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Sustainable supply chain management: a case study at IKEA

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ABSTRACT

While sustainability is central to research on supply chains, there has been relatively little research on diversity and impact on supply chain sustainability performance. Such practices, also called sustainable plans, are the ones that improve not only supply chain economic performance, but also their environmental and social performances. Stakeholders are increasingly exerting pressure on organisations to adopt sustainable practices within their firm and across their supply chain. This one case pilot study explores the extent to which IKEA has successfully integrated sustainability practices into the management of the supply chain. We analyse sustainability practices using data gathered from IKEA as a global case study. Our research findings reveal that sustainability practices can be successfully implemented across an organisation's entire supply chain, including second and third tier suppliers to gain positive environmental and social impacts while still promoting a strong economic bottom line. The article wraps up with a general discussion, limitations, as well as opportunities for future research, and lastly with concluding remarks.

KEYWORDS

Sustainable supply chain management; IKEA; SSCM; sustainability; triple bottom line; organizational culture; best practices; corporate social responsibility

1. Introduction

In a rapidly changing world, supply chain managers struggle to balance cost reduction with corporate social responsibilities. Sustainability, more commonly known as corporate social responsibility (Epstein & Buhovac, 2010), is fluid and ever changing but it is consistently complicated. Environmental degradation, global warming, and corporate pressures to adopt green initiatives stress organisations to incorporate and implement sustainability practices into their supply chain, and seek effective strategies to measure the performance of their sustainability efforts. Although scholarly literature now includes sustainability in research about supply chain management (SCM), case analyses of innovative organisations successfully adopting sustainable supply chain management (SSCM) practices are few. The case study outlined in this paper is narrow, but explores how one global organisation has achieved both of these goals. IKEA has successfully integrated in-house sustainability practices – environmental, social, and economic. Research on sustainability and SCM compared against IKEA's documents and practices to include the management of a global supply chain.

This case study represents document searches from IKEA public sources. Our analysis focussed on IKEA's sustainability efforts within the three broad categories of SCM: inbound functions such as purchasing and procurement, operations and production such as design and manufacturing, and outbound functions such as packaging, marketing, and reverse logistics. The research findings provide a comprehensive analysis to address sustainability issues to gain positive environmental and social impacts, and achieve economic performance.

Though organisation specific, this case study contributes to academic literature on SSCM. As evident through the IKEA case study, an holistic approach to sustainability focussing on all three pillars – environmental, social, and economic – will achieve higher economic performance and gain competitive advantage over rival companies that integrate only one or two pillars (Brockhaus, Wolfgang, & Knemeyer, 2013; Morali & Searcy 2013). While increasing its marketshare and corporate growth IKEA maintained a strong economic position while focussing on an overarching commitment to manage its supply chain by focussing on social and environmental sustainability practices.

This research paper is organised as follows. In the upcoming section, the relevant literature review is presented to serve as a tool to inform the reader on Sustainability, SCM, SSCM, and Best Practices. Then, the research

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method is outlined. Next, a brief background on IKEA; who they are, what they strive to accomplish, as well as their vision and corporate values. This is followed by a presentation of findings in all three broad SSCM categories of inbound, operations, and outbound. Lastly, a general discussion piece coupled with limitations and opportunities for future research and concluding remarks.

2. Literature review

Each heading below represents a major trend in the literature relevant to supply chain management and sustainability about IKEA. The relevant literature can be categorised under the themes of Sustainability, Supply Chain Management, Sustainable Supply Chain Management, and Best Practices.

Sustainability: The most frequently adopted definition of sustainability comes from the United Nations World Commission on Environment and Development: the 'development that meets the needs of the present without compromising the ability of future generations to meet their needs' (WCED, 1987). This definition has become increasingly prevalent and is the most accepted one in literature. However, such a broad definition presents many challenges for contemporary organisations such as difficulties in identifying a company's individual role in the larger macro-economic perspective as well as the lack of guidance on how to effectively identify present and future needs and practices (Carter & Rogers, 2008). Additionally, there are complications in identifying the technologies and resources necessary to meet those present and future needs as well as challenges in developing an understanding of the importance of balancing an organisation's stakeholder responsibilities within the supply chain represent the primary challenges of sustainability for contemporary corporations (Carter & Rogers, 2008).

