

Towards Sustainability: Examining the Drivers and Change Process within SMEs

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Abstract

Sustainability appears to be at the forefront of business topics for the 21st century. Over the past twenty to thirty years, businesses have changed their attitude towards sustainability from rejection to elevating it to a key strategic organization goal, based on the realization that sustainability is not only good for the planet, but financially rewarding. This development results in the need for frameworks describing how organizations can successfully manage the change towards sustainability. This paper provides a thorough literature review of the current stage of the development of such frameworks, as well as a comparison with assessments of where 21st century corporations stand with regards to sustainability. The authors find that while valuable frameworks exist, there is a lack of understanding of whether and how these frameworks work for Small and Medium size Enterprises (SMEs). Building upon the existing models, this paper proposes a pathway for empirical research leading to the alignment and adjustment of these models to the needs of SMEs.

Keywords: sustainability, change management, small and medium enterprise

1. Introduction

Faced with the fact of earth's finite resources, businesses are looking for ways to integrate concepts of sustainability into their product design, operations, and supply chains. As defined by the World Commission on Environment and Development (WCED), "Sustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future" (WCED, 1987). A different definition calls sustainable development "...development that improves the quality of human life while living within the carrying capacity of supporting ecosystems" (IUCN, 1991). In application to businesses, Dyllick & Hocketts (2002) stated: "For the business enterprise, SD [sustainable development] means adopting business strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining, and enhancing the human and natural resources that will be needed in the future". While these earlier definitions focused on sustainable development, later definitions speak more generally of sustainability. Carter & Rogers (2008) defined sustainability as "the strategic, transparent integration and achievement of an organization's social, environmental and economic goals in the systemic coordination of key inter-organizational business processes for improving the long-term economic performance of the individual company and its supply chains". Soyka (2012) formulates sustainability as consisting of "three legs of the stool", namely economic prosperity, environmental protection and social equity, noting that the phrase "people, planet, profits" is increasingly used to describe the three aspects. Sustainable business practices hence require looking at environmental, social and ethical effects of firm operations. Between the initial definition by the WCED and current understanding of sustainable business lies an interesting history. Focusing just on the environmental aspect, firms first balked at the idea of adapting production processes or supply chains that are more protective of the environment. However, drastic environmental disasters (such as Exxon Valdez, Love Canal, Bhopal), followed by costly litigation, slowly resulted in a change of mind. In a review of operations management literature, Kleindorfer et al. (2005) noted that after twenty years of research, it is now obvious that firms no longer argue about the viability of sustainability efforts, but about methods of implementation. Environmental Management Systems (EMS), ISO 14001 certification, Life Cycle Analysis and Triple Bottom Line reporting (Elkington, 1998) are examples of such implementations.

There is a significant body of literature studying the relationship between these managerial measures and actual environmental as well as firm performance (see for example literature review by Molina-Azorín et al., 2009). Although not all results of studies included in this literature review are consistent, overall, firms appear to benefit financially when moving from simple compliance to more rounded and integrative approaches towards environmental performance and hence sustainability. Russo and Fouts (1997) concluded “it pays to be green.” Furthermore, according to Johnson (2009) there appears to be a growing consensus in today’s business world that sustainable practices are not just good for the world, but good for the firm itself. The 2011 United Nations Environmental Programme (UNEP) report suggests that “...transitioning to a green economy has sound economic and social justification”. In the 2010 Sustainability and Innovation Global Executive Study (SIGES) (MIT, 2011) of 3,000 executives, 57% reported that pursuing sustainability-related strategies is necessary to be competitive. This study labeled 24% of the respondents as “embracers” when in addition to seeing sustainability as necessary to be competitive they also reported their organization as having a business case for sustainability and reported it as a permanent part of management’s agenda. These embracers see themselves as outperforming their competitors (70%) and report their organizations’ sustainability related actions have increased their profits (66%).

A sustainable economy requires sustainable businesses. Therefore, learning how to measure increments of success in a firm’s transition to sustainability is important. But even more important is discovering what enables firms to move toward that success. Shrivastava and Hart (1994) posited as early as 1994 that environmentalism will become a driving force for economic, social and political change by the turn of the century, requiring organizations to take a systemic view of the environment-organization relationship and the transformation of the entire organizational design, including competitive strategy, structure and formal systems, as well as organizational processes and culture.

