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An analysis of the community perceptions of well-being

Special reference to nickel mining and processing industry

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The
community
perceptions of
well-being

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Abstract

Purpose – The purpose of this paper is to develop and validate a measurement scale for the local community perceptions of community well-being (CWB) based on the presence of nickel mining activities in Indonesia.

Design/methodology/approach – The measurement uses the conceptual approach of CWB developed in Australia by Walton *et al.* (2014) and the multidimensional CWB model created by Kim and Lee (2014) in Korea, which applies social, economic, environmental, health, political and infrastructural dimensions. The basis of measurement in this study involves 490 communities living in neighborhoods where the nickel industry is located.

Findings – A six-dimensional scale of 29 items is proposed to measure CWB perceptions based on the presence of corporate social responsibility (CSR) by the nickel mining and processing industry.

Research limitations/implications – Despite attempting to sum up the scale by associating it with the distinctive social settings created in this study, this work did not cost much in communicating these scales. The predictive validity of the scales needs to be corroborated by new studies related to CWB construction (measured by CWB scales) with other variables specified in the literature.

Practical implications – This paper presents complete scale development and can provide policies for governments, particularly in Indonesia. Moreover, the CWB scale might be utilized by different entities (e.g. NGOs, open experts and social group media) to determine the view of genuine clients regarding the association's CSR execution.

Originality/value – Although CWB research has been done, the dimension and measurement scale of CWB in the area of recipient of the CSR program from the nickel mining and processing industry has not been studied in Indonesia. In addition, multivariate regression analysis has been frequently used for data analysis; the authors used SEM Smart-PLS as an alternative with paramount predictive accuracy.

Keywords Corporate social responsibility (CSR), Community perceptions, Community well-being, Community well-being scale

Paper type Research paper

1. Introduction

Most countries in the world differ in the way they measure the concept of well-being. Well-being is usually seen as a condition for individuals or groups, and it is often evaluated based on socially determined sets of ideals (Teghe and Rendell, 2005). In some previous studies, the concepts of economic affluence and happiness, life satisfaction, quality of life and social capital have been associated with community well-being (CWB)



(Sung and Phillips, 2016). Beck *et al.* (1998) stated that social quality can be defined as the extent to which citizens can participate in the social and economic life of their communities in conditions that enhance their individual well-being and potential. Therefore, the social quality and CWB of each social group or community is assessed based on certain aspects, such as social, economic, environmental and political (Walton *et al.*, 2014).

Corporate social responsibility (CSR) is the commitment to maximize long-term economic, community and environmental prosperity through business practices, policies and resources (Du *et al.*, 2011). This definition provides an operational perception of CSR business practices, policies and resources related to economic, community and environmental dimensions. In a similar vein, it supports the idea that CSR is a multidimensional, reflective construction of three dimensions of economic development, social equity and environmental protection, according to an elementary dimension (Van Marrewijk, 2003). In addition, the definition of CWB combines the dimensions of social, economic, environment, political, health, and physical and residential well-being (McCrea *et al.*, 2014). Similarly, Cox *et al.* (2010) described CWB as the economic, social, environmental, cultural, and governance goals and priorities that are identified as important by a community, population group or society. CWB has been broadly studied in a range of research fields over many years. The notion of well-being became a debate among researchers, and it has been used interchangeably with quality of life, happiness and life satisfaction. Sung and Phillips (2016) stated that using CWB as an umbrella concept, related terms such as well-being, happiness, quality of life and community development play crucial roles in constructing CWB.

Knowing the dimensions of community welfare is expected to comprise a strategy for stakeholders (NGOs, governments), and related parties will facilitate community empowerment for the welfare of the community. Specifically, quantitative studies on the scale of the CWB have been conducted in the UK, Ireland and Greece (Christakopoulou *et al.*, 2001), the USA (Sirgy *et al.*, 2010), Spain (Forjaz *et al.*, 2011), Australia (Walton *et al.*, 2014) and recently by Kim and Lee (2014) in South Korea. Despite the CWB research done, the dimension and measurement scale of CWB in the area of the recipients of the CSR program from the nickel mining and industry has not been studied in Indonesia.

