

Sustainable Enterprise: Implications for International Finance and Investment¹

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Executive Summary

The fundamental challenge for human institutions in the 21st century is to create and maintain a sustainable combination of economic, social, and natural environmental conditions in an increasingly global and commercial civilization. This challenge is not now being met. The world economy so far is failing to meet even the basic needs of a large fraction of the human population, or to protect its natural resources and the ecosystems that produce them, even as it creates unprecedented wealth and amenities for a few. The reasons for these failures lie in both economic and political institutions.

An emerging literature in strategic business management proposes that the most promising solutions to these problems lie in entrepreneurial business innovation. The Sustainable Enterprise Model (SEM) asserts that businesses can create greater value, even for themselves, by a more balanced optimization of social, environmental and financial considerations than by a narrowly economic emphasis alone. This model raises important questions, challenges, and potentially opportunities for the international finance and investment community. If the world is to become more sustainable, financial and investment institutions must themselves become “sustainable enterprises.”

This paper summarizes the Sustainable Enterprise Model and its implications, highlights unresolved issues and questions about it, and poses a series of recommendations for further discussion and action by the finance and investment community.

The paper is organized in five main sections. The first section frames the Sustainable Enterprise Model against the background of previous arguments as to whether or not businesses bear responsibilities to the larger societies in which they operate, and highlights similarities and differences between the Sustainable Enterprise model and several other leading answers to this question (the pure profit-maximizing position, the stakeholder position, the corporate social responsibility position, the corporate self-interest position).

The second section describes the Sustainable Enterprise model itself, and the evolution of its development from “greening” of the corporation to emphasis on shareholder value, on

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disruptive innovations marketed at the “bottom of the pyramid,” and on the implications of Schumpeter’s “creative destruction” process for sustainability. The third section offers a more detailed definition and criteria for a sustainable enterprise, and highlights several examples of candidates for that label.

The fourth section raises some of the key unanswered questions and unresolved issues about the idea of a “sustainable enterprise.” Does sustainability really represent a “triple bottom line,” or simply a more enlightened version of a single bottom line? By what mechanism does sustainability add shareholder value? Will it in fact out-compete unsustainable practices, or simply coexist with or be destroyed by them? How much sustainability can enterprises achieve? And is the basic vision of sustainability actually internally consistent or merely wishful thinking?

Finally, the fifth section highlights implications of the Sustainable Enterprise Model for the financial and investment community, and proposes several recommendations for further discussion and action by that community.

Introduction

The fundamental challenge for human institutions in the 21st century is to create and maintain a sustainable combination of economic, social, and natural environmental conditions in an increasingly global and commercial civilization. In the words of the World Commission on Environment and Development (WCED), we must meet the needs of people today in ways that do not prevent future generations from meeting their own needs (WCED 1987). More generally, sustainable development includes maintaining ecologically sustainable natural systems and providing just and meaningful social conditions for all the world’s people, as well as providing all people a decent standard of material life and keeping the economy itself healthy and sustainable. Individual businesses in turn must measure themselves against a “triple bottom line,” which includes environmental and social value as well as economic profit (Elkington 1998).³

None of these goals, let alone their combination, is now being achieved. Total world population will increase from 6 billion in the year 2000 to 8-10 billion by 2050 (Population Reference Bureau 2000). Virtually all of this increase will be in the developing nations of Asia, Africa, and Latin America, where 2.5 billion to 3 billion people now live on less than \$2 a day; the bulk of the increase will be in urban areas. The income gap between the richest 20 countries and the poorest 20 has doubled since 1970, to 37 times higher, mainly because of lack of growth in the poorest countries. Similar increases in inequality are also evident within many (but not all) countries (World Bank 2003: 1-3).

³ Some would dispute the desirability of these goals, and even of the entire discourse of “development” – sustainable or otherwise – as an imposition of a Western capitalist model on other societies that have legitimate though different values and integrity (and in some cases, arguably, greater demonstrated sustainability) in their own right. See e.g. articles by ul Haq, Wise, Porter and Sheppard, Sachs, and others summarized in Harris et al. (2001: 58-61, 79-97).

For a large fraction of the world's people and communities, the availability of education, health, nutrition, personal security and justice is stagnant or declining rather than improving. The poorest countries went from a per capita gross domestic product (GDP) growth rate of 1.9 percent annually in 1960-80, to a decline of 0.5 percent per year between 1980 and 2000. Progress in life expectancy slowed during the most recent two decades for all but the highest 20 percent of countries, as did progress in reducing infant mortality. By almost every measure of education, including literacy rates, the middle and poorer performing countries saw less rapid progress in the most recent two decades than in the prior two. The rate of growth of public spending on education, as a share of GDP, also slowed across all groups of countries (all from Weisbrot et al. 2001).

The absolute number of people still living in extreme poverty – at less than \$1 a day – includes an estimated 24% of the population of developing countries (World Bank data, cited in Madrick 2001). While poverty rates have improved in a few areas (East Asia and especially China), they have worsened in Latin America and sub-Saharan Africa and have worsened dramatically in Russia and Eastern Europe. Seventy-seven percent of all countries saw their per capita growth rates decline by at least 5% from 1960-80 to 1980-2000: in Latin America these rates went from a 75% increase to 6%; in sub-Saharan Africa it went from a 36% increase to a 15% decrease (Weisbrot et al. 2000).

Across large areas of the world, ecological conditions such as air and water quality, water supplies, forests, fisheries, and soil productivity also are deteriorating. One-third of the world's people live in countries that are already experiencing moderate to high water shortages, and at current population growth rates that proportion could rise to half or more in the next 30 years. More than a billion people in low- and middle-income countries, and 50 million people in high-income countries, lacked access to safe water for drinking, personal hygiene, and domestic use in 1995. Hundreds of developing-country cities have unhealthy levels of air pollution. Nearly 23 percent of all cropland, pasture, forest, and woodland) have been degraded since the 1950s, 16 percent so severely that the change is too costly to reverse. One-fifth of all tropical forests have been cleared since 1960; an estimated 58 percent of the world's coral reefs and 34 percent of all fish species are at risk from human activities; 70 percent of the world's commercial fisheries are fully exploited or overexploited and experiencing declining yields (all from World Bank 2003: 2-3).

