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Effect of Corporate Social Responsibility on Community Resilience: Empirical Evidence in the Nickel Mining Industry in Southeast Sulawesi, Indonesia

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Abstract: Mining is an important industry in Indonesia. A nickel mining company has operated for almost 45 years. It has managed corporate social responsibility (CSR) programmes in the neighbouring local community. In addition to the environmental conservation and mitigation, as well as socioeconomic enhancement, the CSR is expected to nurture resilience in the local communities. This study's goal is to examine the effect of CSR on community resilience (COM-R) in the surrounding community. To analyse the effect of CSR practise on COM-R, Partial Least Squares-Structural Equation Model (PLS-SEM) is used. Results show that CSR has a positive effect on and a significant relationship with COM-R. Results also indicate that CSR's contribution to COM-R enhances community collective efficacy, community action, and adaptation. Thus, the verified CSR and COM-R model benefits other researchers, companies, and governments to be further explored.

Keywords: corporate social responsibility (CSR), community resilience; community capability; mining industry

1. Introduction

The notion of resilience may start by replacing “sustainability” as the catchy word of policymaking and political rhetoric. To understand how communities react and adapt to environmental, economic, and societal changes, conceptions of marginalized, vulnerability, and resilience have provided an important conceptual framework [1]. Resilience qualities are evident within the notion of adaptive capacity. Researchers use such capacity to examine how systems perform and react to endogenous and exogenous disturbances. This capacity is described as ‘a system ability to adjust, moderate effects and cope with disruption’ [2,3]. Systems which are characterized by diversity, change potential and connectivity (e.g., feedback and flexibility) and have a good adaptive capacity [4].

The nickel mining industry in Indonesia has been operating for nearly 45 years. It makes social and nonsocial changes. This industry is the main driver of employment and economic development in local communities. Issues are also stood on the disturbance to social, economic, and environmental effects on surrounding communities near mining operating sites. Companies must perform corporate social responsibility (CSR), which is an engagement to improving community well-being (CWB) through reimbursable business practices and corporate resources contribution [5,6]. Therefore, CSR efforts

of mining companies in Indonesia bring prosperity to the community and its workers. Indarti and Efni investigated the implementation model of CSR in Indonesia [7]. The model has the following patterns. Firstly, companies may be directly involved by conducting their own CSR programmes or by providing aids directly to the public. Secondly, provide monetary assistance to their foundation or social organisation. Thirdly, establish partnerships with nongovernment organisations, government agencies, and educational institutions. Finally, companies become a member of a social institution. However, how CSR has developed resilience of communities has not been widely studied in Indonesia.

Research related to CSR contributions to the development of communities, such as Idemudia [8], indicated that CSR strategies become effective for contributing to community development through stakeholder collaborative approaches. CSR is believed to positively affect the customer corporate image and other stakeholders in the US, Malaysia and Spain [9–11]. Griffin and Vivari [9] recognised the aids associated with CSR regarding national and international visibility CWB, and the government support. CSR practice in China and Germany is made with sustainable development and also the welfare of society [12,13]. Ismail et al. [14] reported that CSR's role is towards seeing its social, economic, and environmental impact on the community. These studies offer preliminary information that CSR practices affect the welfare of the community. However, their evaluations should be considered in case changes occur in the community. Important aspects of good community future are recovery and growth [15], and these aspects are mentioned as COM-R. McCrea et al. [16] stated that COM-R is a more significant aspect than CWB. COM-R is a conceptual framework for evaluating and nurturing community capacity to support well-being in the face of adversity, climate change, and risk [17]. Recent empirical evidence has shown that ownership of physical, social, natural assets and government intervention contribute to community well-being in terms of food security. Furthermore, the empirical results by Adu et al. [18] revealed that farming communities have been more vulnerable to global warming and weather instability in terms of food production and water supply, which have adversely affected health and economic well-being.

The review of CSR and COM-R was also reported by Rama et al. [19], that CSR develops the capacity for collective action in the US. CSR activities realized the resilience communion in the case of flood-prone areas [20]. Fardham et al. [21] described that engagement in CSR gave a mechanism to express community values, empowerment, and long-term capacity building to the communities. CSR engagement will lead to efficiency in the use of community capitals to achieve the ultimate well-being of the community. Walton et al. [22] found that resilience community and welfare have a positive relationship owing to the mining industry in Australia. Adekola and Clelland [23] pursued to realize the function of small-business activities in contributing to COM-R. The present study referred to Cutter et al. [3], who assessed COM-R by using qualitative analysis, and interviewees represented locally owned and managed businesses in rural local authority areas.

