

# Piggy in the Middle: How Direct Customer Power Affects First-Tier Suppliers' Adoption of Socially Responsible Procurement Practices and Performance

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Received: 15 April 2016 / Accepted: 9 November 2016 / Published online: 17 November 2016  
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**Abstract** Companies are faced with a choice of which type of power to use in their efforts to persuade their first-tier suppliers to adopt socially responsible procurement practices with key second-tier suppliers. However, we know little about how first-tier suppliers will react to different types of power and which are most effective in encouraging the adoption of socially responsible procurement practices. We are also ignorant of the impact of these practices on first-tier suppliers' performance. This paper uses bases of power theory to examine the impact of buyer companies' power usage (non-mediated and mediated) on first-tier suppliers' adoption of socially responsible procurement practices (process-based and market-based) with their own (second-tier) suppliers. We surveyed managers responsible for sustainable supply chain management in 156 firms and analyzed the results using structural equation modeling. Our findings show that non-mediated power use (expert and referent) influences the adoption of process-based and market-based practices, while mediated power use (coercion, legitimacy, and reward) has no significant impact on the adoption of either type of practice.

Additionally, we find that the adoption of market-based socially responsible procurement practices leads to enhanced performance for first-tier suppliers who adopt these practices with their second-tier suppliers.

**Keywords** Sustainable supply chain · Power · Socially responsible procurement practices · Performance

## Introduction

Sustainability is a largely uncontested, morally preferable imperative (Eriksson and Göran 2016) and is increasingly integrated into firms' strategic and operational decision-making (Thomas and Lamm 2012). The sustainability field asserts the importance of the nature, design, and operation of supply chains due to their impact on society. There is growing interest in how socially responsible procurement practices, which focus on benefiting people and communities, can be most effectively introduced and diffused across the supply chain. A complication here is that supply chains are both global and fragmented, often extending to multiple, outsourced tiers of suppliers.

Even if suppliers are distant, geographically and due to their position in the supply chain, companies still have a clear ethical and moral duty to ensure that workers are safe and that the work they do does not adversely affect their human rights. Furthermore, a company's reputation can be seriously damaged because of illegal or unethical practices in not just their own company, but also their suppliers. However, poor social practices by suppliers are not solely the supplier's fault. Many suppliers employ horrific practices, such as child or slave labor, illegal hours, unsafe working conditions, forced overtime, or other human rights abuses, in order to meet the commercial demands of

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powerful buyers (Huq et al. 2014). Suppliers, especially in developing countries, may not have the resources to implement socially responsible practices without assistance and investment, or may be actively discouraged from doing so (Huq et al. 2014; Jiang 2009).

Recent media revelations show a range of human rights abuses across many industries. These include slave labor use in the prawn supply chain of four top retailers: Wal-Mart, Carrefour, Costco, and Tesco (Hodal et al. 2014; Marshall et al. 2016); cases of child and convict labor in the fashion industry (Bishkek 2013; Doward 2012) with the revelation that Uzbek cotton is still used extensively in Bangladesh (Huq et al. 2014); and labor rights abuses in Apple's supply chain involving its supplier, Pegatron, on the outskirts of Shanghai, and child labor in its tin supply chain in Bangka, Indonesia (Bilton 2014; Klassen and Vereecke 2012). Previously, companies could hide behind a denial of responsibility or knowledge of such practices on the part of their suppliers. That is no longer the case and companies, especially leading brands, are increasingly held responsible for poor social practice even at the furthest reaches of their supply chains (Mol 2015).

Many companies now require suppliers to implement socially responsible supply chain programs, such as monitoring the working practices of lower-tier suppliers or developing products that have a positive impact on workers in the supply chain, such as Fair Trade coffee and coconut oil products, which claim to help deliver sustainable livelihoods to the poorest people across the globe (Karjalainen and Moxham 2013). However, the ways in which companies persuade their suppliers to adopt these practices can be quite different.

Some companies adopt morally and ethically questionable coercive approaches to get their suppliers to adopt socially responsible practices. For example, some supermarkets bully their suppliers into adopting socially responsible practices (Balch 2015a). This is fostered by the imbalance of power in the food sector (Touboulic et al. 2014). Other companies adopt a more collaborative approach, engaging with suppliers and helping them to develop products and processes that are beneficial for workers and producers throughout the supply chain. One example is the Livelihoods Fund to encourage smallholder innovation for important commodities within the Danone and Mars supply chains. The companies claim that the fund will help farmers develop and use more sustainable agricultural practices while raising living standards (Balch 2015b), although this has still to be proved. Other companies collaborate with non-traditional supply chain stakeholders, such as NGOs and community groups, and actively engage them in supply chain decision-making. For example, the range of products showing the Panda logo of the World Wildlife Fund attests to the myriad partnerships

between companies and the NGO. However, it is claimed that the NGO trades legitimacy and reputation for financial compensation (Mol 2015).

The role of first-tier suppliers in adopting socially responsible procurement practices is crucially important as they are the 'piggy in the middle,' frequently caught between buyers who want socially responsible initiatives implemented in lower tiers and second-tier suppliers who may be unable or unwilling to adopt these initiatives. What is not clear is how different types of power use affect the willingness or unwillingness of first-tier suppliers to adopt socially responsible supply chain initiatives and diffuse them with their own suppliers. There is also a gap in our knowledge about the effect of implementing these initiatives on the first-tier suppliers' performance. Social responsibility is a serious issue for managers and other stakeholders, and a better understanding of what drives first-tier suppliers to adopt socially responsible practices with their own second-tier suppliers, and the impact of this adoption, is important and timely.

This study contributes to knowledge in several ways. First, it is an empirical study exploring how supply chain social responsibility is achieved (Ashby et al. 2012). We explore the first-tier suppliers' perception of their key direct customers' power use and its effect on the adoption of socially responsible procurement practices with their own key second-tier suppliers. Most of the current sustainable supply chain literature focuses on the buyer firm's perspective (Huq et al. 2014; Zorzini et al. 2015).

Second, we explain how different types of power impact the diffusion of socially responsible practices with key suppliers (Laari et al. 2016; Tate et al. 2013). We contribute to bases of power theory by understanding how perceived direct customer power affects first-tier suppliers' adoption of socially responsible practices with key second-tier suppliers. To the best of our knowledge, socially responsible procurement practices have not been explored using a power lens (Zorzini et al. 2015).

By investigating socially responsible procurement practices rather than environmental supply chain practices, which are the subject of the majority of sustainable supply chain studies (Carter and Rogers 2008; Huq et al. 2014), we gain a unique insight into how power use drives the adoption of practices impacting workers and communities. We expect that the adoption of socially responsible procurement practices will be different to the adoption of environmental supply chain practices. Environmental practices are widely implemented, standardized, and reported due to the extensive adoption of environment management systems, such as ISO14001, as well as more stringent environmental regulations requiring standardized environmental reporting, while social management systems and regulations lag behind (Klassen and Vereecke 2012).

Furthermore, the impact of socially responsible procurement practices appears to have immediate effects on workers in the supply chain. For example, Huq et al. (2014) show that, in Bangladesh, unless companies have sufficient social standards, a competitive market for skilled labor allows workers to leave the company and work elsewhere.

Finally, we explore the question of whether it pays for first-tier suppliers to be socially responsible rather than whether it pays to be green, which has received much more attention (Carter and Easton 2011). We also investigate what types of practice pay: process-based or market-based. Other studies conclude that social responsibility does pay, but these studies are either conceptual (Porter and Kramer 2006, 2011) or specific to one industry or one country (Huq et al. 2014).

In the following sections, we examine the literature related to power, socially responsible procurement practices, and performance. We then introduce the methods used in gathering our data. This is followed by the results of the research, which show that non-mediated power positively impacts the adoption of both process- and market-based socially responsible procurement practices, while mediated power has no significant effect. Finally, we show that market-based practices, but not process-based practices, positively impact supplier performance. We then discuss our findings in light of the current literature and conclude with the limitations of this study and suggestions for further research.

## Literature Review

### Bases of Power Theory

In this study, we define power as the ability of one organization in a supply chain to influence or control the decisions, actions, and behavior of other individuals or organizations in the supply chain (Gaski 1984). The concept of power is used extensively in supply chain management literature to explain the performance of supply chain relationships in terms of trust (Kumar et al. 1995; Maloni and Benton 2000), cooperation (Frazier and Rody 1991; Maloni and Benton 2000), commitment (Kumar et al. 1995; Maloni and Benton 2000; Zhao et al. 2008), adaptation (Hallen et al. 1991; Nyaga et al. 2013), or satisfaction (Benton and Maloni 2005; Frazier and Summers 1986; Maloni and Benton 2000). Power is a key variable in supply chain relationships as it directly relates to the control and influence of one party over another (Maloni and Benton 2000; Nyaga et al. 2013). For example, power asymmetry arises in supply chain relationships if the buyer purchases a large share of a supplier's outputs, thus creating dependence; if one party has unique expertise; or if

one party has developed a contract structure which makes finding another partner very difficult (Belaya et al. 2009). One study found the perception of customer importance by the supplier to be the most reliable indicator of supplier dependence (Hallen et al. 1991).

