

Can Businesses Move Beyond Efficiency? The Shift toward Effectiveness and Equity in the Corporate Sustainability Debate

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ABSTRACT

The aim of this paper is to articulate to a wider practitioner and academic audience the value and importance of moving the sustainable business agenda beyond the notion of eco- and socio-efficiency. This in itself is not a new development in the sustainable business literature. What are emerging are integrated models of corporate sustainability that link together the six criteria that a sustainable business will need to satisfy, namely eco-efficiency, socio-efficiency, eco-effectiveness, socio-effectiveness, sufficiency and ecological equity. At this stage these new models of corporate sustainability need further theoretical development, taking corporate sustainability beyond the business case (eco-efficiency) towards an integrated approach that links in the social and natural cases. A new model for sustainable entrepreneurship is presented and discussed in the context of a social entrepreneur case study. Copyright © 2006 John Wiley & Sons, Ltd and ERP Environment.

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Introduction

THIS PAPER PRESENTS A MODEL FOR UNDERSTANDING THE CONCEPT OF SUSTAINABLE entrepreneurship, that is an organization that has sustainability at the centre of its structure, operations and management: in essence, an organization that is moving beyond the requirement to demonstrate efficiency in its drive to be sustainable.

Divided into three parts, the paper begins by considering where the current corporate sustainability debate is and introduces the new ideas developed by McDonagh and Braungart (2002) and Dyllick and Hockerts (2002). The background to the corporate sustainability debate is explored and the important

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influences these ideas have on a new model of sustainable entrepreneurship are identified. The second part describes the new model; in so doing, it highlights where the strengths of previous work have contributed and what limitations have been overcome. Finally, in the third part we apply the model of social entrepreneurship to the Day Chocolate Company, an example of a sustainable entrepreneurship, to highlight what steps they may need to make to become sustainable.

Corporate Sustainability: Eco-Efficiency Panacea or Problem?

The concepts of sustainable development in the 1980s (Brundtland, 1987) and the triple bottom line in the 1990s (Elkington, 1997) have had the effect of widening corporate responsibility to include the management of impacts upon the natural world and the social world as well as economic factors. More recently, this extension in corporate responsibility and management has been termed corporate sustainability. The way in which businesses have encompassed changing attitudes towards environmental and social issues has moved through different stages over time. From the early 1960s through the 1970s many leading companies were preoccupied with *pollution control* and bolt-on solutions as a means of managing environmental issues. During the mid-1980s and through the 1990s some companies began to see the potential cost savings in their environmental management practices. Activities in this era became dominated by the search for *efficiency* and competitive advantage, the so-called 'win-win' solutions that minimized resource consumption and wastes (Holliday *et al.*, 2002). The idea of doing more with less appealed to the mindset of business leaders. Eco-efficiency was perceived as a win-win solution, enabling the twin goals of economic growth and environmental protection to be maintained; *ergo*, sustainable development could be achieved by business, or so it was thought, until the voices of eco-effectiveness grew louder and louder. Toward the end of the 20th century thinking in the environmental management arena began to change for a third time, with the introduction of *eco-effectiveness* as a guiding maxim to corporate sustainability, the idea being that business practices should go beyond pollution control and eco-efficiency toward a way of doing business that restores and enhances the environment.

Eco-efficiency provided many in business with a much needed framework to guide their strategy, policy and operational practices. The World Business Council for Sustainable Development has seized on the idea of taking a more responsible approach to the use and disposal of scarce and potentially ecologically damaging resources (Willums and WBCSD, 1998). Even the much lauded business guru Michael Porter joined the debate to argue that government intervention can act as a catalyst to innovation and eco-efficiency within industry (Porter and van der Linde, 1995).

However, eco-efficiency is not in itself the panacea as some have presented it to business. Walley and Whitehead (1994) early on

- pointed out that 'it is not easy being green' and
- encouraged businesses to take advantage of eco-efficiency gains by highlighting the low hanging fruit and
- easy gains requiring limited investment.

The problem is that the short payback or non-existent reengineering hides the environmental problems that present more significant challenges. It also presents the false scenario that all business resource efficiencies are by definition ecologically or socially sound.

The World Resources Institute (Day, 1998) have collected evidence to show that despite great strides being made by businesses to improve material and energy efficiency in, for example, the United States, Germany and Japan, the gap between current and sustainable patterns of consumption is widening. Day

(1998) and Welford (1997) argue that eco-efficiency may be a valuable criterion by which to guide and measure corporate sustainability, but it is not on its own a sufficient guiding framework for business.

