Chapter 21
Social Responsibility in Supply Chains

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21.1 Introduction

Companies are increasingly confronted with social responsibility questions in the media along the entirety of the supply chain they are seen to control and they find it particularly challenging. We look at how companies can design and operate supply chains to fulfil their social responsibility and aim to address four key questions that face managers and researchers.

One question is about the choice of the level and scope of supply chain operations to take into account. Supply chain operations comprise coupled processes that in turn comprise coupled sub-processes and so on, whether within a department or across many companies. Moreover, for social responsibility, the context of analysis is typically a large company. Such a company would typically have a global supply chain entailing many other large and small companies so the context for any analysis or application has to be chosen carefully. Finally, the observed operations may be considered 'socially responsible' at one level and in one context but not so at another level or in another context. An example is the 2014 spat between Oxfam and American actress Scarlett Johanssen, then brand ambassador for the charity. Johanssen also became the brand ambassador for SodaStream, an Israeli company manufacturing in the occupied West Bank, claiming the company contributed to peace by giving jobs to Palestinian people under occupation. At another level, Oxfam maintained that "businesses, such as SodaStream, that operate in settlements further the ongoing poverty and denial of rights of the Palestinian communities that we work to support." (BBC 2014)

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A second question pertains to the large number of alternative definitions as well as the huge and diverse objectives of social responsibility. Dahlsrud (2008) has identified 37 definitions of CSR from various researchers and industry bodies (mostly in the period 1998–2003). In the operations literature, Carter and Jennings (2004) take CSR to include business ethics, philanthropy, community, workplace diversity, safety, human rights, and environment. Lists of objectives tend to be rather long—see for instance Carroll (1979, 1999) and Bowen (1953:8–12) although Friedman (1970) advocates the single-objective view that 'the social responsibility of business is to increase its profits'. Dealing with multiple objectives raises the question of Pareto efficiency (how to trade off one objective against another) as well as maximizing versus *satisficing* (meeting some threshold value of) these objectives (Ackoff 1970). Shareholders may also content themselves with satisficing shareholder value (Monsen and Downs 1965).

A third question is how companies can be socially responsible by working directly with the weaker members of society, the 'poor', who comprise the majority in every society. Social responsibility refers to the responsibility of business to society. In the business-and-society discourse, 'business' really means large companies (corporations) because "the powerful are given closer scrutiny" (Carroll and Buchholtz 2012:6; see also Bowen 1953:6), narrowing further on the senior managers who make strategic decisions at these companies (cf. Bowen 1953). Equally, while 'society' is a broad concept, political, media and research attention is focused on those at the other end of the power spectrum, i.e., groups of people without economic or political power: employees, small suppliers, and local communities. So the question is: can companies with economic power run supply chains to meet the needs of the weakest in society, the poor, not just by selling to them but also by employing them or buying from them to improve their economic level?

A final question for managers and OM researchers is to decide whether to or how to develop overarching frameworks to guide a company's strategy to incorporate social responsibility. An overarching framework requires consistency with theoretical frameworks already in use in the strategy, the OM and the social responsibility literature and practice. For instance, strategists may use resource-based view, OM modelling may entail utility theory and the social responsibility practitioners may draw on stakeholder theory. The alternative would be either to develop an entirely new framework or to separate social responsibility efforts from its operations by, for instance, relying solely on philanthropy.

21.2 Literature Review

21.2.1 Corporate Social Responsibility

The social obligations of business are generally codified as corporate social responsibility (CSR). Rangan et al. (2015) describe two other 'theatres' for a company doing CSR besides philanthropy: operational improvement, and new business

models. In the OM literature, there is interest in how CSR initiatives impact purchasing and supply chain management (Cruz 2009) and how supply chain managers incorporate or implement CSR (Carter and Jennings 2004; Carter 2005; Maloni and Brown 2006). London et al. (2010) examine value creation with social enterprises, while Sodhi and Tang (2011) take a supply-chain perspective on these enterprises.

In general, there remains considerable scepticism about whether a modern corporation can or does fulfil its social obligations (Banerjee 2007; Devinney 2009). Such scepticism may explain why research in 'socially responsible operations' tends to focus on social enterprises, small farmers, foundations, etc. Only a handful of papers in the operations or supply chain literature focus on large company initiatives such as ITC's e-choupal, an electronic platform to provide farmers the company's purchase price one day in advance, or Unilever's Shakti Amma, training women in rural areas to sell Unilever's products with financial help from microfinance NGOs. Some additional examples are provided by Lee and Rammohan (2017) in Chap. 20.

