



## Four forces of supply chain social sustainability adoption in emerging economies



Venkatesh Mani<sup>a</sup>, Angappa Gunasekaran<sup>b,\*</sup>

<sup>a</sup> Montpellier Business School, 2300, Avenue des Moulins, 34185 Montpellier Cedex 4, France

<sup>b</sup> School of Business and Public Administration, California State University - Bakersfield, 9001 Stockdale Highway, Bakersfield, CA, 93311-1022, USA

### ARTICLE INFO

#### Keywords:

Social sustainability  
Emerging economy  
Sustainability  
Institutional mechanisms  
Structural equation modeling

### ABSTRACT

Despite the growing stakeholder awareness on social sustainability issues, little is known about what influences firms to adopt social sustainability in their supply chain management practices and the benefits gained from such efforts. This is especially true for emerging economies in Asia and Southwestern Europe, where the social norms differ significantly. Building on stakeholder's and institutional perspectives, we address the issue by exploring how pressures from customers, sustainability culture, government, and external stakeholders act as primary constituents of the firm in determining the extent to which firm consider supply chain social sustainability adoption in emerging economies. Further, we explore how such social sustainability adoption relates to the firm supplier's social performance, the buyer's operational performance and the buying firm's social reputation. We test the hypothesized model empirically using data from 244 Indian and 126 Portuguese firms. Our results are consistent with the hypothesized model; all factors show significant influence and positive links with the firm's benefits.

### 1. Introduction

Concerns about social sustainability have grown significantly during the last two decades. This is mainly because of increased awareness among stakeholders of the impact of corporate actions that leave behind many unattended social issues. This is especially true in developing economies where the society is still evolving its governance mechanisms. Recently, social sustainability has been gaining attention among scholars and practitioners, and significant academic literature has also emerged around it (Klassen and Vereecke, 2012; Ehrgott et al., 2011; Yawar and Seuring, 2015; Sancha et al., 2016). However, little theoretical attention has been paid to understanding what makes corporations act in a socially sustainable way (Ehrgott et al., 2011).

In the literature, although scholars made significant progress in this direction, all efforts were directed toward a developed economy perspective (Yawar and Seuring, 2015). The research on supply chain social sustainability from a developing economy perspective is still in its infancy (Yawar and Seuring, 2015; Mani et al., 2016a, b). On the other hand, supply chain issues vary from developed economies to developing economies as they evolve based on society (Gugler and Shi, 2009). Most of the previous studies concerning social sustainability issues in emerging economies apply a case study approach (Andersen and Skjoett-Larsen,

2009; Tate et al., 2010) or provide a descriptive overview of the social management capabilities of the focal companies (Huq et al., 2016). Others emphasize the responsibility of the purchasing managers in social sustainability adoption via purchasing social responsibility (PSR) (Carter and Jennings, 2004) and logistics social responsibility (LSR) (Ciliberti et al., 2008a,b) in a more standalone fashion that focuses on issues in the upstream supply chain. However, scholars emphasize studies that use all stages of the supply chain to explore social issues and how they impact the focal company's performance (Klassen and Vereecke, 2012). At the same time, others explore literature into what social issues are and how they can be defined (Wood, 1991; Yawar and Seuring, 2015; Mani et al., 2016b).

However, empirical studies of specific drivers and outcomes of social sustainability adoption from an emerging economic perspective are still rare. Scholars acknowledge the need for studies in emerging economies, so as to generalize the findings for theory and practice (Ehrgott et al., 2011; Yawar and Seuring, 2015). To fill this void, we apply stakeholder theory and institutional mechanisms to demonstrate the social sustainability adoption behavior of firms in two emerging economies. Companies are considered to adopt supply chain social sustainability with two different kinds of motivations. Some companies believe that, by virtue of having maintained good relationship with stakeholders, it helps in

\* Corresponding author.

E-mail addresses: [m.venkatesh@montpellier-bs.com](mailto:m.venkatesh@montpellier-bs.com) (V. Mani), [agunasekaran@csub.edu](mailto:agunasekaran@csub.edu) (A. Gunasekaran).

increased financial returns (stakeholder management capabilities) (Sodhi, 2015; Branco and Rodrigues, 2008). Others engage in social sustainability adoption to conform to stakeholders' (government and other external stakeholders) norms and expectations about how operations should be conducted, thus constituting mainly institutional and legitimacy mechanisms to demonstrate the firm's adherence to norms and expectations (Campbell, 2007). Both motivations are considered to be a source of competitive advantage that helps to differentiate a company from its competitors.

Whereas the first kind of motivation can be explored through stakeholders' perspectives (Stieb, 2009; Sodhi, 2015), which state that primary stakeholders (suppliers, employees, community, and customers) are actors who directly influence the firm's actions and behaviors, similarly, secondary stakeholders influence the firms through primary stakeholders' (non-governmental organizations) actions (Agle et al., 2008; Sodhi, 2015). The second kind is consistent with institutional theory and legitimacy explanations that describe how a firm's actions are influenced by external social, political, and economic pressures as firms seek to adopt legitimate practices. Further, institutional perspectives accentuate focus on the role of conformity, social, and regulatory pressures in driving a firm's actions (Jennings and Zandbergen, 1995; Westphal et al., 1997).

In the literature, the application of institutional mechanism theory is still at a comparatively young age. While the extant literature has identified many forces using resource-based perspectives and found resource dependence view to be most salient in that context (Carter and Jennings, 2004; Ehr Gott et al., 2011; Sancha et al., 2016), little research exists in emerging economies on the specific influence of institutional mechanisms on supply chain social sustainability adoption. Others acknowledge this view (Maignan and Ralston, 2002) and complain, in particular, that we need to pay much more attention to the institutional mechanisms that may influence whether firms adopt supply chain social sustainability or not and the possible outcomes of such adoption practices. This paper attempts to fill this theoretical void by exploring a broad set of stakeholders' and institutional conditions under which supply chain social sustainability adoption is likely to take place.

Our study addresses this void by examining two research questions: First, what are the different forces that influence supply chain social sustainability (SCSS) adoption in emerging economies? Second, what are the benefits gained by the firms by adopting social sustainability in their supply chains with regard to a. their supplier's social performance, b. buying firm's operational performance, and c. the buyer's reputation? Third, is there any positive relationship among potential outcomes? For this purpose, we conceptualize supply chain social sustainability adoption as the management of social issues pertaining to product and process aspects in the whole supply chain that invariably affect the safety, health, and welfare of the people in emerging economies. Thus we follow the approach suggested by Wood (1991), Carter and Jennings (2004), and Mani et al. (2016a).

Based on our research questions, we develop a theoretical model that we subsequently validate with a sample of 224 Indian and 126 Portuguese manufacturing firms. The choice of two emerging economies (Europe and Asia) was based on the distinct characteristics of these developing economies. Portugal is the least developed country in the Euro area, and it presents specific corporate structures, governing systems, and institutional mechanisms (Branco and Rodrigues, 2008). Similarly, India is one of the fastest-growing economies in the Asian region, with a different set of social characteristics. Many scholars also acknowledge the need for social sustainability research exploration in different social settings in the institutional framework (Doh and Guay, 2006; Ehr Gott et al., 2011).

The paper is organized as follows: Section 2 provides the literature on supply chain social sustainability and theoretical perspective. Section 3 describes hypothesis development. Next, we provide methodology in section 4, followed by results and analysis, presented in section 5. In section 6, we provide discussions, and finally, we highlight the main

conclusions and implications in section 7.

## 2. Supply chain social sustainability (SCSS)

The term social sustainability, in the supply chain perspective, is defined as the product and process aspects that affect the people's safety and welfare (Wood, 1991). Building on a resource-based view (RBV) that emphasizes possession of rare and inimitable resources that cannot be easily copied by others to give the firm a strategic advantage, Carter and Jennings (2004) demonstrate the firm's ability to build such resources in the upstream supply chain and develop competitive advantage through purchasing social responsibility (PSR). Similarly, Mani et al. (2016a) extend this definition, with the help of stakeholder's resource-based view (SRBV) (Sodhi, 2015), as supply chain social sustainability (SCSS), which describes the management of social issues such as equity, safety and health, product responsibility, human rights, and philanthropy throughout the supply chain. Study of social sustainability is becoming inevitable in the supply chain literature because firms need to operate in a responsible manner and take care of employees' health and safety (Kleindorfer et al., 2005). Others discuss the responsibility of the firm in protecting employees' working conditions for achieving social sustainability (Pagell and Gobeli, 2009).

In supply chain literature, social sustainability so far was limited to buyer-supplier relationships that have implications on social and ethical issues in the supply chain (Yawar and Seuring, 2015), except for recent studies that cover social sustainability in all stages of the supply chain (Pagell and Wu, 2009; Mani et al., 2016a). This relationship in the upstream supply chain was termed socially responsible purchasing (SRP), which includes social issues in purchasing decisions advocated by organizational stakeholders (Maignan et al., 2002). SRP comprises issues including human rights, safety, diversity, philanthropy, community (Carter and Jennings, 2004; Yawar and Seuring, 2015), worker's conditions, and reputation (De Giovanni, 2012; Golini et al., 2014; Gualandris et al., 2014).

