

From global to local: reshoring for sustainability

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Abstract The UK clothing industry has seen the extensive offshoring of manufacturing, which has created fragmented global supply chains; these present a range of supply issues and challenges, including many related to sustainability. Reshoring is a reversion of a previous offshoring decision, thereby ‘bringing manufacturing back home’ (Gray et al. *J Supply Chain Management* 49(2):27–33, 2013), and can be motivated by increased costs and supply management problems. While not a new phenomenon, the reshoring of activities is growing in practice and there is an imperative for academic research (Fratocchi et al. *J Purch Supply Manag* 20:54–59, 2014). Through an in-depth longitudinal case study, this paper explores how sustainability can be addressed through reshoring; the studied UK-based clothing SME has strong principles and is explicitly committed to bringing its supply chain ‘home’. There is a recognised need for more OM research using a social lens (Burgess and Singh *Oper Manag Res* 5:57–68, 2012), so Social Network Theory (SNT) is employed to examine the reshoring decision-making process. SNT applies a relational, qualitative approach to understand the interactions between network actors, and focuses on the types and strengths of relationships and how they provide context for decisions (Galaskiewicz *J Supply Chain Manag* 47(1):4–8, 2011). The findings demonstrate the importance of socially complex, long-term relationships in managing a sustainable supply network. These relationships contribute to the resources that a firm can harness in its supply practices, and SNT extends this with its emphasis on the strength of ties with suppliers, and the

trust, reciprocity and shared meanings it engenders. For the studied firm these advantages are derived through its localised supply chain, and collaborative supplier relationships, and its progressive reshoring of activities is integral to achieving its sustainability principles.

Keywords Offshoring · Reshoring · Nearshoring · Sustainability · Social network theory · Supply management

1 Introduction

Globalisation and economic trends have created highly complex supply chains across multiple industries (Varma et al. 2006), and there has been a tangible and significant shift to firms offshoring their production activities (Darnall et al. 2008). Reductions in quotas and trade barriers have enabled firms to offshore to predominantly developing countries where low labour and raw material costs have provided substantial savings (Tate et al. 2014), as well as access to resources, technology, skills and knowledge (Elia et al. 2014; Jahns et al. 2006, Lewin et al. 2009; Manning et al. 2008).

Sustainable practices, and ensuring supplier responsibility in complex supply chains are additional challenges when offshoring, but an increasingly important consideration (Gray et al. 2013). Proactively minimising environmental impacts and using materials and processes responsibly are value-adding activities (Preuss 2005a), and working closely with suppliers to ensure these goals are met and workers are treated ethically can benefit both the firm and its supply chain. Increased geographical distance can make it difficult to address environmental and social performance, and fully assess suppliers’ sustainability commitment (Gualandris et al. 2014); the achievement of sustainability goals is therefore challenged by the global spread of suppliers (Roberts 2003), and their

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management (Walker and Jones 2012). Supply Management (SM) represents a mechanism for coping with the complexity of global supply networks, and can be applied to managing suppliers' sustainability performance (Gualandris et al. 2014). SM emphasises the importance of long-term relationships with fewer selected suppliers to enable better coordination and sharing of information, skills and knowledge (Choi and Kim 2008).

The offshoring trend has been especially evident within the UK clothing industry, and due to its complex and global nature the industry is well-researched with regard to supply chains. However despite anecdotal evidence of increased reshoring by high street clothing retailers such as Marks & Spencer (Bounds and Powley 2015), there has been limited research into the drivers for this trend, and how and why firms decide to reshore. There is recognition in the nascent reshoring literature that researchers' task is to examine whether it is a new supply phenomenon and conduct research that contributes to the theory, and practice, of reshoring (Gray et al. 2013). By investigating the location decisions made by a UK clothing firm this paper aims to provide insights into the reshoring decision process and its impacts on sustainability performance.

The presented case study is an exemplar UK clothing SME with strong and explicit sustainability principles, which it aims to translate into its supply practices, products and relationships. When it was established it could only source materials and production from global suppliers, so offshored for resource access rather than lower cost labour. Driven by strong sustainability principles, it has however committed to bringing its supply network closer to home, partnering and collaborating with UK and European-based suppliers to enable more local provision of materials, production and skills.

The paper aims to understand why firms decide to reshore and the impact this has on their supplier relationships and sustainability performance. It is structured as follows: the next section reviews the key literature on offshoring and reshoring, and supply management and sustainability performance; this is developed into a research framework, which employs the over-arching lens of Social Network Theory (SNT). The research methodology is then presented followed by the findings and discussion, and the conclusion highlights implications for theory, practice and policy, recognising the study's limitations and opportunities for future research.

2 Literature review

2.1 Offshoring and reshoring

Offshoring is defined as the transfer of or choice to locate production, supply, R&D activities and/or services to a foreign location outside the firm's home country (Larsen et al. 2013; da Silveira 2014), and is a highly complex decision. The

offshoring of manufacturing processes increased significantly in the US, UK and Europe from the early 1990s to mid 2000s with key drivers being the low cost raw materials and labour available from developing countries (Tate et al. 2014). While offshoring decisions should not be based solely on price (Kinkel 2009), a dominant perception is that a firm's primary objective for offshoring is to reduce production costs by targeting low-wage sourcing locations (Larsen et al. 2013).

Reshoring is a reversion of a previous offshoring decision thereby 'bringing manufacturing back home', where the activity is returned to the home country or is nearshored i.e. brought in closer proximity to the focal firm (Gray et al. 2013). The reversal of offshoring decisions is not a new phenomenon, but reshoring is increasingly reported in the relevant press and the imperative for academic research is recognised (Fratocchi et al. 2014). While there is industry evidence of a growing reshoring trend (Arlbjorn and Mikkelsen 2014) it is largely anecdotal and poorly developed as a research area; there is therefore a key need to understand the motivations and implications of bringing processes 'back home' or in closer proximity (Kinkel 2009).

