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# The scope of corporate social responsibility in networked multinational enterprises

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ABSTRACT

The extent of corporate social responsibility of a multinational enterprise along a global production system or chain is contested. Legal approaches highlight ownership, causation, and awareness. The stakeholder approach broadens responsibility but fails to address the directness of linkages. Adopting a social network perspective to examine international production within modern global factory systems, we argue that the extent of responsibility of the lead firm is impacted by all activities and participants in the chain. The full extent of responsibility is likely to be determined by whether indirect partners are exclusive or non-exclusive. Global factory systems, while contributing to geographical, ownership, and task fragmentation, significantly amplify linkages, interactions, and awareness implying a concomitant increase in corporate social responsibility when viewed from a social network perspective.

## 1. Introduction

The subject of corporate social responsibility (CSR) within international business has been one of growing importance for both business managers and academic researchers (Aguinis & Glavas, 2012; Egri & Ralston, 2008; Scherer & Palazzo, 2011). CSR can be defined as "a company's commitment to minimizing or eliminating any harmful effects and maximising its long-run beneficial impact on society" (Mohr, Webb, & Harris, 2001, p47). International businesses find themselves under increasing scrutiny in a number of areas which go beyond the narrow conception of business as a generator of profits for shareholders (Friedman, 1970). Research shows that the range of social issues that businesses are required to address has widened to encompass ethical and moral considerations, social and working conditions, environmental concerns, and sustainable development issues (Kolk, 2016). While this body of research has helped to clarify the meanings of CSR (Schrempf, 2012) and has offered a variety of conceptual frameworks for exploring such concerns (Chen, 2016; Frynas & Yamahaki, 2016; Lund-Thomsen & Lindgreen, 2014), one area of continuing puzzlement is defining the scope of CSR, particularly within multinational enterprises (Ameshi et al., 2007; Danzer, 2011; Mares, 2010; Phillips and Caldwell, 2005). Scope of CSR refers to the extent to which responsibility can be attributed across a production system, and in particular, the degree to which responsibility can be attributed to a lead firm.

If we consider the economic activity of a business as a series of steps or stages of value added, a production system or value chain describes the variety of activities required to bring a product from conception to completion through the different phases of design, production, marketing and delivery to users. The various activities comprising the process can be contained within a single enterprise, or divided between different enterprises and can be located in a specific economy, or dispersed internationally to a number of different locations.

A feature of much of the work on international production systems is its focus on governance (Gereffi, Humphrey, & Sturgeon, 2005). The governance of international production systems describes the form of relationships between partner organisations that oversee the activities required to preserve a value adding process from inception to completion. Within such relationships governance control is exercised through factors such as product specifications, required quality levels, and delivery targets.

While an understanding of governance is insightful in appreciating the power relationships, attribution of value, and opportunities for upgrading along a production system, it fails to fully address the dynamics of such processes. Decisions on sourcing, whether in-house or externalised, as well as upgrading of partner organisations, are assumed to be driven by lead firms who focus primarily on cost considerations (Giuliani, Pietrobelli, & Rabellotte, 2005; Humphrey & Schmitz, 2002; Kawakami & Sturgeon, 2011).

This paper argues that a number of key developments in recent years have altered the structure and operations of multinational enterprises and the decisions they make with regard to the organisation of their international production systems with important implications for understanding the attribution of social responsibility.

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Four major developments are noteworthy. The first is the increased geographical dispersion of value adding. The opening of emerging economies such as India and China has provided significant new locational opportunities. Multinational enterprises have taken advantage of these opportunities, increasing their offshoring (Contractor, Kumar, Kundu, & Pedersen, 2010), both regionally (Baldwin & Lopez-Gonzalez, 2015) and globally (Gereffi 2014; Los, Timmer, & de Vries, 2015). The increasing geographical dispersion of activities has added to both the length and complexity of production systems.

A second, and related development, is the growing fragmentation of production activities. In the early stages of the current period of globalisation of international production it was entire functions such as production, assembly or R & D that were offshored, often necessitating co-location of related undertakings for efficiency reasons. The subsequent spatial separation of functions, with design in one part of the world and marketing in another for example, has now given way to the fragmentation of tasks, where constituent elements of a function can be geographically separated, processed, and subsequently reintegrated (Ali-Yrkkö & Rouvinen, 2015; Timmer, Erumban, Los, Stehrer, & de Vries, 2014). This 'fine slicing' of tasks (Linares-Navarro, Pedersen, & Pla-Barber, 2014) is made possible by the rising sophistication of ICT which facilitates integration and control (Jean, Sinkovics, & Kim, 2008), the growing availability of competent suppliers (Liesch, Buckley, Simonin, & Knight, 2012), and the extension of knowledge codification and product modularity (Cohendet & Steinmueller, 2000; Howard & Squire, 2007).