However, social sustainability adoption in the supply chain requires systematic practices, including developing internal policies, setting up purchasing criteria that regard social issues, and managing supplier relations and collaborations (Sancha et al., 2016). A few authors state many enabling factors that assist the firm in the adoption of social sustainability practices. For instance, Gimenez and Tachizawa (2012) identify most of the studies that suggest internal enablers of the organization. Others, based on institutional theory (DiMaggio and Powell, 1983; Scott, 2007), describe how external pressures coming from the environment influence social sustainability adoption (Hirsch, 1975). Further, Gimenez and Tachizawa (2012) point out the limited literature surrounding enabling governing mechanisms with respect to social sustainability, and also state that the majority of them are case-study-based. Recently, Ehr Gott et al. (2011) through stakeholder theory (Stieb, 2009; Frooman, 1999) identify forces such as customer social pressure, government social pressure, and intensity of middle management pressure in social sustainability adoption in upstream supply chain. Others, using institutional theory, prove the importance of coercive, normative, and mimetic pressures and how they help in achieving social sustainability (Sancha et al., 2015). However, the studies using institutional and stakeholder's perspective on enabling mechanisms that help in achieving social sustainability adoption in developing nations are scant (Gimenez and Tachizawa, 2012). This is especially true with the studies on cross-cultural perspective.

### 2.1. Theoretical perspective

We apply the theoretical underpinnings of stakeholder theory, institutional theory and legitimacy theory to explain how different forces influence social sustainability adoption in emerging economies. Stakeholder theory has been used to investigate corporate sustainability efforts that underscore the fundamental idea behind the concept of sustainable

conduct (Clarkson, 1995; McWilliams et al., 2006). Stakeholders and community are of prime importance for the corporations to achieve long-term prosperity and survival (Heath, 2006; Stieb, 2009). The concept of stakeholder theory is to see the firm's constituents beyond the direct representatives and shareholders. Stakeholder's view also states that "primary stakeholders are actors who directly influence the company (e.g., suppliers, employees, community residents, and customers); similarly, secondary stakeholders can affect the firms through influence on the primary stakeholders (e.g., nongovernmental organizations)" (Agle et al., 2008). Further, Clarkson (1995) argues that the public stakeholders group comprises governments and communities that provide infrastructure to markets whose regulations and laws must be obeyed. All these stakeholders play a vital role in exerting pressure on firms to behave sustainably (Hillman and Keim, 2001). Ehr Gott et al. (2011), through the theoretical underpinning of stakeholder theory, demonstrate various stakeholders' pressures, including customers, government, middle management, mimetic, coercive, and normative (Sancha et al., 2015) for supply chain social sustainability adoption.

On the other hand, institutional theory provides a theoretical lens through which a researcher can identify and examine influences that promote the survival and legitimacy of the organizational practices, which includes social environment, culture, regulations (legal environment), and economic incentives (Hirsch, 1975). Institutional theory further assumes that individuals are motivated to comply with social pressures. Additionally, scholars are interested in how organizational structures and processes become institutionalized over time (Scott, 2007; Glover et al., 2014). Institutionalized activities are those actions that tend to be socially accepted, enduring, and resistant to change and may not be reliant on monitoring and rewards for their persistence (Oliver, 1991). Further, DiMaggio and Powell (1983) state that the term "legitimacy" refers to the adoption of sustainable practices seen by stakeholders as being proper and appropriate. Institutional theory refers to how groups and firms better secure their positions and legitimacy through conforming to various rules, including regulatory structures, government agencies, laws, courts, and other societal and cultural practices that exert conformance pressures (Scott, 2007). Thus, institutional perspectives emphasize the focus on the role of conformity, social, and regulatory pressures in driving the organization's actions (Westphal et al., 1997). In the past, many scholars made use of institutional theory in green supply chain management research; for example, Wu et al. (2012) in the Taiwanese textile industry and Ageron et al. (2012) through sustainable supply chain management practices identified internal and external drivers of SSCM. However, the research on the application of institutional theory in social sustainability adoption in the supply chain is scant.

We apply the theoretical underpinnings of the institutional perspective of legitimacy theory, which refers to the firm's acceptance that depends on the social environment and external constituents. To achieve social legitimacy, companies consider the expectations of various social elements in their actions. Social legitimacy theory assumes that corporations are embedded in the social setting in which they operate, and their expectations and performance are affected by the environment. This interface determines the firm's success and survival. Thus, firms are expected to display their legitimacy in actions that are consistent with the social environment (Zimmerman and Zeitz, 2002). From this perspective, corporations use social sustainability as one of their strategies to seek acceptance and approval from society. Legitimacy theory suggests that social sustainability provides an important path to communicate and convince stakeholders that the company is fulfilling their expectations. Legitimacy theory in fact implies the firm's conformity to the stakeholders' pressures to achieve growth and survival through its social conduct and legitimate actions (Branco and Rodrigues, 2008). Applying the theoretical lens of institutional and legitimacy perspectives, Branco and Rodrigues (2008) prove various stakeholder pressures that act as enablers to social sustainability disclosures in Portuguese companies.

### 3. Hypothesis development

The literature frequently refers to the role that social sustainability aspects, including employee safety, working conditions, health, and labor rights, play in customer purchasing decisions (Yawar and Seuring, 2015). Customer pressures happen to come in two forms. First, the buying organizations exert pressure for socially sustainable business practices in the supplier locations. These organizations integrate socially sustainable purchasing norms in their buying decisions that pave the way for sustainability adoption in the upstream supply chain (Carter and Jennings, 2004). On the other end, pressure from the consumers may force the firms to align with socially responsible initiatives. Otherwise, consumers may boycott the product and may decide to buy from firms that are environmentally and socially friendly rather than from firms that are not (Brown and Dacin, 1997). According to stakeholder theory, Stieb (2009) and Sodhi (2015) argue that there are different stakeholders, including suppliers, customers, society, and government, in the supply chain, and that the focal company has the responsibility to develop and possess the intangible resources (people) through supplier integration, development, and monitoring (Sancha et al., 2015; Klassen and Vereecke, 2012) by effectively addressing social issues. These resources in turn give the focal company a strategic advantage.

Social issues are dynamic, contextual, and time dependent and vary significantly between developed and emerging economies. Additionally, governing structures and enabling mechanisms are found to diverge based on social norms (Yawar and Seuring, 2015). For instance, Ciliberti et al. (2008a) identify social sustainability adoption mechanisms in SME's and emphasize that lack of customer interest acts as a barrier in social sustainability adoption. This implies an important role for customer interest in enabling supply chain social sustainability in developed countries. Similarly, Ehr Gott et al. (2011), building on stakeholder perspective, identify customer pressure as an important factor for enabling social sustainability, and Branco and Rodrigues (2008) prove that customers, as part of the important stakeholders group, play a vital role in enacting social sustainability disclosures. However, an understanding of the social responsibility of business in different regions and countries is contingent on the institutional framework of business (Doh and Guay, 2006). Hence, we hypothesize:

**H1.** *Customer social pressures play a positive role in supply chain social sustainability adoption in emerging economies.*

Sustainability culture can be referred to as the company's recognition of the need to minimize the impact of the firm's activities on its society and communities, which translates into a philosophy and values that drive the decision-making process of the organization (Pagell and Wu, 2009). Values that embed sustainability issues are key in developing a firm's sustainable culture. The sustainable culture of the organization is reflected in the practices adopted (Pagell and Wu, 2009). Most empirical studies found that organizations with sustainable cultures are more likely to adopt sustainability practices beyond regulatory pressures (Pagell and Wu, 2009). However, research on supply chain social sustainability is generally lacking (Marshall et al., 2015), except for a few studies that explore the Western perspective; for example, Weaver et al. (1999) found that social sustainability culture led to the implementation of ethical programs, while pressure from outside firms (institutional pressure) led to resistance and showboating. Others in the U.S. found linkages between organizational culture and purchasing social responsibility (PSR) adoption in upstream supply chains (Carter and Jennings, 2004; Pagell and Wu, 2009). This implies that institutional pressure alone may not be enough to explain the adoption of supply chain social sustainability. Thus, once the firm has developed a sustainability management culture, it is likely to engage in implementing its own sustainability practices within its organization (Linnenluecke and Griffiths, 2010).

Recently, Marshall et al. (2015) classify social sustainability adoption practices into basic social sustainability practices, which refers to safety, welfare, and health, and innovative social sustainability practices, which

refers to product- and process-related aspects. They further assert that institutionalized pressures play a key role in the adoption of basic social sustainability practices, whereas organizational culture plays an important role in advancing social sustainability practice (product and process) adoption in Ireland.

However, the available literature focuses mainly on a holistic perspective of sustainability adoption driven by organizational culture encompassing all three dimensions, more often emphasizing green and environment (Bansal, 2005; Pagell and Wu, 2009) from a Western perspective. Although studies exploring the antecedents of supply chain social sustainability management were scant, research shows that adoption of supply chain social sustainability practices follows from similar enabling factors to environmental practices (Pagell and Wu, 2009). Additionally, scholars advocate further exploration on emerging economy perspectives, as the social norms differ among regions. Thus, we hypothesize:

**H2.** *Sustainability culture is positively associated with supply chain social sustainability adoption in emerging economies.*

Regulatory compliance refers to the pressure exerted by the regulatory authorities for the companies to behave in socially responsible ways. These pressures take the form of legal frameworks, compliance mechanisms, and government certifications in the country where a firm operates. In the changing global business environment, it is necessary to understand how plants located in different regions might be subject to different external pressures and to adopt sustainable practices. For example, the European Union's Regulation on Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) framework aims to improve the protection of human health and the environment from the risks that may result from chemical usage (European Commission, 2017). Similarly, the Canadian government's Occupational Health and Safety Act (OHSA) imposes labor standards and duties on companies and suppliers, among others. In developing countries such as India, the Food Safety and Standards Authority of India's (FSSAI) stringent regulations ensure that companies adopt food safety practices and standards. Scholars endorsing regulatory compliance proved how safety and health administrations' supervision on workplace safety in packing plants improve occupational safety (Campbell, 2007). Drawing from institutional perspective, Campbell (2007) asserts that corporations tend to behave more responsibly with respect to social sustainability adoption if there is strong and well-enforced state legislation in place to ensure such behavior.

