

Supplier Selection Criteria for Sustainable Supply Chains

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Student's Name: Amy Terracciano
Faculty Sponsor: John Visich
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ABSTRACT

In today's global business environment, suppliers can have a significant impact on the buyer's supply chain. Selecting the right supplier can be a critical decision for manufacturers and distributors, and to aid in the supplier selection decision making process a large number of selection criteria have been proposed in the literature. Supplier selection criteria have traditionally focused on metrics that impact the buyer's costs. But due to increased business awareness of the importance of sustainability, supplier selection criteria have now come to include measures on environmental and social performance. While environmental metrics for supplier selection have received some attention in the academic literature, there is a lack of research on criteria that can be used to assess suppliers on social factors. This research adds to the supplier selection criteria literature by identifying both environmental and social factors that can be used to evaluate suppliers in the Food and Beverage, Food and Staples Retailing, and Personal and Household Products industries. We develop these factors by evaluating the supplier codes of conduct of companies that have been recognized by external groups for their efforts in sustainable business operations. We also analyze each company's web site and most recent sustainability report to corroborate our findings. Our framework will consist of a stratified list of criteria based on importance illustrating how these criteria can facilitate the selection of a sustainable supplier.

INTRODUCTION

In today's current global business environment firms endure increasing external pressure to not only make a profit, but to do so in an environmentally friendly and socially responsible way. In order to mitigate these pressures, firms must develop a competitive strategy based on the triple bottom line. The triple bottom line includes profit, people and planet, thus, requiring firms to not only achieve a profit, but also to execute their activities and processes in a socially beneficial manner that does not harm the environment, the local community or their employees.

This focus on the triple bottom line has grown with the increased pressures from customers, governments and non-governmental organizations (Dai and Blackhurst, 2012). According to a study by Babin and Nicholson (2011) consumers pay high attention to the social and environmental efforts that are put forth by a firm. About 44% of the respondents in their survey said that they would "...boycott the company's products to help influence corporate social/environmental practices" (p. 48). Therefore, firms are now being 'forced' to become more environmentally conscious and implement fair labor standards (Dai and Blackhurst, 2012).

In order for firms to achieve a triple bottom line, their focus should be on adapting a strategic approach that enhances their corporate social responsibility. In a survey conducted by Kubenka and Myskova (2009) firms stated that "level of the health and safety workers," "human rights..." and "environmental corporate culture," were all important aspects of corporate social responsibility to achieve a positive triple bottom line (p. 327).

Antonio (2011) discussed similar elements of corporate responsibility practices such as the environment, ethics, health and safety, labor and human rights, community, diversity and financial responsibility. These variables relate to the Hong Kong area and specifically a multinational buying firm in personal products, however, they can be generalized to fit into other geographic areas and industries. Thus, these elements can be translated into sustainable actions to help firms achieve a triple bottom line.

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While the initial effort to migrate to a triple bottom line strategy requires an investment of time and money, if executed effectively, these efforts can have positive implications for firms. By focusing on the triple bottom line, companies now have an opportunity to create a sustainable supply chain that allows them to be more resilient and maintain a more long-term competitive advantage. In addition, an emphasis on the triple bottom line allows firms to mitigate environmental and social risk within their supply chains. These risks often result in higher costs and a damaged reputation (Dai and Blackhurst, 2012).

A firm's triple bottom line approach can be extended into the supplier selection process with benefits to the buying firm that include energy savings, waste reductions, increased health and safety awareness for workers, and less incurrence of legal fees to combat breaches of human rights and environmental wrongdoings (Reeve and Steinhausen, 2007, p. 32). Other benefits include lower operating costs, increased customer loyalty, productivity improvements and better risk management (Antonio, 2011). Thus, according to Reeve and Steinhausen (2007) and Antonio (2011), the inclusion of the triple bottom line will allow firms to secure a positive public reputation while also realizing numerous operational benefits.

Nike is one company that has taken a long-term strategic position on the triple bottom line. The company faced backlash from their loyal customer base and non-profit environmental organizations because of their lack of efforts to instill high labor and environmental standards in their manufacturing processes. This external pressure forced Nike to change their business practices. Through the creation of a board-level Corporate Responsibility Committee, Nike was able to develop a long-term strategy to reduce carbon monoxide emissions, packaging materials, and production waste, while also preventing child labor and ensuring a more socially responsible workplace environment (Paine, Hsieh and Adamsons, 2013). In 2013, Nike reported a 13% reduction in energy and a 10% reduction in water usage, and the company has set goals to reach a reduction rate of 20% and 15%, respectively. These goals reflect Nike's dedication towards reaching these objectives (Paine, Hsieh and Adamsons, 2013).

Also in 2013, Nike partnered with the Fair Labor Association in 2013 to develop and implement a fire safety program for factories in India, Bangladesh, and other countries. The

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company also developed a scoring system to assist in the evaluation of all factories. The evaluation system aligns with Nike's Sourcing and Manufacturing Sustainability Index, with the bronze level signifying that the company can continue operations in that area. In 2013, 68% of all Nike factories received a bronze medal evaluation, up from 49% in 2011 (Nike, Inc., n.d.). These efforts helped improve the brand image of Nike and created a more sustainable supply chain that is now more efficient and competitive.

Comparable to the issues that Nike dealt with in ensuring that their factories implemented high labor standards, the recent Bangladesh factory collapse of 2013 highlights the social issues that are dominant in supply chains. On April 24, 2013, the Rana Plaza building in Bangladesh collapsed, killing about 1,000 people. Rana Plaza was an eight-story building that housed garment and apparel factories (Kennedy, 2014). The collapse exposed the low wages for employees and unsafe working conditions (Kennedy, 2014). The employees were mostly women who often worked 13 to 14 hour shifts with limited days off. On the day of the collapse, the employees refused to enter the building because the structure was badly damaged by cracks. However, they were forced to work or they would lose a month of compensation ("Factory Collapse in Bangladesh," 2014).

Due to the high death toll of the crash, the companies that purchased apparel from Rana Plaza and other Bangladesh factories faced negative press and publicity (Kennedy, 2014). Though this type of environment is often prevalent in the industry in order to lower labor costs, the short-term benefits of offshoring can often increase the risk of firms, compromising their brand and reputation. The companies that encountered such backlash included Joe Fresh, J.C. Penney, Matalan and The Children's Place (O'Connor, 2014). Though groups were formed to improve the working conditions of factories in the area, the companies' promises to compensate survivors and families of victims were not fully upheld (Kennedy, 2014).

However, a year after the collapse, some Bangladesh factories have upgraded work conditions and labor laws have been implemented to protect employees (Kennedy, 2014). These ongoing efforts reflect the need for businesses to consider their sourcing and purchasing strategies in order to minimize negative social consequences. By including social criteria into the supplier selection process, firms can better protect themselves from a

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damaged reputation and to ensure employee protection. Such a feat cannot be possible without the assistance of suppliers. In order to ensure that firms are achieving a triple bottom line, suppliers need to contribute to the firm's sustainability efforts. This means that suppliers must also modify or implement new processes to be more social oriented and environmentally friendly (Noci, 1997). Therefore, the supplier selection criteria process should support and reflect the firm's triple bottom line efforts.

In order to ensure that suppliers meet the expectations of buyers, a formal supplier selection process should be implemented to facilitate the decision. This process should be based on criteria that directly relate to areas of the triple bottom line to better understand how a supplier will impact a firm's sustainability efforts. The sustainability efforts of a firm are only as strong as the involvement and participation of that firm's supply chain in addressing social and environmental issues (Perry and Towers, 2012).

Supplier selection criteria have been deemed as one of the most important steps in the procurement phase. Due to the complexity and length of current supply chains, it is crucial that proper suppliers are chosen to contribute to the sustainability and business needs of the firm at each step in the process (Perry and Towers, 2012). A study by Vonderembse and Tracey (1999) illustrated the importance of having a specific set of criteria that can be communicated to suppliers. Communication of such expectations ensures that the suppliers are meeting the needs of buyers and thus enhancing the performance of the buying firms.

However, the selection process was not always seen as being so crucial. Instead, the evaluation process has gained importance over the years because of the change in the buyer-supplier relationship. In the past, the relationship between the two parties was often characterized as adversarial and distant. However, because firms now focus on shorter lead times with an emphasis on foreign sourcing, the need for a collaborative relationship with suppliers has become necessary (Nydick and Hill, 1992). Park et al. (1996) stated "the supplier partnering effort yielded both absolute and continuous productivity and quality improvement when compared with performance during the non-partnership period" (p. 108). Vonderembse and Tracey (1999) also concluded that there is a high correlation between supplier involvement and the performance of the firm. This makes the supplier selection

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process crucial in the procurement phase in order to ensure that the suppliers chosen are able to develop long-term mutually beneficial relationships with the buyer (Nydick and Hill, 1992). These types of relationships then allow buyers to work with their suppliers to promote sustainable actions.

Despite the literature and research that shows that the selection process is necessary for the sustainability and competitive advantage of a firm, there are few published works that delineate the type of criteria that is needed. Instead, research shows how firms can achieve high profits through the proper evaluation of suppliers, in which the majority of the supplier selection criteria focuses on cost related variables. The apparent omission of criteria that relates to the social and environmental facets of the triple bottom line implies that firms are not choosing suppliers that will contribute to a sustainable supply chain.

Thus, this paper intends to close the gap in the supplier selection criteria research by creating a triple bottom line framework for firms to use in the supplier selection process. Our framework, called the Sustainable Supplier Selection Framework (SSS Framework) will include supplier selection criteria that will encompass the people and planet facets of the triple bottom line for three industries: Food and Beverage, Food and Staples Retailing, and Household and Personal Products. Profit is not included in the framework due to the fact that criteria related to this facet are already in use in current selection processes. The guidelines can then be implemented in the evaluation of suppliers in order to ensure that firms are choosing the optimal supplier to meet their needs and to create a sustainable supply chain.

LITERATURE REVIEW

Supplier selection criteria literature covers a wide array of topics including the benefits of using selection criteria, specific criteria used for the assessment of suppliers, and decision-making models. This literature reflects changing trends seen in supplier criteria, with a heavy concentration by academics starting in the late 1990s until the present. The trends move from an emphasis on quantitative criteria to the inclusion of qualitative attributes, then environmental factors and now social criteria.

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At the same time, the methodology of examining the supplier selection process evolved. The earlier literature emphasized the use of surveys and research. The surveys were distributed to firms in order to gather information on what qualities they believe are the most important for suppliers to possess. Case-study based research was also conducted to reach the same objectives as the surveys and to also develop a deeper understanding of the reasons why particular criteria were more prevalent and important than others. On the other hand, more recent literature (2000s to 2014) reflect many different methodologies such as empirical studies, mathematical models, and research about characterizing and quantifying different supplier criteria.

The change in methodology aligns with the changes in supplier criteria. As the literature from the 90s focused on a particular set of quantitative criteria, surveys and research were used to extract several key criterion needed for evaluation. The more current literature proposes a variety of frameworks that utilize a larger set of criteria so the decision maker can better tailor the supplier selection process to meet their specific procurement needs. Thus, mathematical models have been more heavily emphasized in order to rank and analyze a supplier based on set of more expansive weighted criteria.

Recent published works discuss the importance of environmental and social criteria in the supplier selection process (Ehrgott et al., 2011). However, few articles actually provide a list of criteria and decision-making frameworks for those firms looking to create a more sustainable supply chain. Thus, there is a gap in the supplier evaluation literature as businesses are looking to create supply chains that are now greener and more socially responsible through the selection of their suppliers. See Appendix A for all publications referenced in the literature review.

Early Literature

The early supplier selection literature was characterized by supplier selection criteria that focused around the three major pillars of price, quality and delivery (Igarashi, de Boer and Fet, 2013, p. 247). Nydick and Hill (1992) then highlighted the importance of service attributes such as research and development support, personnel capabilities and facility capacity, to create four pillars which now included service. Despite emerging criteria such as

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technical ability, which is defined as quality and reliability of the product, the adequacy of the manufacturing facilities, the financial strength of the firm and the managerial competence, these four criteria remained as the traditional attributes to use in the evaluation of suppliers (Raina, 1989, p. 14).

Over time, the emphasis placed on each pillar shifted. According to a longitudinal study conducted by Wilson (1994), in the early 1970s, delivery was ranked the most important supplier selection attribute. The late 1970s and early 1980s saw an emphasis in quality, then there was a shift to focus on price and quality (Wilson, 1994, p. 40). During the late 80s and early 90s firms then shifted away from price as a primary factor for choosing suppliers. Instead, companies ranked suppliers based on a widening array of criteria. However, these criteria were still highly quantified and were often focused on cutting costs or speeding up delivery. Firms realized that in order to reduce costs, an emphasis on quality and service could help them achieve this goal (Wilson, 1994, p. 37). Therefore, firms emphasized customer service attributes and consistency ratings (Choi and Hartley, 1996, p. 341), extensions of the traditional criteria (Lambert, Adams and Emmelhainz, 1997, p. 16).

Nonetheless, the traditional criteria plus additional factors such as service and ability to be a collaborative partner held as the dominating guidelines used for the evaluation process (Hirakubo and Kublin, 1998 p. 19) during the 1990s. In terms of the actual decision making process, Raina (1989) believed that each criteria should be weighted differently according to the level of importance and necessity to the buyer. This weighted ranking system is one trend that is seen throughout the overall analysis of all the supplier selection literature. Though the approaches vary and begin to grow more complex in the later literature, the idea of assigning each criterion a certain value still holds merit.