As a change assessment of mining activities, this study was conducted in Indonesia, and it is suspected that the different characteristic factors that cause changes in the size of the items of CWB dimensions will differ from these studies. This paper expands the scale and indicators of a previous research that play an important role in CWB, especially in measuring the impact of CSR implementation on the perfective community. Besides multivariate regression analysis (Walton *et al.*, 2014) and Rasch model analysis (Forjaz *et al.*, 2011), which was previously used for data analysis, we used SEM Smart-PLS as an alternative with paramount predictive accuracy (Bacon, 1999; Hwang *et al.*, 2010; Wong, 2010).

2. Literature review

2.1 Conceptualization: CWB

To date, well-being is still debated in the academics; there is no single universal CWB definition, but several definitions have been proposed in the literature. Wiseman and Brasher (2008) defined CWB as “the combination of social, economic, environmental, cultural, and political conditions identified by individuals and their communities as essential for them to flourish and fulfill their potential” (p. 358). Similarly, Prilleltensky and Prilleltensky (2006) defined CWB as the combination of the aspects of physical, geographical, cultural, economic, political and psychosocial needs. In contrast, Cox *et al.* (2010) argued that CWB affects economic, social, environmental, cultural and governance goals and priorities identified as important by a community, population group or society, and each incorporates economic, social and physical well-being factors (City of Calgary, 2010).

Subsequently, Cuthill (2004) described CWB as an outcome of the complex interrelationships between “democratic governance, economic development, environmental sustainability, and social equity and justice” (p. 8). He also pointed out that five key capital assets (i.e. social, human, physical, financial and natural capital) contribute to the development of CWB. In this paper, Cuthill (2004) claimed that, “CWB is the ultimate goal of all democratic governance, including that delivered by local government” (p. 9). The focus is more on the human and social capital achieved by citizen participation: from an outcome-based perspective, building human capability and social capital as a foundation for CWB. In a similar manner, Maybery *et al.* (2009) argued that one of the factors that are critical determinants for community resilience and well-being is social connectedness and social ties. From the survey, the authors in small inland rural communities in Australia demonstrate that these social capitals are the most valued in the community as a way to build CWB. A study by Finlay *et al.* (2010) reported that factors such as education, employment and working conditions, health care services, housing, social safety, communications, and special factors that depend on the community context are important for understanding community wellness. These factors contribute to the community health outcomes, especially in a distraught community, and improvement of these factors influences the renovation of a community.

Moreover, Forjaz *et al.* (2011) argued that CWB can be regarded as life satisfaction with local residence by considering attachment to it, social and physical environment, and services and facilities. This definition emphasizes the subjective evaluation of social welfare as a state existing at one point in time. Another definition of CWB is a natural environment, where human needs are accomplished and individuals and groups feel satisfied with their way of life (Armitage *et al.*, 2012).

2.2 Dimensions of CWB

Christakopoulou *et al.* (2001) argued that the welfare of a community can be measured in terms of six themes: residence, social, economic, political, personal and personal behavior. Similarly, Miles *et al.* (2008) conducted a study on the measurement of CWB, citing five policies on creating a CWB framework, namely economic, social, environment, cultural and government policies. Meanwhile, Beckley *et al.* (2002) stated that CWB can be measured based on education and income levels.

Morton and Edwards (2012) also argued that the CWB framework shown in the Community Indicator Queensland is a healthy, safe and inclusive community; a rich and vibrant cultural society; a resilient local economy in terms of competitiveness; a sustainable natural environment; and a democratic and engaged community. While Weaver and Habibov (2012) stated that human capital and social capital affect CWB, in a study of CWB under mining impact, Walton *et al.* (2014) and Kee (2017) measured that the CWB uses six meaningful dimensions: economic, social, environment, political, health, and service and facilities. In this study, we develop the CWB dimensions of Walton *et al.* (2014) and add an education dimension that is considered important (Murphy, 2010; Durand, 2015). And recently, Lee and Kim (2015) posited that CWB is a combination of five domain factors: social, economic, cultural, environmental and political factors. Table I illustrates the measurement of CWB.

3. Research method

In this section, we explain sampling design, item generation and selection of items of CWB dimensions, and then specify CWB indicators and development of new items. Finally, this is followed by preliminary measurement assessment (analysis of item validity) and testing of items (CWB scale), which are tested for content validity, reliability, convergent and discriminant validity, and their applicability to empirical studies based on the structural equation model.