DiMaggio and Powell (1983), using the tenants of institutional theory, propose three institutional drivers: coercive, normative, and mimetic pressures. Coercive drivers are said to be a key element in exerting pressure to adopt sustainability-oriented practices (Zhu et al., 2013). They are otherwise defined as influence exerted by those who are in power, such as governments (Sancha et al., 2015). Conforming to the theoretical lens of institutional perspective, Sancha et al. (2015), through their research into global corporations in both Western and developing economies, argue that coercive (regulatory mechanism) and normative pressures do not exert a significant positive effect on social sustainability adoption. Similar contrary results have been achieved in the U.S. by Ehr Gott et al. (2011), and Carter and Jennings (2004) suggest that regulatory mechanisms do not positively influence social sustainability adoption. These results are attributed to regulatory pressures instigating more of a reactive strategy by the corporation than a proactive one. As the literature suggest mixed outcomes, and the literature so far has mainly focused on standalone supplier issues (Carter and Jennings, 2004; Ehr Gott et al., 2011; Sancha et al., 2015) and variations in institutional mechanisms in developing nations, we propose our hypothesis:

**H3.** *In developing economies, regulatory compliance positively influences social sustainability adoption.*

The role of external stakeholders in supply chain social sustainability adoption has been advocated by many scholars (Campbell, 2007; Bansal,

2005). Similarly, scholars, with the help of stakeholder theory and corporate social responsibility, point out that the monitoring of corporate performance by stakeholders is an important factor that increases the likelihood of corporations to behave in socially responsible ways (Mitchell et al., 1997; Aguilera and Jackson, 2003). For instance, one can find from media reports of corporate giant Nestlé's story of excessive lead content in "maagi" products in India, the implication that the power of media and non-governmental organizations in emerging economies influenced the corporation to mend its ways and adopt social sustainability practices (BBC News, 2017). Campbell (2007), building on institutional perspective, advocates that firms are embedded in a broad set of political and economic institutions that affect their behavior. He further asserts the importance of social organizations, NGO's, and media in social sustainability adoption.

According to Porter and Kramer (2002), social organization pressures mainly act as an important factor in social sustainability disclosure mechanisms in developing nations. They further describe how the "International Corporate Governance Network" (a social organization) was responsible for pressuring firms into social sustainability adoption. Social activists' and NGO's' actions vary, including organizing demonstrations, appealing directly to the firms, pressing local governments, and organizing media campaigns (Martin, 2002). Other stakeholders include the media, whose reporting on a firm's wrongdoings to both the public and government officials is vital in enacting corporate governance mechanisms, especially social sustainability (Kjaer and Langer, 2005). According to Bansal (2005), media can play an important role in organizing social movements and exposing wrongdoings. By doing so, it becomes an integral part of the institution-building process, determining the norms of legitimate and acceptable sustainable development practices. However, empirical research linking external stakeholders to social sustainability adoption in emerging economies is scant, and scholars acknowledge a need for further research in this direction (Bansal, 2005).

**H4.** *External stakeholder pressures positively influence social sustainability adoption.*

## 4. Outcomes of social sustainability adoption

### 4.1. Supplier's social performance

In the literature, the research on social sustainability so far focuses predominantly on supplier social issues and their impact on supply chain performance (Wolf, 2014; Sancha et al., 2015; Carter and Jennings, 2004) from a Western perspective. Scholars, while emphasizing sustainability, considered for investigation issues relevant to upstream supply chain (suppliers). This could be because of the supplier organizations spread across different geographic boundaries and how their actions were significantly impacting the buyers (Klassen and Vereecke, 2012). Thus, the social issues in the supplier locations first impact the supplier's social and operational performance, while at the same time affecting buyer's performance (Lee, 2016). Anisul Huq et al., 2014, in their case study research, demonstrated the positive supplier outcomes of adopting social sustainability, including productivity and high rate of staff retention. By incorporating social sustainability practices, suppliers become more "compliant factories" and have better bargaining power to negotiate with buyers than non-compliant ones (Anisul Huq et al., 2014). Others also found similar positive supplier performance results by incorporating socially sustainable manufacturing practices (Lee, 2016; Carter and Jennings, 2004; Pullman et al., 2009) in Western countries.

Better management of social sustainability issues related to product responsibility (unethical practices) can provide better performance incentives for suppliers in emerging economies (Lu et al., 2012). According to Lee (2016), buyers, through their responsible supply chain management actions, including commitment, help in the supplier's social and operational performance in emerging economies. They further state that in Vietnam and South Korea, although each has different social and

cultural settings, the research proves similar performance benefits for the suppliers. Further, Mani et al. (2016b), building on stakeholder's resource-based view, unearthed supply chain social issues, including diversity, wages, health and safety, working conditions, and labor rights, and demonstrated how they can be managed in supplier locations to achieve supplier performance and buyer supply chain performance. However, this was a qualitative study with a small sample size, and they acknowledge the need for future research to validate these outcomes. Thus, we hypothesize:

**H5.** *In emerging economies, social sustainability practices are positively linked to supplier's social performance.*

#### 4.2. Mediating role of supplier's social performance

The adoption of social sustainability manufacturing practices in the supply chain results in tangible performance outcomes for firms (Sancha et al., 2015). Buyer's operational performance refers to the purchasing company's efficacy, including lead time, product and service quality, reliability, innovativeness, and security of supply (Gonzalez-Benito, 2007). The implementation of supply chain social sustainability practices often leads to process innovation, and such innovative behavior of the employees creates greater organizational support (Yuan and Woodman, 2010). Others point out that purchasing social responsibility (PSR) practices lead to better learning outcomes, and learning, in turn, results in better operational performance of the buying organization (Carter and Jennings, 2004).

Stakeholder's perspective advocates that better stakeholder management positively impacts the key relationships that the organization has with individuals and other organizations. This includes creating firm resources and lowering transaction costs (Williamson, 2008). As the supply chain predominantly deals with inter-organizational resources, developing and nurturing these resources benefits the focal company in its operations (Hollos et al., 2012). According to Pagell et al. (2010), social sustainability practices help in creating a better-educated workforce, superior wages, and working conditions that increase employee motivations. The outcomes of such practices improve the supplier's product quality, lead time, and reliability (Yuan and Woodman, 2010) and reduce risk, which enhances the buyer's operational performance (Klassen and Vereecke, 2012). Gualandris et al. (2014) and Sancha et al. (2015) found that the implementation of social sustainability practices in the supply chain leads to improvements in the sustainability performance of the buying firms through supplier social performance. However, Hollos et al. (2012) found no such relationship between managing social issues and operational performance in Western Europe. The literature suggests mixed results of both positive and negative in Western economies. Thus based on the previous arguments, we explore these relationships in emerging economies.

**H6.** *The buyer's operational performance is positively mediated by the supplier's social performance.*

#### 4.3. Buyer's social reputation

Reputation is "a collective representation of a firm's past actions and results that describes the firm's ability to deliver valued outcomes to multiple stakeholders" (Fombrun and Shanley, 1990). Reputations are inertial, which implies that maintaining a good reputation by fulfilling stakeholder's social needs not only helps in building legitimacy to the stakeholders but also helps to withstand future reputation shocks (Deephouse and Carter, 2005). Supply chain social issues put the focal company at severe reputational risk, and it is important to manage and mitigate such issues to avoid sustainable risk (Klassen and Vereecke, 2012). For example, the working conditions and low wages of IKEA's truck drivers were questioned by the stakeholders, which led to massive reputational loss.

This proposition is supported by literature that confirms social

sustainability issues not only affect the social performance but also impact the reputation of the focal firm (Sancha et al., 2016). The literature further asserts that with a supplier's improved working conditions and compliance with child labor and human rights, the social reputation of the buying firm will improve. At the same time, the buying firm will also be able to improve social performance through social reputation (Sancha et al., 2016). Similarly, empirical research by Gimenez et al. (2012) proves that implementation of a supplier's cooperation activities contributes to the social reputation of the buying firm. Others found that supply chain social sustainability practices (monitoring) lead to improvements in the buying firm's sustainability performance, measured as reputation and employee's satisfaction (Gualandris et al., 2014). Thus, we believe, social sustainability issues significantly affect the reputation and social performance of the organization. We hypothesize:

**H7.** *In developing economies, the implementation of social sustainability activities is positively linked to the buyer's reputation.*

**H8.** *In developing nations, the buyer's operational performance is positively linked to the focal company's social reputation.*

## 5. Methodology

### 5.1. Instrument development

To test our empirical model, we employed the mail survey method to collect the data. The questionnaire development involved a stepwise procedure for item generation, as recommended by Churchill (1979). We performed an extensive literature review to identify the extant studies that serve as relevant points of reference. However, there were no established measurement instruments that suited our study purpose without changes. Thus, adaptations were essential to account for the emerging economy perspective of this research. We used the existing constructs and measures wherever possible (Table 1), with small modifications as suggested by an expert panel to match our purpose of study. We adapted a customer social pressure construct earlier operationalized by Ehgott et al. (2011) and Gualandris and Kalchschmidt (2014). To operationalize the influence of sustainability culture in sustainability adoption, items were based on Carter and Jennings (2004) and Marshall et al. (2015). To measure how regulatory compliance influences supply chain social sustainability adoption, items were from Ehgott et al. (2011) and Sancha et al. (2015). Similarly, the scale items used for external stakeholder pressure was developed through a comprehensive review of the literature as well as interviews and pretests with sustainability experts, supply chain practitioners, and academics, as discussed below.