21.2.2 Sustainability

'Sustainability' has become an instrument for large companies to subsume diverse company initiatives pertaining to CSR, environment, and profitability. It provides companies a way to align their CSR and environmental efforts with profitability. Originally, the concept was conceived as being broader in scope (cf. Elkinton 1998): The Brundtland Commission defined it "as development that meets the needs of the present without compromising the ability of future generations to meet their needs" (Carter and Rogers 2008).

Elkinton (1998) presents sustainability as having three 'pillars'—economic, environmental and social—with overlapping zones. Such overlapping zones are helpful for a company because it can report initiatives as serving the environmental (or social) cause even when these are economically motivated. Indeed, the most commonly reported initiatives in companies' sustainability reports are about the reduction in energy consumption. However, the focus on overlaps avoids the awkward question of how to make trade-offs between profitability and social objectives—see Pagell and Shevchenko (2014) in this regard. There are also trade-offs between environmental and economic sustainability: shutting down coalmines (to reduce pollution) adversely affects the economic and social sustainability of mining communities.

The OM literature has considered sustainability from an environmental perspective without explicit incorporation of the social aspects (Carter and Rogers 2008). Sustainability has entered the OM literature as 'sustainable operations management' (Kleindorfer et al. 2005), or more commonly as, 'sustainable supply chain management' (cf. Linton et al. 2007; Seuring and Müller 2008; Pagell and Wu 2009; Carter and Easton 2011). Pagell and Shevchenko (2014) argue that sustainability should be entrenched in all aspects of supply chains.

21.2.3 The 'Poor', the Bottom of the Pyramid and Shared Value

The 'bottom-of-the-pyramid' (Prahalad 2006) approach entails large companies seeking to increase profits by selling goods and services to the 'poor' and possibly using them as suppliers or distributors while doing so. Such operations can require redesigning goods and packaging such as Unilever selling shampoo or its skin-colour-lightening product in small sachets to poor consumers in developing countries (Karamchandani et al. 2011). However, Karnani (2007) provides economic arguments against such marketing of consumer goods to the bottom-of-the-pyramid poor. A broader approach is the 'base-of-the-pyramid' (cf. London and Hart 2011) where 'shared value' is highlighted. An example is the German company Bayer selling agricultural chemicals in small packets to smallholder farmers in developing countries (Karamchandani et al. 2011) creating profits for itself and the farmers. The redesign of modes of production and delivery using the poor as suppliers and distributors *can* make help them in becoming economically better off (Sodhi and Tang 2014).

Engagement with the 'base' of the pyramid requires new business models to engage with the 'poor' as customers or suppliers. Karamchandani et al. (2011) discuss challenges for companies wishing to engage profitably with the bottom of the pyramid: (1) uncertainty of cash flows given the large number of low-margin and low-value transactions, (2) gauging demand and working in 'informal' markets, (3) sales and distribution, (4) providers being neither aggregated nor capable enough to provide quality or volume, (5) business ecosystems not being able to support initiatives.

Although sustainable development has been studied extensively in the development economics literature (Ray 1998; Lal 2000; Hayami 2005), *operational* issues in this context have not been explored much yet. Sodhi and Tang (2011) have looked at social enterprises from a supply chain perspective: These are not large companies but the work of social enterprises has practical implications for what large companies can do. They explore this idea further by looking at the poor as suppliers or distributors in supply chain rather than as consumers (Sodhi and Tang 2014).

The relationship between the company and those at the bottom of the pyramid can create 'shared value' (Porter and Kramer 2006), which recalls the overlaps between the pillars of sustainability "by reconceiving the intersection between society and corporate performance". However, they avoid discussing how to divide the 'shared' value (Coff 1999); Crane et al. (2014) provide some more limitations of the 'shared value' concept.

21.2.4 Stakeholder Resource-Based View

To better understand how to incorporate social responsibility in supply chain operations, Sodhi (2015) outlines 'stakeholder resource-based view' (SRBV) building on resource-based view, utility theory and stakeholder theory.