Similarly, in the sustainable supply chain field, writers regard power, especially of large multinational buyers, as key to the implementation of environmental (Mol 2015) or socially responsible procurement practices (Amaeshi et al. 2008; Sancha et al. 2016a). Studies have investigated how and why dependence impacts sustainable practice adoption in the supply chain, showing that highly dependent suppliers are more likely to adopt specific environmentally or socially responsible practices within their own firms (Awaysheh and Klassen 2010; Touboulie et al. 2014). Other studies have shown that coercive pressure from powerful buyers is vital in driving socially responsible practice adoption (Ehrgott et al. 2011; Fishman 2006; Huq et al. 2014). What has not been investigated in this field is how different types of power use by key direct customers affect first-tier suppliers' adoption of different types of socially responsible procurement practices with their key second-tier suppliers.

This paper will use and contribute to bases of power theory conceived by French and Raven (1959), developed by Maloni and Benton (2000) and extended by Benton and Maloni (2005) to fill this gap. Bases of power theory are grounded in the Weberian (Weber 1947) view of individual power, but also recognize the organizational (Pfeffer and Salancik 1974) and relational nature of power (Hickson et al. 1971). Thus, power is between two parties and the perception of power use is regarded as the foundation of power (Gaski 1984). Bondy (2008) concludes that as power can be recognized by its consequences (Salancik and Pfeffer 1977), by examining the bases of power used it is possible to explore the power struggle over sustainability implementation.

French and Raven (1959) give a classification of five different types of power used in relationships. The first type is *expert power*, where one party has more expertise or knowledge. Starbucks, for example, states that it uses its knowledge and expertise in its 'Cocoa Practices Program' to help suppliers initiate sustainability initiatives. For instance, it brings agricultural know-how to farmers in their supply chain to help produce sustainable coffee beans at (what Starbucks regards as) a fair price. Certification from the program has led to changes in behavior, improved incomes, and improved trade relations (Bitzer et al. 2012). However, it should be noted that cocoa certification programs are criticized for their inability to enforce standards and for prioritizing productivity over environmental or social concerns (Lemelleur et al. 2015).

*Referent power* is admiration for another company's practices or values, or the need to identify with another party, which encourages organizations to adopt or mimic practices. Companies in high-density supply chains with leading sustainability organizations at the center are likely to adopt this stance (Vurro et al. 2009). For example, Patagonia, the US clothing retailer, attracts suppliers that mirror its own values, such as making a positive impact on the environment, examining their own supply chains, and promoting transparency (Ethical Corporation 2016).

*Coercive power* is used when threats or punishment are issued from one party to another, for example when companies threaten to end a relationship or significantly reduce order volumes if sustainability initiatives are not adopted (Jiang 2009). For example, Wal-Mart, though famous for not allowing suppliers to discuss their relationship with the company, is reported to 'hold a supplier's business hostage to its own agenda' and will terminate contracts with suppliers if its sustainability wishes are not met (Fishman 2006, p. 14).

*Legitimate power* is power exercised through legal or structural authority. This is where a company asserts its power as the dominant partner in the relationship. It can be especially prevalent when there is a dominant firm in an industry with many dispersed suppliers (Vurro et al. 2009). For example, it is common for buyers to insist on open-book accounting at the beginning of a relationship, particularly when the buyer has more power, which allows the buyer to investigate suppliers' profit margins (Hoffjan et al. 2011; Lamming et al. 2005).

Finally, *reward power* is exchange-based power, where one party expects to be rewarded for an action. For example, Marks and Spencer, the UK retailer, rates suppliers according to sustainability objectives achieved and gives more business to those with high sustainability scores (Balch 2015a).

For parsimony, these power bases have been further grouped into non-mediated and mediated power (Benton and Maloni 2005; Maloni and Benton 2000; Zhao et al. 2008). Non-mediated power is an indirect form of power embedded in the relationship between the buyer and the supplier. This type of power is regarded as relational and positive and its owner may not even be aware of its existence. The power bases that make up non-mediated power are expert and referent power (Maloni and Benton 2000).

Mediated power entails the direct action of one party on another, with the powerful party controlling its use and application. This is generally regarded as a negative and competitive form of power used by the powerful party over the less powerful party within the relationship. This power is made up of coercive, legitimate, and reward power (Benton and Maloni 2005). Unlike non-mediated power

sources, the use of mediated power is readily apparent to the parties involved in the relationship (Zhao et al. 2008).

### Socially Responsible Supply Chain Practice Adoption

In research and in practice, socially responsible procurement practices are focused on people within the supply chain, including issues such as the human rights and working conditions of employees. Increasingly, socially responsible procurement practices incorporate activities outside the supply chain including benefits to communities or providing social programs such as healthcare or education for those not directly employed in the supply chain (Klassen and Vereecke 2012). Socially responsible procurement practices range from codes of conduct for minimum labor standards in supply chains to more radical developmental projects, such as Fair Trade, with the goals of producer empowerment and equitable trading (Hughes et al. 2007; Karjalainen and Moxham 2013).

A number of studies suggest that socially responsible procurement practices cannot be implemented across the supply chain by a single powerful company. These studies point to the dyadic relationship as the key relationship that impacts the adoption of sustainability practices, as a firm may not have influence further than its first tier of suppliers (Awaysheh and Klassen 2010; Ayuso et al. 2013; Ciliberti et al. 2009; Pedersen 2009; Touboullic et al. 2014). Touboullic et al. (2014) highlight the central role of the first-tier supplier in ensuring engagement with second-tier suppliers. Socially responsible procurement practices have to be passed on from buyer to first-tier supplier and from first-tier to second-tier supplier, and so on. Amaeshi et al. (2008) call this the ripple effect.

Different types of socially responsible procurement practices have been identified. We use the distinction developed by Marshall et al. (2015a) between process-based and market-based socially responsible procurement practices.

#### Process-Based Practices

Process-based socially responsible procurement practices involve companies monitoring their suppliers' socially responsible practices and ensuring that they minimize negative impacts of industrial processes, usually through health and safety compliance (Pagell and Wu 2009; Reuter et al. 2010). This is also known as 'socially responsible purchasing' (Leire and Mont 2010; Maignan et al. 2002), and requires the purchasing manager of the buyer company to ensure that the supplier has the correct social certification or uses a socially responsible management system,

such as SA8000, OHSAS 18001, or a bespoke system (Ciliberti et al. 2009; Lee and Kim 2009).

In many cases, the buyer firm will instruct the supplier firm to provide information about its ability to meet either regulatory social standards or standards set by the buyer firm, which can be more robust than regulatory demands (Wiengarten et al. 2012). This includes questionnaires, dedicated software systems, and/or site visits to the supplier firm. The purchasing manager of the buyer firm then assesses and evaluates the social performance of the supplier.

Many process-based practices are regarded as external to the buyer firm as they take place outside firm boundaries and are an arm's-length approach to managing supply chain sustainability (Klassen and Vereecke 2012). However, some process-based practices, especially when helping suppliers attain certification, ensuring compliance, and assisting in auditing, result in companies working together in a much more collaborative way (Holloos et al. 2012; Pagell et al. 2010). Due to the different relational types involved in the same socially responsible practices (Sancha et al. 2016a), we chose the process- and market-based dichotomy rather than the arm's-length or collaborative dichotomy to capture the practice adopted rather than the relationship type.

#### *Market-Based Practices*

Market-based practices focus on innovation in products and processes and on the strategic direction of the firm and the supply chain. These practices involve working with suppliers to develop socially responsible procurement practices beyond health and safety measures that will bring advantages to the stakeholders involved in the supply chain (MacCarthy and Jayarathne 2012; Klassen and Vereecke 2012). These include changes to the fundamental nature of the supply chain (Pagell and Wu 2009; Nidumolu et al. 2009); developing new products or processes with appreciable benefits for consumers and workers in the supply chain (Amann et al. 2014; Ashby et al. 2012); and reimagining the supply chain to achieve socially responsible outcomes (Abdallah et al. 2012). This means including non-traditional supply chain partners in decision-making and increasing the transparency of supply chain operation and governance (Burchielli et al. 2009; Pagell and Wu 2009).