MEQ

Dimension of community well-being	Measurement of indicator	Author
Social, political and culture	Personal safety, community spirit, community cohesion, trust and reciprocity, community participation, informal social and interaction, decision making and citizen voice Social interaction, family and home, and neighborhood	Christakopoulou <i>et al.</i> (2001), Morton and Edwards (2012), McCrea <i>et al.</i> (2014), Kee (2017) Sirgy <i>et al.</i> (2010)
Education	Facilities and human resources development	Murphy (2010), Durand (2015)
Economic or economic empowerment	Income sufficiency Financial support Dynamic, resilient, economic local Income sufficiency, employment and business opportunities Economic growth	Reeder and Rews (1990), Christakopoulou <i>et al.</i> (2001), Durand (2015) Sirgy <i>et al.</i> (2010). Morton and Edwards (2012) McCrea <i>et al.</i> (2014), Kee (2017)
Environment and health	Environmental quality Health services Appearance, climate, parks Environment Environmental quality and environmental sustainability Green spaces, transportation, air quality, energy quality Physical and psychological health	Ramsey and Smit (2002), Forjaz <i>et al.</i> (2011) Christakopoulou <i>et al.</i> (2001), McCrea <i>et al.</i> (2014), Durand (2015), Kee (2017) Sirgy <i>et al.</i> (2010), Morton and Edwards (2012) and McCrea <i>et al.</i> (2014) Sirgy <i>et al.</i> (2010) Forjaz <i>et al.</i> (2011), Salvaris and Wiseman (2004), Wiseman and Brasher (2008), Cuthill (2002) Walton <i>et al.</i> (2014) Kim and Lee (2014)
Services and facilities infrastructure	Built environment services and facilities Neighborhoods, education, leisure transportation and traffic Community services Sustainable built and natural environment Services and facilities, appearance of built environment infrastructure, including roads	Christakopoulou <i>et al.</i> (2001) Sirgy <i>et al.</i> (2010) Forjaz <i>et al.</i> (2011). Morton and Edwards (2012) McCrea <i>et al.</i> (2014), Kee (2017)

Table I.
Dimension of community well-being constructs

3.1 Sampling design and item generation

This study was conducted in South East Sulawesi, Indonesia. The targets of this research were communities living around the nickel mining and processing industries. They had been exposed to nickel mining and processing activities for 45 years. There were 12 villages with a population of 6,573 people. The sampling frame of the study was based on the village who had benefitted from the CSR program (direct or indirect benefitted). The initial sample size of the study was 490, calculated using Krejcie and Morgan (1970) procedures. In this study, a standard scale development process based on the methodological proposal by Turker (2009), a new multi-item scale for measuring CWB, is designed, which includes items previously used in the literature on CWB. A total of 45 items have been obtained from the earliest researchers. In doing so, our aim is to propose an initial CWB scale with significant content validity.

The item previously used in the literature were selected by following the elimination technique of items used by Shimp and Sharma (1987), which considers five criteria to eliminate items, i.e. multiple arguments, connotation of response respondents, ambiguity, implied assumptions and more than one dimension. Based on these criteria, the number of items becomes 37 items compared with the original 45 items. Furthermore, to get the truth about the concepts of the variables measured then the validity of the content by the expert. In addition, interpretation of the item in the source language of the item to the destination language with the “standard” back translation method technique was done. Table II shows the CWB dimension and the items developed.

3.2 Selection of CWB items

In the following stage, we tested for scale reliability to detect poor item performance in measuring the CWB scale. The questionnaire was pretested in a pilot study on the local community, resulting in minor changes to some items. As this was an early stage of scale development, we decided to use a convenience sample of local community from a variety of statuses of societies who had used or received the CSR program. As much as 80 respondents were randomly selected from the local community and were given an instrument. The instrument was administered to 80 individuals, and 76 respondents answered completely. The pilot-test respondents consist of 25.7 percent women and 65.3 percent men with an average age of 37.4 years.

We used measurement of item validity by correlating item values and retaining items with factor loadings greater than 0.30 or less than -0.30 . This method is considered a severe level (Suhr, 2012). Similarly, Comrey and Lee (1992) considered that the correlation coefficient (r) of each item value of 0.30 or more is acceptable for reliability. The reliability was assessed using the SPSS program with the standard of correlation coefficient values 0.35. So, the number of items of CWB deleted was three: E1-5, E1-6 and E6-4. These items have r values less than 0.35 while other items can be accepted, so the number of items selected is 34. Table III shows the reliability values of CWB items of preliminary measure.

