CHAPTER 1
INTRODUCTION

The main aim of this chapter is to provide the in-depth insights of the basic preliminaries which are used in this research and also point out the purpose of research with its research objectives. This section consists of five major sub divisions which clearly explain the concepts like supply chain management, supplier selection, CSR, significance of CSR in supply chain management, the status of CSR in Indian context, dissertation objectives, etc.

1.1 INTRODUCTION TO SUPPLY CHAIN MANAGEMENT

Fast growing economics results in the huge collaboration with international trade-in which ends in the great attention towards supply chain management. In recent years, the supply chain management becomes more competitive, because no organization can become a sole representative of their product success and their services towards the customer satisfaction, but mainly acts through the collaborative effects of other partners and members involved in supply chain (Kilger 2002; Lambert and Cooper 2000). Hence supply chain management has received (SCM) more attention since the early 1980’s (Croom et al. 2000) and also the SCM is considered one of the strategic weapons which can tackle the contemporary turbulence and also sought to develop sustainable competitive advantage with less investment and high customer satisfaction (Lee and Billington 1992; Spekman et al.. 1998). According to the existing literatures (Cooper et al.. 1997; Kilger 2002; Mentzer et al. 2001; La Londe 1997) SCM is nothing but the extension of logistics management which literally developed in the Annual conference of the Council of Logistics Management in 1995, in which the term supply chain
is used as 13.5% which get increased as 22.4% in 1997 (La Londe 1997; Mentzer et al. 2008) which is praised by many researchers as a remarkable hike. But term supply chain management came in the printed version in 1982 through Keith Oliver, who is a consultant with Booz Allen (Blanchard 2010). Since 1997, the SCM has become a hot topic among researchers and practitioners, but still there is confusion in the concepts and definitions of supply chain, because many researchers explained the SCM in their own perspectives. For instance, Mentzer et al. (2008) reviewed the existing definitions of SCM and argued that these definitions are interlinked and unclear. Some of the definitions are not summarized by Mentzer et al. (2008). Hence, multifarious definitions provided by various researchers are summarized in Annexure I. But generally the SCM definitions are categorized into three perspectives, namely activities, benefits and constituent/component parts (Stock et al. 2010). In addition to this, there is a huge conceptual confusion between the term logistics management and SCM which is clearly explained by Copper et al. (1997). But contrast to this study, (Lambert and Cooper, 2000) argued that logistics management is different from the SCM with the assistance of logistics management revised definition given by the Council of Logistics Management (1998) “Logistics is that part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, services, and related information from the point-of-origin to the point-of-consumption in order to meet customers’ requirements”.

Even though researchers engaged in the evolving chaos on the definition of SCM, studies were not limited to provide the supply chain framework. A typical supply chain (which is shown in Figure 1.1) begins from the extraction of raw materials and ends with the final end users through raw material suppliers, manufacturers, wholesalers and retailers. In addition to this recently supply chain also includes the reverse supply chain for recycling of products.
Figure 1.1  Activities and firms in the supply chain (modified from New and Payne 1995; Tan 2001)