In its practical consequences, there appears to be agreement that significant managerial effort and expertise are needed to implement firm level changes towards sustainability, and that implementation or at least knowledge of other operational improvement processes, such as quality management or lean manufacturing, is supportive. Wood (1991) developed a theory-building framework of Corporate Social Performance, stating that socially responsible and environmental actions require to be looked at from an institutional, organizational, or individual level; or from any combination of the three. Corbett & van Wassenhove (1993) reported that internalizing and operationalizing of environmental issues is needed, supported by searching for synergies from other operational methods (such as Total Quality Management (TQM), or lean manufacturing). Carter et al. (1998) found top and middle level management support to be significantly important for successful green supply chain management implementation, while a study by Darnall (2001) suggests that firms that mandate ISO14001 are able to withstand greater external pressures and have stronger overall internal capabilities. According to Christmann (2000) these capabilities refer to process innovation and implementation. Lueneburger & Goleman (2010) report that sustainability differs from other corporate initiatives as it first concerns operational reality and secondarily public perceptions. Zhu & Sarkis (2004) found that Quality Management is a very important antecedent for successful greening of a firm’s supply chain. Looking into the TQM literature, Naveh & Marcus (2004) found that success of ISO 9000 implementation depends on the level of assimilation (i.e. adoption alone is not sufficient), that needs to be supported by flexible rules to provide identification and internalization.

The literature is also replete with empirical evidence and conceptual explanation of the fact that any kind of transformative change is very difficult to achieve (Beer & Nohria, 2000). Kotter’s (1995) seminal eight-stage process for change management lays out a model for transformative change, and then discusses the ways in which most organizations fall off the path towards the goal they have set themselves. Dunphy et al. (2003) introduced a three-stage wave model describing how firms transition from opposition and ignorance to a stage of transformation. Doppelt (2003) offered the “seven blunders of sustainability” as guidance for practitioners. Lueneburger & Goleman (2010) indicate that their research shows that sustainability initiatives evolve through three distinct phases: in the first phase the systemic challenge is to create the sustainability vision; the second phase is to translate that vision into action; and in the third phase the organization anticipates future needs. Within this framework they identify the needed executive competencies. Eccles et al. (2012) studied companies they referred to as “sustainable” to those they identified as “traditional” in order to identify how transformation to being a sustainable company occurs. The research led them to propose an identity and cultural model in which the first stage involves reframing the company’s identity and the second stage codifies that new identity through mechanisms of engagement and execution. They note that their model is “grounded in large-scale change – something that few companies seek out or do well”.

And yet, as Ates & Butitci (2011) observe, “[i]n change management, on the one hand, a large body of research

is based on large companies with limited focus on S[mall][to]M[edium]E[nterprise]s” (Note 1). On the other hand, there has been an implicit assumption that organizational theories, processes and conceptual frameworks developed through researching large organizations are relevant and directly applicable to SMEs (Tonge, 2001). According to Sarkar (2001) “...there are indeed significant differences between SMEs and their larger counterparts, both in the way they run the business and how they adopt theories and models.”

There is now beginning to be a body of literature, still in its infancy, which takes up the special problems of change process in SMEs in general, and also the particular topic of transforming SMEs into environmentally sustainable organizations. Demartini et al. (2011) present an extensive literature search on sustainable management of SMEs, from which they conclude that at present there exists no convincing evidence that sustainability strategies now being used by large companies are viable for SMEs, and that therefore a great deal of research needs to be done, because of the large numbers of SMEs. A 2010 U.S. International Trade Commission reports that out of about six million firms in the United States in 2006, 89% had fewer than 19 employees; 9% had between 20 and 99 employees; 1.5% had between 100 and 499 employees, and only 0.3%, or about 18,000 firms, had more than 500 employees (USITC, 2012). Given the large number of SMEs, it would seem that evidence-driven theories about specifically which strategies *do* work to help SMEs transition to sustainability are sorely needed.