The literature suggests that SCSS adoption results in various performance outcomes, including supplier social performance, buyer's operational performance, and buyer's reputation (Fig. 1). We measured supplier social performance using an adapted scale from Sancha et al. (2016), buying firm's operational performance based on an instrument from Hollos et al. (2012) and Lee (2016), and buyer firm's reputation from Ehgott et al. (2011) and Sancha et al. (2016). Based on these measurement scales (Appendix 1), the survey instrument was developed. We constituted an expert panel that consisted of ten practitioners, four scholars in the area of sustainability, and academics from elite business schools from Portugal and India. As part of the pretest (face validity) with the practitioners, we also confirmed the practitioner's ability to respond knowledgeably to the questions covered in the instrument. Based on their reviews, a few items were reworded or deleted through a series of iterations to ensure the respondents' clarity. Also in the course of these pretests, we used a double translation protocol approach in developing the questionnaire, as suggested by Hsu et al. (2013). The questionnaire was first developed in English and was then translated into Portuguese. After the translation, we presented the questionnaire to the expert panel for suggestions and modifications in survey items. Then, the Portuguese version was translated into English. There was no significant difference

found between two English versions. We further performed scale purification using confirmatory factor analysis (CFA).

## 5.2. Data collection and response

As the research phenomenon is to investigate supply chain social sustainability in the manufacturing industries, we used the Centre for Monitoring of Indian Economy (CMIE) for India and Amadeus database for Portugal. Both are authentic and easily available for academic purposes. The whole process was performed in two steps. First, Indian manufacturing companies were chosen based on two criteria: companies with minimum revenues exceeding one billion INR, and that have been in business for over 10 years in India. These criteria were applied to ensure that firms have sufficient knowledge of sustainability practices, as the previous research suggested that companies with less revenue have the least interest in sustainability practices (Mani et al., 2016a). The questionnaire was sent to 1200 Indian manufacturing companies from our sample frame. The questionnaire was personally addressed to the supply chain managers, sustainability experts, and heads of CSR with the short note on supply chain social sustainability. The survey in India was carried out from August 2015 to December 2015. Second, in order to understand the forces influencing SCSS in a cross-cultural perspective, we identified 221 manufacturing companies from the Amadeus database in Portugal. We applied similar criteria to get the eligible firms as applied to the Indian database. Additional criteria, such as “firms with valid email IDs,”

**Table 1**  
Constructs and definitions.

Construct name	Definition	Source
Customer social pressure	Refers to the pressures exerted by the buying organizations for socially sustainable business practices in the supplier locations.	Gualandris and Kalchschmidt (2014), Ehrgott et al. (2011)
Sustainability culture	Refers to the company's recognition of the need to minimize the impact of the firm's activities on society and communities, which translates into a philosophy and values that drive the decision-making process of the organization.	Marshall et al. (2015), Carter and Jennings (2004), Pagell and Wu (2009)
Regulatory compliance	Refers to the pressure exerted by the regulatory authorities for the companies to behave socially responsible ways.	Ehrgott et al. (2011), Sancha et al. (2015)
External stakeholders pressure	Refers to the pressures exerted by the media, social organizations, social activists, and NGO's for social sustainability business practices.	Bansal (2005), Sancha et al. (2015)
Supplier social performance	Performance outcomes gained by the upstream business partner through adopting social sustainable activities.	Sancha et al. (2016) Alwaysheh and Klassen (2010)
Buyer's operational performance	Outcome of buyer's social sustainability activities, including lead time, product and service quality, innovativeness, and security of supply.	Hollos et al. (2012) Lee (2016)
Buyer's social reputation	Refers to social image and value gained from the firm's past actions toward social sustainability practices.	Ehrgott et al. (2011) Sancha et al. (2016)
Supply chain social sustainability	Refers to product and process issues that invariably affect the people in the supply chain. SCSS issues include equity, safety, health and welfare, ethical, and human rights.	Carter and Jennings (2004), Mani et al. (2016a, b), Huq et al. (2016)

were applied to ensure authenticity in Portugal. The Portuguese version of the questionnaire was forwarded to 221 manufacturing companies between September 2016 and December 2016.

We followed Dillman (2000) recommendations for the data collection process, including designing, formatting, and administering the questionnaire. Three weeks after the initial questionnaire invitation, we sent a series of four personalized reminders to potential respondents, with a delay of two weeks between each. The companies that did not respond within another six weeks were contacted either by telephone or mail in a last wave and the questionnaire was forwarded. We received 126 usable questionnaires from Portugal and 224 usable questionnaires from India. Of the complete sample, 154 mails from India and 9 mails from Portugal were returned for reasons such as wrong mail ID or executives on tour. This resulted in an overall effective response rate of 21% from India and 57% from Portugal. The respondents' characteristics are shown in Table 2. There is a guideline on minimum sample size requirements for the use of structural equation modeling (SEM). For example, Hair et al. (2006) suggest 100–150 observations, and Kline (1998) suggest 100–400 observations for analysis. Sample size requirements are more often influenced by model complexity, factor loadings, and number of indicators per construct (Shah and Goldstein, 2006). Our sample size fulfills these acknowledged thresholds (224 and 126).

In survey research, key informant issues are bound to happen. To address this issue, we employed two measures during our data collection process (John and Reve, 1982). Our pilot study revealed that executives in middle management and above are knowledgeable in answering questions related to SCSS. We adopted an a priori approach as recommended by Carter and Jennings (2004) to include two questions in the questionnaire regarding “executive's involvement in SCM function in number of years” and their “current position” in the organization. The responses below the rank of executive level were not considered for analysis.

## 5.3. Non-response bias and common method bias

In survey research, non-response bias poses potential limitations. We performed a multivariate T test to examine the difference between the earlier respondents (participants who respond early to the survey) and the non-respondents (participants who respond late to the survey) (Armstrong and Overton, 1977). This disservice was made based on the  $N_{lr} = 55$  (India),  $N_{lr} = 35$  (Portugal) responses generated through our last wave of follow-up calls and emails. There was no statistically significant difference found between early responses and non-respondents. Additionally, non-responsive follow-up calls were made to those who did not answer (non-respondents) with a set of survey questions. It was found that their answers were not significantly different from the respondents (Deming, 1990).

Common method bias can be defined as “systematic error variance shared among measured variables caused by function of the same method or source” (Richardson et al., 2009). Given that the data collected for predictor and criterion variables were from the same respondent, we performed methodological tests to ensure that common method bias was not an issue (Podsakoff et al., 2003). We used two measures to address common method bias issues. First, Harmon's one-factor test was performed to examine common method bias. However, the results show that no such issue was present in this sample, as the total variance extracted through factor analysis stood at 32% below the 50% suggested threshold. This result was further validated through common latent factor method using Amos 20, as recommended by Podsakoff et al. (2003). According to this procedure, the standardized regression weights are compared between the model with common latent factor and the model without common latent factor. There was no significant difference found between the two regression weights, confirming that there is no such problem of common method variance in our model (Richardson et al., 2009; Podsakoff et al., 2003).

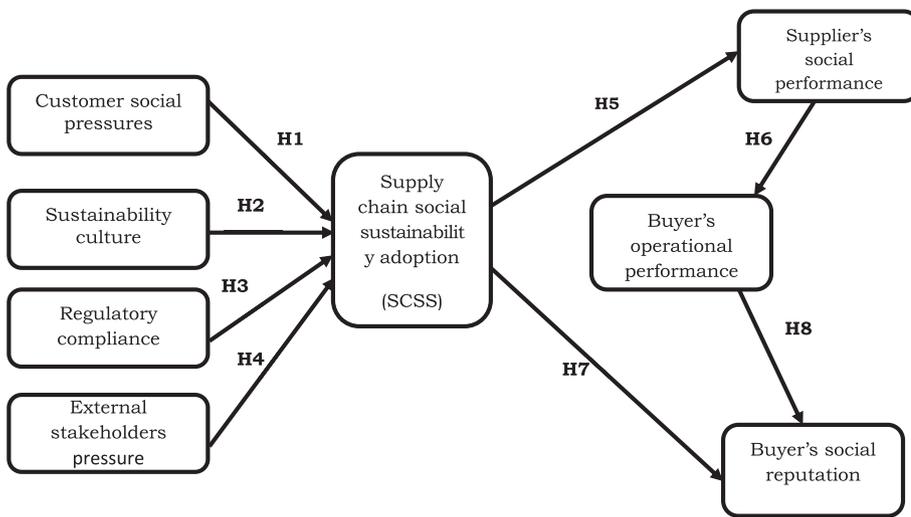


Fig. 1. Supply chain social sustainability (SCSS) adoption – hypothesized model.

Table 2 Sample characteristics.