Sustainability also refers to all activities aimed at improving the social and environmental impacts of a company while maintaining the financial bottom line. This is also mentioned in literature as the 'triple bottom line' (Brockhaus et al., 2013): 'people, planet, and profit' (Hollos, Blome, & Foerstl, 2012), the triad of sustainability: environmental, social, and economic (Chardine-Bauman & Botta-Genoulaz, 2014), and the three pillars of sustainability (Morali & Searcy, 2013).

An important and relevant sustainability research-based model that consistently appears in literature is by Carter and Rogers (2008) – see Figure 1. Four supporting facets of sustainability are identified: risk management, strategy, organisational culture, and transparency. This figure is included as it depicts how the three pillars of sustainability – environmental, social, and economic – when combined with the four supporting facets of sustainability – risk management, transparency, strategy and culture – leads to true sustainability.

1. Risk management, in the lower left quadrant, refers to firm management of short-term financial results within risk factors that include harm resulting from its products and negative externalities such as environmental waste and worker and public safety. In order to manage risk, sustainable development must incorporate the notion of

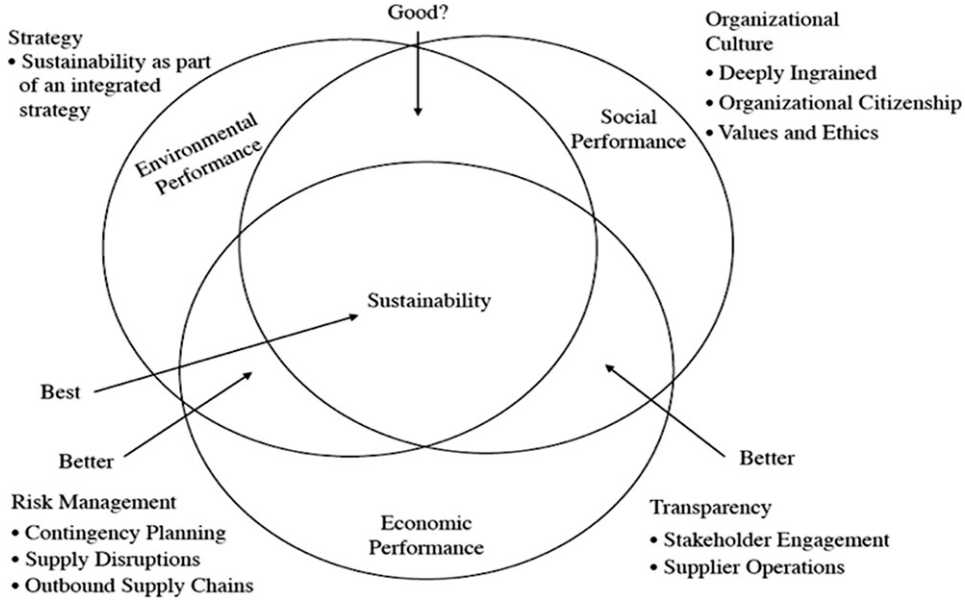

Figure 1. Sustainable supply chain management (Carter & Rogers, 2008).

security and protection from harms, including biodiversity loss, climate change, freshwater scarcity, food insecurity, and population growth.

2. Transparency is evidence of a firm's sensitivity to economic, social, and environmental issues. However, as Figure 1 indicates, transparency extends beyond awareness to include reporting to and actively engaging stakeholders, and then evidence of honest consideration of their feedback and input. Transparency, then, is closely related to corporate culture and ultimately, sustainability.

3. Strategy and Corporate Culture are considered separate organisational concepts in business literature but Carter and Rogers (2008) state that they are seamlessly intertwined to accomplish a firms' sustainability initiatives. This is interesting as they are depicted separately in their diagram. Firms need leadership, culture, and people when developing sustainability strategies (Epstein & Buhovac, 2010). Organizations require a fundamental shift toward developing a sustainability-oriented organisational culture when moving towards corporate sustainability (Linnenlueck & Griffiths, 2010). Sustainability initiatives within the corporate strategy can only be accomplished within a supportive corporate culture (Carter & Rogers, 2008). Therefore, scholars agree that firms incorporate a strategic approach to shifting their corporate culture that supports sustainability initiatives is critical to its successful adoption.

Corporate sustainability performance is the term to include all strategies, practices, and tactics adopted by a firm with the goal of improving its relationship with society and the environment. In this way, corporate sustainability performance is an integral measure of a firm's decision-making process, and therefore sustainable practices must include SSCM (Wolf, 2014). Additionally, there is a significant correlation between environmental and social purchasing decisions and an organisational culture that incorporates fairness and considers the welfare of others (Carter & Rogers, 2008).

