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Social sustainability in the ready-made-garment sector in Bangladesh: an institutional approach to supply chains

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RESEARCH ARTICLE

Laura A. Carlson[Ⓐ] and Vera Bitsch^ᵇ

^ᵃResearch Associate, and ^ᵇProfessor, Chair of Economics of Horticulture and Landscaping,
Technical University Munich, Alte Akademie 16, 85354 Freising, Germany

Abstract

Ready-made-garment (RMG) production for sale in the EU and USA is a key source of economic development for Bangladesh. The 2013 collapse of Rana Plaza revealed worker safety and other social issues in RMG factories in Bangladesh, showing that formal, top-down approaches to these problems, including corporate codes-of-conduct and reforms in Bangladeshi labor laws, have little effect. Supply chain sustainability is a key issue for business, government and civil society. Satisfactory theoretical approaches to promoting social sustainability in supply chains are lacking. A case study using qualitative document analysis identifies the key institutional factors related to social sustainability in the Bangladeshi RMG industry, with a modified version of the Institutional Analysis and Development (IAD) framework as an analytical frame. Key elements of other frameworks for social sustainability are discussed in terms of how well the IAD framework captures those concepts, and how employing the IAD could enhance supply chain analysis.

Keywords: action situation, IAD framework, new institutional economics, rules-in-use, social and cultural context

JEL code: B25, B27, D02, D46, D62, D63, D64, D70, D80, D91, E14, F23, F6, J5, J8, K31, L67, O1

[Ⓐ]Corresponding author: laura.carlson@tum.de

1. Introduction

The collapse of Rana Plaza in Bangladesh in 2013 left 1,134 workers from the ready-made garment (RMG) industry dead, bringing the issue of worker safety in the supply chains of major garment retailers in Bangladesh into world-wide public attention (Kenney, 2013). Bangladesh is a country of approximately 150 million people, nearly a third of whom are classified as poor (World Bank, 2013). In the short period of time since Bangladesh first became an independent nation in 1971, the country has managed significant decreases in such key negative social indicators as poverty, infant mortality and population growth, particularly since 2000 (World Bank, 2013: 49). The World Bank identifies several factors that have contributed to this decline: Real per-capita income increased an average of 19% between 2000 and 2005, and 54% between 2005 and 2010 across all income levels, with increases among the poorest 10% of the population significantly lower at 29% (2000-2005) and 7% (2005-2010) (World Bank, 2013: 44). Demographic changes, increased education levels and increases in foreign remittances have all contributed to the decrease in poverty, but the single most important contribution has come from an increase in labor income (World Bank, 2013: 49). The majority of the population of Bangladesh (nearly 110 million people) still resides in rural areas (Bangladesh Bureau of Statistics, 2013: 24). Accordingly, in 2013, the largest share of all employed (45.1%) was in agriculture, with services encompassing another 34.1%, and only 20.8% employed in industry (Bangladesh Bureau of Statistics, 2013: xvi). By far, the largest single industrial employer in Bangladesh is the labor-intensive RMG industry, with an official estimate of 2,997,000 employees in 2013, accounting for approximately 5% of the total employed population of 58,073,000 (Bangladesh Bureau of Statistics, 2013: 137-139).

Despite the small percentage of the total population active in the sector, the 20 billion USD earnings per year the RMG industry generates (World Bank, 2013: 2) constitute 80% of the total export value of Bangladesh (Kathuria and Malouche, 2016: 9). As a result, RMG producers enjoy a powerful position in Bangladeshi society. A New York Times article published a few days after the Rana Plaza collapse stated,

critics have argued that the outsize importance of the industry has made the government reluctant to take steps that could increase costs or alienate foreign brands...Meanwhile, some factory owners say they cannot raise wages or invest in upgrading facilities because of the low prices paid by Western brands (Yardley and Manik, 2013).

Labor activists interviewed following the collapse claimed that neither the Bangladeshi government nor Western buyers are taking their share of the responsibility for protecting workers in this industry (Yardley and Manik, 2013).

Bangladeshi RMG production represents a broader trend in the globalization of production processes into complex global supply chains that has led many to focus on the concept of supply chain sustainability, which emphasizes “interrelationships among society, the environment, and economic/industrial development” (Hutchins and Sutherland, 2008: 1688). This focus has generated a great deal of collective action involving social sustainability issues (Bartley and Child, 2011) that has contributed to companies in many labor-intensive production sectors establishing “extensive supplier labor codes” (Maloni and Brown, 2006: 35). However, “implementation of such codes of conduct has been considerably more successful in some sectors than others” (Roberts, 2003). The business case for such codes is that “poor environmental and social conditions in corporate supply networks can pose significant reputational risks to big name brands” (Roberts, 2003). However, an investigation of the effectiveness of codes of conduct for improving supply chain sustainability found, “Given the limited overall improvements that codes lead to, it is surprising that companies continue their multi-billions of investments in codes and auditing” (Egels-Zandén and Lindholm, 2015: 38).

This failure is in part due to the fact that, as Moon (2007: 298) pointed out, sustainability issues (particularly social ones) are “highly contextual”, and are “subject to issue attention cycles in which events or findings give them urgency”. This is characteristic of “wicked problems” which are by nature unsolvable, as they

change in relationship to new events and cannot be “fully defined and separated from their context” (Bitsch, 2016: 17). This changeability is exacerbated by the array of actors involved who often have “contradictory perspectives, beliefs, values and goals” with respect to a given situation (Bitsch, 2016: 17).

In discussing efforts to design rule systems that support sustainable management of natural resource systems, Ostrom (2005: 255) points out the impracticality of producing one-size-fits-all rule-based solutions (policies or institutional structures) to complex natural resource problems. This claim is backed up by the results of a number of case studies of long-enduring natural resource governance systems in a variety of legal, cultural and environmental settings that indicate that the rules from which each successful system is constructed vary “dramatically from one system to the next” (Ostrom, 2005: 258). To help make sense of some of this variety, Ostrom and her colleagues made use of the empirical data derived from these case studies to develop and apply the Institutional Analysis and Development (IAD) framework (Ostrom, 2005: 9). Based on this theoretical framework, a set of eight design principles for enduring sustainable natural resource management systems was developed (Ostrom, 2005: 259). This framework can be used to categorize rules according to who makes them and what aspect of the resource system they affect.

Several authors have tried to create similar conceptual frameworks to help guide the search for the key elements necessary for promoting social sustainability (Beske *et al.*, 2014; Boström, 2012; Cuthill, 2010; Henderson *et al.*, 2002; Murphy, 2012; Seuring and Müller 2008). In the literature review that follows, first some background on social sustainability issues in supply chains is presented. This leads into a discussion of recently published theoretical frameworks for assessing social sustainability. The key concepts that form those frameworks are identified and compared with the key elements of the IAD framework and the eight design principles mentioned above.

The remainder of the manuscript is structured as follows: the method section describes the data collection and analysis methods used to generate an empirical dataset describing the Bangladeshi RMG industry as a resource system. The results and discussion section that follows first presents some of the key features of the Bangladesh RMG industry obtained from the empirical data using the concepts that make up the IAD framework as organizing elements. Based on the framework, emphasis is on the institutional arrangements that define the cultural and social issues and relationships between actors that have unique impacts on this particular part of this particular supply chain in this particular location. The ultimate goal, however, is to assess the application of the IAD framework to help organize and support theoretical approaches to sustainability in supply chain settings.

2. Literature Review

Most products today move through a progression of individual business transaction steps on the way to the final consumer, a structure commonly referred to as the supply chain (Hutchins and Sutherland, 2008: 1689). At each of these steps, the possibility exists for negative externalities (defined as costs of doing business that are born by those other than the producer of the good) (Lipschutz, 2004: 197). Externalities are commonly thought of as negative environmental effects, but social impacts occur as well. Among the negative social externalities that have been identified in complex international supply chains in labor-intensive industries such as Bangladeshi RMG are “low wages, substandard working conditions, forced overtime, child labour, and lack of a right of free association (union organizing)” (Lipschutz, 2004: 197).

As a result of the increasingly global nature and complexity of supply chains and an ever-growing interest in sustainability, new actors traditionally seen as outside the supply chains of firms have taken action to ensure that the full social consequences of this form of economic organization are considered. These groups engage in “naming and shaming” campaigns that go beyond traditional labor organizing to bring attention to poor working conditions and other issues related to labor (Bartley and Child, 2011: 425). The development of corporate codes of conduct and sustainability initiatives is often attributed to the collective action efforts of these stakeholders (Bartley and Child, 2011: 427). These new rule systems represent a “move from factory-

centered, state regulation focusing on individual sites of production to supply-chain and "brand" regulation focusing on multiple actors in a production chain" (O'Rourke, 2003: 6).