However, according to Harvard Professor Michael Porter’s book, *Competitive Advantage*, the five major constructs of the supply chain which help in the company’s profitability is mentioned as inbound logistics, operations, outbound logistics, sales and forecasting and service (Blanchard, 2007). The main supply chain management activities include planning, inventory management, product design and development, warehousing, physical distributions, transportation, post-delivery customer support, production scheduling, order processing, sourcing & procurement, systems management, manufacturing, assembly and fabrication (Tan, 2001; Cooper et al. 1997). The performance of the supply chain directly correlates with the profit of any firm, since researchers attempt to measure the supply chain performance. In this connection, many metrics were established, namely supply chain operation reference (SCOR) model, benchmarking, delivery, performance, fill rates, perfect order fulfillment, cash to cash cycle, inventory turns, etc., In which SCOR model gets more focus among practitioners and researchers because it improves the performance through analysis, design and
implement the five major supply chain processes, namely plan, source, make, deliver and return (Blanchard 2007). But for effective implementation of SCM, Lambert and Cooper (2000) provided nine common success components, namely planning and control, work structure, organizational structure, product flow, structure, facility, information flow facility structure, management methods, power and leadership structure, risk and reward structure and culture and attitude. After constructing the basic elements of SCM, the researchers considered the multi echelon supply chain problems which results in outsourcing and global sourcing activities. Even though studies exploited many SCM related theories still there is an ample groom in this field which is mainly created through the expansion of SCM knowledge in customer satisfaction, relationship marketing, trust, channels of distribution, lean management, modelling of supply chain and others (Hunt and Davis 2008; Stock et al. 2010). Until early 90’s supply chain management only focussed on the economical profit, but due to various pressures supply chain management considers other criteria like the environment which further updated with sustainable development which is named as green supply chain management and sustainable supply chain management. Even though the concept of sustainability emerged in early 90’s, in recent years, it got more attention among researchers and practitioners. Hence, this study considered the sustainable supply chain instead of traditional supply chain as a core area. Many studies (Handfield et al. 2002; Van Bommel 2011; Ageron et al. 2012) recommended that the integration of sustainability is compulsory and essential for the healthy long term run and growth of any application sector. The sustainable supply chain considers three major pillars, namely social, economic and environment. However, the previous conventional and green supply chain only considers the economic and eco-efficient respectively, but the sustainable supply chain extends this perspective along with societal concern. Hence, various sustainable strategies are integrated into the supply chain like the integration of the triple bottom line (TBL), corporate social
responsibility (CSR), sustainable manufacturing, etc. In their management and operations. Among these sustainable strategies, CSR is the element which considered all dimensions of sustainability, hence it gained more attention in recent years (Pagell et al. 2008; Ageron et al. 2012). The detailed view of CSR is summarized in upcoming sections with its evolution over literature periods. Due to these sustainable impacts on the supply chain conventional supplier selection evolves to sustainable supplier selection.

1.2 SUPPLIER SELECTION

Even though the supply chain management includes many activities as discussed earlier, outsourcing is considered one of the tedious and complex processes among whole supply chain management. Many researchers admit this complexity in supplier selection in their studies. For instance, according to De Boer et al. (2001) the purchasing decisions are more important due to its significance and also the supplier has powers to damage the firm’s reputation among the customers and firm’s profit turnover and also represents the pictorial representation of the complexities in supplier selection which is shown in Figure 1.2. Zeydan et al. (2011) claims that selection of good supplier provides the significant difference in the improvement of the quality of the end products and also assists to reduce future operational costs and according to Weber et al. (1991) selection of wrong/irresponsible suppliers leads to operational and financial problems. Purchasing operations are not only a complex process for firms, but also for purchasing decision makers (Spekman 1988; Chakraborty et al. 2011). Also the efficient purchasing directly impacts on the quality, customer satisfaction, profitability and market share (Carter and Narasimhan 1994; Cheraghi et al. 2011). Many literature repeatedly addressed that the supplier selection process is more tedious mainly due to the major part of initial investments was made in the procurement process (Kumar et al. 2014). This is particularly true in the application sectors
like automobile, electrical and electronics, machinery & equipment components, etc. (Zeydan et al. 2011).

![Diagram](image)

**Figure 1.2** The Impact of development on the complexities of initial purchasing decisions (De Boer 1998; De Boer 2001)

Initially the supplier selection is called vendor selection process and the first vendor selection problem was analyzed by Dickson (1966), in which 23 criteria were framed to evaluate the supplier based on those criteria. In this research work, he had surveyed 30 commercial organizations and provided the findings in two various approaches, namely vendor selection practice by firms and vendor selection practices by individuals. From 23 criteria he had presented a group of common factors in supplier selection, which is shown in the Table 1.1 (cheraghi et al. 2011).
Table 1.1  Factor used in vendor rating system (Dickson 1966; Cheraghi et al. 2011)