The review of CSR with COM-R is still very slight, in particular, how CSR's role is to improve the resilience of communities near mining industry activities. This study highlights concerns related to building resilience with existing CSR practices and future policies to support COM-R, especially in communities around the nickel mining area. We assessed how the CSR practices around the nickel mining activities have an impact on COM-R. The model of CSR and COM-R with the partial least squares (PLS) structural equation model (SEM) analysis is expected to be new knowledge that can contribute to business and community sustainability.

2. Theoretical Framework

2.1. Community Resilience and Corporate Social Responsibility

Building and fostering community resilience (COM-R) is an intervention to enhanced community preparedness for response and recovery [24]. It was highly discussed in the context risk, shocks, stresses uncertainty, disturbance and vulnerability especially from natural disaster, climate-related shocks (flood and drought), unsustainable materials and conflict [25–27]. Boon et al. [28] and Boon et al. [25] suggested

Bronfenbrenner's bioecological theory as a framework to measuring the progress of interventions to improve community resilience. However, this framework focuses within person characteristics for promoting individual resilience as community members. In the context of global change and natural disasters, Cutter et al. [2] reported the dimensions of COM-R assessment, which consist of economic, social, infrastructure, institutional, and community capitals. Stewart et al. [29] backed this idea and said that dimensions of infrastructure durability, economic, and social resilience are the main indicators to raise the robustness of communities that are affected by natural disasters. Berkes and Ross [30] stated nine dimensions of COM-R, which are community infrastructure, social networks, leadership, diverse economies and innovations, participation, knowledge, skills and learning, positive outlook, relationship between individuals, value and trust, and self-advised agency. Walton et al. [22] reported three dimensions in COM-R assessment, which are collectiveness, community action, and adaptation. From the socioecological conception of resilience includes concepts of adaptive capacity—that is, the community ability to transform and inspired proactively for growth, preservation, mitigation, relief, and reorganisation [26]. Community resilience is also portrayed by the community member capabilities to develop effective action to moderate the effect of a problem [31,32]. Therefore, Norris et al. [33] claimed that community resilience as a theory, consists of capacities and strategy for recovery preparedness.

From the sustainable livelihood framework's starting point of view, the community has some assets from which they derive livelihood [34]. An asset is a stock of resources, namely financial, human, physical, natural, or social, which can be acquired, developed, improved, or transferred through generations [28,32,35]. McCrea et al. [36] identified seven community valuable resources; cultural, social, political, intellectual, financial, natural, and built capital that can be mobilized to enhance community resilience and well-being. Steiner and Atterton [37] discussed that companies that operate in the countryside contribute to the community's resilience. Therefore, if CSR is a company's strategy in community development, then CSR has a direct impact to the community's resilience. This study also referred to stakeholder theory, which has been analysed and expanded by Freeman [38] through its article on strategic management. He introduced stakeholder theory in the debate of CSR and stated that a stakeholder implies to any individual or group of people that can be disturbed or adversely affected by the realization of the organization objective. This means that the outcome of the company's operations affects the community.

2.2. CSR Practice and COM-R Model

Ismail [39] determined that the majority of CSR-participating companies have applied CSR initiatives since the first 10 years of the millennium and have their core businesses in various sectors. Education programs are the common types of CSR contribution. Brew et al. [40] determined that CSR activities are related to education, health, livelihood, and community aid. Degie and Kebede [41] explained that CSR is an essential interface between local communities and the government. Moreover, they mentioned that CSR could be a standard given that it demonstrates that business corporations can address the needs of communities. They also stated that companies' CSR initiatives improve the capability of communities and dimension of CWB. Sarmila et al. [42] established that CSR projects contribute to economic welfare through sources of income, employment opportunities, and asset financing. Al-Zyoud [43] stated that the philanthropic and ethical influence in CSR significantly affects sustainability development.

Businesses that operate using natural resources have the responsibility and capability to increase community capacity and resilience [44]. Soetanto et al. [20] stated that social responsibility's role is important when trying to protect built environments during floods and other changes. The concept of responsibility becomes important when people realize that they cannot survive potential disasters. They must contribute their part, work together, and participate in their community. The authors also argued that integration between community and corporation helps community leaders to decide well regarding COM-R measures. In 2014, Steiner and Atterton reported that private companies help in social and environmental resilience by identifying the role they play in advancing the quality of

life of rural communities in Scotland. They found that resilience can be measured and evaluated by considering socioeconomic dimensions. The “success” of rural communities depends on the development of local resources (including businesses, human capital, land, and natural resources), local control over these resources, and how these resources are used [45].