Figure 1 presents 4 recognised forms of reshoring; in-house reshoring is the return of wholly-owned offshored activities to wholly-owned local activities, reshoring for outsourcing the return of wholly-owned offshored activities to local suppliers, and reshoring for insourcing the move from offshore suppliers to wholly-owned home-based facilities (Gray et al. 2013). The outsourced reshoring decision forms this paper's focus and is where a firm fulfils local market demand by relocating activities previously performed by offshore suppliers to the home location. While factors such as increases in labour costs can make the reshoring decision straightforward and rational, a decision based on changes in the firm's valuation of the true cost of offshoring (Gylling et al. 2015), rather than producing locally offers greater potential for understanding the path from offshore to reshore. A key interest of this paper is how a growing emphasis on sustainability performance impacts the reshoring decision, and extends to gaining a better understanding of the strategic imperative of local manufacturing (Kinkel 2014).

There are tangible benefits associated with offshoring, as summarised in Table 1, and the objective of cost reduction contributes to the economic category of offshoring drivers, which includes the factors of wage differentials, interest rates, tax rates and energy costs, and currency changes (Gray et al. 2013; Jahns et al. 2006). The other categories of drivers are political-legal e.g. trade barriers, tariffs and quotas, which facilitate offshoring and foreign market access, socio-demographic e.g. the availability of skilled, motivated and educated human resources, and technological through the development of telecommunications and transportation technologies (Jahns et al. 2006). Access to specific resources, talented, qualified labour, and technology (Elia et al. 2014, Lewin et al. 2009; Manning et al. 2008) provides opportunities to

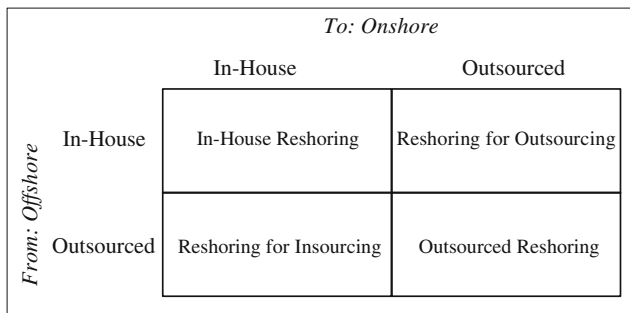


Fig. 1 Reshoring Options (Gray et al. 2013)

improve a firm’s organisational system (Larsen et al. 2013), and the acquisition of specialised knowledge can contribute to firm innovation (Maskell et al. 2007). Focusing on core competences can facilitate the removal of fixed costs for non-core functions such as warehousing (Varma et al. 2006), but there is evidence of the offshoring of core and mission-critical activities (Slepniov et al. 2010).

Key disadvantages as presented in Table 1 include the loss of skills, expertise and core competences, and increased supply chain length and complexity. (Gray et al. 2013). The process of offshoring has been so intense in certain industries that some manufacturing stages and skills have almost disappeared in the ‘home’ countries (Martinez-Mora and Merino 2014). Extensive offshoring can result in the loss of tacit knowledge, reduced innovation through physical and often cultural distance (Caniato et al. 2013), longer, more complex supply chains, long leadtimes and limited flexibility (Tate et al. 2014); geographical distances increase transportation costs, but also complicate decisions around inventory due to the longer leadtimes (Cagliano et al. 2008). It can hamper operational efficiency and make agreements difficult due to lack of trust (Caniato et al. 2013), there can be a lack of understanding, communication and face-face interaction together with cultural and language difference (Caniato et al. 2013; Larsen et al. 2013).

Some of the more negative impacts related to offshoring relate to sustainability; offshoring has environmental and

social implications due to lack of supply chain visibility and differences in country practices and standards. The growth of global supply chains and globalisation is an on-going process, but focal firms are increasingly trying to address the social and environmental aspects of their operations, and attention needs to be paid to political and cultural difference when managing the supply chain (van Bommel 2011). There are indications that the decision to reshore may increasingly result from a greater emphasis on sustainability, with closer proximity to the home company enabling better control over the environmental impact of manufacturing processes and reduced environmental impact due to reduced transport, together with improved visibility of working practices and ethical behaviour (Gray et al. 2013).

The decision to undertake outsourced reshoring and work with local rather than global suppliers can be cost-related, and a response to specific supply problems (Johnston 2012). Overseas destinations for low cost offshoring are experiencing increased pressure for wealth and welfare, which translates into higher salaries and a closing of the wage gap between developed (western) and developing (eastern) countries (Arlbjorn and Mikkelsen 2014); increased labour costs together with high oil prices, increased transport costs and global supply risk make reshoring to local suppliers more economically viable (Tate 2014). Supply-related drivers for outsourced reshoring reflect the issues that can occur from offshoring and managing a global supply network; they include delays and a lack of flexibility, which can prevent market and supply responsiveness, (Fratocchi et al. 2014), and limited visibility and control of suppliers’ activities and behaviours (Caniato et al. 2013), including those relating to sustainability.

By definition global supply chains cannot be as fast and seamless as local supply (Caniato et al. 2013), so reshoring can improve speed, flexibility and simplicity to enable a leaner, more responsive supply chain (Johnston 2012). Additional potential benefits include greater supply chain visibility, the opportunity to contribute to the local economy, and an increased response to sustainability issues (Tate et al.

Table 1 Key benefits and disadvantages of offshoring

Benefits	Disadvantages
Low cost materials	Supply chain complexity & loss of control
Low cost labour	Visibility of processes & practices
Access to qualified labour	Quality of materials & production
Access to resources, knowledge & expertise	Loss of skills/manufacturing in ‘home’ country
Focus on core competences	Loss of core competences
Access to new/broader markets	Geographic distance, longer leadtimes and delays
Beneficial trading conditions	Quality of communication/cultural differences
Organisational flexibility	Increased inventory
Access to technology	Environmental & social standards

2014). However while it may be increasingly cost effective the reshoring of previously offshored activities presents certain challenges. The loss of control over processes and activities that can result from offshoring can make such decisions irreversible (Dekkers 2010), and even if outsourced reshoring is feasible there could be issues with the availability of suppliers in the home location with the required skilled labour and expertise; offshoring has been so intense that some manufacturing stages have almost disappeared in developed countries (Martinez-Mora and Merino 2014).

