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**INTEGRATING SUSTAINABILITY INTO SME
STRATEGY**

Jeff Shields

University of North Carolina, Asheville
jshields@unca.edu

Joyce M. Shelleman

University of Maryland University College
Joyce.shelleman@faculty.umuc.edu

ABSTRACT

Small-to-Medium Enterprises (SMEs) increasingly are expected to develop strategies to accommodate accelerating global sustainability reporting requirements and proactively address sustainability considerations. Many lack a structured approach to facilitate getting started with strategy formulation in response to this significant change in their external environment. This paper presents a readily applicable and practical method SMEs can apply to integrate sustainability considerations as a beginning toward developing a sustainability strategy. Current sustainability issues are identified and discussed with respect to determining company capabilities and assessing the external business environment. This classification of critical sustainability issues offers a flexible planning innovation well-suited to smaller enterprises seeking to begin developing a sustainability strategy.

Keywords: SMEs, sustainability, sustainability strategy, strategy formulation

INTRODUCTION

Sustainable business practices have been steadily on the rise. Many companies now embrace sustainability. Approaching half (43%) of those surveyed by McKinsey & Company report seeking to rectify sustainability with company values, mission, or goals. This focus on strategy is now the top corporate reason for addressing sustainability, just ahead of reputation effects and cost efficiencies (Bonini & Bove, 2014). Alongside large corporations, SMEs are aware of the insurgent sustainability tide and many have begun to incorporate sustainability strategy into their operations for many of the same reasons as large corporations (Brammer, Hoejmosr, & Marchant, 2012; Heras & Arana, 2010).

A clear trend in sustainable business practice is the reporting of company performance with respect to the “triple bottom line”. The triple bottom line encompasses the economic, environmental, and social performance of an organization and this constitutes its current performance with respect to sustainability. This trend has been growing for several decades and now many large companies also require other enterprises in their supply chain, some of which may be SMEs, to report information on sustainability performance. Along with other aspects of the sustainability movement such as public opinion supporting its value, this requirement represents a potentially major change in SMEs’ business environment with consequences that can have substantial impacts on their business.

SMEs should assess, monitor, and potentially develop strategies to accommodate widespread sustainability reporting and to proactively adapt to overall sustainability demands (Parhankangas, McWilliams, &

Shrader 2014; Nadim & Lussier, 2010; Avram & Kuhne, 2008). However, a key challenge faced by many companies, both large and small, is that they currently lack a structure to integrate sustainability into business decisions (Kiron, Kruschwitz, Rubel, Reeves, & Fuisz-Kehrbach, 2013). This is likely to be even more acutely felt in SMEs because many lack financial and human resources (Nicholas, Ledwin, & Perks, 2011; Gadenne, Kennedy, & McKeiver, 2009). Smaller SMEs, in particular, can face resource constraints that increase the difficulty of getting started on the path of systematically bringing sustainability issues into their operations and aligned with competitive considerations. In fact, 98% of SMEs have 20 or fewer workers (U.S. Census Bureau, 2012; 2013). This precludes the luxury of either a dedicated sustainability staff or full-time strategic planning support.

The changing business environment and a growing perceived mandate to address sustainability intersects with the reality of resource constraints that is a feature of SMEs, highlighting the need for an organized approach to begin development of a sustainability strategy that is readily accessible to even very small businesses. However, no method to do this that has a clear focus on sustainability issues has previously been articulated in the small business management literature. This paper provides such a process focused on sustainability to address the need for SMEs to get started on the path of incorporating sustainability as a strategic consideration. A method SMEs can apply to assess their competitive position with respect to sustainability and thus lay the groundwork for formulating a sustainability strategy is presented here.

First, we discuss sustainability and the related issue of sustainability reporting globally and

in the U.S. Then building on the well-known management process of assessing the match between organizational capabilities and environmental conditions, we draw from the literature to identify criteria to apply to integrate sustainability considerations into this framework, focusing on environmental sustainability. Finally, we conclude with a discussion of implications for SME management practice with respect to this practical innovation, limitations, and possible future research.