Gibson and Klinck [46] stated the need for the market to drive the existence of industry and the development in various supporting sectors with a huge effect. The society must negotiate the ways these changes occur, such that society can understand, adapt, and influence. Thus, increasing research on the indicators of endurance and well-being are valuable tools to support key elements and track how benefits and effects are distributed. Buikstra et al. [47] reported that community development and social impact assessments offer insights into the quality and assets of communities that enable them to adapt to major changes or grow successfully. Individual and COM-R components are identified as social networks and support (e.g., learning, positive outlook, environment and lifestyle, initial experience, sense of purpose, infrastructure and support services, differences, innovative and diverse economies, confidence and management) experience changes. These components require interaction among people, infrastructures, communities, the economy, and the environment in the process of building resilience. Rudito [48] stated that the practice of CSR using community development directs a positive change in the sustainability and economic aspects and an effect of CWB [49] and increases COM-R [20,44]. Thus, previous research has shown that direct CSR practices contribute to COM-R. The first hypothesis was expressed on the basis of these findings.

Hypothesis 1 (H1). *A positive and significant relationship exists between CSR practice and COM-R in the Indonesian nickel mining industry.*

In building COM-R that has changed because of mining, three important dimensions for COM-R have been identified, namely, collective efficacy, community action and community adaptation in usages of resources, and commitment towards the community and effective relationships among community members [44,50]. These dimensions and their quality also contribute to COM-R [50]. Walton et al. [22] found that the mining industry could strengthen the sustainability of prosperity by enhancing COM-R dimensions, such as community action, community adaptation, and collective efficacy. Rama et al. [19] affirmed that developing the capacity for collective action with CSR implementation can engage community capacity-building [51]. CSR implementation can enhance community adaptive capacity [52]. Consequently, the practice of CSR can improve community relationship [53]. CSR practices relate and contribute to dimensioning COM-R. On the basis of these results, the present study postulates the following hypotheses:

Hypothesis 2 (H2). *A significant indirect and positive relationship exists between CSR practice in the Indonesian nickel mining industry and collective efficacy dimension.*

Hypothesis 3 (H3). *A significant indirect and positive relationship exists between CSR practice in the Indonesian nickel mining industry and the community adaptation dimension.*

Hypothesis 4 (H4). *A significant indirect and positive relationship exists between CSR practice in the Indonesian nickel mining industry and the community action dimension.*

3. Literature Review

3.1. Corporate Social Responsibility

The CSR concept has been widely used in recent decades as a basis to facilitate business and society. Carroll [54] discussed that businesses have a social responsibility that involves society with regard to the legal, ethical, economic, and discretionary (philanthropic) organizations at some point in time.

The above definition has been used in business and society [14,55,56] on the basis of its worldwide documented applicability. Companies should be held responsible for their effect on communities and the environment where they work [57]. Table 1 shows the definition of CSR in relation to community.

Table 1. Definition of CSR in relation to community.

Author (Year)	Definition
Frederick [58]	CSR is a sign of public posture towards the society's human and economic resources. CSR displays the willingness to utilise resources for broad social ends and not simply for the narrowly circumscribed interests of firms and private people.
Carroll [54]	Business social responsibility encompasses legal, economic, discretionary, and ethical expectations that the society has of an organization.
Kotler and Lee [5]	CSR guarantees to improve CWB by using philanthropic business practices and corporate resources support.
Hopkins [59], Gallardo-Vázquez et al. [11]	CSR focuses on treating firm stakeholders in a socially conscious manner. Stakeholders exist both within and outside of a firm. Social responsibility aims to improve living standards while preserving corporation profitability for its stakeholders, both inside and outside the corporation.

Source: synthesized by the authors.

Carroll [54] proposed the following four dimensions of CSR, that is, economic, legal, ethical, and discretionary responsibilities; the author argued that companies need the basic definition of CSR. Stakeholders are those to whom companies have bonds of responsibilities or dependence. Lyra et al. [60] stated that businesses' main role is to provide services and produce goods for society, emphasising its economic function and prioritising not hurting the principles of responsibility. Carroll [61] discovered that the CSR pyramid holds the whole spectrum of societal expectations regarding responsibilities and upholds the same legal, economic, philanthropic, and ethical dimensions. The author asserted that the most important dimension and the basis for supporting other dimensions is economic dimension. He also stated that, according to the pyramid model, companies must meet the requirements of the market and thus not follow CSR through pure humanity. The author stated that profit should be given priority, followed by other responsibilities.