Changes to products and processes usually involve a collaborative effort by the buyer and the supplier in order to differentiate products and operations (Wolf 2011). This involves creating products that have a social benefit for the entire supply chain and not only improve the health and safety of consumers and workers, but also provide fair

wages for workers and fair margins for producers (Holloos et al. 2012; Pullman et al. 2009).

Other market-based practices focus on changes to the fundamental business model, strategy and vision of the firm and the supply chain (Pagell and Wu 2009): a mindset or cultural change in order to focus on social responsibility. Companies then work with suppliers and non-traditional partners, including secondary stakeholder groups such as NGOs or community groups, to create a more socially responsible supply chain. This also means creating more transparent supply chains, where governance structures and data relating to ethical and social standards are communicated publicly (Ciliberti et al. 2009; Mueller et al. 2009; Pedersen 2009). For example, after intense pressure from stakeholders, including NGOs, the media, unions and academics, Nike and Levi-Strauss now publish lists of their factories, giving data on the labor practices of their suppliers to the public (Doorey 2011).

#### **Power Use and Socially Responsible Procurement Practices**

Few studies examine the impact of power use on socially responsible procurement practices (with the exception of Ayuso et al. 2013; Boyd et al. 2007; Ciliberti et al. 2009), and even fewer examine the effect of power on first-tier suppliers adopting socially responsible procurement practices with their suppliers. An exception here is the work of Touboulie et al. (2014), which explores a single case with multiple dependent relationships to understand how dependence impacts the adoption of sustainable supply chain management practices. However, the paper focuses on environmental rather than social initiatives: the case company regarded the latter as difficult to assess and measure and of less relevance to suppliers. It is interesting, then, to explore the relationship between power and adoption for socially responsible practices as these are less implemented, standardized, or regulated (Klassen and Vereecke 2012).

As there is relatively little work on power in the sustainable supply chain field, we turn to the supply chain management field for evidence. Supply chain researchers have concluded that power is antecedent to the supplier's willingness to make adaptations for its buyers (Nyaga et al. 2013), with research showing that non-mediated power use has a positive impact on relationships (Benton and Maloni 2005; Zhao et al. 2008).

Studies show that non-mediated power use leads companies to adopt relationship-based practices, such as the use of trust and relational norms, in managing the relationship (Liu et al. 2009). Moreover, the use of non-mediated power is much more likely to induce the supplier to adapt to a buyer's wishes (Nyaga et al. 2013). This is reinforced by

evidence that the relationship and association with the buyer drives supplier satisfaction and perceptions of performance (Benton and Maloni 2005).

In the sustainable supply chain literature, we find more evidence of a positive relationship between non-mediated power and process-based practices. Process-based socially responsible procurement practices, such as monitoring and assessment, are shown to combine with collaborative approaches, such as socially responsible training and awareness building, in order to encourage the adoption of socially responsible initiatives (Ciliberti et al. 2008). Additionally, non-mediated power, in the form of assistance to suppliers, leads to the implementation of SA8000 with suppliers (Ciliberti et al. 2009). Following from this, we hypothesize that non-mediated power use will drive process-based socially responsible procurement practice adoption. Thus:

**Hypothesis 1a** Non-mediated power use positively impacts the adoption of process-based socially responsible procurement practices by first-tier suppliers.

Additionally, in both environmental and social supply chain research, we see a positive relationship between non-mediated power and market-based practices. One study shows that social norms are effective in driving the supplier's commitment to environmental sustainability (Sancha et al. 2016b). While relational governance mechanisms drive the willingness of suppliers to adopt socially responsible practices in their own supply chains (Jiang 2009), with shared goals, learning and cascading best practice encouraging socially responsible practice implementation with suppliers (Perry and Towers 2013). Therefore, we hypothesize that non-mediated power use will drive market-based socially responsible procurement practice adoption:

**Hypothesis 1b** Non-mediated power use positively impacts the adoption of market-based socially responsible procurement practices by first-tier suppliers.

For the impact of mediated power use on process-based practices, studies show a consistent pattern. In the environmental supply chain sustainability field, Zhu and Sarkis (2007) conclude that in China, coercive pressures have a positive impact on the adoption of environmental supply chain practices such as monitoring and auditing suppliers as well as suppliers achieving ISO14001 certification. In the socially responsible supply chain literature, Porteous et al. (2015) find that offering suppliers incentives reduces violations and costs and improves their social performance.

When powerful supply chain members enforce social supply chain certification, Social Accountability 8000 (Ciliberti et al. 2009), or monitoring practices with suppliers (Ayuso et al. 2013), suppliers implement these

socially responsible practices and pass them on to their own suppliers (Ayuso et al. 2013). Additionally, in a study of a food supply chain, Touboullic et al. (2014) find that buyer dominance positively impacts the adoption and implementation of sustainable supply chain practices, with less powerful suppliers more willing to quickly fill in and return sustainability questionnaires. Therefore, we propose a positive relationship between mediated power and the adoption of process-based practices:

**Hypothesis 1c** Mediated power use positively impacts the adoption of process-based socially responsible procurement practices by first-tier suppliers.

Unfortunately, there have been no specific studies of the impact of mediated power on market-based practices, therefore we use evidence from power and social responsibility studies in order to develop our hypothesis. In contrast to process-based socially responsible procurement practices, when mediated power is used to achieve innovative or strategic practices, researchers consistently find a negative effect. For example, in the power literature, Nyaga et al. (2013) find that mediated power use negatively affects both collaborative behavior and the supplier's willingness to adapt products or processes to suit the buyer. Benton and Maloni (2005) find that coercive buyer power has a detrimental impact on relationships in the automotive industry; and Jones and Pollitt (1998) suggest that opportunistic or abusive use of power leads to not only a reduction in the quality of products, but also a parallel lack of investment and innovation by suppliers. In the social responsibility literature, Perry and Towers (2013) find that when mediated power is used to drive corporate social responsibility (CSR) practices in the fashion industry, process-based supply chain practices are achievable, but innovative supply chain practices are not. Touboullic et al. (2014) concur that the use of power to implement sustainability has limits, as the use of mediated power creates resistance and resentment among suppliers.

We therefore hypothesize:

**Hypothesis 1d** Mediated power use negatively impacts the adoption of market-based practices by first-tier suppliers.

## Socially Responsible Procurement Practices and Performance

As socially responsible supply chain research is relatively new, few studies examine the impact of socially responsible procurement practices on performance. Fewer still examine the impact on supplier performance. Several studies investigate the impact of sustainability practices as a whole, combining environmental and social measures,

which makes separate analysis impossible (Porteous et al. 2015). Furthermore, the majority of papers in sustainable supply chain management ask whether it pay to be green; very few ask whether it pays to be socially responsible (Miemczyk et al. 2012).

Early arguments almost exclusively state that there are no benefits to implementing social responsibility. Friedman (1970) states that a company should not consider anyone but the direct stakeholders in decision-making, and advocates that socially responsible programs are inherently detrimental to profits. These ideas are challenged in a number of studies (Parket and Eilbirt 1975; Heinz 1976), which find that socially responsible activities can be profitable. However, when these researchers studied longer-term performance, performance advantages were eroded.

One difficulty with these studies is the measures used. As Carter and Rogers (2008) explain, most of the previous studies only examine the costs of socially responsible activities without looking at the benefits. Research shows that it does benefit companies to be socially responsible (Carter and Rogers 2008). Benefits include insurance-like advantages if companies provide funding or assistance to non-direct stakeholders (those not directly linked with the company). This means that if there is wrongdoing in the company, leading to negative headlines and news items, financial performance will be preserved. This is likely due to the moral capital invested outside of the company which comes into play when poor practice is uncovered (Godfrey et al. 2009).

As process-based socially responsible procurement practices are mainly focused on evaluating and assessing compliance with health and safety, companies have to invest in an evaluation system. Although some claim that this investment is difficult to recoup, some studies conclude that there are capability (Foerstl et al. 2010; Reuter et al. 2010) or corporate sustainability performance advantages (Wolf 2014) to implementing these practices. However, research that tests the link between socially responsible procurement practices and performance finds different outcomes. Akamp and Muller (2013) find that evaluating and assessing suppliers did not impact the operational performance of the supplier, while Hollos et al. (2012) argue that process-based socially responsible procurement practices (working conditions, labor, and safety certification) positively impact both cost reduction and operational performance through higher productivity, lower costs, and better operational performance as well as a much more motivated workforce. However, their data show that implementing these practices had no effect on either cost reduction or operational performance. Due to the conflicting arguments, and the more recent evidence from the socially responsible supply chain field, we hypothesize:

**Hypothesis 2a** Process-based practice adoption has no effect on first-tier supplier performance.

Early adopters of market-based socially responsible procurement practices can acquire advantages such as the ability to lobby governments either to make practices mandatory or to stall legislation for certain practices if time to redesign processes or systems is needed (Nidumolu et al. 2009; Pagell and Wu 2009). One report claims that market-based socially responsible projects are twice as important as environmental projects for maintaining the reputation of a company (Brandlogic and CRD Analytics 2012). Additionally, general collaborative efforts with suppliers appear to enhance suppliers' social performance (Sancha et al. 2016a).

