International Journal of Social Science Research and Review

http://ijssrr.com
editor@ijssrr.com
Volume 9, Issue 8
August, 2026
Pages: 136-154

Corporate Social Responsibility and Human Capital Development in Mining Host Communities

Nyanda Josiah Shuli
The Open University of Tanzania, The United Republic of Tanzania
nyandashuli@gmail.com

France Aloyce Shayo
Eastern Africa Statistical Training Centre, The United Republic of Tanzania
France.shayo@gmail.com

Chacha Alfred Matoka
The Open University of Tanzania, The United Republic of Tanzania
matokaca@gmail.com

http://dx.doi.org/10.47814/ijssrr.v9i8.3549

Abstract

This study examined the influence of corporate social responsibility (CSR) practices on community-level human capital development in mining host communities in Tanzania. While existing human capital research in the mining sector has largely focused on workforce preparedness and organisational productivity within mining firms, comparatively limited attention has been directed toward the role of CSR in supporting broader community capability development. Informed by Resource-Based Theory and CSR-development literature, the study conceptualised CSR as an external investment mechanism for community-level human capital formation. A quantitative cross-sectional research design was adopted using primary survey data collected from mining host communities in the Geita, Mara, and Kagera regions. Data were obtained through structured household interviews involving 332 valid respondents selected through stratified random sampling. CSR practices were modelled across four dimensions - economic, legal, ethical, and philanthropic - and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings indicate that CSR practices do not contribute uniformly to community-level human capital development. Legal, ethical, and philanthropic CSR practices demonstrated positive and statistically significant effects, whereas economic CSR practices showed a positive but statistically insignificant effect. Philanthropic CSR practices emerged as the strongest predictor, highlighting the important contribution of voluntary investments in education, vocational training, health services, youth empowerment, and community development programmes. The findings further suggest that governance-oriented, ethical, and community-focused CSR interventions contribute more effectively to strengthening local capabilities than purely economic-oriented CSR initiatives. The study contributes to CSR and extractive-industry literature by extending understanding of CSR beyond philanthropy and corporate legitimacy toward its developmental role in supporting community-level human capital formation. The findings also provide practical insights for mining companies, policymakers, and development stakeholders seeking to design capability-oriented CSR strategies that strengthen community resilience and promote sustainable development in mining host communities.

Keywords: *Corporate Social Responsibility; Extractive Industries; Human Capital; PLS-SEM; Resource-Based Theory*

1.0 Introduction

Strategic corporate management and governance perspectives increasingly recognise human capital as a critical strategic asset for organisational sustainability, competitiveness, and long-term value creation (Greer et al., 2017; Teece et al., 1997; Utami & Alamanos, 2023). In contemporary business environments characterised by rapid technological advancement, digitalisation, and evolving stakeholder expectations, organisations are under growing pressure to develop adaptive, skilled, and knowledge-oriented human resources capable of responding to changing economic and operational realities (Khayrulina et al., 2020). Consequently, human capital development (HCD) has become an increasingly important component of corporate sustainability and governance agendas, particularly as corporations face growing expectations to contribute not only to organisational performance, but also to broader societal development and long-term socio-economic resilience (Johnston & Kemp, 2019; Kotsantonis & Serafeim, 2020; Kemp & Owen, 2019).

These developments increasingly intersect with the evolving role of Corporate Social Responsibility (CSR), which is now widely regarded as an important mechanism for promoting and complementing socio-economic development, particularly in contexts where state-led development efforts face structural and institutional limitations (Idowu, 2021; Msosa & Mugova, 2023). In the extractive sector, CSR is increasingly conceptualised through multidimensional perspectives encompassing economic, legal, ethical, and philanthropic responsibilities, reflecting the diverse ways through which mining companies influence host-community development and broader societal wellbeing (Rela et al., 2020a, 2020b). Originating from the seminal works of Carroll (1979, 1991), these four dimensions represent the full spectrum of corporate responsibilities. According to Carroll (2018), Shabana and Carroll (2010), and Wagner-Tsukamoto (2019), the four-dimensional framework has remained one of the most dominant approaches in CSR scholarship and practice since the 1970s. Within this broader perspective, mining companies are increasingly expected not only to strengthen internal workforce capabilities, but also to contribute to wider developmental outcomes through investments that enhance human capabilities, knowledge development, and long-term community resilience.

Within the extractive sector, particularly mining, the importance of human capital development is especially significant. Mining operations are highly technical, capital-intensive, and increasingly dependent on specialised knowledge, technical competencies, and adaptive capabilities. Empirical evidence indicates that structured training, technical skills, and supportive work environments significantly improve productivity and operational efficiency in mining contexts (Anitra et al., 2025). Nevertheless, mining industries in many developing countries continue to face persistent challenges, including shortages of skilled labour, weak technological preparedness, limited investments in workforce development, and growing mismatches between industry demands and available skills (Mpofu & Nemashakwe, 2023).

Nevertheless, comparatively limited attention has been directed toward the broader developmental dimensions of human capital within mining host communities, particularly regarding how CSR-related interventions contribute to education, skills acquisition, knowledge development, and long-term community resilience. Although a notable contribution is evident in the work of Bonilla Mejía (2020), the study primarily focused on artisanal and illegal mining rather than large-scale corporate mining, which has historically dominated the minerals sector and continues to shape community development dynamics in many resource-dependent economies (Oatley, 2019).

Building on these perspectives, this study conceptualises CSR as an external investment mechanism for community-level human capital development in mining host communities (Ansu-Mensah et al., 2023). This perspective emphasises the potential of CSR to contribute to education, skills acquisition, knowledge development, and broader community capabilities that underpin sustainable socio-economic advancement. Accordingly, this study investigates the influence of economic, legal, ethical, and philanthropic CSR practices toward the developmental capacities of mining host communities in Tanzania.

This study contributes to the literature in three important ways. First, it extends CSR discourse by explicitly linking corporate social investments to community-level human capital development within extractive-industry contexts. Second, it broadens existing human capital debates in mining by shifting attention beyond organisational workforce preparedness toward the developmental capacities of mining host communities. Third, the study provides empirical evidence that may inform policy and practice by guiding mining companies, governments, and other stakeholders in designing CSR interventions that support sustainable human capital development in resource-dependent communities.

2.0 Literature Review

2.1 Corporate Social Responsibility and Human Capital Development in Mining Host Communities

Human capital has increasingly been recognised as a critical factor for sustainable development and competitiveness in the mining sector. Beyond its traditional role as a productive asset, human capital encompasses education, skills, knowledge, creativity, health conditions, experience, competence, and broader capabilities that enable individuals and communities to participate effectively in socio-economic activities and generate value through productive and innovative engagement (Khayrulina et al., 2020). These capabilities are particularly important in mining environments characterised by technological complexity, evolving labour demands, and increasing dependence on adaptive and knowledge-based competencies associated with the Fourth Industrial Revolution (Balog & Demidova, 2021; Mpofu & Nemashakwe, 2023).

Emerging evidence further suggests that the direct benefits accruing to host communities from large-scale extractive operations may be diminishing as technological advancement reduces labour intensity and reshapes traditional employment opportunities in the sector (Muhirwa et al., 2023). This trend highlights the growing importance of broader human capital development that extends beyond direct mine employment to encompass education, skills formation, knowledge enhancement, health, and other capability-enhancing processes that strengthen community resilience and long-term socio-economic sustainability. Consequently, sustained investment in human capital has become increasingly important not only for organisational performance but also for enabling mining host communities to adapt to changing economic conditions and participate more effectively in development opportunities associated with the extractive sector.