To take the efforts being made in accountancy by way of an illustration, Gray and Bebbington (2000) examined the contribution of environmental accounting to sustainability. They argued that much of the existing research in this field has taken a 'managerialist' approach to corporate sustainability, in the sense that solutions being generated are business centred and not environment or sustainability centred. In the same way, eco-efficiency founded on the values of industrial capitalism is presenting a business-centred approach to sustainability. Gray and Bebbington (2000) observed

If environmental accounting works with the grain of business and business continues to encourage desecration of the planet (albeit at a reduced rate) then, *ceteris paribus*, we need to conclude that our environmental accounting may, perhaps, be doing more harm than good.

The flaws in the thinking behind eco-efficiency therefore become clearer. A linear, one-way, cradle-to-grave manufacturing system in which products are made and eventually discarded into a hole in the ground or a furnace is not only wasteful; it can be poisonous. Neither waste nor poisons are particularly efficient, productive or good for the environment. Allowing businesses to continue using eco-efficiency as a way of protecting the environment is not a long-term solution to the environmental problems that challenge humankind. Making a destructive system less destructive only serves to let industry continue to destroy ecosystems and to contaminate and deplete nature more slowly. Under the influence of eco-efficiency a dystopian future lies ahead; destruction is the end game; the only choice remaining is the rate of destruction. Reducing environmental impacts by being eco-efficient creates the illusion of short-term relative improvements. This is not enough for corporations to become truly sustainable.

Toward Eco-Effectiveness

There were many voices expressing concern about the inherent flaws of eco-efficiency; among them were McDonough and Braungart (1998), who introduced an alternative way of designing industry and business built upon the notion that 'waste equals food'. They introduced the concept of eco-effectiveness, suggesting business solutions ought to be life sustaining, restorative and regenerative in addition to being efficient. In so doing, the now conventional cradle-to-grave approach to product design, development and analysis is replaced by a renewing cycle of cradle-to-cradle analysis, transforming the industrial capitalism model for linear thinking to a closed loop system. This thinking resonates with early principles put forward by proponents of industrial ecology (Allenby, 1992) and natural capitalism (Hawkins *et al.*, 2000).

The alternative to eco-efficiency is to enable business to operate in a manner that allows nature and business to succeed, to be productive, the objective being for business to seek a balance with the natural world in such a way as to remove negative impacts and to develop systems to restore and enhance the natural environment. The term eco-effectiveness was coined to describe these ideas. Eco-effectiveness ultimately requires industry to reinvent itself so that the new ways of doing business result in regenerative, not depletive, practices. This concept is founded upon the ideas of systems thinking and waste management: a system thinking in the sense that business needs to shift from a linear approach to a cyclical approach (one that mimics systems which are to be found in nature). For example, the principles of reduce, reuse and recycle need to be applied to the planning and decision-making processes of waste management practices (Dyllick and Hockerts, 2002).

There are now many case studies to exemplify how companies have reaped the benefits of eco-efficiency (Holliday *et al.*, 2002). However, there are fewer examples of how companies have become

more eco-effective in the way they do business. Companies such as the US manufacturer SC Johnson have reaped the benefits of eco-efficiency (between 1990 and 1995 increasing production by 50% and simultaneously cutting waste emissions in half). More recently, the company has reportedly transformed its sustainability strategy by following the principles of eco-effectiveness, resulting in a set of procedures that involves 'more good versus less bad', alongside strict procurements polices for in-sourcing, and the increased use of preferred materials and non-chlorine-based packaging (Ellison, 2001).

Beyond eco-effectiveness may take us to ecological or environmental entrepreneurship, defined by Isaak (1997, quoted by Hockerts, 2003, p. 49) as

system-transforming, socially committed environmental businesses characterised by breakthrough innovation.

The paper now turns to socio-effectiveness.

Towards Socio-Effectiveness

Socio-effectiveness is not a term that has often been used to describe the positive impact of a company's activities on society. The term in common usage at present that touches on this area is 'corporate social responsibility (CSR)'. This often refers to

Continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large (Holmes and Watts, 2000, quoted by Michael, 2003, p. 115).

Yet Michael (2003) is sceptical of CSR's benefits:

The adoption of social objectives by companies is not as new as the 'corporate social responsibility' label suggests. Instead, it touches the 80-year debate between capitalism and socialism. The vague and all-encompassing CSR discourse serves as a forum for advocating the interests of business, government and relatively nonaccountable NGOs. . . . Yet, while the actors most loudly advocating CSR may benefit, society as a whole may be harmed (p. 126).