In short, while the world economy in aggregate has boomed, it is failing to meet even the basic needs of a large fraction of the human population or to protect its natural resources and the ecosystems that produce them, even as it creates unprecedented wealth and amenities for a few. In the words of Amartya Sen, the Nobel Prize-winning economist,

Despite unprecedented increases in overall opulence, the contemporary world denies elementary freedom to vast numbers—perhaps even the majority—of people. Sometimes the lack of substantive freedom relates directly to economic poverty, which robs people of the freedom to satisfy hunger, or to achieve sufficient nutrition, or to obtain remedies for treatable illnesses, or the opportunity

to be adequately clothed and sheltered, or to enjoy clean water or sanitary facilities. In other cases, that unfreedom relates closely to the lack of public facilities and social care, such as the absence of epidemiological programs, or of organized arrangements for health care or educational facilities, or of effective institutions for the maintenance of local peace and order. In still other cases, the violation of freedom results directly from a denial of political or civil liberties by authoritarian regimes and from imposed restrictions on the freedom to participate in the social, political and economic life of the community. (Sen 1999: 3-4)

The reasons for these failures lie in both economic and political institutions. Environmental and social degradation often result from “externalities” of self-interested market decisions, and some environmental and social needs are public goods for which markets do not exist without government services. Yet government solutions themselves are not always effective, and are often an additional cause of environmental and social problems as well (Andrews 1999). Governments establish property rights and rules of exchange that are necessary for effective markets to function, they provide a collective mechanism for redistribution of resources, and they provide public services that markets do not. Yet they too produce externalities and sometimes injustices, and they often lack the resources, expertise, and political support – and even the basic commitment and integrity – necessary to fulfill these roles. Both economic and political institutions also tend to respond to short-term pressures and powerful interests at the expense of longer-term values and of more diffuse public needs.

An emerging literature in strategic business management proposes that the most promising solutions to these problems lie in entrepreneurial business innovation. The Sustainable Enterprise Model (SEM) asserts that there is an increasingly strong business case for sustainability: that businesses can create greater value, even for themselves, by a more balanced optimization of social, environmental and financial considerations than by a narrowly economic emphasis alone. It further argues that sustainability is becoming not just a business opportunity, but a Schumpeterian driver of creative destruction: that is, a fundamental determinant of which businesses will succeed over time and which will be destroyed by superior competitors. Finally, advocates of the SEM argue that the most important opportunities for businesses seeking such success in the future lie at the bottom of the socioeconomic pyramid, rather than at the affluent top where most successful firms are presently clustered (Hart and Ahuja 1996, Hart 1997, Hart and Milstein 1999, Christensen et al. 2001, Prahalad and Hart 2001, van Heel et al. 2001).

These propositions are exceedingly important if true, but so far are largely based on small numbers of examples. They present an important agenda for debate and empirical research, therefore, to assess their accuracy, their generalizability, and the conditions under which they may or may not occur.

They also pose important questions for the international finance and investment community. Most of the common examples of both sustainable and non-sustainable businesses are publicly traded corporations, and international finance and investment markets are therefore among the most powerful forces influencing the behavior of these

firms, either for or against “sustainable” business strategies. International financial and investment institutions also are dominant players in their own right: as the world’s primary repository of capital assets, they channel a large fraction of the world’s available wealth into uses that may or may not increase environmental and social sustainability. Their expectations strongly frame the opportunities and constraints of governments as well. If the world is to become more sustainable – even in economic terms, let alone environmentally and socially – financial and investment institutions must themselves become “sustainable enterprises.”

This paper summarizes the Sustainable Enterprise Model and its implications, and proposes issues that deserve further research and experimentation to evaluate, extend, refine and advance it. A separate future paper will also consider the applicability and implications of the SEM to governments and public-sector enterprises.

Business Decision-making and Social Responsibility

The arguments for sustainable enterprise arise in the context of larger and long-standing debates about the behavior of business organizations. These debates usually have framed environmental and social impacts as matters of corporate social responsibility: that is, as matters that businesses *should* attend to, whether or not it is profitable to do so, out of a moral or ethical responsibility to society.

In important respects, businesses are creatures of public policy. They enjoy rights and privileges established by law without which modern business corporations would exist only in far more modest form, if at all. Examples include rights of incorporation, limited liability, property ownership (including large recent extensions of patent and copyright protection, and of other rights to intellectual property), freedom of speech as though they were individual citizens, and many others. Businesses can use these advantages to accumulate vastly more wealth, economic power, and political influence than are possible for most individual citizens. They depend on government for public safety, regulation, and security services that protect their property, maintain stable rules of market transactions, and enforce their contracts and other transactions. Finally, they enjoy the benefits of many other government services, from physical infrastructures and amenities to public education, health services, and social safety nets. Good government, stable services, and favorable treatment provide major benefits to businesses, while the lack of these benefits handicaps them.

Do businesses, then, also have commensurate duties to society? Do they bear responsibility only to themselves – and to their shareholders, if they are publicly traded corporations – or do they also bear a broader social responsibility to contribute to the economic, environmental, and social sustainability of the societies in which they operate and from which they benefit?⁴

⁴ As two business ethicists put it:

People eat, sleep, vote, love, hate, and suffer guilt. They also go to work for, and manage, corporations that do none of these. Yet corporations are considered “persons” under the law and

This question is important at two levels. First, at the level of the organization itself, corporations hold such disproportionate power and influence in society, and gain so much of these from the favorable rules and services the society provides for them, that one might argue that they owe duties in return.

Second, individuals within corporations, from Board members down through mid-level managers to individual employees, are expected to act in the interests of the corporation – as employees, agents, or fiduciary stewards – rather than of any differing personal views they may hold. In many cases corporate leaders would not personally commit specific actions if they were held legally, or even socially, responsible for the social or environmental consequences of their decisions. However, they often fail to make the connections between decisions they make and the effects of those decisions because of the insulation from responsibility – and the clear pressures against invoking their own personal values as a criterion – that are created by the corporate structure. In their organizational roles, they are shielded from responsibility for the full consequences of their actions on behalf of the corporation (that is, the consequences for others that are not strictly illegal or directly damaging to the corporation itself). They also are legally and economically constrained from acting on their own views – either of self-interest, or of obligation to society – except to the extent that they can defend these either as required by law, or as otherwise in the self-interest of the organization itself.

The Profit-Maximizing Position

Historically, business corporations were created to accomplish large-scale *public* purposes, by pooling financial resources. Examples included joint-stock companies chartered to explore new territories and develop colonies, and later corporations chartered to build public infrastructures such as canals. By the mid-19th century, however, landmark judicial decisions held that incorporation created rights to operate as purely commercial organizations, rather than revocable privileges contingent on their serving the public interest.

A dominant view of business responsibility since that time has been that a business is responsible only for serving the economic interests of its shareholders, so long as it obeys the law and maintains honesty in its transactions. A socially responsible corporation “pursues profit while respecting the moral minimum” (Bowie 1990). As economist Milton Friedman put it (1962, 1970),

have many of the same rights as humans: to sue, to own property, to conduct business and conclude contracts, and to enjoy freedom of speech, of the press, and freedom from unreasonable searches and seizures. Corporations are legal citizens of the states in which they are chartered. They even possess two rights not held by humans: unlimited longevity and limited liability. Corporations in the United States have unlimited charters, they never “die” in the ordinary sense of the term, although some companies go bankrupt, and their shareholders are liable for corporate debts only up to the amount of their personal investments. Are corporations, then, morally responsible in the ways in which people are? (Donaldson and Werhane 1999: 225).