3.2. Community Resilience

Magis [44] stated that COM-R is an individual and shared ability to respond to change. The author discussed how resilient community members intentionally develop individual and shared ability. Members' influence and response to change tolerate and renovate the community and create future community trajectories. Resilience is individuals' adaptive capacity and ability to handle change in a socioeconomic and environmental ecosystem that is continually evolving [62,63]. Social capital is an integrated facet that aids in building COM-R [64,65]. Communities that are resilient are pro-active and independent; thus, such communities are empowered and can affect local life [66,67]. Resilience presents the competence of self-organisation, the capability to absorb disruption and maintain a similar function and the capacity to learn and adapt. Resilient communities are defined as groups that can change [1,15]. Communities need change to live and thrive. Social value fails to survive in social and economic surroundings. Thus, capital should be provided to ensure that a community becomes resilient in the face of change.

Allen et al. [68] claimed that communities have various types of capital; thus, communities are productive, stable, and not weak to external shocks. Wilson [69] reported that COM-R has three types of capital that keep communities together. Social, environmental, and economic capitals are needed for communities to thrive. These capitals are needed in understanding resilience at the community level [1,2]. Certain researchers stated that the dimensions of COM-R include social capital, information and communication, networked resource economic development, and community competence [33]. The subsystems of resilience are economic, ecological, governance, civil society, and

physical infrastructure [70]. Both opinions give different emphasis. For the second opinion, ecological and physical infrastructure aspects are equally important as social factors and community competence. Walton et al. [22] argued that community adaptation, collective efficacy, and community action are needed. They argued that the three dimensions are keys to adapting to all future changes. COM-R in real-world applications can be measured by the abovementioned types or dimensions [44]. The COM-R dimensions are as follows in Table 2.

Table 2. COM-R Dimensions.

Author (Year)	Dimension
Norris et al. [33]	A four-sets resources of networked: social capital, economic development, community competence, and information and communication; these resources determine COM-R
Stewart et al. [29]	A function of the critical infrastructure, supply chain, economic and social resilience
Longstaff et al. [71]	The resilience function of five subsystems: environmental, economic, governance, civil society, and physical infrastructure
Cutter et al. [3]	Measured in five domains: economic, infrastructure, social, institutional, and community capital resilience
Magis [44]	Community resources, its development and engagement, strategic and collective action, active agents, and equity and influence
Kulig et al. [72]	Leadership and empowerment, non-adverse geography, and community engagement
Berkes and Ross [30]	Social networks, diverse and innovative economy, community infrastructure, knowledge, leadership, learning, skills, people–place relationship, engaged governance, values and beliefs, positive outlook, and agency and self-organising
Collins et al. [73]	Community capacity to absorb, react/adjust and recover from disturbance while retaining its essential functions
Walton et al. [22]	Three aspects of COM-R: community adaptiveness, collective efficacy, and community action
Pfefferbaum et al. [65]	Caring and bonding, transformative, assets, potential, disaster, information, managing, and interaction
Brown et al. [74]	Action of the community and community adaptiveness

Source: Source: synthesized by the authors.

3.3. CSR in Mining Activities

Mining has been part of human history for many years [75]. Since the 1980s, studies on mining companies' CSR have increased [75,76]. The CSR of Canadian mining companies rose in the 1990s and frequently reported on environmental and social issues. The mining industry's investment in CSR increased owing to changes in the decision-making structure and led to community investment [76,77], reflecting wide debates on CSR and contributing business to development [76]. CSR is a key that gives mining a social license to operate. Thus, CSR eases community activism against mining companies [78].

It should be the responsibility of medium- and large-scale mining companies to incorporate CSR to encourage the sustainable development of local communities in nearby mining operations. Franks [77] reported that in 2012, almost \$1.7 billion was spent on community investment by 15 of the largest mining companies. The community investment estimates have intensified the scale and scope of CSR programs carried out by mining companies. CSR programmes and activities are hoped to drive local community capacity [79,80]. The CSR of the mining industry must reduce risk in internal and external corporation and push the industry into sustainable future development [81].