Sustainability

Sustainability is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987). This definition has been taken up in business to address stakeholders; a sustainable business “meets the needs of its stakeholders without compromising its ability to meet their needs in the future” (Hubbard, 2009). By this focus on the future, sustainability goes beyond corporate social responsibility (CSR) and can be even more difficult to achieve (Parhankangas et al., 2014).

SMEs have been viewed as relatively slow to adopt sustainability practices. This can be due to a lack of external stakeholder pressure (e.g., government regulations) (Masurel, 2006), time constraints on owners that preclude them from taking on what might be considered a “discretionary” business endeavor (Schaper, 2002), or just limited resources overall (Bos-Brouwers, 2010). Unlike large firms, SME owners typically lack financial resources, time, staff, technical expertise, and organizational structures to take on sustainability (Nicholas et al., 2011; Schulz, Kraus, & Demartini, 2011). The unclear payback, that may be delayed, tends to limit

the expenditure of SMEs’ limited resources on sustainability investments (European Commission, 2002). Further, they lack knowledge of their collective impact as SMEs on the environment, the benefits of addressing sustainability, and tools that can be used to develop sustainability strategies and practices (Aykol & Leonidou, 2014; Lawrence, Collins, Pavlovich, & Arunachalam, 2006).

Company mindset, culture, and subcultures are key elements that help to determine SMEs’ response to sustainability (Bonini & Bove, 2014; Baumgartner, 2009; Howard-Grenville, 2006). The heavily formalized strategic management approach that works for large companies may well not be the best approach for SMEs, where the owner’s vision, a flatter structure, and fewer internal stakeholders will affect discussions and positions on sustainability (Sloan, Klingenberg, & Rider, 2013; Brammer et al., 2012). Instead, a less formalized and flexible approach like that presented in this paper may offer SMEs sufficient structure to draw attention to key issues while not imposing a degree of formalization that is out of character with the smaller organization.

Sustainability reporting requirements, an accounting issue, create pressure and lend an urgency for SMEs to develop and adopt a sustainability strategy. This appears to be a situation where practice is leading theory. These sustainability reporting frameworks have been evolving globally for over two decades and gaining momentum in their importance and participation by large corporations. This accounting issue has significant implications for the business environment of SMEs and their management and, most important, their sustainability strategy. For example, the Securities and Exchange Commission (SEC) and the

Sustainability Accounting Standards Board are moving in the direction of requiring integrated reports and developed sector reporting standards (Schooley & English, 2015; Romero, Lin, Jeffers, & DeGaetano, 2014). Many companies are either planning to or currently are integrating their environmental and social performance into their external financial report and, in many cases, national governments (e.g., South Africa, Sweden) now require external reporting of companies' sustainability performance (Schooley & English, 2015; ACCA, 2014; KPMG, 2013).

The sustainability reporting practices of large companies have implications for SMEs. Among the 100 largest companies from 34 countries as measured by revenues (the N100), sustainability reporting has grown from 53% in 2008 to 71 % in 2013 (KPMG, 2013). Among the top 250 companies listed in the Fortune Global 500 (the G250), reporting has grown from 83% in 2008 to 93% in 2013 (KPMG, 2013). Large companies report a variety of motivations for voluntarily reporting on their environmental and social performance: considerations of reputation, brand, ethics, risk management, economics (e.g., cost reduction, new product and service opportunities), and relationships with governmental authorities (Ernst and Young, 2014; Bonini & Bove, 2014; KPMG, 2011; McKinsey and Company, 2010).

At present, the most well developed and popular reporting framework is the Global Reporting Initiative (GRI) (KPMG, 2013). In 2013, 78% of the N100 and 82% of the G250 used the GRI framework (KPMG, 2013). The GRI framework allows companies to select which of two levels of reporting they will use (GRI, 2013). The highest level requires more comprehensive reporting across a variety of

key aspects of economic, environmental, and social performance. The less comprehensive level still requires the discussion and disclosure of a variety of measures and factors related to economic, environmental, and social performance. Each major aspect then has a set of indicators that are specific measures of a particular aspect. With respect to environmental performance, the aspects are materials energy, water, biodiversity, emissions, effluents and waste, product and services, compliance, transport, overall, supplier environmental assessment, and environmental grievance mechanism (GRI, 2013). Companies analyze which aspects are important or material for their company and then must, at a minimum, report one indicator for each aspect they have identified as material. An analysis of the frequency of reporting environmental performance measures across 1170 GRI reports shows that 74% of the reports reported on direct energy use, 71% on total water withdrawal, and 81% on greenhouse gas emissions by weight (GRI, 2014).

