Linking corporate social responsibility accounting and supply chain management: Evidence from less developed countries

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Abstract

This paper aimed to study the relationship between corporate social responsibility (CSR) accounting and supply chain management (SCM) in the context of less developed countries, such as Yemen. Primary data was gathered through a survey of 380 workers in Yemeni businesses. The information was gathered using a questionnaire. The findings showed that there is a statistically significant association between natural resource development (NRD), service quality improvement (IQS), CSR accounting, and SCM.

Keywords: Corporate Social Responsibility Accounting; Supply Chain Management; Yemen.

1. Introduction

Corporate social responsibility accounting (CSRA) is gaining popularity in industrialized economies. CSRA regularly causes firms to feel uneasy because of their supply networks’ potential for unethical behaviour along these lines and the many challenges posed by their global reach. Multinational corporations are under pressure to protect their brands even if it means assuming accountability for the acts of their suppliers due to the threat of irresponsible behaviour. Pressure groups are attempting to profit from the situation by making use of the stress that is being put on businesses (Amaeshi et al., 2008). Furthermore, concern over corporate responsibility in general and sustainable SCM in particular has grown among businesses and academics during the past ten years.

The field of supply chain management (SCM) has undergone a transformation, shifting its primary focus from economic and environmental concerns to encompassing social considerations as well (Brandenburg and Rebs, 2015). Since the 1980s, scholars have placed increasing emphasis on the recognition and assessment of social issues as crucial for enhancing corporate social performance (Carroll, 1979). The concept of managing the ‘triple bottom line’ in the late 1990s (John, 1997) has led to increased research on corporate social responsibility (CSR) and sustainable development over the past three decades. Furthermore, the increasing prevalence of global supply chain activities in recent decades has led to a growing focus on the integration of corporate social responsibility (CSR) within SCM. This has resulted in the emergence of sub-fields and related topics within the SCM discipline. In recent years, there has been a notable increase in the volume of scholarly research focused on the topic of CSR within the context of SCM. These studies have explored various aspects of CSR in SCM, such as ethical sourcing, the measurement of CSR, the impact of CSR on supply chain performance, CSR-driven supply chain practices, and the monitoring of CSR performance, among others.

Despite the growing interest in both CSRA and SCM, there is a notable gap in the literature concerning comprehensive studies that explicitly investigate the relationship between the two domains. Most existing studies tend to focus on CSR accounting or SCM individually, leaving a gap in understanding how these two critical aspects of business interact and...
influence each other. The primary objective of this research is To Investigate the Influence of CSR Accounting on SCM Strategies

The following section will first introduce (CSR) Accounting and Chain Management (SCM), followed by Hypothesis Development Then, Methodology and Conclusions.

2. Literature review

2.1. CSR Accounting

To elucidate the engagement of purchasing managers in socially responsible endeavours, the concept of purchasing social responsibility can be employed. CSRA is widely recognized as a crucial element in enhancing customer satisfaction. CSR encompasses the economic, legal, and ethical endeavours undertaken by business entities with the objective of enhancing both business and societal objectives. In contrast, corporations encounter a range of obstacles in the process of implementing CSR policies. According to Jermsittiparsert and colleagues (2019), the effectiveness of CSRA procedures has a detrimental effect on customer satisfaction. Corporate social and environmental responsibility pertains to the endeavours undertaken by a corporation to uphold the cultural and ethical standards prevalent in the society within which it conducts its operations. Economic and environmental obligations can be perceived as conflicting or mutually exclusive factors. CSRA was defined by Tate et al. (2010) as the amalgamation of economic, legal, ethical, and discretionary factors contributing to corporate success. Hence, entrepreneurs who assume accountability for their local and global communities play a significant role in the socioeconomic landscape and the strategy of business diplomacy. Social characteristics are highly valued by individuals. Business operations are subject to significant societal awareness and scrutiny. Consequently, corporate governance and CSR emerge as pivotal areas of focus for businesses. Therefore, enterprises exhibit a preference for addressing gaps created by the institutional framework of a nation. Conversely, when formal institutions effectively function within a specific sphere, corporate initiatives are improbable (Amaeshi et al., 2008).