The third trend is the growing outsourcing or externalisation of value added. A range of tasks that were previously internalised under hierarchical governance are now being outsourced to partner organisations (Buckley & Hashai, 2004; Grossman & Helpman, 2005). Externalisation is encouraged by the opportunities for cost saving (Lonsdale & Cox, 1997), to access specialist skills (Jabbow & Zuniga, 2016), or to enable the firm to focus on critical tasks, outsourcing non-core activities (Leavy, 2004). Widespread externalisation of activities is in marked contrast to traditional explanations of the multinational enterprise emphasising the internalisation of transactions to minimise risk and transaction costs (Buckley & Casson, 1976; Dunning, 2000).

The final trend is the growth of society's expectations regarding the transparency and accountability of multinational enterprises for activities within their production systems (Dawkins & Lewis, 2003; Waddock, Bodwell, & Graves, 2002). Rising expectations are apparent in the case of consumers, ethical investors, and a wide range of non-governmental organisations (NGOs)and development agencies (Dawkins & Lewis, 2003).

In combination these shifts have brought fundamental changes in MNE strategy and structure. The key change has been the emergence of networked MNEs (Ghoshal & Bartlett, 1990), combining internalisation of core processes with externalisation of peripheral activities within dense networks of globally dispersed subsidiaries and partner networks.

These developments have coincided with an improved understanding of how networked multinational enterprises interact with partner organisations across value chains. The most incisive analysis is provided by the global factory approach (Buckley, 2011) which models the modern MNE as a differentiated network of value creating activities utilising networks to exploit firm- and location-specific advantages. The conjunction of changes in the nature of international production and new insights into the strategic development of global factory systems provides a foundation for more clearly articulating the extent to which multinational enterprises might be held accountable for events occurring within their production systems.

The intention of this paper is to use these developments in thinking about the networked MNE to examine arguments regarding the extent to which lead firms in such systems carry responsibility across fragmented production systems. The argument is built on two key fundamentals. The first is the concept of social networking that offers a basis for understanding the nature of interactions with partner organisations and provides a starting point for assessing the level of responsibility that might be attributable to lead firms within their production systems (Chen, 2009, 2016). The second is the idea of the global factory system as a model of networked international production that analyses the extent and forms of interaction between lead firms and their partner organisations (Buckley, 2011). The junction of these two, which implies the continuous and close interaction between lead firms and partner organisations, helps to clarify the degree of responsibility that the lead firm might be expected to assume.

We offer a contribution to current thinking in two key areas. First, we utilise social networking (Chen, 2009) as a basis for elucidating the extent of CSR within the modern MNE. A social networking approach allows us to move beyond traditional legal conceptions of responsibility based on ownership relations. Social networking highlights the importance of both direct links and indirect impacts of activities, extending the scope of understanding beyond that of stakeholder and similar approaches to CSR (Freeman, 1984). Second, we utilise the global factory framework to describe the nature and form of interactions across production systems. This framework contributes to the analysis by providing insights into the role of lead or focal firms, the use of non-equity modes of operation, and the types of interaction between network members. The global factory framework illustrates that associations between lead and partner firms extend beyond governance of chain relations and reveals a competitive dynamic where participant organisations increasingly interact through co-creative processes with the aim of upgrading the competitiveness of international production systems. It is the interactions between participant organisations that form the core of social networking approaches and that provide an alternative to ownership as a basis for the attribution of responsibility.

The discussion is organised around five sections. Following this introduction, we examine conceptual perspectives on CSR within international production systems, considering legalistic, stakeholder and social network approaches and their strengths and limitations. This is followed by an overview of the network MNE and the ways in which international production is developed, maintained and upgraded within a network model. Section four examines arguments for the attribution of CSR to lead firms within a particular form of networked MNE, the global factory. Section five offers concluding thoughts and suggestions for further research.