<table>
<thead>
<tr>
<th>S. No</th>
<th>Criteria</th>
<th>Common Factor</th>
<th>Percentage of Systems Using the Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Quality</td>
<td>Quality</td>
<td>96.6</td>
</tr>
<tr>
<td>2</td>
<td>Delivery</td>
<td>Price</td>
<td>93.9</td>
</tr>
<tr>
<td>3</td>
<td>Performance history</td>
<td>Delivery</td>
<td>93.9</td>
</tr>
<tr>
<td>4</td>
<td>Warranties &amp; Claims Policies</td>
<td>Service</td>
<td>81.8</td>
</tr>
<tr>
<td>5</td>
<td>Production facilities and capacity</td>
<td>Technical Capability</td>
<td>63.6</td>
</tr>
<tr>
<td>6</td>
<td>Price</td>
<td>Financial Strength</td>
<td>51.5</td>
</tr>
<tr>
<td>7</td>
<td>Technical capability</td>
<td>Geographical Location</td>
<td>42.4</td>
</tr>
<tr>
<td>8</td>
<td>Financial position</td>
<td>Reputation</td>
<td>42.4</td>
</tr>
<tr>
<td>9</td>
<td>Procedural compliance</td>
<td>Reciprocal Arrangements</td>
<td>15.1</td>
</tr>
<tr>
<td>10</td>
<td>Communication system</td>
<td>Other Factors</td>
<td>12.1</td>
</tr>
<tr>
<td>11</td>
<td>Reputation and position in industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Desire for business</td>
<td></td>
<td></td>
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<tr>
<td>13</td>
<td>Management and organizations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Operating controls</td>
<td></td>
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</tr>
<tr>
<td>15</td>
<td>Repair service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Impression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Packaging ability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>The Labour relations record</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Geographical location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Amount of past business</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Training Aids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Reciprocal Arrangements</td>
<td></td>
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</tr>
</tbody>
</table>

Until 1990s, only these 23 criteria were considered for supplier selection, but these criteria only imply the economic value for the purchaser. But after the revolution of supply chain management, green considerations were integrated in the supply chain activities which are further called green supply chain management (GSCM). In this account the supplier selection
criteria were exceeded with green concerns. In the row, many studies (Srivastava 2007; Sarkis et al. 2011; Sarkis 2013; DiabatandKannanet al. 2011; Mathiyalagan et al. 2013; Muduli et al. 2013a; Govindan et al. 2013; Kannan et al. 2014a; Shen et al. 2013) discussed the criteria for green supplier selection and green supply chain management, which provide the healthier support for purchaser in both environment and economical concern. Many literatures (Gupta 1995; Welford and Gouldson 1993; Murphy and Gouldson 2000; Carter and Narasimhan 1996; Kuo et al. 2010; Dou et al. 2014; Deshmukh and Vasudevan 2014; Deshmukh and Sunnapwar 2013) support the integration of green considerations in SCM and sourcing operations with various frameworks. Even though green supplier selection provides many Eco efficient advantages, due to raising global societal issues and customer awareness, the conventional supplier selection and green supplier selection are not fit for tackling and meet the societal issues. Both strategies focus only on the environment and economical values, but limited with societal value & professional ethics. Societal consideration is a major issue for the firm’s growth and addressing these issues will provide a good fame in-front of stakeholders mainly including customers. Due to these considerations, recent researchers tend to shift their focus towards the path of sustainability integration in supplier selection, which is named as sustainable sourcing/ sustainable purchasing. Researchers like (Walton et al. 1998; Goebel et al. (2012); Pagell et al. (2010); Schneider and Wallenburg (2012); Walker et al. (2012); Ageron et al. 2012) investigated the sustainable sourcing and its impact of firm performance. Ageron et al. (2012) argued that the sustainable sourcing has a high positive correlation with the firm’s performance on both profitability and reputation standard. Due to these emerging needs and to meet the global sourcing standards, this study considers sustainability in supplier selection instead other supplier selection strategies.
1.3 CORPORATE SOCIAL RESPONSIBILITY