4. Results

This section shows the results of the scale and indicators of CWB measurement, especially in measuring the impact of CSR implementation on the perfective community. The empirical results were based on the perception of recipients of the CSR program from nickel mining and industry in Indonesia.

4.1 Profiles of the respondents

The test item stage was conducted with 490 respondents with the same characteristics. Respondents were selected randomly from each area (12 villages). The proportion of the number of samples per village was based on the population. The demographic and socio-economic profiles of the respondents are presented in Table IV. The gender ratio of the respondents was almost balance: 57.5 percent were male and 42.4 percent female. About 43.2 percent were less than 35 years old and 33.5 percent were between 36 and 45 years old. The results showed that 30.4 percent of respondents attended primary and junior secondary school and 39.8 percent secondary school. Nearly half (49.6 percent) were private and self-employed and only 14.3 percent government servants. The vast majority of respondents (87.5 percent) were ordinary people and the gross monthly income distribution was almost equal.

4.2 Reliability and validity of CWB scale

In this section, we test the items using analysis of cross-loading, discriminant validity and reliability. The items that were refined (Table V) were tested with the aim to obtain the

MEQ

Statement	New and adapted item
<i>Social-culture aspect</i>	
E1-1: every member of the community is more willing to help each other	Walton <i>et al.</i> (2014),
E1-2: every member of the community has an increasingly friendly relationship with the community	Christakopoulou <i>et al.</i> (2001)
E1-3: every member of the community works more if there are serious problems	
E1-4: you often visit someone's house	
E1-5: every member of the community is more willing to accept strangers	
E1-6: the symptoms of crime, such as theft, are diminishing in this village	New item
<i>Economic empowerment aspect</i>	
E2-1: the CSR presence of the company led to reduced unemployment in the village	New item
E2-2: enterprises in this village become more advance and independent	
E2-3: the strengthening of the local economy reduces the crime in this village	
E2-4: my income increased to finance life in this village	Walton <i>et al.</i> (2014)
E2-5: my income is more sufficient to finance my lifestyle	New item
E2-6: environmental mitigation activities in this village improved the farmer's productivity	
E2-7: businesses and industries in the village are getting better due to the support of capital and equipment from the company	
E2-8: more and more enterprise premises are established in this village	
<i>Environmental aspect</i>	
E3-1: the quality of the ground water is getting better for this village	Walton <i>et al.</i> (2014)
E3-2: the quality of river water is good for future life this village	New item
E3-3: the quality of the marine ecosystem is preserved for the future	
E3-4: noise due to the operations of the nickel mining and processing is increasingly reduced in this village	
E3-5: dust and gas due to the operations of nickel mining and processing has been increasingly reduced in this village	
E3-6: the life of flora fauna has improved in this village	
<i>Health aspect</i>	
E4-1: the community of this village who suffer from serious illness is decreasing	New item
E4-2: my home environment is getting more comfortable	
E4-3: I feel optimistic about the village community's cleanliness in the future	
E4-4: I feel relaxed and no longer stressful	
E4-5: I succeeded in overcoming my health problems	
E4-6: the health facilities in this village are getting better	
E4-7: the student's health status in this village is getting better	
<i>Education aspect</i>	
E5-1: students in this village are more comfortable learning	New item
E5-2: students in this village showed better performances	
E5-3: the number of dropout students in this village is declining	
E5-4: the more students in this village continue their study	
E5-5: the student attendance in this village is getting better	
<i>Infrastructure aspect</i>	
E6-1: traffic in this village is smoother and more regular	New item
E6-2: access to public transportation in this village is getting easier	
E6-3: the road accident is decreases from time to time	
E6-4: the community in this village who works outside the village is getting easier and faster	
E6-5: the farmers' products are more easily transported out to market	
E6-6: goods are getting easily transported into this village	
E6-7: the presence of community members at mosque is getting better	

Table II.
Indicator and item
development of
community well-being
(37 items)