Wiesner & Poole (2009) attempted to determine what mental models SME (Note 2) managers in Australia use when trying to effect organizational change, and found that they seldom came even close to doing the kind of communication and collaboration that Kotter believes, based on large-company research, is indispensable in effecting transformative change. Of course, questions arise which were outside the scope of Wiesner & Poole’s study, such as: were their findings specific to Australian SMEs? Were the organizations on the road to success in becoming environmentally sustainable even though they were blundering, according to Kotter’s model?

Hotho & Champion (2011), in a theory-development piece, note that “[c]hanges in markets and the competitive strategies of large organizations have increased the pressure on SMEs to focus on innovation, innovation capabilities and innovation management...[s]tudies to date suggest that the SME sector in general still demonstrates an innovation management deficit...”. The authors go on to, among other things, argue that innovation management must be organizationally and socially embedded in change management, or else the innovation as a continuous phenomenon cannot be sustained.

Thus, whether transformative change can be brought about in SMEs the same way it has been in large organizations is an issue which must be seen as looming importantly in the background as we move towards consideration of how change towards environmental sustainability specifically can be accomplished in SMEs.

Wiesner et al. (2010) do address specifically the question of what the “management processes and practices necessary for SMEs to implement environmental [sic] sustainable (ES) practices” will be. They studied twelve firms in Queensland, Australia that were recognized as being fairly “green” and found that there was indeed some correlation between the process that they had undergone, and the “wave” approach that Dunphy outlines, but that departures from that framework, fairly consistent across their small-but-purposive sample, may indicate that SMEs do and perhaps must use a slightly different framework. Whether the same variations will show up in larger samples and/or in other countries will require investigation.

Hoivik & Shankar (2010) make the point that the extent to which a social responsibility initiative like environmental sustainability is driven by external factors (such as legal requirements in the EU and in Norway) does make a difference in how SME managers react, because SMEs tend to be very sensitive to external compliance demands. This probably means that theory development concerning organizational change towards environmental sustainability in SMEs must take into account the specific geopolitical source of the data.

Howard-Grenville (2006), however, provides compelling evidence that internal factors are also important drivers of corporate action with respect to environmental sustainability, and that even organization sub-cultures can have distinct impacts on what the corporation overall decides to do or not do. The author states that “[a]ttending explicitly to what an organization’s culture and subcultures are, not what they ought to be, and how these cultures shape interpretations and action, should yield insight into a more complex picture of the motivators and practices of corporate environmental management.”(p.47). This argues strongly for the use of qualitative research methodology, at least in the beginning, in order to avoid being “fed” the official line rather than the actuality of what the driving cultural attitudes towards sustainability are in the organization, and who/which groups within the SME, if any, actually have the power to take the organization to the next “wave.”

Fawcett et al. (2009) usefully divide SMEs into three categories: Status Quo, Niche Player; Grow and Sell Player; Long-term Growth Player. They argue that as a SME grows larger, it must develop the capacity to manage its

supply chain relationships so that as part of a network it meets its strategic objectives. This may mean that environmental sustainability for a SME that intends to grow will require yet another “soft skill” competence, namely networked supply chain management, which, the authors say, most SMEs do not have or even try to develop. A pilot study on sustainable supply chains in SMEs in Arizona’s aerospace and defense industry indicate that supply chains are indeed a critical part of a move towards sustainability and that SMEs should embrace various ways to improve their current performance in this area (Humble et al., 2012).

Further in this line of research, Hansen & Hamilton (2011) differentiate between firms that want to grow, and firms that do not, and find that growth firms differ significantly from non-growers in terms of perception of opportunities; adaptability in the face of perceived constraints; and understanding of strategic as opposed to non-strategic issues, as well as, of course, the owner’s subjective desire to grow or not grow. Firms that wanted to grow were found to have much larger, more diverse networks of all sorts. They were also found to be more committed to training and development. Therefore, it will be important to distinguish growers from non-growers in any research in which human resource management and/or organizational development factors are being selected as possible drivers of SME responses to the challenge of increasing the firm’s environmental sustainability.