Existing human capital research in the mining sector has predominantly focused on internal organisational capabilities, including workforce preparedness, technical competencies, employee productivity, labour market dynamics, and social performance management. Johnston and Kemp (2019) and Kemp and Owen (2019), for example, highlight limitations in CSR-related expertise and social performance capabilities within mining companies, while Mpofu and Nemashakwe (2023) identify persistent skills mismatches, weak institutional coordination, and inadequate training systems in Zimbabwe's mining sector. Similarly, Kiowi (2022) reports limited investment in skills development and training in Tanzania's mining industry, constraining workforce mobility and broader socio-economic advancement. While these studies provide important insights into firm-level human capital challenges, comparatively limited attention has been directed toward the broader developmental dimensions of human capital within mining host communities, particularly from the perspectives and lived experiences of community members themselves.

Borrowing from the broader conceptualisation of human capital advanced by Khayrulina et al. (2020), community-level human capital in the minerals sector encompasses education, knowledge, training, skills, experience, competence in CSR-related matters, group commitment and cohesion, and the quality of exchange relationships between mining firms and host communities, as informed by Branco and Rodrigues (2006), Kemp and Owen (2019), and Kotsantonis and Serafeim (2020). These dimensions reflect broader capability-enhancing processes that strengthen communities' ability to participate meaningfully in socio-economic and mining-related development opportunities, improve livelihoods, and utilise economic opportunities for long-term socio-economic advancement.

In many developing-country mining contexts, host communities continue to face educational disadvantages, unemployment, limited access to technical skills, and restricted opportunities for capability enhancement. Although a few studies, such as Bonilla Mejía (2020), have begun to examine the community-level implications of mining activities for human capital development, this area remains relatively underexplored within extractive-industry research.

Within this context, CSR has emerged as a potentially important mechanism for supporting community-level human capital development. Contemporary CSR initiatives in the extractive sector increasingly include investments in education, vocational training, scholarships, entrepreneurship development, and community empowerment programmes aimed at strengthening the developmental capacities of host communities (Ansu-Mensah et al., 2023). Empirical evidence suggests that such investments positively contribute to skills development and capability enhancement. Mining companies increasingly invest in education, technical training, and workforce preparation programmes that enhance employability and participation in mining-related economic activities (Gillo et al., 2023). Similarly, Anitra et al. (2025) demonstrate that structured training and supportive environments significantly improve technical capabilities and workforce effectiveness in mining settings.

Despite these developments, limited empirical attention has been directed toward understanding CSR specifically as an external investment mechanism for community-level human capital development in mining host communities. Existing CSR literature has largely focused on stakeholder relations, environmental management, corporate legitimacy, and community wellbeing, with comparatively less emphasis on how CSR contributes to education, skills acquisition, and knowledge development among local populations (Johnston & Kemp, 2019; Rela et al., 2020b). This gap is particularly important in developing countries where host communities often face structural constraints that limit their ability to participate meaningfully in mining-led development processes.

2.2 Hypothesis Development

Drawing from the Resource-Based Theory (RBT), organisations achieve sustained advantage through strategic investment in valuable and capability-enhancing resources, including human capital (Barney, 1991). Although RBT has traditionally been applied to explain organisational competitiveness, its growing application across broader business and development contexts highlights the importance of competencies, knowledge-based capabilities, and adaptive capacities in promoting long-term sustainability and resilience (Utami & Alamanos, 2023). Within mining environments, CSR initiatives that support learning opportunities, skills formation, capability enhancement, and community empowerment may therefore contribute to strengthening the human capital base of host communities.

CSR practices in the extractive sector are often implemented through multiple dimensions, including economic, legal, ethical, and philanthropic responsibilities (Rela et al., 2020a, 2020b). Economic CSR practices may contribute to human capital development through local employment creation, livelihood support, entrepreneurship promotion, and investments in income-generating opportunities that strengthen community competencies and productive capacities. Similarly, legal CSR practices that emphasise compliance with labour standards, community rights, and regulatory obligations may support fair access to capability-enhancing opportunities, skills development initiatives, and socially responsible development interventions within host communities (Ansu-Mensah et al., 2023; Carroll, 1991; Gillo et al., 2023; Shubita et al., 2023; Wagner-Tsukamoto, 2019).

Ethical CSR practices may further strengthen human capital by promoting fair treatment, transparency, stakeholder trust, and inclusive engagement that support community participation in development processes. In addition, philanthropic CSR practices frequently involve direct investments in scholarships, schools, vocational training programmes, health services, and community empowerment

initiatives aimed at strengthening local capabilities, adaptive capacities, and broader developmental opportunities among host populations (Ansu-Mensah et al., 2023; Carroll, 1991; Gillo et al., 2023; Shubita et al., 2023; Wagner-Tsukamoto, 2019).

Empirical evidence suggests that such CSR-related interventions have the potential to strengthen community competencies, livelihood capabilities, and communities' ability to utilise economic opportunities associated with mining activities. In this regard, CSR may function not only as a corporate legitimacy mechanism, but also as an external investment mechanism for community-level human capital formation. Accordingly, the present study argues that CSR practices across economic, legal, ethical, and philanthropic dimensions may positively influence human capital development within mining host communities through enhanced access to capability-enhancing opportunities, skills formation processes, and knowledge-supportive resources.

Based on the foregoing discussion, the following hypotheses are proposed:

H_1: Economic CSR practices have a positive and significant effect on community-level human capital development in mining host communities.
H_2: Legal CSR practices have a positive and significant effect on community-level human capital development in mining host communities.
H_3: Ethical CSR practices have a positive and significant effect on community-level human capital development in mining host communities.
H_4: Philanthropic CSR practices have a positive and significant effect on community-level human capital development in mining host communities.

2.3 Conceptual Framework

This study was guided by the conceptual framework presented in Figure 1. The framework specifies four independent variables modelled as exogenous latent constructs - economic CSR practices, legal CSR practices, ethical CSR practices, and philanthropic CSR practices - and one dependent variable modelled as an endogenous latent construct, namely community-level human capital development in mining host communities. All constructs were treated as latent variables, understood as theoretical concepts that are not directly observable but inferred through multiple measurement indicators (Hair et al., 2019a).

Informed by Resource-Based Theory (RBT) and broader CSR-development literature, the framework conceptualises CSR as an external investment mechanism capable of supporting community-level capability enhancement and human capital formation within mining host communities. The framework proposes that economic, legal, ethical, and philanthropic CSR practices positively influence community-level human capital development by enhancing access to education, skills development opportunities, knowledge formation, adaptive capacities, and broader developmental competencies. Accordingly, direct positive relationships are proposed between each dimension of CSR practice and community-level human capital development, as reflected in hypotheses H_1–H_4.

Economic CSR practices capture mining companies' contributions to local economic development through employment creation, infrastructure support, local procurement, fiscal contributions, and support for income-generating activities within host communities. The construct further reflects the role of community engagement in shaping economically oriented CSR priorities and interventions (Albertin et al., 2021b; Carroll, 1991; Dmytriyev et al., 2021; Gillo et al., 2023; Hilson et al., 2019; Isacowitz et al., 2022; Mbilima, 2021; Rela et al., 2020b; Shubita et al., 2023; Wagner-Tsukamoto, 2019).

Legal CSR practices reflect compliance with statutory, regulatory, and contractual obligations relating to compensation, environmental standards, local content requirements, skills development obligations, and broader governance responsibilities affecting host communities. The construct also captures adherence to institutional and regulatory expectations governing mining operations and community relations

(Albertin et al., 2021a; Carroll, 1991; Dmytriyev et al., 2021; Ivic et al., 2021; Maliganya et al., 2023; Maliganya & Bengesi, 2023; Mining Act, 2019; Reyneke, 2021; Wagner-Tsukamoto, 2019).