		The community perceptions of well-being
	Corrected item-total correlation	Cronbach's α of deleted item
<i>Social</i>		
E1-1	0.772	0.661
E1-2	0.682	0.720
E1-3	0.579	0.762
E1-4	0.460	0.814
E1-5	0.227	0.650
E1-6	0.187	0.740
<i>Economic</i>		
E2-1	0.607	0.780
E2-2	0.608	0.780
E2-3	0.616	0.780
E2-4	0.591	0.783
E2-5	0.533	0.791
E2-6	0.488	0.798
E2-7	0.414	0.810
E2-8	0.392	0.810
<i>Environment</i>		
E3-1	0.647	0.772
E3-2	0.617	0.776
E3-3	0.478	0.806
E3-4	0.626	0.774
E3-5	0.616	0.777
E3-6	0.485	0.804
<i>Health</i>		
E4-1	0.615	0.885
E4-2	0.676	0.877
E4-3	0.611	0.886
E4-4	0.705	0.874
E4-5	0.765	0.866
E4-6	0.734	0.870
E4-7	0.738	0.871
<i>Education</i>		
E5-1	0.745	0.817
E5-2	0.706	0.826
E5-3	0.729	0.820
E5-4	0.524	0.875
E5-5	0.728	0.824
<i>Infrastructure</i>		
E6-1	0.451	0.799
E6-2	0.532	0.786
E6-3	0.751	0.744
E6-4	0.305	0.866
E6-5	0.837	0.737
E6-6	0.824	0.734
E6-7	0.441	0.800
Note: Items E1-5, E1-6 and E6-4 were eliminated or deleted		

Table III.
Validity value of
community well-being
item of preliminary
measure

factor analysis that had convergent validity, which was highly standardized. Confirmatory factor analysis was used to detect items that threatened convergent validity because of low standardized loadings or high Lagrange multipliers (Cadogan *et al.*, 1999; Fornell and Larcker, 1981).

MEQ

Description	Total	% of total
<i>Gender</i>		
Male	282	57.55
Female	208	42.45
<i>Respondents' age (years)</i>		
Less than 25	58	11.84
25–35	154	31.43
36–45	164	33.47
More than 45	114	23.27
<i>Level of education</i>		
Secondary school	195	39.80
Vocational school	64	13.06
Diploma holder	35	7.14
Bachelor degree	46	9.39
Doctor of philosophy	1	0.20
Other (primary school, junior high school)	149	30.41
<i>Occupation</i>		
Farmers/Fishermen	38	7.76
Government	70	14.29
Private/Self-employed	243	49.59
Former employee of firm	29	5.92
Unemployed and housewife	110	22.45
<i>Work experiences (years)</i>		
Less than 1	14	2.86
1–5	205	41.84
6–10	103	21.02
11–15	98	20.00
More than 15	70	14.29
<i>Gross monthly income (IDR)</i>		
Less than 500,000	88	17.96
500,000–1,000,000	81	16.53
1,000,000–1,500,000	113	23.06
1,500,000–2,000,000	64	13.06
More than 2,000,000	144	29.39
<i>Social status</i>		
Ordinary people	429	87.55
Community leader	4	0.82
Religious leader	2	0.41
Public figure	38	7.76
Custom leader	2	0.41
Local government	15	3.06

Table IV.
The demographic and
socio-economic
profiles of the
respondents

Table VI illustrates the discriminant validity of the construct. Meanwhile, the square root of the AVE between each pair of factors is higher than the correlation projected between factors; it ratifies its discriminate validity (Hair *et al.*, 2014). The comparison of cross-loadings in Table VI shows that an indicator's loadings are higher than other loadings for its own construct in the same column and same row. Additionally, the results indicate that there is discriminant validity between all the constructs based on the loadings depicted in Table V.

Table VII shows the results of the reliability statistics of each item and the provisional decisions adopted. Each item identified as a candidate for elimination not only grants a better statistical fit to the model, but also has theoretical justification (Bagozzi, 1981).

The
community
perceptions of
well-being

Item	Sos-Cul	Eco-Emp	Envir.	Health	Educ.	Infra.
E1-1	0.774					
E1-2	0.688					
E1-3	0.798					
E1-4	0.598					
E2-1		0.642				
E2-2		0.740				
E2-4		0.750				
E2-5		0.680				
E2-6		0.723				
E2-7		0.723				
E3-1			0.807			
E3-2			0.790			
E3-3			0.824			
E3-4			0.692			
E3-6			0.746			
E4-1				0.643		
E4-2				0.770		
E4-3				0.752		
E4-4				0.775		
E4-5				0.776		
E4-6				0.679		
E4-7				0.660		
E5-1					0.788	
E5-2					0.787	
E5-4					0.525	
E5-5					0.726	
E6-1						0.649
E6-3						0.771
E6-7						0.764

Table V.
Factor loading after
the testing of items

	Econ-Emp	Educ.	Envir.	Health	Infra.	Soc-Cul
Econ-Emp	0.711					
Educ.	0.356	0.715				
Envir.	0.504	0.308	0.773			
Health	0.560	0.459	0.582	0.724		
Infra.	0.469	0.444	0.482	0.577	0.730	
Soc-Cul	0.351	0.376	0.177	0.397	0.357	0.719

Table VI.
Discriminant validity
of CWB constructs

The provisional purging of the scale was detained to determine Cronbach's coefficient α for each factor using the retained items and calculating the corresponding CR and average variance extracted (AVE) (see Table VII).