The aspects of most supplier codes of conduct today that apply to social sustainability issues are based on principals for fair labor practices developed and promoted by the United Nations labor agency, the International Labor Organization (ILO) (Dae-oup Chang and Wong, 2005: 141-142; O'Rourke, 2003: 6-7). In some cases, codes of conduct are drafted and policed by the companies alone, but in other cases unions, Non-governmental organizations (NGOs) and other stakeholders have developed their own rules and monitoring systems that are then adopted by companies (O'Rourke, 2003: 10-11). Examples of the latter are often developed and propagated by multi-stakeholder initiatives such as the Fair Labor Association and the Clean Clothes Campaign (Dae-oup Chang and Wong, 2005: 142) that otherwise are largely engaged in monitoring efforts.

The variety and number of external monitoring efforts has clearly introduced even more complexity into global RMG supply chains, which can create additional problems for implementation as, "Stakeholders can compete for legitimacy, influence and recognition from companies and public opinion" (Albareda, 2009; Arenas *et al.*, 2009: 176). This complexity of actors makes managing a supply chain particularly difficult. "The term supply chain management has been used to explain the planning and control of materials and information flows as well as the logistics activities not only internally within a company but also externally between companies" (Chen and Paulraj, 2004: 119). This concept has been expanded to explicitly include the concept of sustainability, and is referred to as Sustainable Supply Chain Management (SSCM) (Turker and Altuntas, 2014: 837). Scholars in the field of SSCM tend to discuss sustainability in the supply chain in terms of "outcomes" that result from "managerial decisions and/or behaviors" (Pagell and Wu, 2009: 38). The emphasis of much of the SSCM literature is on the relationship between environmental and economic outcomes with little attention paid to social sustainability impacts (Pagell and Wu, 2009: 38). particularly in relationship to the "cultural or ethical ramifications of decisions" (Hutchins and Sutherland, 2008: 1688).

Recognizing this lack, several authors have made efforts towards developing theoretical frameworks that capture the key features necessary for promoting social sustainability in supply chains (Beske, *et al.*, 2014; Boström, 2012; Coe *et al.*, 2008; Cuthill, 2010; Henderson *et al.*, 2002; Hess, 2008; Murphy, 2012; Seuring and Müller, 2008). In early work, Henderson *et al.* (2002) presented a framework based on what they termed global production networks as an alternative to the commonly used term supply chain. In their view, the "chain metaphor" places too much emphasis on the sequential nature of the production process, and that looking at the production process in terms of networks of actors allows analysis of the "multi-dimensional and multi-layered lattices of economic activity" (Henderson *et al.*, 2002: 442). Their analysis moved sustainable supply chain theory forward in that it focused on "social processes" between actors in the supply chain, including labor (Henderson *et al.*, 2002: 444). Recognition of the importance of the diversity of actors that make up a global production networks is one of the key characteristics of this theoretical perspective, whose adherents also stress the importance of the embeddedness of parts of the network (Coe *et al.*, 2008: 279). This latter distinction is key, as it begins to take into account both the importance of cultural differences in different countries that may affect relationships within the chain of production, and potential avenues of political pressure for various actors that may be outside the immediate cultural setting of a segment of the supply chain, but are still within the "network".

Seuring and Müller (2008: 1704) conducted a structured review of the supply chain management literature to move towards a theoretical framework for SSCM. They identified "barriers and supporting factors" to SSCM that focus largely on issues of communication, information exchange, monitoring and costs associated with the increasing complexities of supply chains. Similarly, Boström (2012: 7-10) identified "six challenges for operationalizing and integrating social sustainability", including unrealistically high expectations of win-win-win scenarios that evenly consider all three sustainability pillars. Boström feels such expectations inherently fail to account for necessary tradeoffs. He points out that some of these high hopes are created by often "vague, subjective, and ideological framing", and argues that the roots of this framing lie

in the historical development of the sustainability concept that began with a focus on environmental issues. For Boström, the perpetuation of the separate pillars concept in sustainability framing reflects a lack of institutional links between environmental and social issues. And further, that all of the above contribute to the continued promotion of “global capitalism for sustainable development”; which ignores the fact that, under current institutional arrangements, the distribution of the benefits of capitalism (as well as the costs) is inherently inequitable and unsustainable. This leads to Boström’s final point, that in order to overcome the challenges already delineated, special attention must be paid to who is involved in the decision making process and how their input is integrated into rule making and enforcement, rather than simply examining the outcomes of those processes.

Some of the high expectations and vague, subjective and ideological framing to which Boström refers can be seen in the framework for analyzing sustainable development put forth by Murphy (2012: 21). Murphy lists the following as the most important aspects that contribute to social sustainability: social cohesion, equity, participation, and awareness for sustainability. He goes on to describe policy areas that fit under each of these aspects, and ways to analyze them, which are almost exclusively based on “commitment” to undertake broad, general actions. Similarly vague are the defining concepts Cuthill (2010: 366) put forth based on action research related to sustainable urban development in Australia. These include social capital, social justice and equity, engaged governance and social infrastructure. Beske *et al.* (2014: 133-139) presented an integration of the theories from the Dynamic Capabilities literature and those from the field of SSCM. They present “categories in which SSCM practices can be structured” that include strategic orientation, continuity, collaboration, risk management, and pro-activity in relation to other stakeholders. The main elements they identified from Dynamic Capabilities are knowledge management, partner development, supply chain reconceptualization, co-evolving and reflexive control. It seems that both approaches focus on practices firms can take to promote sustainability.

As evidenced by many of the concepts included in the various frameworks described above, such as participation, engaged governance, partner development and co-evolving, many supply chain actors are expected to engage in collective and collaborative efforts with one another that require cooperation beyond simple business transactions. The continued devolution of government control over market processes only increases this need, and more and more collective efforts are evolving to create complex interactions. To better understand these interactions, it is useful to look at existing approaches to studying cooperation in collective action situations. Evidence from extensive experimental economics work has shown that the intrinsic preferences of a significant percentage of research subjects actually create a willingness to cooperate with others, even in situations where not cooperating is certain to bring a higher personal monetary payoff. These preferences, however, become weaker after repeated “bad experiences” of betrayal by others (non-cooperation) (Ostrom, 2005: 129). Additionally, the intrinsic willingness to cooperate may also be affected by externally composed constraints that tend to “crowd out” that willingness if participants see them as controlling (Ostrom, 2005: 113). Such externally imposed constraints may be formal or informal, but all can be thought of as institutions (North, 1989).

Institutions in this context are “human-constructed constraints or opportunities within which individual choices take place and which shape the consequences of their choices” (McGinnis, 2011). In order to fully understand the ways in which individual actors interact with one another through implementing particular practices, it is necessary to understand the institutions that govern those interactions and support those practices. This includes both formal institutions such as written rules, laws and contracts, and informal ones such as norms, cultural constraints and gender roles. In describing institutional analysis, Ostrom (1990, 55) states, “The basic strategy is to identify those aspects of the physical, cultural, and institutional setting that are likely to affect the determination of who is to be involved in a situation, the actions they can take and the costs of those actions, the outcomes that can be achieved, how actions are linked to outcomes, what information is to be available, how much control individuals can exercise, and what payoffs are to be assigned to particular combinations of actions and outcomes”. The IAD framework is a tool developed to organize each of these elements according to their relationships with one another.

The IAD framework “identifies, categorizes, and organizes those factors” which are most important in understanding “the ways in which institutions operate and change over time” (McGinnis, 2011: 169). The arena of analysis to which the IAD framework is applied is referred to as the action situation, or “the social spaces where individuals interact, exchange goods and services, solve problems, dominate one another, or fight” (Ostrom, 2011). An actor can be either an individual or a group of individuals acting collectively, and is defined based on the combination of particular attributes that include resources, knowledge, decision making and valuation processes (Ostrom, 2011: 11). All of these attributes are assigned based on the unique set of rules to which each actor is subject, which include both rules-in-form (rules that exist on paper) (Ostrom, 2005: 138) and “working rules”, or “rules-in-use” (Ostrom, 2005: 19-20). The distinction between rules-in-form and rules-in-use is particularly important in a system in which “there may be central laws and considerable efforts made to enforce them, but individuals generally attempt to evade rather than obey the law” (Ostrom, 2005: 20).

In-depth analysis of these sets of rules in various resource management systems using the IAD framework has yielded a set of eight design principles common to long-standing resource systems. (Ostrom, 2005). According to these principles, “clearly defined boundaries” of the resource system are recognizable to users, including who has rights “to harvest resource units” (design principle 1). Users perceive there to be “proportional equivalence between benefits and costs,” meaning rules that limit extraction of resource units “are related to local conditions and to rules requiring labor, material, and/or money inputs” (design principle 2). Functional “collective-choice arrangements” exist that allow users of the resource to modify “harvesting and protection rules” that affect their potential actions (design principle 3). “Monitoring” is in place to “actively audit biophysical conditions and user behavior”, and monitors “are at least partially accountable to the users and/or are the users themselves” (design principle 4). Further, “graduated sanctions” on “users who violate rules-in-use” are likely to come “from other users, from officials accountable to these users, or from both” (design principle 5). There are “conflict-resolution mechanisms” in place in which “low-cost, local arenas to resolve conflict among users or between users and officials” can be addressed in a timely way (design principle 6). There is at least “minimal recognition of rights to organize,” in that users that “devise their own institutions are not challenged by external governmental authorities, and users have long-term tenure rights to the resource” (design principle 7). Finally, “appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities” that take place within the resource system “are organized in multiple layers of nested enterprises” (design principle 8) (Ostrom, 2005: 259).