One model for companies to build lasting competitive advantage is the **resource-based view** (RBV) or its extensions (cf. Hart 1995; Lavie 2006), whereby part of the resources are bundled as firm-specific 'capabilities' that the firm develops in a static economic setting (cf. Wernerfelt 1984; Barney 2001). The resources must raise barriers to entry to others if a competitive advantage is to be durable (Rumelt 1984). In a dynamic economic setting with high uncertainty, resources have to be changed using 'dynamic capabilities' as the firm seeks competitive *survival* in a rapidly changing environment (cf. Teece et al. 1997). Dynamic capabilities "are the organizational and strategic routines by which firms achieve new resource reconfigurations as markets emerge, collide, split, evolve, and die" (Eisenhardt and Martin 2000) although there are many other definitions (Ambrosini and Bowman 2009). 'Dynamic' refers to the external environment rather than to the capabilities, which are built around 'routines' that are the organization's processes. Being able to deliver on social responsibility could be a firm's capability or dynamic capability. But dynamic capability, say, with the company moving facilities from one low-cost country to another lower-cost one continually, could also be tied to social *irresponsibility*.

Garriga and Melé (2004) classify theories in the social responsibility literature as: (1) *instrumental theories* with the corporation solely as an instrument for wealth creation so any social responsibility activity only serves to further that aim; (2) *political theories* about the responsible use power of corporations in society and the politics; (3) *integrative theories* on how business integrates social demands based on the assumption that business depends on society for its existence, continuity and growth; and (4) *ethical theories* based on ethical responsibilities of corporations to society. These can overlap: integrative theories can potentially be reconciled with instrumental theories if a company can meet some social demands only to make more profits in the long run, then it is trying to be integrate society into its decisions. If political power, such as that exerted by large companies on governments, from this perspective is for increasing wealth then an instrumental view can subsume political views as well.

One integrative theory is **stakeholder theory** (Freeman 2010). The assumption is that managers have fiduciary duties to the corporation, not just to the shareholders, and the stakeholders are all the people and groups with an interest in the corporation. According to Donaldson and Preston (1995), the interests of all stakeholders are of intrinsic value and "each group of stakeholders merits consideration for its own sake and not merely because of its ability to further the interests of some other group, such as the shareowners".

In the analytical operations and supply chain literature, **utility theory** is used in the economics of decision-making. Here, the assumption is that we have rational players who seek to maximize their utility—their preference for goods and services—given the possible/actual moves of the other players. Utility theory is consistent with the corporation as an instrument for wealth creation for wealth-maximizing shareholders. And if the concept of utility can extend to the *means* for acquiring goods and services, we have a broad concept maximizing which can cover both resources (as in the resource-based view) under known conditions and dynamic capabilities under uncertainty.

Building on RBV, utility theory and stakeholder theory, Sodhi (2015) proposes **stakeholder resource-based view** (SRBV), defined as

> SRBV is a model to guide the decision-making of managers towards maximizing their utility by developing their organization's capabilities—dynamic capabilities, resources and routines—while recognizing the need to improve the respective utilities of other groups of the organization's stakeholders, possibly by helping them develop their respective capabilities as extensions of the company's own capabilities. Under SRBV, stakeholders for the organization are those whose utility is significantly dependent on these managers' decisions.

SRBV helps managers recognize, whether for a company or for particular operations within a company or across companies, that *there are different groups of stakeholders with their respective resources, routines and dynamic capabilities, seeking to maximize their respective utilities under uncertainty and over their respective time horizons*. Stakeholders for a large corporate include those involved in operations: *suppliers* such as smallholder farmers and contract labourers, *employees*, *mid-level managers*, *senior managers*, and *distributors/wholesalers/franchisees. Shareholders*, *government*, *communities* in which facilities are located, and *consumers* are also stakeholders. Note that the 'company' or 'corporation' is not a monolith—instead, we have senior managers, mid-level managers and shareholders of companies although our focus is on senior managers as decision makers. Under SRBV, each stakeholder (individually or as a group) is treated on a par with other stakeholders from a research perspective.