Ethical CSR practices represent responsible business conduct beyond formal compliance, including fairness in business dealings, support for ethical local suppliers, proactive environmental stewardship, mitigation of socio-economic risks, and socially responsible engagement with host communities. The construct reflects broader principles of ethical responsibility, inclusive development, and corporate accountability within mining environments (Carroll, 1991; Dmytriyev et al., 2021; Kemp & Owen, 2022; Maliganya et al., 2023; Owen et al., 2021; Tsaurai, 2021; Wagner-Tsukamoto, 2019).

Philanthropic CSR practices encompass complimentary initiatives intended to support community welfare and development through investments in education, health services, entrepreneurship support, skills development programmes, local infrastructure, and broader social support initiatives targeting host communities. The construct also captures company-sponsored donations, sponsorships, and community-oriented development interventions beyond mandatory obligations (Ansu-Mensah et al., 2021; Carroll, 1991; Dmytriyev et al., 2021; Gillo et al., 2023; Isacowitz et al., 2022; Mbilima, 2021; Wagner-Tsukamoto, 2019).

The dependent construct, community-level human capital development, was conceptualised as a capability-oriented construct reflecting education, training opportunities, knowledge enhancement, adaptive capacities, and communities' ability to utilise socio-economic opportunities associated with mining activities. The construct further captures broader developmental competencies, including leadership, agency, social cohesion, and relational capacities that enable individuals and communities to improve livelihoods, adapt to changing socio-economic conditions, and participate meaningfully in development processes. Its operationalisation was informed by human capital, CSR governance, and resource-based literature emphasising the strategic importance of capability development, knowledge formation, and community participation in sustainable development processes (Ali et al., 2018; Barney, 2018; Branco & Rodrigues, 2006; Hitt et al., 2001; Johnston & Kemp, 2019; Khayrulina et al., 2020; Kiowi, 2022; Li et al., 2015; Mpofu & Nemashakwe, 2023; Serafeim, 2020; Utami & Alamanos, 2023).

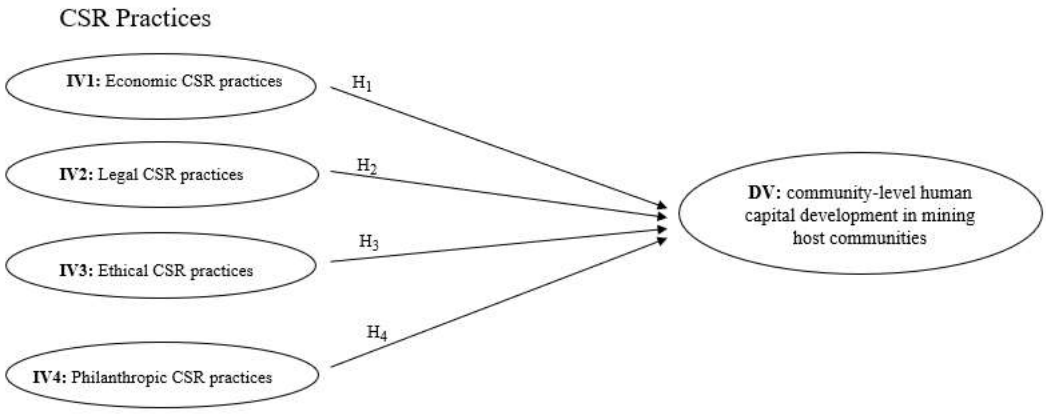

Figure 1. An Illustration of the Conceptual Framework.

Source: Authors.

3.0 Methods and Data

3.1 Study Design

This study adopted a quantitative cross-sectional research design based on primary survey data collected from mining host communities in Tanzania. The cross-sectional approach enabled the empirical examination of the relationship between corporate social responsibility (CSR) practices and community-level human capital development at a specific point in time. Such designs are widely applied in CSR and development research to assess stakeholder perceptions and socio-economic outcomes associated with corporate activities (Bryman, 2012; Saunders et al., 2019; Schindler, 2019).

Primary data were collected using a structured questionnaire administered through face-to-face household interviews. The instrument was designed to capture perceptions of CSR practices across economic, legal, ethical, and philanthropic dimensions, as well as indicators relating to human capital development within host communities.

3.2 Research Setting and Sample Selection

The study was conducted in three major gold-mining regions in Tanzania - Geita, Mara, and Kagera - which host some of the country's largest mining operations and provide an appropriate context for examining community-level development outcomes associated with extractive activities.

A multi-stage sampling strategy was employed. In the first stage, three large-scale gold mining operations - Geita Gold Mining Limited, North Mara Gold Mine Limited, and Stamigold Company Limited - were purposively selected based on their scale of operation, longevity, and variation in ownership structures. In the second stage, wards located in close proximity to these mining operations were identified in consultation with local administrative authorities, as these constitute primary host communities directly affected by mining activities.

In the third stage, two villages or streets within each selected ward were purposively selected based on proximity to mining operations and administrative accessibility, consistent with community-based survey practices (Bryman, 2012; Saunders et al., 2019). In the final stage, households were selected using stratified random sampling. Sampling frames were developed with the assistance of local leaders, and households were randomly selected using computer-generated procedures to enhance representativeness and minimise selection bias. In total, 1,185 households constituted the sampling frame across the study sites.

3.3 Data Collection Procedures

Data were collected through face-to-face structured interviews administered by trained research assistants to household representatives within the selected communities. A total of 393 questionnaires were distributed. Following data screening and cleaning procedures, 332 valid responses were retained for analysis. The final sample size satisfies recommended thresholds for multivariate analysis and structural equation modelling (Hair et al., 2022).

3.4 Variable Measurement and Operationalisation

All constructs in the study were operationalised as latent variables measured using multiple indicator items adapted from established CSR, human capital, governance, and development literature. The indicators were contextualised to reflect the institutional and socio-economic realities of Tanzania's mining sector while maintaining consistency with established theoretical constructs. Detailed measurement items and sources are presented in Appendix I.

The study model comprised four exogenous constructs representing CSR practices and one endogenous construct representing community-level human capital development. The operationalisation of the CSR constructs was informed by Carroll's multidimensional CSR framework (Carroll, 1991, 2021) and related applications within extractive-industry research (Rela et al., 2020a, 2020b; Wagner-Tsukamoto, 2016, 2019). The operationalisation of community-level human capital development was informed by human capital, CSR governance, and capability-development literature (Branco & Rodrigues, 2006; Khayrulina et al., 2020; Kemp & Owen, 2019; Kiowi, 2022; Kotsantonis & Serafeim, 2020).

All indicator items were measured using a five-point Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree. The use of Likert-type scales is widely supported in CSR and management research (Latif & Sajjad, 2018; Saunders et al., 2019), and five-category scales are considered appropriate for multivariate analysis when sample sizes are adequate. Although Likert-scale responses are technically ordinal, they were treated as continuous for structural equation modelling purposes, consistent with established methodological guidance for SEM applications involving five-category response scales (Hair et al., 2010; Rhemtulla et al., 2012).

Demographic variables such as sex, education level, and host community were measured using nominal and ordinal scales and were included primarily for descriptive and contextual interpretation of the sample characteristics rather than for structural model estimation.

3.5 Data Analysis

The data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM), a multivariate analytical technique suitable for examining relationships among latent constructs measured through multiple indicators (Hair et al., 2022; Sarstedt et al., 2022). PLS-SEM was considered appropriate for this study because of its prediction-oriented nature, suitability for complex models, and flexibility in handling context-specific measurement models.

The analysis followed a two-step procedure. First, the measurement model was assessed to establish reliability and validity of the constructs. This involved evaluating indicator reliability, internal consistency reliability using Cronbach's alpha and composite reliability, convergent validity through average variance extracted (AVE), and discriminant validity using the heterotrait-monotrait ratio (HTMT), the Fornell-Larcker criterion, and cross-loadings.