The fact that the IAD framework was developed by scholars primarily interested in the governance of public goods and common pool resources is reflected in its structure. McGinnis (2011) provides a description of the key elements of the IAD framework and the action situation it illustrates. In brief, each actor in an action situation is assigned to one or more positions based on attributes they possess which are determined by a combination of intrinsic qualities of the actor and various types of rules. Based on their assigned positions, participants must make choices among an array of possible actions. The set of possible actions they consider, including those they choose to take (and the outcomes of these actions) are affected by (and in turn affect) the actions chosen by other participants (and the outcomes of these actions) in an iterative dynamic process. This process is acted upon by a wider set of factors that include the rules-in-use within the resource management system, specific key attributes of the resource and the attributes of the community with primary rights to the resource. The latter aspect includes, “all relevant aspects of the social and cultural context within which an action situation is located” (McGinnis, 2011: 175).

The environmental pillar of sustainability is easily and often connected to the management of common pool resources such as forests, fisheries and biodiversity. We argue that social sustainability issues in supply chains have characteristics that are also similar to common pool resources. The added value associated with the good produced as it moves along the chain is the resource being appropriated. The users of this resource system are those actors who manage to appropriate some amount of that added value along the chain. In that sense, each individual or group of individuals is attempting to appropriate as much of the amount of the added value as they consider to be possible and necessary given the amount of resources they themselves have

and must contribute. The rules that apply to the appropriation of that value are different for different user groups and even for some individuals within groups. We can state that the resource is subtractable (another characteristic of common pool resources) in that there is a finite amount of value at the end of the chain that can be finally captured in the price of the good. This total value can, however, include both intrinsic and extrinsic value that apply to users at any point along the chain. Thus, it is not always measured in economic outcomes. Social sustainability issues are related to the relative appropriation of that value among users of the resource – workers, RMG factory owners, western retailers and consumers. Similar to appropriation problems in common pool resources, there is a tendency towards under-provision of social “goods”, free-riding and cheating which in combination may lead to unequal value appropriation and other negative externalities.

The IAD has been applied in a wide variety of locations to assess appropriation problems resulting from various institutional structures governing common pool resources (Ostrom, 2005: 9). Thus, we propose a modified version of the IAD framework as a potential theoretical tool for moving towards a better understanding of the issues that contribute to the wickedness of problems with social sustainability in global supply chains. The eight design principles and the main concepts stressed by the other frameworks discussed above will help guide the analysis. The assumption is that the IAD framework offers something additional through its focus on the relationships between institutions and the actors they govern, rather than solely on the actions of actors or the outcomes of those actions.

Based on this assumption, we have constructed a modified IAD framework for use in analyzing supply chain social sustainability issues using data from the empirical case study example of the RMG industry in Bangladesh (Figure 1). The only modification we have made to the original IAD is to the first of the key elements in the framework: while the IAD framework includes the characteristics of the (natural) resource being appropriated, we replace this element with (1) the unique characteristics of the Bangladeshi segment of the RMG supply chain, particularly, the “size, productivity, and predictability of the resource system” and “the extent of mobility of the resource units” (Ostrom, 2011: 23). We maintain the remaining elements of the original IAD that focus on; (2) social and cultural attributes of the community in which the resource (in this case, the supply chain segment) is based; and (3) the rules-in-use in that particular segment of the supply chain, particularly those that relate to “collective-choice rules that the users may adopt authoritatively in order to change their own operational rules” (Ostrom, 2011: 23). It is important to note here that the rules-in-use may differ both from the rules-in-form for that segment as well as from the rules-in-use (or form) in other segments of the supply chain. These first three elements combine to affect the environment

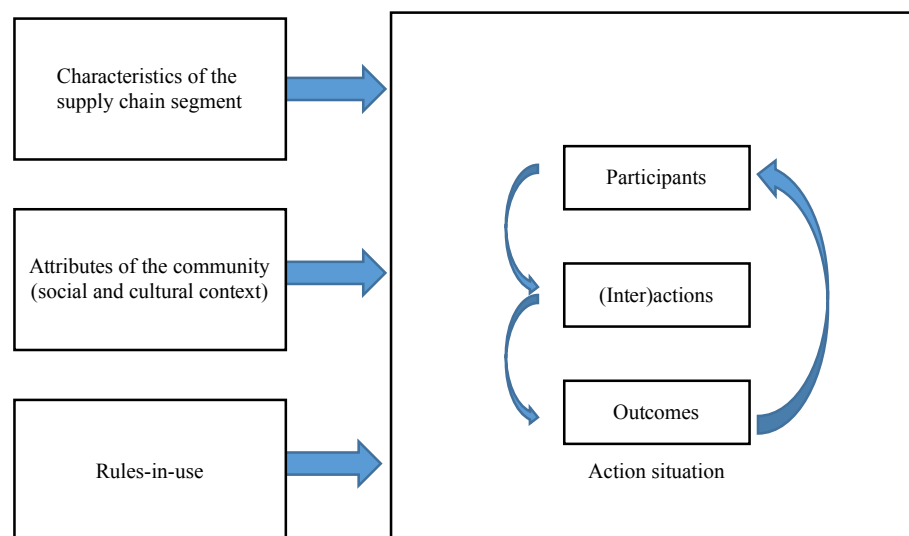


Figure 1. Framework for institutional analysis of supply chains (adapted from Ostrom, 2005).

in which the participants interact; (4) the action situation, which includes the participants, the actions they take, and the outcomes these actions generate. It is important to recognize the iterative nature of this process (represented by the feedback arrows within the action situation), as participants react to the outcomes of their own actions and the actions and outcomes of other participants.

The modified framework is applied to a set of empirical data about the Bangladeshi RMG industry that relate to social sustainability issues. This empirical data is derived from qualitative document analysis of existing peer-reviewed scientific studies of the RMG industry in Bangladesh and a variety of other source types. Thus, existing data about the case of Bangladeshi RMG production is used to examine the effectiveness of applying a modified version of the IAD framework to identify the key institutional relationships that are important in analyzing issues of social sustainability in supply chain situations. The approach used to collect and analyze that empirical dataset is described in the following section.

3. Methods

A case study approach is used to describe the operational situation in the RMG sector in Bangladesh, to identify the external and internal motivations facing the appropriators of units of value from that resource system, as well as the outcomes of the combination of those factors in terms of social sustainability. According to the IAD framework, operational situations are “All action situations where individuals engage in the provision, production, distribution, appropriation, assignment or consumption of goods and services” (Ostrom, 2005: 56). A case study approach is seen as appropriate here because “the study investigates a contemporary phenomenon” and “seeks an in-depth understanding of the phenomenon within the framework of the actors involved” (Mugera and Bitsch, 2005: 82), as well as “the dynamics present within single settings” (Eisenhardt, 1989: 534). Based on Stake (2005) the work presented here can be considered an instrumental case study, as it has been undertaken “mainly to provide insight into an issue or to redraw a generalization” with regard to the problems surrounding social sustainability in supply chains. The Bangladesh RMG industry was selected as an appropriate case because it combines many of the key issues of supply chain social sustainability in developing countries and, largely due to the Rana Plaza incident, has received a substantial amount of attention from retailers, activists, scholars and governments. Thus, a rich array of existing data is available for this case.

All data used to develop the case study presented here are derived from secondary sources. This includes seventeen peer-reviewed scientific articles, fifteen documents from international and Bangladeshi government agencies, five reports from private policy agencies, five from labor organizations, seven from other non-governmental activist organizations, two from multi-stakeholder initiatives, eighteen from Bangladeshi or western print and radio news sources, web pages from two retailers and three industry associations, and five books.¹ The data collection process began with qualitative coding of an initial document that provided an overview of the the RMG sector in Bangladesh (Bhattacharya *et al.*, 2002). Based on that coding, subsequent document searches were conducted to locate additional sources to more fully describe the themes identified in the first document. New sources were coded, compared to one another and to previous sources, new themes identified and existing themes made more concrete. In addition to seeking additional information on conceptual issues, important actors and institutional arrangements identified in the coding process were further pursued through addition of new source material. In cases where multiple sources were identified with information pertinent to a given concept, sources based on interviews or surveys of actual participants in the RMG industry within Bangladesh were prioritized. Source selection and conceptual coding continued in this way until sufficient detail was reached to fill out the structure of the IAD framework.