According to the International Finance Corporation, more than 90 percent of companies globally are SMEs, accounting for more than half of all employment (IFC, 2012). Nearly three quarters of all pollution can be attributed to SMEs (European Union, 2010; Williamson, Lynch-Wood & Ramsay, 2006; Hillary, 2004). For these reasons, they play a "vital role" in stewarding social and ecological resources (Moore & Manring, 2009). Further, networked SMEs can behave much like a larger company in the marketplace (Moore & Manring, 2009), increasing their potential impact.

Beyond linkages among SMEs, large companies that use GRI reports are expanding their reporting requirements along a limited

set of indicators to their supply chains. Thus SMEs in supply chains of large companies may expect to have environmental reporting become a part of their business as a result of their supply chain participation. The commonly reported environmental performance measures above may serve as a benchmark for what SMEs might be expected to produce.

In short, sustainability reporting requirements are providing a powerful impetus and need for SMEs to integrate sustainability issues into their business decisions. In response to this and other pressures to address sustainability, in the next section of this paper, we present a structured practical approach for SMEs to incorporate sustainability considerations that starts to lay the groundwork for a sustainability strategy. By identifying key issues, this method seeks to remedy potential sustainability knowledge limitations and, because it is so straightforward, it can work within the resource constraints of SMEs in order for them to begin to proactively address sustainability.

A Structured Approach to Integrating Sustainability Issues

Given the increasingly large scale attention and reporting of sustainability efforts and the potential benefits of reporting, SMEs must engage in this endeavor. Sustainable performance and associated reporting are unavoidable 21st century strategic issues. The benefits of sustainability efforts in SMEs go beyond any directly quantifiable financial benefits to include factors such as innovation, market share, brand, and compliance with regulations (Conway, 2014; Brammer et al., 2012; Heras & Arana, 2010). However, many SMEs may be unaware of these benefits (Lawrence et al., 2006).

A management approach that integrates sustainability into the overall management of an SME is viewed as an essential tool for incorporating sustainability into strategy (Tsalis, Nikolaou, Grigoroudis, & Tsagarakis, 2013). The well-known technique known as “SWOT” analysis (based on strengths (S), weaknesses (W), opportunities (O), and threats (T)) is common to most strategic management processes. It is an easily grasped framework intended to assess the suitability among perceived company capabilities and future environmental conditions. SWOT is a simple tool and thus is especially appropriate for the needs of SMEs’ given their limitations (Lumpkin, McKelvie, Gras, & Nason, 2010). “SWOT analysis can be highly useful for microenterprises wishing to take stock of their strategic situation and forming a strategy that matches the situation...the SWOT framework can best be used as a starting point for analysis in that it provides the “raw material” to conduct more comprehensive ... analysis” (Lumpkin et al., 2010, pp. 4-5). Research suggests that not knowing about available strategic tools, such as SWOT, may be what prevents their use in small SMEs (Woods & Joyce, 2003).

Many companies report that they lack a model to integrate sustainability issues into their primary business (Kiron et al., 2013). Unlike highly formalized approaches that may work well in resource-rich large companies, SWOT can be an ideal approach for relatively resource-poor, less formalized small enterprises to engage with sustainability issues.

The goals of SWOT analysis include identification of key strategic issues – in this case related to sustainability, examination of relevant data and information, and evaluation of the potential magnitude and importance of

issues. An ultimate goal is to help to assess a fit among company capabilities and its external environment in order to take competitive actions that seize opportunity, deflect or avoid threat, remedy or sidestep weaknesses, and develop and/or capitalize on capabilities (Lumpkin et al., 2010). This concentrated focus on competitive issues and actions, along with other strategic tools, culminates with budgeting and resource allocation decisions that then drive actions. In a sustainability context, this represents the beginning of a sustainability strategy and resulting sustainability practices throughout the business.