2.2. Human Resource Development (HRM)

Human Resources (HR) is commonly perceived as a department that manages individuals in a manner similar to how accounting manages financial resources in most organizations. Massive computer systems and extensive procedural manuals are utilized to monitor and manage salary structures, benefits packages, career trajectories, retirement programs, and health insurance (Liker & Hoseus, 2010). The role of HRD in organizations as a strategic business partner has been extensively examined and analysed by various theories and scholars. Consequently, the resilience of Human Resource Development (HRD) could be regarded as a novel determinant of success that, when integrated with the endeavours of other stakeholders, has the potential to enhance organisational resilience either on an individual or collective level. According to Mitsakas (2020), it is imperative for Human Resource Development (HRD) to assume a leadership role in driving organisational change and, by means of its policies and initiatives, make a significant contribution to enhancing organisational resilience. Individuals and teams undergo training to acquire technical skills and knowledge, which contributes to their personal growth and the advancement of the organisation. Human resource competency encompasses the exceptional skills and abilities possessed by individuals and teams. The aforementioned exceptional attributes and competencies may encompass both technical and managerial proficiencies. The proficiency of the project team is primarily influenced by the capabilities of both the project manager and the project team manager (Saengchai et al., 2020).

2.3. Natural Resources Development (NRD)

The efficient utilization and governance of natural resources plays a crucial role in securing a sustainable future for numerous nations endowed with abundant resources. Furthermore, it is widely acknowledged that globalization plays a significant role in enhancing awareness regarding sustainable resource extraction practices and enabling the dissemination of cleaner industrial technologies to developing nations, thereby enabling the establishment of sustainable development models. However, there is a scarcity of research examining the impact of globalisation in alleviating environmental repercussions on natural resources in economies that heavily rely on resource extraction (Erdoan et al., 2021). Although there has been considerable interest in the interplay between financial development, natural resources, and ecological efficiency, limited research has been conducted to assess the level of coupling coordination among these factors at a regional level (Zameer et al., 2020). Moreover, emerging economies have encountered challenges in enhancing their economic performance by leveraging their natural resource endowments. The process of harnessing natural resource endowments presents a complex economic and political challenge that necessitates private investment for the identification and extraction of the resource. Additionally, it requires the implementation of fiscal regimes to effectively capture revenue, the adoption of judicious spending and investment
strategies, and the formulation of policies to effectively manage volatility and mitigate adverse impacts on the broader economy (Venables, 2016).

2.4. Improve Quality Service (IQS)

Currently, many businesses are placing significant emphasis on the topic of service quality, recognising its pivotal role in determining the long-term viability of an industry. Service quality can be defined as the disparity between the actual satisfaction experienced by consumers and their initial expectations upon availing services. Service quality can be described as the disparity between the initial “expectation” of clients prior to accepting a service and their subsequent “perception” after receiving the service. In essence, service quality can be calculated by subtracting the perceived service from the expected service (Huang et al., 2014). Moreover, it is imperative for companies to prioritise the provision of high-quality services to their clients, as this factor significantly contributes to gaining a competitive edge and maintaining customer loyalty (Latif et al., 2021). In order to assess service quality, a five-dimensional framework is utilised, encompassing tangibles (such as modern and visually appealing physical facilities, up-to-date equipment, and well-presented personnel), reliability (including punctuality, dependability, and accuracy in service delivery), responsiveness (promptness in addressing customer needs), assurance (demonstrating knowledge, courtesy, and trustworthiness), and empathy (providing individualised attention and displaying a caring attitude). Reich et al. (2010) employed the disparity between anticipation and perception as a means to assess quality.