The approach to data collection and analysis described above is similar to that used in grounded theory, in that the individual sources used were examined and compared and assigned conceptual codes developed based on a process of constant comparison (Strauss and Corbin, 1998). Throughout the process, memos

¹ A complete list of the sources used is available from the authors upon request.

were used to make note of interrelationships between concepts and actors and to document missing areas of information to guide further sampling. Coding of the data and memo writing were both accomplished using the qualitative data analysis software package ATLAS-ti (Version 7.5.18, ATLAS.ti GmbH, Berlin, Germany). The benefits of using these types of software go beyond efficiency and convenience. Qualitative data analysis can serve as a way to keep track of the research process, thus helping to lend it credibility (Hwang, 2008). In addition, it helps ensure a systematic process of analyzing qualitative data by serving as both a memory aid and as a device to identify key concepts and apply meaningful codes to those concepts (Konopásek, 2008).

Grounded theory as a method has been used by other authors in supply chain analysis (for a review see Denk *et al.*, 2012). Randall and Mello (2011: 864) advocate for the use of grounded theory in the movement towards theory in supply chain management because it provides “deep insights into social phenomena” particularly, “the underlying meanings in human experiences, interactions, and relationships that form company strategies and actions in a supply chain context” and the “behavioral dimensions at the individual, organizational, and inter-organizational level”.

The results and discussion section that follows presents some of the key features of the Bangladesh RMG industry derived from the qualitative empirical analysis described above. The modified IAD framework (Figure 1) is used as a structuring device. The eight design principles will be referred to (as design principle 1, 2, etc.) throughout as well as the main concepts from the other frameworks described above where they apply.

4. Results and discussion

4.1 Characteristics of the supply chain segment

The story of the modern Bangladesh RMG industry is a rather short and intense one. A key factor in the development of the RMG industry in Bangladesh was the Multi-Fiber Agreement (MFA) – a now-defunct global trade agreement (formal rule) establishing quotas on garment exports designed to protect US and EU textile and RMG industries from threats from foreign competition (Ahmed *et al.*, 2014). This led companies from restricted countries to seek out manufacturing partners in other countries not affected by quotas. Desh Garments, one of the first entrants to the Bangladeshi industry, was thus supported by foreign direct investment from the South Korean firm Daewoo in an effort to avoid MFA restrictions (Ahmed *et al.*, 2014).

Well-connected Bangladeshis secured favorable policies from Bangladeshi government allies that facilitated initiation of RMG production with little capital investment (Yunus and Yamagata, 2014). Duty-free status of goods imported to bonded warehouses and back-to-back loans that eliminated the need to have the cash up front to buy cloth and accessories made it both cheaper and easier for Bangladeshi export-oriented RMG producers to begin to fill export orders (Yunus and Yamagata, 2014; Zohir, 2001). Thus, Bangladeshi RMG entrepreneurs, created at least partial boundaries (design principal 1) around the resource (the value generated by RMG production in Bangladesh) by effectively limiting competition from outside. In fact, with the help of formal policies originating both from outside and within Bangladesh they essentially created their own resource.

These policy advantages helped the Bangladeshi RMG export industry to grow rapidly from a 1980 total of a mere 30 factories to more than 5,100 in 2011 (Yunus and Yamagata, 2014). The Bangladeshi RMG industry demonstrated an average annual growth of 12.3% over the period from 2002 to 2011 (Yunus and Yamagata, 2014). By 2008, Bangladesh was the fourth largest global exporter of RMG, with most of those exports going to the European Union (EU – nearly 60%) and the United States (US – nearly 30%) (Yunus and Yamagata, 2014). Bangladesh’s market share continued to grow, and in 2009 they became second only to China in terms of single-country RMG exports (Kathuria and Malouche, 2016). The 2012 Survey of Manufacturing Industries reported a total of 6,984 RMG manufacturers (Bangladesh Bureau of Statistics,

2013). Thus, the boundaries of the resource (the total value available for appropriation) continued to expand, as did the pool of actors appropriating value from it.

Export Protection Zones (EPZs) with special rules such as duty-free imports of raw material and tax-free exports of finished products to encourage foreign investment are a common strategy used by less developed countries like Bangladesh to encourage foreign investment (Dicken, 2011: 201). As a result of such policies, Dicken (2011: 459) states, “employment tends to be geographically concentrated in the large, burgeoning cities and in the EPZs”. In the case of Bangladesh, however, while the RMG industry is concentrated largely in two major Bangladeshi cities (Dhaka and Chittagong) the majority of textile factories in Bangladesh are not located in EPZs (Yunus and Yamagata, 2014: 81) They are also overwhelmingly wholly or majority-owned by Bangladeshis, a fact that sets the industry in Bangladesh apart from that in other major RMG-exporting countries such as Cambodia and Taiwan (Rahman *et al.*, 2007: 5). This is indicative of Bangladesh as a whole. According to the Bangladesh Bureau of Statistics, of an estimated 42,792 individual manufacturing establishments, only 263 are considered to be foreign-owned and only 160 are identified as being joint ventures between local and foreign owners (Bangladesh Bureau of Statistics, 2013). The regional concentration of largely locally-owned RMG operations should, theoretically contribute to the satisfaction of many of the design principles (design principles 1, 3, 4, 5 and 6). A geographically concentrated resource is more easily understood by appropriators, and communication among them should be less costly. Thus, self-organization to accomplish monitoring sanctioning and conflict resolution should involve fewer transaction costs. Domestic actors involved in the Bangladeshi RMG resource system appear, at least, to have a great deal of potential control of that resource. Who those actors are and what factors complicate collective action amongst them is explored in more detail in the discussion of the social and cultural attributes of community and the participants in the action situation that follows.

One way in which Bangladesh does not differ from other major RMG producers is that women workers have played a key role in the development of the industry. Some argue that this is a phenomenon inherent to RMG, “the industry’s growth strategy depends on the social discrimination of women and as a consequence of this, on their major willingness to accept low qualified, low paid and, often, informal employment opportunities” (Ferenschild and Wick, 2004: 9). In order to evaluate the validity of this claim in the context of Bangladesh, some of the key social and cultural characteristics of the country or “community” in IAD terms, as well as key attributes of women as participants must be examined.

4.2 Social and Cultural Attributes of the Community

The nature of the political system in Bangladesh is not conducive to good governance. Historical factors contributed to difficulties that have faced political leaders in Bangladesh from its founding. Centuries of different colonial rulers contributed to the formation of “local lords...in charge of law and order” (Van Schendel, 2009: 51). This system resulted in the development of “a ruling elite “separated from the masses of the population by their military and political power” (Van Schendel, 2009: 51). This system, which was “open to the successful adventurer” (Van Schendel, 2009: 52) was and remains a great resource for the RMG entrepreneurs, as evidenced by the favorable policies mentioned above. Another legacy of the colonial period, is a tradition of identity politics that originated under British rulers who treated Muslims in colonial India as a unified entity – a concept which was largely false in the Bengal region given the wide variation in the religious and social practices and beliefs of the inhabitants (Van Schendel, 2009: 81-82). In fact, an important group of cultural and intellectual leaders in eastern Bengal promoted much more secular and less conservative values that were key to moving Bangladesh towards independence from Pakistan, itself a nation whose boundaries were created wholly based on religious divisions. Still, the conservative element remains strong in Bangladesh which is overall, still largely rural. The result is political competition between two ruling elites – an urban elite, which is largely represented by the Awami League (AL) party – and a rural elite, which tends to be more supportive of the Bangladesh Nationalist Party (BNP) (Rahman and Langford, 2012; Van Schendel, 2009). “The broad spectrum of conservative Muslim and right-wing religious groups

believes that Bangladesh should derive its basic national identity from its Muslim and Islamic heritage, a view not acceptable to secular parties like the AL” (Rashiduzzaman, 1997: 267).

The power struggle between the AL and the BNP is manifested most clearly in the practice of *hartal* – politically-motivated country – or sector-wide strikes that have been a part of the political process in Bangladesh since before statehood (Van Schendel, 2009). *Hartals* continue to be a one of the main strategies used by the two parties to undermine the power of the other, as evidenced by the following excerpt from the May 16 2016 Daily Star, a newspaper published in the Bangladeshi capitol of Dhaka, “Both the major political parties – whether the ruling party Awami league (AL) or the opposition BNP – have used *hartal* as a major political weapon to create mass unrest in the country since 1991. If BNP is in power, the AL goes on to call *hartal* after *hartal*, and if AL is in power, the BNP gets busy calling *hartals*.” Thus, violent protest is routinely used in Bangladesh as a legitimate means to enforce or resist more formal institutional arrangements. The question of whether this can be considered to represent the presence of adequate conflict mechanisms (design principle 6) perhaps depends on whether one looks at outcomes or process. As will be discussed below, similar violent means have been the most effective tool for RMG workers to secure promised wage increases. It is difficult to see it as movement towards the social cohesion and trust-building seen as key to moving towards more socially sustainable supply chains (Beske *et al.*, 2014).