As a framework, SWOT can be graphically represented in a simple two-by-two matrix, as shown in Figure 1. Its accessible graphic representation allows key issues to be summarized and then debated within a participatory strategy-making session to best surface the ideas and specialized knowledge of key parties within the organization. It likely owes much of its popularity as a management tool to this accessibility and ease of use.

Figure 1: SWOT Analysis Matrix

Trends and Factors in the External Environment	Opportunities	Threats
Internal Company Capabilities	Strengths	Weaknesses

In Table 1, we outline a sustainability SWOT framework that is based on review of the sustainability and SME sustainability literatures. From this review, we identify and categorize major sustainability strategic issues within each cell of the matrix. In this presentation, we focus on environmental sustainability (i.e., ecological or planet issues) although the principles of the method and

framework itself apply equally to the social dimension of sustainable business practice (i.e., people issues). While some of the strategic issues considered here may be unique to SMEs, many cut across business size and apply to a broad range of businesses.

We begin our discussion of the sustainability SWOT with the external business environment and move then to internal company capabilities. The sustainability and SME literature on the pressure for and benefits to SMEs of adopting sustainability practices provide the basis for the issues in each cell. Collectively these factors represent an informal checklist for SMEs to consider as they begin their discussions of their sustainability strategy. In the following discussion, we highlight some of the environmental sustainability issues from each cell of the matrix. This is a beginning for SMEs to stimulate their own consideration of such issues.

Environmental Sustainability Opportunities and Threats in the Business Environment

SMEs have experienced pressures to adopt sustainable practices (i.e., become aware of potential threats) and have benefited from adopting sustainable practices (i.e., have seized opportunities) (Brammer et al., 2012). These are primarily in the areas of customers and markets, competitors, government incentives and regulation, other stakeholders such as value chain companies and workers, resource availability and sourcing, and macro-level systemic factors.

Customers and markets

Opportunities related to customer and market demand such as new markets and market share can be traced to significant benefits that SMEs have experienced (Bagur-Femenias, Llach, &

Alonso-Almeida, 2013; Brammer, et al., 2012; Revell et al., 2010; Heras & Arman, 2010; Lawrence et al., 2006; Williamson et al., 2006). As just one example of this, a recent Nielsen global study showed that half of all respondents in the 40-44 year old age group are willing to pay more for goods and services from sustainable companies (Hower, 2013). To what extent do the SME's existing customers or other potential customers who share their respective demographics place value on the environment with respect to products, services, and sustainable operating practices? These changing needs can facilitate retention of customers and entrance into new markets by offering environmentally friendly products or business practices; conversely, changing customer preferences can be a threat (KPMG, 2013; Lawrence et al., 2006). Are there opportunities for sustainability branding in key lines of business (KPMG, 2013)? Do any of these offer a first mover branding advantage? As the sustainability trend continues to expand, these may decline over time.

Competitors. Cost advantages from adopting sustainability practices (Revell et al., 2010; KPMG, 2013) represent an opportunity to be more competitive. On the output side, other companies' need for sustainable products and services in the SME's existing supply chain may be an opportunity for sustainable sourcing. On the input side, evolving technologies such as solar energy and new technologies may offer operations and materials cost reductions.

When a competitor promotes and brands itself as a green company (e.g., introducing new green products or services, reducing energy consumption, adopting renewable energy

sources, etc.) that is a threat (Bagur-Femenias et al., 2013; Brammer et al., 2012), especially if it's "greenwash". Greenwash is advertising that falsely portrays a company as environmentally responsible.

Government incentives and regulation. A lack of legislation and regulation is an opportunity for an SME to define its sustainability efforts free of constraints imposed by government stakeholders. At the same time, pending legislation and/or regulation may be an opportunity for branding and early mover advantages that demonstrate proactive compliance (Brammer et al., 2012; Heras & Arana, 2010; Revell et al., 2010; Zorpas, 2010). Reporting environmental performance could position the SME to influence the shape of pending regulation, staving off the threat. Regulation with respect to environmental impacts by business can be expected to continue (GRI, 2013).