## 2. Conceptualising CSR within international production systems

Debate on the extent to which multinational enterprises should assume responsibility for CSR within their international production systems presents a confusing picture. While the traditional views of Friedman (1970) now attract far less support (Carson, 1993), there is little agreement on how an acceptable scope could be determined. For some the position is clear: responsibility should be limited by the degree of cause and effect. If it cannot be shown that the actions of a lead firm directly impact on an independent partner, there should be no assumption of responsibility (Amaeshi, Osuji, & Nnodim, 2008). However, an increasing number of authors argue that lead firms should accept some indirect responsibility, that is responsibility for autonomous members of the chain, but the extent of this and the reasoning underlying different positions, are disputed (Bhandarkar & Alvarez-Rivero, 2007; Blowfield & Frynas, 2005; Emmelhainz & Adams, 1999; Svensson & Baath, 2009; Wood, 2002). For example, Wood argues that responsibility follows from a commitment to stakeholders, similarly, both Bhandarkar and Alvarez-Rivero (2007) and Emmelhainz and Adams (1999) see the pressure for extended social responsibility as a reflection of consumer and NGO influence. For Svensson and Baath (2009) assuming responsibility for indirect business relationships is a prerequisite for ensuring the necessary transparency to implement an effective CSR programme. Other writers identify the business case for implementing a chain-wide CSR policy (Bhandarkar & Alvarez-Rivero, 2007). Either way, companies assuming responsibility for independent

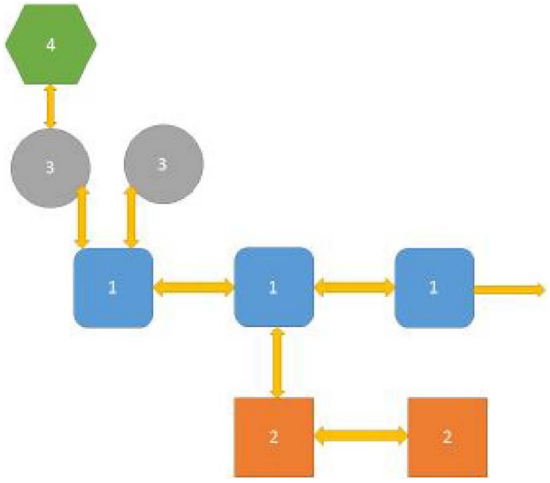


**Fig. 1.** International Production System Composition.

partner organisations in their production systems is a relatively recent development (Lim & Phillips, 2008).

A number of conceptual frameworks for understanding the extent of lead firm responsibility within international production chains have been proposed. A simple schematic, as shown in Fig. 1, offers a useful framework for understanding why conceptions of liability have gradually broadened.

In this example the primary production process of the lead firm is marked 1. These operations are assumed to be internalised: owned and controlled by the firm. Activities marked 2 form part of an associated and complementary process, owned by the same lead firm. For the sake of illustration, chain 1 might involve the design and manufacture of vehicle parts such as floor pans, engines and gearboxes. Chain 2 is complementary and provides electronic vehicle components. In this case responsibility (and liability) are clear: they result from legal ownership. Note that the location of these activities is not significant and is secondary to ownership.

Activities marked 3 are performed by first tier partners who may be buyers or sellers. In this case there is no direct ownership relationship. Rather, any conception of responsibility of the lead firm would be based on interactions and possible stakeholder notions. Finally, 4 identifies upstream buyers or sellers linked indirectly to the primary production process. It is activities at this level of removal from the lead firm, characterised by both an absence of ownership and direct interactions, that have generated the more controversial arguments regarding responsibility.

Conceptual frameworks for understanding the extent of lead firm responsibility within international production systems have gradually expanded from a legalistic conception, through stakeholder views, to network perspectives. The legalist position on the extent of CSR responsibility is based on two general principles: that of a causal link between the action of a business and its consequences; and knowledge by the business of the probable consequences (chains 1 and 2 in Fig. 1). Such a perspective presumes dyadic relationships between two entities and faces an obvious constraint in the case of an international production system fragmented by ownership and location. It would be difficult, in many cases, to show that the actions of a lead firm had a direct impact on a third or fourth-tier supplier located on the other side of the world (chains 3 and 4). Similarly, at this level of removal, proving knowledge of the consequences would also be problematic. When the limitations of a dyadic perspective have been recognised and the benefits of a broader network view acknowledged (Phillips & Caldwell, 2005), the problem persists because networks are assumed to comprise independent entities interacting through arm's length transactions.

