t-statistic of 2.973, and a p-value of 0.003. These values confirm a significant relationship, indicating that Humanitarian Logistics significantly influences Corporate Social Responsibility. The relationship from Logistics Performance Human Resources to Corporate Social Responsibility, with a path coefficient of 0.301, a t-statistic of 2.805, and a p-value of 0.005, is also significant. This implies that Logistics Performance Human Resources has a notable impact on Corporate Social Responsibility. Lastly, the path from Logistics Performance Human Resources to Humanitarian Logistics has a coefficient of 0.400, a t-statistic of 3.740, and a p-value of 0.000, indicating a significant and substantial relationship. This suggests that improvements in Logistics Performance Human Resources are associated with significant changes in Humanitarian Logistics.

4.4 Indirect Effect

In Table 7, the study explores the indirect effects of key variables on Corporate Social Responsibility (CSR). Firstly, the relationship between Community Engagement and CSR reveals a substantial impact, with a direct effect path coefficient of 0.153, a T statistic of 2.748, and a P value of 0.006. These statistics signify statistical significance and indicate a significant indirect effect of Community Engagement on CSR. Secondly, the analysis of Logistics Performance Human Resource and CSR unveils a similarly influential relationship, with a direct effect path coefficient of 0.144, a T statistic of 2.011, and a P value of 0.044. This relationship also demonstrates statistical significance, emphasizing the noteworthy indirect effects of Logistics Performance Human Resource on CSR. In essence, both Community Engagement and Logistics Performance Human Resource play pivotal roles in shaping CSR outcomes, as evidenced by their statistically significant impacts in this study.

Table 7

Indirect Effect

Path	Original Sample (O)	T Statistics	P Values	Result
Community and Engagement → Humanitarian Logistic → Corporate Social Responsibility	0,153	2,748	0,006	Significant
Logistics Performance Human Resource → Humanitarian Logistic → Corporate Social Responsibility	0,144	2,011	0,044	Significant

Source: Processed Data (SmartPLS 4.0), 2023

4.5 Goodness of Fit Test

In the assessment of model fit, R-squared (R^2) values were employed to evaluate the explanatory power of the regression models for the dependent variables, Corporate Social Responsibility and Humanitarian Logistic. The R^2 value for Corporate Social Responsibility was reported as 0.582, indicating that approximately 58.2% of the variance in this variable is accounted for by the independent variables in the model. This is indicative of a strong explanatory power, as a significant portion of the variability in Corporate Social Responsibility is captured by the model. Similarly, the R^2 value for Humanitarian Logistic stood at 0.573, signifying that 57.3% of its variance is explained by the predictors. This also denotes a robust model fit, confirming that the majority of the variation in Humanitarian Logistic is well-explained by the independent variables included in the study.

Table 7

R-squared value

Variabels	R ²	Result
Corporate Social Responsibility	0,582	Strong
Humanitarian Logistic	0,573	Strong

Further analysis was conducted to evaluate the combined goodness of fit for both models. This was achieved through the calculation of Q-squared ($1 - (1 - 0.582)(1 - 0.573)$), which aims to ascertain the cumulative explanatory power when considering both dependent variables simultaneously. The result of this computation was 0.822, or 82.2%, suggesting a very strong overall fit of the combined models. This high combined R² value implies that, when the effects on Corporate Social Responsibility and Humanitarian Logistic are considered together, the independent variables provide a comprehensive explanation for a significant majority of the observed variance in these outcomes. This reinforces the effectiveness and robustness of the models in explaining the key relationships under study.

4.6 Discussion

Influence of Humanitarian Logistic on Corporation Social Responsibility

Humanitarian logistics significantly influences Corporate Social Responsibility (CSR) with a direct path coefficient of 0.36. In this context, humanitarian logistics is an endogenous variable, impacted by Logistics Performance and Community Engagement and Impact. This relationship signifies how companies can leverage humanitarian logistics to meet their CSR obligations, particularly in delivering essential aid to disaster-stricken areas through their expertise and infrastructure. Such logistics operations, pivotal in mobilizing resources, skills, and knowledge for assisting vulnerable communities during disasters, inherently embody CSR principles by contributing to societal welfare and support. The integration of CSR into logistics underscores the importance of a comprehensive, organization-wide approach to social responsibility. This approach suggests that companies with strong humanitarian logistics capabilities are better equipped to achieve their CSR goals, as they play a crucial role in promoting societal well-being and resilience during disasters (Anjomshoae et al., 2023; Carter & Jennings, 2002; Van Wassenhove, 2006).