Other stakeholders. Stakeholders can represent either opportunities or threats. Some stakeholders, such as investors, may resist sustainable practice while others demand it. Balancing competing stakeholder interests with respect to sustainability can be an important strategic issue (KPMG, 2013). SMEs with improved environmental performance may represent a lower level of risk to financiers, investors, and insurers because of factors such as positive brand effects and a reduced likelihood of adverse publicity (e.g., dumping of toxic waste reported in the local newspaper) (KPMG, 2013; Revell et al., 2010). Some supply chain partners require reports on sustainable performance (Brammer et al., 2013; Bagur-Feennias et al., 2013; Revell et al., 2010).

Table 1: SWOT Analysis Framework for Potential Environmental Sustainability Issues

<p>Opportunities</p> <ul style="list-style-type: none"> •Cust. dem. associated with valuing sustainability •Evolving customer demand for sustainable operations, products, or services •Revenue generating products/services that address sustainability concerns of existing customers •Revenue generating product/service extension to assist customers in reducing their env. impacts •New market segments to target with sustainable products/services •Sustainability branding in key lines of business, including first mover advantage •Comp. not competing based on sustainability brand •Regulation (lack of or pending) •Stakeholder demand for change •Supply chain competitive sourcing •Material cost reductions •Emerging technologies 	<p>Threats</p> <ul style="list-style-type: none"> •Cust. lack of awareness and/or commitment •Competitors’ sustainable products/services/operations •Competition branding itself based on environmental impacts, including “green wash” •Insufficient gov. incentives and/or fin./investors to facilitate inv. in eco-efficient processes •Regulation (lack of or pending) •Value chain partners demand sustainable oper. •Stakeholder resistance to sustainability •Difficulty attracting and retaining talented workers who value sustainability •Potential shortages in key resources/inputs •Key resources/inputs facing dramatic price increases and/or price volatility •Rising energy costs •Unanticipated syst. economic and sociopolitical impacts of climate change, water shortages, etc
<p>Strengths</p> <ul style="list-style-type: none"> •A sustainability strategy is in place •Executives and owner(s) committed to sustainability •Employees value sustainability •Have taken actions to innovate at improving environmental performance •A company history of proactive strategic choices •Experience mapping processes •Risk management capabilities •Knowledge base & structured process(es) for plan. •Good understanding of stakeholder and customer preferences for sustainability •Roles and responsibility for sustainability allocated and clearly communicated •Strong comp. mission and history based on ethical serv., comm. responsibility, and long term effects •Organization and culture supports innovation and cross disciplinary collaboration •Indirect org. capabilities in sustainability •Well-developed information systems, performance measurement and reporting •Resource base is robust 	<p>Weaknesses</p> <ul style="list-style-type: none"> • No sustainability strategy • Lack of commitment from managers/owner(s) • Lack of/low commitment from employees • Business case for sustainability is not apparent • No current hist. & track record of actions taken • Knowledge base and capabilities for sustainability readiness planning are weak • Poor understanding of how stakeholders and customers value sustainability • Poor or no formal allocation of responsibility for sustainability initiatives and outcomes. • Heavily dependent on ecologically unsustainable processes • Company culture places low value on innovation • Few, if any, systems for performance measurement and reporting • Lack of infrastructure for working with suppliers • Facing other significant competitive challenges associated with resource constraints
<p>Sources: Avram & Kuhne (2008), Bagur-Femenias et al. (2013), Baumgartner (2009), Brammer et al. (2012), Bonini & Bove (2014), Bos-Brouwers (2010), CIMA (2011), CGMA (2014), Clarkson et al. (2011), Ernst & Young (2013), GRI (2013), Heras & Arman (2010), Hoogendoorn et al. (2015), Hower (2013), Jasch (2009), Kiron et al. (2013), Klewowitz & Hansen (2014), KPMG (2013), Lawrence et al. (2006), Leonidou et al.(2014), Loucks et al. (2010), Lumpkin et al. (2010), Revell et al. (2010), The Economist Intelligence Unit (2008), Williamson et al. (2006), Woods & Joyce (2003), Zorpas (2010).</p>	

Customers may be able to readily switch suppliers to those with superior performance. Dramatic price increases and/or volatility in key resources threaten the ability to contain costs and maintain pricing advantages. Companies may also experience difficulty in attracting employees who value sustainability.