A significant extension in thinking about the scope and extent of CSR occurred with the development of stakeholder theory (Freeman, 1984). Freeman defines stakeholders as “any group or individual who can effect or is affected by the achievement of the organization's objectives” (Freeman, 1984 p46). Underpinning the stakeholder view is the idea that businesses are accountable to wider society which permits their existence and continuation through an implicit social contract.

The view that businesses should be accountable to a wider group of stakeholders rather than the single group of owners (shareholders), alters the CSR debate in two key ways. First, it introduces the possibility of alternative company goals, beyond simply profit. If a business is accountable to stakeholders, then presumably these stakeholders may have a wider set of goals that need to be met. One manifestation of this thinking is triple bottom line reporting (Elkington, 1998). The second shift is in terms of influence on top management. If management are responsive to the needs of stakeholders, they are also likely to be pressured by stakeholder lobbying. The volume, range and effectiveness of stakeholder pressure have all increased immeasurably in recent decades (Waddock et al., 2002). Of course, stakeholder pressure has also been facilitated by new communication and media platforms, the wider availability of corporate information, and escalating societal concerns.

While broadening the CSR responsibility debate, the stakeholder perspective offers little definitive guidance in assigning responsibility. In essence, it is not immediately obvious exactly who are key stakeholders and the importance they assume in cross-border production. Chen (2016) has argued that the social responsibilities of a lead firm should be based on a detailed consideration of the economic, social and knowledge relationships the firm has with other entities in the chain, both directly and indirectly, rather than a simple assessment of influence based on stakeholder type.

Attempts to understand these relationships has created a third, and more comprehensive perspective, a social network view (Chen, 2009). Social network views (Borgatti & Foster, 2003; Miller, 2007; Young, 2004) analyse the existence of complex relations among multiple entities in a network, a form that is characteristic of contemporary MNEs. Such networks reveal the coexistence of legal corporate independence with network interdependence. This coexistence exposes the difficulty of assigning unrestricted social accountability that conflicts with the idea of corporate autonomy (Amaeshi et al., 2008). To overcome this, network analysts focus on power relations and the axiom that with power and influence comes responsibility. This implies that firms act, and hence can be assumed to be accountable, within their sphere of influence. Indirect influence may occur through a ripple effect (in a traditional view of international production systems) (Amaeshi et al., 2008) or through recurring network interactions (the view of the global factory approach, see below). The latter view is more consistent with societal demands for CSR. As Schrempf (2014) recognises, attempts to limit CSR responsibility based on assigned or unassigned responsibility are not consistent with network-wide shared responsibilities articulated by critics of CSR.

Social connection and network theories are useful when considering the scope of international production CSR but do require answers to two key questions. The first is when can we consider an entity to be part of a network? In other words, how is incorporation defined? The second is when and how can we be clear that an entity is connected to an issue within a production process. We suggest that the contribution of the global factory perspective discussed in the following section is invaluable in answering these two questions.

## 3. From internalised to networked MNE systems

Changing environmental conditions in the world economy may be expected to bring changes in the strategy and structure of MNEs. In recent years the world economy has become more integrated and more volatile. Integration has occurred at both the regional level and in the decisions of individual firms as to how they organise their production

systems. While closer integration of value chains may bring cost and responsiveness benefits, it also increases vulnerability to disruptions. External shocks to the economic system have increased and changed in nature, becoming less like risks and more characteristic of uncertain events (Enderwick, 2006). Competition has increased in most sectors with the rise of emerging market firms (Sauvant, 2008), the growing internationalisation of smaller firms (Coviello & Munro, 1997) and the opportunities created by new technologies (Zhou, Wu, & Luo, 2007). While globalisation has added to competitive pressures, it has also created novel prospects for the restructuring of international operations. The opening of new locations has provided additional markets, valued resources, and potential partners. The fine slicing of production tasks has enabled a greater spatial differentiation taking advantage of cost, quality, and skill differences between locations. In addition, the growing sophistication of outside suppliers in a large number of markets is increasing the attractiveness of outsourcing (Liesch et al., 2012).

The externalisation or outsourcing of tasks offers a number of potential benefits. It allows the sharing of risks, access to new skills and ideas, and enhanced operational flexibility. In addition, partnering allows firms to grow in novel ways, adopting organisational forms quite different from their past choices. In this way firms are able to overcome the administrative heritage that limits thinking about strategy and structure (Bartlett & Ghoshal, 1990).