SRBV allows the manager as well as the researcher to tackle the four key questions listed in Sect. 21.1:

The first question was about the choice of the level and scope of supply chain operations to take into account. Under SRBV, there is no explicit restriction. The manager could consider any subset of stakeholders as long as the utility and capabilities of each (type of) stakeholder is fully accounted for. In the Johanssen-Oxfam example, both sides could agree on the utility of Palestinians obtained from gainful employment at Israeli companies operating in the occupied territories. But equally, they could agree that there are other (non-working) Palestinians whose utility is affected by living conditions under occupation, which is only solidified through the operations of Israeli companies. Under SRBV, the manager (or researcher) has to treat all stakeholders of interest on a par with each other to understand them at an economic level. Different managers may select different subsets of stakeholder groups but they can agree on any stakeholder's utility derived from the operations in scope. Furthermore, the unit of observation is the "operation", whatever its scope. A particular manager researcher will have to scope out the breadth and level of the operations over which he or she can make decisions.

The second question pertained to the large number of alternative definitions as well as the huge and diverse objectives of social responsibility. Under SRBV, we have a broad conceptual view of utility and managers have to recognize that other stakeholders have their own objectives underlying their respective utility. Under SRBV, the different *objectives* that the broad CSR literature considers are split up across the different stakeholders and the manager should recognize other

stakeholders' objectives into their respective utility. Understanding utility by stakeholder allows the manager to focus on and differentiate stakeholder-specific drivers of utility-maximizing effort.

The third question was how companies can be socially responsible by working directly with the weaker members of society, the 'poor', who comprise the majority in every society. The poor, if part of the company's supply chain as suppliers, distributors, or consumers or even as members of communities where the company has supply chain operations may be stakeholders. If their utility (or disutility) is affected by the company's operations—indirectly by the managers' decisions—then the poor are stakeholders. Developing their capabilities may be part of or get aligned with the managers' efforts to develop their company's capabilities. However, philanthropic efforts unrelated to the company's operations are not included in SRBV. This is because the intended beneficiaries of philanthropic may not be stakeholders whose utility depends significantly on a company's operations. Still, there is a grey area if the philanthropic effort is considered useful for marketing purpose.

The last question for managers was deciding whether to or how to develop overarching frameworks to guide a company's strategy to incorporate social responsibility. SRBV provides such a framework that enables decision-making consistent with utility theory, resource-based view and stakeholder theory. Concepts like 'shared value' are rendered more tangible under SRBV in terms of increasing utility for the managers themselves, their shareholders, and their suppliers or the communities in which these suppliers have operations. Using SRBV, a manager can have a long-term view focusing on developing his/her company's capabilities (dynamic capabilities, resources and routines) as well as those of the company's stakeholders by extension.

21.3 Related Findings and Practical Implications

We find many operations and supply chain configurations being tried by different organizations mainly targeting economic improvement of the poor. These organizations are mostly social enterprises rather than large companies. As such, we discuss our findings specifically for social enterprises first in Sect. 21.3.1. Next, we discuss our findings related to the poor as suppliers (Sect. 21.3.2), as distributors (Sect. 21.3.3), and as borrowers of working capital lending specifically targeting them (Sect. 21.3.4). This sets the stage for us to discuss implications for large companies in Sect. 21.3.5.

21.3.1 Social Enterprises

Sodhi and Tang (2011) view social enterprises as enabling the supply chains of micro-entrepreneurs with the supply-chain perspective of material, information and cashflows. Here are some examples of social enterprises: To lend to the poor,

Grameen Bank relies on group lending, SKS is a for-profit organization that utilizes capital markets to scale up its operations quickly, and Kiva is a person-to-person online lending organization.

Then there are the enterprises that consider the poor as suppliers. For instance, Arzu sells custom designed rugs made by Afghan women weavers. Thamel is an online portal that allows diasporas to send gifts and money to their loved ones who live in Nepal. Coconut World sells coconut sugar produced by the farmers in the Philippines. Another example of a social enterprise is Ecomaximus that produces and sells elephant dung paper that is co-produced by the villagers and their elephants in Sri Lanka, and Men-on-the-Side-of-the-Road (MSR)—serves as an agent to help the day laborers in South Africa to find jobs in a safe and humane environment.

VisionSpring uses the poor as distributors. It procures cheap reading eyeglasses and sells them through micro-entrepreneurs, thus providing affordable reading glasses for low-income individuals with presbyopia.

Other social enterprises seek to help micro-entrepreneurs become more productive. KickStart develops and sells mechanical irrigation pumps and cooking oil presses so that the farmers can improve productivity. Solar Cooker allows villagers to start bakery businesses in areas that do not have easy access to energy.