Supply Chain Management (SCM): is defined as 'the management of exchanges of materials and information in the logistics process stretching from the purchasing of raw materials to the delivery of end-products to end customers' (Chardine-Bauman & Botta-Genoulaz, 2014). In this way, stakeholders are linked together and become part of the chain. SCM is a means of understanding and refining the efficiency and effectiveness of activities undertaken by firms from initial procurement all the way to the final product (Vasileiou & Morris, 2006). Globally dispersed supply chains have led to an increased importance for SCM as a source of competitive advantage due to the link between supply management, proficiency, and economic performance of a firm (Hollos et al. 2012). SCM can be a difficult task for firms, but becomes even more challenging when coupled with sustainability goals and policies.

Sustainable Supply Chain Management (SSCM): Sustainability is an integral part of SCM and an attempt to incorporate it using the triple bottom line concept in the existing supply chain practices leads to study sustainable supply chain management (SSCM) (Ansari & Qureshi, 2015). SSCM is 'a set of managerial practices that includes all of the following: (i) Environmental impact as an imperative; (ii) consideration of all stages across the entire value chain for each product; and (iii) a multidisciplinary perspective encompassing the entire product life cycle (Gupta & Palsule-Desai, 2011).' SSCM is 'the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e. economic, environmental and social, into account which are derived from customer and stakeholder requirements (Seuring & Müller, 2008).' SSCM is 'the strategic, transparent integration and achievement of an organisation's social, environmental and economic goals in the systemic coordination of key interorganisational business processes for improving the long-term economic performance of the individual and its supply chain' (Carter & Rogers, 2008).

Another important concept is corporate sustainability performance which is the term to include all strategies, practices, and tactics adopted by a firm with the goal of improving its relationship with society and the environment. In this way, corporate sustainability performance is an integral measure of a firm's decision-making process, and therefore sustainable practices must include SSCM (Wolf, 2014).

There are numerous formal definitions of SSCM across the literature, but all include integration of business practices with sustainability. Generally, SSCM is the result of merging the three pillars of sustainability – social, environmental, and economic – with core business practices such as procurement, logistics, knowledge management, marketing, and operations (Morali & Searcy, 2013). SSCM is also explained as a set of managerial practices that include environmental impact as an imperative, consideration for all stages across the entire value chain for each product, and a multi-disciplinary perspective that encompasses the entire product life-cycle. It seems that

across the literature, the merging of corporate strategy and practice around sustainability is increasingly recognised and is now part of the definitions of SSCM (Gupta & Palsule-Desai, 2011)

Additionally, there are three integrated facets of SSCM (Gupta & Palsule-Desai, 2011). Firstly, organisations must consider the environmental impacts of their actions as an integral part of their decision-making process rather than an external imposition from government, a social pressure, or a fad to be exploited (such as greenwashing). Secondly, it is essential that environmental impacts are monitored across the entire value chain. Lastly, component relates to the corporate strategy beyond a narrow functional perspective to embody a broader view of sustainability that amalgamates issues, problems and solutions across functional boundaries.

Integration and relational awareness are concepts that also animate the SSCM literature and are present in our IKEA case study. For example, Vasileiou and Morris (2006) state that in order to promote sustainability within a supply chain, it is vital that firms understand influence. These influences are relational, and encourage adoption of sustainability practices. Therefore, the relationship between participants of a supply chain is a key component of sustainability. To create a genuine competitive advantage for the supply chain when implementing sustainability efforts, factors such as the collaboration and integration of key members of the supply chain, redesigning purchasing, operations, and distribution activities, and the ability to engrain sustainability initiatives internally and across the supply chain, are prerequisites (Brockhaus et al., 2013). Despite said prerequisites, implementing SSCM practices is challenging.

Key difficulties in implementing SSCM practices are: (a) lack of understanding the intricate interplay between the three pillars of sustainability and how that affects the economic bottom line, (b) capital investment commitments, (c) risk management and supplier monitoring, (d) measurement, (e) transparency of information and knowledge, (f) alignment of corporate strategy with SSCM initiatives, and lastly (g) corporate culture (Morali & Searcy, 2013). Scholars seem to support Rogers and Carter's SSCM framework (Figure 1) regarding the importance of organisational culture, strategy, risk management, and transparency when adopting sustainability practices within a firm and across the supply chain.