Wu and Pagell (2011) found positive outcomes from market-based socially responsible procurement practices, including collaborative new product and process development implementation between buyers and suppliers giving performance benefits to companies in the supply chain not only in the long term, but also in the short term. Moreover, socially responsible new product and process design provides companies with additional knowledge and information-sharing capabilities (Pedersen 2009) and can become a source of competitive advantage (Foerstl et al. 2010).

Creating non-traditional or transparent supply chains takes major behavioral and operational changes (Pagell and Wu 2009), but leads to improved performance through reduced absenteeism and healthcare costs as well as productivity improvements and the ability to recruit high-performing individuals (Pfeffer 2010).

For example, when Nike and Levi-Strauss disclosed their supply chain membership data to the public, this enabled the companies to reap short-term reputational benefits as well as long-term collaborative benefits across the fashion industry (Doorey 2011). The short-term benefits included the ability to spot and solve problems with labor practices in the supply chain quickly and effectively and the companies being lauded as global leaders in transparency. Over the long term, the companies gained advantages from the facilitation of greater industry collaboration where informal, trusting relationships developed with other major retailers, suppliers, and private actors who investigate working conditions, resulting in greater information sharing across the industry (Doorey 2011).

Additionally, companies gain 'cooperative advantages' through the inclusion of communities surrounding supply chains as partners in the company (Strand 2009), while Klassen and Vereecke (2012) conclude that market-based practices, innovation, and strategy improve company and supply chain performance. From this evidence, we hypothesize:

**Hypothesis 2b** Market-based practices positively impact first-tier supplier performance.

Figure 1 represents the theoretical model and the hypothesized relationships.

## Methods

### Research Design

We designed and administered a survey to test our hypotheses. It is argued that the relationship between key direct customers and first-tier suppliers is indicative of other strategic supply chain relationships (Cao and Zhang 2011). This focus is used for investigating sustainable supply chain practices (Giunipero et al. 2012; Hollos et al. 2012), and therefore we adopt the perspective of the first-tier supplier as the unit of analysis for this research.

A randomized sample of 1000 companies with operations in the Republic of Ireland was purchased for this research. The companies selected complied with three conditions: first, adherence to the listed NAICS specifications; second, a lower limit of 50 employees (to control for plant size); finally, job title information, which provided the first assurance that we were targeting the employee with responsibility for supply chain social responsibility. The NAICS classifications were chosen to give a representative sample of companies in Ireland excluding pure services. Pure service companies were not included as they were unlikely to have suppliers both in the developed and developing economies, meaning less pressure for adopting socially responsible procurement practices (Awaysheh and Klassen 2010). The lower limit of 50 employees excludes small firms, as defined by the European Commission (2014), as they are less likely to induce suppliers to introduce socially responsible programs due to the resource

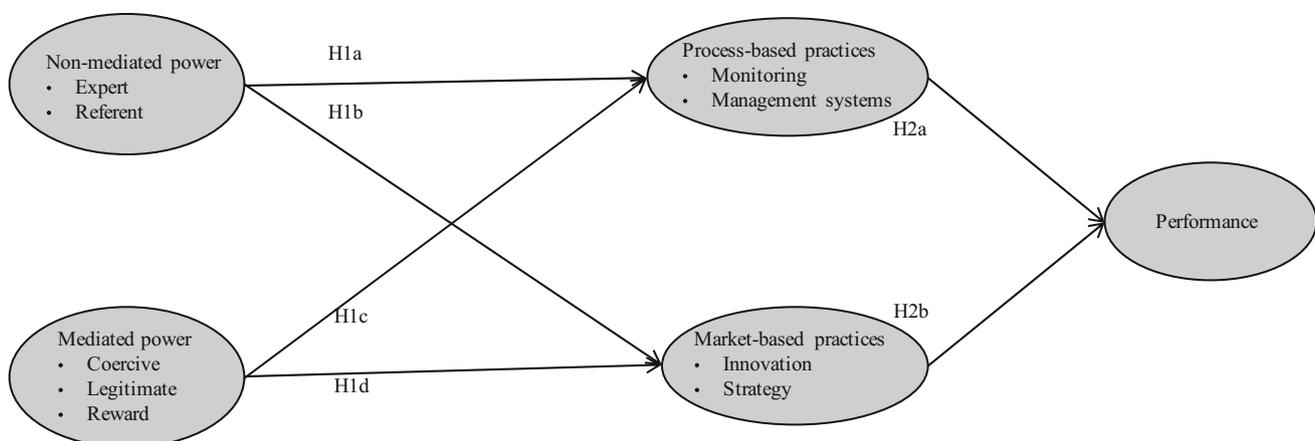
intensiveness of these initiatives (Awaysheh and Klassen 2010). Locating the study in a country with nationwide regulation removes the effect that different regulations might have on socially responsible procurement practice adoption (Pagell and Gobeli 2009). Duplicates and companies outside of the NAICS classification were removed, leaving a total sample of 883 companies.

In addition to the requirement that the database contained the details of the supply chain manager or similar in each company, telephone calls were made to ascertain who was responsible for socially responsible programs with suppliers. This ensured we talked to the person with the most knowledge of socially responsible procurement practices. Finally, an outline of the nature of the survey allowed for further confirmation that the most suitable informant was questioned. This had to be someone in the first-tier supplier company with knowledge of both direct customer pressures and the implementation of socially responsible procurement practices. Miller and Roth (1994) suggest that this attention to informant selection assists in overcoming common-method variance.

### Questionnaire Administration

A pilot study ( $n = 33$ ) was conducted with a sample of respondents, in similar industries and positions to the final sample, to verify the effectiveness of the established scales and to improve the survey's appeal to respondents (Cycyota and Harrison 2006). A Cronbach's alpha value was generated for each construct. All constructs were accepted as the alpha for each was greater than 0.7 threshold (Cronbach 1951).

We chose to administer the survey by telephone as this ensures rapid data collection (Forza 2002), maximizes response rates, and helps guarantee access to the expert in the organization (Miller and Roth 1994). Additionally, the



**Fig. 1** Theoretical model and hypotheses

purpose of the survey can be reiterated through an opening statement ensuring that questions are answered by the appropriately identified respondent and that instructions are followed (Forza 2002). Telephone surveys also allow for immediate clarification and for respondents to ask questions (Pagell and Gobeli 2009). The sample size was reduced to 863 companies during the telephone survey process. Within three weeks of beginning the survey, a response rate of 18.08% (156 responses) was achieved.

### Non-Response Bias and Social Desirability Bias

Tests for non-response bias compared early respondents (responses received within the first 2 weeks,  $n = 108$ ) and later respondents (responses received within the third week,  $n = 48$ ) (Armstrong and Overton 1977). A *t* test of difference was conducted on all items of the focal constructs as well as on the control variables of this study, and no statistically significant differences were identified at  $p < 0.05$ .

A statement assuring the confidentiality of the participant and the company, as well as guaranteeing that data would be treated in accordance with best data management practices (Zhu et al. 2013), was read out at the beginning of each interview in an attempt to mitigate social desirability and avoid a common-rater effect. Respondents were asked to answer questions from a company rather than a personal perspective as a second effort to reduce social desirability bias (Carter 2000). As an additional provision, questions were varied in terms of positive and negative wording.

### Response Rate

Respondent companies, as shown in Table 1, covered 10 industries based on the NAICS (2007) codes, ensuring that no industry was omitted. While they are representative of

Ireland's industries, there is a slight over-concentration of manufacturing firms. This is due to manufacturing comprising 16 different classifications (Ruane and Gorg 1997) and the fact that no pure services were included. Retailers (with corporate clients) and wholesale companies are also slightly under-represented. However, recent studies show the importance of manufacturing in Ireland and the wide adoption of supply chain practices in manufacturing (Chavez et al. 2012). Furthermore, unlike much of the developed world, Ireland's gross domestic product is fairly evenly balanced between manufacturing and services, making this sample representative.

The survey respondents included chief executive officers (0.64%), company directors (8.33%), supply chain managers (51.92%), and other managers who were responsible for socially responsible procurement practices in their company (39.11%). Phillips (1981) suggests that the rank of respondents is commensurate with their information reliability and that the measure to assess their qualifications is the number of years they worked in the company. The respondents had, on average, been in their current position for eight years, their current company for 14 years, and their current industry for over 17 years. 149 (95.5%) of the companies surveyed had been in business for five years or over.