Election results in Bangladesh are also strongly affected by the sort of activity described above. “It is well known that voter intimidation and vote-buying are widespread in both rural and urban settings” in Bangladesh (Stiles, 2002: 839). In order to reward the often violent and oppressive acts perpetrated on behalf of the party, both parties are known to follow a system of patronage politics. “No prominent leader or party in Bangladesh has been free from the taint of favoring activists who had committed criminal or violent offenses” (Rashiduzzaman, 1997: 261). “Rent seeking is an equilibrium outcome in Bangladesh and acknowledged by all economic actors in the garment industry: owners, labor, and foreign buyers. According to these stakeholders, corruption is a predictable and manageable cost of doing business” which is only offset through the maintenance of low labor costs (Ahmed *et al.*, 2014: 265).

Thus, violence, corruption and intimidation are among the most important resources used to obtain and maintain political power in Bangladesh. This extends to so-called civil society. As most Bangladeshi unions are seen as connected to one political party or another, (Ahmed *et al.*, 2014; Fair Wear Foundation, 2013), patronage extends to top union positions as well. The resulting weakness of the government and perceived illegitimacy of unions translates into weak enforcement of labor laws, building and fire safety codes, and a general distrust of unions among workers, RMG entrepreneurs and the general public (Ahmed *et al.*, 2014). This distrust in unions has a significant impact on the effectiveness of collective action efforts organized by international unions and NGOs who tend to insist on the importance of formal rules in support of union formation and recognition. Thus, effective collective choice mechanisms (design principle 3) do not exist for addressing key social sustainability issues in Bangladesh, and the ones that enjoy the strongest advocacy do not appear to fit well to the local context. This does not support Cuthill’s (2010) notion of engaged governance or Beske *et al.* (2014) concept of collaboration among actors.

Another key cultural component of Bangladesh is its strongly patriarchal society in which women were traditionally expected to follow the will of a male protector (Kabeer and Mahmud, 2004). This normative structure had already begun to devolve when the RMG industry began to take hold in Bangladesh. Large-scale death and imprisonment of men during the Bangladeshi war of independence from Pakistan and subsequent labor migration of men to other countries has increasingly left women to fend for themselves or replace the missing men as contributors to family income (Kabeer and Mahmud, 2004; Van Schendel 2009). This highlights the dynamic nature of institutions in any given setting. The robustness of an institution refers to its ability to recover to some new equilibrium after external shocks. In response to the dual threats of poverty and lack of male protection and new opportunities for wage employment, young rural women migrated in large numbers to urban centers where RMG production is concentrated. Traditional norms requiring women to stay in their fathers’ or husbands’ homes were relaxed due to external economic pressures. The informal

institutions governing women's behavior began to change. The result was in an average annual increase in the female labor force of 10% in the period from 1974 to 1999/2000, (the total increase in labor participation was only 3% during this same period) (Murayama, 2006: 65). This dynamic has served to create more social capital for women and dramatically altered the set of informal, but still monitored and enforced rules and norms that govern the possible actions women are able to take in Bangladesh. Still, as wage earners women have become legitimate appropriators of value from the RMG resource system, with rights and responsibilities associated with their position. A closer look at some of the rules-in-use in that system will shed more light on how they affect female workers and other actors differently.

4.3 Rules-in-use

Despite the proliferation of supplier codes of conduct mandated by western brands and retailers that purport to guarantee the rights of workers to collective bargaining, legal minimum wages, a limited number of working hours per week and guaranteed days off (Huq *et al.*, 2014), workers report excessively long shifts, lack of employment security, threats of layoffs and factory closings due to increased expenses from code compliance, and verbal and physical abuse at the workplace (International Labor Rights Forum, 2015). Thus, the rules-in-form appear to have little legitimacy or explanatory power in Bangladesh. One study confirmed the “rent-seeking equilibrium outcome” extends to RMG factories in that RMG factory owners and managers admit to widespread cheating with regard to codes of conduct, and representatives of western buyers acknowledge their complicity, stating that it is part of their strategy of nurturing mutually trusting relationships with suppliers (Huq *et al.*, 2014). Various elements related to trust and long-term-relationship building are identified in all of the frameworks described above. Between at least some participants in the Bangladeshi segment of the RMG supply chain, building trust is, in part, based on mutually agreed upon rules-in-use that are directly oppositional to externally-imposed rules-in-form – collaborative cheating. Among the arguments given for this is that the rules do not suit the needs of the workers themselves. Decreased working hours due to externally imposed codes of conduct reportedly serve only to increase work loads and production speed expectations (Action Aid, 2015). This violates the proportional equivalency principle (design principle 2) and thus detracts from the legitimacy in the eyes of those subjected to the rule. The appropriators themselves break it as it only serves to increase the share of the value they get for their effort. More important avenues for positive change for workers are good behavior of management and on-time payment of wages (Awaj Foundation, 2013).

That the principles of equity and social justice identified in most frameworks are clearly not present in Bangladeshi RMG factories is clearly illustrated by the position of women there. While women are a key component of the RMG workforce, female workers are paid less than their male counterparts, are seldom promoted to positions of power over other workers, and are subject to sexual harassment both on the way to work and on the job (Kabeer and Mahmud, 2004). As participants in the action situation (and appropriators of the resource), then, they are still subject to different rules than their male counterparts. Some report having full control over their wages, while others report handing them over to a husband or father. While familial rules like these are assigned, monitored and enforced outside the operational situation being analyzed, they affect it in that they limit the opportunities women have elsewhere, and thus, the set of choices women would even conceive of within the action situation itself. This hints at the nested sets of action situations and associated institutional configurations to which appropriators are subjected (design principle 8).

Still, the large concentration of women working and living together in close conditions could be expected to generate new forms of social capital amongst those women that could be leveraged to appropriate more value. In general, though, collective choice arrangements (design principle 3) involving RMG workers in Bangladesh are absent. For example, while the legal basis for trade unions has always been present in Bangladeshi law, overall trade union participation of the labor force in Bangladesh remains small (Al Faruque, 2009). “The highly fractionalized nature of the union movement in Bangladesh along with government neglect of workers’ organizations has stunted the growth of a significant organized labor movement. Moreover, the nature of the political competition between the AL and the BNP does not require the two parties to seek the support

of organized labor in order to form a winning coalition” (Ahmed *et al.*, 2014: 266). Political appointments to union leadership positions further capture and dilute the potential power of unions as agents of collective action in Bangladesh.

Left no formal means to register their grievances (design principle 6), the most effective tool of RMG workers in Bangladesh appears to have been labor unrest. It was due to labor unrest in the Bangladesh RMG industry in 1994, that a committee including three representatives each from RMG workers, RMG employers and the Bangladeshi Government was formed to try to negotiate (Al Faruque, 2009: 23). Though workers’ representatives on this committee reportedly made numerous efforts to use the labor committee structure to improve things for workers, the industry continued to violate each agreement, resulting in sporadic, factory-level protests, some of which were negotiated by factory-level unions and some mediated by local NGOs (Rahman and Langford, 2012: 97). Ultimately, these protests contributed to changes in the formal rules applicable to RMG working conditions embodied in the Bangladesh Labour Law of 2006.

The Bangladesh Labour Law of 2006 consolidated “as many as 25 separate legislations” pertaining to labor and working conditions that had previously been in place in Bangladesh (Rahman, 2015: 66). Key features of the 2006 legislation include specific provisions that prohibit children under age 14 from working in most settings and restrict the number of hours that both adolescents (aged 14-18) and women can work, mandate the provision of worker identity cards and letters of appointment, provide death and maternity benefits for workers, and compensation to family members in case of death or disability (Rahman, 2015: 66). Thus, they assign rights and prohibit certain activities for particular subsets of potential resource appropriators. Although collective bargaining rights for workers are included in the law, for a factory union to be eligible for registration with the Bangladeshi government and legally represent workers to the Ministry of Labour and Employment in Bangladesh, 30% of all workers in the establishment must be members (Rahman, 2015: 68). In addition, the law stipulates that a worker can only be a member of the union as long as he or she remains employed by the establishment at which the union is housed; thus, fired workers are immediately out of the union even if they hold office in it (Rahman, 2015: 68). A common tactic of employers is to dismiss a worker for misconduct, thereby making that worker ineligible to remain a trade union officer (Rahman, 2015). While a worker can complain to the Labour Court, they face problems of underlying corruption at the courts and serious backlog of cases which, in some instances, can stretch back many years (International Trade Union Confederation, 2008). Thus, low-cost conflict resolution venues (design principle 6) are not present for violations of formal labor laws in Bangladesh. The effective absence of these formal rules helps support the development and perpetuation of informal rules that actually govern the treatment that RMG workers, union members and organizers in RMG factories receive both from management within the factory (intimidation, threat of firing, and increased workloads), as well as in the community at large (visits at home from hired thugs and threats to family members) (Action Aid, 2015).