Selection Criteria Expansion

Though the emphasis in the early literature was on price, quality, delivery, and service, it slowly grew to include other facets of supplier's performance such as technological ability and lead time. As the evaluation processes started to branch out from the traditional criteria, Choi and Hartley (1996) believed that criteria should also include the analysis of customer service and relationship potential between the buyer and the seller, an important aspect for

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both the automobile and healthcare industry. They also extended this list to include past performance, technical capability and organizational profile as necessary areas of evaluation.

Even though suppliers were now being evaluated on multiple levels of criteria, and not just four main categories, Vonderembse and Tracey (1999) argued that depending on the products being produced, the procurement strategy should change and align with the specific item. Therefore, when looking at global suppliers for standard products, cost was still the number one factor during this time period (Hirakubo and Kublin, 1998, p. 21). On the other hand, suppliers of more customized or complex products should be evaluated on factors that extended past cost and included quantitative factors. Thus, supplier criteria should be modified depending on the product (Vonderembse and Tracey, 1999).

In relation to the findings of Hirakubo and Kublin (1998) about quantitative factors, the literature shows a shift in the supplier selection process in the mid and late 1990s. Instead of only focusing on qualitative criteria, firms started to adapt qualitative criteria into their decision making. Firms began to place a lower importance on cost, quality, delivery and service and instead, adopted more criteria that they attempted to quantify.

These qualitative criteria, as stated by Kannan and Tan (2002), focus on the supplier's strategic commitment to the buying firm. As more firms began to outsource, the dependence on suppliers increased. This resulted in pressure to create more areas of evaluation in order to reduce the risk of a supply chain disruption if a poor-performing supplier had been selected. These evaluation areas shifted from the traditional measurable criteria to more qualitative criteria such as the ability to meet the buyer's unique needs and the capabilities of the supplier.

Buyer's needs had expanded to include on-time delivery and sharing information, while supplier capabilities included adoption of new technology and shorter lead times. Kanna and Tan (2002) discovered through their survey that these particular attributes had more of an impact on the performance of the buyer than the original criteria structures.

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Sen et al. (2008) also expanded upon the traditional criteria and developed an integrated chart of selection variables broken down into three levels. The first level is the main criteria: cost, quality, service, reliability, management and organization, and technology. The second and third levels include sub-criteria. The second level consists of criteria such as operating cost, process flexibility, product range, communication system and speed in development. The last level contains fewer sub-criteria than level two. These level three sub-criteria are only for the main categories of cost, quality, service and technology. Examples include price breaks, quality team visits and future manufacturing capabilities. This comprehensive chart organizes criteria into a hierarchy for businesses to evaluate suppliers based on the type of desired integration level.

In 2007, Kannan and Haq used a mathematical model to determine important criteria for supplier selection. The study focused on more of a multiple-criteria approach that included both quantitative and qualitative attributes such as price, quality, and capabilities. Several other authors came to the same conclusions as Kannan and Haq (2007) through mathematical models Chan et al. (2008), Dai and Blackhurst (2012) and Tuzkaya (2013), and empirical studies Simpson and Power (2005), Carter, Maltz and Yan (2008) and Jabbour and Jabbour (2009).

Vijayvagy (2012) conducted research similar to Sen et al. (2008) by developing seven criteria groups based on popular selection criteria: quality, cost, delivery, flexibility, reputation, reliability, and post sales services. Thus, the 2000s also showed that businesses were adopting a multiple-criteria evaluation approach that decreased the emphasis on the traditional criteria.

Selection Criteria Expansion-Environmental

It was not until the late 90s that buyers began to consider the environmental side of the business. This shift towards environmental awareness in the supply chain was due to external pressures from institutions and government agencies. These pressures resulted in literature published on how to integrate environmental factors into the supplier selection process.

Noci (1997) breaks down environmental criteria into two categories based on the type of strategy that the buying firm decides to adopt. The first strategy is the pro-active green

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strategy and this relates to the idea of “anticipating competitors, by product or process innovation, in order to achieve a competitive advantage” (Noci, 1997, p. 106). The criteria for firms to use when adopting this type of strategy is to evaluate suppliers based on their cooperation with environmental programs, and levels of green competencies such as: clean technology, materials, and capacity to respond in a timely manner to external and internal changes. The second strategy is a re-active environmental strategy in which the “company only aims at aligning its environmental performance with regulator’s prescriptions” (Noci, 1997, p. 106). The criteria used for this strategy includes a supplier’s solid waste amounts, air emissions, and energy consumption. Thus, this specialized framework is dependent on the type of strategy that is being pursued by the firm.

As the literature moves into the 2000s, a growing number of other frameworks were developed, similar to Noci’s (1997), which allowed firms to incorporate environmental criteria into their supplier evaluation process. By this time, the environment had now become a topic of interest among businesses.

The research completed by Monczka, Trent and Handfield (2005) reflected the continual importance of primary criteria: price, quality and delivery. On the other hand, they further discussed the importance of additional factors such as long term relationship potential, sourcing strategies and environmental regulation compliance similar to ISO 14000 certification. Thus, their research extends the traditional criteria and begins to emphasize environmental criteria.

Lee et al. (2009) proposed another framework that focuses on evaluating green suppliers to determine which suppliers would positively contribute to the overall performance of a firm. The framework combines criteria derived from the Delphi model that determined the most important factors for evaluating green suppliers based on averages gathered from questionnaires sent to eleven industry professionals. The results showed that environment related certificates, pollution prevention, and use of hazardous materials were the most popular criteria to use in the selection process. They then expanded upon these results to then create a hierarchical chart that can assist in choosing a supplier. The main criteria points of this framework include green supplier performance related factors such as: quality,

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technology capability, pollution control, environment management, green product and green competencies. These main criteria are then broken down into sub-criteria such as: green process planning, recycling, green packaging, capability of R&D and waste water. The proposed framework becomes valuable when another mathematical model is applied to compare and contrast the suppliers against one another. Nonetheless, specific criteria are discussed in regards to evaluating green suppliers.

Jabbour and Jabbour (2009) developed a framework based on environmental criteria in Brazilian companies. The framework illustrated a comprehensive chart that delineated categories such as quantitative environmental criteria and qualitative environmental criteria. This framework focused on the environmental performance of suppliers and was intended to be used in conjunction with other criteria in the supplier decision-making process. Some environmental criteria that were considered to be quantitative included: solid/chemical waste, water recovery, energy usage and recycling. The qualitative criteria included: retention of green consumers, environmental training, environmental planning, and policy and use of environmental materials (Jabbour and Jabbour, 2009, p.484). The purpose of this framework by Jabbour and Jabbour (2009) is to extend upon traditional supplier requirements and create a simple and comprehensive way for buyers to evaluate the environmental performance of suppliers.

Shortly after Jabbour and Jabbour (2009) publicized their environmental framework, Zhu and Dou (2010) set out to distinguish between the factors used in the evaluation of green supply chains. Their dual application of research and mathematical models showed that environmental factors such as pollution controls, pollution prevention, resource consumption levels and environmental management systems should be combined with the traditional supplier performance metrics (Zhu and Dou, 2010, p.309). They also argued that a supplier should be evaluated on the environmental attributes that can be managed within the organization in order to better influence the outcomes.

This point was later supported by Dai and Blackhurst (2012) who illustrated the idea of incorporating environmental and sustainability criteria in the evaluation process as a necessary business requirement due to the external pressures from customers and

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communities. Despite their argument in favor of environmental criteria, Dai and Blackhurst (2012) did not identify suitable environmental criteria that could potentially be used in the selection of suppliers.

Chiarini (2012) developed a list of steps, based on the ISO 14001 standard, which can be followed to help create a sustainable supply chain. This research focuses on manufacturing companies and their best practices in regards to the ISO standard. This particular standard enforces environmental initiatives and actions, such as reducing emissions and waste and introducing continuous improvement. One particular section of ISO 14001 relates to controlling the sustainability of suppliers through management review and audits. Chiarini (2012) elaborates on this clause by suggesting that the important aspects of environmentally sustainability should be chosen by the company and communicated to the supplier to focus in on. Once these aspects have been chosen the suppliers and company should work together to implement the necessary steps and regular inspections should be scheduled to ensure compliance. These audits allow companies to better measure the supplier's environmental progress and performance.

In addition to better understanding the influence of ISO 14001 on supplier environmental actions, Chiarini (2012) states five steps that can be taken to help create a sustainable supply chain. The first step is create a new contract with suppliers that states that the supplier will participate in reducing environmental impacts, such as not working with hazardous chemicals. Second, companies should educate suppliers on environmental issues. For example, firms can raise awareness about the requirements listed in ISO 14001. The third step is to implement an environmental management system for the suppliers. This system should help in achieving the ISO 14001 certification by including audits, environmental analyses and the creation of defined environmental goals. This management system connects to the fourth step of creating key performance indicators (KPIs). These KPIs are the metrics used to measure environmental performance. Lastly, the supplier will become a green partner. A green partner means that the supplier will continually strive to achieve environmental goals and will also invest in green technology.

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Based on these five steps, Chiarini (2012) believes that attaining the last one is the most important as this will help create the desired environmentally friendly supply chain. Thus, the potential for a supplier to become a green partner needs to be evaluated to determine their impact on the sustainability of the entire company. Without this ability of the supplier the company cannot “invest in environmental technologies as well as in common research dedicated to the impacts of the product during its lifecycle” (Chiarini, 2012 p. 30).

Harms, Hansen and Schaltegger (2013) also discuss the importance of certifications and standards in the evaluation and selection process of suppliers. Their research states that ISO 9000 and ISO 14001 are prominent among German publically traded companies decision making processes to help reduce the risk of selecting a supplier who will negatively impact their reputation. These standards ensure that suppliers are adapting sustainability related initiatives in their businesses and can be used as criteria (Harms, Hansen and Schaltegger, 2013).

In a longitudinal study from 1991-2001 completed by Igarashi, de Boer and Fet (2013), they identified a trend towards an emphasis of environmental consciousness in evaluating suppliers. They concluded their paper with possible ways to integrate environmental criteria into the selection process and broke down the possible criteria into three categories. The first category was organizational related criteria that reflected management decisions and included: certification of environmental management systems, environmental policy, compliancy to regulations and the evaluation of the environmental performance of second tier suppliers. The second category defined product related criteria. The attributes in this category were the reduced use of toxins, recycling, environmental labelling and green technology. Lastly, the third category focused on environmental criteria such as proper training of staff and waste management (Igarashi, de Boer and Fet, 2013, p. 253).

In addition, Tuzkaya (2013), utilized a mathematical model to analyze the relationship of environmental and traditional criteria when used simultaneously in the selection process. Tuzkaya (2013) believed that the traditional criteria of cost, responsiveness, reliability and agility should still be used in the evaluation process. However, these specific attributes

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should be used to complement environmental criteria such as green process management, environmental costs, pollution control and green image (Tuzkaya, 2013, p. 429).

Kannan, Jabbour and Jabbour (2014) also discussed the importance of evaluating suppliers based on criteria that relate to green supply chain management (GSCM). They argued that the adoption of GSCM can improve the overall environmental performance of a firm's supply chain by positively contributing to their sustainability efforts. However, the research does not provide evaluation criteria to be used in selecting suppliers based on their GSCM initiatives. This is because the researchers believe that it is difficult to create a fair selection method that captures the essence of GSCM and translates it into selection criteria. Hence, no specific criteria are outlined.

Kumar, Jain and Kumar (2014) specify the use of green data development analysis to track and measure the carbon footprint of suppliers. Carbon footprint relates to the emissions of a company in terms of carbon dioxide, greenhouse gases and emissions from organizational activities and from their products or services. By measuring such a factor, firms will better be able to understand the environmental efficiency of a supplier. Thus, the carbon footprint should be used as a criteria in choosing suppliers because the measurement has implications about the supplier's processes and future contributions to the sustainability of a supply chain.

Despite the numerous publications on incorporating environmental criteria into the supplier selection process Simpson and Power (2005) deduced that the emphasis on environmental criteria was very low when compared to the other factors that were used to choose a supplier. Through research and an empirical study, Simpson and Power (2005) concluded the supplier decision was still based on the potential relationship and the traditional criteria, not environmental factors. This conclusion by Simpson and Power (2005) was counter to the findings of Kanna and Tan (2002).

Similarly, the study conducted by Harms, Hansen and Schaltegger (2013) shows that economic aspects are the most relevant in developing a sustainable supply chain. The factors in the economic category, such as supplier reliability, cost reduction and quality assurance, have a relevance rate of 80% or above. However, when looking at the environmental factors

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used in the selection and evaluation process, the percentage of relevance ranges from 25% to 91%. Environmental factors include waste reduction, biodiversity and renewable energy. Therefore, the fact that environmental factors have a lower average of relevance than economic aspects shows that firms are still focusing in on traditional criteria (Harms, Hansen and Schaltegger, 2013).

Thus, there is a discrepancy between firms realizing the pressure to act in an environmentally friendly manner to actually implementing and taking action toward more of an environmental emphasis in the supplier selection decision making process. These discrepancies continued over the following few years. Therefore, the trends are indeed moving away from the early criteria that only focused on quality, cost and service. Though traditional criteria are still currently being emphasized despite the intense pressure to become more sustainable and environmental, several articles relate to the importance of environmental criteria in the selection process (Brown, 2008).

In a study conducted by Brown-Wilson Group in 2007, about 21% of all US and UK public companies included green clauses in their vendor contracts. In the same year, 43% of all companies that were outsourcing for the first time added environmental criteria into the supplier selection process (Brown, 2008). Thus, the trend is slowly moving in the direction of using both traditional and green credentials to evaluate suppliers. Brown (2008) also identified the environmental demands that the surveyed companies expected of their outsourcing suppliers. Some of these demands included: reducing carbon footprint to zero impact, compliance with environmental legal regulations, and innovation to protect the environment. This survey reflects how environmental criteria can be included in contracts and selection criteria to ensure that the buying firm is creating a sustainable supply chain (Brown, 2008).