A range of factors, mostly firm and industry-specific are underexplored in reshoring research (Fratocchi et al. 2014); firm size and the nature of its industry are highly relevant, and there is an assumption in the current anecdotal evidence that it is primarily larger MNCs that are reshoring (Arlbjorn and Mikkelsen 2014). The challenge of reshoring to restore competences that were previously offshored (Kinkel 2014), and responding to the loss of tangible and tacit skills in the home country needs to be explored. In addition examining the strength of ties (Kinkel 2009) can offer important insights for understanding how supplier relationships contribute to the reshoring decision and its outcomes, including the impact on sustainability performance.

2.2 Supply management

The growth in offshoring reflects a tangible shift from vertical integration and its perceived benefits – economies of scale, access to capital etc. – to highly complex, global supply chains where each company specialises in a specific process or stage of production (Samaranayake 2005). As a result SM has become increasingly important as a mechanism to coordinate suppliers (Soderberg and Bengtsson 2010), and overcome some of the challenges of offshoring (Caniato et al. 2013). Effective management requires the integration of information and material flow through its different stages and strong supplier relationships (Kauffman 2002; Samaranayake 2005); issues such as a lack of common understanding, lack of control and differing approaches can be resolved through more informal governance systems (Burgess and Singh 2012).

Research to understand global supply is progressively moving away from conventional economical and technological mechanisms towards more relational, inter-organisational approaches (Pilbeam et al. 2012), which focus on the relation between actors in a supply network and how they cooperate, stimulate and influence each other (van Bommel 2011). In SM the focal firm engages in activities to coordinate suppliers and empower them, and relies on close involvement through long-term relationships, information sharing and coordination (Gualandris et al. 2014). Transactional relationships focus on increasing the number of suppliers or frequently switching suppliers to economise costs, whereas relational approaches

focus on the sharing of information (Power 2005; Preuss 2005b). Cooperation is considered the threshold level where firms exchange some essential information and engage some suppliers in long-term relationships, while in coordination workflow and information is exchanged to allow more seamless linkages between suppliers. Collaboration represents the optimum level when focal firm and suppliers work together to plan and execute operations with greater success than if they acted in isolation (Nyaga et al. 2010).

Trust is an essential element of inter-organisational relationships (Simpson and Power 2005), and critical to understanding effective working in supply networks (Pilbeam et al. 2012). Individual relationships and close-knit social relations (van Bommel 2011) can reduce transaction costs and nurture trust and informal networks, which in turn enable the flow of information (Samaranayake 2005), and overcome the decision-making uncertainty that can result from offshoring (Primo 2010). Trust-based relationships can also improve the efficiency of production activities (Gereffi and Lee 2016), and facilitate supplier development, integration and coordination (Caniato et al. 2013); trust and commitment has a strong link to collaboration, and commitment indicates a desire to maintain a valued relationship (Primo 2010).

Effective SM is driven by the mechanisms used to coordinate the behaviour of suppliers, and provide a foundation for trust and commitment (Narasimhan et al. 2008). Relational governance is important to developing and managing good supplier relationships and plays a role in economic and social upgrading within the supply network (Gereffi and Lee 2016). The literature suggests that informal rather than formal governance instruments are more successful; informal instruments relate to governance that is embedded in social structure, social norms, value systems, culture, and sharing information beyond what is formally required (Pilbeam et al. 2012). The greater emphasis on social factors and inter-personal relationships provides better governance relationships than contractual arrangements and can result in increased supplier collaboration (Burgess and Singh 2012).

As indicated in Table 1 there are many cost and resource-based advantages in offshoring, but the physical and cultural distances between the firm and its suppliers can make it challenging to develop the levels of communication and trustful, informal and long-term relationships advocated by the SM literature (Bernardes 2010). Reshoring or nearshoring reduces these distances, offering the potential for improved communication and supplier visibility. This raises the question as to whether the reshoring trend is a rational response to increasing offshoring costs (Gray et al. 2013) or a more nuanced reaction to the difficulties associated with managing offshore suppliers, with closer proximity potentially enabling better supplier management; this could extend to the sustainability performance of suppliers.

2.2.1 Supply Management for Sustainability

Every product generated, transported, used and discarded within a supply chain has some impact on the environment, and is a function of the material and energy consumed, and wastes released in its lifecycle (Tsoufas and Pappis 2006). Organisations appear to be increasingly committed to more sustainable behaviour, although there are indications of non-engagement, opportunistic behaviour and ‘greenwashing’ (Baumgartner and Ebner 2010). For firms that systematically manage their impacts there are 3 recognised strategies: reactive, ‘end of pipe’ pollution control; proactive where firms recycle and re-use products/materials within their supply chains and aim to pre-empt new legislation; and value-seeking where environmental behaviour is integrated into the business strategy with a supply network-wide responsibility (Preuss 2005a). Internal responses include Environmental Management Systems (EMS), use of certification and Design for the Environment (DfE), which considers performance over the full lifecycle, to include recycling (Field and Sroufe 2007; Mascle and Zhao 2008); external responses focus on supplier development, evaluation, integration, and collaboration to address environmental and social impacts and develop mutually beneficial responses (Gualandris et al. 2014). This extends to how suppliers are treated, their work environment and rights; social equity requires that all members of society have equal access to resources and opportunities (Bansal 2005), extending to the fair, ethical and equitable treatment of employees. It is concerned with poverty, injustice and human rights, and from an SM perspective considers the welfare of all employees globally (Krause et al. 2009).