Development brings about political, social, economic, and environmental changes to enhance the overall quality of life sustainably. Mining companies' concept of development is narrow [82]. Mining activities have been viewed by previous studies as a capitalist process that takes place across time and space [83]. The mining industry has caused great destruction and abandoned areas depleted of valuable economic resources [84], on which a community is highly dependent [32]. Slack [85] stated that a gap exists between CSR's expectations and reality given that CSR is not integrated in companies' operational business models. Moreover, the effectiveness of CSR initiatives in petroleum, gas, and other mineral extracting is increasingly questionable. Multinational mining firms were "rated" as good corporate citizens. However, no clear indication supports how this recognition is given to address issues of sustainability after communities are affected and of whether community development initiatives effectively contribute to sustainable community development [86]. Therefore, CSR practices in the mining industry must be transformed into the development of society with more equity; they must protect natural resources and preserve them to improve life in sustainable development [39]. CSR in mining activities has been increasingly understood by previous studies as a concept of community

development. Most CSR initiatives in the mining sector are aimed at protecting the environment, community development and stimulating stakeholder engagement [87] in order to foster resilience and well-being of the community.

4. Methodology

4.1. Population, Sampling, and Data Collection

The total population of family leaders across 12 surrounding villages at nickel mining operating and processing activities was 6,236. A large size is required for reliable analysis in the SEM model [88]. Roscoe [89] stated that the applicable sample size for research is between 30 and 500 family leaders. Israel [90] proposed that, in addition to the sample size calculation formula, a good sample size is between 200 and 500 respondents if using multiple regression, covariance analysis, and multivariate analysis. Following these guidelines, the sample size was 500 family leaders and selected through stratified simple random sampling technique. Table 3 shows that the population was divided into twelve strata (villages) and stratified sample size of the study. The data was gathered through field surveys, using a tested structured questionnaire [91] with support from trained native enumerators. The family leaders were interviewed face-to-face by researchers with assistance from native enumerators to complete the survey questionnaire. This empirical survey was started in October 2017, at Oko-Oko village, ended in January 2018 at Huko-Huko Village in southeast Sulawesi, Indonesia. Almost 98.0% (490 family leaders) of the survey questionnaires were completed and appropriate for analysis.

Table 3. Population and sample size at the study site.

No	Village	Total Number of Family Leaders	Sample Size
1	Oko-oko	272	22
2	Sopura	304	24
3	Hakatetobu	275	22
4	Tambea	280	22
5	Pomalaa	319	26
6	Kumoro	676	54
7	Dawi-dawi	1,151	92
8	Tonggoni	710	57
9	Totobu	180	14
10	Palembua	943	76
11	Pesouha	391	31
12	Huko-Huko	735	59
	Total	6236	500

Source: elaborated by the authors.

4.2. Measurement of Constructs

We adopted previous researchers' validated and established measurement items using the same variables. A five-point Likert scale was used to measure CSR and COM-R dimensions. We adopted the CSR measurement from the pyramid of Carroll [61,92] and other researchers (Maignan and Ferrell [93]; Perez et al. [94]; Stanaland et al. [95]; Serageldin and Steer [96]). Table 4 shows the CSR dimensions. Walton et al. [22], Magis [44], and Iskandar et al. [49] established the COM-R scale. COM-R has three dimensions as follows. (1) Community actions pertain to respondents considering how their local community responds to CSR practice and nickel mining activities regarding planning, accessing relevant information, having adequate leadership, supporting volunteers, establishing key networks within the community, demonstrating good working relationships between intergroup, preservation, and an overall assessment of how satisfied they are with the manner in which the community responds to change. (2) Community efficacy represents respondents considering how well residents, businesses, governments, and company's resources can work cooperatively to address concerns or take opportunities in relation to CSR practice and nickel mining activities. (3) The level of

community adaptation is when respondents are asked about their perception of the manner in which the community handles CSR practice and nickel mining activities. Table 4 presents the indicators that measure COM-R. We used a 5-point Likert scale, from 1 = strongly disagree to 5 = strongly agree for constructs measurement [97]. The survey questionnaire was tested for internal reliability on 76 family leaders and found that the Cronbach's alpha (CA) (α) for CSR was 0.90, classified as excellent, and COM-R was 0.77 indicating acceptable internal consistency [98–100]. With PLS-SEM analysis (Hair et al. [100]), the composite reliability for CSR constructs between 0.81 and 0.83 and COM-R constructs between 0.81 and 0.82 was considered good [98].

Table 4. Measurement of CSR Dimensions.

Construct	Dimension	Reference
CSR practice	Economic	Carroll [61,92]; Maignan and Ferrell [93]; Crespo and Del Bosque [101]; Pérez et al. [94]; Alvarado-Herrera et al. [102]; Ismail et al. [14]; Stanaland et al. [95]
	Legal and Ethical	
	Philanthropic	
Community Resilience	Community Action	Walton et al. [22,50]; Magis [44]; Bown et al. [74]; McCrea et al. [16]; Iskandar et al. [49]
	Collective Efficacy	
	Community Adaptiveness	

Source: Synthesized by the authors.