There is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.

Friedman argued, for instance, that business executives are responsible to be agents of the shareholder owners, and have no right to exercise their own personal judgment about spending someone else's money—taxing the owners' rightful profits, or the compensation of workers or the prices charged to customers—to achieve some other "social" purpose selected by the executive.⁵ Friedman also argued that business executives do not have any special claim to know what the public interest is, and are not selected in a politically accountable way to be agents of social ends. Other advocates of this position argue that the responsibility to shareholders represents an important set of social and ethical values in its own right, such as the ethics of fiduciary obligation, respect for fair contractual relations, the efficient and not wasteful use of human and natural resources, and responsiveness to consumer choices and satisfactions (Bird and Waters 1989).

In its extreme forms, this argument has been taken to mean that businesses have no responsibility to their communities, workers, or societies except to make a profit. In this view, businesses are justified in transferring ("externalizing") as many of their costs as possible onto society (for instance pollution, and unemployment), so long as they are not legally prohibited from doing so. They also are equally entitled to use their market power to play each community or country off against others in pursuit of tax privileges and price concessions, even to the extent of paying far less taxes than the cost of public services they receive, and closing plants – with the associated social costs left to the community – whenever it suits their bottom line to do so.

Following this philosophy, many businesses have focused on their short-term economic bottom line alone, ignoring the environmental and social costs which their decisions impose on others. In recent years, the increased pressures of computerized stock trading algorithms and of hostile-takeover and leveraged-buyout practices have intensified pressures to increase short-term returns to shareholders at the expense of almost any other considerations. Some would argue, however, that in doing so, businesses also overlook opportunities to achieve a greater overall payoff even for themselves through optimizing across economic, environmental and social considerations. More on this below.

⁵ Examples might include refraining from increasing the price of a product in order to prevent inflation, or making expenditures to reduce pollution beyond the amount that is in the best interest of the corporation or required by law, or hiring "hard core" unemployed rather than more qualified available workers in order to reduce poverty.

The Stakeholder Position

A more recent literature has argued that businesses are responsible not merely to their shareholders but also to other stakeholders, including their managers and employees, customers, suppliers, lenders, insurers, neighbors, communities in which they operate, and others. All these stakeholders, advocates argue, have legitimate claims and rights that must be respected in the business's decisions:

Corporations have stakeholders, that is, groups and individuals who benefit from or are harmed by, and whose rights are violated or respected by, corporate actions.... Just as stockholders have a right to demand certain actions by management, so do other stakeholders have a right to make claims.... We can understand value-creation activity as a contractual process among those parties affected (Evan and Freeman 1988).

Some advocates of this position hold that Friedman's position not only is incorrect legally, but also presents an idealized and misleading view of how business managers operate in practice. Stone (1975), for instance, argues that the directors of a corporation are legally as well as morally responsible not only to shareholders but also to customers, creditors, the state, neighbors, and others. He also argues that in practice managers do not act as agents of their shareholders, but often go to great lengths to prevent shareholder votes on resolutions with which managers disagree (citing a shareholder resolution on Dow's production of napalm, for instance).

The Corporate Social Responsibility Position

A third view is that businesses do in fact have social obligations beyond the moral minimum, not only to stakeholders but to society as a whole: they have an obligation to corporate social responsibility (CSR). Norman Bowie has argued that corporations owe a "duty of gratitude" to help solve social problems, in return for the many public services provided to them by the communities in which they operate; that since corporations are treated as citizens, they have civic obligations similar to those of any other citizen; and that corporations even have a special additional obligation to use their disproportionate economic power and influence responsibly:

Perhaps the three strongest arguments are based on the duties of gratitude and citizenship and the responsibilities of power.... Society provides tremendous resources to corporations. The local community provides public education that trains workers, a legal system complete with police and courts to enforce corporate contracts, and a huge infrastructure of highways, sewage and garbage disposal, and public health facilities. Corporate taxes are not sufficient payment for the corporations' share of these resources, therefore corporations have a duty out of gratitude to help solve social problems. Moreover, even if corporate taxes did cover their fair share, corporations are citizens morally similar to individual citizens: as a result, they have a similar obligation to help solve social problems.

Finally, the moral use of power requires that power be used responsibly. (Bowie, 1990)

Goodpaster (1991), on a related but slightly different tack, argues that even if businesses do not owe the same fiduciary obligation to other stakeholders as to their shareholders, they nonetheless have ethical responsibilities for environmental and social consequences that are inherent in their fiduciary relationships to the shareholders themselves. No shareholder, he argues, can legitimately expect of an *agent* behavior that is ethically less responsible than he would expect of himself. But often there is no obvious forum in which to confirm or act on such ethical expectations, particularly in today's stock transactions which are often driven not by individual ethical shareholders but by the impersonal, price-driven computer algorithms of large investment funds. In the words of Chad Holliday, CEO of Dupont:

A publicly owned company in America must concern itself with creating shareholder value or else the company's owners will eventually revoke its right to operate.... [F]or sustainable growth to succeed, there will have to be complete alignment of environmental, societal and shareholder values. That will not come easily, and business and industry cannot accomplish it working alone. (Holliday, 2000)

In reality, a fundamental disconnect exists between shareholders and agent behavior, for two reasons. First, it is unreasonable to assume that most investors can act either rationally or ethically with regards to social responsibility, when adequate, accurate, and comparable information – even on many important economic aspects of their options, as illustrated by recent scandals, let alone on environmental and social performance – is not provided. Relatively greater transparency exists only in the most exceptional of cases by the “best” firms, who use it as a form of image differentiation. Second, most mutual funds and other investment vehicles are so large and diversified that even if perfect information did exist, it would be nearly impossible for the average (or even professional) investor to properly evaluate them. Social-criteria funds (and socially-conscious institutional investors, such as church pension funds) exist as an option, but represent a small fraction of the market.⁶

The Corporate Self-Interest Position

A fourth position that has more recently been proposed is that it is actually in the business's *own* enlightened self-interest to behave responsibly toward the societies in which it operates. The World Business Council for Sustainable Development (WBCSD), for instance, argues that

⁶ Even leaving aside computer trading algorithms, share trading is largely dominated by the representatives of large institutional investors such as pension and mutual funds, who would argue that they have an ethical obligation to their investors to invest for the highest return consistent with their announced investment criteria. And some argue that even social investment funds serve merely to salve the consciences of their investors: if they disinvest in otherwise financially attractive stocks, any resulting reduction in their price will simply be captured and corrected by other investors who do not share these scruples.