21.3.2 The Poor as Suppliers

A company may be able to buy goods from the poor directly at good prices and, at the same time, be seen as contributing towards poverty alleviation. In developing countries, social enterprises and companies can help the poor as suppliers by using three basic models:

1. *Reducing intermediate echelons to obtain higher selling prices*: Farmers and other small producers in developing countries typically sell their output through layers of middlemen and consequently get low prices for their product. This creates an opportunity for social enterprises or companies to help the poor by purchasing their output directly. For example, Coconut World purchases coconut sugar made by small farmers in the Philippines directly, and then sells directly to consumers through its online store and to other retailers in the US (Cameranesi et al. 2010). Walmart purchases the crops directly from farmers in China to reduce its costs; the farmers also benefit by getting a higher price (An et al. 2012). The social enterprise Arzu purchases wool rugs directly from Afghan women and sells these in the US. Organizations such as Fairtrade certify such direct purchase from the farmer by manufacturers and retailers. Doing so enables these manufacturers and retailers to advertise to (largely) western consumers that the company is working to ensure the farmer gets a higher price than he would get from middlemen.
2. *Reducing search cost:* The poor as suppliers do not have an easy way to search for customers for their products or services. In South Africa, Men-on-the-Side-of-the-Road (MSR) developed an online portal as a marketplace for day laborers

(micro-entrepreneurs) and homeowners, which helps laborers and potential customers find each other (Sodhi and Tang 2011). Likewise, truck owners in India or South Africa are typically micro-entrepreneurs with a single vehicle, private enterprises have created websites offering to match loads from shippers with trucks to help reduce the problem of trucks heading back home empty after delivery, e.g., LoadJunction.com in India or 123LoadBoard in South Africa. Chipchase et al. (2006) reports that customer demand information available on the mobile phones has helped taxi drivers to increase their earnings in Pakistan and Thailand. The same has been reported for fishermen in Kerala seeking markets for fish, a perishable product because of the fishermen's lack of access to cold chain facilities (Jensen 2007). A broader question is that of the value of information. For instance, Chen and Tang (2015) analytically obtain conditions under which use of (free) public or (costly) private information can be beneficial to a smallholder farmer or not.

3. *Improving productivity*: The poor, especially small farmers, often lack relevant information to improve productivity and to increase selling opportunities. In India, IFFCO disseminates information about weather forecasts and crop advisory information (what to cultivate, when to harvest, and how to improve yield and quality) to farmers via mobile phones so that they can plan their farming activities accordingly (Ghosal and Parbat 2012). Also, Reuters Market Light (RML) tracks the prices of 50 commodities over 1000 markets and the weather conditions of 2000 locations and disseminates crop- and location-specific information to subscribed farmers in India using SMS text messages so that farmers can sell their products at a higher price (Preethi 2009).

21.3.3 The Poor as Distributors

In developing countries, the distribution infrastructure is inadequate. A social enterprise or a company can help reducing distribution cost by using micro-entrepreneurs as distributors. For example, Mozambique-based VidaGas uses micro-entrepreneurs to sell propane gas to food-stall owners, fishermen, health clinics, etc. (Watson and Kraiselburd 2009). Vision Spring sells affordable reading glasses to low-income individuals through a network of micro-entrepreneurs in developing countries (Bhattacharya et al. 2010). Social enterprises like Living Goods and Solar Sisters, both operating in Uganda, also use women micro-entrepreneurs to do last-mile distribution of household necessities and solar lamps respectively thus emulating the model of the famed Avon Ladies (Economist 2012).

The basic distribution strategy entailing the poor as distributors is a **hub-and-spoke** strategy. An enterprise can set up a center in a larger village as a "hub" from which micro-entrepreneurs (or employees) can travel to the more remote rural areas as "spokes" to sell goods or provide services. Such a distribution network can further benefit from (a) using existing commercial/non-commercial networks for moving goods to the micro-entrepreneurs or (b) providing additional services at the hub or sell more products or services to create more supply chain surplus.

Providing additional services is a **piggyback** strategy. Gramin Suvidha Kendra, a private–public partnership between MCX and Indian Post Office established in 2006, distributes seeds, fertilizers, water purifiers, micronutrients and solar lanterns to farmers via the ubiquitous post offices in India (Vachani and Smith 2008). In Africa, Cola Life, an independent UK charity, has used a wedge-shaped container that fits between the Coca Cola bottles in their crates to reduce distribution costs (see www.colalife.org).