Industry	India	Portugal
Manufacture of food and beverages products	38	16
Manufacturer of tobacco products	2	2
Manufacturer of textiles	15	5
Manufacturing of apparel	24	14
Manufacturer of leather and tanneries	3	2
Manufacturer of painting materials	0	3
Manufacturer of wood cork and wood products	3	4
Manufacturer of paper and paper products	6	4
Manufacturer of petroleum and refined petroleum products	2	1
Manufacturer of chemicals and chemical products	18	8
Manufacturer of pharmacy and pharmaceutical preparations	18	4
Manufacturer of rubber and plastic products	2	7
Manufacturer of metal and mineral products	6	8
Manufacturer of computer, electronic, and optical products	20	5
Manufacturer of electrical products	8	8
Manufacturer of motor vehicles and spare parts	31	15
Manufacturer of other transport equipment	4	1
Manufacturer of furniture	0	6
Manufacturer of basic metals and fabricated metal products	12	6
Manufacturer of architectural/cement/construction equipment	21	3
Manufacturer of fast moving consumer durables	11	4
Total	244	126
Experience of respondents		
1-5 Years	10	7
6-10 Years	96	75
Over 10 Years	138	44
Total	244	126

6. Analysis and results

Structural equation modeling (SEM) is an appropriate technique when the study requires a series of regression analyses to be performed, where the dependent variable for one such regression analysis might act as an independent variable of another. SEM's are statistical procedures for measurement testing, functional, predictive, and causal hypotheses (Bagozzi and Yi, 2012). SEM also allows the computation of measurement error variance in both exogenous and endogenous variables. We adapted two-step procedures to test our hypothesis through SEM by using Amos 20's maximum likelihood procedure (MLP) as recommended by Koufteros (1999). As we collected two different samples, one from India and other from Portugal, we first applied Schuirmann's two one-sided tests (TOST) for equivalence (Schuirmann, 1987) and found that there was no significant difference in their means. Further, using both samples, we constructed a measurement model through confirmatory factor analysis (CFA). The reported results are shown in Table 3. To assess the fit

between the measurement model and the data, we used  $\chi^2$ /degrees of freedom ratio, goodness of fit index (GFI), comparative fit index (CFI), the normed fit index (NFI), composite reliability (CR), and root mean square error of approximation (RMSEA) as recommended by Bentler (1990). The fit indices for the model:  $\chi^2/df = 1.383$ , GFI = 0.920, CFI = 0.947, TLI = 0.938, RMSEA = 0.032, indicate an appropriate fit (Bagozzi and Yi, 2012; Bentler, 1990; Kline, 1998). Thus, fit indices for the model are well within the threshold levels as recommended by Kline (1998) and Schumacker and Lomax (2004). Further, all the scale items indicate factor loading greater than 0.50 and  $p < 0.001$  significance level, suggesting convergent validity for the indicators (Gerbing and Anderson, 1988) (Table 3).

In order to assess the convergent and discriminant validity, we use two procedures as recommended by Hair et al. (2006). For convergent validity, we examine values of composite reliability (CR) and average variance extracted (AVE). The recommended threshold values for CR and AVE are  $>0.70$ ,  $0.50$ , respectively. The values in Table 4 show excellent convergent validity for the constructs. According to Churchill (1979), discriminant validity can be assessed through inter-construct correlations and assessment of whether or not the square root of AVE is greater than the inter-construct correlations. The values presented in Table 4 suggest inter-construct correlations below  $0.70$  and that the square root of AVE is greater than inter-construct correlations. Therefore, all the latent constructs cleared the discriminant validity.

To further validate our hypothesis in the conceptual model, we created a structural model through maximum likelihood estimation (MLE) using Amos 20. The results of the structural model are displayed in Fig. 2. The overall model indicates satisfactory values with respect to fit indices:  $\chi^2/df$  (2.155), GFI (0.912), CFI (0.901), TLI (0.914), and RMSEA (0.056) meeting the highest proposed thresholds. According to Bagozzi and Yi (2012), the RMSEA value must be less than  $0.08$ . The RMSEA values in Fig. 2 indicate (0.056) within the threshold level, implying better fit.

The results of structural modeling show that the intensity of customer social pressure positively influences social sustainability adoption (H1). Further, the intensity of the sustainability culture of the organization was positively linked to social sustainability adoption (H2). The regulatory compliance (H3) and the intensity of external stakeholder pressure positively influence social sustainability adoption (H4). Regarding outcomes, supplier's social performance, buyer's operational performance, and buyer's social reputation were all positively related to social sustainability adoption in the supply chain (H5, H6, and H7). Through these results, the study effectively answers our proposed research questions. The results also demonstrate significant linkage between social sustainability adoption and performance outcomes, including supplier's social

performance, buyer's operational performance, and buyer's social reputation.

## 7. Discussion

One of the important outcomes of this research is the role of four different forces that influence social sustainability adoption in the European and Asian emerging markets. Customer social pressure significantly influences social sustainability adoption in the supply chain. This result could be because the majority of the suppliers of multinational companies are situated in emerging markets, and the customers, with the virtue of their commanding power, better negotiate with their suppliers to enforce social sustainability adoption. This corroborates with the predictions of stakeholder theory that stakeholders and the community are of prime importance for corporations in order to achieve long-term prosperity and survival (Heath, 2006; Stieb, 2009). This outcome is in line with Carter and Jennings (2004) research in the United States that established customer pressures and their positive impact on social sustainability adoption in upstream supply chain. Similar positive results were achieved by Ciliberti et al. (2008a,b) in Italy that describe how lack of customer social pressure acts as an important barrier to adopting social sustainability practices, and Branco and Rodrigues (2008) and Ehrgott et al. (2011), based on stakeholders perspective, demonstrated linkage

between customer social pressure and disclosure on social sustainability adoption. Our results also correspond to the results achieved by Sancha et al. (2015), building on institutional perspectives, that advocate how institutional mechanisms act as enablers in building sustainable capabilities and sustainability adoption. Sancha's work further proves the positive role of coercive mechanisms (customer pressure) in social sustainability adoption. We extend and affirm the institutional perspective that drives focal firms to act on social sustainability adoption through the power of coercive mechanisms.

The sustainability culture of the organization was found to influence social sustainability adoption in the supply chain (Table 5). This outcome further corresponds to the earlier studies in Western countries that found sustainability culture to be a driving force in influencing social sustainability adoption beyond regulatory pressures (Pagell and Wu, 2009). Similar results were achieved by Carter and Jennings (2004), which found linkages between purchasing social responsibility (PSR) and social sustainability adoption in upstream supply chain. Marshall et al. (2015) proved, through institutional perspective, the role of institutionalized pressure in basic social sustainability adoption and of organizational culture in advanced (product and process) social sustainability adoption. With the sample from two emerging economies, it could be generalized that the sustainability culture of an organization is positively linked to social sustainability adoption.

Our results also show regulatory compliance and its positive linkage to social sustainability adoption in the emerging economies. This is an interesting outcome that differs from existing studies, which found a negative relationship between regulatory compliance and social sustainability adoption. Sancha et al. (2015), conforming to the theoretical lenses of institutional perspective, arrived at similar results: coercive regulatory mechanisms do not influence significant positive effects on social sustainability adoption. Similar results were achieved by Ehrgott et al. (2011) and Carter and Jennings (2004), which proved no significant relationship between regulatory mechanisms and social sustainability adoption. On the contrary, our results shows regulatory pressure to have a positive link to social sustainability adoption with respect to the emerging economies. This could be because regulatory mechanisms still play a key role in enforcing laws related to minimum wages, child labor, bonded labor, safety, and health issues as the society evolves with respect to social issues. The hypothesis results are shown in Table 5.

External stakeholder pressure is positively linked to social sustainability adoption in both economies. This outcome is consistent with the results achieved by Campbell (2007) and Bansal (2005), which proved positive linkage between social organizational pressure and social sustainability adoption in emerged economies. Others arrived at similar results that point out how stakeholder's monitoring helps in increasing socially responsible behavior (Mitchell et al., 1997; Aguilera and Jackson, 2003). Further, Campbell (2007), building on institutional theory, advocates how a firm's entrenched set of political and economic institutions affect its social behavior. Kjaer and Langer (2005) also arrived at similar results that proved media stakeholders' role in enacting corporate governance mechanisms related to social sustainability. According to Scott (2007), firms operating in different institutional environments in different countries may face diverse pressures, including home and host institutional environments that, in turn, testified to exert fundamental influence on a firm's strategy.

Supply chain social sustainability adoption resulted in various outcomes, such as supplier's social performance, buyer's operational performance, and buyer's reputation. Our results found positive linkage between social sustainability adoption and supplier's social performance, buying firm's operational performance, and buying firm's social reputation in both emerging economies (Table 5). Many scholars have arrived at similar results. For example, Carter and Jennings (2004) have found supplier's performance as an outcome of social sustainability adoption. Anisul Huq et al., 2014 and Lee (2016) found positive linkage between supply chain social sustainability and supplier's performance. This conforms to earlier assertions that suppliers are part of upstream supply