Resource availability and sourcing. Reductions in energy consumption represent an opportunity. Rising energy costs also can threaten the operations of most SMEs and should stimulate efforts to alter existing energy paradigms. Potential shortages of key inputs and price volatility are threats that warrant close attention (Ernst & Young, 2013). Similarly, if an SME's suppliers are themselves part of a supply chain that is vulnerable to environmental disruption (e.g., drought) then these potential disruptions can be a threat.

Macro-level systemic factors. Unanticipated systemic economic and sociopolitical impacts of climate change along with water shortages, rising sea levels, rising greenhouse gases, and related environmental catastrophes represent threats to business (Kiron et al., 2013). These events present difficult issues that may require scenario planning sessions and other approaches for SMEs to try to surface potential impacts and devise appropriate responses. The SWOT analysis can help to bring them to the agenda.

Environmental Sustainability Company Strengths and Weaknesses

Environmental sustainability capabilities are primarily in the categories of strategy and commitment, knowledge and experience, organization, and resources. Potential strengths with respect to environmental action and reporting are related to the competencies necessary to obtain the benefits SMEs have

associated with adopting sustainable practices and reporting on their environmental performance; lack of internal competencies to obtain the benefits of sustainability is a weakness.

Strategy and commitment. A company that already has developed a sustainability strategy has an important capability to deal with an external threat or an opportunity as it emerges. Lack of a sustainability strategy and an apparent business case for sustainability are related weaknesses. Companies that thoroughly address sustainability have developed both a business case for sustainability and have a strategy (Kiron et al., 2013, p. 3).

If an SME's owner and employees are committed to sustainability, these preferences can motivate development and implementation of programs to reduce environmental effects (e.g., purchasing, energy efficiency, product redesign, process changes) (Hoogendoorn, Guerra, & van der Zwan, 2015). Without commitment at the top and at all levels, sustainability efforts will be stymied. Top management, along with customers, is the prime mover that determines commitment to sustainability (Kiron et al., 2013; Leonidou, Christodoulides, & Thwaites, 2014). Involving employees in sustainability brainstorming and decision-making can ensure the best ideas and greatest commitment to implementation of changes as well as functioning to both attract and retain talented employees (Leonidou et al., 2014). Management capabilities such as allocation and communication of roles and responsibilities for sustainability provide universal clarity of expectations and tell others where to go for assistance.

Knowledge and experience. Alongside strategy, a track record of actions to innovate

at improving environmental performance is a key capability due to accumulated organizational learning to achieve benefits by being proactive (Klewitz & Hansen, 2014; Bos-Brouwers, 2010; Avram & Kuhne, 2008). A knowledge base (Becherer & Helms, 2014) and structured process for sustainability planning enables the SME to treat it as a strategic issue and integrate it into core business decision making. Part of this knowledge base should include a good understanding of customer and stakeholder preferences that support sustainability (Loucks, Martens & Cho 2010). Poor understanding or data to support understanding customer preferences for sustainable operations, products and/or services is a weakness.

Innovation in both process and products and services is important to attain the benefits of addressing sustainability (Hoogendoorn et al., 2015; Klewitz & Hansen, 2014). For example, cost reductions are many times achieved by looking at the way an SME has always done things and finding new ways that reduce the use of inputs such as energy or water (Bos-Brouwers, 2010). Improving reputation and brand require programs to already be in place to reduce impacts on the environment (e.g., product design to use less energy or lower disposal costs, improving the efficiency of the manufacturing process) (Brammer et al., 2012; Heras & Arnan, 2010).