4.4 Action situation, participants, interactions and outcomes

This section presents some of the key participants in the RMG action situation in Bangladesh and identifies some of the most important institutional factors affecting their actions. The goal is to help illustrate both the different sets of incentives facing individual actors based on the formal and informal rules that govern their actions, and how those incentives are continually being altered by the iterative process of interactions with other participants and outcomes.

■ *Participants: multi-stakeholder initiatives unique to Bangladesh*

Largely as a result of the sense of urgency brought about by the Rana Plaza incident, the Bangladesh Accord on Fire and Building Safety (the Accord) was signed in May 2013 between the Industrial global trade union, four NGOs, and over 200 (largely European) garment brands and retailers, led by Hennes & Mauritz (H&M) (Reinecke and Donaghey, 2015). The Accord is considered unique, due both to its contractual nature that ostensibly holds western corporations legally accountable for fire and building safety issues in factories

owned and managed by independent RMG suppliers, and because unions were involved in its creation. This ostensibly new, but still largely top-down approach is a 5-year commitment that includes detailed inspections for building and fire code violations in the RMG factories in Bangladesh from which its members source, online publication of factory locations and results of inspections, and mandatory remediation of the problems identified in those inspections (Bangladesh Accord, 2013). Due to the poor governance structure of Bangladesh described above and the power of the RMG industry in Bangladesh, implementation of the Accord has been slow, and few factories have received failing marks. Repairs that have occurred have been financed by the local RMG suppliers, who have largely eschewed financial help from the western brands who signed the Accord agreement (Daily Star, 2016a). More significantly, in several cases, the Bangladeshi government has reportedly refused to force RMG entrepreneurs to comply with Accord inspector recommendations to immediately close factories found to have serious safety issues (Greenhouse and Manik, 2014). Still, the Accord has been referred to as a “significant new departure in global supply chain labour governance” (Reinecke and Donaghey, 2015). This, however, is based on the perception of increased accountability through existing formal institutions in Bangladesh, whose already inadequate resources have been only partially upgraded to deal with the increased work (International Labor Rights Forum, 2015).

■ *Participants: industry organizations*

The Alliance for Bangladesh Building and Safety (Alliance) is a Wal-Mart-led initiative with goals and procedures that, at least on the surface, appear to be nearly identical to those of the Bangladesh Accord (Alliance for Bangladesh Worker Safety, 2016). The big difference is that the Alliance is purely an industry group that includes 26 largely US-based brands and retailers who declined to sign the ostensibly legally binding Accord (Reinecke and Donaghey, 2015). Thus, these participants have chosen to exclude themselves from the potential additional monitoring and sanctions and associated conflict resolution mechanisms the international legal level (design principles 4, 5, 6) for conditions in their producer factories in Bangladesh. Some have reported Accord member factories to be more compliant and Alliance members more tolerant of old abuses (International Labor Rights Forum, 2015). As many Accord factories are also Alliance factories, Alliance members have the potential to free-ride on the efforts of the Accord. For their part, Accord signees cannot exclude Alliance members (or others) from the benefits of any improvements they are able to make. Thus, Accord signatories could be acting as resource providers for appropriators with whom they are in competition. This does not seem like a sustainable solution. Bangladeshi RMG suppliers were the initial providers of the resource and continue to play a major role in its maintenance.

Also, as these agreements were worked out largely amongst actors from outside of Bangladesh, the quality of involvement of local actors (as referred to by Beske *et al.*, 2014; Boström, 2012; Cuthill, 2010) is low, undermining legitimacy still further. RMG workers (except through indirect representation by the global union and the government inspectors) are not able to participate in rule-making, monitoring and holding monitors accountable, or sanctioning (design principles 3, 4, 5 and 6 are violated).

The importance of RMG as a driver of development, employer of unskilled workers and contributor to labor income has yielded RMG producers a great deal of power in Bangladesh. This power is institutionalized in the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), which quickly assumed a quasi-governmental role, for example, in assigning Bangladesh’s MFA quotas to producers (Yunus and Yamagata, 2014). In this way, the BGMEA has a great deal of control over the boundary of the RMG resource system in terms of who is allowed to extract value from it. Knitwear producers in Bangladesh formed their own, related organization in the Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA), largely in response to the threat of changes in the EU General system of preferences (GSP) country of origin (rules-of-origin restrictions) related to knitwear garments that threatened quota-free status of Bangladeshi knit goods (Yunus and Yamagata, 2014: 81). Thus, even a threatened formal rule change can generate collective efforts to deal with that change and result in new coalitions of resource users with their own unique agendas for influencing rules.

The power of the BGMEA and BKMEA is augmented by the fact that a large amount of research into the garment industry in Bangladesh is accomplished based on lists of companies and other data supplied by one or both of these two industry groups (Action Aid, 2015; Yunus and Yamagata, 2014; Zohir, 2001). Thus, they control a large amount of information as it flows both up and down the supply chain. Up to now, the BGMEA and its member entrepreneurs have been able to resist efforts from western brands, unions, workers and activists to significantly change the rules-in-use with regard to labor conditions and wages. This can be attributed to their control of important social capital and social infrastructure (Beske *et al.*, 2014; Cuthill, 2010; Murphy, 2012).

■ *Participants: large retail buyers*

Buyers from the Bangladesh RMG industry include the world's largest volume retailers, including major US buyers like Wal-Mart, Gap, K-mart, Sears, J.C. Penney, and Levi Strauss; and the main RMG buyers from the EU, including C&A, H&M, and Marks and Spencer (Kabeer and Mahmud, 2004: 143). By extension, then, their customers (the consumers of their goods) are also appropriators of the value in the RMG supply chain. Due to the continued social costs that arise from this relationship, foreign appropriation of the value provided by the Bangladeshi RMG resource system is considered by some to be significantly more than their contribution to the costs, violating many of the key elements of social sustainability (design principle 2; equity: Murphy, 2012; social justice and equity: Cuthill, 2010). The largest single buyer of RMG from Bangladesh, with annual purchases reaching five billion dollars in 2016 (Daily Star, 2016b), is H&M who continue to make attempts to try to better incorporate these costs into their own rule systems for governing supply chains.

Having established a supplier code of conduct in 1997, H&M opted in February of 2016 to replace the code with a "Sustainability Commitment" which states, "We want to make sustainability an integrated part of all our global business relationships and work closely with our suppliers and business partners in order to achieve long lasting impacts across our entire value chain" (H&M, 2017). Given the large amounts of product H&M sources from Bangladesh, events like Rana Plaza represent a massive threat to such a carefully cultivated reputation. Thus, despite the fact that H&M was not named as one of the companies sourcing from any of the factories at Rana Plaza, it was the first official signatory to the Bangladesh Accord on Fire and Building Safety (Reinecke and Donaghey, 2015). H&M seized the opportunity provided by the Rana Plaza collapse to try to gain more control over its supply chain partners in Bangladesh, both through stakeholder pressure and financial means, and in so doing, increase brand reputation. This increase in social capital can be considered additional value that H&M hopes to extract from the Bangladeshi RMG resource system, offset by the costs of additional monitoring and sanctions. Despite its proactivity, the focus of H&M's efforts still seems to be on enforcing the formal rules at work in Bangladesh, rather than trying to better understand and affect changes in the more important informal rules at work there.

Another large retail actor in the Bangladeshi RMG industry is Wal-Mart – the single largest US-based buyer of clothing from Bangladesh (Human Rights Watch, 2015; Ullah Mirdha, 2016). Wal-Mart has been widely criticized for unfair labor practices in its own retail and distribution systems, as well as in its supply chains (Bloomberg, 2003; Kolben, 2007). In connection with its US operations, Wal-Mart has been accused of many of the same violations deemed problematic in the Bangladesh RMG industry, including wage and hour violations, employment discrimination and locking employees in stores overnight (Greenhouse, 2004; Kolben, 2007). One of the biggest criticisms of Wal-Mart, however, is its animosity towards unions. "Wal-Mart's anti-union animus is evident at the beginning of the employee's tenure when she receives the employee handbook, which provides that

we are not anti-union; we are pro-Associate. It is our position that every Associate can speak for himself or herself without having to pay hard-earned money to a union in order to be listened to and have issues resolved (Kolben, 2007: 286)."

As a retailer of their own branded merchandise, Wal-Mart, like H&M, does not possess any manufacturing systems of its own. However, due to its size and buying power, Wal-Mart's activities have impacts across a large number of related industries in its supply chain and those of competitors. By forming its own coalition of buyers in response to Rana Plaza, Wal-Mart is attempting to capture some of the value of the social capital H&M is reaping from their proactivity (Beske *et al.*, 2014), while significantly limiting the costs of capturing that value by avoiding sanctions, monitoring and conflict resolution mechanisms associated with the Accord agreement (design principles 4, 5, 6).