Second, the structural model was evaluated to test the hypothesised relationships between CSR practices and human capital development. This stage involved examining collinearity diagnostics, estimating path coefficients, and assessing their statistical significance using bootstrapping procedures with 5,000 resamples. The model's explanatory and predictive capabilities were further assessed using the coefficient of determination (R^2), effect sizes (f^2), and predictive relevance (Q^2) (Hair et al., 2022; Sarstedt et al., 2022). In addition, out-of-sample predictive performance was evaluated using the PLSpredict procedure with cross-validation settings, consistent with recommended practices for prediction-oriented SEM analysis (Hair et al., 2022).

4.0 Results

4.1 Respondents' Characteristics

Table 1 presents the demographic characteristics of the respondents. Male respondents constituted 57.2% (190) of the sample, while female respondents accounted for 42.8% (142). Regarding education, most respondents had attained either secondary education (45.2%; 150) or primary education (40.4%; 134), suggesting generally moderate levels of formal education within the surveyed communities.

In terms of years of experience or duration within the host communities, the largest proportion of respondents (37.7%; 125) reported one year or less, followed by those with one to three years (22.3%; 74). Respondents with ten years or more accounted for 19.3% (64), indicating that the study captured views from both relatively recent and long-term community members.

With respect to host community representation, Biharamulo Mine (BM) contributed the largest share of respondents at 37.3% (124), followed by North Mara Gold Mine (NMGM) at 34.6% (115) and Geita Gold Mine (GGM) at 28.0% (93). The distribution indicates reasonable representation across the three selected mining host communities.

Table 1: Demographic Characteristics of Respondents

	Frequency	**Percentage**
Sex category of respondents		
Male	190	57.2%
Female	142	42.8%
Total	332	100.0%
Education		
Primary	134	40.4%
Secondary	150	45.2%
Certificate/diploma	29	8.7%
Bachelor's degree	15	4.5%
Master's degree or above	4	1.2%
Total	332	100.0%
Years of experience		
One year or less	125	37.7%
From 1 to 3 years	74	22.3%
From 4 to 6 years	47	14.2%
From 7 to 9 years	22	6.6%
10 years or more	64	19.3%
Total	332	100.0%
Host community represented		
GGM	93	28.0%
NMGM	115	34.6%
BM	124	37.3%
Total	332	100.0%

Source: Field Data Analysis by Authors (2026)

4.2 Measurement Model Assessment

The measurement model was assessed to establish the reliability and validity of the latent constructs included in the study. Consistent with recommended PLS-SEM procedures, the assessment focused on indicator reliability, internal consistency reliability, convergent validity, and discriminant validity (Hair et al., 2022; Sarstedt et al., 2022).

4.2.1 Indicator Reliability

Indicator reliability was assessed using outer loadings. Recommended thresholds suggest that indicator loadings should generally exceed 0.70, although loadings above 0.60 may be retained in exploratory or context-specific research where indicators demonstrate theoretical relevance and acceptable construct reliability (Hair et al., 2017; Hair et al., 2022).

The results indicate that most indicators achieved loadings above the recommended threshold of 0.70, demonstrating satisfactory indicator reliability. The outer loadings ranged from 0.609 to 0.867 across the study constructs. A few indicators - including EP1, EP4, EP6, EP8, HCD5, HCD9, PP5, PP7, and TP7 - recorded loadings below 0.70 but above 0.60 and were retained due to their theoretical relevance and acceptable contribution to construct reliability and validity. Overall, the findings suggest that the indicators adequately represented their respective latent constructs.

4.2.2 Internal Consistency Reliability and Convergent Validity

Internal consistency reliability and convergent validity were assessed using Cronbach's alpha, composite reliability (CR), and Average Variance Extracted (AVE). Cronbach's alpha and composite reliability values above 0.70 indicate satisfactory internal consistency reliability, while AVE values of 0.50 or higher demonstrate adequate convergent validity by confirming that constructs explain more than half of the variance of their respective indicators (Hair et al., 2017; Hair et al., 2022). The results are presented in Table 2.

As shown in Table 2, all constructs achieved Cronbach's alpha values above the recommended threshold, ranging from 0.769 to 0.888, while composite reliability values ranged from 0.845 to 0.911. In addition, all constructs recorded AVE values at or above the acceptable threshold of 0.50, ranging from 0.500 to 0.571. These findings confirm that the constructs exhibited satisfactory internal consistency reliability and adequate convergent validity.

Table 2: Construct reliability and convergent validity

	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
EP	0.86	0.89	0.504
HCD	0.769	0.845	0.524
LP	0.888	0.911	0.561
PP	0.875	0.9	0.5
TP	0.847	0.888	0.571

Source: Field Data Analysis by Authors (2026)

4.2.3 Discriminant Validity

Discriminant validity was assessed using the Fornell–Larcker criterion, cross-loadings, and the heterotrait–monotrait ratio (HTMT). The Fornell - Larcker criterion requires the square root of the Average Variance Extracted (AVE) for each construct to exceed its correlations with other constructs, while HTMT values should generally remain below 0.85 or 0.90 depending on the level of construct distinctiveness required (Hair et al., 2017; Hair et al., 2022). Results are presented in Table 3.

The results from the Fornell–Larcker criterion indicate that the square root of AVE for each construct exceeded its corresponding inter-construct correlations. For example, Human Capital Development (HCD) recorded a square root AVE value of 0.724, which exceeded its correlations with Economic CSR practices (0.539), Legal CSR practices (0.607), Philanthropic CSR practices (0.649), and Ethical CSR practices (0.616). Similar patterns were observed across all constructs, supporting adequate discriminant validity.

The HTMT results further confirmed construct distinctiveness, with most values remaining below the recommended threshold of 0.85. Although the HTMT value between Philanthropic CSR practices (PP) and Ethical CSR practices (TP) reached 0.887, it remained below the more liberal threshold of 0.90 suggested in related SEM literature, indicating acceptable discriminant validity overall.

In addition, examination of cross-loadings showed that indicators loaded more strongly on their respective constructs than on other constructs. For instance, HCD indicators demonstrated higher loadings on the Human Capital Development construct relative to other latent variables, while CSR indicators similarly

exhibited stronger associations with their intended constructs. Collectively, these findings suggest that the constructs were empirically distinct and exhibited satisfactory discriminant validity.

Table 3: HTMT Ratio Results showing Discriminant Validity

	EP	HR	LP	PP	TP
EP					
HCD	0.649				
LP	0.801	0.732			
PP	0.736	0.788	0.813		
TP	0.805	0.756	0.782	0.887	

Source: Field Data Analysis by Authors (2026)

4.3 Structural Model Assessment

Following confirmation of the measurement model, the structural model was evaluated to test the hypothesised relationships between CSR practices and human capital development.

4.3.1 Collinearity Assessment

Collinearity among predictor constructs was assessed using the Variance Inflation Factor (VIF). VIF values below 5 indicate the absence of problematic multicollinearity among the predictor constructs (Hair et al., 2017; Hair et al., 2022).

The results indicate that all predictor constructs recorded VIF values well below the recommended threshold of 5. Specifically, Economic CSR practices (EP) recorded a VIF value of 2.403, Legal CSR practices (LP) recorded 2.641, Philanthropic CSR practices (PP) recorded 2.917, while Ethical CSR practices (TP) recorded the highest VIF value of 2.944. These findings suggest that multicollinearity was not a concern in the structural model and that the predictor constructs were sufficiently distinct to permit reliable estimation of the hypothesised relationships.