Similarly, De Clerq & Voronov (2011) argue that one must also distinguish between new firms and more experienced firms with regard to sustainability strategies, arguing that external social expectations regarding firm legitimacy are higher with respect to new businesses, who are expected to be economically viable and to encompass from the very beginning a personal commitment on the part of the entrepreneurial founders to waste reduction, reducing the ecological footprint, and the like. To the extent that “sustainability logic” is built into a firm from the beginning, it may be faster or easier or both to move from one wave to the next. This, then, is another methodological concern that good SME research should take into account.

As discussed earlier in this section, it is evident that firms are increasingly attempting to practice their businesses sustainably. The review of the current literature also shows that while several change management models exist that can guide managers in their activities towards sustainability; they may not in their entirety be suitable for SMEs. In fact, there appears to be a need for a change management framework that will be useful for SMEs on their road towards sustainability. This paper seeks to develop such a framework from the existing literature by comparing existing models and suggests how to empirically study the practice of change towards sustainability in SMEs.

2. The Framework

2.1 The Definition of Small to Medium Size Enterprises

The most-used definitions of what constitutes a SME emphasize number of employees first and foremost (Ayyagari et al., 2007). While the number of employees ranges from 100 (e.g. Netherlands) to 500 (e.g. United States), the European Commission’s definition is most broadly used. Although the Commission uses a gross revenue ceiling in addition, in terms of employee headcount it defines a medium-sized enterprise as employing fewer than 250 persons; a small enterprise employs fewer than 50 persons; and a microenterprise employs fewer than 10 persons (European Commission Recommendation, 2003).

Ayyagari et al. (2007) surveyed more than 75 countries to find their official definitions of “SME” and actually experienced a fair amount of difficulty finding reliable information. However, their best efforts lead to estimates of fifteen (15) countries using a cut-off of 500 employees; two (2) using a cut-off of 300 employees; twenty-one (21) countries using the EC cut-off of 250 employees; fourteen (14) countries using a cut-off of 200 employees; two (2) countries using a cut-off of 150 employees; and twelve (12) countries using a cut-off of 100 employees. For some countries they were simply unable to find any reasonable data. Clearly, however, by an almost three-to-one margin, most countries use a cut-off of 250 or fewer employees to define a SME.

2.2 SMEs Are, and Must Be, Managed Differently from Large Organizations

It has gradually been recognized in the management literature that SMEs are not merely organizations which failed to become large, but which in all other respects could be assumed to be similar to larger organizations (Garcia-Morales et al., 2007). Instead, SMEs are qualitatively different organizations which must, in order to be successful, be managed differently from large organizations. Aragon-Correa et al. (2008) articulate some of the managerial differences (compared to large organizations) that affect the ways SMEs approach strategic planning and implementation: “shorter lines of communication and closer interaction within the SMEs, the presence of a founder's vision, flexibility in managing external relationships, and an entrepreneurial orientation.” Since all change in any organization is brought about through human interaction with other humans and with all other

factors of production, it is not surprising that the process for and the pathways of creating strategic change must vary as the parameters of human interaction vary, and firm size is one of the significant variables.

2.3 Models for Change Management and SMEs

In order to understand movement towards sustainability in SMEs one needs to understand both the drivers that compel a shift from current business practices towards those seen as sustainable, and also the process the SME engages in to implement those changes. Moving to an operating paradigm that includes consideration of the operations' environmental impact represents a major change and strategic shift for an organization. Studies of large-scale strategic organizational change point to the difficulty of such initiatives. They consume time, energy and attention and often fail to achieve the desired results. Yet by understanding the change process and applying that knowledge to leading and managing change, one is able to improve the results. This involves understanding the steps, which need to be taken for the process to be successful (Kotter, 1995).

As noted in the previous section, research on organizational change has typically been focused on large-scale organizational change. One such model is Kotter's Eight Stage Process of Creating Major Change (Kotter, 1995). This model states that there are eight stages that an organization must move through, and that each stage must be adequately addressed if the desired change is to occur and become part of a new operating environment. These steps include:

- 1) Establishing a sense of urgency
- 2) Creating the guiding coalition
- 3) Developing a vision and strategy
- 4) Communicating the change vision
- 5) Empowering broad-based action
- 6) Generating short-term wins
- 7) Consolidating change and producing more change
- 8) Anchoring new approaches in the culture

