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72194 Sustainable Development and New Zealand

Assignment 1

Sustainable development: a revolution or business as usual?

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1 Introduction

1.1 The many faces of sustainable development

The concept of sustainable development first appeared in 1980 in the IUCN World Conservation Strategy (cf Hopwood, Mellor, & O'Brien, 2005). The term was famously defined seven years later by the World Commission on Environment and Development in their report *Our Common Future* (also known as the Brundtland report) as

“development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987).

Although the Brundtland definition of sustainable development has been widely cited—a search on scholar.google.com turns up more than 8000 published papers—the term, its proper definition and policy implications have been the subject of continuing debate (Costanza & Patten, 1995) to such an extent that Pearce (1993) felt compelled to refer to the collecting of different and incompatible definitions of sustainable development as “a popular pastime”. This comes as no surprise, as the term sustainable development is widely open to interpretation that may depend on the ideological mindset of the listener (Lélé, 1991). What may be interpreted as a call for fundamental change towards “a world of environmental stability and social justice” by some (Wackernagel & Rees, 1996) has also been interpreted as an unfortunate label for the somewhat oxymoronic term ‘sustainable growth’ (cf Holliday, Schmidheiny, Watts, & World Business Council for Sustainable Development, 2002, p.15).

In the following I shall discuss different definitions of sustainable development and their underlying assumptions. Furthermore, I shall take a look at what influence the adoption of sustainable development has on business practises.

2 Discussion

2.1 Towards clarity

As Parris and Kates (2003) note, most definitions of sustainable development describe a relationship between economy, environment, equity, and society, yet proponents of sustainable development differ in their responses to the three systemic questions that Costanza and Patten (1995) proposed as a way to derive practical implications and indicators from any given approach to sustainable development, namely (*a*) what system (or property thereof) should be sustained; (*b*) for how long; and (*c*) when to assess whether the system has persisted.

Without this systemic approach to sustainable development and methods to evaluate a given system, definition of the term is a meaningless pursuit. To avoid adding to the set of incompatible definitions I shall consider sustainable development, for the purposes of this

discussion, to be a set of frameworks designed to address a range of differently weighted environmental and socio-economic concerns; associated with every such framework are a set of goals and indicators to measure the performance of a system that is subject to the actions specified in the framework.

2.2 Sustainability as capital transfer

The plethora of conflicting definitions of sustainable development reflects the multitude of ideas about what is to be subject to development and what should be sustained (Hediger, 2006). In general, sustainable development requires that some measure of human well-being persists over a given interval (Pearce, 1993). This means that any action that likely degrades human well-being in the future must be compensated for. According to Pearce (1993), the literature on sustainable development identifies the passing on of capital as the mechanism by which future generations are compensated. Just as financial capital enables an entrepreneur to invest and derive interest as a way to generate profit, “the transfer of capital bequests” to future generations is tantamount to a transfer of capabilities sufficient to generate well-being (Pearce, 1993). This abstract concept of a capital stock includes manufactured capital, e.g. infrastructure, machinery, etc., as well ‘natural’ capital, such as ecosystem integrity, biodiversity, the stock of natural resources, and so on. ¹

2.3 What is to be sustained?

Proponents of sustainable development differ in what they consider a part of the capital that may not diminish as it is passed from one generation to the next (Pearce, 1993). The different viewpoints on what must be sustained usually lie within the spectrum from what has been termed ‘weak sustainability’ to ‘strong sustainability’ (Hediger, 2006).

Weak sustainability, according to Pearce (1993), is “indifferent to the form in which we pass on the capital stock”. This implies that a reduction of natural capital can be offset by man-made capital and vice versa. From the point of view of weak sustainability, the focus is on the maintenance of the aggregate stock of total capital, both natural and man-made (Hediger, 2006). The assumptions of weak sustainability are especially apparent in the energy industry that faces depletion of non-renewable fuel resources. In an attempt to balance the reduction of natural resource stocks (natural capital), the industry invests in technology (man-made capital) to improve the efficiency of resource extraction, as well as new technology that depends on renewable forms of energy (substitution of one type of natural capital for another) (Pearce, 1993; Hediger, 2006).

Strong sustainability on the other hand does not make the assumption that every form of

¹To ensure that total capital is an accurate representation of potential human well-being, it must of course be normalised over the total population size.

capital can be substituted by another. Instead, some functions provided by natural capital (called ‘critical natural capital’) are deemed irreplaceable (Gutés, 1996). This is an obvious consequence of the multi-functionality of what is usually considered a mere resource in an economic context. Dyllick and Hockerts (2002) mention forests as an example to illustrate that natural capital not only represents a resource base, but also provides other functions that can be lost as resource depletion progresses even if a substitute for the resource could be found. A minimum requirement under the model of strong sustainability is hence, that the stock of critical natural capital be protected in addition to ensuring that the total stock of capital persists (Pearce, 1993).

The minimum requirements of neither weak nor strong sustainability are sufficient for achieving the goal of sustainable development, however, as that necessitates the satisfaction of basic human needs, including but not limited to adequate food and water supply, education, and health care (Hediger, 2006).