**Table 3**  
Results of measurement model.

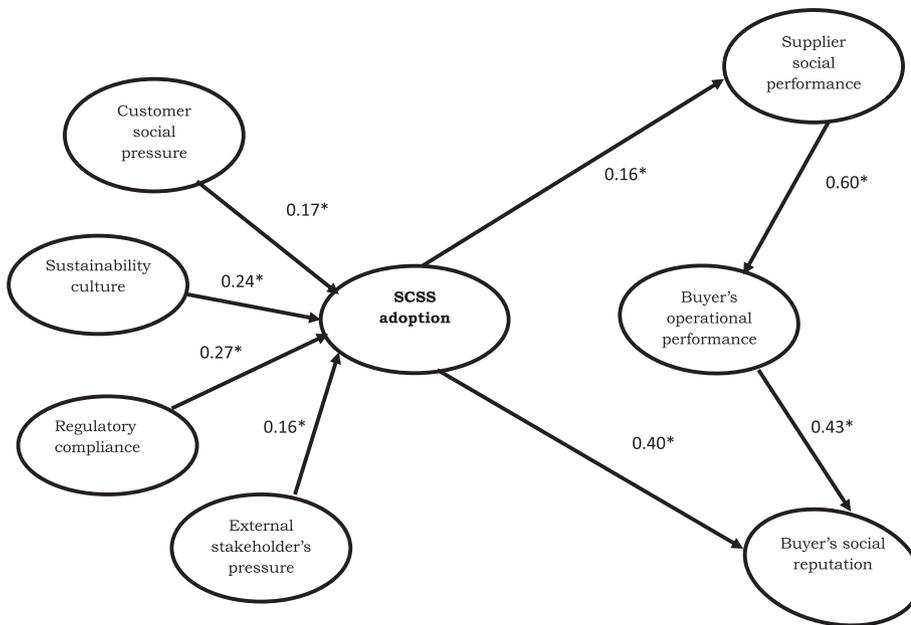
Constructs	Alpha ( $\alpha$ )	Standardized loading	t-values	p-value
Customer social pressure	0.76			
CSP1		0.78	7.967	***
CSP2		0.76	7.989	***
CSP3		0.61	8.542	***
CSP4		0.89	**	***
Sustainability culture	0.80			
SC1		0.79	9.418	***
SC2		0.78	9.434	***
SC3		0.88	9.521	***
SC4		0.70	8.365	***
SC5		0.89	**	***
Regulatory compliance	0.79			
RC1		0.71	**	***
RC2		0.75	5.783	***
RC3		0.91	1.011	***
Ext. Stakeholder pressure	0.72			
ESP1		0.79	9.069	***
ESP2		0.71	9.125	***
ESP3		0.80	**	***
Supplier social performance	0.81			
SSP1		0.75	**	***
SSP2		0.79	8.025	***
SSP3		0.89	5.882	***
SSP4		0.88	5.900	***
Social sustainability adoption	0.76			
Equity		0.63	1.295	***
Safety		0.71	**	***
Health		0.80	3.111	***
Human rights		0.79	4.594	***
Ethical issues		0.69	5.626	***
Buyer's operational performance	0.79			
BOP1		0.77	**	***
BOP2		0.86	9.446	***
BOP3		0.82	11.986	***
BOP4		0.79	11.732	***
Buyer's social reputation	0.78			
BSR1		0.88	**	***
BSR2		0.80	5.634	***
BSR3		0.74	5.950	***

All the values are significant at  $p < 0.001$  level, \*\*regression weights constrained to one, \*\*\* values are significant at  $p < 0.001$  level.

**Table 4**  
Convergent and discriminant validity.

Constructs	CR	AVE	MSV	ASV	BOP	CSP	SC	ESP	RC	SSA	BSR	SSP
BOP	0.800	0.574	0.440	0.104	0.758							
CSP	0.763	0.552	0.181	0.049	-0.008	0.742						
SC	0.785	0.524	0.393	0.094	0.095	0.249	0.723					
ESP	0.742	0.591	0.181	0.072	0.032	0.425	0.420	0.768				
RC	0.768	0.525	0.393	0.091	0.022	0.310	0.327	0.361	0.724			
SSA	0.753	0.551	0.018	0.008	0.125	0.074	-0.078	-0.084	0.032	0.742		
BSR	0.776	0.525	0.317	0.115	0.515	0.010	0.011	-0.001	-0.060	0.135	0.724	
SSP	0.714	0.561	0.217	0.141	0.663	-0.022	-0.088	0.088	-0.120	0.029	0.719	0.748

BOP = buyer's operational performance, CSP = customer social pressure, SC = sustainability culture, ESP = external stakeholder pressure, RC = regulatory compliance, SSA = social sustainability adoption, SSP = supplier's social performance, BSR = buyer's social reputation, CR = composite reliability, AVE = average variance extracted, MSV = maximum shared variance, AVE = average shared variance.



**Fig. 2.** Structural model.

**Table 5**  
Summary of hypothesis results.

Model link	Std. coefficient	Result
CSP to SCSS adoption	0.17*	Supported
SC to SCSS adoption	0.24*	Supported
RC to SCSS adoption	0.27*	Supported
ESP to SCSS adoption	0.16*	Supported
SCSS adoption to SSP	0.16*	Supported
SSP to BOP	0.60*	Supported
SCSS to BSR	0.40*	Supported
BOP to BSR	0.43*	Supported

\* Significant at p < 0.001 level.

chain and influenced significantly by SCSS adoption, which directly reflects on their performance outcomes (Anisul Huq et al., 2014).

At the same time, SCSS adoption also results in buyer's operational performance mediated by supplier's social performance. This result is consistent with earlier research by Sancha et al. (2015) that found positive buyer's performance and Carter and Jennings (2004) that proved positive linkage between purchasing social responsibility (PSR) and operational performance of the firm mediated by learning. Others found that adoption of SCSS improves product quality, lead time, and reliability and reduces risk, which in turn improves buyer's operational performance (Klassen and Vereecke, 2012). To the contrary, Hollos et al. (2012) proved no significant positive linkage between SCSS adoption and

buyer's performance in the emerging economies. Our results, based on institutional perspectives, confirm in both emerging economies that adoption of SCSS positively helps in the improvement of buyer's operational performance.

Our results also found linkage between SCSS adoption practices and the buyer firm's social reputation. This upholds the scholars' majority belief that social issues in the supply chain, if unattended, may cause operational performance issues that, in turn, affect the social reputation of the focal company. One can see this from the popular media, such as the BBC questioning IKEA's working conditions of their truck drivers in Europe and causing possible damage to IKEA's reputation. This outcome is in line with the results achieved by Sancha et al. (2016) that proved that social sustainability issues, if not addressed in the supply chain, may not only affect firm's operational and social performance but also affect its social reputation. They further assert that the social reputation of the company helps in achieving social performance. Our outcome is consistent with Gimenez et al. (2012), which confirms that supplier cooperation activities with respect to social sustainability adoption contribute to the social reputation of the firm. Thus, our results can be generalizable to an extent of the emerging economy perspective, as both the emerging economies produce similar performance outcomes.

### 8. Conclusion and implications

The aim of the research was to identify various forces influencing SCSS in emerging economies. Additionally, we also explored the

performance outcomes (benefits) of social sustainability adoption. Our results prove there are four different forces—customer pressure, regulatory compliance, sustainability culture, and external stakeholder pressure—that influence SCSS adoption. While the majority of the literature suggests a negative linkage of regulatory compliance to SCSS adoption, our results found a significant positive relationship in emerging economies. Further, our results found benefits of SCSS adoption in the form of supplier social performance, buyer's operational performance, and buyer's reputation. The implications are twofold as follows.

First, in emerging economies where social issues are increasingly becoming social concerns, our results help in the identification of different forces that drive social sustainability adoption. All four forces significantly influence SCSS adoption in the Asian emerging economy. Regulatory compliance showing significant linkage with SCSS adoption is an especially unconventional outcome, as most of the earlier studies that were conducted in developed nations proved a negative relationship with SCSS adoption. This is an important contribution to the body of knowledge, as regulatory pressure still plays a key role in enacting social sustainability adoption in emerging economies. This implies that practitioners in emerging economies need to be aware of the importance of several institutional pressures that can help build sustainable supply chains. Further, firms operating out of these economies should understand the “technical knowhow” of regulatory norms that potentially effect the performance of the organization.

The sustainability culture of the organization is significantly linked to SCSS adoption. This implies that sustainability must be integrated with the culture of the focal firm so as to enable people or processes that might help in social sustainability adoption in both economies. Practitioners in emerging economies should nurture and foster a sustainability culture in the focal firm that, in turn, helps achieve competitiveness in the supply chain. Additionally, practitioners in emerging economies must give the utmost care to issues raised by external stakeholders and be proactive in devising engagement mechanisms with social groups to avert reputational risk.

Regarding our second objective, our results show that social sustainability adoption results in supplier's social performance in terms of human rights compliance, child labor compliance, and safety compliance for the suppliers. As a result, the focal company's lead time, quality, and reliability of products increases, thereby improving the supplier's performance as well as the buyer's operational performance. This outcome proves the institutional perspective of stakeholder's conformity and increased legitimacy to stakeholders. Further, our results prove that in both economies, social sustainability adoption is positively linked to the buyer's reputation, which means the buying company must put in effort to ensure social issues are addressed proactively to avoid reputation loss. All three outcomes of SCSS adoption are important contributions to the theory of knowledge, as they show possible benefits that practitioners can expect by managing supply chain social issues in emerging economies. Our results contribute to the sustainability literature by extending the relationship between institutional and stakeholder pressures and supply chain social sustainability adoption in emerging economies.

This research identified different forces in social sustainability adoption and its outcomes. As such, it adds to the ongoing discussion on institutional perspective and legitimacy theory as key pillars in social sustainability. Based on the outcome of this research, a worthwhile avenue for future research might be the expansion of the developed research model to include the buying firm's supply chain performance and financial performance as an additional outcome variable, as this link is still at infancy level. It has been widely discussed in the supply chain literature that social issues not only affect the suppliers but also impact the buyer's operational and supply chain performance (Sancha et al., 2016). It would therefore be a valuable advancement in resource dependence perspective (RDT) and social sustainability research to test how the outcome variables used in this research can serve as mediators in this relationship. For instance, what could be the mediating role of supplier performance in the operational and supply chain performance of the focal company?