4.3. Structural Equation Models

We empirically studied the effect of CSR practice on COM-R in the second part of this study by using SEM. We used the PLS statistical methods for taking advantage of first-hand data [99,103]. As noted in Figure 1, the conceptual framework of CSR was formed by three first-order subconstructs, namely: legal and ethical, economic and philanthropic dimensions, and measured as a second-order reflective construct. The present research framework (Figure 1) was formed using composite indices (i.e., special constructs). PLS is a proper technique; as suggested by Hair et al. [103] and Sarstedt et al. [104], we utilised Smart-PLS professional statistical analysis software.

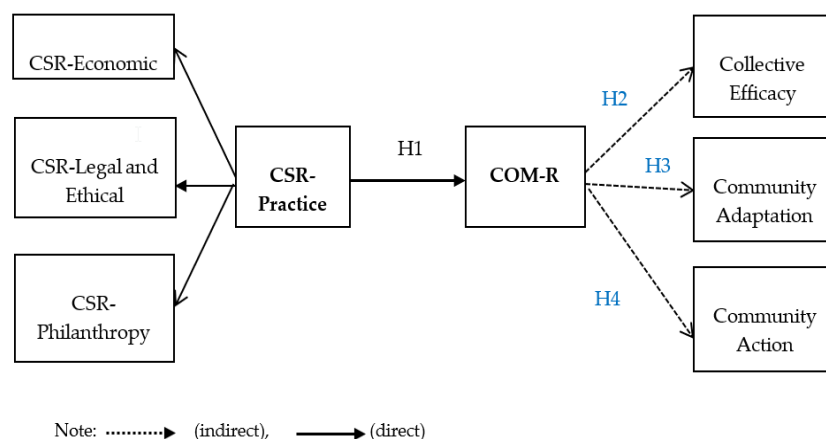


Figure 1. Framework of CSR and COM-R Model. Source: formed by the authors.

5. Results

5.1. Respondent Profile

This section defines the profile of respondent, consisting of gender, age, academic qualification, occupation, and average monthly earnings. This study indicated that respondents were relatively gender-neutral from 57.5% male- and 42.4% female-headed households. The distribution age of less than 25 years was 11.8%, aged 25 to 35 was 31.4%, aged 36 to 45 was 33.5% and over 45 years was 23.3%. Most of them are 36 to 45 years old and are considered productive community members. The distribution of educational qualification is different. The highest is high school graduate (39.8%), followed by

junior high school (24.5%), diploma holders (7.1%) and undergraduates (9.4%). One respondent has a doctorate in philosophy. Respondents who worked at the mining company are only 2.4%. Most of them are self-employed and involved in informal business (41.4%) and farmers/fisherman (15.9%). The rest (22.4%) do not have permanent employment. The majority of the respondents (36.1%) earn IDR 1,000,000 to IDR 2,000,000. Approximately 34.5% have a monthly income less than IDR 1,000,000 per month, and 29.4% earn more than IDR 2,000,000 a month.

5.2. Measurement Model Verification

A method for testing the proposed theoretical framework is illustrated in Figure 1, which displays the structural model for reflective measurement using the PLS-SEM technique. Individual item reliability, convergent and discriminant validities were observed to assess the acceptability of the measurement model [103,105]. CA shows the verification for convergent validity. Each factor loading on the dependent variable must be significant and greater than 0.70 [106], whereas the average variance extracted (AVE) from each variable should be greater than 0.50. We evaluated discriminant validity by comparing the correlation between each pair of constructs and the root of AVE amongst those constructs [107]. We evaluated the reflective measurement model in terms of building credibility, reliability of individual items, legitimacy of discrimination, and convergence validity. We considered the reliability of individual items sufficient when the factor load is greater than 0.50 in each construct. We could use these items for reflective variable instructions (Table 5).

Table 5. Measurement Model.

Variable	Item	Outer Loading	Composite Reliability (CR)	Cronbach's Alpha (CA)	AVE
Corporate Social Responsibility Construct					
Economic	B1-1	0.701	0.806	0.639	0.582
	B1-2	0.758			
	B1-3	0.830			
Legal and Ethical	B2-1	0.705	0.827	0.721	0.546
	B2-2	0.708			
	B2-4	0.789			
	B2-5	0.750			
Philanthropic	B4-1	0.714	0.835	0.737	0.560
	B4-3	0.751			
	B4-5	0.787			
	B3-6	0.739			
Community Resilience Construct					
Community Action	D1-1	0.816	0.812	0.653	0.591
	D1-2	0.743			
	D1-8	0.745			
Community Adaptation	D3-1	N/A	1.000	1.000	1.000
Collective Efficacy	D2-1	0.889	0.891	0.756	0.804
	D2-4	0.904			

Source: Authors.