Perhaps the most significant benefit of outsourcing for the contemporary MNE is the ability to both exploit and augment firm-specific advantages. Supplier organisations are attracted by the advantages that they can acquire (technology, market access, scale economies) from a partner. At the same time the partner organisation is also looking for benefits, increasingly in the form of co-created advantages. This dynamic conception of the firm as an integrator of geographically mobile firm advantages with locationally bound assets, is a popular notion of the networked MNE (Andersson, Dellestrand, & Pedersen, 2014; Ghoshal & Bartlett, 1990; Hennart, 2009). The key point here is that outside partner organisations are much more than simply suppliers. They are more likely to be co-creators of value, characterised by increasing resource and knowledge flows and complex interactions between network contributors.

A more developed view of the networked MNE is provided by concept of the global factory with the idea of a differentiated network created and driven by a lead firm combining a variety of tasks, locations, and governance modes to build and manage a global production system (Buckley, 2009, 2011). A key assumption of global factory thinking is that production chains have to be directed, that is coordinated and integrated, and this is a key role of the lead firm. In addition, it is no longer the case that it is functional stages in the value chain that are detached, rather, decisions are based on the fragmentation of tasks or activities, the process of fine-slicing (Buckley, 2014). Global factory thinking differs from traditional conceptions of the MNE, in a number of ways which are summarised in Table 1.

Table 1 highlights some of the distinctive elements in the global factory approach when compared to more traditional conceptions of the multinational enterprise (MNE) or lead firm. Its dynamic orientation means, for example, that suppliers are selected not simply because of their ability to meet cost or quality requirements, but as potential partners contributing to upgrading of the value chain. Similarly, the conception of value is extended beyond profit to include flexibility, resilience and innovation, all traits sought by the lead firm as it attempts to deal with market instability, uncertainty, and disruption. Partner organisations are expected to be more than simply compliant: they are increasingly expected to show long term cooperation and commitment to value creation.

The lead firm within a global factory system plays a more decisive role in that as well as coordinating resource and information flows along the value chain, it is continually seeking to upgrade the competitiveness of its supply chain through innovation, often co-created with partner organisations. The extent of responsibility is less clear within the global factory when compared with a traditional MNE. Responsibility within a traditional MNE, particularly one characterised by internalised operations, derives from ownership, control and legal liability. In contrast, the global factory, characterised by some level of externalisation, finds its responsibilities defined by stakeholder expectations and its position in a social network. We also observe differences in the direction of social responsibilities. Traditionally, these have focused on backward links to suppliers, and have generally been limited to first-tier suppliers. For the global factory, societal expectations now extend downstream to consider logistics, marketing, and after sales service. Increasingly, assumptions of responsibility are expanding to include product use, disposal, and impacts (Schrempf, 2014). The influence of the lead firm also differs in the two approaches. Moving beyond a strict legal conception of liability and due diligence, the global factory through its role as key coordinator and integrator of a production system is vulnerable to failures anywhere in the network.

A further difference between the two systems is in resource flows. As well as product and service exchange, the global factory manages vast and complex information flows: flows that are multidirectional and form a critical part of co-creative innovative activities. This changes radically the role of supplier organisations. Within a global factory system the role of a supplier shifts from a specific task within a defined value adding procedure to participation in a dynamic and evolving process of competitive upgrading where they may contribute to specialisation, enhanced flexibility, and innovation. Traditional conceptions of upgrading, largely developed within the global value chain literature (Humphrey & Schmitz, 2002) and that focus on gaining access to more lucrative stages of the chain, fail to capture the opportunities for co-creation that arise when production chains are perceived in a dynamic rather than a static way.

A clearer picture of the dynamics and interactive nature of lead firm-partner organisation dynamics might be provided by an example. Analysis of Foxconn's website reveals that the world's largest contract assembler strongly advocates a collaborative role with customers. Foxconn highlights its focus on the entire value chain, on adding worth through valued services such as logistics and end-to-end testing as well as training suppliers to enhance collaboration. Best practices are also documented and shared with key stakeholders. Analysis of the strategic manufacturing relationship between Apple and Foxconn identifies the importance of flexibility provided by the latter (Quarterman, 2012). This flexibility encompasses the production of new products, the product mix, and output volume. The collaborative nature and mutual dependence of the Apple-Foxconn relationship is also endorsed by Liang (2016) who shows that this association differs from conventional supplier relations in that it involves two leading firms at different, but key stages of the production process, is characterised by mutual dependency, and has been global from inception. Liang argues that this represents an amalgamation of modular, relational, and captive modes of governance (Gereffi et al., 2005), suggesting that a chain analogy is no longer a useful concept where first-tier suppliers actively manage backward linkages in the process. In addition, leading suppliers to Apple such as Toshiba, Samsung and Foxconn are active foreign investors adding capacity in preferred locations such as China, improving flexibility and network interaction. Complementarity is also apparent in the fine slicing of functions such as innovation. Apple has responsibility for product innovation, while Foxconn focuses on process innovation, but it is the conjunction of the two that drives value creation.