The general observations that most change efforts do not succeed is echoed in the field of sustainability, with most experts in agreement that progress towards sustainability has been modest at best (Doppelt, 2003). In examining what goes wrong with organizational efforts to move towards sustainability, Doppelt (2003) has identified what he terms "seven sustainability blunders". These include:

- 1) Patriarchal thinking that leads to a false sense of security
- 2) A "siloeed" approach to environmental and socioeconomic issues
- 3) No clear vision of sustainability
- 4) Confusion over cause and effect
- 5) Lack of information
- 6) Insufficient mechanisms for learning
- 7) Failure to institutionalize sustainability

A comparison of Kotter's eight stages and Doppelt's seven blunders reveals substantial overlaps. Doppelt's "patriarchal thinking" describes an organization that follows a model of a clear chain of command in which information flows to the top and is used by those responsible for policy, strategy and decision making, and in turn flows downward to those that will then implement the actions. Such a patriarchal approach would not see the need for building a sense of urgency around any issue beyond the group of top managers. This patriarchal approach would also tend to see organizations as a mechanistic model in which directions are followed and the functions in the organization are pieces, which can be managed independently. Thus directions are given to one group, one function, and the area seen as most important at the moment. A silo of information and action is created. This "blunder" dovetails neatly with Kotter's fifth step that calls for empowering broad-based action, as being one of the prime reasons organizations "fall off" the path to change at this point, since patriarchal thinking and a siloeed approach will make it impossible to empower broad-based action.

Doppelt's first two blunders also run counter to the first two change steps identified by Kotter. If decision-making occurs at the top and is reliably implemented by directive, then the organization would not see the need to develop a broad based sense of urgency around a change initiative. Nor would the organization see

the need to have that program led by a group of individuals from across the organization making up what Kotter terms the 'guiding coalition'.

Kotter's third step, developing a vision and strategy, relates to Doppelt's third error, no clear vision of sustainability, and his fourth error, confusion over cause and effect. The need to create a clear and compelling vision to guide change is well established. However, linking that vision to a workable strategy is equally important. In Kotter's model, the guiding coalition is charged with developing both the vision to be achieved and also the strategy by which the vision can be realized. As a broad based coalition, there is less likelihood that confusion over the cause and effect of actions arises because individuals familiar with the interdependencies of the organization would be in discussion with one another.

Kotter's fourth step, communicating the vision, and Doppelt's fifth blunder, a lack of information speak to the same issue – adequately communicating the vision of what the organization seeks to become, and providing ongoing feedback on the means, methods, progress and problems. This step, when seen as an ongoing action step, insures that the vision driving the change initiative is kept in clear focus on the agenda of items to do.

Kotter's sixth step calls for generating short-term wins and his seventh calls for consolidating change and producing more change. In discussing the sixth blunder, Doppelt states "People ultimately learn by doing and by judging results. When employees are given few opportunities to test new ideas, and when few rewards are provided for those who do so, not much learning will occur" (p.53).

Finally, Kotter's eighth step, calling for anchoring new approaches in the culture, and Doppelt's seventh blunder, speaking to failure to institutionalize change, also pair nicely. Absent incorporating new practices into the shared values of the organization, changes would require continued directed pressure and attention which over time will fade as more pressing demands come to the fore. Hence it is essential to weave the changes into the very fabric of the operating environment.

While a prescriptive process for leading the change process can improve the likelihood of effectively implementing large scale change, the steps need to be informed by where the organization is at the start of the process, and where, in some measurable sense, it seeks to go. It is overly simplistic for an organization to state that "we strive to become sustainable". In the First Annual Business of Sustainability Survey conducted by the MIT Sloan Management Review and the Boston Consulting Group (2009) "more than 92% of survey respondents said their company was addressing sustainability" (p.19). Commenting further, the researchers stated that "[companies] are virtually united in the view that sustainability...is and will be a major force to be reckoned with – and one that will have a determining impact on the way their businesses think, act, manage and compete" (p.21). Yet at the same time, that survey pointed to "pervasive lack of understanding among business leaders of what sustainability really means to a company" (p.24). Indeed, in this survey it was noted that "some companies have difficulty modeling the business case – or even finding a compelling case - for sustainability" (p.24).