Therefore, the literature illustrates how environmental criteria is gaining hold in the evaluation process. More and more journals and articles are being published on various environmental criteria and measuring systems that can be incorporated into the evaluation process to help create a sustainable supply chain. Though not many firms are actually adopting this evaluation area, the trend does show that as environmental criteria becomes

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more of a topic of discussion, it will begin to be integrated into the selection efforts of companies.

Selection Criteria Expansion-Social

In contrast to the literature about environmental criteria in the supplier selection process, the literature about social responsibility is limited and general. Little research has been completed on how and if firms choose their suppliers based on social issues. With such a limited focus on the social aspect of the triple bottom line in the supplier selection process, firms are preventing themselves from achieving a sustainable supply chain because their suppliers are not fully integrated with their strategy.

Despite the lack of literature published on social supplier selection criteria, there is some research about how social criteria can be integrated into the evaluation process. To begin with, Arminas (2001) suggested that suppliers be chosen based on whom they are accredited by and for how long they have maintained accreditation. The accreditation relates to ethical and social qualifications specified by certain organizations for firms to respect (Arminas, 2001).

In addition to evaluation accreditations for choosing suppliers, many firms are implementing codes of conduct to help ensure that suppliers maintain ethical labor standards. The codes, or similar documents such as code of ethics and business principles, are tools to help firms implement and manage corporate social responsibility (Preuss, 2009).

In the 1990s and 2000s, the popularity of codes of conduct grew. Codes of conduct were a response to the external demands of globalization and several institutions such as activist groups and non-profit organizations (Arminas, 2001). These groups fought against sweatshops and poor labor standards and demanded that companies improve the treatment of their employees (Coats, 2009).

To protect their brands and bottom lines, multinational corporations began to implement codes to hold the suppliers accountable in protecting rights of workers and maintaining good working conditions on the factory floors (Egels-Zanden, 2014). By having these codes, companies often created a positive and ethical image for themselves, therefore gaining

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acceptance from society (Adebanjo et al., 2013). However, some critics argue that the codes are a way for businesses to gain support without actually changing their processes (Egels-Zanden, 2014).

The provisions in the codes differ based on company and/or industry. Some codes include increasing salaries, giving compensation for overtime and also limiting the amount of overtime for employees. In addition, health and safety education, the prohibition of child labor and the requirement of accident insurance have also been enforced in codes of conduct (Egels-Zanden, 2014).

In a study conducted by Egels-Zanden (2014), four toy factories in China were examined between 2004 and 2009. The objective of the study was to show if the implemented codes of conduct were effective. The study showed that over the five years, the factories improved working conditions and treatment of employees. However, these improvements resulted in higher production costs for suppliers and created more challenges in meeting the demands of the buyers. For example, with less overtime allowed, suppliers found that meeting strict production deadlines was much harder.

Despite the implementation of codes, often times suppliers fail to maintain the minimum standards included. In order to enforce the codes, buyers began to subject their suppliers to audits. The audits enforced in toy factories in China revealed suppliers falsifying time cards and/or factory managers scripting employee interviews. These failures could reflect how the codes are not producing the improvements in the workplace that was once hoped (Egels-Zanden, 2014). Thus, social issues do not seem to come into focus until after a supplier is chosen. However, suppliers often tend to adopt the initiatives in the codes, before the selection process, to appear attractive to buying firms (Egels-Zanden, 2014).

Even with the strong presence of codes of conduct in industries, Perry and Towers (2012) believe that there are several ways to address social issues in the supply chain. These alternatives include inspections/audits, adoption of international standards, and extended frameworks. However, the research completed by Perry and Towers (2012) about the effect of

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these various ways to create standards around social issues have resulted in the same conclusions as Egels-Zanden's (2014) implications that codes may not have the desired effect.

Therefore, because companies are being held accountable by consumers and stakeholders to implement social initiatives throughout the entire supply chain, the use of codes and standards will not help in the progress towards that goal. Instead, as found in interviews of businesses involved in the manufacturing of apparel in Sri Lanka, trust and cooperation are necessary to create a supply chain that focuses on corporate social responsibility. Trust and cooperation allow for the buyer and supplier to create a collaborative partnership and enhance the communication and visibility along the supply chain (Perry and Towers, 2012). This, in return, makes it easier to implement social related activities throughout the supply chain. The findings from Perry and Towers (2012) study showed that "a collaborative approach to CSR which achieved better levels of supplier engagement than a compliance-based approach that tended to create distrust" (p. 490). Thus, there may be more successful ways of holding suppliers accountable to implement social issues than codes of conduct.

At the same time, companies such as Wal-Mart, and Pepsi-Co are using alternative methods to become more ethical and ensure that suppliers adhere to social standards. To begin with, Wal-Mart has its own sustainability index that is used to measure several components that relate to labor and the environment. This index is used in the selection of suppliers depending on how the suppliers answer questions and their steps toward becoming more sustainable and ethical. On the other hand, Pepsi-Co offers training workshops for all new suppliers to ensure that they are in compliance with the company's standards and expectations (D'Aquila, 2012).

Therefore, there are many ways for companies to ensure that suppliers are acting in sustainable and ethical ways. However, unlike Wal-Mart, few companies are actually choosing suppliers based on their current efforts and instead prioritizing other criteria such as quality and price over social issues (D'Aquila, 2012).

Social criteria has gained the least traction in being included in the evaluation process. However, because these issues directly impact the sustainability of a firm and a supply chain, the literature does show that these criteria will be more emphasized in the future due to

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stakeholder pressures. Nonetheless, it is an area that cannot be neglected and should be integrated into decision making process.

CLOSING THE RESEARCH GAP

Based upon the review of the literature and the public knowledge that firms are under more intense pressure to create sustainable supply chains, we will add to the supplier selection literature in the following ways. First, we look to close the gap in defining specific environmental criteria companies can use when evaluating their suppliers. Second, we will propose social criteria companies can use when evaluating their suppliers. The criteria we propose will originate from company websites, supplier/vendor codes of conducts, ethical policies and social accountability standards such as the GRI G3.1 and G4. Third, we will combine the environmental and social criteria with the traditional criteria to create a supplier selection framework that encompasses the people and planet aspects of the triple bottom line. This framework, called the Sustainable Supplier Selection Framework (SSSF), will assist in the supplier selection decision making process as the criteria will be only those attributes that are most necessary for a buying firm to achieve their triple bottom line goals and create a sustainable supply chain.

RESEARCH METHODOLOGY

In order to identify sustainable supplier selection criteria that are relevant for decision-making processes, we decided to analyze companies that had established initiatives focused on corporate social responsibility and the triple bottom line. The companies used in our analysis were gathered from Newsweek's World's Greenest Companies in 2014, CSR-Sustainability Monitor 2014 Company Ranking, and Forbes 100 Companies with the Best CSR Reputation in 2013. These three lists provided rankings of the most sustainable or most green companies in the world. Therefore, the companies chosen would provide best practices for other firms to follow when looking to create a sustainable supply chain through the participation of suppliers. Each list used different criteria and evaluation factors to determine what companies would appear on the list and what rank they would receive

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Newsweek

Newsweek's World's Greenest Companies in 2014 ranks the top 500 global companies based on corporate sustainability and environmental impact. The list was created through a partnership with Corporate Knights Capital, a research firm that uses sustainability data to develop investment strategies. Companies were scored on the following categories: energy productivity, carbon productivity, water productivity, waste productivity, and reputation. These various environmental metrics were derived from those that are most publicly available. The scoring and rankings were then based on a propriety rules-based method (Newsweek, 2014).

However, because the list only ranks firms based on available metrics, there are several limitations. First of all, only a few companies state their carbon footprint and thus, companies cannot be evenly compared based on carbon productivity and how they impact the environment with their processes and products. Also, the list does not include supply chain impacts. For example, greenhouse gas emissions disclosed by a firm usually only represents the emissions for one region and not for the entire supply chain. Therefore, those that did report this type of information, received "five percent of their greenhouse gas emissions score, simply for reporting some part of this Scope..." (Newsweek, 2014 p. 3). Those that did not report on this area were given a score of zero.

In addition to not taking into consideration the entire supply chain, many firms did not specify the breakdown of certain metrics in certain areas or regions. For instance, water use in a company is only deemed as being high or low when considering where that company is located. Thus, without the full context of certain environmental criteria, the rankings could not properly reflect that sustainability of a firm. It should be noted that some of the information is incomplete due to lack of availability, and also certain key categories are missing from the analysis. These categories include the impact on biodiversity and political lobbying. This is because it is sometimes challenging to create rules-based scores for international companies (Newsweek, 2014).

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CSR-Sustainability Monitor

The second list viewed was CSR-Sustainability Monitor 2014 Company Ranking. The CSR-Sustainability Monitor is a system developed by researchers at the Weissman Center for International Business at Baruch College. The objective of the system is to allow for Corporate Social Responsibility (CSR) reports to be compared based on a set of common variables to determine the most socially responsible company in the world (Ferns et al., 2014).

The reports analyzed came from companies that published a report in 2012 and appeared in the “top 250 of the 2012 Fortune 500 or Fortune Global 500, or that were included in the previous version of the CSR-Sustainability Monitor” (Ferns et al., 2014 p. 5). This resulted in a list that contained 614 companies in 20 industries from 43 countries. The majority of the companies came from North America, East Asia and Western Europe and were categorized in industries such as manufacturing, information services and mining (Ferns et al., 2014). In order to compare and contrast the CSR reports from these 614 companies, eleven contextual elements were created. These elements were integrity assurance, environment, philanthropy and community involvement, external stakeholder engagement, supply chain management, labor relations, corporate governance, bribery and corruption, human rights, codes of conduct, executive/chairman’s message.

Each element was assigned a weight, creating a total of 100% between the eleven categories. Companies were given a score for each category based on the “quality, depth, and breadth of their disclosure” (Ferns et al., 2014 p. 1). Thus, the performance of the companies on these eleven elements was not taken into consideration for the rankings. Also, any supporting documents or links mentioned within the reports were not used in the scoring process. The credibility of the rankings then depended on the level of accuracy in the information provided in the CSR reports (Ferns et al., 2014).

Forbes

The last list used to identify potential companies is the Forbes 2013 Companies with the Best CSR Reputations. Forbes partnered with Reputation Institute, a consulting firm that analyzed companies to determine which one had the best reputation. Reputation Institute looked at 100 companies from fifteen different countries (Smith, 2013).

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Each company was evaluated based on the RepTrak system. This system determined consumer's perceptions and feelings towards a particular company based on trust, esteem, admiration and good feeling. These emotional indicators were then combined with seven categories that relate to corporate reputation: workplace, governance, citizenship, financial performance, leadership, products and services, and innovation. However, out of these seven only three directly relate to corporate social responsibility. The three dimensions are citizenship, governance and workplace and they were the categories that were used in the rankings of the companies. Reputation Institute believes that these emotional indicators of the three specific categories are based on the consumer's perceptions corporate social responsibility of the firm (Smith, 2013).

Therefore, in order to gather data, 55,000 consumers were polled to determine how they felt about the 100 chosen companies. The consumers were asked to designate each company a ranking of: good corporate citizen, responsibly-run company, appealing place to work. These rankings were then translated into scores for each company. The scores ranged from 60.67 to 72.97. Other factors that were taken into consideration included company size, annual revenue, multinational presence and familiarity among consumers (Smith, 2013).

Companies

After reviewing the potential companies to use in our analysis, we decided to limit our research to only three industries. These industries are the Food and Beverage industry, the Food and Staples Retailing industry and the Household and Personal Products industry. All three of these industries were chosen because they directly impact the end consumer. Therefore, these industries would include those companies that would take into the consideration the triple bottom line because of the pressures from their consumers to be more environmentally friendly and socially oriented.

In addition, we only analyzed companies that appeared on at least two out of the three lists. The purpose of this selection method was to ensure that the companies being used in the research were demonstrating high levels of corporate sustainability based on multiple perspectives. Also, the companies chosen have originated from all over the world. Thus, not one specific country or region was of focus for the analysis.

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The tables below list the companies used from each industry and what list they appeared on with their respective ranking. The first industry contains eight companies, the second industry has nine companies and the last industry used for the analysis has five companies. This gave us a total of twenty-two companies. From these twenty-two companies, twenty of the companies appear on the Newsweek list, twenty-one from the CSR-Sustainability Monitor rankings and eight from Forbes. Only five companies appear on all three lists.

Company Name	Newsweek	CSR-Sustainability Monitor	Forbes
Altria Group	144	334	
Associated British Foods	372	547	
Coca-Cola Co.	229	38	27
General Mills	65	191	63
Kellogg		209	14
Nestle	201	60	10
Pepsi Co	246		99
Unilever	31	475	65

Table 1: Food and Beverage Industry (n=8)

Company Name	Newsweek	CSR-Sustainability Monitor	Forbes
Carrefour	51	50	
CVS Caremark	64	133	
Seven & I Holdings	224	362	
Target	284	211	
Tesco	330	468	
Walgreens	156	575	
Wal-Mart	337	130	
Wesfarmers	127	72	
Woolworths	196	103	

Table 2: Food and Staples Retailing Industry (n=9)

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Company Name	Newsweek	CSR-Sustainability Monitor	Forbes
Colgate-Palmolive	169	260	16
Henkel	113	352	
Kimberly Clark	328	23	
L'Oreal	35	376	
Procter and Gamble		119	29

Table 3: Household and Personal Products Industry (n=5)

Reports

Once the twenty-two companies were chosen and finalized, numerous reports and documents were gathered for each company. These documents were company issued reports that contained information on the sustainability and corporate social responsibility initiatives of the company. The gathered reports include: GRI/CSR reports, Supplier/Vendor Code of Conduct and Ethical Policies. Websites were also looked at to better understand their social and environmental efforts.