Hence, CSR only really refers to socio-efficiency, and socio-effectiveness goes beyond this towards organizations having a social mission, which have a sustained positive impact on society. An example may be fair trade companies or alternative trading organizations, which aim to help marginalized producers in developing countries through fair trade certification schemes or own initiatives. This example is discussed further using the Day Chocolate Company later in this paper.

What are the benefits to companies of the socio-effectiveness approach? The rewards may be to fulfil the company's core social mission above all, which often includes secondary aims of educating stakeholders on the social objective, e.g. fair trade. These core missions are often checked and communicated through social auditing and reporting cycles. Organizations are often small, working on a specific social mission, and many are not companies in the traditional sense. They are frequently cooperatives or companies wholly owned by charities or charities themselves. These companies are referred to as social entrepreneurs, who

. . . play the role of change agents in the social sector by:

- Adopting a mission to create and sustain value (not just private value),
- Recognizing and relentlessly pursuing new opportunities to serve that mission,

- Engaging in a process of continuous innovation, adaptation, and learning,
- Acting boldly without being limited by resources currently in hand, and
- Exhibiting a heightened sense of accountability to the constituencies served and for the outcomes created (Dees, 1998).

The next section discusses the integration of the three elements of sustainable development.

Integrated Models of Corporate Sustainability

In the corporate sustainability journey three milestones have been passed along the way: pollution control, eco-efficiency and eco-effectiveness (Steelcase, 2001). In turn, each new way of thinking guides business to new heights of sustainability awareness and understanding. The emphasis has been predominantly upon ways of managing and minimizing environmental impacts; what is missing is an integration of the social, environmental and economic aims under the one sustainability objective. Recently there have been a number of attempts at producing an integrated model of corporate sustainability. This paper will consider this new agenda for corporate sustainability by combining the Dyllick–Hockerts (2002) model of the six criteria of corporate sustainability and the McDonough–Braungart (2002) model of the triple top line.

Dyllick and Hockerts (2002) (see Figure 1) argue that sustainable corporations have to demonstrate how their business practices go beyond eco- and socio-efficiency to include the additional criteria of eco- and socio-effectiveness, sufficiency and ecological equity (sometimes referred to as ecological justice; cf. Gray and Bebbington, 2000). They rightly recognize that many businesses have tended to focus on the ‘business case’ for sustainability; by this, Dyllick and Hockerts mean the emphasis has been placed upon seeking eco-efficient and socio-efficient business decisions. They also go on to suggest that many companies will continue to place a greater emphasis on the business case until ‘external systems’ through stakeholders force firms to take more notice of the societal and natural case. As has been argued above, this is insufficient in a world of finite resources. The principles of substitution, linearity and reversibility that inform decisions within the ‘business case’ are not constants that can be relied upon outside of abstract economic models.

By way of contrast, but following a similar triangular model, McDonough and Braungart (2002) (see Figure 2) introduce the concept of triple top line thinking, shifting the emphasis of corporate accountability to the beginning of the design process. The objective is not to support what they believe to be an obsolete way of doing business but to create a new way of doing business

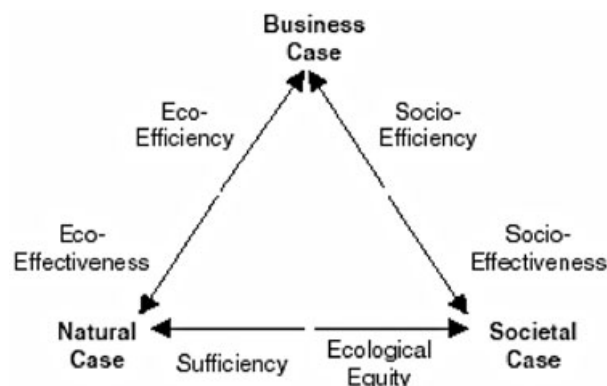


Figure 1. Overview of the six criteria of corporate sustainability (Dyllick and Hockerts, 2002, p. 138)

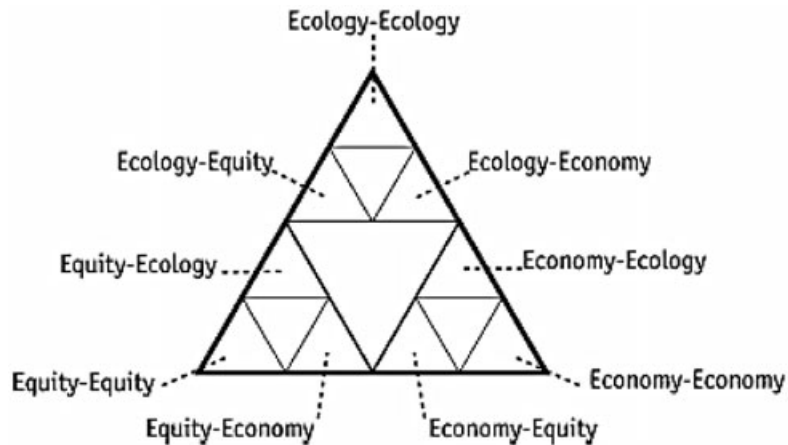


Figure 2. Fractal triangle (McDonough and Braungart, 2002, p. 253)