When change is applied to a specific area of focus – be it globalization, technological innovation, or sustainability – it is important to consider the stages or levels that define and describe one's current position, and the dimensions of alternative stages to which one is seeking to move. This allows those involved in leading the change efforts to better frame future states, identify both the opportunities and the obstacles that accompany them, and more clearly articulate the challenges to be faced and overcome.

One particularly useful framework of the stages and phases organizations go through as they move to become more sustainable is offered by Dunphy et al. (2003), termed the Sustainability Phase Model. This model is shown in Figure 1.

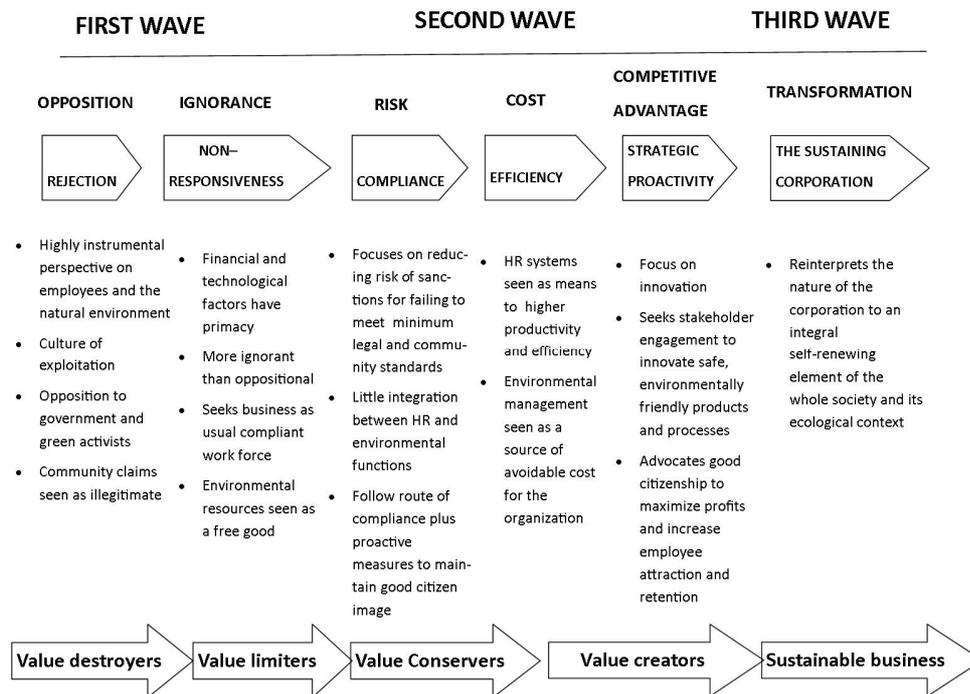


Figure 1. Sustainability phase model (after Dunphy, 2003)

Organized into one of three waves of change, six phases are identified which characterize the organization's "way of treating the human and natural resources it employs" (p. 14) and range from Rejection to the Sustaining Corporation (shown by the top arrows in Figure 1). Above each arrow is a single word, which characterizes the predominant attitudinal focus among senior executives at that phase. For example, an organization at the Compliance phase is primarily focused on managing risk as it relates to resources used. Below the phase arrows are bullet points, which describe some of the key characteristics of organizations at that phase. Below these bullet points is a second set of arrows that shows how each phase affects the value of the firm. For example, in the rejection phase, value is seen as being destroyed as the firm's practices increase risks for the firm, while those at in the compliance phase are described as conserving value by reducing risk.

As with any model, this framework offers a simplification of the complexity inherent across organizations and industries, but it can be useful in helping to ascertain where an organization is as it considers actions to move towards greater sustainability.

Dunphy's Sustainable Phase Model considers the stages and phases an organization goes through as it moves towards greater sustainability while Lueneburger & Goleman's three phases of a sustainability initiative focus on specific initiatives and actions (Lueneburg & Goleman 2010). Despite the different focus some correspondence can be drawn between the two models.