Corporate social responsibility is nothing but one of the sustainable strategies which recently gained more attention by researchers and practitioners. This CSR strategy mainly focuses on the financial performance (Orlitzky et al. 2003; Walsh et al. 2003), employee motivation (Maignment et al. 1999; Turban and Greening 1997) and customer perception (Brown and Dacin 1997; Handelman and Arnold 1999; Sen and Bhattacharya 2001) along with the impacts of CSR policies (Ingenbleek et al. 2007). In primitive days managers, consider only the economic value in their decision as per quote, “the only business of business is to do business” (Jonker and Witte 2006) but due to the pressures from various stakeholders which include both external and internal stakeholders, posed the managers to consider the ethical, moral, and social values in their decisions (Anderson 1989). Due to these consideration CSR became more significant in recent years (Filizoz and Fisne 2011; Cheng et al. 2014; Deng et al. 2013). Hence, due to these various potential benefits, the researchers and practitioners tend to focus on the implementation of CSR strategy. Along with these considerations the CSR has become a mandatory strategy in every organization. Even though there are many sustainable strategies exist in the current business realm such as triple bottom line (TBL), corporate citizenship (CC), corporate social performance (CSP), people, plant and profit (3ps), corporate responsibility (CR), social responsibility (SR) and business ethics (BE), cleaner production, corporate responsible investment (CRI) but still among these strategies, CSR is contemplated all dimensions of sustainability (Pagell et al., 2008; Ageron et al., 2012). Also CSR is a widely used terminology in contemporary business environment rather than other strategies (Yang and Guo, 2014) and according to Wood (1991) the CSR strategy includes all other sustainable strategies such as CC, CR and BR. With these considerations and vital importance of CSR as a sustainable strategy
over other, this paper sought to review the CSR as an umbrella term and its implementation strategies in various management applications

1.3.1 History and Evolution of CSR

The history of CSR has started since 1930s and it continually got revolute corresponding with time of modern globalization and industrialization trading. The history and evolution of CSR are detailed below.

1.3.1.1 Early 1930s

The concept of CSR was first coined by the two Harvard university professors, A.A Berle and C. G. Means in their book *The Modern Corporation and Private Property* in 1930 and Dodd (1932) in his “*For whom are corporate managers trustees?*”, in which they discussed the rights of shareholders, greater transparency, ownership and control (Sen 2011; Kannan et al. 2014b).

1.3.1.2 1950 to 1960

Even though the term CSR was coined in 1930, the first formal writing was encrypted by Bowen in his book *Social Responsibilities of the Businessman*. Most of the researchers agreed that the CSR concept is started from the Bowen, hence Bowen is called as ‘Father of Corporate Social responsibility’ (Carroll 1999). Still the 1950s period is considered as the modern era of corporate social responsibility. In addition to him, some prominent literatures (Davis, 1960; Frederick, 1960; McGuire, 1963) were started to avail of CSR in 1960s. But on this the rise of Friedman (1962) is a notable one.

1.3.1.3 1970 to 1980

During this year a number of publications of CSR and CSR based concepts were increased. In these literatures, the Committee for Economic
Development (1971) contributes the literature with a triple concentric model which is shown in Fig 1.3.

![Triple Concentric Model for CSR](image)

**Figure 1.3 CED model for CSR (Carroll, 1999; Sen et al. 2010)**

Apart from CED, many studies exhibit with the concern of CSR in this duration, for instance, Johnson (1971); Frederick (1978); Sethi (1975); Davis (1973); Steiner (1971); Manne and Wallich (1972); Eilber and parker (1973); Eells and Walton (1974); Ackerman and Bauer (1976); Carroll (1979). In the above studies, Carroll (1979) received many positive reviews from the critics and considered as one of the major literature of CSR over time. In 1980s, a very notable study was provided by Freeman in 1984 on his book named *Strategic management: A stakeholder approach*. It explained the importance of stakeholder and its interconnection with the CSR, which hiked the importance of CSR subsequently.