Best practices is defined as 'any practice or experience which has proved its value or which is used in an efficient way in an organisation, and can be applied in other organisations' (Chardine-Bauman & Botta-Genoulaz, 2014). Additionally, suitably implemented, best practices can generate considerable profits of performance within a short period of time (Maire, Bronet, & Pillet, 2005). Considering the concept of best practice, IKEA's approach to successfully incorporating sustainability within its firm and across its supply chain makes a connection between the two.

Three characteristics of best practices identified in the SSCM literature include formalisation, effectiveness, and reusability (Chardine-Bauman & Botta-Genoulaz, 2014). Formalization refers to a best practices ability to identify the problem, describe solutions, and indicate results. Effectiveness refers to its ability to meet the performance assessment criteria of a process which includes its relevance, coherence, effectiveness, efficiency, robustness, and sustainability. Lastly, its reusability refers to its transferability to other organisations, situations, or industries.

However, there are also many challenges related to best practices for SSCM. These include the identification of said practices, the difficulty in knowing which practices have a real impact, determining methods to effectively adopt them, as well as the willingness of a successful firm to share their best practices with rivals (Maire et al., 2005). Although scholarly literature now includes sustainability in research about supply chain management (SCM), case analyses of innovative companies' successfully adopting sustainable supply chain management (SSCM) practices are notably lacking. Additionally, there is scarce literature on how the adoption of corporate sustainability practices translates successfully inside organisations (Linnenlueck & Griffiths, 2010).

3. Research method

This study is exploratory in nature and is aimed at identifying SSCM practices. A case study method is preferred over other methods as case method evaluates the real time circumstances without being prone to manipulation (Soltani & Wilkinson, 2010). We adopted a questionnaire approach to a mid-management IKEA *Communications Responsible* staff member, and conducted an in-depth analysis of the IKEA Group Yearly Summary FY16 report, the IWAY Standard, the IKEA Group Sustainability Strategy for 2020, and the IKEA Group Sustainability Report FY16. Combined, these reports and questionnaires provide a holistic view of IKEA's sustainability efforts within their global supply chain. The sustainability research questions are shown in Appendix 1.

4. IKEA as a case study

This case study offers insight into SSCM practices in action. IKEA was chosen for the case study, amongst many, for three primary reasons. IKEA is a global firm with manufacturing and distribution centres across the world; its supply chain is vast and complex. IKEA is a pioneer firm that introduced a systematic way of working with sustainability across its operations (Alänge, Clancy, & Marmgren, 2016). Also, IKEA aligns with the goals of our study: to analyse a global firm that successfully develops and implements real and impactful sustainability efforts within their organisation and across their supply chain. We share these findings in an academic context to serve as encouragement and as a role model for other companies in all industries to look to for sustainability ideas and innovation.

IKEA's vision is to 'create a better everyday life for many people' and their business concept is 'to offer a wide range of well-designed, functional home furnishing products at prices so low that as many people as possible will be able to afford them' (IKEA Supply AG, 2008). The vision and business ideas are carried across all aspects of the business, 'We work hard to achieve quality at affordable prices for our customers through optimising our entire value chain, by building long-term supplier relationships, investing in highly automated production and producing large volumes. Our vision also goes beyond home furnishing. We want to create a better every day for all people impacted by our business.' (Inter IKEA Systems B.V., 2015). Not only is IKEA a signatory to the Ten Principles of the United Nations Global Compact that outlines areas of human rights, labour, environment, and anti-corruption, IKEA's sustainability progress is actively tracked against each principle (IKEA Group, 2016). IKEA also supports the United Nations Sustainable Development Goals (SDGs); a framework comprised of 17 goals to end poverty, fight inequality and injustice, and tackle climate change (IKEA Group, 2016). Here too, IKEA's progress is tracked against the goals of the SDGs for sustainability and SCM.

4.1. Inbound, operations & production logistics

At IKEA, Inbound and Operations & Production Logistics are interconnected in IWAY Standards – described below. This is unusual as they are generally two separate steps or functions of the whole supply chain.

IWAY Standard encompasses IKEA's inbound logistics regarding purchasing and procurements as well as operations and production decisions regarding the design and manufacturing of the products (IKEA Supply AG, 2008). IWAY is the 'IKEA way' of purchasing products, materials and services and is the IKEA supplier Code of Conduct (IKEA Supply AG, 2008). It establishes the minimum requirements for environmental, social, and working conditions when purchasing products, materials and services. IKEA believes good business can be done while being a good business; this is a pre-condition of future growth alongside suppliers that share the same vision. The guiding principles of IWAY are based on what is best for the child, worker, and the environment. IWAY is founded on the eight core conventions defined in the Fundamental Principles of Rights at Work, ILO declaration June (1998), the Rio Declaration on Sustainable Development (1992), The UN Johannesburg Summit on Sustainable Development and the Ten Principles of the UN Global Compact (2000). IKEA acknowledges the fundamental principles of Human Rights defined by the United Nations Universal Declaration of Human Rights.