Phase one in Lueneburger & Goleman's model is a reactive stage. By late stage one and early stage two, that reactive posture is a conscious action on the part of management. That is similar to the risk phase of the early second wave in the Dunphy model. Phase two in Lueneburger & Goleman's model marks a transition from being consciously reactive to becoming consciously proactive. In the Dunphy model this corresponds to the mid- and later second wave stages of Efficiency and Strategic Proactivity. Once conscious of the issues, actions are taken first to conserve value and then they are seen as a source of value creation. Both models end with similar descriptions. Dunphy's sustainable business in the Third Wave of his model is defined as "integral and self-renewing", seeing sustainability as part of the normal fabric of doing business. This is akin to Lueneburger & Goleman's Third Phase in which management is described as being "unconsciously proactive".

Going back to the first MIT (2009) survey, respondents cited "the impact on a company's image and brand as the paramount benefit of addressing sustainability" (p.23). While over a third of respondents saw impact on company image as the principal benefit derived from addressing sustainability issues, fewer than 10% saw cost

savings, competitive advantage, risk management or a range of other measures as driving sustainability in their organizations (p.19). This would suggest that there is a lack of awareness of the benefits along these dimensions, given the views expressed by the group labeled “embracers” in subsequent surveys. When survey respondents were asked to rank the impact that sustainability-related factors would have on their organization, 67% indicated that government legislation (the top rated factor) would have a significant or a major impact, with 58% indicating that consumer concerns (the second highest factor) would have a significant or major impact. This would suggest the modality of respondents to the 2009 MIT survey would be positioned in the second wave at the Compliance phase. They seek to meet the legal and community standards and undertake some proactive actions to develop and maintain an image as a good citizen. This is reinforced by the Price Waterhouse Coopers’ 14th Annual Global CEO Survey (PWC, 2011). This survey asked CEO’s about sustainable growth. Of the survey’s five areas of focus through 2014 CEOs’ top focus was “How do we tap into growing customer sentiment about environmental and corporate responsibility practices?” (p.1). While this might entail strategic changes in procurement, production or offerings, those changes would be in response to and driven by the image the company has developed with its customers.

It should also be noted that many organizations have been engaged in change initiatives driven by a desire for cost savings and greater efficiency. Often, these initiatives were undertaken without regard to concerns over sustainable practices, and at times included changes that ran counter to those values. Organizations can clearly be focused on ways of increasing efficiency and reducing costs that may in fact be exploitive of the resources used. So to label an organization as being in the Efficiency phase along the sustainability continuum, one would expect to see that organization seek cost reductions as the result of improved management and utilization of the resources it uses.

Comparing both MIT reports provides a perspective how firms collectively are moving through both the Dunphy (2003) and the Lueneburg & Goleman (2010) models. For example, in the first survey, 43% of respondents indicated that their organizations had no clear business case for sustainability. This had dropped to 38% in the third survey. In the first survey, only 10% of respondents indicated that the greatest benefit to the organization was that sustainability initiatives provided an increased competitive advantage, which had increased to 26% by the third survey. Of particular interest, in the first survey, respondents reported that the most significant internal obstacle to addressing sustainability issues was “outmoded mental models and perspectives on sustainability” (21%, MIT, 2009). In the third survey the most significant internal obstacle had shifted to “difficulty quantifying and valuing the effects of sustainability-related strategies on reputation of brand, company, or offerings” (MIT, 2011). These and other survey questions allow researchers to identify where large percentages of firms currently are with respect to change towards sustainability and how collectively this sample of firms has shifted views over the period between the first and third surveys. However, the reports offer little insights into the processes and challenges said firms encounter on their way.

In other words, it is difficult to determine which step in the waves or phases of change may correspond to Kotter’s change process and Doppelt’s failures.

Furthermore, the MIT surveys are disproportionately represented by large organizations with the supplemental interviews focusing on large global organizations. Little is known about where in the change models SMEs find themselves, or even whether the Dunphy and/or Lueneburg & Goleman model is appropriate, much less how SMEs would manage the transition between the different stages. The only research thus far by Wiesner & Poole (2009) as well as Wiesner et al. (2010) points toward both similarities to and differences from initiatives towards sustainability in SMEs to the discussed models, but is thus far limited to Australian businesses. Accordingly, there is a need to gather more data on change towards sustainability in SMEs.