The measurement for convergent validity and construct reliability signifies measures of internal consistency. Table 5 provide the reliable investigation of reflective constructs. The Cronbach alpha (CA) coefficient and composite reliability were greater than 0.70. AVE was investigated to assess convergent validity. The AVE values must be larger than 0.50. All our constructs exceeded this condition. The variance shared between the construct and others should be less than AVE to assess discriminant validity (Table 6).

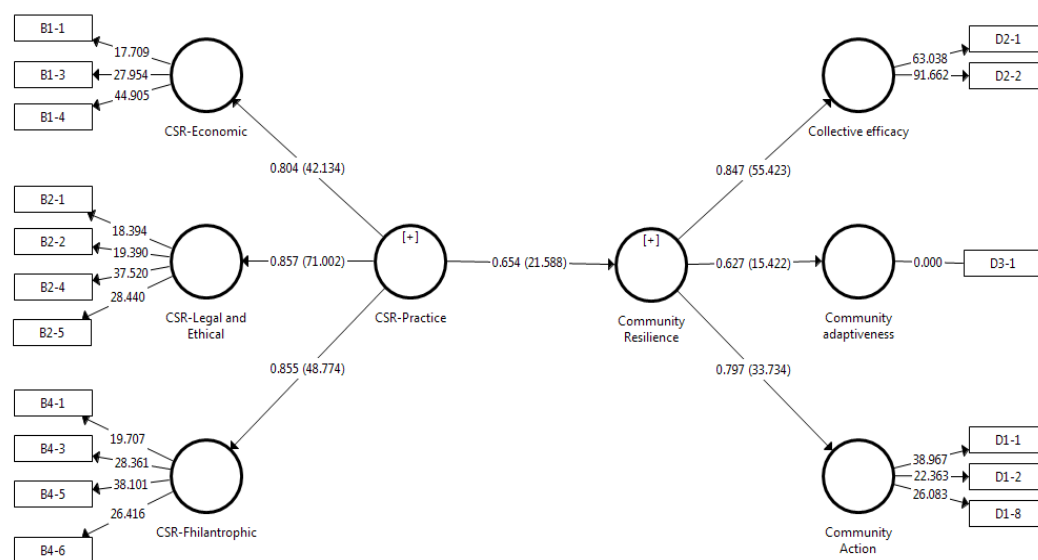
Table 6. Discriminant Validity.

Variable	CSR-Economic	CSR-Philanthropic	CSR-Legal and Ethical	Collective Efficacy	Community Action	Community Adaptation
CSR-Economic	0.763					
CSR-Philanthropic	0.547	0.748				
CSR-Legal and Ethical	0.558	0.570	0.739			
Collective Efficacy	0.362	0.423	0.439	0.896		
Community Action	0.434	0.385	0.509	0.449	0.769	
Community Adaptation	0.312	0.225	0.266	0.479	0.288	1.000

Source: Authors.

5.3. Structural Model Evaluation

We used Smart PLS 3.0 to test the structural modelling and hypotheses [106]. We gauged the predictive power of the structural equation model by calculating the value of R^2 , which is the amount of variance described by the exogenous construct [108,109]. The model fit assesses a significant relationship between the variable and explained variance in the endogenous latent variables [110]. The overall model was fit with $R^2 = 0.428$. $t = 10.842$ was significant at $p < 0.001$. The results of the structural model analysis showed that CSR and COM-R have a direct and positive significant relationship ($\beta = 0.654$, $p < 0.001$) as shown in the Figure 2 below. Thus, hypothesis 1 (H1) was supported. The hypothesis testing showed a significant indirect and positive relationship between CSR with the three COM-R dimensions, consisting of hypothesis 2 (H2), the correlation of CSR practice to collective efficacy ($\beta = 0.554$, $p < 0.001$), hypothesis 3 (H3) CSR practice to community action ($\beta = 0.521$, $p < 0.001$) and hypothesis 4 (H4) CSR practice to community adaptiveness ($\beta = 0.410$, $p < 0.001$). Moreover, Table 7 indicates a positive and significant relationship between the CSR and COM-R dimensions. Therefore, the structural model has a significant predictive power.