in which products and industrial processes are so intelligently designed they don't need to be regulated. Instead, they create wholly positive effects, a large and beneficial ecological footprint (McDonough and Braungart, 2002, p. 252).

This model of corporate sustainability is represented by a fractal triangle, at each corner of the triangle ecology, economy and equity operate as anchors to a spectrum of value. Every business decision is connected to and has an impact upon all three value systems, all of which carry equal weight and require equal consideration. By moving through each zone on the triangle asking appropriate questions, solutions are sought that optimize and maximize value in all zones.

Dyllick–Hockerts (2002) and McDonough–Braungart (2002) models are summarized and compared in Tables 1 and 2.

The Dyllick–Hockerts model may provide a useful insight into new ways of advancing solutions on the production side of the equation, but it may not necessarily properly address the problems relating to consumption. That is, no matter how environmentally friendly you make a product, if consumer demands are too high there is a potential for imbalance and environmental or social harm.

There is a tendency as indicated in the Dyllick–Hockerts model that companies may concentrate on one of the cases such as the natural case, e.g. Patagonia, rather than putting all elements of the model at the company's heart at the same time. This is especially prevalent in small companies with philosophies to help a particular disadvantaged section of society or produce 'green' products. These companies have moved well beyond the eco- and socio-efficiency efforts of larger and more recognized companies. The question is for companies fulfilling the societal and natural cases whether all elements of the model can be successfully incorporated into a company without a watering down of their core missions.

The answer should be that all companies should be aiming toward sustainable development incorporating all the aims of the Dyllick–Hockerts model because all elements are intractably linked as shown in the McDonough–Braungart model. One positive action in one area may have a large negative impact in another area. The McDonough–Braungart model uses a 'triple top line' approach to designing new products. The approach systematically moves from one sector to another, 'asking questions in the extreme' (McDonough and Braungart, 2002, p. 254); see Table 2. The result is that

Business case		Social case		Natural case	
Eco-efficiency	Socio-efficiency	Ecological equity	Socio-effectiveness	Sufficiency	Eco-effectiveness
Refers to a firm's efficient use of natural resources. It is usually calculated as the economic value added in relation to a firm's aggregate ecological impact.	Refers to the relationship between a firm's economic value added and its social impact. It requires the minimization of negative impacts, such as accidents at work and the maximization of positive social impacts, such as training and health benefits.	This refers to the inter-generational inheritance of natural capital, both positive and negative (pollution etc).	Refers to the assessment of a firm's absolute social performance. Are a company's products accessible and therefore benefiting all or just an elite few?	Refers to the actions of individual consumers to make responsible choices right through to consumers collectively boycotting or subverting corporate branding and marketing strategies that are believed to be environmentally harmful.	This criterion can be interpreted in different ways. It refers to either a technical effectiveness or a complete alternative to eco-efficiency (McDonough and Braungart, 1998).

Table 1. A summary of the Dyllick–Hockerts model (2002) of corporate sustainability

Economy–economy		Equity–equity		Ecology–ecology	
Q: Can I make my product or provide a service at a profit?		Q: Will the factory or office improve the quality of life of all stakeholders? and restoring ecosystems?		Q: Are we obeying nature's laws? Q: Are we creating habitats	
Economy–ecology	Economy–equity	Equity–ecology	Equity–economy	Ecology–equity	Ecology economy
Q: Will our service or production process use resources efficiently? Q: Will our business process reduce waste?	Q: Are the employees producing a promising product earning a living wage?	Q: What ways could the product or service enhance the health of employees and customers?	Q: Are men and women being paid the same for the same work? Q: Are we finding new ways to honour everyone involved, regardless of race, sex nationality or religion?	Q: Will our product or service contribute to the balance of the local ecology?	Q: Is our ecological strategy economically viable? Q: Will it enable us to use resources effectively?

Table 2. A summary of the McDonough–Braungart model (2002) of corporate sustainability

Each of these questions represents an opportunity for creating value. Together, they signal the opportunity of acting with positive intentions across a wide spectrum of human concerns. Such intentions introduce a new standard of product quality, performance and success (McDonough and Braungart, 2002, p. 255).