A coherent CSR strategy based on sound ethics and core values offers clear business benefits. These accrue from the adoption of a broader world view, which enables business to monitor shifts in social expectations and helps control risks and identify market opportunities. Such a strategy also helps to align corporate and societal values, thus improving reputation and maintaining public support.... Business, and hence society, prospers in stable markets with effective legal systems, well-defined property rights and where consumers have spending power and freedom of choice. Social responsibility is, consequently, essential for the creation of long-term value for shareholders.... (WBCSD, 1999)

WBCSD goes on to argue that particularly in the developing world, businesses can extract identifiable returns to shareholders for “social investments” in such services as schools and hospitals and other infrastructures, by producing healthier and better-educated workers and customers and by creating a more stable and supportive climate for business.

The questions still incompletely answered in this position, however, are whether the interests of shareholders are in fact sufficiently aligned with the broader interests and needs of society to assure that society’s environmental, social, and economic needs are met as well as the demands of shareholders. Historically that alignment has often been absent. Such social investments may not always generate identifiable returns, or the returns may not be reliably capturable by the investing firm, or may not be commensurate with the time horizon demanded by the investors. What has changed today, if anything, to assure that business decisions will create sustainable development trends for human civilization?

The Sustainable Enterprise Model

The Sustainable Enterprise Model (SEM) argues that sustainability is not merely a matter of altruistic philanthropy or ethical responsibility, but a core strategic interest and opportunity for businesses themselves.

Beyond Greening and Philanthropy

Stuart Hart (1996) argues that past arguments for both environmental and social consciousness in business management have been misdirected. The rationale for improving environmental performance (“greening”) was limited at first almost exclusively to regulatory compliance (the “moral minimum”), accompanied by widespread and resentful assumptions that such compliance represented deadweight costs subtracted from the bottom line. Michael Royston (1979, 1980) challenged this attitude with the claim that pollution prevention *pays*: that it is not necessarily compliance costs that reduce profits, but the waste of materials and energy represented by pollution discharges, and associated inefficiencies and liabilities for cleanup and damages. This argument, while more attractive, still led only to incremental savings in production costs

(“eco-efficiency”). Even the recent widespread adoption of environmental management systems, under the ISO 14001 international voluntary standard, remains largely limited to incremental “continual improvement” in existing production processes: it could, but rarely does, serve as a stimulus for more strategic rethinking of entire product life-cycles and business opportunities (Andrews *et al.* 2003).

Similarly, Hart argues, past arguments for social consciousness have remained too narrowly focused on philanthropy – on altruistic expenditures to maintain community good will and a positive corporate image – rather than on the strategic potential of social considerations in the core of a company’s business itself. Social problems, Hart argues, represent business *opportunities*: vast unmet human needs and wants represent far larger potential markets at the bottom of the socioeconomic pyramid than are available at the relatively saturated top where most of today’s leading corporations target their products.

Sustainability as Shareholder Value

The first step of Hart’s argument, in short, is that sustainability is not a matter of defensive costs but of business opportunities. Second, therefore, it should be addressed in the core of a business’s strategy and not merely in its philanthropy, and it should produce increased economic value – as well as environmental and social value – both to shareholders and to society. The core of a firm’s competitive business should be designed to achieve a greater social good and a more environmentally sustainable world, as an integral element of providing greater shareholder value. Sustainability in this view represents a fusion of economic, environmental, and social dimensions, rather than a compromise among them: an opportunity for greater value creation – a “synergy bonus” – by jointly optimizing all three.

How would this work in practice? In the environmental dimension, it begins with cost savings from pollution prevention and eco-efficiency, but then progresses to more fundamental innovations in both products and production processes, such as life-cycle analysis, eco-design, industrial ecology, ecological footprint reduction (less materials and energy per product), and “Natural Step” principles such as minimizing resource extraction, toxics, landscape disturbance, and pollution.⁷

Over the longer term, it implies a more widespread shift to “clean technologies,” such as the displacement of toxic chemicals by more benign substitutes, displacement of inefficient central power plants by more distributed micro-power alternatives (solar, for instance), and of some material- and energy-intensive products by less material services. Increasing sustainability is, in short, a dynamic process, driven by innovation in products and technologies and not merely by cost-saving efficiencies.

In the social dimension, Hart argues, value can be added in the short term by increasing transparency, accountability, and stakeholder dialogue to preserve the firm’s right to operate and to enhance and differentiate its reputation from its competitors. Over the

⁷ The Natural Step, <http://www.naturalstep.org/>.

longer term, there are large opportunities for meeting unmet needs of poor people and poor communities, and thus raising the bottom of the socioeconomic pyramid.

Finally, Hart argues, the elements of the “triple bottom line” are mutually reinforcing. Market opportunities are far greater at the bottom of the social pyramid than in the relatively saturated markets of the affluent, and the needs and wants of the poor cannot easily be met with the expensive and environmentally wasteful technologies of wealthy markets. To be profitable in the future, enterprises must realign their business models with the global challenge of sustainability, including environmental and social as well as economic dimensions, and seek their profits in new and “disruptive” technologies to serve the poor rather than just in new products or expanded markets for the affluent.

Hart’s vision, in short, is of a world where business contributes to wealth creation that is ethical and equitable, as well as economically and environmentally sustainable. His mission is to understand and articulate how the challenge of global sustainability changes the competitive landscape for enterprises.⁸

This argument in turn is closely aligned with a broader proposition that business approaches – and particularly, a renewed focus on entrepreneurship, rather than merely on management of large corporations – offer more promising instruments for creating a sustainable world than do governments and other institutions. In this view, business organizations have by far the greatest capacity to generate innovative solutions and to leverage resources for their implementation, if they can but be educated to recognize sustainability as a business opportunity. In the words of William Ruckelshaus, former CEO of Browning-Ferris Industries (and twice former Administrator of the U.S. Environmental Protection Agency), “Sustainability is as foreign a concept to managers in capitalist societies as profits are to managers in the former Soviet Union.”

“Disruptive Technologies” and the “Bottom of the Pyramid”

The first move of Hart’s Sustainable Enterprise Model, then, is to argue for sustainability as a major step beyond “greening” and philanthropy, as a business opportunity. The second move is to argue that it is a core business strategy, using environmental and social performance to create greater business value as well as benefits to society.

The third move is perhaps even more provocative. Hart argues that the future of business sustainability itself – as well as sustainable development more generally – lies with radical and discontinuous change rather than with maintaining stability and continuous improvement. It lies, he and others argue, with entrepreneurial start-up competitors that introduce “disruptive” technologies and innovations at the bottom of the socioeconomic pyramid, rather than with continuous improvement or better marketing of existing technologies – even “green” ones – to more people.