## Appendix 1. Constructs and measures

Constructs and measures	Cronbach's Alpha
<i>Customer social pressure</i> (Gualandris and Kalchschmidt, 2014; Ehgott et al., 2011)	0.76
Set high social standards in their buying decision (0.78)	
Show strong awareness about social issues (0.76)	
Prefer purchasing from firms with a strong social image (0.61)	
Customers need complete information to assure our social compliance (0.89)	
<i>Sustainability culture</i> (Marshall et al., 2015; Carter and Jennings, 2004)	0.80
We provided information to all employees on importance of social sustainability (0.79)	
We promoted social sustainability as a major goal across all departments (0.78)	
Our firm had a clear policy statement urging social sustainability in every area of operations (0.88)	
Supply chain social sustainability was a high priority activity in our firm (0.70)	
Supply chain social sustainability was a central corporate value in our firm (0.89)	
*Our firm had a responsibility to be socially sustainable	
<i>Regulatory Compliance</i> (Ehgott et al., 2011; Sancha et al., 2015)	0.79
<i>Government and regulatory body in our industry</i>	
increases pressure if our industry does not improve socially by itself (0.71)	
aggressively pushes for social improvement (0.75)	
is expected to pressurize regarding social efforts within the next 3 years (0.91)	
<i>External stakeholders pressure</i> (Social organizations, NGO's, social groups, social activists) (Bansal, 2005; Sancha et al., 2015)	0.72
Our organization is conscious about social groups and activists (0.79)	
One bad move can develop enough negative publicity that can really hurt you (0.71)	
We are very aware of the media and don't always get the play that we would like out of things (0.61)	
We are aware of the increasing public knowledge and perception of social issues (0.79)	
<i>Outcomes</i>	
<i>Suppliers social performance</i>	0.81
(Sancha et al., 2016; Awaysheh and Klassen, 2010)	
Improvement in human rights compliance in suppliers facilities (0.75)	
Improved child labor compliance in the suppliers' facilities (0.79)	
Improvement in safety and labor conditions in the suppliers' facilities (0.89)	
<i>Buyers operational performance</i> (Hollos et al., 2012; Lee, 2016)	0.79

(continued on next page)

(continued)

Constructs and measures	Cronbach's Alpha
<i>SS adoption resulted in improvement of</i>	
Product quality (0.77)	
Production costs (0.86)	
Lead time (0.82)	
On-time delivery (0.79)	
<i>Buying firms reputation</i> (Ehrgott et al., 2011; Sancha et al., 2016)	0.78
<i>Our company is acknowledged among stakeholder's especially for being socially sustainable as highly reputable</i> (0.88)	
innovative (0.80)	
competent (0.74)	
reliable (0.71)	
<i>Our company adopts social practices related to</i>	0.76
(Carter and Jennings, 2004; Mani et al., 2016a,b; Huq et al., 2016)	
equity	
safety	
human rights	
health and welfare	
ethical issues	

\* Items removed for model fit. Values in parenthesis denote standardized factor loading.

## References

- Ageron, B., Gunasekaran, A., Spalanzani, A., 2012. Sustainable supply management: an empirical study. *Int. J. Prod. Econ.* 140, 168–182.
- Agle, B.R., Donaldson, T., Freeman, R.E., Jensen, M.C., Mitchell, R.K., Wood, D.J., 2008. Dialogue: toward superior stakeholder theory. *Bus. Ethics Q.* 18 (02), 153–190.
- Aguilera, R.V., Jackson, G., 2003. The cross-national diversity of corporate governance: dimensions and determinants. *Acad. Manag. Rev.* 28 (3), 447–465.
- Andersen, M., Skjoett-Larsen, T., 2009. Corporate social responsibility in global supply chains. *Supply Chain Manag. Int. J.* 14 (2), 75–86.
- Anisul Huq, F., Stevenson, M., Zorzini, M., 2014. Social sustainability in developing country suppliers: an exploratory study in the ready-made garments industry of Bangladesh. *Int. J. Oper. Prod. Manag.* 34 (5), 610–638.
- Armstrong, J.S., Overton, T.S., 1977. Estimating non response bias in mail surveys. *J. Market. Res.* 396–402.
- Awaysheh, A., Klassen, R.D., 2010. The impact of supply chain structure on the use of supplier socially responsible practices. *Int. J. Oper. Prod. Manag.* 30 (12), 1246–1268.
- Bagozzi, R.P., Yi, Y., 2012. Specification, evaluation, and interpretation of structural equation models. *J. Acad. Market.* 40 (1), 8–34.
- Bansal, P., 2005. Evolving sustainably: a longitudinal study of corporate sustainable development. *Strat. Manag. J.* 26 (3), 197–218.
- BBC News, 2017. Maagi Noodles Go Back on Sale in India after Recall. Accessed through: <http://www.bbc.com/news/business-34759615> (on 01 February 2017).
- Bentler, P.M., 1990. Comparative fit indexes in structural models. *Psychol. Bull.* 107 (2), 238.
- Branco, M.C., Rodrigues, L.L., 2008. Factors influencing social responsibility disclosure by Portuguese companies. *J. Bus. Ethics* 83 (4), 685–701.
- Brown, T.J., Dacin, P.A., 1997. The company and the product: corporate associations and consumer product responses. *J. Market.* 68–84.
- Campbell, J.L., 2007. Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Acad. Manag. Rev.* 32 (3), 946–967.
- Carter, C.R., Jennings, M.M., 2004. The role of purchasing in corporate social responsibility: a structural equation analysis. *J. Bus. Logist.* 25 (1), 145–186.
- Churchill Jr., G.A., 1979. A paradigm for developing better measures of marketing constructs. *J. Market. Res.* 64–73.
- Ciliberti, F., Pontrandolfo, P., Scozzi, B., 2008a. Investigating corporate social responsibility in supply chains: a SME perspective. *J. Clean. Prod.* 16 (15), 1579–1588.
- Ciliberti, F., Pontrandolfo, P., Scozzi, B., 2008b. Logistics social responsibility: standard adoption and practices in Italian companies. *Int. J. Prod. Econ.* 113 (1), 88–106.
- Clarkson, M.E., 1995. A stakeholder framework for analyzing and evaluating corporate social performance. *Acad. Manag. Rev.* 20 (1), 92–117.
- De Giovanni, P., 2012. Do internal and external environmental management contribute to the triple bottom line? *Int. J. Oper. Prod. Manag.* 32 (3), 265–290.
- Deephouse, D.L., Carter, S.M., 2005. An examination of differences between organizational legitimacy and organizational reputation. *J. Manag. Stud.* 42 (2), 329–360.
- Deming, W.E., 1990. *Sample Design in Business Research*, vol. 23. John Wiley & Sons.
- Dillman, D.A., 2000. *Mail and Internet Surveys: the Tailored Design Method*, vol. 2. Wiley, New York.
- DiMaggio, P., Powell, W.W., 1983. The iron cage revisited: collective rationality and institutional isomorphism in organizational fields. *Am. Socio. Rev.* 48 (2), 147–160.
- Doh, J.P., Guay, T.R., 2006. Corporate social responsibility, public policy, and NGO activism in Europe and the United States: an institutional-stakeholder perspective. *J. Manag. Stud.* 43 (1), 47–73.
- Ehrgott, M., Reimann, F., Kaufmann, L., Carter, C.R., 2011. Social sustainability in selecting emerging economy suppliers. *J. Bus. Ethics* 98 (1), 99–119. Accessed through: European Commission Report, 2017 [http://ec.europa.eu/environment/chemicals/reach/reach\\_en.htm](http://ec.europa.eu/environment/chemicals/reach/reach_en.htm) (on 20 January 2017).
- Fombrun, C., Shanley, M., 1990. What's in a name? Reputation building and corporate strategy. *Acad. Manag. J.* 33 (2), 233–258.
- Frooman, J., 1999. Stakeholder influence strategies. *Acad. Manag. Rev.* 24 (2), 191–205.
- Gerbing, D.W., Anderson, J.C., 1988. An updated paradigm for scale development incorporating unidimensionality and its assessment. *J. Market. Res.* 186–192.
- Gimenez, C., Tachizawa, E.M., 2012. Extending sustainability to suppliers: a systematic literature review. *Supply Chain Manag. Int. J.* 17 (5), 531–543.
- Gimenez, C., Sierra, V., Rodon, J., 2012. Sustainable operations: their impact on the triple bottom line. *Int. J. Prod. Econ.* 140 (1), 149–159.
- Glover, J.L., Champion, D., Daniels, K.J., Dainty, A.J.D., 2014. An Institutional Theory perspective on sustainable practices across the dairy supply chain. *Int. J. Prod. Econ.* 152, 102–111.
- Golini, R., Longoni, A., Cagliano, R., 2014. Developing sustainability in global manufacturing networks: the role of site competence on sustainability performance. *Int. J. Prod. Econ.* 147, 448–459.
- Gonzalez-Benito, J., 2007. A theory of purchasing's contribution to business performance. *J. Oper. Manag.* 25 (4), 901–917.
- Gualandris, J., Kalchschmidt, M., 2014. Customer pressure and innovativeness: their role in sustainable supply chain management. *J. Purch. Supply Manag.* 20 (2), 92–103.
- Gualandris, J., Golini, R., Kalchschmidt, M., 2014. Do supply management and global sourcing matter for firm sustainability performance? An international study. *Supply Chain Manag. Int. J.* 19 (3), 258–274.
- Gugler, P., Shi, J.Y.J., 2009. Corporate social responsibility for developing country multinational corporations: lost war in pertaining global competitiveness. *J. Bus. Ethics* 87 (3), 3–25.
- Hair Jr., J.F., Black, W.C., Babin, B.J., Anderson, R.E., Tatham, R.L., 2006. *Multivariate Data Analysis*, sixth ed. Pearson Education, Upper Saddle River, NJ.
- Heath, J., 2006. Business ethics without stakeholders. *Bus. Ethics Q.* 16 (04), 533–557.
- Hillman, A.J., Keim, G.D., 2001. Shareholder value, stakeholder management, and social issues: what's the bottom line? *Strat. Manag. J.* 125–139.
- Hirsch, P.M., 1975. Organizational effectiveness and the institutional environment. *Adm. Sci. Q.* 327–344.
- Hollos, D., Blome, C., Foerstl, K., 2012. Does sustainable supplier co-operation affect performance? Examining implications for the triple bottom line. *Int. J. Prod. Res.* 50 (11), 2968–2986.
- Hsu, C.C., Choon Tan, K., Hanim Mohamad Zailani, S., Jayaraman, V., 2013. Supply chain drivers that foster the development of green initiatives in an emerging economy. *Int. J. Oper. Prod. Manag.* 33 (6), 656–688.
- Huq, F.A., Chowdhury, I.N., Klassen, R.D., 2016. Social management capabilities of multinational buying firms and their emerging market suppliers: an exploratory study of the clothing industry. *J. Oper. Manag.* 46, 19–37.
- Jennings, P.D., Zandbergen, P.A., 1995. Ecologically sustainable organizations: an institutional approach. *Acad. Manag. Rev.* 20 (4), 1015–1052.
- John, G., Reve, T., 1982. The reliability and validity of key informant data from dyadic relationships in marketing channels. *J. Market. Res.* 517, 524.
- Kjaer, P., Langer, R., 2005. Infused with news value: management, managerial knowledge and the institutionalization of business news. *Scand. J. Manag.* 21 (2), 209–233.
- Klassen, R.D., Vereecke, A., 2012. Social issues in supply chains: capabilities link responsibility, risk (opportunity), and performance. *Int. J. Prod. Econ.* 140 (1), 103–115.
- Kleindorfer, P.R., Singhal, K., Wassenhove, L.N.V., 2005. Sustainable operations management. *Prod. Oper. Manag.* 14 (4), 482–492.
- Kline, R.B., 1998. *Principles and Practice of Structural Equation Modeling*. Guilford Press, NY.