In summary, the global factory approach provides a comprehensive and dynamic analysis of the creation, management, and coordination of global production systems. It highlights the key role of a lead firm that typically retains control over higher value-added activities such as R & D and marketing, but is willing to outsource non-core tasks. The lead firm reintegrates a highly fragmented global production process drawing together a network of partner organisations, both internal and external, providing resources and information. Critically, from our perspective, the global factory models the production process not

**Table 1**
International Production Organisation and Coordination in Traditional MNEs and Global Factory Systems.

| Issue | Traditional MNE | Global Factory System |
|---|---|---|
| Selection of suppliers | Quality and cost threshold | Potential partner in production system upgrading |
| Forms of value sought | Value as profit | Value as profit, resilience, flexibility and innovation |
| Expectations of partner organisations | Compliance | Compliance, Commitment, Cooperation, Creativity |
| Key role of lead firm | Coordination/integration of largely internal resource flows | Creating advantage within production systems, coordination of resource and information flows |
| Responsibility of lead firm | Derives from ownership, externally limited to first tier partners | Derives from stakeholder expectations of position within a social network |
| Direction of responsibility | Typically upstream to suppliers | Upstream and downstream. Increasingly encompassing product use and impacts. |
| Source of influence of lead firm | Derives from legal liability and due diligence | Directs and integrates a social network |
| Primary task of lead firm | Buyer of components, resources and business services | Coordinator of complex, fragmented production systems |
| Strategic planning process | Top down within lead firm | Emergent, collaborative, bottom up, coordinated by lead firm |
| Information flows | Largely from lead firm to affiliates and first tier partners | Multidirectional within social network, orchestrated by regional and parent HQs |
| Innovation | Largely internalised, linked to marketing and driven by lead firm | Occurs collaboratively, coordinated by lead firm, internally and externally. May be separate focus on products and processes |
| Partner organisation upgrading | Occurs through gaining access to more lucrative stages of the production process.<br>Requires access to lead firms. | Occurs through contribution to upgrading of value.<br>Occurs through interaction with lead firm affiliates, regional HQ or network participants. |
| Value of partner organisation | Equated with role in particular stage of the value chain. | Linked to innovation, increased specialisation, provision of flexibility. |
| Level of partner organisation commitment | Often low, they incur costs but have little input. | Higher, may have input and may share costs. |

simply as a series of steps, rather as a complex interactive network. Partner organisations contribute to the dynamic upgrading of production activities through their specialist knowledge. Value is not a zero-sum game; its creation and distribution is a negotiated process. The analysis is firmly embedded within the social, economic and political reality as a result of location and governance choices of the lead firm. This examination suggests a level of interaction and awareness across production systems that is far higher than that associated with traditional descriptions of global value chains.

## 4. Assessing the scope of CSR in networked MNE systems

To this point our argument on assessing the scope of CSR within global production systems has considered three notable trends that have converged to create a need to move beyond legalistic and stakeholder approaches to the problem. The first of these has been growing societal expectations of businesses, particularly international businesses, to consider social, ethical and environmental concerns in their decision making. This pressure has broadened the range of issues that businesses must reflect on and has widened the span of organisations that may be associated with a particular issue. Second, globalisation means that the impacts of adverse CSR events are now more immediate, dramatic, and damaging than they once were. As examples we might recall Enron, Tyco, the Rana Plaza collapse in 2013, and the VW emissions cheating scandal. All of these have imposed huge and continuing costs on business and society and massively influenced consumer and investor behaviour. The third trend is the development of network MNEs that have increased the global dispersion of production activities, pushed the fragmentation of these activities down to the level of specific tasks, while reorganizing control processes. As suggested above, global factory structures have massively increased interactions within production systems as the nature of association has evolved.

The convergence of these trends enables us to examine the CSR scope of lead firms within production processes characterised by the absence of ownership and direct linkages. Arguments for the assumption of responsibility stem from the ways in which the network structures of global factory mediated production systems have massively increased member connections and interactions as strategic decisions seek to capture the benefits of flexibility, resilience, and innovation that such networks offer.