### 1.3.1.4 1990 to till date

Since 1990s to till date many researchers who engaged in the field of CSR and they who integrating these CSR strategies in many applications, including supply chain management, manufacturing, design, etc.
1.3.2 Definition

Even though the CSR strategies are well popular, still there is wide debate in the conceptualization and terminologies of CSR (Devinney 2009; McWilliams et al. 2006; Oberseder et al. 2013). For instance, According to the World Business Council for Sustainable Development (WBCSD) (2000), CSR is defined as “Corporate social responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as the local community and society at large”. But according to UK government, “Corporate social responsibility recognizes that the private sector’s wider commercial interests require it to manage its impact on society and the environment in the widest sense. This requires it to establish an appropriate dialogue or partnership with relevant stakeholders, employees, customers, investors, suppliers, or communities. CSR goes beyond legal obligations, involving voluntary, private sector-led engagement, which reflects the priorities and characteristics of each business, as well as sectoral and local factors”. Not only in the definition but also in the perspectives there is a conflict. For instance, the European Commission provides two definitions with the concern of perspective, in which the stakeholder perspective defined CSR as “a concept where companies decide voluntarily to contribute to a better society and cleaner environment” and in business perspective, it is defined as “a process by which companies manage relationships with various stakeholders who have an important influence on their license to operate”. Hence, many researchers are actively involved in the debate of these preliminaries of CSR. For instance, Dahlsrud (2008) listed thirty-seven definitions in literature, in addition to this, some other definitions of CSR exist in literature summarized in Annexure II. With the previous discussions it is clearly evident that every member practicing CSR has their own perspectives. In addition to this, there are lots of concepts underneath it like sustainable
development, business ethics, corporate social contract, corporate accountability to business in society, corporate citizenship, corporate governance, etc. (Kakabadse et al. 2005).

1.3.3 Approaches of CSR

After the integration of CSR in global history, many approaches are introduced with different perspectives. Even though many perspectives exist, mainly three perspectives gained more positive reception from researchers, namely, shareholder approach, stakeholder approach and Carroll’s pyramid of responsibility. Presently in India, four CSR model theory are exist namely, The ethical (Ghandian) model, The statist (Nehruvian) model, The liberal (Friedman) model and Stakeholder (Freeman) model. Among these four models, the stakeholder model is widely used in the Indian scenario (Kannan et al. 2014), because the stakeholder model is only term which fulfills the expectations of all members who are actively coordinating in CSR and in addition to that developing country like India faces lot of local communal problems, in this regard, the stakeholder model is the best solution.

1.3.3.1 Shareholder approach

Though the CSR gained positive reviews from critics, some controversies arose against the concept of CSR. In the criticism of CSR, this shareholder approach is a leading one, which was pioneered by Milton Friedman. According to him, “the social responsibility of business is to increase its profits” (Frey and Curz-Curz, 2009; Filizoz and Fisne 2011). From his point of view, spending for society is a waste of shareholder’s money (Friedman, 1970; Andrioif & McIntosh 2001; Larsen 2010). According to this theory, the only responsibility of the business and managers is to serve to increase the business economical profit of the firm (Friedman 1970; Carr 1968; Evans and Sawyer 2010). Implementation of the shareholder theory is
not good for the organization to stay in the long term market. Not considering the notions of the stakeholders will have a huge negative effect on the firm’s growth. Hence, to balance this situation, stakeholder theory was introduced.

1.3.3.2 Stakeholder approach

The stakeholder theory was pioneered by Freeman in 1984, and he stated that the firm should fulfil the expectations of the multi stakeholders of the firm and also need to get their suggestions in time of decision making. According to Freeman’s stakeholder theory, stakeholders are “any group or individual who can affect or is affected by the achievements of the firm’s objectives”. After the integration of stakeholder theory, the CSR gained more focus on both practitioners and researchers. Hence, this stakeholder theory is one of the milestones in CSR history. The basic purpose of this stakeholder theory is to identify “whether and why corporations attend to the interests of stakeholders along with their own immediate corporate interests” (Campbell 2007; Oberseder et al. 2013). In recent years, the legitimacy theory is considered the extreme version of the stakeholder theory (Cheers 2011).

1.3.3.3 Carroll’s pyramid of responsibility or societal view

Carroll constructs the CSR based on the four main constructs namely economic, legal, ethical and discretionary or philanthropic, (Carroll, 1991) which is called as Carroll’s pyramid of CSR which is shown in Figure 1.4.
This Carroll theory considers the most admitted and valuable theory of CSR by many authors (Meehan et al. 2006; Keinert 2008; Galbreath 2009; Geva 2008; Filizoz and Fisne 2011). According to Carroll, CSR is defined as “the social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time”. Previous theories mostly highlighted societal activities as mandatory acts, but this theory extends the scope from mandatory to voluntary through philanthropic and ethical activities.