To begin with, each company's most recent CSR report and/or GRI report was pulled. These reports were all published between 2012 and 2014. The CSR reports delineate the information regarding the company's social and environmental efforts. On the other hand, GRI reports contain the disclosed information relating to the elements stated by the GRI standards. These elements include: organizational profile, management approach and performance indicators, economic, environmental and social. Thus, in comparison to CSR reports, the GRI report contains information related to company structure and business environment, as opposed to only sustainability related knowledge.

A majority of the firms filed the GRI G3.1 version, and thus the most recent version of the report, GRI G4.0, was not emphasized due to lack of availability. Often times the GRI report was included at the end of the CSR report. Note that the combining of these two documents is not distinguished in the chart below and instead, only the CSR report is acknowledged as being used. In addition, the Supplier/Vendor Code of Conduct for each firm was also looked at in order to better understand supplier expectations. These expectations focus on areas such as business integrity and environmental and human rights compliance. Though the codes of conduct did vary in format and information, all 22 established that suppliers must comply to

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the requirements listed in order to maintain a relationship with the buying firm. These codes of conduct were the main source of information in better understanding how suppliers can participate in creating a sustainable supply chain.

Company	CSR Report	GRI Report	Supplier/ Vendor Code of Conduct	Ethical Policy	Website	Business Code of Conduct	Sourcing Guidelines	Sustainability Guide
Altria Group	X		X					
Associated British Foods	X		X					
Carrefour	X			X				
Coca-Cola Co.	X		X			X		
Colgate- Palmolive	X		X	X		X		
CVS Caremark		X	X					
General Mills	X		X					
Henkel	X		X		X	X		
Kellogg	X		X					
Kimberly Clark	X		X		X			X
L'Oreal	X			X	X			
Nestle	X		X				X	
Pepsi Co	X		X					
Procter and Gamble	X		X		X			
Seven and I Holdings	X		X					
Target	X		X					
Tesco	X			X	X			
Unilever	X						X	
Walgreens					X	X		
Wal-Mart	X		X					
Wesfarmers	X			X		X		
Woolworths	X			X				

Table 4: Data Sources Utilized for Each Company

Categories

In order to compare the various reports and documents against one another, the analysis was structured around the following five categories: Business, Environment, Labor Practices, Society and Product. The first four categories were derived from the GRI G4.0 standards, specifically the “Supply Chain Related Standard Disclosures” section. The GRI report was used

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as a baseline because it provides specific sections that allow the firm to disclose information regarding their sustainability efforts.

The GRI G4.0 report breaks the “Supply Chain Related Standard Disclosures” section into four categories. These categories are: General Standard Disclosures, Specific Standard Disclosures, Environmental, and Social. Since the purpose of the research is to analyze the triple bottom line in relation to supplier selection criteria, a few changes were made to the GRI categories. However, it should be noted, that the sub-categories listed under each section in the GRI report remained the same. This was done to understand if these areas were truly of concern for firms to take action towards. Additional categories based on the findings from company reports were then added to the appropriate section.

The General Standard Disclosures section, from the GRI G4.0 report, was renamed to include all information about the “Business” of the firm. This refers to areas such as business integrity, compliance with local laws and implementation of auditing systems. The second category dealt with the economics of the firm and thus it was not included in the overall analysis of the 22 companies. This is due to the fact that firms are already using cost related factors and criteria as a prerequisite for suppliers. Therefore, the economic aspect would have little impact on the general analysis because this area of the triple bottom line is already being included in the evaluation process.

The Environmental category stated by the GRI G4.0 report remained the same and also included the original sub categories: Energy and Emissions. Lastly, the Social category was originally broken into three sub categories: Labor Practices and Decent Work, Human Rights and Society. Due to the immense amount of information in the Social category, we divided it into two new separate categories. These new categories are Labor Practices and Society. The Labor Practices section includes the original sub categories from the original Labor Practices and Decent Work and Human Rights sections. The combining of these two areas is due to the fact that they both help secure the rights and freedoms of employees, with little clear distinction between the two. The existing sub-categories under these two categories were then combined to be included under the new overarching group. The last category remained as Society.

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During the research, a new category emerged that is not included in the GRI G4.0 report. Many companies expected their suppliers to develop programs and implement initiatives around product safety and quality. Therefore, this new category, Product, contains those sub-categories that deal with the integrity of the items being sourced throughout the supply chain. The sub-categories for this particular segment have all been derived from the reports that were being analyzed. Due to the pressure from consumers about product related attributes, we felt that this category should be included in the analysis to better help firms achieve a sustainable supply chain.

Therefore, the GRI G4.0 standard disclosures section that relates to the supply chain was used as a baseline for the analysis of the companies. The analysis focuses on five categories which properly capture the people and planet focused efforts completed or in progress by a company.

Sub-Categories

With the five categories established, the reports gathered for each company were reviewed. During the review, the main focus was to find those initiatives and efforts that related to the triple bottom line that required the participation of suppliers. These initiatives then became sub-categories for each of the overarching segments. Thus, sub-categories were derived from the information found within the documents and reports. The table below reflects how many sub-categories were created for each category. Refer to Appendix B for a full breakdown of the established sub-categories for each SSSF category.

SSSF Category	Number of Sub- Categories
Business	8
Environment	22
Labor Practices	14
Society	2
Product	7

Table 5: Number of Sub-Categories per SSSF Category

Distribution of Sub-Categories

Each company was analyzed based on these established sub-categories. In the event that the company was fulfilling a sub-category under the SSS Framework, a value of 1 was given for that company. This would allow for the sub-categories and companies to be analyzed based on

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frequency counts. The frequency counts of sub-categories were compared based on industry as well as a compilation of the results from all 22 companies.

Once the frequency counts for each sub-category had been determined, tiers were created to further compare and contrast the frequency counts. Three tiers were created for each industry and for the compilation of all 22 companies. Each tier has a range that states which sub-category should be placed in which tier depending on its assigned frequency count. Tier One signifies those sub-categories with the highest frequency count while Tier Three contains the sub-categories with the lowest frequency count.

Therefore, those sub-categories that appear in Tier One are those criteria that are most crucial to the evaluation process of suppliers because they are the initiatives that sustainable companies are requiring the most participation from their suppliers. Thus, Tier One sub-categories provide best practices for other firms to follow when looking to create a sustainable supply chain. On the other hand, Tier Three contains those sub-categories that are not as crucial or necessary to the evaluation process of suppliers because less companies are reporting on these particular initiatives. Instead, the activities placed in Tier Three can be interpreted as those initiatives that can help support the efforts to becoming sustainable. Tier two then represents those sub-categories that are gaining prominence and have about half the support of all companies. While these sub-categories are not necessary in the selection of suppliers, they are more frequently exercised than Tier Three initiatives.

Due to the fact that each industry has a different number of companies, the tier ranges shift among industries. The table below depicts the ranges for each industry as well as the ranges used when the results of each individual company were compiled together.

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Industry	Tier One Range	Tier Two Range	Tier Three Range
Food and Beverage	6-8	3-5	0-2
Food and Staples Retailing	7-9	3-6	0-2
Household and Personal Products	4-5	3-2	0-1
Compilation of 22 Companies	15-22	7-14	0-6

Table 6: Tier Distribution Ranges by Industry

INDUSTRY ANALYSIS

The companies within each industry were analyzed and compared against one another to determine the tier distribution for that particular industry. The results are discussed below.

Food and Beverage Industry

There are eight companies in the Food and Beverage industry. These companies are: Altria Group, Associated British Foods, Coca-Cola Company, General Mills, Kellogg, Nestle, Pepsi Co, and Unilever. Half of these companies are based in Europe and the other half in the United States.

Business Category

Within the Business segment, the only sub-category that is highlighted within the reports of all eight companies is Business Integrity. This shows that these companies want to ensure that their suppliers are acting with integrity and following the proper anti-corruption and anti-bribery laws. In addition, Subject to Audits for Compliance received a count of seven, showing that this is another aspect that firms are expecting compliance from their suppliers. In order for the codes of conduct and other standards to be followed, firms are realizing that audits are an efficient way to evaluate a supplier’s compliance.

The two categories that have received the lowest count are: Develop Mutually Beneficial Relationship with Diverse Suppliers and the Use of ISO 26000 Standards. It should be noted that no company in this particular industry required the latter sub-category to be followed. This may be because firms have developed their own social responsibility requirements and have not reached the point of adopting international standards as of yet. Refer to Appendix C for the Business tier distribution for this industry.

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Environment Category

The breakdown of the Environment segment shows that 16 of the 22 sub-categories fall evenly between Tier Two and Tier Three. This particular distribution signifies that not all companies are embracing environmental initiatives. Instead, Tier One distribution reflects that these companies are requiring their suppliers to adhere to more general standards. All eight of the companies expect suppliers to Practice Responsible/Sustainable Sourcing and to Implement Sustainable Strategies/Reduce Environmental Impact. Though these two initiatives do help create more environmentally friendly supply chains, they are vague. The companies do not specifically state how suppliers should implement these specific initiatives. Thus, the actions towards these standards are subjective.

On the other hand, Tier Two and Tier Three contain more specific expectations in the sense that they target a particular area of the environment. For example, Tier Two contains the provisions of waste management and pollution prevention. These are more focused areas that can potentially be more measurable than the majority of the initiatives in Tier One. Thus, the Food and Beverage industry may only be concerned with implementing those actions that appear to be environmentally friendly but could potentially have limited impact. It should be noted that Compliance with Local Environmental Laws and Recycling did receive a count of seven. This does show that recycling is on the forefront of environmental initiatives and is taken seriously throughout the industry.

In this particular section of the Food and Beverage Industry, Nestle fulfills 19 of the 22 sub-categories. This is the only company to reflect more than half of the initiatives shown in this category in their reports. Nestle has been shown to be thorough with their Environmental sub-categories and even has a separate guideline packet for sourcing. This book of guidelines explicitly states the rules and regulations that suppliers must adhere to when sourcing different products, such as soya and palm oil. Thus, Nestle stands out as taking the lead in Environmental initiatives and being committed to creating a sustainable supply chain. Refer to Appendix C for the Environment tier distribution for this industry.

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Labor Practices Category

Compared to the four other segments, the Labor Practices category is a main focal point for the Food and Beverage industry. This can be concluded based on the fact that ten of the fourteen sub-categories appear in Tier One. This distribution signifies that supplier compliance to Labor Practices is crucial. Nine of the sub-categories have received a frequency count of 8, with Complying with Local Employment Laws receiving a seven. Therefore, these companies are respecting and acknowledging the rights of employees and the International Laws and Regulations that govern employment. By expecting suppliers to uphold these terms, businesses are creating more responsible and safer work conditions.

One sub-category that received a count of one is Emergency Preparedness Training for Employees. Due to the recent Bangladesh factory collapse, it was hypothesized that this particular initiative would receive more emphasis. With many stakeholders criticizing the conditions of factories and workplaces, it is surprising that some sort of formal emergency training is not expected among suppliers. Refer to Appendix C for the Labor Practices tier distribution for this industry.

Society Category

The Society category shows that neither of the two sub-categories are expected to be upheld by any of the suppliers from the eight companies. Instead, both initiatives fall under Tier Two, reflecting that these are important but not necessary to achieve a sound triple bottom line. At the same time, the distinct distribution of this segment does highlight the fact that Society is not a complete focus for firms when creating expectations for suppliers. Thus, this could be a possible area of improvement for this particular industry in order to better influence the communities that suppliers are doing business in. Because society impacts the people side of the triple bottom line, this category should not be disregarded and instead, firms should work to integrate the segment into supplier codes of conduct.

Pepsi Co. is the only company in this industry to not reflect any Society related initiatives. Though this could be due to a variety of reasons, this fact could inhibit the company from being truly sustainable. On the other hand, this could also show that firms do not have to hold suppliers

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accountable for Society related sub-categories and still have a positive triple bottom line. Refer to Appendix C for the Society tier distribution for this industry.

Product Category

In respect to the Product category, five of the sub-categories fall under Tier Three. Only one, Product Quality and Safety, is in Tier One. The placement of this sub-category is not surprising due to the fact that the Food and Beverage industry must ensure that all products are of high quality and safe for human consumption.

At the same time, Tier Three is comprised of those initiatives that are gaining discussion among activist groups and stakeholders. Therefore, it was thought that actions such as elimination of GMOs and compliance with the Global Food Safety Initiative (GFSI) would be more prominent. Instead, only two companies, Coca-Cola and General Mills, require the GFSI standard to be followed. Due to the fact that this is the Food and Beverage industry, it was believed that the GFSI would be of more importance to companies. However, as firms start to consider external criticisms, these types of sub-categories may be adopted by more companies in future years. Refer to Appendix C for the Product tier distribution for this industry.

Food and Staples Retailing Industry

The Food and Staples Retailing industry differs than the Food and Beverage industry because the industry contains those businesses that sell the produced food and beverages, as opposed to making the products. The companies analyzed in the Food and Staples Retailing industry are: Carrefour, CVS Caremark, Seven & I Holdings, Target, Tesco, Walgreens, Wal-Mart, Wesfarmers, Woolworths. Four of these companies are from the United States and two are from Australia. Seven and I Holdings is from Japan, Tesco is from the United Kingdom and Carrefour is a French based company.