Addressing sustainability performance should involve co-operation throughout the entire supply network (van Bommel 2011), but the global spread of suppliers and inadequate supplier management can prevent sustainability goals being met (Gualandris et al. 2014). Trust and strong, durable relationships with a smaller number of suppliers can contribute to superior performance (Narasimhan et al. 2008) and SM’s integrated approach is intended to take the potential environmental and social side effects of offshoring into account (van Bommel 2011). It can therefore positively contribute to sustainability performance by focusing on win-win solutions through mutually beneficial relationships with suppliers (Burgess and Singh 2012).

2.3 The research framework

Network and social-based theories have a strong relevance to understanding the relational components of supply networks (Pilbeam et al. 2012); the application of theories such as social capital are only receiving recent attention, so there is a recognised need for more OM research using a social lens (Burgess and Singh 2012). Social Network Theory (SNT)

explicitly applies a relational, more qualitative approach to understand the interactions between network actors. It focuses on the types and strengths of relationships and how they provide context for decision-making (Galaskiewicz 2011); the strength of ties between actors is best represented by intangible relationships (Autry and Griffiths 2008), and are important in building trust, which facilitates the information exchange and coordination needed in SM (Galaskiewicz 2011). The structural component of SNT applies to how firms and suppliers are connected and what interactions occur in terms of information, materials, components etc., while the relational component focuses explicitly on the social interactions and their outcomes (Galaskiewicz 2011). It represents a powerful tool for analysing the content, pattern and connections of relationships in a network (Choi and Kim 2008), and the relational outcomes of SNT can strongly inform SM practice through a focus on trust, informal relational governance and socially constructed meanings.

Figure 2 presents the research framework that will be applied to answer the following research questions:

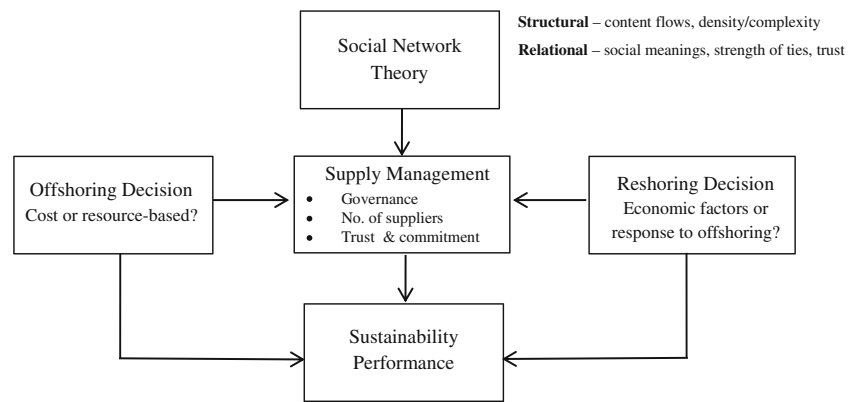
RQ1. Why do firms decide to reshore, and what are the challenges and benefits?

RQ2. Does a local supply chain enable better supply management, and what impact does this have on sustainability performance?

The framework consolidates the key concepts presented in the literature review, namely the motivations for offshoring and reshoring decisions, and how these decisions in conjunction with SM contribute to the sustainability performance of the firm and its supply network. SNT provides the overarching lens for the framework, with its structural and relational components informing the considerations and practice of SM. The decision to offshore or reshore then has implications both for the form of SM undertaken and the supply chain’s sustainability performance.

3 Research methodology

The offshoring trend has been especially evident within the UK clothing industry; it has seen the relocation of most if not all production to overseas suppliers (Bergvall-Forsberg and Towers 2007), which has resulted in a significant loss of UK skills and manufacturing (DEFRA 2011). Clothing supply chains are heavily buyer-driven and low unit cost is a major driver; focal firms typically govern how the supplier relationships work (Gereffi and Lee 2016), and can use their buying power to demand lower prices. The UK clothing industry has benefitted from the lower costs associated with overseas suppliers (Dekkers 2010) as well as improved access to resources, but has also experienced some significant problems as a result

Fig. 2 The research framework

of offshoring, including those related to environmental and social performance (Tate et al. 2014). Key environmental issues in the industry relate to availability and responsible use of resources, and the amount and extent of waste and pollution generated by production processes. Increased purchase frequency and reductions in pricing (Birtwistle and Moore 2007) have also created a ‘throwaway’ attitude, which has increased the rate of garment disposal (Allwood et al. 2006). From a social perspective key considerations are workers’ rights, working conditions and child labour (Forman et al. 2004), with the collapse of garment factories in Bangladesh a powerful illustration of how rights can be abused. This extends to impacts on societal capital, which benefits individuals and their communities through education, health and welfare, and social development (Dyllick and Hockerts 2002).

The reshoring of previously offshored processes can enable greater supplier control and more visibility (Caputo and Palumbo 2006); the decision to reshore potentially reflects the UK clothing industry’s response to offshoring issues, as well as economic factors with the progressive increase in overseas suppliers’ pricing (Gylling et al. 2015). As an industry that has been heavily researched in relation to offshoring and supply management it has an important contribution to make to the developing reshoring research field. It is acknowledged that given its early research stage case studies are required to enable a rich understanding of the context and drivers of the reshoring trend (Seuring 2008); an in-depth qualitative case study is deeply embedded in rich empirical descriptions of a dynamic and evolving phenomenon, and addresses ‘how’ and ‘why’ questions (Eisenhardt and Graebner 2007). Case research enables new and creative insights and offers high validity with practitioners (Karlsson 2009); case studies can explain real-life phenomena that are too complex for other approaches and the strategy provides powerful tools for capturing both the hard and soft elements of an organisation (Voss et al. 2002).

The presented case study represents one of a series within a larger research project on sustainability performance in UK clothing SMEs; it forms the focus of this paper as it is a sustainability exemplar within its industry and offers significant insight into the decision to reshore a specific set of production activities to the UK as a means to address strong principles. A single case study enables a detailed and highly focused investigation into a specific phenomenon (Eisenhardt and Graebner 2007), and given the paper’s focus on SM and relational governance it was important to observe the supply decision-making process and the development of supplier relationships over time. There is a dearth of longitudinal studies in the supply network literature, which typically looks at networks at a point in time rather than as a dynamic cycle (Pilbeam et al. 2012). There is also recognition that the roles and responsibilities of suppliers will change over time and as relationships evolve (Slepnirov et al. 2010). The challenges of longitudinal study are potential changes in respondents and data, especially if conducted over a long time period, and even the closure of the firm during the study (Cagliano et al. 2008).