Experience mapping processes for new process installation or for improving efficiency or quality is a strength. Material flow analysis maps the inputs to the business (e.g., types of materials, energy) and then outputs (e.g., waste) (Jasch, 2009), identifying outputs to target to improve environmental performance. Experience evaluating business risk also can be used to assess environmental-related risk so that steps can be taken to

address the largest environmental risks (e.g., effluent or waste outputs from the business) (Ernst & Young, 2013; The Economist Intelligence Unit, 2008).

Organization. Tackling sustainability in a serious way requires support from the organization (Kiron et al., 2013). Not only commitment from top management but also allocation of formal responsibility for sustainability offers a strength (CGMA, 2014). Indirect weaknesses are latent capabilities that may limit response to sustainability challenges. This includes a company culture that places low value on innovation (Baumgartner, 2009; Bonini & Bove, 2014). A lack of infrastructure can inhibit supply chain collaboration on sustainability issues or a crucial response to a supply chain partner's new sustainability requirements (Vaaland & Heide, 2007).

A well-developed performance measurement and reporting system lays a foundation for sustainability. Sustainability reporting is made possible by a system for measuring and reporting environmental-related performance (e.g., lbs. of paper recycled, lbs. of toxic waste). Reporting provides important impetus to develop programs that show improvements (CIMA, 2011). Lack of systems for performance measurement and reporting preclude internal accountability and reporting sustainability performance to important external bodies or stakeholders (e.g., GRI, governmental regulatory bodies).

Resources. A robust resource base is an important capability for a company that plans to take on sustainability issues in a substantive manner (Clarkson, Li, Richardson, & Vasvari, 2011). A lack of resources to back up initiatives can lead to forgoing financial and related benefits of sustainability,

disenchantment with the effort within the organization, and superficial responses that will be readily discernible in external reporting, potentially undermining the company's reputation with respect to sustainability. Similarly, resources diverted to other significant competitive challenges can prevent an SME from developing a viable strategy for dealing with sustainability issues.

In this section of the paper, we have outlined many of the key issues in each cell of a sustainability SWOT matrix that SMEs need to integrate into their sustainability strategy. In the next part of the paper, we discuss implications of the model, limitations, and future research.

Discussion and Conclusions

This framework offers a flexible but structured approach to SMEs to begin to formally integrate sustainability considerations into their overall business strategy, meeting an important need especially for the 98% of SMEs that operate with 20 or fewer workers (U.S. Census Bureau, 2013; U.S. Census Bureau, 2012). SWOT fits many SMEs' context of limited resources and the framework's identification of issues addresses their reported lack of awareness of the benefits of addressing sustainability (e.g., opportunities) (Lawrence et al., 2006). A major practical implication of the framework and identification of key sustainability issues is as a tool to get started or continue to develop a sustainability strategy (Lumpkin et al., 2010; Nadim & Lussier, 2010). The checklist items in the matrix enable SMEs to identify key strategic sustainability issues that warrant their attention. Companies can seek then to optimize congruence between their internal capabilities and the external cells in the matrix as they examine the current status of the company and potential trends in the

competitive (including regulatory and social) global environment with respect to sustainability.

When an SME finds that it has many strengths that give it a readiness to engage in improving sustainability performance, it should take action and gain the advantage of being proactive (Jenkins, 2006). This could begin with efforts to develop a better understanding of stakeholder and customer preferences regarding sustainability related performance standards and related issues (see GRI, 2013; Loucks et al., 2010). This preliminary assessment will point to follow-up steps such as to identify important sustainability impacts (e.g., emissions, waste) and their locations (e.g., community, customers, suppliers). Strengths that are translated into further development of company capability will then lead logically to a reassessment of opportunities. Such opportunities can be pursued to achieve some of the benefits of improved sustainability performance (e.g., cost reduction, brand enhancement, risk reduction).

Similarly, when an SME finds instead that, rather than strengths, it has many weaknesses in the presence of opportunities (e.g., customers who value sustainability) and/or threats (e.g., competitors branding themselves as green or marketing green products and services), it also must take action. In such a situation, the company is faced with a strategic imperative (i.e., critical and urgent) to take action to mitigate its weaknesses through steps to develop internal capabilities that address sustainability.