Influence of Logistic Performance on Humanitarian Logistic and CSR

Logistic performance acts as an exogenous variable, functioning independently as a direct predictor of both Humanitarian Logistics (HL) and CSR. In this study, logistic performance significantly and positively influences HL and CSR. It directly affects the efficiency and effectiveness of humanitarian logistics, where efficient logistic performance ensures timely and adequate delivery of aid, resources, and services in humanitarian operations. This is crucial for managing complex logistics demands during humanitarian crises, thus directly influencing HL (Idris & Che Soh, 2014; Rutaba, 2022).

Furthermore, logistic performance has a direct and positive impact on a company's CSR initiatives. Effective logistics management enhances a company's ability to respond to social needs and contribute to societal welfare. This encompasses improved resource allocation, reduced environmental impact, and enhanced disaster response capabilities—all essential components of CSR (Roh et al., 2022).

Influence of Community Enggegment and Impact on Humanitarian Logistic and CSR

Community engagement and impact (CE) are exogenous variables that exert a significant and positive influence on both humanitarian logistics and CSR within the scope of

this study. Their pivotal role in shaping the effectiveness of humanitarian logistics is evident as actively engaged communities provide valuable insights, resources, and support to humanitarian efforts. This active involvement enhances the coordination and efficiency of logistics operations, ensuring more effective delivery of aid and services to those in need. Furthermore, community engagement and impact make substantial contributions to a company's CSR initiatives. A company's active engagement with communities and the positive impact it generates are foundational aspects of corporate responsibility. By fostering positive relationships with the communities they serve, companies can effectively demonstrate their commitment to societal welfare and support—core elements of CSR (Opdyke et al., 2018; Rela et al., 2020).

5. Conclusion

This study provides comprehensive insights into the dynamics of Corporate Social Responsibility (CSR) within the realm of humanitarian logistics, as evidenced in the context of the 2022 Cianjur Earthquake response by PT Kalbe Farma. Our path analysis has unveiled significant direct and indirect relationships among CSR, Humanitarian Logistics, Logistic Performance, and Community Engagement and Impact. The findings suggest a complex, bidirectional influence where CSR not only shapes but is also shaped by these variables. Specifically, Humanitarian Logistics emerges as a crucial conduit through which PT Kalbe Farma realizes its CSR objectives, underlining the integral role of logistic capabilities in disaster response. Logistic Performance is found to bolster CSR capabilities, suggesting that efficient and effective logistic operations are central to the actualization of CSR in crisis scenarios. Moreover, Community Engagement and Impact play a pivotal role in informing and enhancing both humanitarian logistics and CSR initiatives. This study, therefore, extends our understanding of CSR in the specific context of humanitarian logistics, providing valuable insights into how corporations like PT Kalbe Farma engage with societal challenges.

6. Implications

The study's findings have several direct implications for the practice of CSR, particularly in the context of humanitarian logistics. The integration of humanitarian logistics into CSR strategies is crucial for corporations, as it not only aids in effective disaster response but also enhances the corporation's societal impact and reputation. Strong relationships with local communities are essential for corporations. Engaging with communities aids in more effective and tailored humanitarian responses and reinforces the company's commitment to societal welfare, which is vital for long-term sustainability. Additionally, the results highlight the importance of logistic performance in fulfilling CSR obligations, especially in humanitarian contexts. Improving logistic capabilities should be viewed as a key component of a company's social responsibility framework, rather than just an operational enhancement. This is particularly relevant for companies in disaster-prone regions, where effective response can significantly impact both the company and the communities it serves.

7. Research Limitations

An examination of direct and indirect effects within the realm of Corporate Social Responsibility (CSR) uncovers intriguing complexities that warrant further investigation. The existing research is constrained by its focus on only four variables and fourteen indicators, whereas in the reality of the field CSR involves numerous other variables with the potential to influence it. Therefore, future research should delve deeper and broaden its scope to explore this intricate relationship comprehensively. Additionally, researchers should consider intermediary variables or contextual factors that could underlie significant indirect effects.

Further exploration in the CSR domain holds promise, as indirect effects may exert more substantial influence than initially apparent, highlighting the need to probe deeper dynamics. This presents opportunities for researchers to examine the impact of various intermediary variables and contextual factors on CSR. Future CSR research has the potential to advance our understanding of how companies can effectively fulfill their social responsibility.

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