### Operationalization of Variables

All measures were previously developed and tested by other researchers. The respondents were asked to indicate the extent of their agreement with statements, with all measures consisting of items on a scale from 1 ('strongly disagree/not at all') to 7, 'strongly agree/fully implemented or developed.' The items are in the Appendix.

Power and socially responsible procurement practices are second-order factor scales. We followed the guidance

**Table 1** Industry responses

Industry	Number of respondents	% of respondents	% in database
Utilities	7	4.5	0.7
Construction	6	3.9	5.9
Manufacturing	83	53.2	26.4
Wholesale trade	13	8.3	23.7
Retail trade	10	6.4	31.7
Transportation and warehousing	29	18.6	2.7
Postal services, couriers and messengers, and warehousing and storage	6	3.9	4.1
Telecommunications	1	0.6	2.9
Waste management and remediation services	1	0.6	1.9
Total	156	100	100

of measurement theory, which suggests that second-order models should be used when lower-order factors correlate with each other and a theoretically justifiable higher factor (mediated and non-mediated power) exists that accounts for the relations among the lower-order factors (specific power bases). When this condition is met, second-order factor models offer more parsimonious and interpretable measurement models (e.g., Chen et al. 2005).

Non-mediated power contains two scales: expert and referent power. The scales were adapted from Zhao et al. (2008) and supported by Nyaga et al. (2013). Expert and referent power scales consist of three items. Expert items include the use of expertise, advice given to the supplier, and highly skilled staff in the buyer company. Referent power focuses on admiration of the buyer company, deference to it, and imitation of the buyer's operations.

Mediated power consists of coercive, legitimate, and reward power, mirroring the combination used by Maloni and Benton (2000) and Benton and Maloni (2005). Coercive, legitimate, and reward power scales consist of three items each. Coercive power includes threats to withdraw business and actions that could reduce profitability or increase difficulty in conducting business. Legitimate power incorporates a feeling of duty to do as the buyer requests, obligation, and adherence to socially responsible requests. Reward power items encompass both tangible and intangible rewards or the possibility of punitive action if the supplier does not fulfill their requests.

Socially responsible procurement practices comprise two second-order constructs. We measured socially responsible procurement practices using scales validated by Marshall et al. (2015a). Process-based socially responsible procurement practices involve health and safety practices and incorporate monitoring and management system items. Monitoring has three items covering process elements: monitoring compliance with health and safety requirements, distributing questionnaires for assurance, and monitoring commitments to goals. Management systems consists of four practices: the co-design of work-life balance systems, aiding in the introduction of employee compliance and auditing systems, assistance in obtaining OHSAS 18001 or SA8000 certification or other systems, and collaborative development of an ethical code of conduct system.

Market-based socially responsible procurement practices include innovation through new product and process development and supply chain strategy redefinition practices. Socially responsible innovation, with three items, measures initiatives, such as developing products and processes that reduce risks for consumers and employees, as well as developing innovations to benefit workers throughout the supply chain. Supply chain strategy redefinition practices were measured using a three-item scale.

Redefinition involves ensuring fair trade and margins throughout the supply chain, publishing data on working conditions and codes of conduct to the public, and the minimization of negative impacts on communities around the supply chain operations.

The outcome variable, performance, was measured using a four-item scale adapted from Nahm et al. (2004), assessing the degree to which the sales, return on investment, market share, or competitive position increased.

### Control Variables

We use company size based on employee numbers and company age as control variables in the model. It is noted that the size of a firm can affect its ability to invest in responsibility practices (Perrini et al. 2007; Porteous et al. 2015), with many small enterprises lacking the resources to implement social responsibility practices (Awaysheh and Klassen 2010). We also take into account that newer companies may lack resources or experience in terms of implementing responsibility practices (Wiklund 1999). Further, we included participants' knowledgeability and experience as a control variable (Phillips 1981).

### Analysis

#### Confirmatory Factor Analysis

To test the hypothesized relationships, we followed Anderson and Gerbing's (1988) two-step procedure. In the first step, we tested the reliability, validity, and unidimensionality of items and variables via confirmatory factor analysis (CFA). Table 2 summarizes the correlations between the focal constructs of the study. The descriptive statistics, as well as the standardized loadings of the first- and second-order factors, are presented in Table 3. All path loadings are significant at the  $p < 0.01$  level and exceed the critical threshold of 0.5. No cross-loadings were detected. More importantly, the results of the CFA suggest

**Table 2** Correlations of theoretical constructs

	1	2	3	4	5
1. Non-mediated power	0.93				
2. Mediated power	0.58	0.83			
3. Process-based practices	0.55	0.42	0.86		
4. Market-based practices	0.48	0.36	0.79	0.87	
5. Performance	0.50	0.18	0.62	0.68	0.88

The diagonal shows the square root of the average variance extracted (AVE). All correlations are statistically significant at the  $p < 0.05$  level

**Table 3** Measurement model of theoretical constructs

First- and second-order constructs	Items	Std. $\beta$	$p$ -Value	Mean	SD
Non-mediated power					
CR = 0.93; AVE = 0.86; MSV = 0.33; ASV = 0.28					
Expert (0.94)	EX2	0.83	0.01	4.40	1.60
	EX3	0.86	0.01	4.23	1.61
	EX4	0.91	<sup>a</sup>	4.60	1.57
Referent (0.91)	RF1	0.91	0.01	4.05	1.59
	RF2	0.92	0.01	4.08	1.60
	RF3	0.90	<sup>a</sup>	4.32	1.56
Mediated power					
CR = 0.87; AVE = 0.69; MSV = 0.33; ASV = 0.17					
Coercive (0.68)	COE2	0.73	0.01	3.14	1.72
	COE3	0.80	0.01	3.56	1.76
	COE4	1.00	<sup>a</sup>	3.51	1.77
Legitimate (0.78)	LEG1	0.89	0.01	4.69	1.66
	LEG2	0.86	0.01	4.30	1.84
	LEG4	0.76	<sup>a</sup>	4.59	1.62
Reward (1.00)	REW1	0.80	0.01	4.08	1.68
	REW2	0.87	0.01	4.20	1.67
	REW4	0.43	<sup>a</sup>	2.56	1.50
Process-based practices					
CR = 0.85; AVE = 0.74; MSV = 0.63; ASV = 0.37					
Monitoring (0.90)	SM1	0.91	<sup>a</sup>	4.29	2.14
	SM2	0.85	0.01	3.78	2.22
	SM3	0.92	0.01	3.67	2.09
Management systems (0.82)	SMS1	0.85	<sup>a</sup>	2.54	1.77
	SMS2	0.94	0.01	2.99	2.11
	SMS3	0.79	0.01	2.47	1.80
	SMS4	0.76	0.01	3.51	2.28
Market-based practices					
CR = 0.86; AVE = 0.76; MSV = 0.63; ASV = 0.36					
Innovation (0.90)	SI1	0.83	<sup>a</sup>	4.32	2.07
	SI2	0.39	0.01	4.37	1.91
	SI3	0.85	0.01	4.85	1.96
Strategy (0.84)	SS2	0.81	<sup>a</sup>	4.17	2.00
	SS3	0.83	0.01	4.14	1.83
	SS4	0.93	0.01	4.32	2.01
Performance					
CR = 0.94; AVE = 0.78; MSV = 0.46; ASV = 0.28					
	FO1	0.88	<sup>a</sup>	3.81	1.67
	FO2	0.92	0.01	3.84	1.70
	FO3	0.84	0.01	3.57	1.68
	FO4	0.89	0.01	4.05	1.74

$\chi^2/df$  (746.45/447) = 1.67; IFI = 0.93; TLI = 0.92; CFI = 0.93; RMSEA = 0.066

In parentheses: Standardized factor loadings from second- to first-order constructs

<sup>a</sup> indicates fixed factor loading

that the proposed measurement model for the focal constructs has a good overall fit.

As summarized in Table 3, the comparative fit index (CFI), the Tucker–Lewis index (TLI), and the incremental

fit index (IFI) values are above 0.90, while the root-mean-square error of approximation index (RMSEA) is below 0.07. Further, all latent variables show high reliability and convergent validity, with composite reliabilities (CR) and

average variances extracted (AVE) exceeding the recommended standard of 0.7 and 0.5 for all constructs, respectively (Bagozzi and Yi 1988). Results also support the discriminant validity of the measures, as the average variance extracted exceeds the squared correlation between all pairs of latent constructs (Fornell and Larcker 1981). The maximum shared variances (MSV) and average shared variances (ASV) are also smaller than the average variance extracted for each construct, providing additional evidence for the discriminant validity of the measures.