■ *Participants: Bangladeshi ready-made garment entrepreneurs*

The global shift in production of goods to less-developed countries has already been touched on above. What makes the RMG industry unique is its focus on fast fashion – in which the strategy for profit-making is based on the concept of convincing consumers to buy cheaper clothing more often. “The fast fashion industry owes its special features and structure to its requirements for shortened lead-times, faster inventory turnovers and high order fulfillment rates for customer demand at its peak points” (Turker and Altuntas, 2014: 838). This places RMG suppliers in the position that raising their prices even slightly or not meeting production agreements threatens the loss of production contracts. Buyers report being more concerned with things other than workers' rights and working conditions that could have negative effects on the economic efficiency of sourcing from Bangladesh, such as unreliable electricity supply and corruption (Berik and Rodgers, 2010: 68). Bangladesh's competitive advantage over other potential RMG producers is mainly considered to be the low labor cost, with costs of the poor governance system (corruption and inefficiency of infrastructure) eating up some of the value that could potentially otherwise be appropriated by workers (McKinsey and Company, 2011). Provision of the resource in terms of infrastructure, both physical and social (Cuthill, 2010) is not being accomplished well under the current rule system. This provision problem is evidenced in some of the “new” arrangements that have been made since Rana Plaza.

The financial arrangements offered through the Bangladesh Accord and Alliance, require not only a commitment from buyers to RMG producers to make up some of the costs of providing the resource, but also a commitment from the RMG producers to give up some of their autonomy. By taking the financial assistance offered through these agreements, RMG entrepreneurs might potentially be giving up a significant amount of control that, up to now, they have not wanted or needed to cede due to the acceptance of the rules-in-use. By forming a coalition with organized labor and creating a new set of rules that is binding under both legal and financial contracts, Accord-signatory buyers have attempted to change the rules-in-form to give them more control over facilities where value is being created and appropriated. However, as in the case of the Accord, none of the entrepreneurs offered financial help from the Alliance partners have chosen to take it (Butler, 2013). Cooperation from RMG entrepreneurs in terms of making necessary repairs has also not been promising. According to the Third Annual Report from the Alliance published in October of 2016, “To date, the Alliance has suspended 97 factories for failure to make progress on repairs that address safety concerns” (Alliance for Bangladesh Worker Safety, 2016: 9). It seems this collective effort has failed to create sufficient social capital or engaged governance (Cuthill, 2010) to create effective monitoring and sanctioning mechanisms (design principles 4 and 5) in RMG factories in Bangladesh. Though collaboration is clearly present (Beske *et al.*, 2014), the effects of this collaboration are negated by other factors. A look at how RMG workers are included in these and other collective action agreements within the RMG supply chain may shed light on why.

■ *Participants: ready-made garment workers in Bangladesh*

While most accounts cite figures of 4 million people employed in the industry, 80% of whom are women (Fair Wear Foundation, 2013; International Labor Rights Forum, 2015; Reinecke and Donaghey, 2015), the BGMEA is consistently the source of this information. According to the 2012 Bangladesh Census of Manufacturing Industries, however, the industry employs 2,762,335 workers, 1,257,464 (ca. 45%) of whom are men and 1,504,871 (ca. 55%) of whom are women (Bangladesh Bureau of Statistics, 2013).

Several studies provide information as to the characteristics of RMG workers in Bangladesh that are helpful in understanding the way the rules-in-use affect the attributes they possess with regard to appropriating value from RMG production. Two recent surveys of RMG workers were conducted by the Awaj foundation, a Bangladeshi NGO whose stated purpose is “giving a voice to Bangladesh’s Women Garment Workers” (Awaj Foundation, 2017). The first survey, conducted in 2013, assessed 1215 garment workers from more than 250 factories, 69% of whom were women. The second survey in 2015-16 covered 1007 garment workers, 85% of whom were women. In contrast to the frequent characterization of RMG workers as largely “illiterate”, slightly over 17% of respondents in the 2013 survey had not attended school at all, while nearly a quarter of those surveyed had attended school for 9 years or more. The 2016 report states, “The percentage of workers without even one year of formal schooling decreased from 17% in 2013 to 6% in 2016, which is very low compared with the literacy rate of the general population of Bangladesh (61.5%)” (Awaj Foundation, 2016: 19). In a study by Rahman *et al.* (2007:6), only 20% of the workers surveyed were considered “unskilled”, while 44% were assigned to the “skilled” category. Most had at least primary education, with men being generally more educated than women. Skill level does not seem to have a high impact on wages, as one study showed that 80% of those surveyed earned between 3,000-4,999 Taka (38-62 USD) per month, independent of education level (Awaj Foundation, 2013: 41). It seems from these figures that the social capital available to RMG workers (at least in terms of skills and education) is growing. Increased literacy will also bring increased access to information, another key element mentioned in some way by the authors all of the supply chain social sustainability frameworks described above.

Rather than focusing on long-term relationships with their employers, Bangladeshi RMG workers choose to move frequently among factories (Awaj Foundation, 2013: 38-39; Murayama, 2006: 86). This can be attributed to the potential gains workers have by practicing this strategy of mobility, “the more different factories the participant has worked in, the bigger are her/his chances to earn a higher salary (Awaj Foundation, 2013: 44). Thus, despite the seeming insecurity of jobs with no formal contracts or identity cards, it seems that RMG workers have devised a strategy to make the relative fluidity of the employment arrangements work in their favor by moving about frequently in search of better pay. This strategy, however, does not appear to be conducive to fulfilling long-term relationships, continuity or social capital in efforts to build trust.

In questioning workers about what they like best and dislike most about their current work place, the number one positive response (from 27.5% of those surveyed) was a “good factory environment” and the number one dislike (26.6% of respondents) was “bad behavior of management and supervisors” (Awaj Foundation, 2013: 50-52). The next important positive responses were “timely salary payment” (23.9%) and good behavior of management and supervisors” (10.4%). Among the most common dislikes were “violation of leave facility” (12.9%) and delayed salary and overtime payment (9.8%) (Awaj Foundation, 2013: 50-52). These responses seem to indicate that workers are indeed concerned about how they are being treated, and that not only the economic value of the resource is important to them. The report goes on to state, “Interestingly, aspects that are usually high on the agenda of the media, NGOs and other pressure groups, are not significantly reflected in the interviewees” expressions of what they dislike. None of the workers mentioned “issues of worker participation, e.g. in form of worker representation committees and health and safety committees or by organizing in trade unions” (Awaj Foundation, 2013: 54-55). This may be attributable to the general distrust of unions in Bangladesh described above, and points to a need to develop other, more legitimate, means of supporting worker participation in creating, monitoring and sanctioning behavior in Bangladeshi RMG factories.

■ *Participants: Bangladeshi women in their role as ready-made garment workers*

Women have been able to increase their social capital (what Cuthill (2010: 366) calls “a theoretical starting point for social sustainability”) through wage work in the RMG industry in Bangladesh, but are still subject to constraints from the male-dominated society of Bangladesh. Thus, the aspects of social justice and equity (Cuthill, 2010; Murphy, 2012; design principle 2) are not present within the operational situation in this instance. Still, in interviews, women in the RMG industry in Bangladesh reported having greater power of

choice about life decisions, such as marriage age and partner, than they would have had before beginning garment work (Kabeer and Mahmud, 2004). Many stated that they chose to seek work in the garment industry despite objections from their male family members. “Almost all the female workers in the 1990 garment industry survey reported that the decision to work in the garment industry was their own and in many cases it was done in opposition to the wishes of the male household head” (Zohir, 2001: 50). Thus, their new position as appropriators of the RMG resource is contributing to continued change in the informal rules and norms that women face in Bangladesh, once again highlighting the iterative and dynamic nature of the relationships between actors and institutions.

■ *Interactions and outcomes*

In 2006, beginning with independent protests at two RMG factories in Dhaka over unpaid wages, violent suppression by police generated enough anger in the RMG worker community to fuel a mass violent protest movement over a period of days between May 10 and May 23 (Rahman and Langford, 2012).

The entirety of Dhaka City and its adjacent areas became a battlefield because the workers were extremely militant and enraged, and as a result normal life ground to a standstill. On 23 May approximately 16 factories were burnt, 50 factories were vandalized, 200 vehicles were ransacked and a worker was killed (Rahman and Langford, 2012: 90).