This is a useful tool, but it does not provide enough detail to translate into values, strategies etc for companies to viably use. In addition, it is still concentrating on the separate elements of sustainable development and not the whole. In doing so it may lose the momentum towards sustainable development.

The aim of the paper is to develop these two models into a new model for sustainable entrepreneurship. Why? The emphasis for both aforementioned models could be argued to have been on established big businesses that are approaching sustainable development from the eco- and socio-efficiency end of the models. This approach provides little indication of the practical implications and experiences of the eco and socio-entrepreneurs in operationalizing the other elements of the path towards sustainable development.

Sustainable entrepreneurship has been discussed previously, for example by Hockerts (2003), who developed

an entrepreneurial process model for sustainability entrepreneurship that aims to highlight key development phases and their core elements. The model will identify distinct phases of sustainability entrepreneurship as well as the managerial practices that go along with them. The objective is to provide sustainability entrepreneurs with a practical road map for managing the transformation from informal sector start-up to for-profit mainstream business (p. 154).

This paper develops a different model of sustainable entrepreneurship, not to move 'from informal sector start-up to for-profit mainstream business', but to learn about the successes of all types and structures of organizations with successful sustainable development practices. This may result in sustainable entrepreneurship meaning that traditional business models have barriers to achieving sustainable development. Conversely, successful sustainable entrepreneurship may mean organizations having a radically different organizational model.

This paper will now discuss the development of the model by Dyllick and Hockerts to focus on entrepreneurship and advance it to sustainable entrepreneurship.

The Sustainable Entrepreneurship Model

The sustainable entrepreneurship model in Figure 3 builds on Dyllick and Hockerts (2002) model in four ways.

The first step is to swap the labels 'ecological equity' and 'sufficiency', because ecological equity or 'ecological justice' is referred to by Gray and Bebbington (2000) as

Eco-justice tries to capture the idea of equity between peoples and generations and, in particular, the equal rights of all peoples to environmental 'resources'.

This is an environmental centred principle, while sufficiency is a more social centred principle; referring more to individuals (and companies) living on needs rather than wants. Hockerts (2003) explains:

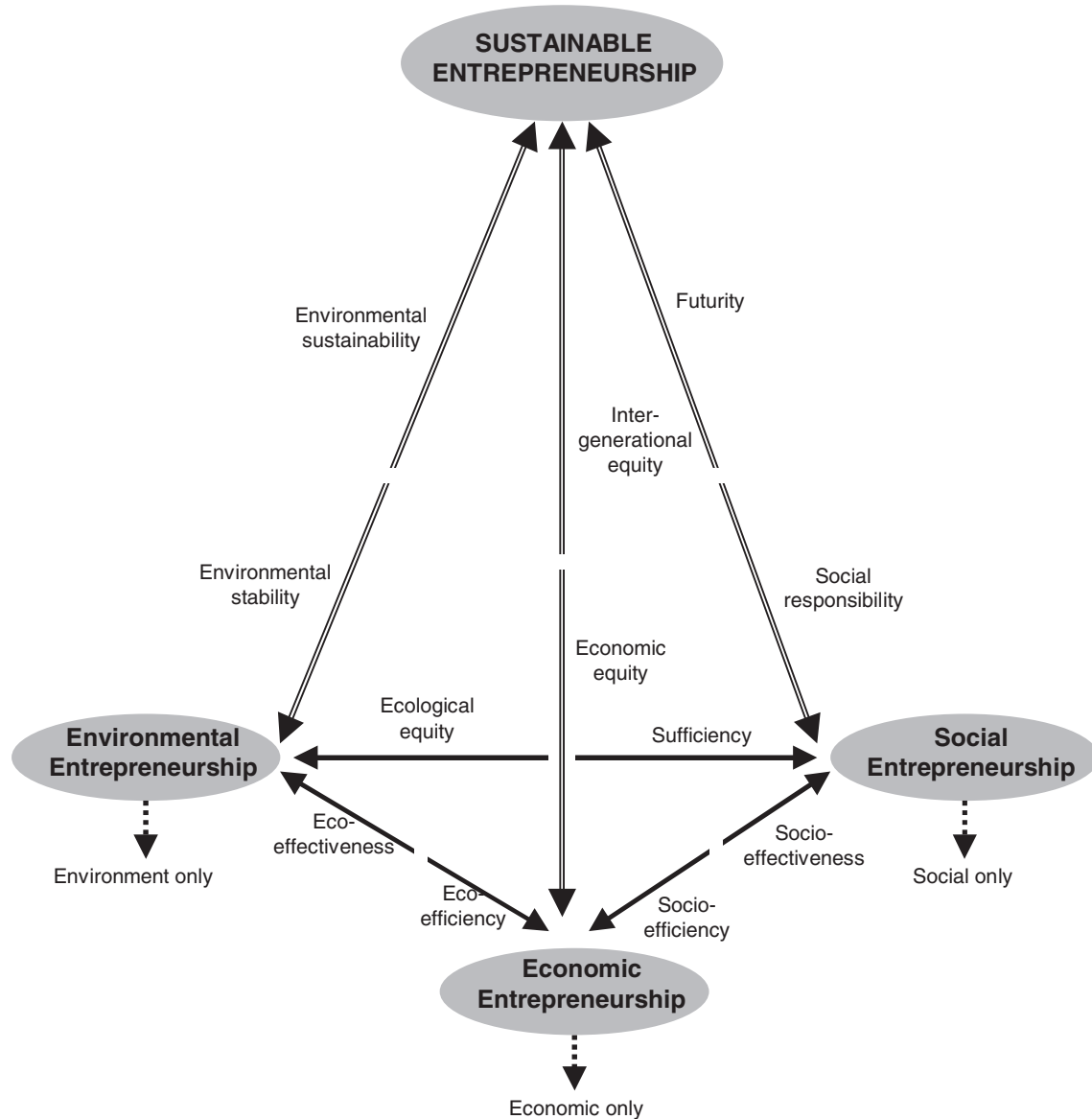


Figure 3. The sustainable entrepreneurship model

... sufficiency is primarily a criterion for sustainable consumerism, the business world has at least an indirect responsibility. Marketing and corporate advertisements have an increasing influence on consumer trends and life-style developments. Rather than fuelling the demand for more unsustainable products, firms might try to channel demand towards less problematic areas (p. 30).

In advancing the model, the aim is to move towards sustainable entrepreneurship and hence the current labels of 'business case', 'natural case' and 'societal case' in the Dyllick–Hockerts model (2002) are replaced by 'economic entrepreneurship', 'environmental entrepreneurship' and 'social entrepreneurship'. The aim here is to develop a model using new organizations with strong philosophies, economic, environmental and social.

Hence, the definition of entrepreneurship we are using is

venturesome individuals who stimulate economic progress by finding new and better ways of doing things . . . Entrepreneurs create value . . . starting a business is neither necessary nor sufficient for entrepreneurship (Dees, 1998).

Another question is whether sustainable entrepreneurship is a greater entity than its elements; is the whole greater than its parts? The answer is something that the two previously discussed models rejected by default, but in doing so they failed to recognize that just fulfilling the separate goals of sustainable development creates a mentality that focuses on maximizing efforts only towards the individual elements of sustainable development and not maximizing efforts towards sustainable development.

To illustrate this point, Hockerts (2003) defines sustainable entrepreneurship as consisting

. . . of the identification of a sustainability innovation and its implementation either through the foundation of a start-up or the radical reorientation of an existing organization's business model so as to achieve the underlying ecological or social objectives (p. 50).

The choice of words 'to achieve the underlying ecological or social objectives' suggests that social entrepreneurs and environmental entrepreneurs are in fact sustainable entrepreneurs without having to incorporate the other elements of sustainable development. This paper argues that the consequence of this is failure of companies to move towards sustainable development, and maybe ultimately the failure of companies to achieve their core mission. This paper argues that sustainable entrepreneurship is the incorporation of all elements of sustainable development, not just some.

The different types of entrepreneur, as described above, that have placed a primacy on the environment or society are sometimes categorized under the collective umbrella term of social enterprise (Drayton, 2002; DTI, 2002). It is not clear why this has occurred. The conflation of terms can be useful in that it helps to create a simple distinction between regular entrepreneurship and all other forms of entrepreneurship; however, this simplification can also become a problem. By grouping social and environmental entrepreneurship together under the heading of social enterprise it could lead some to misinterpret the way in which these organizations are contributing to sustainable development. This is not to say that economic, social and environmental entrepreneurs cannot contribute to sustainable development. The important distinction is that they are not an integrated approach that incorporates all three components of sustainable development into their organizations in a holistic way. Consequently, social, environmental and economic entrepreneurs have a primacy that over-rides, and therefore potentially hinders, an organization's path to sustainability.

The advancement of the model is the 'sustainable entrepreneurship' element. This essentially is attempting to move the various poles of entrepreneurship (economic, environmental and social) towards a higher plane of sustainable entrepreneurship. This involves a two-way relationship, in line with the Dyllick-Hockerts model.