1.3.4 CSR in SCM

As mentioned earlier, the CSR strategy is extended to supply chain management due to various pressures from various sources. Even though these pressures exist, the CSR implementation has many significant effects on supply chain management.

1.34.1 Significance and benefits of CSR in SCM

- CSR positively affects the firm’s supply chain performance (Preston and O’Bannon 1997; Ruf et al. 2001; Simpson and Kohers 2002; Gupta 2011)
• It helps to retain and attract higher quality employees ((Fombrun and Shanley 1990; Turban and Greening 1997; Gupta 2011)
• It provides the reputation and positive corporate image in front of all stakeholders(Aupperle et al. 1985; Simon 1995; Smith 1994; Smith and Stodghill 1994; Gupta 2011)
• Improves the customer motivation to go with the choice CSR practicing firm when the firm exceeds the customer expectations on their ethical behaviour (Creyer and Ross 1997)
• It provides greater local societal support which helps the firm to succeed to long run. ((Brown and Dacin 1997; Creyer and Ross 1997; Ellen et al. 2006; Murray and Vogel 1997; Sen and Bhattacharya 2001).
• It helps to maintain the good relation between the buyer and supplier which helps with the improved product quality which results in a healthier supply chain.
• CSR integration helps to achieve the full support of multi stakeholders by considering their opinion in the firm’s decision making
• Implementation of CSR strategy in the supply chain helps to tackle and withstand the risk which includes reputation risk and environmental risk.

1.3.5 CSR in Developing Countries Scenario

In the implementation of CSR practices, developed countries like US and EU outpace the developing nations due to various known and unknown means. For instance, in Europe the year 2005 was declared as the year of CSR across the countries (Jamali and Mirshak 2007), Similarly, in the UK, they have appointed a separate minister for CSR in the department of Industry and Commerce and in France they passed a bill against the CSR
reporting for the firm having more than 300 workers and the Danish
government supports the CSR through CSR research centres (Wanderleyet al.
2008). According to Baughn et al. (2007), the CSR practices have a direct
positive impact by economic development, but in contrast to this quote,
Lattemann et al. (2009) revealed that in addition to the economic
development, other factors like poor governance, less transparency,
government support also play a major role in CSR implementation (Wanderley
et al. 2008; Govindan et al. 2014b). Hence, these factors differentiate the CSR
implementation between the developed and developing scenarios. Many
studies (Jamali 2007; Wanderley et al. 2008; Lattemann et al. 2009; Govindan
et al. 2014b) revealed that the developer scenarios are still striving hard to
implement these sustainable strategies in their operations. In recent years, even
though studies are emerging in developing geography still there is a huge gap
between the virtual and literature realm. Generally in the recent contemporary
business environment developed nations outsourced from developing nations
because of the low labor wages compared to their markets. But many
developing nation’s firms couldn’t meet their standard expectations. Hence,
many firms were rejected from the supply chain network, which makes the
economic imbalance around the nations. With these considerations, this study
considered the developing scenario to explore the sustainability (CSR) issues
in the supply chain.

Many studies (Idowu and Filho 2009; Roome 2005; Larson 2010;
Govindan et al. 2014b) concluded that the impact and factors of CSR in one
country is not necessarily the same in other nations which implies the
statement “A lot size is not fit for all”. Hence, there is need to explore the
nations individually with the concern of CSR because every nation has its own
diversification, heritage and culture which makes the big question among the
generalization of implementation of CSR. Among the developing nations, this
study, particularly focuses on the Indian context where the CSR is more common. India is one of the developing nations which is next to China in human power. Many studies (Arevalo and Aravind 2011; Govindan et al. 2014b; Gupta 2014; Khanna and Gupta 2011; Verma 2011; Hussain 2014) repeatedly recommended that there is a huge need to address CSR related issues in Indian context. Hence, this study, considers the Indian scenario as a case origin.