IWAY standards include statements of legal compliances, confidentiality, and business ethics. Firstly, legal compliances require that IKEA suppliers adhere to and comply with relevant applicable national laws or IKEA WAY specific requirements. Secondly, confidentiality is the importance placed on the trust and relationship between IKEA and its suppliers and the assurance that IKEA treats such relationships as confidential. Lastly, business ethics pertains to the foundation of IWAY which is based on trust, integrity, and honesty, as key to successfully implementing sustainability. Business ethics encompasses the widespread understanding of IKEA's Corruption Prevention Policy as an integral part of IWAY. The specific components of IWAY Standards include fourteen general sections: Start-up Requirements, General Conditions, Environment, Chemicals, Waste, Fire Prevention, Health & Safety, Housing, Wages & Benefits, Child Labour, Forced & Bonded Labour, Discrimination, Freedom of Association, and Harassment, Abuse & Disciplinary Actions.

1. Start-up requirements. More importantly known as 'IWAY Must', establishes primary compliances for all suppliers before IKEA signs a business contract. It includes the implementation of all measures to prevent child labour and considers the best interests of the child. It also includes forced and bonded labour where IKEA suppliers shall not use forced, prison, bonded, or involuntary labour. The IWAY Must incorporates the prevention of severe environmental pollution that widely spreads and where its effects are difficult or expensive to correct. IKEA suppliers

are required to prevent workers from exposure to severe safety hazards, are required to maintain transparent and reliable records on employee working hours and wages, as well as provide accidental insurance to all workers for coverage of medical treatment due to work-related accidents.

2. General conditions. This includes a supplier commitment to comply with the IWAY requirements and to appoint one, or several persons, the responsibility and authority to ensure IWAY compliance. IWAY also include communication to sub-suppliers and employees; IKEA suppliers are required to communicate the IWAY to its workers and to its suppliers who are involved in IKEA. IKEA suppliers are required to perform internal IWAY audits minimum every 12 months, as well as establish internal procedures to guarantee regular updates of the IWAY requirements.

3. Environmental. This compliance involves environmental protection including classification, reporting and inspections by authorities as well as compliance with local laws relating pollution such as air, noise, ground, and water pollution. It also includes energy measuring and recording as well as setting targets for its reduction.

4. Chemicals. IKEA suppliers are required to comply with local laws related to chemicals as well as maintaining lists, establish proper procedures, provide employee training, as well as ensure proper labelling, storage, handling, and transportation of chemicals.

5. Hazardous and non-hazardous waste. This includes legal compliance with local laws and regulations, establish and keep adequate records of waste, have established procedure for the handling, storing, transportation, and disposal of waste, provide employee training, as well as have proper licenced contractors for proper disposal and follow legal requirements for on-site incineration and landfill.

6. Fire prevention. This involves adhering to local laws regarding fire protection including fire classification, reporting, and inspection by authorities. It also requires that all suppliers keep appropriate fire report incident records, provide appropriate firefighting equipment and training, have appropriate and functional emergency exits and fire alarms, as well as conduct evacuation drills annually.

7. Worker health and safety. This ensures that IKEA suppliers comply with applicable laws in classification, workplace risk analysis, reporting and inspections by authorities. This includes a broad list of issues such as incident report records, health and safety training, having necessary machine safety devices, provide safety instructions, ensure safety hazards are avoided, as well as provide personal protective and first aid equipment. Additionally, suppliers are required to maintain adequate internal air quality, appropriate temperature and noise levels, have appropriate lighting, provide drinking water and hygiene facilities, but most importantly IKEA suppliers shall have an active Health & Safety Committee.

8. Housing facilities. This requires that IKEA suppliers ensure provision of clean, private, quiet, safe, hygienic, and reasonable living space.

9. Wages, benefits and working hours. This ensures that their suppliers comply with laws and regulations and provide written information to workers prior to employment about wages and employment terms. Requirements include adequate payroll and attendance records, adhere to established working hours and overtime, pay wages and overtime, as well as provide breaks, days off, leave, and benefits.