1. The relationship between economic and sustainable entrepreneurship involves the following.
 - a. Economic equity, which is the distribution of economic wealth fairly between existing generations as well future generations.
 - b. Inter-generational equity, which refers to the economic welfare of future generations being taken into account in company decisions and operations.
2. The relationship between environmental and sustainable entrepreneurship involves the following.
 - a. Environmental stability, which is the positive forces being exerted on the environment to stabilize and where necessary restore the various ecosystem functions, e.g. climate change.

- b. Environmental sustainability, which refers to the long-term sustainability of the environment being taken into account in company decisions and operations.
3. The relationship between social and sustainable entrepreneurship involves the following.
 - a. Social responsibility, where companies and individuals take responsibility and are accountable for direct and indirect, negative and positive impacts on existing generations.
 - b. Futurity, which refers to the social well-being of future generations being taken into account in company decisions and operations.

Ultimately, sustainable entrepreneurship is a sum of all the 12 variables of the model operating in unison. It cannot be achieved by only subscribing to social or environmental entrepreneurship. The sustainable entrepreneurship model does not represent a 'direct route' from any of economic, environmental or social entrepreneurship poles to sustainable entrepreneurship but rather the relationship between these three poles and sustainable entrepreneurship. Whether it is possible within the structural constraints of a liberal economy to be a truly sustainable entrepreneur is a subject worthy of further research. The next section will focus on the case study of the Day Chocolate Company to illustrate the contributions a social enterprise makes to sustainability and also the inherent obstacles they need to overcome if they want to become a sustainable enterprise.

The Case of the Day Chocolate Company

The Day Chocolate Company is a radical entrepreneur, which is successful but most importantly does not have a traditional business structure. The Day Chocolate Company was set up in 1998 to access the UK chocolate market by a West African cocoa growers co-operative called Kuapa Kokoo with The Body Shop International and Christian Aid and facilitated by Twin Trading (Doherty, 2003). All organizations (except Twin Trading) own a third of the company, which sells Fairtrade chocolate in the brands Divine and Bubble. Both brands carry the Fairtrade Mark certified by the UK Fairtrade Foundation, which is part of the International Fair Trade Labelling Organisation (see Young and Welford, 2002). The overall aim of the Day Chocolate Company is to

improve the livelihood of smallholder cocoa producers in Ghana (Doherty, 2003).

A Social Entrepreneur

Essentially the Day Chocolate Company is a 'social entrepreneur' fulfilling at least four element of the 'sustainable entrepreneurship model'.

1. Socio-efficiency: the only evidence is the positive social impact on the cocoa growers and the local community as well as consumers. Evidence is needed on the working conditions in the other parts of the supply chain such as chocolate production and within the Day Chocolate Company itself.
2. Socio-effectiveness: positive impacts on the cocoa growers and the local community.
3. Social responsibility: the company taking responsibility for the production of cocoa but evidence needed on the impacts on other stakeholders.
4. Economic equity: unlike traditional chocolate companies, the Day Chocolate Company is partially owned by the suppliers (in this case the Kuapa Kokoo co-operative) as well as a charity – Christian Aid – and another company with sustainable aims – The Body Shop International. This and the fair-trade scheme the company operates within means that the suppliers get a guaranteed price for the

cocoa. Evidence needs to be collated on other economic equity issues, such as wage differentials within the Day Chocolate Company, and its whole supply chain.

Does this mean that the Day Chocolate Company is a 'social entrepreneur' according to the 'sustainable entrepreneurship model'? It certainly has major elements as outlined above but there are two areas of that need to be investigated in future research.

1. There is not enough evidence.
2. Does selling chocolate go against the 'sufficiency' element of the model? The Day Chocolate Company certainly does not restrict/ration the number of bars of chocolate a customer can consume. It does not 'educate' consumers on the harm of a high sugar diet or provide labelling beyond that legally required. Does this mean that the company fails because its product can have negative health impacts? No, but it does not fulfil sufficiency because there is no restriction on the amount of product that can be sold in theory with consequential larger and larger environmental impacts.

In the end the Day Chocolate Company has made a success of experimenting with a new organizational structure and its aim is to be a social and fair trade entrepreneur, not a sustainable entrepreneur – yet.

Towards Sustainable Entrepreneurship?

How would the Day Chocolate Company move towards being a sustainable entrepreneur? Here we examine the relationships between economic, environmental and social entrepreneurs and sustainable entrepreneurship that have not already been discussed as part of being a social entrepreneur (above) and how the company could build on this current social focus.