4.3.2 Coefficient of Determination (R^2) and Effect Size (f^2)

The explanatory power of the structural model was assessed using the coefficient of determination (R^2), while the contribution of each predictor construct to the endogenous construct was evaluated using effect size (f^2). According to Hair et al. (2022), R^2 values of 0.25, 0.50, and 0.75 may be interpreted as weak, moderate, and substantial explanatory power, respectively. For effect size, f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively.

The results show that community-level human capital development (HCD) achieved an R^2 value of 0.481, indicating that the four CSR practice dimensions jointly explained approximately 48.1% of the variance in community-level human capital development. This suggests moderate explanatory power of the structural model. In social science and behavioural research, where human perceptions, institutional conditions, and socio-economic dynamics are often influenced by multiple interacting factors, R^2 values within this range are generally considered acceptable and meaningful for explaining complex social phenomena (Hair et al., 2022; Sarstedt et al., 2022). The finding therefore indicates that CSR practices constitute an important explanatory mechanism for understanding variations in community-level human capital development within mining host communities, even though other contextual and institutional factors may also contribute to the observed outcomes.

The effect size results indicate varying contributions of the predictor constructs to HCD. Philanthropic CSR practices (PP) recorded the largest effect size ($f^2 = 0.065$), followed by Legal CSR practices (LP) ($f^2 = 0.033$) and Ethical CSR practices (TP) ($f^2 = 0.025$), all indicating small effect sizes. Economic CSR practices (EP) recorded a negligible effect size ($f^2 = 0.002$). Overall, the findings suggest that

while the CSR dimensions collectively contributed meaningfully to explaining community-level human capital development, the individual effects of the predictor constructs ranged from negligible to small.

4.3.3 Predictive Relevance (Q^2) and PLSpredict Assessment

The predictive relevance of the structural model was assessed using the Stone–Geisser Q^2 statistic obtained through the blindfolding procedure. In addition, out-of-sample predictive performance was evaluated using the PLSpredict procedure by comparing the prediction errors of the PLS-SEM model with those of the linear model (LM) benchmark. According to Hair et al. (2022) and Shmueli et al. (2019), Q^2 values greater than zero indicate that the model possesses predictive relevance and performs better in predicting new observations than a naïve benchmark approach.

The results indicate that all indicators of the endogenous construct, community-level human capital development (HCD), recorded positive Q^2 values ranging from 0.227 to 0.238. Specifically, HCD11 and HCD12 achieved the highest Q^2 values of 0.238, while HCD9 recorded the lowest value of 0.227. These findings confirm that the model possesses satisfactory predictive relevance and adequate out-of-sample predictive capability.

The PLSpredict results further demonstrate acceptable predictive performance of the PLS-SEM model. Across most indicators, the PLS-SEM model generally produced lower or comparable prediction errors for both RMSE and MAE relative to the linear model benchmark. Similar patterns across the indicators suggest that the structural model achieved adequate predictive performance in explaining community-level human capital development. Consistent with recommendations by Hair et al. (2019b, 2022) and Shmueli et al. (2019), the combination of positive Q^2 values and generally favourable prediction error patterns indicates that the model demonstrates acceptable out-of-sample predictive power.

4.3.4 Path Coefficients and Hypothesis Testing

The hypothesised relationships were assessed using path coefficients, t-statistics, and p-values generated through the bootstrapping procedure with 5,000 resamples. The results of the structural model are presented in Figure 2.

The findings indicate that Economic CSR practices (EP) had a positive but statistically insignificant effect on community-level human capital development ($\beta = 0.052$, $t = 0.738$, $p = 0.461$). Accordingly, H_1, which proposed that economic CSR practices have a positive and significant effect on human capital development in mining host communities, was not supported.

Legal CSR practices (LP) demonstrated a positive and statistically significant effect on community-level human capital development ($\beta = 0.212$, $t = 2.852$, $p = 0.004$). This finding suggests that compliance-oriented CSR practices relating to legal obligations, environmental standards, and governance responsibilities contribute positively to education, skills development, and broader capability enhancement within host communities. Therefore, H_2 was supported.

Similarly, Philanthropic CSR practices (PP) recorded a positive and statistically significant effect on community-level human capital development ($\beta = 0.314$, $t = 3.932$, $p < 0.001$). This represents the strongest effect among the CSR dimensions examined, indicating that voluntary CSR initiatives such as educational support, skills development programmes, health services, and community-oriented development projects play a significant role in strengthening community human capital. Consequently, H_3 was supported.

Ethical CSR practices (TP) also exhibited a positive and statistically significant effect on community-level human capital development ($\beta = 0.195$, $t = 2.459$, $p = 0.014$). The findings imply that responsible business conduct, fairness, environmental stewardship, and proactive management of socio-economic impacts contribute positively to the development of knowledge, skills, and broader community capabilities. Accordingly, H_4 was supported.

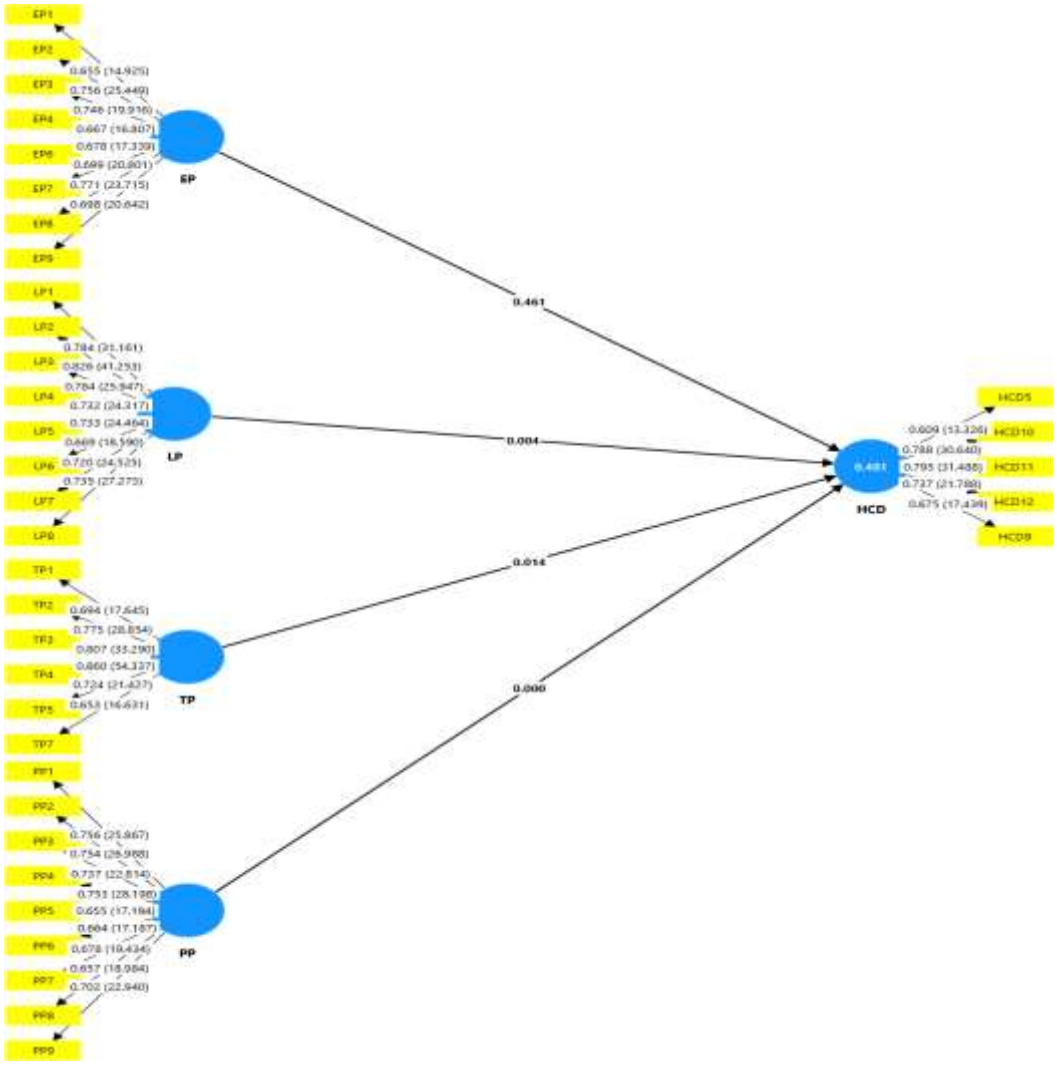

Figure 2: Statistical Significance of the Hypothesised Direct Relationships
Source: Field Data Analysis by the Researcher (2026)

Overall, the results suggest that legal, philanthropic, and ethical CSR practices significantly contribute to community-level human capital development in mining host communities, whereas economic CSR practices did not demonstrate a statistically significant effect within the study context, as summarised in Table 4.