Business Category

In regards to the business category, the Food and Staples Retailing companies show that no one sub-category received the support from all nine companies. Instead, Business Integrity, proves to be the most common. This initiative received a count of seven, showing that not all firms require suppliers to act with integrity and to adhere to specific laws. In addition, half of the initiatives are distributed in Tier Three, highlighting the lack of emphasis of this category.

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An interesting point in this segment is that the Compliance with Local Laws initiative only received a count of 4. Therefore, less than half of the companies explicitly state that suppliers should be following the country laws in which they are doing business in. Due to the increase in globalization, this particular sub-category was expected to appear in Tier One to ensure that suppliers are respecting the appropriate laws and regulations.

In addition, Walgreens is the only company in this category to not address any of the Business initiatives. This could be attributed to the fact that for the analysis of Walgreens only two documents were reviewed (see Table 4). These documents were the website, which included their CSR initiatives, and the Business Code of Conduct, which was directed towards employees. The expectations for suppliers could be addressed in other mediums not identified in this research. Refer to Appendix C for the Business tier distribution for this industry.

Environment Category

When looking at the Environment category, the distribution is highly uneven. Only two initiatives, Recycling and Practice Responsible/Sustainable Sourcing are in Tier One. On the other hand, twelve of the 22 sub-categories are in Tier Two. Thus, this particular distribution highlights how the nine companies in this industry have very few environmental initiatives in common. Instead, these nine companies seem to show that sustainability can be achieved through many different types of initiatives. There are limited sub-categories that are “required” to be implemented in order to create sustainability through environmental actions. Thus, Tier Two seems to be the main focus for this segment when looking at initiatives for other firms to adopt to strengthen their environmental efforts.

The category also shows that the majority of the firms are implementing less than half of the initiatives found. Wal-Mart has the highest number of adopted sub-categories, at 15, which is unsurprising given the fact that Wal-Mart is often the target of external criticisms. Therefore, Wal-Mart may be taking a strong stance on environmental activities to mitigate the risk to their reputation. The number of sub-categories adopted by each firm could be a reflection of how pressured the firm is to adapt more environmentally friendly processes. Refer to Appendix C for the Environment tier distribution for this industry.

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Labor Practices Category

Unlike the previous category, Labor Practices shows that many of the initiatives are in Tier One. Thus, these nine companies truly focus on labor practices and believe that they are crucial to achieving a sustainable company. Some of the initiatives that are highlighted by all nine companies include: Prohibition of Child Labor, Prohibition of Forced and Compulsory Labor and Wages and Benefits.

At the same time, only three companies require suppliers to Uphold International Human Rights Laws/Regulations. Due to the fact that the International Standards contain many important provisions in regards to labor practices, it is surprising to find so few firms implementing their requirements. However, firms may feel that because their own codes of conduct cover the same or similar material, the suppliers will be already indirectly respecting these regulations.

The Anti-Retaliation initiative is the only sub-category to receive no support from any of the nine companies. The lack of support reflects an industry difference. This is because each separate industry was analyzed using the same set of sub-categories. Therefore, the anti-retaliation initiative does not seem to be crucial for this particular industry in creating a positive triple bottom line. Refer to Appendix C for the Labor Practices tier distribution for this industry.

Society Category

The Society segment contains only two sub-categories, which are both distributed in Tier Three for this industry. The initiatives, Respect Land Acquisition Rights and Support of Local Communities/Rural Development both received a count of one. The companies to initiate these efforts are Wal-Mart and Seven & I Holdings, respectively. Thus, the lack of expectations for suppliers in this category shows how this segment may not be necessary for firms to bestow upon suppliers in order to become sustainable. Instead, sustainability and achieving a positive triple bottom line may come from the four other categories for this industry. Refer to Appendix C for the Society tier distribution for this industry.

Product Category

This category shows that again, not all nine companies have a common requirement in regards to product safety and quality. Instead, seven of the nine companies explicitly state the importance of Product Quality and Safety and Origin Mapping/Transparency. In addition, the

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only sub-category in Tier Two is Product Recall System. Due to the fact that many of these companies are in the Food Retailing Industry, it was expected that all would properly integrate their suppliers in to their recall system to become more efficient and agile in the event of a recall.

The initiatives that are distributed in Tier Three are not as surprising due to the fact that these deal directly with the product itself and the majority of these companies only handle the final step of bringing the product to the consumer. Thus, these sub-categories are specific to the food manufacturing industry and are not applicable to the Food and Staples Retailing business segment. However, in the future, these companies can start putting restrictions or expectations on products, such as no genetically modified organisms (GMOs), and only sell those goods that follow their standards.

Woolworths, an Australian company, only requires suppliers to adhere to one sub-category. This category is Origin Mapping/Transparency. The lack of Product related standards could be due to the fact that these standards were not included in the gathered reports. Also, because Product Quality and Safety is of growing importance, from the perspective of the consumer, Woolworths may decide to explicitly integrate that sub-category into the code for suppliers in the future. Walgreens also only requires suppliers to adhere to one sub-category, Product Quality and Safety. Refer to Appendix C for the Product tier distribution for this industry.

Household and Personal Products Industry

The last industry analyzed in this paper is the Household and Personal Products industry. Five companies were looked at in total with three being from the United States and the remaining two originating in Europe. The companies that were analyzed were Colgate-Palmolive, Henkel, Kimberly-Clark, L'Oreal and Procter & Gamble. All of these companies provide specific products for consumer use whether that be make-up and skin care products or bathroom and paper goods.

Business Category

The Business segment for this industry reflects a relatively even distribution. Both Tier One and Tier Two have three sub-categories and Tier Three has two. The initiative that is followed by all five of the companies is Comply with Local Laws. This reflects an importance on

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conducting business in accordance to the country that one is doing business in. Business Integrity and Subject to Audits for Compliance both received a count of four.

Kimberly-Clark is the only firm to require suppliers to Develop Mutually Beneficial Relationships with Diverse Suppliers. At the same time, the Use of ISO 26000 Standards seems to be irrelevant in this particular industry. Therefore, suppliers need not establish compliance to this particular sustainability standard. These two sub-categories received the least support from this industry. Refer to Appendix C for the Business tier distribution for this industry.

Environment Category

The second category, Environment, also shows an even distribution. Tier One and Tier Three contain seven provisions each, while Tier Two has eight. There are five sub-categories that are followed by all five companies. These sub-categories are: Emissions, Implement Sustainable Strategies/Reduce Environmental Impact, Recycling, Sustainable Packaging and Practice Responsible/Sustainable Sourcing.

Given the nature that a few of these companies are producers of beauty products and skin care goods, Animal Welfare and No Testing is not as crucial as thought. Instead, only one company explicitly bestows this standard upon suppliers. Currently, many activist groups are fighting to ban animal testing and though this particular initiative may not result in a truly sustainable supply chain, it can have positive effects on the company's reputation if followed.

Many of the sub-categories that deal with land, such as Soil Management and Fertilizer Optimization are distributed under Tier Three. This is because the industry does not necessarily influence or impact this area of the environment. Instead, the industry seems to focus on Environmental Laws, Sustainable Packaging, Energy and Water Conservation to further develop a sustainable supply chain. This could be attributed to the fact that the industry has more of a direct influence on these areas, and thus, programs focused on them would improve sustainability.

In addition, Henkel and L'Oreal, both European companies were the only ones to not require Water Conservation Programs. Though this could be due to a variety of reasons, it is interesting to see the differences between European and American firms. At the same time, the three

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American based companies, Colgate-Palmolive, Kimberly-Clark and Procter & Gamble, all reflect twelve standards to be followed by suppliers. Even though this could be of coincidence, it does show that in this particular industry, the American companies are adopting more Environmental initiatives than their European counterparts. Refer to Appendix C for the Environment tier distribution for this industry.

Labor Practices Category

Labor Practices shows that a majority of the sub-categories are distributed in Tier One. Initiatives such as Child Labor, Anti-Discrimination and Health and Safety in the Workplace are deemed as necessary for this industry. At the same time, only three of the companies require suppliers to Comply with Employment Laws. However, all five firms do state that suppliers must follow the local laws of the country (under Business Category) and thus, this broad statement could include the employment laws as well. L'Oreal is the only firm to not signify that suppliers adhere to Employment Laws or International Rights Laws. Though this issue could be addressed under different means, this is the only company in the industry that does not acknowledge a pre-existing body of labor rights. Refer to Appendix C for the Labor Practices tier distribution for this industry.

Society Category

One society sub-categories is under Tier Two and the other one falls under Tier Three. This shows that there is no full support of either sub-category for this particular industry. At the same time, there are minimal requirements for suppliers in societal related initiatives. Instead, only three companies recognize that suppliers should be supporting local communities and contributing to rural development. The other initiative, received no frequency count, reflecting that it is not necessary or even highly recommended for firms to emphasize when in this industry. Refer to Appendix C for the Society tier distribution for this industry.

Product Category

The last category, Product, shows a heavy distribution towards Tier Three. There are five sub-categories in this tier. These sub-categories deal with recalls, conflict minerals and other non-applicable initiatives such as GMOs. Those that are in Tier One are Product Quality and Safety and Origin Mapping/Transparency. However, neither of these sub-categories received a full

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frequency count of five. Nonetheless, the distribution does reflect that these are two necessary standards for suppliers to better improve the sustainability of the supply chain. Tier Two received no sub-categories.

Kimberly-Clark supports the highest number of initiatives, at four. Again, there are seven sub-categories in the Product segment showing that not all of these have been adopted in this industry. On the other hand, Henkel only requires the respect of one sub-category. Thus, there is a slight gap between firms in this industry about the importance and support for Product sub-categories. Refer to Appendix C for the Product tier distribution for this industry.

Conclusions for Industry Analysis

The individual analysis of all three industries shows several similarities and contrasts. To begin with, when looking at the Business Tiers for each industry, the Food and Food Retailing industry is the only industry to have one sub-category in Tier One. The other two industries have three sub-categories within this same tier. In this same category, Business Integrity is the only initiative to appear in all three Tier Ones. This reflects the importance of suppliers exhibiting high levels of integrity when doing business. At the same time, the sub categories, Develop Mutually Beneficial Relationship with Diverse Suppliers and Use of ISO 26000 Standards are distributed in Tier Three for all industries. This particular distribution can reflect how these two sub-categories are not necessary for creating a sustainable supply chain, however, they can be implemented to further the efforts

In regards to the Environment category, there is not a common trend within the three industries analyzed. Instead, each industry does have one sub-category that is supported by all companies within that industry. However, this sub-category is not the same across all three business segments. In addition, the distribution of the twenty-two sub-categories varies. Though certain expectations, such as Soil Management and Fertilizer Optimization are in Tier Three for all three industries, the frequency counts vary greatly for each. Thus, the Environment segment seems to reflect that there is not a standard set of sub-categories that these industries follow. Instead, the initiatives seem to be dependent upon the type of industry, and its specific products, and are highly influenced by strategic direction and objectives of the companies within the industry.

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The Labor Practices segment shows similarities among the three industries. These three industries all enforce common sub-categories that include: Freedom of Association/Collective Bargaining, Prohibition of Child Labor, Prohibition of Forced and Compulsory Labor, Fair Treatment of Employees and Health and Safety in the Workplace. It also appears that Decent Housing Conditions, Emergency Preparedness Training for Employees and Protect against Anti-Retaliation are the least supported initiatives among these industries. Therefore, there are commonalities in the Labor Practices segment in which the industries seem to be following similar levels of enforcement of the sub-categories.

When looking at the Society category, neither of the two sub-categories are distributed in Tier One for the industries. Instead, the sub-categories either fall in Tier Two or Tier Three. Therefore, there is no full acceptance for a particular social oriented initiative. In addition, each industry shows a different pattern of distribution. The Food and Beverage Industry only has these particular sub-categories in Tier Two. The Food and Food Retailing Industry shows that the initiatives are in Tier Three while the last industry, Household and Personal Products Industry has a sub-category in Tier Two and Tier Three, respectively. The level of importance differs among industry.

There are noticeable trends among the Product categories for the industries. Product Quality and Safety is the only initiative to appear in all three of the Tier One areas. While the Household and Personal Products industry does not have sub-categories within Tier Two, the other industries have one initiative in Tier Two. At the same time, the Food and Food Retailing industry is the only industry that has a frequency count for all seven sub-categories within the Product category. The other two industries reflect some sub-categories with having a count of zero.

Also, Origin Mapping/Transparency appears to be the second top sub-category among all the industries. Though it is not in Tier One for the Food and Beverage Industry, the high frequency does shed light on how firms are trying to be more transparent within their supply chain. This particular initiative could relate to external pressures for companies to be able to trace the life cycle of a product to prove that it is both safe and of high quality for consumers.

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Therefore, these three industries reflect several similarities and differences in regards to the five categories analyzed. The various distribution patterns of the sub-categories in the three tiers among each industry highlights the fact that different industries place varying degrees of importance on the same sub-categories. This important finding emphasizes that firms need to adopt those particular initiatives in tier one for their industry to begin developing a sustainable supply chain and creating a positive triple bottom line through the participation of suppliers.

ALL COMPANIES ANALYSIS

The importance of specific criteria was further discerned by compiling the data from the individual industries into one list of criteria based on the sub-categories. In order to create such a list, the frequency for each sub-category in each segment was summed up across all three industries. Therefore, this list uses the data gathered from all twenty-two companies as opposed to the data from the companies in each separate industry.

Due to the fact that twenty-two companies were used in this particular analysis, the tiers changed. Tier One then includes the sub-categories that received a frequency count of 15-22. Tier Two is assigned those that are initiated by 7-14 companies and Tier Three includes the frequency of 0-6. This new tier distribution then highlights what sub-categories are most important and respected based on twenty-two companies.