21.3.4 Working Capital Lending for the Poor as Suppliers or Distributors

Micro-entrepreneurs have very little access to credit from traditional banks not only because of lack of credit history or collateral but also because of the small amounts of money involved relative to the transaction cost for the bank for screening and collection. Therefore, social enterprises and companies can find ways to finance the working capital if they are to engage the poor as suppliers or distributors. For example, as already noted, Vision Spring provides each micro-entrepreneur in its supply chain with $75 worth of eye charts, brochures, and a stock of reading glasses. In general, there are different types of microfinance models for micro-entrepreneurs to obtain micro-loans:

1. *Self-help groups (SHG)/Rotating Savings and Credits Associations (ROSCAs).* A community of the poor can form self-help groups, where all members bring savings to weekly (or monthly) meetings, and one of the members can take a loan from these savings (Ardener 1995; Snow 1999). While this approach cannot be used for working capital funding, it might be useful for a micro-entrepreneur to purchase capital goods like a bicycle.
2. *Community banks.* These banks seek to stimulate economic development (in terms of business and job creation) for their communities. Grameen Bank uses "group lending" to reduce its screening, monitoring and collection costs: all members in a group are responsible to provide the repayment when one of the members is behind (Foroohar 2010). Benefits of group lending can be extended for working capital funding if all members of the group are suppliers or distributors in the same supply chain and both materials and cash flows can be aggregated at the group level.
3. *Peer-to-Peer Networks.* Kiva is a person-to-person online lending organization that enables people in developed countries to provide micro-loans (Flannery 2007). So this could be used for funding micro-entrepreneurs wishing to be suppliers or distributors, but more for investment in capital goods rather than working capital.
4. *Commercial MFIs*: SKS is a for-profit, publicly traded microfinance organization in India that uses capital markets to scale up its operations quickly and uses information technology to reduce operating cost (Akula 2008). Such a system could also be useful for working capital funding if micro-entrepreneurs can keep rotating balances.

21.3.5 Practical Implications for Large Companies

Large companies seeking for ways to discharge their social responsibility can learn from social responsibility can learn from social enterprises. Indeed, a company can offer all three types of benefits to the poor as suppliers—reducing the number of intermediate echelons, reducing search costs for selling products/services and improving their productivity—by exploiting both supply chain structure and information technology.

Consider Indian consumer-goods giant ITC's e-Choupal initiative: ITC provides farmers the historical selling prices of different crops at different locations on its web portal, and ITC pre-announces its own price for purchasing the crops directly from the farmers before the market opens the next day. These smallholder farmers are least aware of a floor price when bringing their produce to ITC or to a commodity marketplace (Anupindi and Sivakumar 2006, 2007; Goyal 2010).

Companies can also use the poor as distributors. One example is Coca Cola in East Africa, where bottlers deliver over $500 million worth of product to 1800 "manual" distribution centers operated by 7500 micro-entrepreneurs. There micro-entrepreneurs use push carts or even bicycles to distribute the product to small retailers (who are also micro-entrepreneurs) in congested areas, making frequent but small deliveries to these cash-strapped micro-retailers. Another examples is Hindustan Unilever, a subsidiary of Unilever in India, that started Project Shakti in 50 villages in 2000 with woman-entrepreneurs receiving training and stocks of consumer-packaged goods from Unilever's rural distributor to sell the goods to consumers and micro-retailers in 6–10 villages (Rangan and Rajan 2007).

Finally, companies can offer microfinance as working capital for the poor as suppliers or distributors, e.g., by pre-paying for supplies from the poor. Collection costs are also reduced because collection can piggyback on the transfer of goods. Lending transaction costs are greatly reduced if we tie micro-lending to the actual transaction. Moreover, aggregation of suppliers or distributors can fit the group-lending model well as we already noted. A practical way would be to provide micro-retailers inventory on credit till the end of the day: the micro-retailer would effectively get credit for the day and the company would limit its risk to the value of 1 day's inventory (Sodhi and Tang 2014). Or, a company like ITC could lend to farmers before the sowing season and then gets its money back by receiving the produce when the farmer brings produce to ITC directly or receiving cash when he sells his produce on the Mandi.