Six site visits were conducted over a 12-month period and an on-site interview was also conducted with a key UK supplier (see Appendix 1 for the structure of visits and interviewees). The questions were adapted in response to any new or interesting facets that arose during the interview process (Reuter et al. 2010). All interviews were conducted at the firm’s premises, and field notes recorded during each visit; supporting data including Company Accounts, marketing material and policies was acquired, and together with field notes and transcripts formed a clear narrative for the case (Yin 2009). Qualitative data is full, earthy, holistic and real, but because the context is part of the study there will always be many variables and a high volume of rich data (Yin 2009). Cross interview analysis allowed common patterns to be identified, and a coding system was

implemented to relate content to specific themes, with supporting information used to verify, triangulate and enhance the analysis (Karlsson 2009). See Appendix 2 for the themes that resulted from the analysis.

The case study is a surfing lifestyle brand based in the South West of the UK. It stands for 3 points of commitment – People, Product, Planet - and produces a select range of technical clothes from recycled and natural fibres. The company ethos is a desire to make the best technical apparel with minimal environmental impact, and it will not make products that cause more of a problem than they solve. The firm has a distinctive brand identity that aligns with its principles, and a loyal customer base; it aims to tell a story and ‘hopes that our honesty comes out in our marketing and people will learn to trust that’ (Owner).

The company information presented in Table 2 illustrates how the firm has grown in size and turnover since the owner established it in 2005, with just 1 employee and 1 product. It was originally a home-based business, moving to its current premises in 2009, and has always kept all design, marketing and customer-related activities in-house. It measures its performance on the quality, durability and longevity of its core products, and meeting the specific technical needs of its customer base; while design and aesthetics contribute to the brand’s strong identity product performance is the key order winner.

4 Findings

4.1 The supply location decision

Key questions researchers need to ask in relation to reshoring are why, when and where was the activity offshored and what is the starting point for the reshoring decision (Fratocchi

et al. 2014)? The studied firm is in full control of the design function, which enables them to develop products which are durable, repeatedly usable, harmlessly recoverable and environmentally compatible in disposal (Tsoufias and Pappis 2006). This translates into sourcing materials derived from recycled, animal-friendly, or easily renewable origins. The quality and performance of Merino wool is key to the core product, but this specific raw material can only be sourced from New Zealand or Australia, and strict controls mean the fibre cannot enter European seas until it has been cleaned. This means that it has to be transported to China for cleaning, before it can be transported elsewhere for processing, weaving and manufacturing. Having committed to using Merino wool this specific aspect of supply was largely out of its control. The firm produces its waterproof outerwear from recycled polyester, and initially sourced this material from the leading industry supplier in Japan, which innovated the technology that enables polyester garments, materials or components to be recycled into fibre. When the studied firm was established this was the only supplier in the market, so again the choice of supply location was initially constrained.

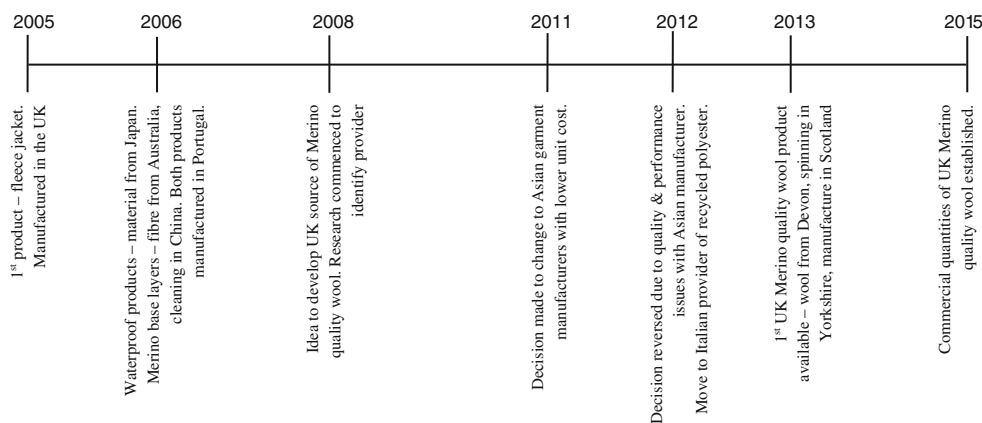
In contrast to the clothing industry’s primary focus on the cost benefits of offshoring, the studied firm’s decision to offshore its raw material supply and processing overseas was driven, and in part constrained by specific resource and expertise availability. The same factors governed their choice of garment manufacturers, but the necessary expertise was in closer proximity. Figure 3 illustrates the firm’s key location decisions in relation to its core products and indicates how the supplier relationships have evolved over the timeline, including a temporary change of manufacturers, and their recent initiatives to enable material production to be reshored to the UK.

As indicated in Fig. 3 the firm decided to move its garment manufacture to an overseas provider with lower unit costs as a means to increase their product margin, despite their well-established relationship with the manufacturer in Portugal. This is reflective of a cost-based rather than the resource-based offshoring decisions the firm had made previously (Larsen et al. 2013), and the owner admitted it was an inappropriate decision as they encountered quality and performance issues that threatened the brand’s integrity.