The results from this analysis can then be used to help establish a list of criteria for firms use when choosing sustainable suppliers. The criteria for evaluation of future suppliers should be those sub-categories that appear in Tier One. Firms can further support and propel their efforts by also including the initiatives that fall under the Tier Two and Tier Three sections.

Business Category

The Business category shows that there are three specific initiatives that firms should be implementing. These initiatives, as seen below, revolve around integrity, compliance with laws and adhering to audits. The fact that Business Integrity is the highest counted initiative in this category emphasizes the importance of suppliers maintaining high levels of integrity when conducting business. This also includes adhering to any sort of anti-bribery or anti-corruption

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laws. However, it should also be noted that there is not a single sub-category in this segment that is followed by all twenty-two companies.

<i>TIER ONE (15-22)</i>	<i>TIER TWO (7-14)</i>	<i>TIER THREE (0-6)</i>
<ul style="list-style-type: none"> • Business Integrity (19) • Comply with Local Laws (17) • Subject to Audits for Compliance (17) 	<ul style="list-style-type: none"> • Comply to Third Party Audit System (10) • Requirement of Continuous Improvement/Corrective Action (9) 	<ul style="list-style-type: none"> • Responsibility to have Similar Standards (6) • Develop Mutually Beneficial Relationship with Diverse Suppliers (4) • Use of ISO 26000 Standards (1)

Table 7: All Companies Business Tier Distribution

Nonetheless, the established list of criteria derived from this category contains the three initiatives listed under Tier One. The other five sub-categories can then be followed by firms to further their efforts to improve their triple bottom line. However, these five standards are not entirely necessary to create a sustainable supply chain. This is supported by the fact that the top supported sub-category in Tier Two only received a count of ten. This count is less than half of all companies analyzed, showing that it may not be of great influence towards a firm’s sustainability efforts.

The last sub-category in Tier Three, Use of ISO 26000 standards only has the support of one company. ISO 26000 is a sustainability standard that focuses on social responsibility. Only one sustainable company expects suppliers to also represent some support of engaging in sustainability related efforts. As firms start to realize that creating a true sustainable supply chain requires the support from all levels of the supply chain, the requirement of suppliers to show some sort of sustainability standard may grow in importance. This standard will reflect the supplier’s commitment to practicing sustainability related activities.

Environment Category

When compiling the data from the companies into the Environment category several trends are apparent.

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TIER ONE (15-22)	TIER TWO (7-14)	TIER THREE (0-6)
<ul style="list-style-type: none"> • Recycling (21) • Practice Responsible/Sustainable Sourcing (21) • Implement Sustainable Strategies/Reduce Environmental Impact (19) • Comply with Local Environmental Laws (16) • Sustainable Packaging (16) • Emissions (15) 	<ul style="list-style-type: none"> • Preservation of Forests, Wood (14) • Waste Management (12) • Energy (11) • Water Conservation Initiatives (10) • Implement Green Technology (9) • Animal Welfare/No Testing (8) • Hazardous Materials Guidelines (7) • Pollution Prevention (7) • Use of ISO 14001 Standards (7) 	<ul style="list-style-type: none"> • Implement a Formal Environmental Management System (5) • Transportation Optimization (5) • Fertilizer Optimization (4) • Adhere to Good Agricultural Practices (3) • Exhaust and Drainage Management (3) • Have a Company Environmental Representative (2) • Soil Management (2)

Table 8: All Companies Environment Tier Distribution

To begin with, though there are no sub-categories that have received a count of twenty-two, two do have a count of twenty-one. These initiatives, Recycling and Practice Responsible/Sustainable Sourcing appear to be the most implemented and supported among the companies. The sub-category Recycling does include more than just recycling plastic and paper goods. It extends into recycling waste and water back into the business processes to be re-used. Recycling has received such importance and it is unsurprising since this was one of the few initiatives that pioneered the “Green Movement.” Thus, it makes sense for a majority of the companies to adopt recycling. On the other hand, Pollution Prevention is under Tier Two with a frequency count of only seven. During the “Green Movement” decreasing pollution and bringing awareness about the environment was a main concern. Therefore, by only having about 30% of the companies commit to this widely recognized initiative, is surprising given the topic’s acknowledgement among external stakeholders.

In addition, Practice Responsible/Sustainable Sourcing also seems to be of great importance. Though this sub-category does appear to be vague because many of the firms do not explicitly

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state how suppliers should implement such an act, it does positively contribute to helping the planet. This initiative is then closely followed by Implement Sustainable Strategies/Reduce Environmental Impact, with a count of nineteen.

Also made apparent in this analysis is that the two sub-categories that are originally from the GRI G4 report, Energy and Emissions, have not received much support, considering they are part of the disclosure section. Emissions is in Tier One, however, at the low end with a count of fifteen. At the same time, the sub-category, Energy, is followed by eleven companies and is thus, in Tier Two. The lack of full adherence towards these particular sub-categories could be attributed to the fact that the GRI G4.0 report is not used by all companies. Instead, many of the companies analyzed had only used the G3.1 version of the report. The G3.1 version does not include the Supply Chain disclosures. Therefore, the inclusion of Emissions and Energy in Supplier Codes of Conduct may be further emphasized in the future when companies start to use the G4.0 version.

Also, Tier Three is made of sub-categories that are influenced by the specific industry. Thus, initiatives such as Soil Management, Exhaust and Drainage Management and Adhere to Good Agricultural Practices may not be applicable for all companies. In such a case, a firm should then also look at the individual distributions for each industry to best determine the importance of industry specific criteria.

Nonetheless, the six sub-categories that appear under Tier One should be used as criteria in the supplier selection process. These criteria have then been deemed as important and critical in the process of becoming sustainable. At the same time, these criteria can be transferred across many industries. For example, though Sustainable Packaging may not relate to all industries, the idea of using sustainable packaging when transporting products from one point to another and not just in terms of putting the final product in a recycled package could be exploited in many business.

Also, because the majority of the sub-categories fall in Tier Two and Tier Three, this reflects the trends seen in the literature. The literature points out that there are criteria firms can use, however, not all companies are applying such criteria. This is apparent in the fact that only a

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few sub-categories are adopted by more than half the companies. As the environment grows in importance in the future, it is expected that many of these sub-categories in Tier Two and Tier Three will shift up. This movement will show that firms are further incorporating the environment into their business strategy.

Labor Practices Category

The Labor Practices category shows a dramatically different distribution of sub-categories in the three tiers than the previous two segments. In this particular category, 70% of the sub-categories are in Tier One. This type of distribution shows that not only is Labor Practices a common area of supplier compliance for these twenty-two companies but it is also of great importance in creating a sustainable supply chain.

TIER ONE (15-22)	TIER TWO (7-14)	TIER THREE (0-6)
<ul style="list-style-type: none"> • Enforce Anti-Discrimination (22) • Prohibition of Child Labor (22) • Prohibition of Forced and Compulsory Labor (22) • Health and Safety in Workplace (21) • Wages and Benefits (21) • Fair Treatment of Employees (21) • Freedom of Association/Collective Bargaining (20) • Work Hours and Overtime (19) • Comply with Local Employment Laws (18) • Uphold International Human Rights Laws/Regulations (15) 	<ul style="list-style-type: none"> • Health and Safety Training for Employees (11) • Decent Housing Conditions (7) 	<ul style="list-style-type: none"> • Emergency Preparedness Training for Employees (6) • Enforce Anti-Retaliation (4)

Table 9: All Companies Labor Practices Tier Distribution

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There are three sub-categories that are common among all twenty-two companies. These are Enforce Anti-Discrimination, Prohibition of Child Labor and Prohibition of Forced and Compulsory Labor. These initiatives, especially the last two, are heavily emphasized in international laws and regulations established by the United Nations or the International Labour Organization. Thus, the fact that only fifteen of the twenty-two companies Uphold International Human Rights Laws/Regulations could be a possible discrepancy in the Codes of Conducts or that the acknowledgement of such regulations is implied. There are also three initiatives that are supported by twenty-one of the companies. Thus, the high frequency count among several of the initiatives in this category show the importance of these sub-categories.

The high counts can be attributed to several factors, including pressure from stakeholders for firms to better respect and enforce the rights of employees. With events such as the Bangladesh Factory Collapse that shed light on inappropriate working conditions and constant coverage of sweatshops, many firms are feeling the pressure to provide for better environments. Therefore, their efforts may be to not only satisfy stakeholders but to also increase their overall reputations.

However, as mentioned before, Emergency Preparedness Training for Employees is not as enforced, with only six companies requiring this standard. This type of training could help employees in events such as a factory collapse or natural disasters that are frequent in the areas of many of these factory locations. Training such as this could further help protect employees.

Therefore, because of the backlash firms receive from stakeholders in regards to Human Rights it would not be surprising to see that in the near future more of these particular sub-categories have a frequency count of twenty-two. In addition, this also reflects trends in literature that show that more firms are adopting Codes of Conduct that require suppliers to uphold certain Human Rights standards. Though not all firms are requiring such efforts, the trend seems to be going in such a direction. Thus, future years may show quite different distributions of the sub-categories.

Society Category

Unlike the other categories, the Society category only has two sub-categories. This shows that this particular area has room to grow and evolve and that currently, it is of not great focus for

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the supplier evaluation process. This lack of emphasis is also supported by the lack of sub-categories in Tier One. Instead, Tier Two has one initiative, Support of Local Communities/Rural Development and Tier Three contains the last sub-category, Respect Land Acquisition Rights. In addition, less than half of the companies require suppliers to respect either of these sub-categories.

TIER ONE (15-22)	TIER TWO (7-14)	TIER THREE (0-6)
None	<ul style="list-style-type: none"> • Support of Local Communities/Rural Development (9) 	Respect Land Acquisition Rights (5)

Table 10: All Companies Society Tier Distribution

The lack of overall adherence towards this category reflects that such a category is not crucial in creating a sustainable supply chain. Nonetheless, this does not mean that firms should not strive to fulfill such initiatives. Both of these sub-categories can help create more sustainable businesses as they directly impact the geographic areas in which the businesses are located. By better providing for and investing in the local area, businesses can help build the local economy and talent to benefit themselves.

It should also be noted that only five companies describe that suppliers should Respect Land Acquisition Rights. Because the sub-categories that deal with adhering to local laws is often distributed in Tier One, such an initiative could fall under one of these more broad categories.

Based on the distribution of these initiatives, the criteria to evaluate suppliers in regards to Society is not certain. Instead, firms should focus on improving their social efforts and involving suppliers. Thus, when deciding on suppliers, those who do support social initiatives may be become more attractive in the evaluation process because of the extra concern for the triple bottom line that they are demonstrating.

Product Category

The last category, Product, is another category that contains an unusual distribution when gathering the data from all twenty-two companies. Tier Two contains no sub-categories while

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Tier One has two and Tier Three has five. Thus, the majority of the initiatives are not followed by many of the companies.

<i>TIER ONE (15-22)</i>	<i>TIER TWO (7-14)</i>	<i>TIER THREE (0-6)</i>
<ul style="list-style-type: none"> • Product Quality and Safety (19) • Origin Mapping/Transparency (15) 	<p>None</p>	<ul style="list-style-type: none"> • Product Recall System (6) • Comply with Global Food Safety Initiative (3) • No Traces of GMOs (3) • Conflict Minerals (2) • Promote Fair Trade (2)

Table 11: All Companies Product Tier Distribution

Tier One shows that Product Quality and Safety is required by nineteen of the companies. This sub-category has implications for the end product, making it a focal point. On the other hand, the Product Recall System initiative is in Tier Three. Currently, there has been much news on products being recalled. The increase of recalls was thought to have influenced the adaption of a recall system, especially in industries that directly impact the end customer. However, such a business deal may be discussed in a separate document that was not included in the analysis.

Nonetheless, Tier Three contains many of the initiatives that have recently been gaining popularity and recognition. As stakeholders protest for more improvements and actions from companies, firms have begun to slowly react to the demands. Thus, these sub-categories could be another area in the data that gains more recognition in the future.

However, as noted in a previous section, these types of sub-categories are dependent on the specific industry. Therefore, companies in the Household and Personal Products Industry may not involve GMOs or Conflict Minerals in their supply chains. This would mean that these two sub-categories would not be included in their Codes of Conduct due to the lack of relevance. Because not all criteria are applicable to the three industries, the frequency counts may not correctly reflect a particular sub-categories importance.

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Though the Product category was derived from the data gathered from the various reports that were looked at, the category still holds relevance towards creating a sustainable supply chain. The criteria to evaluate a supplier on should reflect those sub-categories under Tier One. This type of evaluation will allow the buying firm to choose a supplier that will produce a high quality and safe product and that can also show the support for such a claim.

Conclusions for All Companies Analysis

Based on these findings, several conclusions can be drawn. To begin with, we believe that the findings are transferrable across industries. Though we focus on three specific industries, the findings are general enough to be used in the selection processes of other industries. Thus, the Tier One data can be applied to the supplier selection decisions for many companies because these criteria are a compilation of the results found in three different industries. However, those findings in Tier Three may be industry specific, and therefore, more difficult to apply to other businesses.

In addition, due to the transferability of the data, we also believe that companies should be using the criteria under all Tier Ones to help determine the most suitable supplier for their needs. These criteria have been identified as the most crucial to the evaluation processes based on how many times they have appeared in company reports and documents. Due to their high presence in these reports of companies recognized for their sustainability efforts, the criteria will help support and progress the efforts of firms in creating a sustainable supply chain. Therefore, we recommend that these criteria be used as they will ensure that suppliers are aligned with the company's sustainability goals and objectives.