⁸ For an explicit statement of this mission and vision, see the Center for Sustainable Enterprise web site at <http://www.bschool.unc.edu/sei/>.

Following Schumpeter (1947) and Jacobson (1992), Hart and Milstein (1999) and Christensen et al. (2001) argue that the driving force of capitalism is not the equilibrium-seeking price competition that takes place among established firms (and that preoccupies most economists), but a more fundamental and dynamic *disequilibrium* driven by innovation. In this view, significant profit can be derived only from innovation: from the extra amounts people are willing to pay for a new product before competitors enter and drive the price down to competitive levels.⁹

As this competitive process develops, established firms face constant pressures to keep their profit margins healthy by further differentiating their products, moving them up out of the sluggish competitive tiers of the mass market into more affluent and discriminating tiers where profitability is higher. As they do so, however, they tend to market increasingly over-sophisticated products to smaller and smaller numbers of the most discriminating customers, gradually becoming hostages to their current technologies and market positions. And in doing so, they also leave growing opportunities for new innovators in the larger markets at the bottom of the socioeconomic pyramid. New businesses typically enter by innovating successfully at the bottom or periphery of existing markets, where profit margins appear too limited for established firms.¹⁰

The resulting “disruptive” technologies create new growth and economic value in the industries they penetrate – even when they cause traditionally entrenched firms to fail – by allowing less-skilled and less-affluent people to do things previously done only by expensive specialists in centralized, inconvenient locations. In effect, they offer consumers products and services that are cheaper, better, and more convenient than before. In low-end and peripheral markets, they can market more cheaply and avoid competition with established up-market firms until they themselves are well established with cheaper products; then move up with more sophisticated versions of their products until eventually they face the same forces as other high-end firms, discovering that not enough volume exists to sustain growth, and leading to painful consolidations.¹¹

Because successful business innovations often start in low-end and peripheral markets, Christensen, Hart and others propose that the enormous unmet needs of the large majority of the world’s people – economic as well as environmental and social – represent correspondingly vast potential markets and business opportunities to those who are willing to think entrepreneurially about how to meet them. The disruption process could

⁹ In practice, profits also are generated by any advantage that allows one producer to maintain a barrier to entry against competitors. Examples include proprietary knowledge or costly technology, the time necessary to create a competing product, or legal barriers to entry. Many of these barriers are created by public policies, such as copyright and patent laws, confidential business information restrictions, non-disclosure and non-compete contracts, as well as tariffs, subsidies, and other forms of protection.

¹⁰ Well-known historical examples include the Volkswagen “bug” and Toyota’s original Corona line of automobiles, desk-top computers and personal copiers, and many others.

¹¹ Not all authors agree. Some would argue that there are two distinct types of disruptive innovations: those that do not perform as well as existing products but are cheaper and more convenient, but also others that succeed because they are qualitatively better than those they replace even though more expensive. Refrigerators are more expensive but better than iceboxes, vacuum cleaners than brooms, word processors than typewriters (Surowiecki 2001).

thus hold the key to economic development in poor countries: globalization's greatest market opportunities lie with the billions of poor people who are joining the global market economy for the first time.

Schumpeterian “Creative Destruction”

The final move (so far) of the SEM argument is that entrepreneurial innovation toward greater sustainability and bottom-of-the-pyramid markets is not only a business opportunity but increasingly, an *imperative* for businesses that seek to survive and succeed. Schumpeter argued that innovation drives a dynamic process of “creative destruction” by which more innovative businesses gradually replace their competitors.

Hart et al. propose that the emerging challenge of global sustainability is a catalyst for a new round of creative destruction, which offers unprecedented opportunities to managers with the foresight to capitalize on it but mortal threat to those that are environmentally or socially destructive and fail to adapt. Most of today's large corporations, they argue, developed in an era of abundant raw materials, cheap energy and limitless sinks for waste disposal. Over the past few decades, however, it has become increasingly clear that many of the technologies developed during this period contribute to the destruction of the very ecological systems on which the economy depends. Most efforts to date at “greening” and “environmental management,” however, serve only to improve incrementally the performance of existing products and processes; and sector-based collaboration in pollution prevention and product stewardship is often used to solidify the competitive positions of incumbents by rewriting the rules of the game in their favor.

In the long run, they argue, the dynamics of creative destruction will work against firms that rely only on incremental improvements and fail to change the fundamental manner in which products, processes, and services are provided. Material- and energy-intensive industries will find global sustainability to be a competency-destroying challenge which calls for radical repositioning and new competency development. Information- and service-intensive industries will find global sustainability to be a competency-enhancing challenge which offers significant potential for product substitution and leapfrogging.

As examples they cite the rapid penetration of cell phones throughout Asia, the Grameen Bank model of micro-credit financing (and its newer ventures, Grameen Phone and Grameen Energy), the success of Hindustan Lever in marketing detergents to poor communities, the global potential of small-scale solar electric power and other forms of distributed energy, and the shifts of several large chemical companies to “green chemicals” and biotechnology (Dupont, Monsanto).¹² See Box __ for several of these examples.

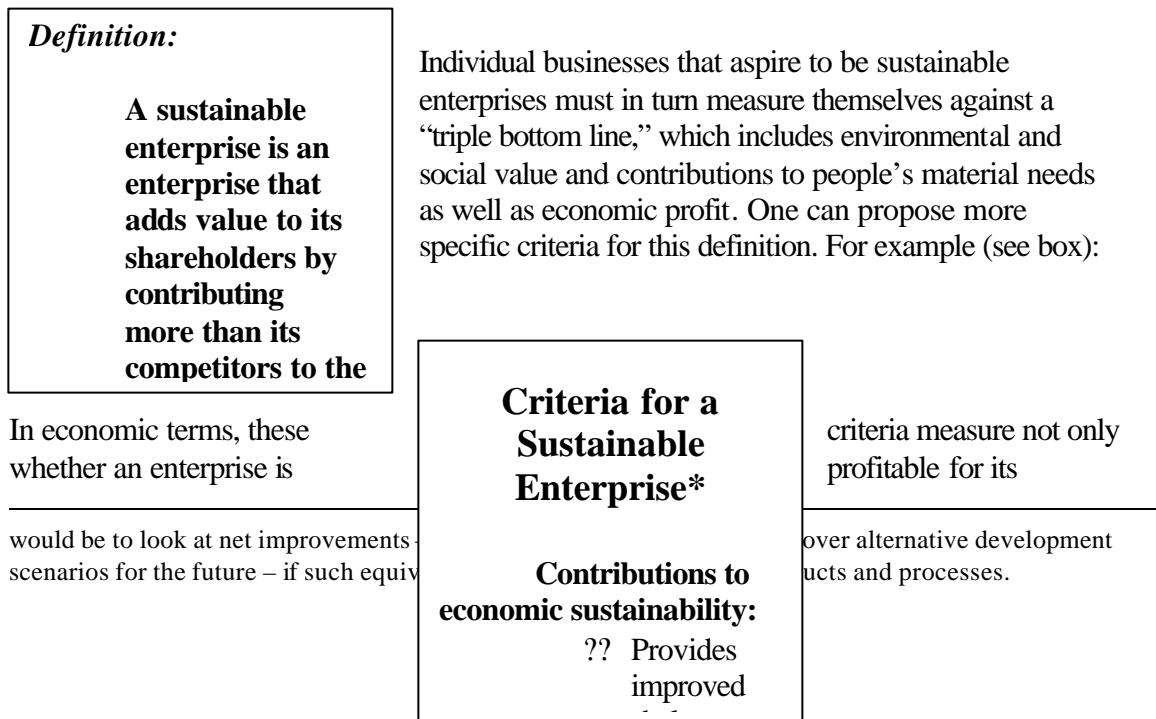
¹² An important question is to what extent each of these examples is in fact sustainable, and compared to what. Biotechnology itself may prove not to be sustainable, at least in some of its applications, nor are the present production activities involved with many “sustainable” products. Solar panels, arguably one of the most promising of the sustainable enterprises in consumer use, require pollution- and energy-intensive production processes. The consumer electronics business, often heralded for dematerialization in its use context, also requires far more pollution-intensive production processes. Perhaps a proper perspective