‘I think previously we were all about quality and then the financial pressures put the focus more on margins and that has now lead us back to being more about quality... We had the brand and the product and the commerciality behind the brand and the product and we’ve still got that, but are going back to the brand as how it started’ (Owner)

Table 2 Key company information

Established	2005
Turnover 2011/12	£668,000
Turnover 2014/15	£1.48 M
No. of Employees 2015	30
Accreditation	Global Organic Textile Standard (GOTS)
Sales Mechanisms	Independent retailers, own retail outlets, online sales
Supplier Locations	Australia, China, Japan, Portugal, Italy, UK
Core Products	Knitted base layers, waterproofs, insulation
In-house activities	Product design, marketing, warehousing & despatch, customer service, product repair

Fig. 3 Timeline of key supply decisions and activities

This serves to illustrate a key issue acknowledged within the reviewed offshoring literature, namely that a short-term focus on cost saving and profit maximisation (Barthelemy 2003) through switching to cheaper suppliers in developing countries can have tangible impacts on product, quality and service, but also affects the more intangible dimensions of firm reputation and trust. The studied firm reverted back to its original garment manufacturers in Portugal after one season and their previous strong relationship enabled this; they now firmly state that they ‘won’t jump ship each season to save a few pennies’ (Owner).

The firm’s decision to reshore key supply activities commenced in 2008 when they committed to developing fully UK-produced wool products, with the long-term aim to remove the Australian and China supplier from their supply network. This commitment to more localised supply has also resulted in a new relationship with a European supplier of recycled polyester fibre; this decision was not possible until the market had developed sufficiently to offer alternatives to the industry leading supplier in Japan. Together with the reshoring of wool production to the UK this move makes the supply network simpler and with fewer suppliers, as well as more visible and controllable.

4.1.1 Local not global

An emergent and distinctive theme was of the firm developing a new supply chain as a result of their specific principles. The desire for their supply to be closer to home and to their ‘recipe’ resulted in a unique partnership with a Devon-based farmer to reintroduce sheep that could produce Merino quality wool. The firm developed the idea, and undertook extensive research to identify the only UK farmer who had the industry connections, knowledge and expertise, which could combine with the firm’s technical and design skills to initiate the project; consequently they embarked on a *very* long-term collaborative partnership. The farmer located the only remaining breed of sheep in the UK that could produce the required high quality of wool, and as there were only 28 sheep left in the UK

developed a breeding programme to establish production-level numbers for the firm. A small number of wool accessories were available early 2013, but it took a further 2 years to reach a commercial level of production, and the project is ongoing. For the Design Manager it enabled him ‘to work from the earth to the shelf within a circle and that presents a very manageable information chain that allows us to talk about every point of process and that ability to engage at every step’. The farmer recognises that localising supply creates a sense of community and connection, and these values can be harnessed to develop something new and commercial that also aligns with nature. While unit prices may be higher when issues that can arise from the long distance supplier relationship, such as delays and communication (Fratocchi et al. 2014), and additional costs such as transport are factored in it can be cheaper to reshore production to the UK. There is also the opportunity to tell the UK-manufactured story, which can represent a competitive advantage arising out of collaborative supplier relationships.

A further theme associated with developing a new supply chain was the recognition that there is still a strong ‘textile brotherhood’ in the UK that can be harnessed to enable the reshoring of this aspect of its garment production. Having established the wool project the firm subsequently worked with spinners in Yorkshire and manufacturers in Scotland to ensure that the whole product chain could be UK-based. This aligned with the emerging theme of preservation and posterity; by establishing or maintaining local supply industry skills could be preserved or developed in new directions. It implies recognition that the progressive offshoring of production has eroded the UK textile industry and its skills, and firms can reverse this trend through a commitment to local business and community. The production of high quality wool was always possible within the UK, which historically has had a strong wool industry (McGregor 2015); however the growth in offshoring has caused the industry to decline significantly, with the loss of breeds relevant to the production of high quality wool-based

clothing products. Reshoring this activity therefore represents a significant challenge, requiring the sourcing of the required skills and developing a sufficient quantity of the correct quality breeds; the case study clearly emphasises the commitment and expertise needed, but also demonstrates that it can be achieved.

4.2 Supply management

The studied firm has always had a local rather than global mentality, and activities were offshored out of necessity, due a lack of availability of materials and specific skills in the home country. They are progressively moving towards local sourcing of raw materials, and the nearshoring of manufacturing within the UK and Europe rather than Japan, Australia and China. The Japan supplier was originally the only one who could provide recycled polyester, while Merino wool can only be sourced from Australia and New Zealand and processed in China. The relationships with these 3 suppliers have been formal in their governance; they are all large, established and highly commercial suppliers. The studied firm has contracts in place, and an appropriate level of information is shared, but as site visits are infrequent visibility of the supply tiers is limited, and there is no joint investment or collaboration. There is therefore limited opportunity for shared R&D, and the studied firm is considered a customer rather than a partner.

The closer proximity of suppliers in the UK, Italy and Portugal enables more regular visits, but they are also similar in size to the studied firm, most are family-run, and there is a greater reliance on informal forms of governance, and even friendships, particularly with the more recently established UK-based suppliers. The firm has always recognised the importance of good relationships, and while this has been more difficult to achieve with the larger suppliers in Japan, Australia and China, they have always worked with suppliers in Portugal for garment manufacture, due to the availability of the necessary skills and their proximity. They consider honesty and trust key to the quality of these supplier relationships; 'It's not a case of relying on them, but trusting them. It's about having really good relationships... that there's transparency and we understand what is required from each other' (Supply Chain Manager). The long-term perspective that the firm applies brings additional benefits with suppliers willing to accept lower profits because they trust and believe in the firm's principles. The shared commitment is also evidenced in supplier flexibility with a desire to solve problems. 'I know they haven't made any money on a certain product because of the amount of development and delivery costs... they

don't whinge about it because they see it as a long-term relationship' (Owner).