We tested for common-method variance by conducting Harman's one-factor test, a common latent factor test, as well as a marker variable test (Podsakoff et al. 2003). When the proposed measurement model is compared to a one-factor model,  $\chi^2$ -difference tests show that the one-factor model (CFI = 0.14; IFI = 0.15; TLI = 0.084; RMSEA = 0.23;  $\chi^2/df$  (4114.87/465) = 8.85) has fit statistics significantly inferior to the specified measurement mode. Further, when conducting a common latent factor test, the common variance is 35% and thus clearly below the threshold of 50%. More importantly, when a marker variable (customer dependency) was introduced, the common variance decreased to 31%, providing additional evidence that the effect of common-method variance is likely to be low in this study.

Finally, we conducted an unmeasured latent methods factor test, following recommendations provided by Podsakoff et al. (2003) and Liang et al. (2007). In doing so, we calculated the degree to which each indicator's variance was explained by its principal construct (i.e., substantive variance) and compared it to the degree of common-method variance. The results indicate that the ratio between the average substantive variance (0.7396) and the common-method variance (0.0001) is 740:1 and the findings show that none of the method factor loadings are significant. Overall, the empirical evidence suggests that common method bias is unlikely to adversely influence the results of this study.

### Empirical Testing of Hypothesized Structural Relationships

Having established the reliability, validity, and unidimensionality of the measurement model, in a second step the authors tested the causal relationships among the variables. The overall fit indices for the structural model indicate an acceptable fit to the data ( $\chi^2/df$  (908/542) = 1.66; IFI = 0.92; TLI = 0.90; CFI = 0.92; RMSEA = 0.066). Table 4 shows the standardized path estimates of the six hypothesized structural relationships.

Overall, the findings show that the key constructs are related in the theoretically hypothesized manner. Support was found for H1a and H1b, with non-mediated power

influencing both process-based practices (H1a; 0.48,  $p < 0.001$ ) and market-based practices (H1b; 0.46,  $p < 0.001$ ). However, mediated power does not have a significant influence on process-based and market-based practices. H1c and H1d ( $p > 0.05$ ) are therefore rejected. H2a is supported as process-based practices do not have a significant effect on performance (H2a; 0.22,  $p > 0.005$ ). H2b is supported as market-based practices are positively associated with firm performance (H2b; 0.52,  $p < 0.001$ ). As discussed earlier, we also controlled for company size ( $\beta = -.097$ ;  $p > 0.05$ ) and company age ( $\beta = 0.096$ ;  $p > 0.05$ ). Neither variable was statistically significant. The results indicate that non-mediated power explains significant variance in process-based practices ( $R^2 = 0.34$ ) and market-based practices ( $R^2 = 0.26$ ), while overall the hypothesized model explains over 50% in performance ( $R^2 = 0.51$ ).

### Test for Attenuation in the Model

Previous sustainability studies have shown that the adoption of environmental or socially responsible procurement practices can also be influenced by industry, stakeholder and regulatory pressures (Sarkis et al. 2010; Wolf 2014; Zhu and Sarkis 2007). We thus reestimated the model with a post hoc modification that included direct paths between industry, stakeholder, and regulatory pressures and market-based and process-based practices, respectively. The new CFA, including the three additional constructs, shows a satisfactory fit ( $\chi^2/df$  (1202/744) = 1.62; IFI = 0.91; TLI = 0.90; CFI = 0.91; RMSEA = 0.063), with fit-statistics for industry, stakeholder and regulatory pressures all indicating high reliability, validity and unidimensionality (Table 5). All factors loadings were above 0.5.

In a second step, we tested the structural relationships. Overall, the model has an inferior fit ( $\chi^2/df$  (1649/882) = 1.87; IFI = 0.85; TLI = 0.83; CFI = 0.85; RMSEA = 0.075) compared to the originally hypothesized model. The results show that industry pressure has a statistically significant influence on the adoption of market-based and process-based practices, while stakeholder pressure influences process-based practices but not market-based practices (Table 6). Regulatory pressure had no significant influence. However, it is important to note that the proposed relationships between mediated and non-mediated power and firms' practices still hold. The only change in the model is the relationship between mediated-power and process-based practices, which is now statistically significant at the <5% level. The findings suggest that even controlling for industry and stakeholder pressures, perceived customer-power still has a significant influence on the adoption of process-based and market-based

**Table 4** Structural model parameter estimates and significant levels

	Std. $\beta$	SE	$p$	Hypotheses
Hypothesized relationships				
Non-mediated power $\rightarrow$ process-based practices	0.48	0.152	***	Supported
Non-mediated power $\rightarrow$ market-based practices	0.46	0.138	***	Supported
Mediated power $\rightarrow$ process-based practices	0.14	0.160	n.s.	Rejected
Mediated power $\rightarrow$ market-based practices	0.07	0.143	n.s.	Rejected
Process-based practices $\rightarrow$ performance	0.22	0.13	n.s.	Supported
Market-based practices $\rightarrow$ performance	0.52	0.157	***	Supported
Control variables				
Firm age $\rightarrow$ performance	0.096	0.014	n.s.	
Firm size $\rightarrow$ performance	-0.097	0.000	n.s.	
Manager knowledgeability $\rightarrow$ performance	-0.069	0.011	n.s.	
Variance explained ( $R^2$ )				
Process-based practices	0.34			
Market-based practices	0.26			
Performance	0.51			

$\chi^2/df$  (908/542) = 1.66; IFI = 0.92; TLI = 0.90; CFI = 0.92; RMSEA = 0.066

\*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ , all two-tailed tests

**Table 5** CFA with additional controls

	CR	AVE	MSV	ASV	1	2	3	4	5	6	7	8
1. Non-mediated power	0.92	0.86	0.34	0.22	0.93							
2. Mediated power	0.86	0.69	0.34	0.14	0.59	0.83						
3. Process-based practices	0.85	0.74	0.65	0.29	0.56	0.43	0.86					
4. Market-based practices	0.87	0.76	0.65	0.29	0.48	0.36	0.81	0.87				
5. Industry pressure	0.82	0.6	0.53	0.28	0.45	0.26	0.47	0.55	0.77			
6. Stakeholder pressure	0.86	0.68	0.53	0.22	0.43	0.22	0.43	0.4	0.73	0.82		
7. Regulatory pressure	0.78	0.55	0.42	0.16	0.18	0.42	0.31	0.36	0.65	0.46	0.74	
8. Performance	0.94	0.78	0.47	0.24	0.51	0.19	0.63	0.68	0.47	0.48	0.21	0.89

$\chi^2/df$  (1202/744) = 1.62; IFI = 0.91; TLI = 0.90; CFI = 0.91; RMSEA = 0.063

practices, further supporting the robustness and validity of our model.

## Discussion

### Power Use and Adoption of Socially Responsible Procurement Practices

Our study sought to understand how to persuade first-tier suppliers to diffuse socially responsible procurement practices with their suppliers most effectively. Power theory unanimously agrees that the use of non-mediated power relates to better relationship performance (Benton and Maloni 2005; Maloni and Benton 2000; Nyaga et al. 2013; Zhao et al. 2008): suppliers are likely to respond to the use of power only if it is in the form of knowledge,

expertise, or the desire to be like the buyer (Grienberger et al. 1997; Griffith et al. 2006; Hallen et al. 1991). We agree and find that non-mediated power has a positive impact on the adoption of process-based and market-based socially responsible procurement practices.

For process-based practices, non-mediated power may act as a signal to the first-tier supplier that the buyer will assist them and provide expertise and training when they adopt monitoring systems with their own suppliers (Maloni and Benton 2000). For example, Cora Kemperman, the Dutch clothing chain, provided sustainability assistance and encouragement to persuade suppliers to comply with SA8000, with some of its suppliers also achieving certification (Ciliberti et al. 2009). Some suppliers then use these process-based practices to attract other customers (Huq et al. 2014). When first-tier suppliers have a social monitoring and management system already in place, it may be

**Table 6** Structural model with alternative model explanation

	Std. $\beta$	SE	$p$	Hypotheses
Hypothesized relationships				
Non-mediated power $\rightarrow$ process-based practices	0.38	0.117	***	Supported
Non-mediated power $\rightarrow$ market-based practices	0.34	0.100	***	Supported
Mediated power $\rightarrow$ process-based practices	0.19	0.160	**	Rejected
Mediated power $\rightarrow$ market-based practices	0.08	0.097	n.s.	Rejected
Process-based practices $\rightarrow$ performance	0.18	0.127	n.s.	Supported
Market-based practices $\rightarrow$ performance	0.52	0.155	***	Supported
Additional controls				
Stakeholder pressure $\rightarrow$ process-based practices	0.194	0.099	**	
Stakeholder pressure $\rightarrow$ market-based practices	0.093	0.083	n.s.	
Industry pressure $\rightarrow$ process-based practices	0.192	0.105	**	
Industry pressure $\rightarrow$ market-based practices	0.38	0.095***		
Regulatory pressure $\rightarrow$ process-based practices	0.026	0.123	n.s.	
Regulatory pressure $\rightarrow$ market-based practices	0.072	0.105	n.s.	
Control variables				
Firm age $\rightarrow$ performance	0.086	0.011	n.s.	
Firm size $\rightarrow$ performance	-0.102	0.000	n.s.	
Manager knowledgeability $\rightarrow$ performance	-0.067	0.013	n.s.	
Variance explained ( $R^2$ )				
Process-based practices	0.26			
Market-based practices	0.28			
Performance	0.47			

\*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

that further expertise-sharing and example-setting by the buyer increases the supplier's willingness to implement more sophisticated process-based initiatives. If the supplier is more knowledgeable and has implemented sophisticated systems, it may be the effect of non-mediated power, increasing trust and commitment in the relationship (Kumar et al. 1995; Maloni and Benton 2000; Zhao et al. 2008), which drives the supplier to implement more complex practices.