Change of the transformative nature envisioned by Kotter, and by Dunphy and Doppelt specifically in the area of environmental sustainability, is predicated on organizational learning. As Sanzo et al. (2012) have noted, the literature on organizational learning has focused on large organizations, and empirical evidence on the ways in which organizational learning is accomplished in SMEs is largely lacking.

As defined by Spicer & Sadler-Smith (2006), organizational learning is “the development or acquisition of new knowledge or skills in response to internal or external stimuli that leads to a more or less permanent change in collective behavior and that enhances organizational efficiency and/or effectiveness” (p.135).

Using Dunphy’s stages of rejection, non-responsiveness, compliance, efficiency, strategic proactivity, and the sustaining corporation as convenient Progress Points on the path of transformative organizational learning, evidence needs to be elicited as to whether SMEs (which may need to be broken down into sub-categories, for

example following the Fawcett et al. (2009) or Hansen & Hamilton (2011) models) actually progress through Dunphy's phases, or whether many SMEs skip one or more phases.

Evidence is needed as to whether, assuming that some SMEs do reach Dunphy's last three stages (efficiency, strategic proactivity, and the sustaining corporation), they do in fact march through Kotter's eight stages to get there. Perhaps SMEs tend not to develop guiding coalitions, for example, because it is so much easier in a SME than in a large firm to have one-to-all and all-to-all communication. Perhaps SMEs tend not to develop a clear vision of and strategy for reaching sustainability because of the perennial tendency of SMEs to do very little longer-term strategic thinking (Brinckmann et al., 2010).

Does it then happen in SMEs, as Doppelt asserts that it does in large firms, that the lack of a clear strategy for attaining sustainability prevents the organization from moving into Dunphy's Phases Five and Six? Or is it possible that in SMEs the CEO's personal vision for the firm plus a flatter decision-making structure and less compartmentalized communications due to fewer people make it possible to arrive at institutionalized proactivity in the area of environmental sustainability without a formal, long-range strategic plan issuing from a guiding coalition?

Hence, at every step along the way there needs to be evidence of whether or not that which is natural and which works for large organizations does or does not work for SMEs.

The authors suggest surveying SMEs with respect to their understanding of sustainability, motivations for becoming more sustainable I think there SHOULD be a comma here? and strategic and operational processes used to move forward towards sustainability. This data can then be analyzed with respect to the current change models to determine which aspect of each model is applicable and workable for a SME. By modifying the existing models as needed and integrating Kotter's and Doppelt's general, process oriented steps, the authors believe a framework can be developed that will allow SMEs to approach the path towards sustainability regardless of their potentially more limited resources in comparison to large organizations.

3. Conclusions

Sustainability is a buzzword of the 21st century business world. Looking back at twenty-five years since the initial definition of sustainable development by the WCED, businesses have changed their perspective towards sustainable practices from rejection to embracing it as a strategic organizational goal. Accordingly, practitioners' experiences as well as academic research have produced a wealth of knowledge that appears to show that sustainability is not only needed, but doable for firms, and financially rewarded. Furthermore, there is an increasing body of literature targeted at explaining not whether sustainable business is the way to go, but how to actually implement it. Several change models have been developed, with work by Dunphy (2003), Lueneburg & Goleman (2010) and Eccles et al. (2012) being widely recognized.

Although individual business success stories start to appear, very little information is available on the challenges and intermittent failures firms may encounter on their road towards sustainability. Furthermore, the vast majority of studies focus on large enterprises, leaving SMEs, that generally have – as recognized in the literature – limited managerial resources and capacities for change management, on the sideline. Given the large contribution by SMEs to national economies, this lack of data-supported conceptual models to help guide SMEs through the process of change toward sustainability is a concern, as it leaves a large swathe of economic contributors lacking clear guidance on how to accomplish this important change.

The authors posit that the existing change models nevertheless provide the starting point for SMEs, as well as a theoretical base to develop a change model that takes the non-uniformity of business types and resource constraints these firms face into consideration. Hence this paper encourages urgently needed empirical research which studies where SMEs are with respect to the process of changing toward sustainability, and what methods of change they employ, with the ultimate goal of developing the "SME Sustainability Change Model" in the near future.

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