As observed, even with the elimination of the above-mentioned items, the new values of Cronbach's α and composite reliability support scale reliability. However, the AVE results show some deficiencies in the Social-Culture (Sos-Cul) dimensions, suggesting the need for elimination of items phase to improve the scale. Hair *et al.* (2014) argued that the factor loading or EVA should be higher than 0.50, so that EVA items under 0.50 should be eliminated until EVA value > 50 .

Items must be eliminated to improve EVA value, and the measurement model that grants a better statistical fit to the model is: two items (E1-5 and E1-6) in the Sos-Cul dimension, one item (E6-4) in the infra dimension, one item (E2-8) in the economic empowerment (Eco-Emp)

MEQ

Latent variable	Code	Loading > 0.5	EVA > 0.50	Composite reliability (CR) 0.60-0.90
Soc_Cul	E1-1	0.774	0.505	0.809
	E1-2	0.688		
	E1-3	0.798		
	E1-4	0.598		
Econ_Emp	E2-1	0.642	0.511	0.859
	E2-2	0.740		
	E2-4	0.750		
	E2-5	0.680		
	E2-6	0.723		
	E2-7	0.723		
	E2-8	0.723		
Envir.	E3-1	0.807	0.598	0.881
	E3-2	0.790		
	E3-3	0.824		
	E3-4	0.692		
	E3-6	0.746		
Health	E4-1	0.643	0.525	0.885
	E4-2	0.770		
	E4-3	0.752		
	E4-4	0.775		
	E4-5	0.776		
	E4-6	0.679		
	E4-7	0.660		
Educ.	E5-1	0.788	0.533	0.803
	E5-2	0.787		
	E5-4	0.525		
	E5-5	0.726		
Infra.	E6-1	0.649	0.517	0.773
	E6-3	0.771		
	E6-7	0.764		

Table VII.

Results summary for
reflective
measurements for
CWB scale

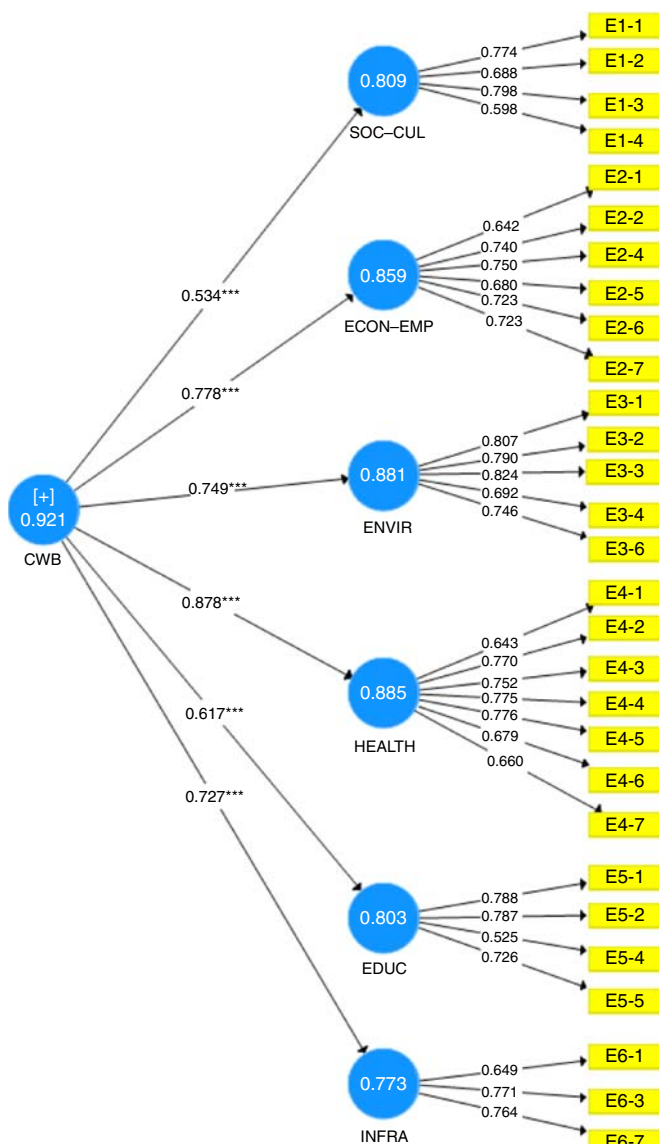
dimension, one item (E3-5) in the environment dimension, one item (E3-5) in the education dimension and four items (E6-2, E6-4, E6-5, E6-6) in the infrastructure. These items from the construct were identified as candidates for elimination because their EVA values were 0.35, 0.43 and 0.315. The results of items that were eliminated are presented in Table VII.