21.4 Future Research

Integrating social responsibility into operations and supply chain management practice using SRBV provides many opportunities for socially responsible operations and for future research. This is because, as SRBV makes explicit, the researcher can

choose any subset of stakeholders for study and suggest norms for their choices rather than take the viewpoint of only a company's managers. Below are some of these opportunities.

21.4.1 Developing Case Studies

There is shortage of well-researched case studies or even descriptions of different operation settings detailing how different groups of stakeholders became better off (or not) because of the operations. One research question can be about the type of operations and how these operations are being economically sustained: What's the business model and where's the money? Implicitly, this research question can include research objectives tied to *value creation* and *value delivery* (London et al. 2010) and *value sharing* (say between micro-entrepreneurs and the corporation as between farmers and ITC in the latter's e-Choupal project). Sodhi and Tang (2012) attempt to understand how the supply chains of individual micro-entrepreneurs can be strengthened by social enterprises, and examine the economic sustenance of such operation. Phenomenological investigation by way of field study and ethnography would be quite useful as a foundation for further research.

One aspect of such studies could lead to better understanding of the multi-way partnership and factors behind success/failure for particular operations by way of, say, local communities, NGOs and the regional government working or not working together. Unanticipated *side effects* of seemingly socially responsible operations would stem from studying a wider set of stakeholders. For instance, donated clothes can have a detrimental impact on the local apparel and retail industry, as seen in Africa. Looking at a wider set of stakeholders, as with SRBV, can help anticipate 'side effects'.

Research in social irresponsibility beyond excellent journalism is limited. The problem of large companies setting up elaborate operations to avoid taxes is not new (Christensen and Murphy 2004) and may even be considered desirable by managers rather than being 'socially irresponsible'. But there are other instances of well-documented irresponsible behaviour by corporations. Armstrong (1977), using behavioural experiments, suggests the problem of *irresponsible* behaviour among managers may be widespread and is possibly linked to 'stockholder' perspective such as that advocated by Friedman (1970).

21.4.2 Social Enterprise

Social entrepreneurship offers an appealing proposition—making money by doing good. There are several topics that merit further study such as appropriate supply chain and other performance measures for social enterprises working with micro-entrepreneurs; supply chain coordination and collaboration between social enterprises and other organizations; how mutually created value is shared between the

social enterprise and its micro-entrepreneurs; and support of government policy for social enterprises.

21.4.3 Better Understanding of the Poor

There are plenty of opportunities to research the decision making of the poor in emerging markets. For instance, as feature mobile phone penetration rate exceeds 90 % in India, companies such as Reuters Market Light (RML) and Nokia are offering information services to farmers (cf. Chen and Tang 2015). Some key issues to investigate include identifying the key drivers for farmers as regards paying for subscription, how farmers use the information in practice to make farming decisions, and whether or not such market information actually helps farmers earn more.

Mobile-based finance has been considered as a major breakthrough to help the poor-conduct financial transactions (savings, loans, remittances, loan repayments, payments) over the mobile phones (Lee and Tang 2012). One area of study could be how mobile finance services with instant access change the spending and savings habits of the poor.

21.4.4 Impact Studies

Measuring the alleviation of the targeted social problem across different time frames and scopes requires field study by way of so-called 'impact' studies. Current studies do not have consistent results. For instance, Mittal et al. (2010) finds that farmers subscribing to market information via mobile phones enjoyed higher income, while Fafchamps and Minten (2012) find no evidence supporting this claim. There is room for analytical models here too: Chen and Tang (2015) show that that more accurate market information can have a detrimental effect to prices and therefore to farmers' wellbeing. Incidentally, studies of stock performance are not uncommon. Frooman (1997) does a meta-analysis of event studies to examine the impact of socially responsible announcements on the stock performance of a firm—similar work could be done with not only companies' but also other stakeholders' performance.

21.4.5 Monitoring Suppliers

Companies that face consumers directly do not wish to be associated in the media with such problems at their suppliers as child labour or poor work conditions of workers. How should companies monitor and motivate their suppliers? Porteous et al. (2015) analyse the responses from practitioners at 334 companies and report that incentives for suppliers rather than penalties are strongly associated with a reduction in the company's violations and operating costs.