2.4 Corporate sustainability

In the context of corporate sustainability, three types of capital are to be maintained: economic, natural, and social capital (Dyllick & Hockerts, 2002). The meaning of economic capital is rather self-evident; natural and social capital in this context, however, deserve a little more explanation.

Ayres (1989) considered the industrial system’s consumption of resources and production of both desirable and undesirable outputs as an ‘industrial metabolism’. An industry’s operations are considered *ecologically sustainable* if the rate of consumption is equal or below the rate of natural reproduction, and if undesirable outputs are emitted below the rate of absorption by natural ecosystems (Dyllick & Hockerts, 2002). *Social capital* consists of human capital (including employee skills and strength of business relations) and societal capital (the relations between businesses and communities) (Dyllick & Hockerts, 2002). Socially sustainable companies, according to Dyllick and Hockerts (2002),

“add value to the communities within which they operate by increasing the human capital of individual partners as well as furthering the societal capital of these communities.”

It rarely makes sense to treat these three forms of capital as separate entities, as can be seen in the example of eco-tourism. The business of Elm Wildlife Tours, an eco-tourism business operating on New Zealand’s Otago Peninsula, for example, depends on the successful maintenance of natural capital, i.e. the continuing survival of threatened species such as the Yellow-eyed penguin and the New Zealand sea lion. Their financial interests are inextricably linked to species conservation, i.e. maintenance of natural capital, even as far as motivating active conservation efforts (Green Globe, 2004). This in turn, in addition to offering educa-

tional tours, ‘adds value’ to the local community and thus increases the community’s social capital.

While these connections between the three types of capital may not be as obvious in other sectors, the complementarity between manufactured and natural capital is well-established in the literature (cf Daly, 1994).

2.5 ‘Sustainable growth’ or: The business case for sustainability

The definitional flexibility of the term “sustainable development” has been a factor in its adoption by businesses. DeSimone and Popoff (2000) see the concept of eco-efficiency—the idea that negative environmental impact of business practises is inefficient and inherently wasteful—at the heart of sustainable development. Within the context of continuous growth, a notion that survives in the term “sustainable growth” (cf Holliday et al., 2002), eco-efficiency is an extension of quality control. While the goal of quality control is ‘zero defects’, eco-efficiency is directed towards ‘zero emissions’ (DeSimone & Popoff, 2000). Although advocates of eco-efficiency, such as DeSimone and Popoff (2000), often point out the advantages of this management philosophy for both the financial bottom line and the environment (and justly so), eco-efficiency does not imply sustainable development, although the opposite is certainly true (Dyllick & Hockerts, 2002). As Dyllick and Hockerts (2002) argue, sustainability (without the untenable assumption that all types of capital can be substituted for one another) not only requires relative improvements—something that can undoubtedly be attained through eco-efficiency—but also demands any activity to stay within the absolute limits of ecosystem carrying capacities. A business whose operational improvement rate due to increased eco-efficiency is lower than its rate of growth will inevitably fail to be environmentally sustainable (Dyllick & Hockerts, 2002).

2.6 Measuring sustainability

As a consequence, it is necessary to measure and report sustainability performance. Reviewing a decade of environmental reporting, Kolk (2004) notes a trend towards increased reporting of environmental and social performance along with financial reports. Although this so-called triple bottom line reporting is a step in the right direction, it is not actually what is required to accurately gauge a company’s performance with respect to sustainability (Gray & Milne, 2002). As Gray and Milne (2002) put it,

“the triple bottom line is not a triple bottom line at all but a financial bottom line with a little bit of social and environmental added.”

Kolk (2004) concurs in his review, stating that full sustainability or environmental performance reports are still rare. He also criticises that a lack of universally agreed performance

indicators makes it difficult to “distinguish ‘greenwash’ from ‘realistic’ reporting”, even when reports are externally audited.

3 Conclusions

As I hope to have demonstrated, the term sustainable development is vulnerable to wide interpretation, some of which allow for potentially unsustainable business practises that are in compliance with ‘weaker’ interpretations, but violate one or more of the constraints of strong sustainability. While all interpretations are concerned with the maintenance of capital over time, definitions of sustainable development based on the concept of weak sustainability make the untenable assumption that the degradation of one type of capital can be made up for by increasing another and hence conservation of the total aggregate capital is sufficient.

Although on average more businesses than in previous decades are now including social and environmental performance indicators in what is called triple bottom line reports, the reporting quality is relatively poor, biased towards the financial bottom line, and generally insufficient to evaluate a company’s performance with respect to sustainable development (Gray & Milne, 2002). This situation could be improved if a universally accepted set of science-based sustainability indicators were adopted (Parris & Kates, 2003) and legislation were passed that required environmental reporting to be in compliance with said indicators (Gray & Milne, 2002).

Finally, to remove barriers that keep the general public from identifying with sustainable development, communities must be strengthened, thereby promoting individual agency in a climate of general mistrust in governments and businesses as agents of change towards a sustainable society (Macnaghten & Jacobs, 1997).

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