Table 4: Hypothesis Testing Results of the Structural Model

Hypotheses	Path	Path coefficients	t-value	p-value	Result
H_1	EP → HCD	0.052	0.738	0.461	Not supported
H_2	LP → HCD	0.212	2.852	0.004	Supported
H_3	PP → HCD	0.314	3.932	0.000	Supported
H_4	TP → HCD	0.195	2.459	0.014	Supported

Source: Field Data Analysis by Authors (2026)

5.0 Discussion

The findings reveal that legal, philanthropic, and ethical CSR practices exert positive and statistically significant effects on community-level human capital development in mining host communities, whereas economic CSR practices demonstrated a positive but statistically insignificant effect. These results provide important empirical insights into the role of CSR as an external investment mechanism for community-level human capital formation within extractive-industry contexts.

The insignificant effect of economic CSR practices suggests that economic-oriented CSR interventions alone may not necessarily translate into meaningful improvements in education, skills acquisition, and knowledge development within host communities. Although economic CSR initiatives often focus on employment creation, infrastructure support, and local economic participation, such interventions may generate more immediate livelihood benefits than long-term capability enhancement. This finding implies that the contribution of economic CSR to human capital development depends on the extent to which economic benefits are linked to sustained learning, training, and capacity-building opportunities. The finding is consistent with Muhirwa et al. (2023), who argue that the developmental contribution of extractive industries extends beyond direct economic benefits and requires more holistic investments that address broader social and human development needs. Consequently, economic CSR initiatives may have limited influence on human capital development when implemented without complementary capability-enhancing interventions.

In contrast, legal CSR practices demonstrated a significant positive effect on community-level human capital development. This finding suggests that compliance-oriented CSR interventions relating to labour standards, environmental obligations, compensation systems, local content requirements, and governance responsibilities create institutional conditions that support capability development within host communities. By promoting structured engagement, skills-related obligations, and formal development commitments, legal CSR practices may contribute to improving communities' access to education, training, and broader developmental opportunities. The finding aligns with literature emphasising the importance of governance structures and institutional arrangements in shaping sustainable development outcomes in extractive environments (Johnston & Kemp, 2019).

Similarly, ethical CSR practices exhibited a positive and significant influence on community-level human capital development. This suggests that responsible business conduct, fairness, environmental stewardship, and proactive management of socio-economic impacts contribute meaningfully to the development of community capabilities. Ethical CSR practices may strengthen trust, social inclusion, and participatory engagement between mining companies and host communities, thereby creating conditions that support knowledge acquisition, learning opportunities, and broader socio-economic participation. These findings are consistent with broader conceptualisations of human capital that extend beyond technical competencies to include behavioural, relational, and adaptive capabilities necessary for effective participation in modern socio-economic systems (Balog & Demidova, 2021; Khayrulina et al., 2020).

Among the CSR dimensions examined, philanthropic CSR practices recorded the strongest effect on community-level human capital development. This finding highlights the important role of voluntary corporate investments in education, skills development, health services, entrepreneurship support, and community development programmes in strengthening local capabilities. In many mining host communities, philanthropic CSR initiatives frequently provide direct support for schools, scholarships, vocational training, and youth empowerment programmes, which are closely linked to human capital formation. The findings therefore support arguments advanced by Ansu-Mensah et al. (2023) that CSR initiatives in extractive industries increasingly function as mechanisms for supporting broader community development and capability enhancement.

The findings further reinforce perspectives from human capital literature which emphasise that education, skills acquisition, knowledge development, and continuous learning are essential for long-term socio-economic resilience and participation in evolving economic systems (Mpofu & Nemashakwe, 2023).

In mining environments characterised by technological advancement and changing labour demands, capability-enhancing CSR interventions may therefore play an important role in strengthening communities' preparedness to benefit from mining-related opportunities and broader development processes.

Overall, the findings suggest that the developmental contribution of CSR in mining host communities extends beyond immediate welfare support and economic assistance toward broader capability formation. The results particularly underscore the importance of legal, ethical, and philanthropic CSR practices in strengthening education, skills acquisition, and knowledge capacities within host communities. From a RBT perspective, these findings reinforce the view that human capital constitutes a strategically valuable capability that can support long-term socio-economic resilience and adaptive capacity within resource-dependent communities. This further suggests that CSR in extractive-industry contexts should not be understood solely as a philanthropic or legitimacy-oriented activity, but also as a strategic mechanism capable of supporting sustainable human capital development and broader community transformation.

Limitations and Future Research

This study is subject to several limitations that provide avenues for future research. First, the cross-sectional design limits the ability to capture the long-term and evolving nature of CSR contributions to community-level human capital development. Human capital formation is inherently cumulative and develops over time through sustained investments in education, training, and capability enhancement. Future longitudinal studies could therefore provide deeper insights into how CSR interventions influence human capital development trajectories within mining host communities. In addition, while the present study focused on the direct effects of CSR practices on community-level human capital development, future research could further explore additional explanatory mechanisms and contextual conditions that may shape these relationships. Factors such as institutional quality, governance effectiveness, community participation, social capital, and policy environments may influence the extent to which CSR interventions contribute to sustainable human capital formation in mining communities.

6.0 Conclusion and Implications

This study examined the influence of CSR practices on community-level human capital development in mining host communities in Tanzania. Using a PLS-SEM approach, the findings demonstrate that CSR practices do not contribute uniformly to human capital development outcomes. Specifically, legal, ethical, and philanthropic CSR practices exerted positive and statistically significant effects on community-level human capital development, while economic CSR practices showed a positive but statistically insignificant effect.

The findings suggest that CSR interventions associated with governance responsibilities, responsible business conduct, and complementary community-oriented investments play a more important role in strengthening education, skills acquisition, knowledge development, and broader community capabilities than purely economic-oriented CSR initiatives. In particular, philanthropic CSR practices emerged as the strongest predictor of community-level human capital development, highlighting the important contribution of voluntary investments in education, vocational training, health services, youth empowerment, and community development programmes. Ethical CSR practices also demonstrated significant influence, suggesting that fairness, trust-building, environmental stewardship, and socially responsible engagement contribute meaningfully to capability enhancement within mining communities. Similarly, legal CSR practices were found to support human capital development by creating institutional and governance conditions that facilitate access to training, skills development, and broader developmental opportunities.

In contrast, the insignificant effect of economic CSR practices implies that economic-oriented interventions such as employment creation, infrastructure support, and local procurement do not automatically translate into sustained capability development within host communities. This finding suggests that economic CSR initiatives may generate more immediate livelihood or economic benefits unless they are deliberately integrated with education, training, and long-term knowledge-development strategies.