21.4.6 Understanding the Role of Markets and Government in Improving Social Welfare

As groundwater or other natural resources get depleted, trading on the market is considered as the best possible solution. But does it actually work? Murali et al. (2015) show that exporting water through a water market with exogenous price is detrimental to both society and the environment within the community if we consider 'triple bottom line benefits'. Their work generalizes to other commodities as well: consider for instance, India's ban on export of cotton in 2012 and a 30 % tax to discourage export of iron ore in 2011. Also, different parties may not actually participate in the market. For instance, a significant amount of waste currently going to landfill or incinerators could potentially be re-purposed. Dhanorkar et al. (2015) consider why such exchanges have had limited take-up. Their work has implications beyond such exchanges to those of manpower such as Men-on-the-Side-of-the-Road in S. Africa and freight-boards for truck transportation in Africa or Asia as there may be similar factors affecting lack of take-up.

How should government balance different interests? This is an important research topic. Park et al. (2015) consider social welfare stemming from optimal application of carbon taxes with retailers seeking to maximize profit and consumers seeking to maximize utility and show that the government will find carbon taxes more effective as the competition becomes higher.

21.4.7 Improving the Lot of Smallholder Farmers in Developing Countries

Tang and Zhou (2012), Chen et al. (2013), Devalkar et al. (2011) and McCoy (2012) provide welcome first steps for further research in this area. Aggregating smallholder farmers via cooperative or other aggregations has attracted the attention of policy-makers, those interested in social development and certainly many OM researchers (Chen et al. 2015). But are these always beneficial for farmers? An et al. (2015) find that cooperatives (or other aggregations) of smallholder farmers are not necessarily a silver bullet relative to farmers who choose not to join the cooperative.

One way to develop resources for smallholder farmers is online or telephone forums. But how should such forums be designed and operated? For a forum with experts and (some) knowledgeable farmers, Chen et al. (2015) use game-theoretic analysis to show that knowledgeable farmers never provide answers that are more informative than the experts in equilibrium. Chen and Tang (2015) show that the value of private information providers such as RML in India decreases as public information services improve.

In this context, studying how to optimize different types of supply contracts (e.g., wholesale price, revenue sharing, or profit sharing) with a view to poverty alleviation as well as profits for the enterprise would be useful. These contracts

would include supporting the micro-entrepreneurs' need for capital, say, farmers having to buy equipment, seed, or fertilizer. The role of the wholesale auction markets in India called *mandis* also needs to be better understood as to how the government can achieve its objectives optimally.

21.4.8 Distribution Models Using the Poor

Efficient distribution strategies for enabling micro-entrepreneurs in developing countries to buy, distribute, and sell products have not been studied much. Moreover, for *piggyback distribution*, it is not clear how the value created should be shared between the network owner and the enterprise or micro-entrepreneurs. For example, how much should Coca Cola charge Cola Life for distributing its AidPods? How much should India Post charge Gramin Suvidha Kendra? Inventory issues arising from a hub-and-spoke system with many micro-entrepreneurs as spokes provide interesting research opportunities. For example, a hub-based inventory at a centralized warehouse reduces the inventory due to the "pooling" effect, but makes it costly for the micro-entrepreneurs to replenish their inventories especially if they have to do so frequently owing to limited purchasing power. Involving local entrepreneurs as informal sales force in developing countries creates new research opportunities to extend the existing marketing and the OM literature in the area of sales force planning, sales territory design, and incentive design (Lilien et al. 1992).

21.4.9 Working Capital Lending to the Poor

Economists have studied microfinance since the early 1990s (cf. Armendáriz and Morduch 2007) and there are different economic theories on group lending—see and for comprehensive reviews. One research opportunity lies in testing the assumption of risk reduction in group-lending. The same could be applied to micro-entrepreneurs as distributors when provided with goods on inventory on a credit basis. Another research opportunity deals with optimal loan repayment: frequent repayment schedule reduces the amount of defaulted loans but it increases the lenders' cost of collection. A third research opportunity is screening micro-entrepreneurs for lending to reduce the cost associated with default loans. Developing effective way to develop new credit scoring methods by analyzing the data captured by the financial transactions (remittances, loan repayments, payments) conducted over the mobile phones (Lee and Tang 2012) may be a practical way to carry out such research. Researchers have also used Kiva's online portal to examine how this information on financial transactions would affect lending behaviour among online lenders (Hartley et al. 2010). This can be specialized to screening for distributors especially when the goods are being provided on credit.

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