10. Prevention of child labour. As previously stated, IKEA suppliers are required to implement all measures to prevent child labour to consider the best interests of the child. They are required to abide the UN Convention on the Rights of the Child as well as national and international laws; this is applicable to IKEA's first tier supplier as well as their sub-contractors.

11. Forced & bonded labour. As mentioned, forced, prisoned, bonded, or involuntary labour are not permitted for IKEA's suppliers and their sub-contractors.

12. Discrimination. Additionally, IKEA suppliers will not discriminate because of race, religion beliefs, gender, marital or maternal status, age political affiliation, national origin, disability, sexual orientation or any other basis.

13. Freedom of association. Suppliers do not prevent workers from associating freely or exercising collective bargaining activities.

14. Harassment, abuse and disciplinary actions. IKEA suppliers shall not engage in public punishment or allow harassment and abuse in their workplace.

The unique component of IKEA's IWAY Standards is the fact that it reaches past first-tier suppliers. Darnall, Jolley, and Handfield (2008) explain that *direct* environmental impacts originate from a firm's first-tier suppliers and stem from inputs that increase waste during storage, transportation, processing, use, or disposal. *Indirect* environmental impacts refer to a firm's second-tier suppliers who produce inputs for the first-tier supplier, which have an indirect impact on the final producer's environmental impacts (Darnall et al., 2008). Organizations that adopt sustainability efforts focussed on reducing environmental impacts generally only focus and evaluate their

first-tier suppliers (Darnall et al., 2008). IKEA is unique as IWAY Standards mandate first-tier suppliers to implement said standards to second-tier suppliers and beyond. Such a large component of this case analysis is dedicated to IWAY Standards as it embodies all aspects of Carter and Rogers (2008) framework (see Figure 1) leading to genuine sustainability.

Procurement. Hollos et al. (2012) identify three main components of 'responsible procurement' as (1) human rights, (2) minimisation of environmental impacts, and (3) maintenance of high standards of ethics and business integrity. IKEA has successfully implemented a series of specific procurement sustainability policies, in addition to the IWAY Standards, such as the IKEA View Cotton (IKEA Group, 2016). Since 2015, IKEA has been supporting more sustainably sourcing for all its cotton, and is both working with World Wildlife Fund (WWF) and is the founding member of the Better Cotton Initiative (BCI) to transform cotton farming and set social and environmental standards for cotton production. Both the initiatives have led to increased farming efficiencies and higher cotton yields, decreases in water usage, chemical fertilisers, and pesticides while simultaneously cutting costs, boosting farmers' profits, as well as preventing water and ground pollution from the reduction of chemicals and pesticides.

IKEA has also adopted the IWAY Forestry Standard as a part of the IKEA supplier code of conduct which sets out the minimum criteria for all wood products supplied to IKEA (IKEA Group, 2014). These criteria include not harvesting by illegal methods, from operations involved in forest-related social conflicts, or from areas identified as Intact Natural Forests (INF). IKEA also requires from their wood suppliers that they have a process in place to implement these standards throughout their supply chain and to keep record of the origin of their wood. IKEA is also a member of the Forestry Stewardship Council (FSC) which aim to protect diversity, ensure forest regrowth, protect the rights and needs of people who work and live in the forest, and to stimulate economic development (Forestry Stewardship Council, 2017). IKEA goal is to become forest positive by 2020 – meaning that they are committed to promote sustainable forestry across the industry and beyond their needs.

Additionally, in October 2014 IKEA took a position on palm oil – they 'believe that, when grown responsibly, palm oil has the potential to be a sustainable raw material … and can have a positive impact on livelihoods, particularly of smallholders' (IKEA Group, 2016). IKEA ensures their commitment to responsible and sustainable palm oil sourcing. This is accomplished with their ongoing support of the Roundtable of Sustainable Palm Oil (RSPO) certification as the best available tool to achieve sector level change in the palm oil industry.

4.2. Outbound

Packaging innovation. IKEA is well known for its innovative packaging. Specifically, the OptiLedge (see Appendix 2), or internally known as Loading Ledge, as an alternative to wood pallets (OptiLedge, 2017). The primary benefits of this innovative unit load carrier are, firstly it is sustainable as it is made of poly-propylene which is an environment-friendly material that is strong, light, durable, and recyclable. Secondly the loading ledge is a cost saver in both fuel, due to its lightweight material, and labour for its ease in handling loads. There is also a cost-saving component due to reductions in damages, workplace injuries, and lead time (OptiLedge, 2017). The main differences between using loading ledges and traditional wood pallets is the flexibility of the loading ledges as they allow for varying size and design – '… instead of the product dimensions being modified to fit the load carrier, the load carrier is adjusted to fit the products' (Hellström & Nilsson, 2011). From the transportation point, using loading ledges provides better cube utilisation due to the elimination of empty spaces between the units and the utilisation of the space previously taken up by wood pallets – see Appendix 3 (Hellström & Nilsson, 2011).