The study contributes to the CSR and human capital literature by extending understanding of CSR beyond philanthropy and corporate legitimacy toward its role as an external investment mechanism for community-level human capital formation. In doing so, the study broadens existing debates in extractive-industry research, which have traditionally focused on workforce preparedness and organisational productivity, by directing attention toward the developmental capacities of mining host communities. The findings further reinforce broader human capital perspectives that emphasise education, skills acquisition, adaptability, and continuous learning as essential foundations for long-term socio-economic resilience in rapidly changing economic environments.

From a practical and developmental perspective, the findings suggest that mining companies should adopt more capability-oriented CSR strategies that prioritise education, vocational training, entrepreneurship support, and knowledge-enhancement initiatives within host communities. CSR interventions should therefore move beyond short-term welfare support toward sustained investments that strengthen communities' ability to participate effectively in mining-related and broader socio-economic opportunities. Consistent with Muhirwa et al. (2023), the findings further underscore the importance of a more holistic approach to community development in which mining companies complement government efforts by addressing broader social, human, environmental, and wellbeing-related challenges affecting host communities. For regulators and policymakers, the findings highlight the importance of strengthening governance and institutional frameworks that encourage mining companies to integrate human capital development objectives into CSR planning and implementation, while ensuring that corporate investments contribute meaningfully to sustainable community development outcomes.

Despite these contributions, the study is subject to several limitations. The cross-sectional design limits the ability to capture the long-term and evolving nature of CSR contributions to community-level human capital development. In addition, the study relied primarily on perception-based measures collected from host-community respondents, which may be subject to response bias and subjective interpretation. The study was also limited to selected mining host communities in Tanzania, which may constrain the generalisability of the findings to other extractive or institutional settings. Future research could therefore employ longitudinal approaches, incorporate objective human capital indicators, and undertake comparative studies across different countries or extractive industries. Further studies may also examine additional contextual and institutional factors such as governance quality, community participation, and social capital that may influence the relationship between CSR practices and community-level human capital development.

References

Abuya, W. (2023). Does Corporate Social Responsibility (CSR) Actually Develop Mining Communities? An Examination of CSR Programmes in Kenya's Mining Sector. In S. K. Msosa, S. Mugova, & C. Mlambo (Eds), *Corporate Social Responsibility in Developing Countries* (pp. 83–109). Springer International Publishing. https://doi.org/10.1007/978-3-031-27512-8_6

Albertin, G., Yontcheva, B., Devlin, D., Devine, H., Gerard, M., Suljagic, I. J., Thakoor, V. V., & Beer, S. (2021a). Mining and multinationals in Sub-Saharan Africa. In *Tax avoidance in Sub-Saharan Africa's mining sector* (Departmental Paper No. 2021/022, 3–6). International Monetary Fund. https://doi.org/10.5089/9781513594361.087

Albertin, G., Yontcheva, B., Devlin, D., Devine, H., Gerard, M., Suljagic, I. J., Thakoor, V., & Beer, S. (2021b). Mining fiscal regimes and tax revenue performance: Adequate fiscal gains? In *Tax avoidance in Sub-Saharan Africa's mining sector* (Departmental Paper No. 2021/022, 15–28). International Monetary Fund. https://doi.org/10.5089/9781513594361.087

Anitra, V., Dari, R. W., & Handoko, F. (2025). The role of technical skills as a mediator in the effect of training and work environment on employee productivity in the mining industry. *International Economics and Business Conference (IECON)*, 3(1), 847–858.

Ansu-Mensah, P., Marfo, E. O., Awuah, L. S., & Amoako, K. O. (2021). Corporate social responsibility and stakeholder engagement in Ghana's mining sector: A case study of Newmont Ahafo mines. *International Journal of Corporate Social Responsibility*, *6*(1), 1. https://doi.org/10.1186/s40991-020-00054-2

Ansu-Mensah, P., Twum, K. K., Agyapong, G. K., & Nimako, R. K. (2023). CSR and community development: A focus on firms in the extractive sector in Africa. In S. K. Msosa, S. Mugova & C. Mlambo (Eds.), *Corporate Social Responsibility in Developing Countries*, CSR, Sustainability, Ethics & Governance, 65-81. https://doi.org/10.1007/978 3 031 27512 8_5

Balog, M. M., & Demidova, S. E. (2021). Human capital development in the context of the fourth industrial revolution. *IOP Conference Series: Earth and Environmental Science*, *666*(6), 062120. https://doi.org/10.1088/1755-1315/666/6/062120

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120. https://doi.org/10.1177/014920639101700108

Barney, J. B. (2018). Why resource-based theory's model of profit appropriation must incorporate a stakeholder perspective. *Strategic Management Journal*, *39*(13), 3305–3325. https://doi.org/10.1002/smj.2949

Bonilla Mejía, L. (2020). Mining and human capital accumulation: Evidence from the Colombian gold rush. *Journal of Development Economics*, *145*, 102471. https://doi.org/10.1016/j.jdeveco.2020.102471

Branco, M. C., & Rodrigues, L. L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics*, *69*(2), 111–132. https://doi.org/10.1007/s10551-006-9071-z

Bryman, A. (2012). *Social research methods* (4. ed). Oxford University Press.

Carroll, A. B. (1979). A Three-dimensional conceptual model of corporate performance. *The Academy of Management Review*, *4*(4), 497. https://doi.org/10.2307/257850

Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, *34*(4), 39–48. https://doi.org/10.1016/0007-6813(91)90005-G

Carroll, A. B., & Brown, J. A. (2018). Corporate social responsibility: A review of current concepts, research, and issues. In *Corporate Social Responsibility* (pp. 39–69). Emerald Publishing Limited. https://doi.org/10.1108/S2514-175920180000002002

Carroll, A. B. (2021). Corporate social responsibility: Perspectives on the CSR construct's development and future. *Business & Society*, *60*(6), 1258–1278. https://doi.org/10.1177/00076503211001765

Dmytriyev, S. D., Freeman, R. E., & Hörisch, J. (2021). The relationship between stakeholder theory and corporate social responsibility: Differences, similarities, and implications for social issues in management. *Journal of Management Studies*, *58*(6), 1–30. https://doi.org/10.1111/joms.12684

Frolova, V., Dolina, O., & Shpilkina, T. (2020). The role of financing in the development of human capital of mining industry: Modern trends under uncertainty. *E3S Web of Conferences*, *174*, 04025. https://doi.org/10.1051/e3sconf/202017404025

Gillo, I., Bilame, O., & Anthony Assenga, E. (2023). Corporate social responsibility practices: Insights from North Mara gold mine, Tanzania. *International Journal of Research in Business and Social Science (2147- 4478)*, *12*(6), 79–90. https://doi.org/10.20525/ijrbs.v12i6.2795

Greer, C. R., Lusch, R. F., & Hitt, M. A. (2017). A service perspective for human capital resources: A critical base for strategy implementation. *Academy of Management Perspectives*, *31*(2), 137–158. https://doi.org/10.5465/amp.2016.0004

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson Education.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019a). *Multivariate data analysis* (8th ed.). Cengage.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019b). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.

Hilson, A., Hilson, G., & Dauda, S. (2019). Corporate social responsibility at African mines: Linking the past to the present. *Journal of Environmental Management*, *241*, 340–352. https://doi.org/10.1016/j.jenvman.2019.03.121

Hitt, M. A., Biermant, L., Shimizu, K., & Kochhar, R. (2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: a resource-based perspective. *Academy of Management Journal*, *44*(1), 13–28. https://doi.org/10.2307/3069334

Idowu, S. O. (2021). Introduction. In S. O. Idowu (Ed.), *Current global practices of corporate social responsibility: In the era of sustainable development goals* (pp. xiii–xx). Springer International Publishing. https://doi.org/10.1007/978-3-030-68386-3

Isacowitz, J. J., Schmeidl, S., & Tabelin, C. (2022). The operationalisation of corporate social responsibility (CSR) in a mining context. *Resources Policy*, *79*, 103012, 1 – 7. https://doi.org/10.1016/j.resourpol.2022.103012

Ivic, A., Saviolidis, N. M., & Johannsdottir, L. (2021). Drivers of sustainability practices and contributions to sustainable development evident in sustainability reports of European mining companies. *Discover Sustainability*, *2*(1), 17. https://doi.org/10.1007/s43621-021-00025-y

Johnston, S., & Kemp, D. (2019). *Organising for social performance in the global mining industry: A snapshot study*. Centre for Social Responsibility in Mining, Sustainable Minerals Institute, The University of Queensland.