2.5. Supply Chain Management (SCM)

Supply chain management (SCM) refers to a systematic approach employed to regulate the flow of goods, services, and associated information from the initial source to the final destination of consumption. The process of supply chain management encompasses various components, including procurement, manufacturing, inventory control, as well as logistics and transportation. The complexity has been heightened as a result of globalization, which has led to the presence of numerous suppliers, consumers, and logistics service providers situated in diverse geographical regions. Simulation software is a valuable tool for managing complex systems due to its ability to replicate real-world conditions. By providing a virtual environment, simulation software enables managers to make more informed decisions in various domains, including facility placement, transportation, and inventory model selection (Maina & Mwangangi, 2020). Additionally, SCM is a prominent managerial instrument utilized in corporations, albeit its utilisation seems to be more prevalent in small and medium-sized enterprises (Al-Hakimi et al., 2022a). The study conducted by Kot et al. (2020) reveals significant statistical differences in SCM determinants, factors, impediments, practices, functioning, environmental, and social sustainability between contrasting economies. However, it is worth noting that only SCM determinants do not exhibit significant differences based on entity size. Moreover, the SCM represents the pinnacle of progress in the field of purchasing, procurement, and other activities related to the supply chain. SCM is a burgeoning discipline that is experiencing rapid growth and reshaping the strategies employed by both manufacturing and nonmanufacturing organizations to meet the demands of their customers (Almatarneh et al., 2022). Therefore, supply chains are frequently managed with limited consideration for the broader operational environment in which they function (Al-Hakimi et al., 2022b). This perspective fails to acknowledge the inherent vulnerability and detrimental effects that have emerged as supply networks have evolved into complex systems. Recent and ongoing crises have highlighted the interconnectedness of supply chain architecture and processes with political-economic issues, as emphasized by Wieland (2021).

2.6. Hypothesis Development

According to New’s (2015) study, the distinct attributes of modern-day slavery may render conventional supply chain corporate social responsibility assessment (CSRA) initiatives ineffective. According to Faisal (2010), it is not necessary to allocate equal levels of attention to all supply chain obstacles related to corporate social responsibility (CSR). There are two categories of barriers: those with strong driving power and low dependency, which necessitate significant attention and possess strategic importance, and those with high dependency but low driving power. Jermiversary (2019) Based on the research results, it is recommended that logistics companies prioritise two critical practises: environmental stewardship and human resource management. The provision of resources for the environment and human capital plays a pivotal role in promoting community development, thereby resulting in heightened levels of customer satisfaction. Carter and Jennings (2002) posit that the act of engaging in purchasing social responsibility yields both direct and indirect benefits to supplier performance. Additionally, this positive influence is further mediated by the enhancement of trust and cooperation. These findings will have an impact on purchasing managers, as well as managers in customer service, distribution, and business-to-business marketing logistics. According to the findings of Tate et al. (2010), companies in various industries, of different sizes, and located in different geographic regions prioritise distinct aspects of social, environmental, and economic responsibility at different stages of their supply chains. The investigation provided novel insights into corporate communications that would not have been unearthed through
alternative methodologies. The results obtained from our exploratory research provide additional evidence regarding the influence of country of origin and industry on corporate responsibility behaviour. These findings shed light on the presence of both isomorphic and polymorphic patterns in corporate responsibility over time, as highlighted by Carbone et al. (2012). Based on the research conducted by Al-Omoush et al. (2022), it has been observed that intellectual capital plays a significant role in shaping supply chain agility, collaborative knowledge development, and the overall sustainability of companies. Similarly, the findings of Cruz (2013) indicate that corporate social responsibility (CSR) initiatives can be effectively utilised to mitigate global supply chain risks. The study conducted by Jarah et al. (2022) revealed a significant statistical association between internal audit practises and supply chain management within the context of shipping organisations. The study conducted by Al-Zaqeba et al. (2022) reveals a statistically significant correlation between management accounting and supply chain performance in logistics manufacturing companies, with a significance level of 0.05. Blasi and colleagues (2018) identified various prevalent patterns and sector-specific variations. The involvement of companies in corporate social responsibility (CSR) initiatives has been found to have a positive impact on their overall stock returns and a mitigating effect on financial risks. However, it is important to note that the specific type of CSR activities in which companies engage plays a significant role in determining these outcomes. The outcomes of an analysis of accounting figures exhibit varying levels of clarity, as they are contingent upon both the particular region of corporate social responsibility (CSR) and the sector-specific activities undertaken. According to the findings of Jarah and Almatarneh (2021), it was determined that a comprehensive comprehension of the organisation contributes to the enhancement of work quality. The subsequent hypotheses are presented in consideration of the preceding discourse:

- **H1:** A statistically significant and positive correlation exists between HRD and CSM.
- **H2:** A statistically significant and positive correlation exists between NRD and CSM.
- **H3:** A statistically significant and positive correlation exists between IQS and CSM.