This emphasises the role of trust and reciprocity, and illustrates the strategic benefits of coordinated/collaborative relationships (Attaran and Attaran 2007; Bordonaba-Juste 2009). SNT recognises the need for strong ties and shared understandings with supply network actors, which can be achieved through friendship and reciprocity (Autry and Griffiths 2008), and it informs how this can translate into SM practice. The firm's close relationships with its reshored/nearshored suppliers support extensive sharing of information and joint R&D of materials, processes and products. The harnessing of the tacit skills and expertise of its supply partners and the resulting shared learning creates a 'distinctive visibility' and sustainable competitive advantage (Barney 2012); the innovative Merino wool project has created a difficult to replicate product that was unachievable through the more formal, commercial relationship with their Australian supplier, and there is also the opportunity to promote a 'local' story. The firm is working towards a smaller number of suppliers and the creation of a unique supply chain where they reduce or localise processes for every product and 'don't add stuff for no reason'.

4.3 Sustainability principles and performance

Coming from a marine science and surfing background the firm owner has emotional connections to the natural environment and these inform the principles that apply to the firm's supply chain practices; the firm was explicitly established on the principles of People, Product and Planet and these commitments permeate their supply decisions and practice. Their principles inform the commitment to developing local rather than global supply, as a mechanism to support UK/European producers, as well as their local community, and to fully manage and minimise their environmental impacts. For the Planet the firm is committed to responsibly sourced fabrics and factories, and chooses and develops raw materials and proprietary performance fabrics that are natural and biodegradable, such as wool, or have a reduced environmental impact, such as recycled polyester. These decisions and practices create a Product that is innovative and built to last, and reflects the importance of joint R&D and supplier collaboration in meeting these goals.

The firm is explicitly committed to the local area, supporting charities such as Surfers Against Sewage (SAS), which align strongly with their brand and People principles, and the owner intends for the business to always remain where it was established. The firm's first product was made in the South West and still is, which reflects a strong, on-going commitment

to developing local supply as well as a new industry; ‘we’re always looking to bring things back to the UK and keep it more local, more transparent... that’s all part of the reason why it started’ (Owner). The drivers for a local supply network have been there from Day 1, and are personal to the owner, but the nature of the market and resource/skills availability in 2005 required the firm to offshore key activities, which it is now seeking to reshore or nearshore. Their commitment to People relates to making a positive difference to its local community and economy, and the UK clothing industry as a whole, and they want relationships with people they believe in; this is reflected in their working with other SMEs and family-run businesses in preference to large, global suppliers. They also aim to work with suppliers that share their principles and sustainability commitments, as this makes it easier to make and implement the right People, Product and Planet decisions.

There is strong recognition in the literature that offshoring can erode an organisation’s tacit skills, knowledge and core competences (Tate et al. 2014); the firm’s explicit decision to have greater control and visibility of its supply network through reshoring/nearshoring its production activities represents a mechanism to address this. The case study suggests that bringing a supply chain back home/in close proximity can enable an organisation to more fully harness the resources, skills and innovation that it and its suppliers possess. Given the issues of supplier visibility associated with offshoring, it could be argued that working with closer proximity suppliers offers a simpler, more controllable response to sustainability performance, but as the case study illustrates it takes time, consideration and commitment to reshore successfully.

5 Discussion

This paper has provided a unique insight into the offshoring decisions of an exemplar UK clothing firm, its decision to progressively reshore these activities, and the innovative collaborations it engaged in to make a local supply network possible. It has effectively created a new industry, reintroducing materials, manufacturing and skills that had disappeared through the extensive offshoring experienced within the UK clothing industry (Allwood et al. 2006). The case has value in investigating the drivers for reshoring, the impact on SM and sustainability performance, but also the role that a reshoring strategy can play in reinvigorating industry in the home country, and the advantages that can be derived through collaborative supply relationships.

RQ1. Why do firms decide to reshore, and what are the challenges and benefits?

The reviewed literature indicated that firms offshore to global suppliers for cost-based reasons i.e. lower labour/raw material cost, beneficial trading conditions, and resource-based reasons i.e. access to skills, expertise and technology, while reshoring can be driven by progressive increases in costs, a need to reduce global supply risk and a response to supply issues (Johnston 2012). For the studied firm its offshoring decisions were primarily resource-based, and for specific products the decision was constrained by resource availability. The owner has always had a local rather than global mentality, so the decision to reshore and create a unique and ‘local’ supply network was a long-term strategy. Its implementation was not explicitly in response to supply issues or increased costs, but rather the opportunity to nearshore more materials, such as recycled polyester as the market developed, and the development of strategic and personal relationships with UK suppliers with the skills, expertise, passion and commitment to reshore an entire product chain.

The challenges experienced by the firm are largely those that necessitated the offshoring of its raw material production and processing i.e. a lack of UK or European-based resources and skills. They had been depleted by the extensive offshoring of clothing production post quota removal and suppliers either did not exist or could not offer the required commercial levels of materials. Development of the recycled polyester market created new and closer suppliers, but took several years, and the firm itself undertook the necessary and extensive research to initiate the process and develop a viable commercial source for UK Merino quality wool. While time-consuming this gradual reshoring has given the firm full visibility of its supply network, increased responsiveness, increased supplier commitment and involvement, and a sustainable competitive advantage through the unique way it harnesses the skills and resources of its local supply network together with the opportunity to market and promote the Made in the UK story and heritage.

RQ2. Does a local supply chain enable better supply management, and what impact does this have on sustainability performance?

When first established there were limited choices of supplier for the specific technical requirements of the firm’s products; all were large global suppliers based primarily in developed countries, and this created a long distance, multi-tiered supply network. Relational governance was formal due

to the commercial size of the suppliers, and there was limited opportunity for joint R&D, face-face communication and full supply visibility; network ties were relatively weak as a result. The firm nearshored its manufacturing to European suppliers, as the required skills and resources were available, and it has maintained the relationships with these smaller and family-run firms for over 10 years. The collaborative project to develop a fully UK-based product chain has taken over 7 years and has relied on strong ties, highly coordinated SM and joint commitment; for the firm owner local supply provides the required simplicity, through fewer and closer suppliers, and level of control to achieve its environmental and social goals.