Looking forward, Hart et al. argue that the emerging world economy is composed of three types of markets: the developed consumer market, the emerging market, and the subsistence/survival market. To compete successfully in the consumer economy, businesses must reduce the life-cycle impacts of their products through technological innovation: reduce the “footprint” of their environmental impacts, close the gap between price and full life-cycle costs, dematerialize, shift from goods to services, and increasingly use their wastes as inputs to other processes (“industrial ecology”). In the emerging economy, they must avoid a potential collision between rapidly growing economic demand and the limited ecological capacity for supply or waste disposal, by innovating “leapfrog” technologies as substitutes for current environmentally damaging products (cell phones and cheap electric vehicles, for instance). In the survival economy, they must develop inexpensive products and services, and must adapt their business models to meet basic human needs – and in the process, to attack established businesses’ markets from below through the Schumpeterian innovation cycle.

What is a “Sustainable Enterprise”?

What then is a “sustainable enterprise,” and how would one recognize one?

First and foremost, a sustainable enterprise should be defined not just as one that assures its own future survival, but as one whose activities contribute to the achievement of a sustainable world. That is, sustainable enterprises are those that on balance contribute more than their competitors to “meeting the needs of the present generation in ways that do not prevent future generations from meeting their own needs” (WCED 1987). In short, a sustainable enterprise is an enterprise that adds value to its shareholders by contributing more than its competitors to the three goals of a sustainable common future: providing a decent standard of material life to all people, maintaining ecologically sustainable natural systems; and providing just and meaningful social conditions for all people.



shareholders, but also whether it is more effective than its competitors in generating sustainable livelihoods and wealth, and goods and services that meet human needs, in poor communities themselves.

In environmental terms, these criteria measure whether an enterprise is more effective than its competitors in limiting the extraction and dispersion of toxic pollutants, limiting the physical disturbance of the ecosystems in which it operates, and minimizing inefficiency and waste in the use of material and energy resources. They also measure the sustainability of its impacts on resource and energy use. Using resources only from well-managed ecosystems, for instance, requires ecologically sustainable management of fisheries, forests, and agro-ecosystems. And systematic reduction of dependence on fossil fuels recognizes both the increasing risks of scarcity and overdependence on fossil fuels, and the pervasive impacts of fossil-fuel combustion on air pollution, global warming, and other serious and unsustainable environmental problems.

Taken together, these criteria capture the key dimensions of human impact on the sustainability of natural ecosystems and processes on which human and other species depend for their life, health, and resources. They do not require zero impact, and they are not absolute: it is more accurate to determine that an enterprise is more sustainable than its competitors than that one enterprise is sustainable and another is not. Even in such relative comparisons, multiple criteria may require difficult judgments: one enterprise may score highly on some criteria and a competitor higher on others. But the selection of these criteria does imply that businesses that achieve these results better than their competitors should be recognized and rewarded as more sustainable enterprises.

Finally, in social terms these criteria measure whether an enterprise contributes to or detracts from the development of just, effective, and stable institutions, and transparent and democratic decision-making, that are also essential elements of a sustainable society.

These three sets of criteria are of course not only for sustainable enterprises, but for a sustainable society as well. Some may object that they are primarily the responsibility of governments and of civil-society institutions, rather than of business enterprises. However, business and financial enterprises are themselves among the most powerful forces in civil society, for good or ill, and they must therefore share actively in the responsibility for the outcomes. One could even argue that it is in the self-interest of businesses to meet such criteria, if they are themselves to achieve long-term economic sustainability rather than merely to maximize short-term profits at the expense of future prosperity.

Hart and others have identified a number of examples of candidates for the title of “sustainable enterprises.” The box below shows summaries of several of these examples:

Examples: Candidate “Sustainable Enterprises”

1. ***A transnational corporation:***¹ In response to a local competitor, Hindustan Lever Ltd. (HLL, a subsidiary of Great Britain’s Unilever PLC) developed a new detergent (“Wheel”) in the 1990s specifically for marketing in poor communities in India. Wheel was formulated to substantially reduce the ratio of oil to water in the product, responding to the fact that the poor often wash their clothes in rivers and other public water systems. HLL also decentralized the production, marketing, and distribution of the product to leverage the abundant labor pool in rural India, quickly creating sales channels through the thousands of small outlets where people in the poorest communities shop. HLL also changed the cost structure of its detergent business so it could introduce Wheel at a low price point. HLL and its local competitor now share 38 percent each of the local detergent market, and HLL itself registered a 20 percent growth in revenues per year and a 25 percent growth in profits per year between 1995 and 2000. HLL’s parent company Unilever used HLL’s business principles (not the product or the brand) to create a new detergent market among the poor in Brazil, where the Ala brand has also been very successful. The absence of high margins of profitability in such markets is more than offset by high volume and capital efficiency.
2. ***An independent venture:***¹ A U.S.-based NGO, the Solar Electric Light Fund (SELF), has creatively adapted technology and applied microcredit financing to bring electrical service to people in remote villages in Africa and Asia who would otherwise spend money to burn hazardous kerosene, candles, wood, or dung for their light and cooking. SELF’s rural electrification system is based on small-scale on-site power generation using renewable resources. A revolving loan fund gives villagers the financial means to operate these electrical systems themselves, also creating jobs.
3. ***An indigenous venture:***¹ A subsidiary of the widely-known Grameen Bank micro-credit initiative, Grameen Phone sells wireless phones to local entrepreneurs on credit, who then sell phone use services to the residents in each village who could not afford individual phones. Cellular phone calls are far more economical for residents than traveling for several days on mules and buses to acquire information. Grameen Phone is now extending its services to include computer and internet connections to rural villages, which in turn opens electronic access to such services as banking, medicine, and education. Grameen Phone (and other related ventures, such as Grameen Energy) has materially improved the way people live in rural Bangladesh. As basic needs are met at the village level, pressure for migration to overcrowded urban areas is reduced. Furthermore, citizens able to meet basic needs no longer need to cut forests for cooking fuel, pollute and drink contaminated water, or avoid expensive health care, thus strengthening their social and environmental systems; and wireless telecommunications itself provides far cheaper and more immediate access to telecommunications services, with far less environmental impact, than would be necessary to string wiring to every rural village. As villages prosper, a growing economic base has jump-started entrepreneurship, employment has increased, and the overall standard of living has improved.