- Koufteros, X.A., 1999. Testing a model of pull production: a paradigm for manufacturing research using structural equation modeling. *J. Oper. Manag.* 17 (4), 467–488.
- Lee, S.Y., 2016. Responsible supply chain management in the Asian context: the effects on relationship commitment and supplier performance. *Asia Pac. Bus. Rev.* 22 (2), 325–342.
- Linnenluecke, M.K., Griffiths, A., 2010. Corporate sustainability and organizational culture. *J. World Bus.* 45 (4), 357–366.
- Lu, R.X., Lee, P.K., Cheng, T.C.E., 2012. Socially responsible supplier development: construct development and measurement validation. *Int. J. Prod. Econ.* 140 (1), 160–167.
- Maignan, I., Ralston, D.A., 2002. Corporate social responsibility in Europe and the US: insights from businesses' self-presentations. *J. Int. Bus. Stud.* 33 (3), 497–514.
- Maignan, I., Hillebrand, B., McAlister, D., 2002. Managing socially-responsible buying: how to integrate non-economic criteria into the purchasing process. *Eur. Manag. J.* 20 (6), 641–648.
- Mani, V., Agrawal, R., Gunasekaran, A., Papadopoulos, T., Dubey, R., Childe, S., 2016a. Social sustainability in the supply chain: construct development and measurement validation. *Ecol. Indic.* 71, 270–279.
- Mani, V., Gunasekaran, A., Papadopoulos, T., Dubey, R., Benjamin, H., 2016b. Supply chain social sustainability for developing nations: evidence from India. *Resour. Conserv. Recycl.* 111, 42–52.
- Marshall, D., McCarthy, L., McGrath, P., Claudy, M., 2015. Going above and beyond: how sustainability culture and entrepreneurial orientation drive social sustainability supply chain practice adoption. *Supply Chain Manag. Int. J.* 20 (4), 434–454.
- Martin, R.L., 2002. The virtue matrix: calculating the return on corporate responsibility. *Harv. Bus. Rev.* 80 (3), 68–75.
- McWilliams, A., Siegel, D.S., Wright, P.M., 2006. Corporate social responsibility: strategic implications. *J. Manag. Stud.* 43 (1), 1–18.
- Mitchell, R.K., Agle, B.R., Wood, D.J., 1997. Toward a theory of stakeholder identification and salience: defining the principle of who and what really counts. *Acad. Manag. Rev.* 22 (4), 853–886.
- Oliver, C., 1991. Strategic responses to institutional processes. *Acad. Manag. Rev.* 16, 145–179.
- Pagell, M., Gobeli, D., 2009. How plant managers' experiences and attitudes toward sustainability relate to operational performance. *Prod. Oper. Manag.* 18 (3), 278–299.
- Pagell, M., Wu, Z., 2009. Building a more complete theory of sustainable supply chain management using case studies of 10 exemplars. *J. Supply Chain Manag.* 45 (2), 37–56.
- Pagell, M., Wu, Z., Wasserman, M.E., 2010. Thinking differently about purchasing portfolios: an assessment of sustainable sourcing. *J. Supply Chain Manag.* 46 (1), 57–73.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., Podsakoff, N.P., 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *J. Appl. Psychol.* 88 (5), 879.
- Porter, M.E., Kramer, M.R., 2002. The competitive advantage of corporate philanthropy. *Harv. Bus. Rev.* 80 (12), 56–68.
- Pullman, M.E., Maloni, M.J., Carter, C.R., 2009. Food for thought: social versus environmental sustainability practices and performance outcomes. *J. Supply Chain Manag.* 45 (4), 38–54.
- Richardson, H.A., Simmering, M.J., Sturman, M.C., 2009. A tale of three perspectives: examining post hoc statistical techniques for detection and correction of common method variance. *Organ. Res. Meth.* 12 (4).
- Sancha, C., Gimenez, C., Sierra, V., 2016. Achieving a socially responsible supply chain through assessment and collaboration. *J. Clean. Prod.* 112, 1934–1947.
- Sancha, C., Longoni, A., Giménez, C., 2015. Sustainable supplier development practices: drivers and enablers in a global context. *J. Purch. Supply Manag.* 21 (2), 95–102.
- Schuurmann, D.J., 1987. A comparison of the two one-sided tests procedure and the power approach for assessing the equivalence of average bioavailability. *J. Pharmacokinet. Pharmacodyn.* 15 (6), 657–680.
- Schumacker, R.E., Lomax, R.G., 2004. *A Beginner's Guide to Structural Equation Modeling*. Psychology Press.
- Scott, W.R., 2007. *Institutions and Organizations: Ideas and Interests*. Sage Publications, Thousand Oaks, CA.
- Shah, R., Goldstein, S.M., 2006. Use of structural equation modeling in operations management research: looking back and forward. *J. Oper. Manag.* 24 (2), 148–169.
- Sodhi, M.S., 2015. Conceptualizing social responsibility in operations via stakeholder resource-based view. *Prod. Oper. Manag.* 24 (9), 1375–1389.
- Stieb, J.A., 2009. Assessing Freeman's stakeholder theory. *J. Bus. Ethics* 87 (3), 401–414.
- Tate, W.L., Ellram, L.M., Kirchoff, J.F., 2010. Corporate social responsibility reports: a thematic analysis related to supply chain management. *J. Supply Chain Manag.* 46 (1), 19–44.
- Weaver, G.R., Trevino, L.K., Cochran, P.L., 1999. Integrated and decoupled corporate social performance: management commitments, external pressures, and corporate ethics practices. *Acad. Manag. J.* 42 (5), 539–552.
- Westphal, J.D., Gulati, R., Shortell, S.M., 1997. Customization or conformity? An institutional and network perspective on the content and consequences of TQM adoption. *Adm. Sci. Q.* 366–394.
- Williamson, O.E., 2008. Outsourcing: transaction cost economics and supply chain management. *J. Supply Chain Manag.* 44 (2), 5–16.
- Wolf, J., 2014. The relationship between sustainable supply chain management, stakeholder pressure and corporate sustainability performance. *J. Bus. Ethics* 119 (3), 317–328.
- Wood, D.J., 1991. Corporate social performance revisited. *Acad. Manag. Rev.* 16 (4), 691–718.
- Wu, G.C., Ding, J.H., Chen, P.S., 2012. The effects of GSCM drivers and institutional pressures on GSCM practices in Taiwan's textile and apparel industry. *Int. J. Prod. Econ.* 135 (2), 618–636.
- Yawar, S.A., Seuring, S., 2015. Management of social issues in supply chains: a literature review exploring social issues, actions and performance outcomes. *J. Bus. Ethics* 1–23.
- Yuan, F., Woodman, R.W., 2010. Innovative behavior in the workplace: the role of performance and image outcome expectations. *Acad. Manag. J.* 53 (2), 323–342.
- Zhu, Q., Sarkis, J., Lai, K.H., 2013. Institutional-based antecedents and performance outcomes of internal and external green supply chain management practices. *J. Purch. Supply Manag.* 19 (2), 106–117.
- Zimmerman, M.A., Zeitz, G.J., 2002. Beyond survival: achieving new venture growth by building legitimacy. *Acad. Manag. Rev.* 27 (3), 414–431.