**Figure 2.** Structural Model of CSR Practice on COM-R.**Table 7.** Study Hypothesis Testing.

	Path	Coefficient	Standard Deviation	T Statistics	Decision
H1	CSR-Practice -> COM-R	0.654 ***	0.030	21.588	supported
H2	CSR-Practice_ -> Collective efficacy (indirect)	0.554 ***	0.028	19.668	supported
H3	CSR-Practice_ -> Community Action (indirect)	0.521 ***	0.031	16.548	supported
H4	CSR-Practice_ -> Community adaptiveness (indirect)	0.410 ***	0.029	13.912	Supported

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Source: authors.

6. Conclusions and Discussion

CSR is a commitment and obligation of a company to leverage natural resources that can provide quality of life, economic benefits, and well-being for workers, community, and nation [5,111]. Natural resource management, such as nickel mining operating and processing activities in Indonesia, is one of the government's projects and development policies that can bring changes to economic, social, and environmental capital or a public-led dimension [69]. Strengthening of the society, community action [22,33], and community capacity are needed in facing various challenges and changes at all times [112,113], including nickel mining and exploration. The CSR initiated by corporate nickel mining is aimed at sustaining the surrounding community's well-being as well as COM-R. We therefore assessed the impact on COM-R of CSR practices around nickel mining activities.

CSR implementation by nickel mining companies and its effect on COM-R showed a positive and significant impact. The results of this study have been empirically proven from previous findings by Rama et al. [19], that investment through CSR practices provides an individual capacity effect and develops collaboration among community members. Moreover, this finding is also supported by Magis's [44] statement that changes occur through company activities that leverage natural resources and improve society capacity to achieve a resilient society through community action. This means that CSR investments can develop community capacity and cooperation to achieve community endurance, as mentioned in previous evidences [19,52,53]. The empirical findings derived from this study further strengthened Walton et al.'s [22] and McCrea et al.'s [36] results. Similarly, Wasylcia-Leis et al. [114] explained mining in relation to the change of endurance, such as social endurance, economy, and environmental impact. Developing the resilience and well-being of future sustainable community depends on stakeholders' commitment, especially to the company and government. CSR practices, such as economic, ethical, and philanthropy aspects undertaken by the company, have a positive impact on the community capacity. According to Case [17], building community capacity supports the resilience and well-being of the community in the face of environmental changes, difficulties, and risks in life. Soetanto et al. [20] stated that the role of corporate social responsibility is important to protect the built environment. The community began to realise that they could not endure the effects of extreme changes. Therefore, cooperation among the company, community leaders, and community is a step for making better decisions on the enhancement of community resilience, as stated by Magis [44]. The cooperation actions and collectiveness among community members are important aspects. Bandura [115] justified that collective effectiveness and community action are important to establish continuously the well-being of the community. Moreover, CSR practice has a significant indirect and positive impact on community adaptation, which has been reinforced by Rahmawati [52].

In the context of this research, CSR is able to foster community adaptation, which fits the assertion by Collins et al. [73] on the community's ability to absorb, react to, and regain from interference. Buikstra et al. [47] stated that community adaptation can be done by individuals and groups through changes in social networking and support, life experiences, environment, lifestyle, infrastructure, and support services and economy. We discovered a significant positive and indirect relationship between CSR practice and community action. CSR activities lead to good working relationships among groups in different communities and improve the community connection, as reported by Boadi et al. [53]. The community can also find relevant information and solutions when dealing with changes. Shucksmith [116] shared that community action, such as networks relation, is important. Local community partnerships with various partners, including government agencies and private companies, contribute to the social and environmental endurance and enhance the quality of life of the community [37]. Thus, partnerships between company and community through CSR programmes are an effective intervention in nurturing COM-R.

7. Limitations and Future Research

The results of this study are valuable and lead to the advancement of COM-R by strategic development model of CSR practices. This study analyses the role of CSR in improving society in the

face of social, economic, and environmental changes, especially in communities surrounding the mining activity. However, this study requires further analysis for a thorough understanding of CSR practices in relationships with community resistance. The study will provide interesting evidence if the sample can be taken from different perceptions of stakeholders, such as local government and nongovernment organizations and not only the perception of the surrounding communities. Finally, the obtained model of CSR to improve the resilience of the community will be more holistic. The mixture of qualitative and quantitative approaches should be used to find their credible causal interactions best understood. In-depth explorative study could also be interesting, or even necessary, to investigate specifically how CSR awakens COM-R.

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