### 3. Methodology

The data was obtained utilizing the survey methodology, wherein a questionnaire was employed, in accordance with the specific requirements of the present study. Zikmund (2010) asserts that it is imperative for survey questionnaires to possess a well-structured format and undergo thorough back testing prior to their actual implementation. Furthermore, the implementation of pre-testing for the research survey questionnaire serves as a means to mitigate bias and uncertainty, while simultaneously upholding a superior standard of quality and integrity in the questionnaire. The concept of tool validity pertains to the sufficiency and appropriateness of the research instrument. In accordance with the research conducted by Bourque and Fielder (2003), the current study seeks to employ the survey method to comprehensively depict, elucidate, and investigate the phenomenon under examination. The self-administered questionnaire was selected as the primary instrument for data collection in the survey, as it is a widely employed method in survey research. The respondents in this study are the employees working in Yemeni companies. The questionnaire that was administered is comprised of two sections. The initial section encompasses various aspects such as human resource development, NRD development, and service quality improvement within the context of CSRA CSR. The second component of the Intelligence Quotient for Supply Chain (IQS) encompasses items that pertain to supply chain management (SCM) as a dependent variable. The data was analysed using statistical tests, specifically SPSS. The unit of analysis is commonly regarded as the primary subject of study within an experiment, encompassing individuals or groups that researchers are interested in investigating to assess the unit of measurement and analysis. Huck and Bounds (1974) argue that in order to evaluate the conceptual and operational meanings of the constructs within a study paradigm, it is imperative to establish a precise definition of the unit of analysis. Furthermore, the utilisation of an erroneous unit of analysis can potentially result in the selection of inappropriate methodologies, the misrepresentation of findings, and the undermining of research implications. According to Benbasat (1987), in order to determine an appropriate unit of analysis, it is essential to clearly define the problem statement and ensure that the research objectives are effectively addressed.

#### 3.1. Data analysis

The provided content provides a concise overview of the findings derived from a research endeavour that sought to establish the correlation between CSRA and SCM. Table 1 displays the descriptive statistics and Cronbach's alpha coefficient. The highest mean achieved for the Human Resource Development (HRD) with a high degree of agreement is 3.86, while the lowest mean achieved for the Individual Quality of Service (IQS) with a medium degree of agreement is 3.62. The researchers also utilised Cronbach Alpha to assess the reliability of the instrument in the study sample. The CSRA exhibited a Cronbach's alpha coefficient of 0.953, while the SCM demonstrated a Cronbach’s alpha coefficient of 0.914. The Human Resources Department (HRD) exhibited the highest Discriminant Validity (DNR) value of 0.882.
Additionally, the HRD demonstrated alpha values of 0.878 for DNR and 0.864 for Internal Consistency (IQS), indicating satisfactory levels of reliability.

**Table 1** Means, standard deviation and Cronbach’s alpha for all domain and total means of them (N=380)

<table>
<thead>
<tr>
<th>No</th>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Human Resource Development (HRD)</td>
<td>3.86</td>
<td>0.68</td>
<td>0.878</td>
</tr>
<tr>
<td>2</td>
<td>Natural Resources Development (NRD)</td>
<td>3.75</td>
<td>0.73</td>
<td>0.882</td>
</tr>
<tr>
<td>3</td>
<td>Improve Quality Service (IQS)</td>
<td>3.62</td>
<td>0.71</td>
<td>0.864</td>
</tr>
<tr>
<td>4</td>
<td>Supply Chain Management (SCM)</td>
<td>3.79</td>
<td>0.68</td>
<td>0.914</td>
</tr>
</tbody>
</table>