Data analysis was conducted with PLS 3.0. The procedure used of each item in the scale was evaluated, and reliabilities were determined for each of the six factors. We identified important instrumental factors from the literature, including CWB (e.g. Walton *et al.*, 2014; Christakopoulou *et al.*, 2001). Finally, exploratory and confirmatory factory analyses indicated the formation of 29 instruments (with six indicators total) in measuring CWB. All these reflectively measured the first-order facets of both the ID and the CWB showed CWB values for convergent validity and reliability (i.e. AVE above 0.50 and composite reliability above 0.70), as well as discriminant validity following the Fornelle and Larcker criterion (Fornell and Larcker, 1981; Henseler *et al.*, 2009) (Figure 1).

5. Discussions and conclusions

5.1 Theoretical discussion

The main contribution of this research is the development of the CWB scale, a valid measurement scale for community perceptions of CSR based on the six dimensions proposed: Soc-Cul, economics, environment, health, education and infrastructure; and some empirical studies followed to create a new scale and narrow down and test its reliability and



Note: *** $p < 0.001$

The
community
perceptions of
well-being

Figure 1.
CWB scale after
validation and
final purging

validity through a confirmation approach. The latest version of the CWB scale consists of three items for Soc-Cul: five for economic, five for economic and six for environment, five for health, three for education and two for infrastructure dimensions. Table VIII presents the words and contents of each item in the final version of the CWB scale.

Table VII shows that the appearance of the item is good, the measurement of the loading factor and composite validity shows a very good value > 0.70 and an EVA value > 0.50 for each indicator and construct.

MEQ

Statement	Code item
<i>Culture-social aspect (Soc-Cul)</i>	
Every member of the community is more willing to help with each other	E1-1
Every member of the community has an increasingly friendly relationship	E1-2
Every member of the community works more if there are serious problems	E1-3
You often visit someone's house	E1-4
<i>Economic empowerment aspect (Econ-Emp)</i>	
The CSR presence of the company led to reduced unemployment in the village	E2-1
Enterprises in this village become more advance and independent	E2-2
The strengthening of the local economy reduces the crime in this village	E2-4
My income increased to finance life in this village	E2-5
My income is more sufficient to finance my lifestyle	E2-6
Businesses and industries in the village are getting better due to the support of capital and equipment from the company	E2-7
<i>Environmental aspect (Envir)</i>	
The quality of the ground water is getting better for this village	E3-1
The quality of river water is good for this village	E3-2
The quality of the marine ecosystem is preserved for the future	E3-3
Noise due to the operations of the nickel mining and processing is increasingly reduced in this village	E3-4
The life of flora fauna has improved in this village	E3-6
<i>Health aspect (Health)</i>	
The community of this village who suffer from serious illness is getting less	E4-1
My home environment is getting more comfortable	E4-2
I feel optimistic about the village community's cleanliness in the future	E4-3
I feel relaxed and no longer stressful	E4-4
I succeeded in overcoming my health problems	E4-5
The health facilities in this village are getting better	E4-6
The student's health fitness in this village is getting better	E4-7
<i>Education aspect (Educ.)</i>	
Students in this village are more comfortable learning	E5-1
Students in this village showed better performance	E5-2
The more students in this village continue their study	E5-4
The student attendance in this village is getting better	E5-5
<i>Infrastructure aspect (Infra)</i>	
Traffic in this village is more smoothly and regularly	E6-1
The road accident is decreases from time to time	E6-3
The presence of community members at mosque is getting better	E6-7

Table VIII.
The result of
validated community
well-being items

All dimensions of CWB showed a good value, which illustrates that all the theories previously described were still closely related and supported the development of CWB item measurement, as shown by the composite validity value (Table VII).