Though each category showed significant and unique data, three categories in particular should be individually highlighted. The first category, Environment, is a category that follows the trends seen in the literature. The literature states that firms are beginning to adopt more environmentally friendly criteria in their evaluation process, and the inclusion will grow in the future due to external pressure. This category has the most sub-categories due to this pressure and therefore, reflects companies' efforts to adopt more environmental friendly initiatives and actions. Firms seem to be emphasizing the environment in their programs and evaluation decisions.

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At the same time, the Labor Practices category is of great focus for companies. The predominance of Tier One subcategories illustrates how firms are focused on ensuring that their suppliers respect the rights of employees and commit to high levels of human rights. Again, this support of almost all companies can be attributed to the impact that poor labor practices of suppliers can have on the reputation of the firm. News about sweatshop conditions has put many firms in a negative light that has negatively affected consumer's perceptions. Standards about human rights is a way to mitigate such a risk.

Lastly, the Society category, unlike Labor Practices, seems to be of low focus for companies. Since there are only two sub-categories in this topic area and none of them are distributed under Tier One, it can be concluded that few companies are focusing on societal issues. This lack of focus might be due to firms focusing more on environmental standards and human rights initiatives. Thus, this category has not received the necessary attention. However, society does directly impact the triple bottom line of a firm as it encompasses the people aspect and it should be of importance for firms. Society is then an area for further research to understand why it is not of great focus and how can suppliers include societal issues into their evaluation process to better further their efforts towards becoming sustainable.

LIMITATIONS

The research proposed has a few limitations that should be addressed. To begin with, the findings presented in this report have not been cross-tabulated. Thus, they are the findings discovered by only one researcher. Second, only twenty-two companies were analyzed. This is a small sample and therefore, the results are only reflective of companies who are forerunners in establishing a sustainable supply chain. Also, because much of the information gathered was from GRI and CSR reports, the quality of the information depends on the accuracy of the reporting. Though these are formal reports and have been compiled through third parties, green washing could be a possible issue. Lastly, the performance of suppliers is not known. Though all sub-categories reflect the efforts and programs that suppliers must engage in, the suppliers' performance in regards to these activities has not been researched. It is unknown whether or not suppliers do comply with these initiatives and if they achieve the goals set by companies. In addition, the impact of supplier's actions on the sustainability of a firm was not researched.

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Thus, the sustainability label could be due to the efforts of the company only or also due to the efforts of the suppliers. This distinguishing conclusion was not made.

IMPORTANCE OF RESEARCH

The results found in this study are a compilation of best practices that have been derived from companies that are considered sustainable and/or green. Thus, the criteria in the tiers are guidelines for firms to follow when creating a sustainable supply chain. The participation and involvement of suppliers is necessary in the creation of a sustainable supply chain and therefore, these findings can help ensure that the best supplier is chosen for the role. Without a structured format or list of criteria for firms to use, elements of the triple bottom line can often go unnoticed in the supplier selection process. These findings create an easy to follow framework for firms to follow.

In addition, the research creates a foundation for further investigation of supplier selection criteria and how to emphasize the importance of suppliers in creating a sustainable supply chain. Once suppliers are chosen, companies need to ensure that they remain in compliance with the specified rules and regulations stated in codes of conduct. These compliance techniques can be researched to further understand the best ways for firms to ensure that suppliers are continuously contributing to their sustainability efforts. At the same time, the use of international standards, such as ISO 14001 and ISO 26000 can be further analyzed to see how they influence suppliers and if they contribute to the triple bottom line.

The research completed can also be extended and/or supported with a better understanding of the criteria used by the firms through interviews or case studies of different companies. These findings can contribute to the list of factors needed for the decision making process. Thus, this research lays a foundation for supplier selection criteria and the triple bottom line. As companies progress towards adapting more sustainable initiatives and programs, the criteria will evolve and change with external pressures and forces. The proposed framework will then have to be adapted to better reflect the changes seen in company's corporate social responsibility efforts.

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APPENDICES

Appendix A: Literature Review Tables

Traditional Criteria	Emphasis
Raina (1989)	Supplier criteria should focus on four main factors: specialized commercial services, management capability, financial standing and manufacturing capability. Included use of weighing criteria based on importance and necessity.
Nydick and Hill (1992)	Use Analytic Hierarchy Process (AHP) to assist in the decision making process when using subjective and objective criteria for suppliers. Emphasizes importance of supplier selection criteria and its implications.
Wilson (1994)	Reflects the changing supplier criteria over a period of time as the marketplace becomes more global. Price was once a primary area of focus and it has changed to quality.
Choi and Hartley (1996)	Focuses on the US Auto industry and emphasizes eight factors for supplier selection. Findings show that consistency is the number one factor while price is the least crucial to the selection.
Lambert, Adams and Emmelhainz (1997)	Discovered a list of attributes needed in suppliers in the healthcare industry. The top twenty attributes related to product-quality, collaborative relationships. Price was not in top twenty.
Hirakubo and Kublin (1998)	Outlines the different purchasing strategies for customized versus standard products in Japanese firms. Findings show that price is more relevant for standard products while capability is more important for customized products.
Vonderembse and Tracey (1999)	Analyzed high performing firms and discusses involving suppliers in development process and how supplier criteria can increase overall performance.
Ehrgott et al. (2011)	Researched American and German businesses and how middle-level supply managers play an influential role in driving sustainable supplier selection.
Igarashi, de Boer and Fet (2013)	Research over ten year period about changes in environmental criteria. Discusses how to integrate the criteria.

Table A.1: Traditional Criteria Literature

Supplier Selection Criteria for Sustainable Supply Chains

Senior Capstone Project for Amy Terracciano

Environmental/Expansion Criteria	Emphasis
Noci (1997)	Develops environmental criteria depending on pro-active green strategy or re-active environmental strategy. Focuses on buyer-supplier relationships.
Kannan and Tan (2002)	States that soft, quantifiable criteria is more impactful than hard criteria (price, quality) in the manufacturing industry.
Monckza, Trent and Handfield (2005)	Lists a variety of criteria to be used in the selection process. Discusses traditional criteria and additional factors to be used in evaluation.
Simpson and Power (2005)	Deduced the emphasis of environmental criteria in evaluation processes to be low. Selection still focuses on traditional criteria.
Kannan and Haq (2007)	Looks at build-to-order supply chains and the criteria and sub-criteria used in supplier selection.
Brown (2008)	Describes 13 steps to develop a sustainable outsourcing program and the criteria needed to start a green partnership with outsourcing suppliers.
Carter, Matlz and Yan (2008)	Focuses on the influences of the perceptions in choosing global suppliers.
Chan et al. (2008)	Looks at criteria used when choosing a global supplier such as geography, infrastructure and financial background.
Sen et al. (2008)	Categorizes buyer-supplier integration levels and based on the desired level, certain criteria is needed to choose the supplier. Developed list of criteria to be used based on 7 categories.
Lee et al. (2009)	Research on high-tech industry and proposes framework to evaluate green suppliers based on the Delphi Model.

Table A.2: Environmental/Expansion Criteria Literature

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

Environmental/Expansion Criteria	Emphasis
Jabbour and Jabbour (2009)	Focuses on quantitative and qualitative environmental criteria used in Brazilian companies when selecting suppliers.
Zhu and Dou (2010)	Analyzes green supply chains and determined the necessary environmental criteria needed to create one. These criteria should be in combination with traditional criteria.
Chiarini (2012)	Focuses on manufacturing firms and their implementation of ISO 14001 standards to help create a sustainable supply chain. Requires involvement of suppliers in the stated 5 step process.
Dai and Blackhurst (2012)	Integrated analytical approach combining AHP and Quality Function Deployment to create a greener supplier selection approach.
Vijayvagy (2012)	States that supplier selection is a multiple-criteria decision making process and that AHP should be used.
Harms, Hansen and Schaltegger (2013)	Focuses on German companies and the adoption of risk-oriented evaluation and selection processes of suppliers to implement a sustainable supply chain.
Igarashi, de Boer and Fet (2013)	Research over ten year period about changes in environmental criteria. Discusses how to integrate the criteria.
Tuzkaya (2013)	Discusses the integration of environmental criteria in the supplier evaluation process through model math.
Kannan, Jabbour and Jabbour (2014)	Research on Brazilian companies and the adoption of GSCM to enhance environmental performance of the supply chain.
Kumar, Jain, Kumar (2014)	States importance of carbon footprint analysis in supplier selection process.

Table A.3: Environmental/Expansion Criteria Literature Continued

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

Social Criteria	Emphasis
Arminas (2001)	Focuses on supplier accreditation in upholding Human Rights standards and how these standards improve brand image/reputation.
Coats (2009)	Discusses Fair Trade and the objectives of activist groups and consumers in relation to Human Rights.
Angheluta, Moisa and Langa (2011)	Focuses on the automobile industry and determined that social responsibility is not an evaluation factor, however, this area could have positive implications for firms.
D'Aquila (2012)	Discusses tools and methods companies can use to track and measure corporate social responsibility initiatives.
Perry and Towers (2012)	Researched apparel manufacturers in Sri Lanka to discover that collaborative relationships are more influential than codes of conduct in creating social expectations for suppliers.
Adebanjo et al. (2013)	Focuses on Nigerian suppliers and whether or not they are in compliance with buyer's standards.
Egels-Zanden (2014)	Analyzes the effects of codes of conducts in a longitudinal study in China.

Table A.4: Social Criteria Literature

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

Appendix B: Sub-Category Definitions

Sub-Category	Definition
Business Integrity	<ul style="list-style-type: none"> • Adhere to anti-corruption and anti-bribery rules and regulations. • Be mindful of conflict of interest when doing business • Exhibit confidentiality and protection of information when doing business • Follow guidelines on accepting gifts, meals and entertainment
Comply with Local Laws	<ul style="list-style-type: none"> • Conduct business in accordance to the rules of the country that you are doing business in
Comply to Third Party Audit System	<ul style="list-style-type: none"> • Subject to being audited and held to the standards of third party audit systems. Examples of these systems include: Ethical Trading Initiative (ETI), Supplier Ethical Data Exchange (SEDEX) and AIM-PROGRESS. These systems create standards around business, labor practices, society and the environment and can be used in place of or in conjunction with a Supplier Code of Conduct
Develop Mutually Beneficial Relationship with Diverse Suppliers	<ul style="list-style-type: none"> • Work towards diversity within the supply chain. Diversity can be defined as small businesses, women-owned businesses and minority-owned businesses
Requirement of Continuous Improvement/Corrective Action	<ul style="list-style-type: none"> • Display efforts to be continuously improving through innovation, efficiency and taking the initiative to correct past failures
Responsibility to have Similar Standards	<ul style="list-style-type: none"> • Create similar standards that include expectations about the business, environment, labor practices and society for your suppliers to adhere to throughout the supply chain
Subject to Audits for Compliance	<ul style="list-style-type: none"> • Subject to pre-determined and/or spontaneous audits from the base company to ensure adherence to Code of Conduct
Use of ISO 26000 Standards	<ul style="list-style-type: none"> • Adhere to and follow the standards set in place by ISO 26000

Table B.1: Business Sub-Categories

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

Sub-Category	Definition
Adhere to Good Agricultural Practices	<ul style="list-style-type: none"> Follow the guidelines set forth by the Good Agricultural Practices Manual that addresses safety, techniques and commodity-specific practices
Animal Welfare/No Testing	<ul style="list-style-type: none"> Fair and humane treatment of animals Prohibition of testing products on animals
Comply with Local Environmental Laws	<ul style="list-style-type: none"> Conduct business in accordance to the rules of the country that you are doing business in
Emissions	<ul style="list-style-type: none"> Implement strategies to reduce dangerous emissions
Energy	<ul style="list-style-type: none"> Implement strategies to save energy
Exhaust and Drainage Management	<ul style="list-style-type: none"> Properly manage exhaust outputs and drainage systems
Fertilizer Optimization	<ul style="list-style-type: none"> Recycle/Compost products for fertilizer Reduce use of pesticides in fertilizer
Have a Company Environmental Representative	<ul style="list-style-type: none"> Designate an employee to represent environmental efforts of the company and act as an advocate and a liaison
Hazardous Materials Guidelines	<ul style="list-style-type: none"> Follow the company's specific guidelines on how to properly dispose of and limit use of hazardous materials
Implement a Formal Environmental Management System	<ul style="list-style-type: none"> Implement a system to identify and mitigate negative impactful processes on the environment
Implement Green Technology	<ul style="list-style-type: none"> Innovate to reduce impact on the environment Implement more efficient and environmentally-friendly technology
Implement Sustainable Strategies/Reduce Environmental Impact	<ul style="list-style-type: none"> Implement strategies and processes that allow for environmental impact to be reduced and for the company to be more sustainable in its activities
Pollution Prevention	<ul style="list-style-type: none"> Prevent high levels of pollution in all areas of business
Preservation of Forests, Wood	<ul style="list-style-type: none"> Protect forests and wood by limiting deforestation
Recycling	<ul style="list-style-type: none"> Create more recyclable products Recycle waste and other products to be reinvested into the business processes
Soil Management	<ul style="list-style-type: none"> Properly manage soil usage to prevent over-harvesting and to ensure for preservation of land
Sustainable Packaging	<ul style="list-style-type: none"> Create and design more sustainable packaging for products
Transportation Optimization	<ul style="list-style-type: none"> Design transportation routes to limit mileage
Use of ISO 14001 Standards	<ul style="list-style-type: none"> Adhere to and follow the standards set in place by the international certification, ISO 14001
Waste Management	<ul style="list-style-type: none"> Properly manage and dispose of waste
Water Conservation Initiatives	<ul style="list-style-type: none"> Design and implement processes to conserve water