1. The relationship between economic and sustainable entrepreneurship involves the following.
 - a. Inter-generational equity: the future generations in the cocoa farming community need to be taken into account by ensuring that cocoa farming is a long term enterprise but also ensuring the community has diversity of enterprises beyond cocoa farming.
2. The relationship between environmental and sustainable entrepreneurship involves the following.
 - a. Environmental stability: seriously addressing the major impacts of the product and its use, these being the production of cocoa – maybe shifting to organic production; transport within the supply chain – not using air freight, shifting to rail freight and in addition reducing its 'food miles' – and addressing the impacts from the production and disposal of packaging – reducing packaging and shifting to better materials.
 - b. Environmental sustainability: starting to move to a zero impact company by analysing whether the production and use of the product can be radically altered or whether another type of product with a less of an impact will achieve the fair trade principles of the company.
3. The relationship between social and sustainable entrepreneurship involves the following.
 - a. Futurity: the future generations in the cocoa farmer community need to be taken into account through long term education, health and cultural programmes through partnership with the farming community.

What does this mean for the Day Chocolate Company and sustainable entrepreneurship? First, the company is not aiming towards sustainable development, only the social element in the form of fair trade and helping Ghana's smallholder cocoa producers. Hence, the company would need to evolve not only its overall objective but also its operations to address the other elements of the 'sustainable entrepreneurship model'.

There is no doubt that the Day Chocolate Company has positive impacts on the Ghanaian community with which it works and by which it is partially owned, but what makes it so different in terms of its social entrepreneurship from the other economic entrepreneurs in the same business? The main one is the company structure, with the growers' cooperative owning a third of the company and having two members on the board of directors, as well as being owned by an international development charity and a large experienced company in sustainable business operations.

Is this format a one-off? No; other co-operatives also have suppliers/farmers owning a stake in the company, but this company is a limited company not a co-operative. Other similar companies include Traidcraft and Suma Wholefoods. Is this format the blueprint of a sustainable entrepreneur? Maybe, but much more work needs to be done through case studies of social, environmental and sustainable entrepreneurs. However, what is interesting is the following.

- Even with a social entrepreneur, there is a real question mark over the product itself; i.e., can a company making chocolate ever be sustainable when it is a luxury? Can a company ever be sustainable when it has no limit on sales and hence consumption? How can a company be aware of its limits to growth when other unsustainable companies will just keep growing, in the short term, taking sales?
- Does the current structure of traditional companies hinder their move towards sustainable development? Do new structures, such as that of the Day Chocolate Company, provide evidence for sustainable entrepreneurship of the future?

The final point about the Day Chocolate Company is that the sustainable entrepreneurship model demonstrates that it is a social entrepreneur and not a sustainable entrepreneur. There is nothing wrong with being a social or environmental entrepreneur if that is the aim, but all elements of the model need to be balanced, not just a few, before entrepreneurs can describe themselves as 'sustainable entrepreneurs'.

Conclusions

This paper has provided a think piece to discuss how companies become sustainable entrepreneurs incorporating all elements of sustainable development, not just eco- or socio-efficiency. The sustainable entrepreneurship model does not provide a quick route for companies that have polarized themselves as economic, environmental or social entrepreneurs to jump up to being sustainable entrepreneurs ignoring all the other elements of the model. The aim of the model is to advance the previous models to a higher level for entrepreneurship, avoiding the pitfall of the previous model of polarizing companies. This paper argues that ultimately, sustainable entrepreneurship is a sum of all the 12 elements of the model operating in unison. It cannot be achieved by only subscribing to social or environmental entrepreneurship.

Sustainable entrepreneurship may even be greater than the sum of its parts but difficult issues for companies still need to be explored in more depth, such as sufficiency, futurity, environmental sustainability and inter-generational equity. This can be done by analysing not the traditional large brand names pushing eco- and socio-efficiency, but environmental and social entrepreneurs who are operating beyond efficiency. Much more work needs to be done on how these companies fit into this model, what aims and practices they have that make them environmental and social entrepreneurs, how this advances the model, the sustainable business debate and more importantly the practices that are transferable to other companies.

Future work will focus on the following:

1. Field research, developing case studies of social and environmental entrepreneurs. How do their activities fit into or develop this model?
2. What are the best practices that will move organizations towards sustainable entrepreneurship?
3. Are there transferable elements to other organizations?
4. Is sustainable entrepreneurship measurable?
5. Is there an ideal organizational structure for sustainable entrepreneurship with sustainable development as the core mission?

Ultimately, sustainable development is by its very nature a developmental road, but polarizing companies into economic, environmental or social entrepreneurship is not the answer.

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