These actions resulted in the Tripartite Memorandum of Understanding in which the labor committee sat down with the workers to negotiate an agreement to settle the dispute (Rahman and Langford, 2012: 90). According to Rahman and Langford (2012: 90-91), this seemingly spontaneous show of solidarity by mass numbers of RMG workers had three major impacts, (1) RMG entrepreneurs saw a real physical threat to their establishments; (2) Bangladeshi government officials sat down to negotiate in earnest with RMG worker representatives for the first time; and (3) a minimum wage board was formed that resulted in an increase in wages by 75%. Thus, changes in formal rules were made due to workers’ violent protests. Other issues were also agreed upon in these meetings, many of which were eventually incorporated into the Bangladesh Labour Law of 2006. However, despite these “achievements”, many RMG entrepreneurs did not increase wages, and in response to further inaction from the Bangladesh government, violent worker protests began again in 2010. “From January 1 to June 30, 2010, there were an estimated 72 incidents of labor unrest, leaving at least 988 workers injured in clashes with police” regarding key issues related to worker mistreatment by management, non-payment of wages, factory closings without notice or payment of wages due, and not allowing leaves and holidays as required (Claeson, 2010: 20). Economic forces external to the RMG sector contributed to the unrest. “During the past two years, as workers have seen their meager earnings eroded by double-digit inflation, protests and violent clashes with the police have become increasingly common” (Yardley, 2012). Perhaps not surprisingly, given the rather violent nature of the collective action undertaken by RMG workers, government authorities stepped in to stop it (design principle 7). In fact, the Bangladeshi government seems to have done little to support workers but talk, “the Minister of Labor urged garment factory owners to pay all wages and payments owed to workers’ (Claeson, 2010: 20). However, as shown by the worker survey results outlined above, many workers (particularly women) were still not receiving the minimum wage agreed on by 2013 when the Rana Plaza collapse occurred. Again, formal rule changes brought about by violent protest were not sufficient to alter the rules-in-use.

In the wake of Rana Plaza, the Bangladeshi government entered into an agreement known as the Sustainability Compact with the EU, US, ILO and several other national government actors. As part of this agreement, the Bangladesh Labour Act of 2006 was amended to increase worker’s collective bargaining rights and workplace safety. Key changes were the elimination of a provision that had mandated the Bangladesh Government’s Registrar of Trade unions to provide the names of the officials of trade unions that have applied for registration to employers. (Human Rights Watch, 2015) However, NGOs, workers and labor activists report that this is still common practice. Once again, changes in rules-in-form did little to alter rules-in-use.

Unions have, to date, not been able to successfully overcome the constraints on organizing RMG workers created by the strategies of powerful political and social elites in Bangladesh and the BGMEA. The Accord agreement created a new formal alliance between global unions and Western brands that may prove to be an effective enough strategy to alter some aspects of these power relationships that are based on informal rules. However, the RMG entrepreneurs' strategy of refusing to comply with or benefit from Accord policies seems to indicate that they intend to continue their past successful strategies of relying on their political clout within Bangladesh and resistance to relinquishing power to western brands and local and global unions. The Bangladeshi government seems to be backing them up, as evidenced by their refusal to mandate the closing of factories deemed as unsafe by Accord and Alliance inspectors. The distrust of unions by nearly all parties in Bangladesh may also be a hindrance that requires the creation of new types of worker representation that can more effectively negotiate between workers and RMG entrepreneurs.

5. Conclusions

The IAD framework, developed by institutional economists based on extensive research into public good provision and common pool resource management, provides a structure for examining institutional incentives facing individual decision makers about appropriation of value from a common pool resource. The present study has used of a modified IAD framework to apply existing theoretical concepts to a case study in supply chain social sustainability, and therefore, has shown the IAD framework to be an effective tool to organize the key variables in these dynamics at the operational level. Using information gained from document analysis to identify the key institutions governing economic and social processes in the RMG industry in Bangladesh, provides a greater understanding of the reasons behind the continued lack of progress towards social sustainability in this segment of the RMG supply chain. The failure of attempts to promote social sustainability through corporate codes of conduct and reforms in Bangladeshi government policy indicates that other, less formal, institutional arrangements, such as norms and rules-in-use, are more important in determining the actions of particular actors in the Bangladeshi RMG supply chain.

Based on the eight design principles associated with the IAD framework, the existing institutional arrangements have been analyzed in the context of the local community and related to the specific circumstances of the supply chain segment. The analysis has shown that Ostrom's design principles incorporate most of the main elements identified in the social sustainability frameworks proposed by other authors. While environmental issues associated with RMG production in Bangladesh have not been touched on here, the original framework is specifically designed to make the institutional linkages between environmental, social and economic pillars of sustainability explicit, thus addressing one of the key critiques put forth by Boström (2012). One main element that the IAD approach adds to the other frameworks discussed here is that the institutional arrangements serve themselves as indicators of the potential for long-term sustainable resource management. This addresses what Hutchins and Sutherland (2008) see as a key challenge in efforts to promote sustainability, namely operationalization of the key concepts it entails. Another is the way that the IAD-based institutional approach incorporates the sociocultural and political environment in which the supply chain segment operates directly into the analysis. Boström's (2012) assertion that special attention must be paid to who is allowed to be involved in rulemaking in supply chains is also specifically addressed by the IAD framework and associated design principles. Application of the IAD framework to other locations and other industries has the potential to identify areas with similar constraints on the action situation in which participants have been able to successfully change the dynamic internal to the action situation to create actual improvements in social sustainability.

To that end, the results of the analysis of RMG production in Bangladesh show that particular attention should be paid to the existence of monitoring and sanctioning that is visible to all resource appropriators. To better understand how information is transmitted through the supply chain, the rules-in-use should be examined rather than focusing on the rules-in-form, as is common in supply chain sustainability research and policymaking. Policies that support collective action at the local level, rather than ones that prescribe top-down solutions where monitors are not directly accountable to appropriators (particularly workers,

but also factory owners, managers and consumers) seem more appropriate than those where monitors are accountable primarily to RMG buyers and consumers, at least in the Bangladeshi context. Other sectors in similar settings should be examined, in which labor issues are also a sustainability topic to see if this applies in those contexts as well.

As Maloni and Brown (2006: 43) pointed out, there are many parallels between the food industry and RMG, “labor and human rights also present a complicated issue in the food industry, potentially exposing the supply chain to the same reactions and protests experienced by the apparel industry”. Thus, food and agricultural supply chains with important segments located in countries with similar histories, cultures and political arrangements could be expected to behave in similar ways to the RMG industry in Bangladesh. Comparisons among supply chains for different products in the same setting using an institutional perspective could provide additional insights into the unique characteristics of that resource, the community in which it is based and the rules-in-use in that context, and help move existing supply chain sustainability theory forward. Studies designed to capture the effects of similar social, economic and political dynamics between key actors in fruit and vegetable export supply chains could be especially useful in this regard, particularly in other developing country settings where research into supply chain sustainability has been surprisingly scarce (Seuring and Gold, 2013).

The role of factory managers and line supervisors in perpetuating some of the less tangible problems in the Bangladeshi RMG industry, such as verbal and physical abuse and sexual harassment has been alluded to in many worker interviews as well as by factory owners. (International Labor Rights Forum, 2015). Still, little is known about these actors, who they are, where they come from, and what incentives they face to maintain the system of ill-treatment of factory workers documented above. Such mid-level managers are an unknown quantity in research into supply chain problems, because they are not accessible to researchers (Chan and Siu, 2010), or because they are simply not included in analyses (Bitsch and Yakura, 2007). Despite extensive efforts during the theoretical sampling process, no suitable sources were found to help shed more light on these particular participants in the Bangladeshi RMG action situation.

With regard to Bangladeshi RMG workers, finding ways to help them self-organize that do not rely on unions may be more effective than efforts up to now that assume traditional unions are the most appropriate. The analysis has shown that the rules-in-use and the characteristics of the community combine to render union negotiations ineffective as either a conflict resolution method or a means through which RMG workers can participate in rule-making and enforcement. The characteristics of the resource, such as its geographic concentration and the relative homogeneity of its ownership should be an advantage to workers and those trying to provide them with tools and information that would support that effort. Development of innovation collective choice mechanisms that take advantage of those characteristics and take local conditions into account is needed. Given the importance of rules-in-use (rather than rules-in-form) as well as their relative invisibility, in-depth analysis of these rules requires field research. This presents new challenges, however. As Ostrom (2011) points out, rules-in-use are often implicit understandings that change almost imperceptibly. The limited (but expanding) set of choices available to women in Bangladesh provides an example of rules-in-use that continue to change and evolve in relationship to changes in other elements of an action situation. The tacit nature of this sort of local knowledge makes it especially difficult for outside observers to identify and understand, in part because those who do understand it consider it common knowledge and thus, do not verbalize it. Thus, further research into the Bangladeshi RMG supply chain (or other labor-intensive chains) should be based on prolonged engagement using in-depth qualitative methods such as participant observation and unstructured interviews (preferably conducted in the native language of the participants).

The major theoretical contribution of this effort was to show that looking at social sustainability issues as a resource appropriation problem using an institutional framework to help organize theoretical concepts from more traditional supply chain and development approaches can yield additional insights into the difficulties behind efforts to promote social responsibility. The points of leverage that are likely to be effective in each supply chain situation are different and based on the complex, dynamic relationships between the participants

(individuals and groups) in particular segments of that supply chain. As all relationships are based on an agreed-upon set of rules, analyzing the actually functioning rule set (rules-in-use), rather than simply trying to understand outcomes can help identify potential points for improvement. The IAD framework helps organize those elements and the eight design principles serve as a guide to identify institutional arrangements that help or hinder movement towards social sustainability.

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