Marketing. With an annual circulation of over 100 million copies, the IKEA catalogue is frequently claimed to be the one of most widely read publications in the world (Håkansson & Waluszewski, 2002). Due to this claim, it became the focus of public debate in the 1990's when two big environmental issues were connected to the production and use of printing paper – the growing European waste land and the chlorinated discharge from pulp bleaching (Håkansson & Waluszewski, 2002). IKEA's response to this increasing concern was the formulation of a new environmental policy that included their 'green' catalogue requirements; chlorine-free pulp bleaching process and catalogue paper made of post-consumer paper waste (Håkansson & Waluszewski, 2002), and over 50,000 tons of lightweight paper, not only was such a product not yet commercially practical, the development of such paper was perceived as impossible (Håkansson & Waluszewski, 2002). Despite such barriers, within one year, the largest European producers of high-quality printing paper, Svenska Cellulosa Aktiebolaget, successfully created a paper product that met IKEA standards (Håkansson & Waluszewski, 2002). IKEA reports in fiscal year 2016 a reduction in carbon emissions from catalogue production by 26% compared to fiscal year 2015 (IKEA Group, 2016).

Reverse logistics. Increased concerns over the environmental impacts of organisations' activities pressured the extension of the supply chain to include the entire life-cycle of a product (Morali & Searcy, 2013). This is more commonly referred to as reverse logistics. Reverse logistics is a process in which a firm systematically accepts products or parts after 'consumption'; a 'reverse logistics system incorporates a supply chain that has been redesigned to manage the flow of products or parts destined for remanufacturing, recycling, or disposal and to use resources effectively' (Dowlatshahi, 2000). IKEA has in place many reverse logistics efforts such as a cardboard take-back programme where customers can return cardboard packaging to the store for recycling, as well as furniture take-back programmes where customers can bring unwanted furniture to their stores and IKEA works with local charity partners to rehome the old furniture (IKEA Group, 2016).

5. Discussion

As established through the literature review, the concept of SSCM and the challenges associated with implementing SSCM efforts is broad. This case study demonstrated that it is possible to successfully implement SSCM practices. Globalisation challenges increase the need to re-evaluate our approach to basic factors such as land, capital, and labour (Balkyte & Peleckis, 2011). Economic uncertainty forces organisations to take a proactive and innovative approach to change their practices and explore opportunities through social and environmental programmes (Zu, 2014). Silvestre (2015) states that due to the vastly competitive global business environment, business leaders, academics, and policy makers acknowledge the importance of proper SCM as a key driver to gain local and national competitive advantage.

This study provides several relevant findings. Firstly, a superficial or partial implementation of sustainability practices is ineffective; only a holistic approach to both environmental and social policies will lead to genuine sustainability. Secondly, building relationships with various stakeholders within the organisation across the supply chain has been a successful approach for IKEA. Thirdly, continuously improving and searching for ways to inflict positive and meaningful change is important. This can be accomplished by supporting organisations across the supply chain with implementing sustainability within their firm by financial, technological or human resources. Although this case study did not include many cases, the results of the study are valuable and can be argued to be best practices for successfully integrating SSCM policies.

Limitations of this study are primarily based on IKEA's available of information on its sustainability efforts, to vast to be explored in this case study. IKEA is recognised for a strong corporate culture but the role of corporate culture and the integration of SSCM are outside the scope of this case study. Despite, this offers an opportunity for further research.

Future research opportunities beyond the role of corporate culture and the integration of SSCM are the social dimension. Of the three pillars – economic, environmental and social – the social dimension of the three pillars is glaringly absent. IKEA approaches sustainability from a holistic perspective by stressing the importance of positive social and environmental efforts as their overarching responsibility and role in society, rather than an opportunity to be exploited or 'greenwashed'. Their belief seems to be that taking care of people and the world naturally takes care of their bottom line.

Opportunities also emerge for scholars to analyse the effects of globalisation on SCM. Given that IKEA has supply chain members globally dispersed, this article did not discuss the challenges of this. Due to the growing number of companies that, like IKEA, have global supply chains, more research is needed on the challenges and opportunities of this phenomenon. Furthermore, an analysis of the effects of SSCM practices on social and environmental factors would be valuable as it would provide concrete evidence on the effectiveness of a firm's sustainability implementations across their supply chain.