1.4 MULTI CRITERIA DECISION MAKING (MCDM)

Selecting an appropriate supplier is a non-frivolous process in which multiple criteria are needed to specifically explore. According to Zeydan et al. (2011) both single and multi-optimization models are having comparative disadvantage with MCDM tools. Hence, they recommended the MCDM is the best option for the supplier selection problem. Due to these concerns, in this research, multi criteria decision making tools are used to analyze and evaluate the CSR issues. MCDM can balance with the long term issues, risk, complexities and uncertainties in the process and it is purely a structural framework which is used to analyze the characterized decision problems through complex multiple objectives (Zeleney 1984; Ananda and Herath 2009). In this study, MCDM tools, interpretive structural modelling (ISM) and Analytic hierarchy process (AHP) are used to analyze and evaluate the CSR issues in the supplier selection process. The information and introduction of the ISM and AHP is detailed in the corresponding upcoming sections.

1.5 DISSERTATION OBJECTIVES

The main objective of this research is to integrate sustainability in supply chain management through CSR. As mentioned earlier, supplier selection plays a vital role in supply chain management. Hence this research
selected this supplier selection process to integrate CSR. As a part of integration, this research, analyses the interrelationship and interdependencies among the common CSR issues, and finally these CSR issues are evaluated to identify their priority and ranking among one another. With the assistance of this ranking and priority of the CSR issues, the purchasing manager can select their supplier with the concern of CSR. In order to achieve this aim, a model framework is proposed, which is shown in Figure 1.5. The framework includes all the steps of the research which help to achieve the above-mentioned aim which is validated through different application industrial sector case studies. According to the proposed framework, the common CSR issues are collected from existing literature and opinions from technical experts (including field and industrial experts). Then the collected common CSR issues are analyzed and evaluated with the assistance of ISM and AHP respectively, in order to avoid uncertainties and vagueness in results. Further, the CSR issues are analyzed with fuzzy approach. Finally, the results are validated with the assistance of literature and cases of industrial manager’s feedback.
**Goal:** To analyse the CSR issues and their independencies in supplier selection process under uncertainty

![Diagram showing the research framework](image)

**Figure 1.5 The Research framework for the study**

This research aims to focus on below mentioned objectives.

- To shed light on the advantages of firms’ integrating CSR practices in the supply chain process, especially within an Indian context.
- To identify and collect the common CSR issues from a review of literature, experts’ opinions, and from experienced technical experts.
• To propose a model framework to analyze CSR issues along with the assistance of MCDM tools through the input of case industrial managers.

• To apply the proposed framework to South Indian firms in different application field sectors and to identify an essential CSR issue by which the best supplier based on those respective sectors might be selected.

• To pursue whether the essential issues and interrelationships between the CSR issues obtained from the study were validated by the feedback of experts, industrial managers, and finally to compare these results to existing literature.

1.6 ORGANIZATION OF THESIS

Chapter 1 provides the preliminary knowledge of the basic concepts such as SCM, CSR, sustainability, and so forth. It also reveals the need for the study and establishes why this study is especially important in an Indian context. Finally, it presents the core objectives of research and gives the organization of the thesis.

Chapter 2 presents the overview of the existing literature in supply chain management along with the consideration of CSR integration. This review also provides the status of CSR in an Indian scenario. This chapter explores more in-depth insights on CSR effects in supply chain, and finally ends with observations that are combined with the existing literature gap.

Chapter 3 presents a modeling and analysis of interactions among the criteria and sub-criteria of CSR issues in supply chain environments, especially those related to the supplier selection process using Interpretive Structural Modeling (ISM).
Chapter 4 presents a hierarchy structured Multi Criteria Decision Making (MCDM) model for evaluating and prioritizing the most influential and essential CSR issues during supplier selection using Analytical Hierarchy Process (AHP). The proposed model is illustrated and validated with the assistance of case study.

Chapter 5 presents a hierarchy structured model for prioritizing and selection of essential CSR issues in supplier selection using Fuzzy AHP under uncertainties. The effectiveness of the model is illustrated using a case study.

Chapter 6 highlights the major contributions of research under the considered scope. Finally, this chapter ends with the study’s own limitations and sheds light on future enhancements in CSR-based supply chain activities.

The reference of the literature relevant to the research study reported in this thesis is included towards the end.