Sos-Cul dimension, the way that the individual and local communities function socially, is intrinsic to its viability and its capability to solve the problems and exploit the opportunities that confront it. The dimension Sos-Cul contributes to CWB with a large composite validity value ($CR = 0.80$). Similarly with the Eco-Emp dimension, these dimensions are important in existence of local community; further availability of employment opportunities, income, local economic business and resource greatly supports the well-being of the community. This dimension has contributed to CWB with a large composite validity value ($CR = 0.86$). This result supports the dimensions of CWB provided by Walton *et al.* (2014), McCrea *et al.* (2014), Christakopoulou *et al.* (2001) and Sirgy *et al.* (2010). Likewise, the education dimension contributed to CWB with a large

composite validity value ($CR = 0.80$). This result supports the dimensions of CWB provided by Murphy (2010).

The environment dimension recognizes the meaning that the environment holds for people can run deep. The environment is not just a physical set of everyday experiences, but also has psychological significance for individuals. This dimension contributed to CWB with a large composite validity value (0.88). This result supports the dimensions of CWB provided by McCrea *et al.* (2014), Forjaz *et al.* (2011), Salvaris and Wiseman (2004), and Cuthill (2002). Further, health dimension can be considered to include physical and psychological health as well as social and economic well-being (Wan *et al.*, 1982; Ramsey and Smit, 2002; Etches *et al.*, 2006). Therefore, communities also need physical and psychological health to achieve well-being. Sirgy *et al.* (2010), McCrea *et al.* (2014) and Morton and Edwards (2012) pointed out that health service is an important aspect to measure the health dimension. This dimension has contributed to CWB with a large composite validity value ($CR = 0.89$).

The infrastructure dimension is necessary to support the individual and the community in all economic activity and social relation, and in their work. McCrea *et al.* (2014) pointed out that service and facilities include satisfaction with local schools, sports and leisure facilities, medical and health services, and community support services, as well as overall satisfaction with services and facilities in their local community. They have shown that one of the indicators of service and facilities is the appearance of the built environmental infrastructure, including roads. Meanwhile, Sirgy *et al.* (2010) cited neighborhoods' education and leisure transportation and traffic. Likewise, Morton and Edwards (2012) equally emphasized a sustainable built and natural environment. These dimensions contributed to CWB with a composite validity value ($CR = 0.77$). In summary, all dimensions discussed above supported the CWB construct; so dimensional CWB has a significant explanatory ability for community perceptions of CWB.

5.2 Managerial implications

The principle administration ramifications of this investigation were to give professionals solid and genuine instruments to quantify their view of group prosperity, specifically concerning the social, economic, environmental, health, social and infrastructure dimensions. The CWB scale can be a capable instrument to screen the adequacy of CSR programs when all is said and done. Moreover, the CWB scale might be utilized by different entities (e.g. NGOs, open experts and social group media) to determine the view of genuine clients regarding an association's CSR execution.

5.3 Limitations and future research

Despite attempting to sum up the scale by concerning it with the distinctive social settings created in this study, this work did not cost much in communicating these scales. The predictive validity of the scales needs to be corroborated by new studies related to CWB construction (measured by CWB scales) with other variables specified in the literature. In our study on the use of CWB construct and indicators, we constructed new and adopted or adapted such a dimension of CWB (Walton *et al.*, 2014) and collaborated with other researcher such as Ramsey and Smit (2002), McCrea *et al.* (2014), Durand (2015), Kim and Lee (2014), Sirgy *et al.* (2010), Christakopoulou *et al.* (2001), Forjaz *et al.* (2011) and currently, Kee (2017). While most of the items developed from several dimensions or indicators were designed by researcher as new items, other items were adopted mainly in Sos-Cul dimension. Scale measurements of variables aimed at different aspects of indicators and scales were previously conducted in some countries, such as Australia (Walton *et al.*, 2014) and America (Sirgy *et al.* (2010). Specifically in this paper, the items of CWB scale are centered around territories that have been the recipients of CSR programs from nickel mining and processing companies over a long term (over 30 years). This scale measures the community view of CWB based on the effects of CSR by the nickel industry practice.

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