Beyond the initial assessment of capabilities relative to its environment, the SME can progress to gathering additional information as needed on company capabilities,

stakeholder preferences, and relevant environmental trends. Evidence of ecological impacts of unsustainable business practices is continually emerging and must be factored into company decisions in the 21st century.

With this matrix, sustainability issues can be integrated with the rest of the SME's strategic considerations and planning. From there, SMEs will have a clear mandate for budgeting and resource allocation decisions with respect to sustainability. Development of organizational capabilities, especially environmental performance reporting, should be a ground floor strategy. For example, by tracking performance, one office products SME was able to quantify that it saved the equivalent of 0.5% of annual sales by developing and using reusable boxes from propylene to replace cardboard disposables (CGMA, 2013). Such results help to establish the business case that is important for a sustainability strategy (Kiron et al., 2013).

The sustainability SWOT is not the entirety of a strategic planning process – a potential limitation if the framework is viewed in isolation. Another limitation is that the sustainability SWOT is better suited to smaller SMEs and those that have not yet begun to address sustainability in their core business decision processes. An examination of overall trends in social, economic, political, technological, and ecological arenas is a preliminary step to provide inputs to this analysis that we do not address here. Similarly, it is expected that a company subsequently would integrate strategic issues emerging from this sustainability SWOT analysis into line of business strategic assessments of non-sustainability-related issues to arrive at integrated strategy. Finally, a limitation of this paper is that we have focused only on issues related to

environmental sustainability. Integration of the social dimensions of sustainability also is possible in a similar process by using a sustainability SWOT.

It is important to avoid establishment of a “parallel organization” for sustainability (Schaltegger & Wagner, 2006) with lesser priority which will tend to be minimized when times are tough. In fact, a purpose of the sustainability SWOT is to begin to draw attention to stakeholder and other concerns with sustainability implications that have the potential to affect the entire business. Over time, it is likely and to be expected that sustainability issues (identified in the matrix in Table 1) will become fully integrated into core business strategy as its sustainability strategy. Future research could explore how this tool is deployed in SMEs of various sizes, perhaps using a methodology such as case studies. Research might also investigate how it might be modified to suit industry differences (Hoogendoorn et al., 2015), the effects of its use on outcome measures of SMEs' sustainability performance, and the perceived usefulness of this element of a planning process at identifying critical opportunities, threats, strengths, and weaknesses within SMEs with respect to sustainability.

In conclusion, this paper details the first known structured process to integrate sustainability issues into SME strategy and overall business considerations, meeting a current need that is increasing in urgency. With a focus here on environmental (i.e., ecological) sustainability, critical sustainability issues related to opportunities and threats in the business environment and with respect to company capabilities (strengths and weaknesses) are drawn from the scholarly literature and current studies of

practice. Identification of these issues provides an essential starting knowledge base for SMEs that have never before engaged in sustainability discussions and addresses an urgency for heightened awareness.

The framework itself addresses the need for companies to find a structured way to integrate sustainability considerations, offering a method that is aligned with the significant resource constraints normally experienced by SMEs. It should require little in the way of staff support or financial resources to implement. It also offers a less formal and perhaps even familiar approach that may be better suited to these organizations, especially smaller SMEs (Lumpkin et al., 2010). For those SMEs that have not yet addressed sustainability concerns, the sustainability SWOT is a straightforward method to begin to assess competitive position and to get started on the path of incorporating sustainability as a strategic consideration.

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Jeff Shields is an assistant professor at UNC Asheville where he teaches in the area of cost and management accounting. He earned his Ph.D. in Business Administration from the University of Pittsburgh. His research interests are in the use of management accounting information by small businesses in making business decisions (e.g., cost management, revenue management, seasonality, and sustainability).

Joyce M. Shelleman is Adjunct Professor of Management in The Graduate School, University of Maryland University College, and also serves as adjunct faculty in the Leadership MBA Program at St. Joseph's College. She earned her Ph.D. in Business Administration from the University of Pittsburgh. Her current research interests include small and micro-SMEs, planning and control systems, and sustainability management strategy.