A network structure changes relationships, and judgment of responsibility, in significant ways. First, it is much more difficult to attribute contribution within a network so that the idea of cause and effect is no longer a useful measure of responsibility weakening the traditional argument that to substantiate responsibility one must first prove causation and knowledge. Social network theory emphasises power and influence within networks (Borgatti & Foster, 2003). Second, network relations increase the likelihood of social connection replacing causality in attributing responsibility. Connections are high in any process where products, services and information are exchanged on a recurrent basis (Mueller, Gomes dos Santos, & Seuring, 2009). We have argued in Section 3 above that global factory systems increase the extent, frequency, and multiplexity of interactions.

We elaborate the impact of global factory systems on network characteristics and the implications of these for corporate social responsibility in Table 2.

Table 2 illustrates that on almost any network characteristic, a global factory system increases interaction amongst participants and, in many cases, increases awareness of the activities of fellow contributors. More specifically, the primary role played by the lead multinational enterprise places that firm in a position of considerable influence. As we have suggested, this role is much more than simply buying resources or coordinating transactions, it encompasses a wide range of innovative activities which, through co-creative processes, ensure the upgrading and continuing competitiveness of the sector value chain. It is not only influence that is increased. At the same time, the need for specialist inputs, knowledge and cooperation on problem-solving (Wei & Liu, 2006) mean that the lead firm, and often primary suppliers, have an elevated awareness of the actions of other participant firms. In addition, high network density (Oliver 1991; Rowley, 1997), strong ties (Granovetter, 1973) and the creation of specialist clusters (Baum, Shipilov, & Rowley, 2002), all facilitate the diffusion of behavioural norms and expectations. Under such conditions the combination of increased influence and awareness implies a greater assumption of responsibility.

Specifying the exact extent of corporate social responsibility across fragmented, externalised production systems is not simple. If all activities were internalised, falling under the ownership and governance of the lead firm then expectations would be that complete responsibility for the process is attributable to the lead firm. Social networking

**Table 2**
Network Characteristics and Implications for CSR Scope.

| Network characteristics | Impact of a global factory system | Implications for scope of CSR responsibility |
|---|---|---|
| Transactional content | Increased exchange of resources, information and innovation. Multiplexity of exchange | Increased interactions, influence and awareness |
| Transactional frequency | Increased | Increased interactions and awareness |
| Types of resources | Seeks more customised resources and specific information | Increased influence, awareness and responsibility of lead firm |
| Network size | Increased | Influence over a greater number of entities, awareness might be reduced |
| Length and dispersion of value chain | Increased | Centrality of lead firm as coordinator increases influence, awareness and responsibility |
| Influence of lead firm | High due to role as coordinator and integrator and as driver of innovation | Greater influence implies greater awareness and responsibility |
| Network density | Increased | Greater density increases information flows and expectations of CSR norms |
| Degree of centrality | Increased | Role of affiliates/regional HQ and parent HQ as coordinators |
| Closeness centrality | High for lead firms | Lead firms first to anticipate and respond to emerging CSR issues |
| Strength of ties | High | Co-creation encourages strong ties characterised by high frequency, reciprocity and intimacy |
| Small world networks | Fragmentation and cluster activity | Facilitates exchange and partner awarenes |

approaches with their focus on interactions could be used to argue that even when partners are independent in terms of ownership, but are exclusive partners to a lead firm directed network, then again the lead firm may be seen as responsible for the activities of the external partner organisation. Things become more complicated when network partners are non-exclusive and contribute to processes mediated by other, unrelated lead firms. Assigning the attribution of responsibility based on the extent of linkages or some measure of dependence would be extremely difficult. However, in an important sense such assessments may not be necessary. This is because in the minds of stakeholders such as consumers, attribution would be absolute. For example, if a branded mobile device failed because of defective batteries supplied by an outside supplier, a supplier that serviced a number of consumer product firms, consumers would still blame the brand owner and presumably lead firm. Their assignment of responsibility for poor quality, unacceptable working conditions, or any other social concern, is likely to be directed at the lead firm in the production process, irrespective of the extent to which a contributing organisation is exclusive or otherwise. The lesson for lead firms and brand owners is clear: in the minds of influential stakeholders, responsibility is easily and simply assigned and is likely to be encompassing.