Table 2 presents the Pearson correlation coefficients between variables. The results indicate a statistically significant positive association between HRD and SCM at a significance level of 0.05. The Pearson correlation coefficient for this relationship is 0.813, which is statistically significant at a p-value of 0.000. A statistically significant positive correlation was observed between NRD and SCM at a significance level of 0.05, as evidenced by a Pearson Correlation coefficient of 0.924. (0.000). Table 2 presents the findings indicating a significant positive association between IQS and SCM at a significance level of 0.05. The Pearson Correlation coefficient of 0.815 demonstrates a strong and statistically significant relationship (p < 0.001) between the two variables.

**Table 2** Pearson Correlation between Variables (N=380)

<table>
<thead>
<tr>
<th>Variables</th>
<th>HRD</th>
<th>NRD</th>
<th>IQS</th>
<th>SCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resource Development (HRD)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Resources Development (NRD)</td>
<td>0.768*</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve Quality Service (IQS)</td>
<td>0.960**</td>
<td>0.750**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Supply Chain Management (SCM)</td>
<td>0.813**</td>
<td>0.924**</td>
<td>0.815**</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 3 presents the results of a statistical analysis examining the relationship between CSRA and SCM. The analysis reveals that there is a statistically significant relationship at a significance level of α≤0.05. Among the variables considered, HRD demonstrates the highest level of effectiveness, with a "t" value of 37.412 and a statistically significant p-value of 0.000. The corresponding correlation coefficient (R) is 0.822, and the coefficient of determination (R2) is 0.676. Similarly, NRD exhibits a significant relationship, with a "t" value of 45.023 and a p-value of 0.000. The correlation coefficient (R) for NRD is 0.926, and the coefficient of determination (R2) is 0.857. Lastly, IQS also demonstrates a significant relationship, with a "t" value of 24.518 and a p-value of 0.000. The correlation coefficient (R) for IQS is 0.812, and the coefficient of determination (R2) is 0.659. Consequently, the primary hypothesis and its subordinate hypotheses have been affirmed.

**Table 3** Result of the (Regressions) analysis to the relationship between corporate social responsibility accounting and supply chain management (SCM) items (N= 380)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>β</th>
<th>R</th>
<th>R2</th>
<th>&quot;t&quot; value</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRD</td>
<td>0.851</td>
<td>0.822</td>
<td>0.676</td>
<td>37.412</td>
<td>0</td>
</tr>
<tr>
<td>NRD</td>
<td>0.872</td>
<td>0.926</td>
<td>0.857</td>
<td>45.023</td>
<td>0</td>
</tr>
<tr>
<td>IQS</td>
<td>0.881</td>
<td>0.812</td>
<td>0.659</td>
<td>24.518</td>
<td>0</td>
</tr>
</tbody>
</table>
4. Conclusions

The objective of this study is to generate favourable results for all entities involved in the organisation, rather than solely focusing on generating a positive financial gain for its shareholders. The conducted activities should extend beyond the limited interests of the company and surpass the fundamental legal obligations. Furthermore, the primary objective of this study was to examine the correlation between Corporate Social Responsibility Accounting (CSRA) and various dimensions such as human resource development, NRD development, IQS service quality enhancement, and supply chain management (SCM). The results presented align with the research conducted by Jermsittiparsert et al. (2019), Carter & Jennings (2002), Tate et al. (2010), Carbone et al. (2012), Cruz (2013), and Blasey et al. (2018).

Future research in this area could focus on conducting longitudinal studies to understand the dynamic nature of the relationship over time, performing comparative analyses across industries and regions, incorporating multi-stakeholder perspectives to gain a holistic understanding, using qualitative methods to explore experiences and challenges faced by companies, investigating the impact of CSR integration on supplier diversity and ethical sourcing, and exploring the role of technology and data analytics in facilitating CSR accounting integration into supply chain management practices. Addressing these limitations and pursuing these research directions would lead to a more comprehensive understanding of how CSR accounting and supply chain management interact and contribute to sustainable and responsible business practices.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References