Table B.2: Environment Sub-Categories

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

Sub-Categories	Definition
Freedom of Association/Collective Bargaining	<ul style="list-style-type: none"> Grant employees the right to join/leave groups and take collective action
Health and Safety in Workplace	<ul style="list-style-type: none"> Ensure that the workplace is safe and in proper condition for employees
Prohibition of Child Labor	<ul style="list-style-type: none"> No employee must be under the appointed child labor age
Prohibition of Forced and Compulsory Labor	<ul style="list-style-type: none"> No employee should be forced to work against his/her will
Comply with Local Employment Laws	<ul style="list-style-type: none"> Conduct business in accordance to the rules of the country that you are doing business in
Decent Housing Conditions	<ul style="list-style-type: none"> If housing is provided for employees, the housing must be safe and in good, livable conditions
Emergency Preparedness Training for Employees	<ul style="list-style-type: none"> Provide training for employees in the event of an emergency (i.e. fire, natural disaster)
Enforce Anti-Discrimination	<ul style="list-style-type: none"> No employee should be discriminated during the hiring/employment processes based on race, gender, national origin, religion, age, etc.
Fair Treatment of Employees	<ul style="list-style-type: none"> No employee should be physically or verbally abused Violence towards employees is not tolerated
Health and Safety Training for Employees	<ul style="list-style-type: none"> Provide safety training for employees Ensure employees maintain hygienic workplace conditions
Protect against Anti-Retaliation	<ul style="list-style-type: none"> Prohibition against retaliation of an employee who makes a complaint, raises a concern, etc.
Uphold International Human Rights/Laws Regulations	<ul style="list-style-type: none"> Maintain the rules and regulations that are mentioned in International Human Rights Documents (United Nations, ILO, etc.)
Wages and Benefits	<ul style="list-style-type: none"> Provide employees with the appropriate legal mandated wages, given the country of residence
Work Hours and Over Time	<ul style="list-style-type: none"> No employee should be forced to work more than the mandated number of hours Provide for vacation time, leave periods and acknowledged holidays Employees should be properly compensated for over time

Table B.3: Labor Practices Sub-Categories

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

Sub-Category	Definition
Respect Land Acquisition Rights	<ul style="list-style-type: none"> • Uphold acquisition rights when buying/selling land • Do not violate people’s right to land usage
Support of Local Communities/Rural Development	<ul style="list-style-type: none"> • When conducting business, invest in and support local communities to help grow/develop economies

Table B.4: Society Sub-Categories

Sub-Category	Definition
Comply with Global Food Safety Initiative	<ul style="list-style-type: none"> • Uphold standards under the Global Food Safety Initiative
Conflict Minerals	<ul style="list-style-type: none"> • Avoid sourcing/using conflict minerals in processes
No Traces of Genetically Modified Organisms (GMOs)	<ul style="list-style-type: none"> • Prevent use of GMOs in products
Origin Mapping/Transparency	<ul style="list-style-type: none"> • Provide information on sourcing initiatives and where products come from • Be transparent in supply chain processes
Product Quality and Safety	<ul style="list-style-type: none"> • Ensure products are of high quality and safe for consumer use
Product Recall System	<ul style="list-style-type: none"> • Design a system to efficiently and properly deals with recalls
Promote Fair Trade	<ul style="list-style-type: none"> • Uphold the standards and expectations of Fair Trade

Table B.5: Product Sub-Categories

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

Appendix C: Industry Tier Distributions

<i>TIER ONE (6-8)</i>	<i>TIER TWO (3-5)</i>	<i>TIER THREE (0-2)</i>
<ul style="list-style-type: none"> • Business Integrity (8) • Comply with Local Laws (8) • Subject to Audits for Compliance (7) 	<ul style="list-style-type: none"> • Requirement of Continuous Action/ Corrective Action (4) • Comply to Third Party Audit System (4) • Responsibility to have Similar Standards (3) 	<ul style="list-style-type: none"> • Develop Mutually Beneficial Relationship with Diverse Suppliers (2) • Use of ISO 26000 standards (0)

Table C.1: Food and Beverage Business Tier Distribution

<i>TIER ONE (6-8)</i>	<i>TIER TWO (3-5)</i>	<i>TIER THREE (0-2)</i>
<ul style="list-style-type: none"> • Practice Responsible/Sustainable Sourcing (8) • Implement Sustainable Strategies/Reduce Environmental Impact (8) • Comply with Local Environmental Laws (7) • Recycling (7) • Emissions (6) • Sustainable Packaging (6) 	<ul style="list-style-type: none"> • Preservation of Forests, Wood (5) • Waste Management (5) • Implement Green Technology (5) • Water Conservation Initiatives (4) • Energy (3) • Adhere to Good Agricultural Practices (3) • Pollution Prevention (3) • Fertilizer Optimization (3) 	<ul style="list-style-type: none"> • Hazardous Materials Guidelines (2) • Animal Welfare/No Testing (2) • Exhaust and Drainage Management (2) • Implement a Formal Environmental Management System (1) • Have a Company Environmental Representative (1) • Soil Management (1) • Transportation Optimization (1) • Use of ISO 14001 Standards (1)

Table C.2: Food and Beverage Environment Tier Distribution

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

<i>TIER ONE (6-8)</i>	<i>TIER TWO (3-5)</i>	<i>TIER THREE (0-2)</i>
<ul style="list-style-type: none"> • Health and Safety in Workplace (8) • Work Hours and Overtime (8) • Wages and Benefits (8) • Freedom of Association/Collective Bargaining (8) • Prohibition of Child Labor (8) • Prohibition of Forced and Compulsory Labor (8) • Enforce Anti - Discrimination (8) • Fair Treatment of Employees (8) • Uphold International Human Rights Laws/Regulations (8) • Comply with Local Employment Laws (7) 	<ul style="list-style-type: none"> • Health and Safety Training for Employees (3) 	<ul style="list-style-type: none"> • Decent Housing Conditions (2) • Protect Anti-Retaliation • Emergency Preparedness Training for Employees(1)

Table C.3: Food and Beverage Labor Practices Tier Distribution

<i>TIER ONE (6-8)</i>	<i>TIER TWO (3-5)</i>	<i>TIER THREE (0-2)</i>
None	<ul style="list-style-type: none"> • Support of Local Communities/Rural Development (5) • Respect Land Acquisition Rights (4) 	None

Table C.4: Food and Beverage Society Tier Distribution

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

TIER ONE (6-8)	TIER TWO (3-5)	TIER THREE (0-2)
<ul style="list-style-type: none"> • Product Quality and Safety (8) 	<ul style="list-style-type: none"> • Origin Mapping/Transparency (4) 	<ul style="list-style-type: none"> • No Traces of GMOs (2) • Comply with Global Food Safety Initiative (2) • Product Recall System (1) • Promote Fair Trade (1) • Conflict Minerals (0)

Table C.5: Food and Beverage Product Tier Distribution

TIER ONE (7-9)	TIER TWO (3-6)	TIER THREE (0-2)
<ul style="list-style-type: none"> • Business Integrity (7) 	<ul style="list-style-type: none"> • Subject to Audits for Compliance (6) • Comply to Third Party Audit System (4) • Compliance with Local Laws (4) 	<ul style="list-style-type: none"> • Requirement of Continuous Improvement/Corrective Action (2) • Develop Mutually Beneficial Relationship with Diverse Suppliers (1) • Use of ISO 26000 Standards (1) • Responsibility to have Similar Standards (0)

Table C.6: Food and Staples Retailing Business Tier Distribution

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

TIER ONE (7-9)	TIER TWO (3-6)	TIER THREE (0-2)
<ul style="list-style-type: none"> • Recycling (9) • Practice Responsible/ Sustainable Sourcing (8) 	<ul style="list-style-type: none"> • Implement Sustainable Strategies/Reduce Environmental Impact (6) • Preservation of Forests, Wood (5) • Energy (5) • Comply with Local Environmental Laws (5) • Sustainable Packaging (5) • Waste Management (5) • Animal Welfare/ No Testing (5) • Emissions (4) • Water Conservation Initiatives (3) • Hazardous Materials Guidelines (3) • Pollution Prevention (3) • Use of ISO 14001 Standards (3) 	<ul style="list-style-type: none"> • Implement a Formal Environmental Management System (2) • Transportation Optimization (1) • Fertilizer Optimization (1) • Exhaust and Drainage Management (1) • Implement Green Technology (1) • Adhere to Good Agricultural Practices (0) • Have a Company Environmental Representative (0) • Soil Management (0)

Table C.7: Food and Staples Retailing Environment Tier Distribution

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

TIER ONE (7-9)	TIER TWO (3-6)	TIER THREE (0-2)
<ul style="list-style-type: none"> • Prohibition of Child Labor (9) • Prohibition of Forced and Compulsory Labor (9) • Enforce Anti-Discrimination (9) • Fair Treatment of Employees (9) • Wages and Benefits (9) • Comply with Local Employment Laws (8) • Health and Safety in Workplace (8) • Work Hours and Overtime (8) • Freedom of Association/Collective Bargaining (7) 	<ul style="list-style-type: none"> • Health and Safety Training for Employees (5) • Decent Housing Conditions (4) • Uphold International Human Rights Laws/Regulations (3) 	<ul style="list-style-type: none"> • Emergency Preparedness Training for Employees (2) • Protect against Anti-retaliation (0)

Table C.8: Food and Staples Retailing Labor Practices Tier Distribution

TIER ONE (7-9)	TIER TWO (3-6)	TIER THREE (0-2)
None	None	<ul style="list-style-type: none"> • Respect Land Acquisition Rights (1) • Support of Local Communities/Rural Development (1)

Table C.9: Food and Staples Retailing Society Tier Distribution

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

TIER ONE (7-9)	TIER TWO (3-6)	TIER THREE (0-2)
<ul style="list-style-type: none"> • Product Quality and Safety (7) • Origin Mapping/Transparency (7) 	<ul style="list-style-type: none"> • Product Recall System (4) 	<ul style="list-style-type: none"> • Comply with Global Food Safety Initiative (1) • Promote Fair Trade (1) • Conflict Minerals (1) • No Traces of GMOs (1)

Table C.10: Food and Staples Retailing Product Tier Distribution

TIER ONE (4-5)	TIER TWO (3-2)	TIER THREE (0-1)
<ul style="list-style-type: none"> • Comply with Local Laws (5) • Business Integrity (4) • Subject to Audits for Compliance (4) 	<ul style="list-style-type: none"> • Responsibility to have Similar Standards (3) • Requirement of Continuous Improvement/Corrective Action (3) • Comply to Third Party Audit System (2) 	<ul style="list-style-type: none"> • Develop Mutually Beneficial Relationship with Diverse Suppliers (1) • Use of ISO 26000 standards (0)

Table C.11: Household and Personal Products Business Tier Distribution

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

TIER ONE (4-5)	TIER TWO (3-2)	TIER THREE (0-1)
<ul style="list-style-type: none"> • Emissions (5) • Implement Sustainable Strategies/Reduce Environmental Impact (5) • Recycling (5) • Sustainable Packaging (5) • Practice Responsible/Sustainable Sourcing (5) • Preservation of Forests, Wood (4) • Comply with Local Environmental Laws (4) 	<ul style="list-style-type: none"> • Energy (3) • Water Conservation Initiatives (3) • Transportation Optimization (3) • Implement Green Technology (3) • Use of ISO 14001 Standards (3) • Implement a Formal Environmental Management System (2) • Hazardous Materials Guidelines (2) • Waste Management (2) 	<ul style="list-style-type: none"> • Pollution Prevention (1) • Animal Welfare/No Testing (1) • Soil Management (1) • Have a Company Environmental Representative (1) • Adhere to Good Agricultural Practices (0) • Exhaust and Drainage Management (0) • Fertilizer Optimization (0)

Table C.12: Household and Personal Products Environment Tier Distribution

Supplier Selection Criteria for Sustainable Supply Chains
Senior Capstone Project for Amy Terracciano

TIER ONE (4-5)	TIER TWO (3-2)	TIER THREE (0-1)
<ul style="list-style-type: none"> • Freedom of Association/Collective Bargaining (5) • Prohibition of Child Labor (5) • Prohibition of Forced and Compulsory Labor (5) • Enforce Anti-Discrimination (5) • Health and Safety in Workplace (5) • Work Hours and Overtime (4) • Wages and Benefits (4) • Fair Treatment of Employees (4) • Uphold International Labor Laws/Regulations (4) 	<ul style="list-style-type: none"> • Comply with Local Employment Laws (3) • Emergency Preparedness Training for Employees (3) • Health and Safety Training for Employees (3) • Protect against Anti-Retaliation (2) 	<ul style="list-style-type: none"> • Decent Housing Conditions (1)

Table C.13: Household and Personal Products Labor Practices Tier Distribution

TIER ONE (4-5)	TIER TWO (3-2)	TIER THREE (0-1)
None	<ul style="list-style-type: none"> • Support of Local Communities/Rural Development (3) 	<ul style="list-style-type: none"> • Respect Land Acquisition Rights (0)

Table C.14: Household and Personal Products Society Tier Distribution

TIER ONE (4-5)	TIER TWO (3-2)	TIER THREE (0-1)
<ul style="list-style-type: none"> • Product Quality and Safety (4) • Origin Mapping/Transparency (4) 	None	<ul style="list-style-type: none"> • Product Recall System (1) • Conflict Minerals (1) • Promote Fair Trade (1) • No Traces of GMOs (0) • Comply with Global Food Safety Initiative (0)

Table C.15: Household and Personal Products Product Tier Distribution

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