Unanswered Questions

The propositions of the Sustainable Enterprise Model are attractive, but they also involve a number of underlying assumptions that have not yet been fully examined.

Triple bottom line, or enlightened single bottom line?

First, the SE model (and the “triple bottom line” concept itself) implies that environmental and social benefits accrue not just to society but to the business itself, and – importantly – that these add value *in addition to, rather than mediated through*, economic value. If they are merely mediated through economic value (that is, environmental and social outcomes that show up in the economic bottom line), then the “triple bottom line” still is ultimately a single financial bottom line, albeit one more broadly enlightened about the environmental and social components of its content.

On the other hand, if they truly are argued to be *separate* dimensions of value, then evidence is needed to show how such non-financial value dimensions actually affect the overall market valuation of businesses, especially in sectors that have large environmental and social impacts. There has been some research already on the relationships between environmental, social, and economic performance of businesses (see e.g. Hart and Ahuja 1996, Klassen and McLaughlin 1996, Dowell, Hart and Yeung 2000), but more systematic work is needed.¹³

Mechanisms: How does sustainability add value?

Second, if environmental and social performance do add distinct value to a business, by what mechanisms does this occur? For instance, does sustainability add value because it reduces previously overlooked costs, or improves the morale and productivity of its workers, or proactively reduces the business’s dependence on increasingly expensive materials and energy? Or because it opens up new markets, or produces better products for existing markets? Or because its customers or investors now more explicitly demand environmental and social performance? Or because these are increasingly necessary simply to maintain the business’s “license to operate” with communities, governments, civil-society interest groups, and other stakeholders? See Box ___ for several examples.

¹³ Van Heel et al. (2001), for instance, identify ten dimensions of business value against which environmental and social performance can be measured: shareholder value, revenue, operational efficiency, access to capital, customer attraction brand value and reputation, human and intellectual capital, risk profile, innovation, and license to operate.

How Does Sustainability Add Value?

Example 1: Efficiency improvements? Many businesses in the late 1970s and 1980s found that they could *save* money by reducing pollution: for instance by reducing wastage of materials and energy in their operations (cf. Royston 1979, 1980, Sarokin et al. 1985). These savings did not represent any change in market forces, but merely a belated recognition by many businesses themselves that they had been ignoring large hidden costs and inefficiencies which their pollution emissions represented. They were in fact leaving large amounts of money “lying on the table,” because of their narrow focus on compliance costs rather than on pollution as an indicator of economic inefficiency. Were these merely one-time savings, or would “continual improvement” procedures produce more?

Example 2: Image Positioning? Some major firms have sought value in marketing a brand image of public commitment to sustainable practices. For instance, Nike marketed itself as a leader in labor, environmental, and corporate social responsibility standards after being targeted for public shaming by labor advocacy groups. Is such image positioning “real” value, or merely damage control by a brand-vulnerable firm? Is it generalizable to other firms? Wal-Mart, for instance, competes almost exclusively on price rather than other aspects of its image, and has vastly more influence on suppliers and consumer product markets: Is sustainability a “Schumpeterian driver” on a firm such as Wal-Mart? And finally, is image-based value applicable to non-branded commodities firms? Extraction and primary processing of basic metals, fossil fuels, and fibers are far larger causes of environmental impacts than most manufacturing processes, but most of these are sold only as commodity inputs to other businesses: does an image of sustainability provide value to commodity producers?

Example 3: Betting on a Different Future? In March 2002, British Petroleum (BP) announced that it had reduced its greenhouse gas emissions by over nine million tons eight years ahead of target, and that it would peg net future emissions at this new, lower level despite plans to grow its oil and gas production by 5.5 per cent a year. It planned to achieve half this commitment by increasing energy efficiency, but half also by “reinventing the energy business” through continued reduction in the carbon content of the products BP makes and sells, including natural gas which represented over 40 per cent of the company’s production. If this is a good business decision by BP, why are its major competitors –Chevron Texaco and Exxon Mobil, for instance – not doing the same? Is BP betting on Schumpeterian innovation leadership, or is this merely another example of image positioning by BP? What would it take to induce all firms in a major, high-impact sector such as oil and gas production to behave more sustainably?

Example 4: Relative Costs Changed by Regulations? EPA’s landfill regulations, promulgated in the 1970s, raised the cost of industrial and municipal waste disposal by close to an order of magnitude. This significantly and permanently changed the relative costs of pollution prevention (including recycling) versus disposal. It thus made source reduction and recycling more cost-effective than disposal for many materials formerly discarded by many firms, and it also created opportunities for a far more profitable and professionally managed recycling and waste management industry than previously existed. In this case, some environmentally sustainable practices that did not previously pay, now did so. For all their bad press, are government regulations ultimately the most reliable or only way of imposing the full costs of unsustainable practices on businesses themselves – and on all businesses that cause them, rather than just on those whose images are most visible and vulnerable to public criticism – rather than on third-party victims and society as a whole?

These questions are centrally important, because they determine how widely sustainability may penetrate additional businesses, and whether the forces driving it are widely generalizable and enduring or merely a special case affecting a few of the most visible corporations. It is critical to investigate further how universally these mechanisms operate across the firms and sectors that have significant environmental and social impacts.

Will sustainability creatively destroy unsustainable practices?

Champions of the SE model propose that sustainability may act as a Schumpeterian force driving creative destruction of less sustainable competitors over time. This is a worthy hope, but far from proven so far. The rapid depletion of some resources, such as ocean fisheries and groundwater aquifers, provide perhaps the clearest cases in its favor: as the fish or the water disappear, clearly the industries that depend on them will either change or be destroyed. But even here it is unclear whether scarcity will cause the creative destruction of unsustainable practices quickly enough to save the resources themselves from destruction. Only collective action, such as an enforceable cap on total annual fish harvests or water withdrawals combined with marketable quotas within the cap, may have a chance of saving such resources themselves from destruction.