Second, in line with previous bases of power findings, where the admiration for and expertise of the buyer positively reinforces relationship commitment (Maloni and Benton 2000; Zhao et al. 2008) and adapting to the buyer (Nyaga et al. 2013), we extend the theory by showing that non-mediated power encourages first-tier suppliers to adopt market-based initiatives such as public transparency and socially responsible new product development with suppliers. The apparel company Patagonia, for example, encourages suppliers, through value-driven leadership and advice, to implement socially responsible practices such as publicly disclosing social information and developing ecologically and socially sustainable products such as organic cotton (de Brito et al. 2008; Ethical Corporation 2016). Again, where the supplier is more sophisticated, non-mediated power use by the buyer may encourage the supplier to go even further with their social innovation.

Third, we are surprised that mediated power use has no impact on the adoption of process-based or market-based practices, as suggested by previous power (Nyaga et al. 2013; Zhao et al. 2008) and sustainable supply chain studies, either positively for process-based practices (Ayuso et al. 2013; Ciliberti et al. 2009; Zhu and Sarkis 2007) or negatively for market-based practices (Boyd et al. 2007; Perry and Towers 2013).

The finding that mediated power has no impact on process-based practice adoption could be for a range of contextual or methodological reasons. First, cultural differences may play a role, as these studies took place in Spain (Ayuso et al. 2013), Italy (Ciliberti et al. 2009), and China (Zhu and Sarkis 2007). Zhu and Sarkis (2007), for example, find a positive impact of coercive power on environmental sustainability practices in China. The difference in the national setting is important, as *guanxi*, an informal system of favors, even at an instrumental or transactional level, can drive the implementation of supply chain initiatives. Ayuso et al. (2013) explore environmental and social sustainability as one construct, while Zhu and Sarkis (2007) focus only on environmental sustainability. As environmental monitoring and management systems are more widely implemented, standardized, and enforced (Klassen and Vereecke 2012) they are more likely to be adopted.

Nevertheless, our findings concur with sustainable supply chain studies. Porteous et al. (2015) note that penalties (mediated power) have little impact on the adoption of environmental and social practices. Touboulie et al. (2014) find that dependent suppliers concede to buyer sustainability demands initially, but when coercion is used suppliers resist dominant buyers. One interpretation is that forcing first-tier suppliers to monitor their suppliers, which is morally questionable at best, may be a symptom of a badly designed, badly communicated, or 'greenwashed' (Van der Ploeg and Vanclay 2013) sustainability program, or could be seen as a surveillance or control tool (Mol 2015), which suppliers will not implement.

Finally, for market-based practices, the above is especially true. Not only has it been well documented that mediated power does not achieve relationship satisfaction or performance (Benton and Maloni 2005; Boyd et al. 2007; Frazier and Rody 1991), but also using coercion, force, or inducement, especially when driving initiatives that help people in supply chains, goes against the underlying logic of psychological and physical well-being at the heart of market-based socially responsible supply chain initiatives (Pfeffer 2010). Touboulie et al. (2014), for example, describe a food supply chain where a new sustainability technology was bought for, and distributed to, first-tier suppliers by a powerful buyer. However, the suppliers refused to adopt the technology, not only because of the mediated power of the buyer manifested through the adversarial practices and short-term contracts of the suppliers, but also because they had not been consulted about the new technology. It is clear that powerful parties have to abstain from their use of mediated power if they want to drive an innovative and progressive sustainability agenda.

### Socially Responsible Procurement Practices and Performance

Regarding whether it pays for first-tier suppliers to be socially responsible, our study shows that only market-based socially responsible procurement practices have a positive effect on first-tier supplier performance. Process-based practices have no effect. This both challenges and reinforces previous theory in the power and supply chain sustainability fields.

*Process-based practices*, which are focused on monitoring, health, and safety, and are a risk management tool for the buyer (Klassen and Vereecke 2012), are considered to negatively impact performance as a short-term cost (Pullman et al. 2009). Indeed, Boyd et al. (2007) propose that monitoring damages buyer-supplier relationships due to its inherently adversarial nature and, therefore, impacts performance. However, we disagree, and support Pullman

et al. (2009) and Hollos et al.'s (2012) finding that there is no direct link between process-based socially responsible procurement practices and performance. This could be due to the external nature of monitoring and management systems, which benefits the company changing its social practices, but not the company monitoring these changes or, as Pullman et al. (2009) conclude, there may be an indirect link between social programs and performance through increased quality.

That *market-based practices* positively impact the performance of the first-tier supplier contradicts findings in the power literature, but supports sustainable supply chain theory. Nyaga et al. (2013), in a study of a large multinational and its suppliers, find that when suppliers adapt processes and products for a large buyer these adaptations do not affect performance. Our study challenges this. Adapting to the buyer by introducing market-based socially responsible procurement practices enhances the performance of the supplier, although we have to keep in mind that smaller companies may not have the resources to implement these practices (Awaysheh and Klassen 2010), and to date there is no evidence that these schemes result in social sustainability improvements (Doorey 2011).

However, socially responsible procurement practices may bring financial results that other types of adaptation do not. When a company is engaged in innovative and strategic socially responsible practices that encourage the development of products and services that benefit workers in the supply chain, fair trade, and transparency of ethical data, and help communities surrounding the supply chain, it may signal the legitimacy of the company and reinforce the social contract it has with society (Kozlowski et al. 2015). Implementing innovative supply chain sustainability practices can result in new products and the opening of new markets for the supply chain (Nidumolu et al. 2009; Pagell and Wu 2009). Design changes to reduce societal impact that are below regulatory requirements have no benefits for companies. Innovative firms, which link sustainability practices to learning, reputation and their license to operate, benefit the most (Perry and Towers 2013).

These findings are interesting because the business case for investment in socially responsible procurement practices can be difficult to make, particularly in the short term, and may be seen as a drain on scarce resources. However, market-based socially responsible procurement practices are likely to lead to a range of intangible positive outcomes for companies, such as greater visibility in their operations; new markets; and better relationships with employees, suppliers; and stakeholders. It is only when companies are innovative in their implementation of social issues in their new products and processes and in the redefinition of their supply chains that these advantages will accrue.

## Conclusion

This study responds to the call for contributions to knowledge in several ways. First, it responds to the call for empirical studies demonstrating how socially responsible procurement practices are adopted (Ashby et al. 2012). Quantitative studies of the drivers and outcomes of social responsibility are rare (Ehrgott et al. 2011; Park-Poaps and Rees 2010), and this is the first study to use structural equation modeling in order to understand how bases of power impact the adoption of socially responsible procurement practices by first-tier suppliers.

Second, it responds to the call for research to examine how different types of power impact the diffusion of sustainability practices in the supply chain (Laari et al. 2016; Tate et al. 2013). We use bases of power theory to understand how different types of power impact the adoption of socially sustainable supply chain practices by first-tier suppliers with key second-tier suppliers. This contribution is unique in a number of ways. It adds to theory by introducing novel practices. Bases of power theory focus on the impact of power on the satisfaction or performance of one party in the relationship in terms of trust, commitment, and cooperation (Kumar et al. 1995; Maloni and Benton 2000). Our contribution not only is the unique context in which we use the theory but it also extends the theory, by showing that non-mediated power has a positive effect on the adoption of process- and market-based practices, while mediated power does not.

Lastly, this study contributes to supply chain sustainability theory in a number of ways. We examine socially responsible procurement practices rather than the environmentally responsible ones and also answer the question ‘Does it pay to be socially sustainable?’ Much supply chain sustainability theory has explored whether it pays to be green (Ağan et al. 2016; Grekova et al. 2016), with much less attention given to the performance outcomes of social responsibility (Carter and Easton 2011). This is a direct response to Ehrgott et al.’s (2011) call to investigate the effect of socially responsible procurement practices on the performance of the firm. We find that it does pay for suppliers to be socially sustainable, but only if they adopt market-based socially responsible procurement practices.