6. Conclusions

IKEA is a model company that others can turn to as inspiration and model for positive change. IKEA can successfully implement sustainability policies across their entire supply chain to include all stakeholders and their various interests while maintaining a strong economic position. Our research concludes that IKEA has developed a formal, effective, and reusable set of best practices to successfully implement SSCM practices. Despite widespread concern that adopting sustainability efforts will result in economic erosion and thus a loss of competitive advantage (Nidumolu, Prahalad, & Rangaswami, 2009), our case study demonstrates the exact opposite; IKEA is a leader in innovative

sustainability practices across its supply chain. With the support of academic research, IKEA stands as a model of the effective merging of sustainability and growth, as particularly evident in their impressive SCM model.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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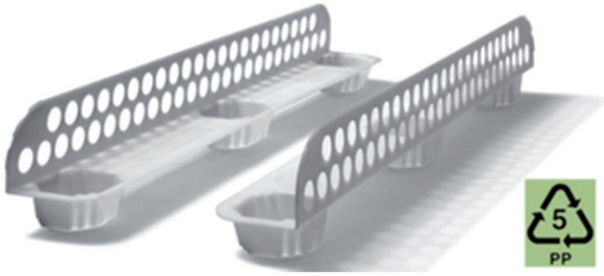
Appendix 1

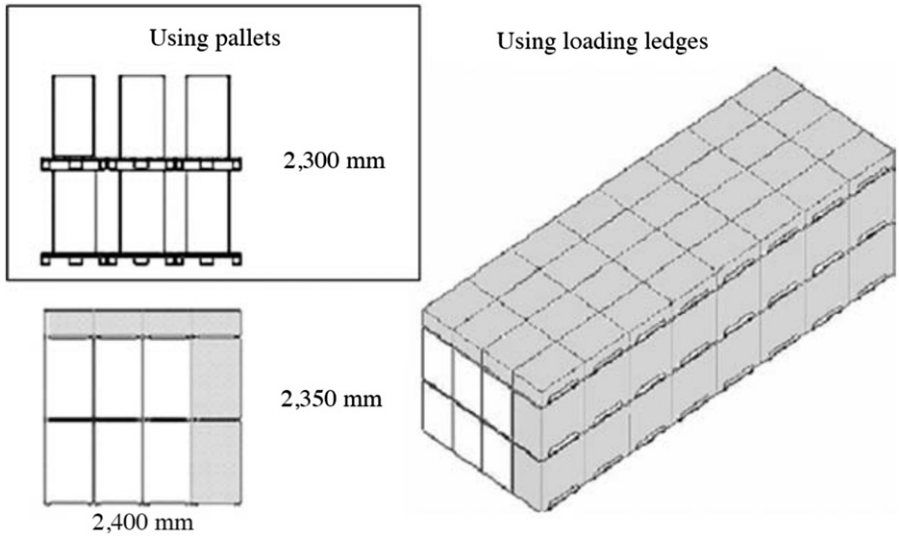
Sustainability activities	Questions
Inbound	1- Holding awareness seminars for contractors and suppliers
Suppliers side	2- Guiding suppliers to set up their own environmental programmes
Does your organisation?	3- Bringing together suppliers in the same industry to share their know-how and problems
	4- Notifying suppliers about the benefits of sustainability practices, cleaner production and technologies
	5- Urging/pressuring suppliers to practice environmental activities
	6- Selection of suppliers based on environmental criteria
Production/Service	1- Practice environment-friendly raw materials
Does your organisation?	2- Practice substitution of environmentally questionable materials
	3- Taking environmental measures into consideration
	4- Consider environmental plan
	5- Practice optimisation of process to reduce solid waste and emissions
	6- Practice cleaner technology processes to make savings in energy, water, and waste
	7- Practice internal recycling of materials within the production phase
Outbound	1- Implement environment-friendly waste management
Consumer side	2- Practice environmental improvement of packaging
Does your organisation?	3- Practice taking back packaging
	4- Practice eco-labelling
	5- Practice recovery of company's end-of-life products
	6- Practice providing consumers with information on environmental friendly products and/or production processes
	7- Practice the use of environment-friendly transportation and shipping

Appendix 2



OptiLedge: load carrier alternative to wood pallet (OptiLedge, 2017).

Appendix 3



Displays a total filling increase of 44% (Hellström & Nilsson, 2011).