Kemp, D., & Owen, J.R. (2019). *Establishing the foundations for effective social performance in the global mining industry.* Centre for Social Responsibility in Mining, Sustainable Minerals Institute, The University of Queensland.

Kemp, D., & Owen, J. R. (2022). Corporate social irresponsibility, hostile organisations and global resource extraction. *Corporate Social Responsibility and Environmental Management*, *29*(5), 1816–1824. https://doi.org/10.1002/csr.2329

Kiowi, L. O. (2022). Human resources practices and employees quality of life in Tanzania mining industry: A qualitative study. *Journal of Human Resource &Leadership*, *6*(2), 89–105. https://doi.org/10.53819/81018102t2083

Kotsantonis, S., & Serafeim, G. (2020). Human capital and the future of work: Implications for investors and ESG integration. *Journal of Financial Transformation*, *51*, 115–130. https://www.capco.com/-/media/CapcoMedia/Subfolder-Unsorted/Capco-2/PDFs/Journal-51/Journal-51WebArticle3Kotsantonis.ashx

Latif, K. F., & Sajjad, A. (2018). Measuring corporate social responsibility: A critical review of survey instruments. *Corporate Social Responsibility and Environmental Management*, *25*(6), 1174–1197. https://doi.org/10.1002/csr.1630

Maliganya, W., & Bengesi, K. M. K. (2023). Compliance of large-scale mining companies to regulatory framework for sustainable mining: A case of Buzwagi gold mine, Kahama District, Tanzania. *Business Excellence and Management*, *13*(3), 73–96. https://doi.org/10.24818/beman/2023.13.3-06

Maliganya, W., Bengesi, K. M. K., Mbota, M. M., & Bulengela, G. (2023). Corporate social responsibility and the challenges of the regulatory environment in the Tanzanian mining sector. In S. K. Msosa, S. Mugova, & C. Mlambo (Eds), *Corporate Social Responsibility in Developing Countries* (pp. 157–173). Springer International Publishing. https://doi.org/10.1007/978-3-031-27512-8_10

Mbilima, F. (2021). Extractive industries and local sustainable development in Zambia: The case of corporate social responsibility of selected metal mines. *Resources Policy*, *74*, 101441. https://doi.org/10.1016/j.resourpol.2019.101441

Mining Act 2019 Cap 123 s.4 (1), s. 105 (1) and s. 105 (2) (Tanzania)

Mpofu, Q., & Nemashakwe, P. (2023). The adequacy of human capital for the fourth industrial revolution era in the mining industry in Zimbabwe. *International Journal of Social Science Research and Review*, *6*(8), 67–78. https://doi.org/10.47814/ijssrr.v6i8.1419

Msosa, S. K., & Mugova, S. (2023). Corporate social responsibility challenges in the extractive industry: An introduction. In S. K. Msosa, S. Mugova & C. Mlambo (Eds.), *Corporate Social Responsibility in Developing Countries: Challenges in the Extractive Industry,* (pp 1-14), Springer. doi.org/10.1007/978-3-031-27512-8_10

Muhirwa, F., Shen, L., Elshkaki, A., Hirwa, H., Umuziranenge, G., & Velempini, K. (2023). Linking large extractive industries to sustainable development of rural communities at mining sites in Africa: Challenges and pathways. *Resources Policy*, *81*, 103322. https://doi.org/10.1016/j.resourpol.2023.103322

Oatley, T. H. (2019). *International political economy* (Sixth edition). Routledge Taylor and Francis Group.

Owen, J. R., Kemp, D., & Marais, L. (2021). The cost of mining benefits: Localising the resource curse hypothesis. *Resources Policy*, *74*, 102289, 1–7.

Rela, I. Z., Awang, A. H., Ramli, Z., Rusdan, M., Mappasomba, M., & Nikoyan, A. (2020a). Conceptual model of corporate social responsibility impact on community well-being. *Entrepreneurship and Sustainability Issues*, *8*(2), 311–323. https://doi.org/10.9770/jesi.2020.8.2(18)

Rela, I. Z, Awang, A. H., Ramli, Z., Taufik, Y., Md Sum, S., & Muhammad, M. (2020b). Effect of corporate social responsibility on community resilience: Empirical evidence in the nickel mining industry in Southeast Sulawesi, Indonesia. *Sustainability*, *12*(4), 1395, 1–17. https://doi.org/10.3390/su12041395

Rhemtulla, M., Brosseau-Liard, P. É., & Savalei, V. (2012). When can categorical variables be treated as continuous? A comparison of robust continuous and categorical SEM estimation methods under suboptimal conditions. *Psychological Methods*, *17*(3), 354–373. https://doi.org/10.1037/a0029315

Reyneke, S. (2021). Corporate social responsibility in South Africa: CSR and sustainable development in the South African mining industry. In S. O. Idowu (Ed.), *Current Global Practices of Corporate Social Responsibility* (pp. 543–561). Springer International Publishing. https://doi.org/10.1007/978-3-030-68386-3_25

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2022). Partial least squares structural equation modeling. In C. Homburg, M. Klarmann, & A. Vomberg (Eds), *Handbook of Market Research* (pp. 587–632). Springer International Publishing. https://doi.org/10.1007/978-3-319-57413-4_15

Saunders, M.N.N, Lewis, P. and Thornhill, A. (2019). *Research methods for business students* (8th edition). UK.

Schindler, P. S. (2019). *Business research methods* (13th ed.). McGraw-Hill Education.

Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. *European Journal of Marketing*, *53*(11), 2322–2347. https://doi.org/10.1108/EJM-02-2019-0189

Shubita, M., Ahmed, S., & Essel-Paintsil, M. (2023). The economic impact of corporate social responsibility on the development of indigenous communities: Evidence from Ghana's mining sector. *International Journal of Organizational Analysis*, *31*(1), 196–214. https://doi.org/10.1108/IJOA-10-2021-2985

Tsaurai, K. (2021). Mining, poverty, and income inequality in Central and Eastern European Countries: What do the data tell Us? *Comparative Economic Research. Central and Eastern Europe*, *24*(3), 7–25. https://doi.org/10.18778/1508-2008.24.19

Utami, H. & Alamanos, E. (2023) *Resource-Based Theory: A review.* In S. Papagiannidis (Ed), TheoryHub Book. Available at https://open.ncl.ac.uk / ISBN: 9781739604400

Wagner-Tsukamoto, S. A. (2016). *What ethics? An integrative economics ethics approach to corporate social responsibility (CSR).* In Proceedings of the British Academy of Management (BAM) 2016 Conference, University of Newcastle, United Kingdom, September 6–8.

Wagner-Tsukamoto, S. (2019). In search of ethics: From Carroll to integrative CSR economics. *Social Responsibility Journal*, *15*(4), 469–491. https://doi.org/10.1108/SRJ-09-2017-0188

Yousefian, M., Bascompta, M., Sanmiquel, L., & Vintró, C. (2023). Corporate social responsibility and economic growth in the mining industry. *The Extractive Industries and Society*, *13*, 101226. https://doi.org/10.1016/j.exis.2023.101226

Copyrights