SNT emphasises the strength of ties between the firm and its suppliers, and the trust, reciprocity and shared meanings it engenders (Galaskiewicz 2011), and this in turn informs SM practice. The findings demonstrate the importance of more informal governance, and socially complex, long-term relationships in developing and managing a sustainable supply network. These more personal relationships contribute to the tangible and intangible resources that a firm can harness in its supply practices, resources that can provide a sustainable strategic advantage. For the studied firm these advantages are derived through its localised supply chain, and long-term collaborative supplier relationships, and its progressive reshoring of key activities is integral to achieving its sustainability principles and commitment to People, Product and Planet.

6 Conclusion, limitations and future research

The presented case is distinctive as the firm is reshoring activities that were originally offshored to global suppliers with specific resources in *developed* rather than developing countries. Its decisions are not representative of the average UK clothing company, which typically offshores to developing countries with lower labour costs, but it does provide a more nuanced view of the offshoring-reshoring decision process, and its impact on the nature and management of the supply network. The unique perspective of the case indicates that reshoring can be a highly creative and innovative tool and not just a reaction to economic changes or supply issues (Arlbjorn and Mikkelsen 2014).

The studied firm's 3 points of commitment to People, Product and Planet provide a framework for developing an embedded and principled supply response to sustainability. For researchers this offers the foundation for developing the field in new, multi-disciplinary directions, away from just the 'greening' of specific supply processes (Ashby et al. 2012), to understanding how

resources, relationships and responsibilities can be coordinated across the supply network for sustainability performance. For the studied firm having a local supply chain is integral to achieving its environmental and social commitments; this provides a rich area for future study on how the localising of suppliers contributes to sustainability performance and offers an opportunity to align sustainability research with the nascent field of reshoring (Gray et al. 2013).

For practitioners the case study indicates the imperative to evaluate principles and understand how these translate into supply decisions, including those related to supplier proximity and sustainability. There needs to be a move away from offshoring decisions based on reducing costs and increasing profits (Dekkers 2010) to choosing the right and potentially more local supplier; this requires a shift from a short-term to long-term perspective, and from transactional to the cooperative and collaborative relationships advocated by SM. This can address some of the key issues associated with extensive offshoring, including sustainability performance (Tate 2014), but also help an organisation develop a coordinated and competitive supply network based on trust, reciprocity, and shared principles.

For policy makers it demonstrates the positive impacts that can result from a considered, and coordinated reshoring implementation; this includes the reintroduction/re-harnessing of skills within the UK, the creation of 'new' industry, support for local communities, and economic growth, both local and potentially national. The case has illustrated the length of time and commitment needed to achieve a UK or nearshored supply network, and there is a need for policy and government initiatives to facilitate the process, through incentives to focal firms wanting to reshore or work with local suppliers and mechanisms for developing and increasing the skills, expertise and knowledge which can be depleted by offshoring.

The limitations of the paper are through its focus on a single case study, albeit one that has strong principles that have driven its desire for a local supply chain to 'its own recipe'. The findings offer a unique insight into reshoring for sustainability principles and performance, but are not representative of the average clothing firm and therefore not generalizable to the clothing industry as a whole or to other industries which are evidencing the reshoring trend. The case study indicates that reshoring for sustainability should be done with consideration and awareness, and for firms that offshore from developing countries this would include understanding the impacts on local communities in those countries. There is therefore a research need for multiple comparative case studies of firms that have or are in the process of reshoring previously offshored production activities.

Appendix

Table 3 Structure of interviews and interviewees

Date	Interviewees	Duration
13/4/10	Owner Supply chain manager	1 h 7 min
14/1/11	Owner Supply chain manager	59 min
10/3/11	Design Manager	1 h 21 min
23/6/11	Supply chain manager	1 h 2 min
18/11/11	UK wool supplier	1 h 15 min
30/11/11	Owner	52 min
6/3/11	Follow up email with supply chain manager	N/A

Table 4 Interview protocol

Context Area	Level	Questions	Field Procedures/ Sources of Information
Company Ethos	Organisation	What is your background? (each interviewee)	Interviews
		What are the firm's sustainability principles?	Company literature
		How are these communicated?	
Design	Product	Who is involved with the design of your products and why?	Interviews
		How are design requirements communicated to the supply chain?	Product specs/brochures
		How do you develop/evolve existing products?	
Raw Materials	Product	What raw materials do you use and why?	Interviews
		Where do you source your raw materials and why?	Product specs/brochures
Garment Production	Process	Where are your finished products manufactured and why? How do you monitor and manage this stage of the process?	Interviews
SM/relationships	Organisation/suppliers	How do you manage your supplier relationships? How long have you been working with each supplier?	Interviews with firm and its suppliers where feasible
		Do you have policies/codes of practice in place with your suppliers and if so how do you ensure they are achieved?	
		How important are your supply chain relationships to achieving your business and sustainability goals?	
		How frequently do you change or source new suppliers?	
Communication	Organisation/suppliers	How do you communicate with your suppliers? How frequently?	Interviews Marketing material
		Who has direct communication with your suppliers and why?	Direct observation
Decision making	Organisation	Who is involved in business decisions and why? How do you align your decisions with your firm ethos/principles?	Interviews
End of Life	Process	Do you have any mechanisms to allow customers to return products to you for repair/reuse/recycling? Do your suppliers provide any end of life options?	Interviews
Company Performance	Organisation	How many staff do you employ? What is your annual turnover? Are you profitable?	Annual reports/financial data

Table 5 Key themes from the analysis

Themes	
Supply network practice	SM understanding Unique processes Simplifying through fewer suppliers
Supply network configuration	European manufacturing Creation of new industry/supply chain UK produced, processed & manufactured (1)
Supplier relationships	Personal relationships Trust & transparency Innovation, adaptability, evolution Posterity & heritage (1)
Product	Longevity Functionality Quality & performance Lifecycle responsibility
Principles	Integrity & honesty People, product, planet Telling a story Preservation (1)
Environmental responsibility	Local charity Local community Textile brotherhood (1)
Social responsibility	Local charity Local community Textile brotherhood (1) Ethical suppliers

Key: 1 = UK supplier

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