## 5. Conclusions

Our discussion has used the concept of social network analysis to address the question what is the scope of social responsibility of a contemporary networked MNE? The answer that emerges is that it is lead firm in an international production process who is assumed to carry responsibility for the actions of other participants in a networked production system, irrespective of ownership patterns or the directness of linkages. The rationale for such a view is that networked production systems operate as purposeful systems under an implicit social contract that carries an obligation to avoid harmful impacts on society. In modern global production systems this obligation falls primarily on the lead firms that orchestrate global factory systems. How these operations are structured, including the degree of geographical dispersion, externalisation of ownership, and depth of linkages, does not, certainly in the minds of influential stakeholders, negate this obligation. International production systems increasingly operate as networks subsuming a set of interrelated nodes (Borgatti & Li, 2009). Within such networks responsibility is attributable to connection rather than causality.

We have considered the two key questions of when does an entity become part of a network, and when can connection to an issue be assumed? The answer to the first part is when that entity is part of a directed international production process. It is not necessary that the participant organisation be exclusively involved in a process, it may be part of multiple unrelated production processes. Contribution in contemporary networked production systems, particularly those coordinated by lead firms within global factory systems, means much more than just supply relations. We have argued that such chains are characterised by co-creation in the pursuit of value, flexibility, resilience and innovation. In response to the second part we suggest that connection levels are much higher than traditional global value chain analyses suggest. Information and resource exchanges are multidirectional and dependence is increasingly reciprocated.

We accept that the nature of linkages may differ between lead firms, first-tier suppliers, and subsequent partner organisations. Dealings between lead firms and first-tier organisations are perhaps best described as continuous, relational ties. Links to those further removed in the chain may be more accurately described as interactions, based on discrete events. Nevertheless, for all parties, irrespective of ownership or direct ties, linkages and influence are real. For example, companies such as Mattel require their direct partners to ensure that their own suppliers, in turn, adhere to corporate CSR standards (De Chiara & Spena, 2011).

Our approach, building on the global factory framework, facilitates the grounding of international production activities within the reality of structural and institutional environments (Bair, 2005). Recognition of the multiple objectives sought by lead firms from their production networks, such as flexibility and innovation, enables us to reconsider many of the limitations voiced by global value chain scholars including the operation of dual labour markets with adverse incorporation (Phillips, 2011), and the blending of formality and informality (Barrientos, 2013; Enderwick 2017; Phillips 2011).

Our approach can also contribute to the understanding of upgrading within international production systems. Traditional analysis offers limited prospects for upgrading assuming that opportunities are controlled by the lead firm (Humphrey & Schmitz, 2002). Examination of the operation of global factory systems such as Amazon, highlights the existence of labour market dualism both between and within plants. This suggests the selectivity of upgrading opportunities and the potential coexistence of simultaneous upgrading and downgrading within an organisation. In the same way, the desire to maintain the competitiveness of production systems is consistent with the possibility of economic upgrading in the absence of comparable social upgrading (Barrientos, Gereffi, & Rossi, 2011). Conventional approaches to upgrading are overly restrictive and pay insufficient attention to the provision of added value services by vendors and the ability to increase returns through co-creative approaches to system upgrading.

Our discussion also highlights a number of areas where further research work is required. One is the possibility that lead firms may use

CSR in a strategic way to both gain social legitimacy and to maintain dominance of production relations. Such anticipation and reaction to emerging CSR concerns could distort important and independent mechanisms for ensuring transparency and accountability (Bair & Palpacuer, 2015). A second area is the growing pressure on firms to account for not simply the ways in which their products are produced (upstream CSR), but also the use of those products and consequent impacts (downstream CSR). Such concerns have, for example, linked tobacco with consequent health costs, casinos and problem gambling, and fast food and obesity (Schrempf, 2014). This is an area that has not been adequately addressed in terms of corporate social responsibility. Third, the popular corporate responses to CSR pressures such as codes of conduct and auditing also have complex impacts on international operations that are worthy of further investigation. These include tensions between the goals of cost minimisation and CSR compliance, possible switches in location and governance mode (Nadvi, Lund-Thomsen, Xue, & Khara, 2011), and the numerous compliance challenges faced by smaller partner organisations (Bhandarkar & Alvarez-Rivero, 2007; UNCTAD, 2012). Finally, we might also speculate that in the future lead firms will have to consider not just the external facets of value chain CSR such as suppliers and other stakeholder interests, but also address internal aspects including diversity and equality, privacy, and wellbeing. These aspects have attracted very little discussion to date.

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