For practice, we show that managers have to be careful as to how they communicate and encourage suppliers to adopt socially responsible supply chain initiatives. It is clear that mediated power use has no effect on adoption. If firms use coercion, legitimacy, or reward to force or induce suppliers to implement practices, the likely result will be resistance and a waste of time and resources, as demonstrated by the food industry example given by Touboulic et al. (2014). However, if managers provide expertise, training, and knowledge or lead by example through sustainability values

and orientation, first-tier suppliers will be much more disposed to adopt or enhance their own socially responsible procurement practices [see the example of Cora Kemperman cited by Ciliberti et al. (2009)]. Furthermore, if the practices adopted actively benefit people and communities, not only will it encourage suppliers to embrace socially responsible initiatives, but suppliers will also perform better. This is good not only for supply chain employees and surrounding communities, but also for the competitive position and financial sustainability of the supplier. As other studies link coercive power with resistance and distrust (Boyd et al. 2007), managers should think twice before adopting this stance because of the negative signals it sends to suppliers, and because it is ineffective or, at worse, destructive to relationships, reputation, and sustainability.

The study has several ethical implications. Powerful companies that are brand leaders, in our view, have a moral duty to ensure that socially responsible practices towards people and communities are embedded throughout their supply chains: social benefits should be as important as economic benefits in order to drive a truly sustainable agenda. Companies that abuse their power and force suppliers to adopt socially responsible practices in their supply chains not only are acting unethically, but are doing so for no gain. Relying on expertise and values and acting ethically drives suppliers not only to monitor their supply chains for social good, but also to initiate innovative and strategic sustainability initiatives with their suppliers. It seems that influencing others through positive expertise and identification is not only more ethical, but also more effective in driving practice adoption. For companies that want to provide ethical leadership, market-based sustainability practice adoption leads to better competitive performance by first-tier suppliers. This means that innovative, strategic, and ethical supply chain practices make better business sense.

## Limitations and Future Research

This study is limited in a number of ways. First, this is a cross-sectional study at a single point in time and does not capture the dynamism of supply chain decision-making. Furthermore, this study is situated in Ireland and, although we include a large number of multinational organizations, the context may have an impact on the findings. This study could be enhanced by taking a wider European or global view. We collected data from only one source in the supply chain, who was aware of the downstream pressures to be socially sustainable and involved in the adoption of socially responsible procurement practices. Further, we focused on key direct customer and supplier relationships. Future studies should examine multiple parties in the companies and in the customer and supplier companies and

a range of supplier relationship types in order to verify and triangulate the perspectives of customers and suppliers.

Additionally, internal sustainability culture is an important driver of sustainability practice adoption in the supply chain (Fraj-Andrés et al. 2009; Marshall et al. (2015b)). Unfortunately, this study did not have space to explore the effect of internal sustainability culture on the adoption of supply chain practices: this would be an interesting avenue for further research.

Although our analysis did not demonstrate a cumulative effect of process- and market-based practices, the evolution of these types of practices could be explored in a further study. Using longitudinal cases or multiple time series surveys, research could explore if there is an interaction, how it occurs and its outcomes. Furthermore, NGOs, such as the Fair Labor Association and World Wildlife Fund, offer process-based services such as monitoring suppliers for labor issues as well as market-based services such as offering transparency advice in the supply chain and how to include multiple, non-traditional stakeholders in decision-making. Another interesting research opportunity would be to understand how NGOs' sustainability practices affect the companies' sustainability practices and outcomes.

Finally, this study only examined the financial performance outcomes of adopting socially responsible practices. A future research direction could be to investigate the different costs and benefits, in the short and long terms, of adopting socially responsible procurement practices. Furthermore, recent supply chain writers question the focus on financial performance and advise a wider exploration of

multiple performance types, and indeed question the primacy of economic performance over social or environmental performance. It is argued that in certain circumstances social and environmental factors should outweigh economic factors when synergy with economic performance cannot be obtained. For example, studies could investigate the trade-offs that occur between social and environmental sustainability performance and financial performance (Matthews et al. 2016; Pagell and Shevchenko 2014; Sancha et al. 2016a). Future research could explore how the adoption of socially responsible procurement practices impacts multiple types of performance and the synergistic or trade-off effects between these, for a more nuanced view.

**Acknowledgements** This study was funded by the Irish Research Council for Humanities and Social Sciences (IRCHSS).

#### Compliance with Ethical Standards

**Conflict of interest** The authors of the paper declare they have no conflict of interest.

**Ethical Approval** This study has been approved by our institution's ethics committee and has been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

**Informed Consent** All participants gave their informed consent prior to their inclusion in the study.

## Appendix

See Table 7.

**Table 7** Survey questions

Non-mediated power (adapted from Zhao et al. 2008)

When it comes to social supply chain sustainability...

#### Expert

- EX1 ...your key customer knew what they were doing (*dropped item*)
- EX2 ...you usually got good advice from your key customer
- EX3 ...they had specially trained people who really knew what to do
- EX4 ...their business expertise made them likely to suggest the proper thing to do

#### Referent

- RF1 ...you really admired the way your key customer ran their sustainability program so you tried to follow their lead
- RF2 ...you generally wanted to operate your sustainability program very similar to the way they did
- RF3 ...your company did what the customer wanted because you had very similar feelings about the way a sustainability program should be run

Mediated power (adapted from Zhao et al. 2008)

When it comes to social supply chain sustainability...

#### Coercive

- COE1 ...your key customers' people got back at you if you did not do as they asked (*dropped item*)
- COE2 ...they hinted that they would take actions that would reduce your profits if you did not go along with their sustainability requests
- COE3 ...they might have withdrawn business from you if you did not go along with their sustainability requests
- COE4 ...if your company did not agree to their sustainability suggestions, they would make things difficult for you

**Table 7** continued

Legitimate	
LEG1	...it was your duty to do as your key customer requested
LEG2	...you had an obligation to do what they wanted even if it wasn't part of the contract
LEG3	...while working with your customer, you accepted their sustainability recommendations ( <i>dropped item</i> )
LEG4	...your customer had the right to expect you to go along with their sustainability requests
Reward	
REW1	...if you did not do what your key customer asked, you did not receive good treatment from them
REW2	...you felt that by going along with their sustainability requests, you were favored on other occasions
REW3	...by going along with their sustainability requests you avoided some problems other companies faced ( <i>dropped item</i> )
REW4	...they offered rewards so that you went along with their sustainability wishes
Process-based socially responsible procurement practices [adapted from Marshall et al. (2015a)]	
Monitoring	
COE1	You monitored your key supplier's compliance with your health and safety requirements
SM2	You sent health and safety questionnaires to your key supplier in order to monitor their compliance
SM3	You monitored your key supplier's commitment to health and safety improvement goals
SM4	You conducted audits of the health and safety of their employees ( <i>dropped item</i> )
Management systems	
SMS1	You designed systems for work/family balance across the supply chain with your key supplier
SMS2	You introduced employee health and safety compliance and auditing systems with your key supplier
SMS3	You helped your key supplier obtain OHSAS 18001 certification, SA8000 or other management system certification
SMS4	You developed an ethical code of conduct system with your key supplier
Market-based socially responsible procurement practices [adapted from Marshall et al. (2015a)]	
Your company...	
Innovation	
SI1	...developed new product/processes with your key supplier that reduced health risks for consumers
SI2	...developed new product/processes with your key supplier that benefited workers throughout the supply chain
SI3	...developed new product/processes with your key supplier that reduced health and safety hazards for employees
SI4	...developed new product/processes with your key supplier that provided fair margins to all your suppliers ( <i>dropped item</i> )
Strategy	
SS1	...has changed its supply chain strategy to bring non-governmental organizations (NGOs) and community groups into the supply chain ( <i>dropped item</i> )
SS2	...has changed its supply chain strategy to minimize negative impacts on communities around your supply chain operations
SS3	...has changed its supply chain strategy to make social sustainability data (ethical code of conduct/impact on communities) throughout our supply chain available to the public
SS4	...has changed its supply chain strategy to focus on fair trade throughout the supply chain
Performance (adapted from Nahm et al. 2004)	
Social sustainability practices have resulted in...	
FO1	...sales growth
FO2	...increased return on investment
FO3	...market-based share gain
FO4	...better overall competitive position
Control variables	
Firm size	
REV	Please state your approximate annual sales revenue (Globally):
Firm age	
AGE	What year was the company founded?
Knowledgeability	
YRSCO	How many years have you worked in your company?

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