In most cases, sustainability is at best only one Schumpeterian force, among others that press in opposing directions. The pressure for higher quarterly returns to investors, for instance, exerts a powerful influence to creatively destroy firms that seek long-term social and environmental sustainability – or even long-term economic stability – over short-term profits. The fact that short-term profitability is embedded as a primary criterion in impersonal computer-trading algorithms for a vast proportion of the world's investment capital makes this an unusually powerful and pervasive driver. At its core, the Schumpeterian process is measured by success in market competition, not by sustainability per se; sustainability must then be a compelling imperative indeed to thrive in the face of opposing forces as powerful as these.

The creative destruction process is also retarded by the power of existing businesses – both in markets and in the political arena – to slow the rise of new technologies and competitors and their own associated displacement. This is true even for conventional business competition, and probably even more so for new products and processes whose sustainability is in part a public good. Technological obstacles block some innovations: capital-intensive production processes for motor vehicles bar all but a few major manufacturers from entering the market, and most find it more profitable to continue producing and selling their existing products than to innovate new ones. Path-dependent infrastructures block others: how fast can hydrogen or fuel-cell cars displace petroleum-fueled vehicles without an equivalent network of refueling and service stations? Market power retards others: established manufacturers have significant influence over many distribution networks. Finally, established firms and industries have far greater influence than new ones over public policies and their implementation – subsidies and tax breaks, production and import quotas, regulatory mandates, lax enforcement, and others – which

accordingly tend to protect established businesses and industries far more than they promote the rise of disruptive innovations by more sustainable enterprises.

It seems more likely therefore that most sustainable enterprises will develop as niche-market competitors in sectors and markets that are not dominated by established industries; and that any broader success or market penetration will result less from their own “disruptiveness” and more from the occurrence of larger disruptive events – natural-resource crises, the emergence of large new markets such as China, moments of public political outrage to reform or regulate mainstream industries – that create windows of opportunity for more sustainable enterprises to expand their roles and displace powerful established firms.¹⁴ On the other hand, such moments may also create opportunities for established firms to use their resources to swallow or destroy emergent but still weaker competitors.

How much sustainability can enterprises achieve?

It is not yet clear how much of the solution to global sustainability can be provided by sustainable enterprises alone.

First, two persistent side-effects of business decisions lie *beyond* the business case for individual firms. The first of these is “externalities:” that is, adverse consequences imposed on third-party stakeholders that are not borne by the producers or consumers in business transactions, such as pollution affecting the neighbors of a factory or farm.¹⁵ Businesses minimize their costs when possible; in some cases, this leaves real costs imposed on others (governments often do the same, for instance by discharging pollutants onto downwind or downstream jurisdictions, as do individuals). Such costs by definition are not included in business decisions unless they are artificially imposed on their sources by regulations, taxes, liability exposure, or other effective socioeconomic sanctions.

The second side effect is “tragedies of the commons:” that is, damage to shared (“open access”) resources that results from cumulative overuse by self-interested businesses or individuals. In such situations, *by definition* the rationally self-interested choices of businesses (or governments, or individuals) produce cumulatively damaging consequences to all (Hardin 1968).

¹⁴ In the language of evolutionary biology one might describe this as a “punctuated equilibrium” theory of change, in which sudden major disruptions rather than incremental evolution through competition are the major drivers for change. A similar position in the literatures of political science and law holds that major change arises through intermittent “windows of opportunity” (Kingdon 1984) or “republican moments” of mass public demand for government change, between which moments the political process is dominated by major established interests that are more or less in equilibrium with one another and produce only marginal and incremental changes.

¹⁵ Externalities may include beneficial as well as adverse impacts on third parties – for instance, when a business’s presence provides amenities for its neighbors for which it has no way of charging them – but such “spillover benefits” do not present the same kinds of problems.

Both these side effects can be remedied only by collective action to impose full costs on those responsible for them, and to ration the use of shared resources and ecosystems within their sustainable capacity.¹⁶

Second, beyond these limitations on sustainable decision-making by individual businesses, many environmental and social problems do not arise from business decisions alone, but from the aggregate of consumer decisions (such as residential choices, automobile purchases and driving behavior), from the decisions of public enterprises and other organizations, and from government and other institutional failures.

Environmental and social damage in the former Soviet Union, for instance, was not due just to market-oriented business behavior, but to corruption and the absence of stable and effective governance. The same is arguably true across much of Africa and many less-developed countries elsewhere, along with other causes such as warfare, ethnic rivalries, and entrenched elites.¹⁷ Environmental and social damage are also associated with illiteracy, poor health, and fundamental scarcities of natural resources, exacerbated both by commercial exploitation and by a legacy of historically impoverished conditions.¹⁸ These problems probably cannot be fully remedied by enterprises alone.

However, enterprises exert powerful influence on these processes, for good or ill – especially transnational corporations, investors, and financial institutions – and should be held responsible at least for the direction, and ideally for the magnitude, of their impacts. Enterprises that support corrupt elites and repressive governments to maximize their own profits, for instance, are an important part of the problem. So are those that take advantage of weak laws, or unenforced environmental protection or occupational safety regulations, at the expense of workers and surrounding communities; and those that reincorporate outside of the countries where they produce and market their products to escape their fair share of taxation to support good governance, public services, and social safety nets in the countries where they benefit from doing business. So, finally, are those that fail to use their resources and influence to help create more sustainable human societies in which to live and do business.

Finally, sustainable enterprises are unlikely to emerge and prosper unless there is a supportive public policy framework for them. Business strategies do not emerge in a vacuum: public policies establish the playing field, rules of the game, and many additional incentives. Businesses in turn exercise major influence on the creation and evolution of such policies. A positive policy framework for sustainable enterprise would be one in which as much as possible, property rights and transaction rules reflect the full environmental and social costs associated with them, and incentives that promote

¹⁶ This kind of cooperation is itself becoming more difficult in some respects, as mergers and acquisitions have displaced the senior executives of more and more businesses from local communities to distant headquarters.

¹⁷ In Indonesia, for instance, vast areas of forest in 2001 were being rapidly and illegally destroyed not by transnational corporate concessionaires but by local gangs in the absence of effective policing.

¹⁸ DeSoto (2000) argues as well that the greatest barrier to Third World economic and social development is the absence of economically negotiable property rights and of reliable transaction rules for leveraging them for income and credit.

environmental and social damage are systematically reduced. Ideally, it would also provide incentives that promote more sustainable socioeconomic and ecological conditions.

Economic and social versus ecological sustainability?

Finally, the most fundamental question of all is whether the basic vision of sustainability – the “triple bottom line,” the claim that one could somehow improve the material as well as social conditions of the world’s still-growing population while sustaining its essential ecosystems – is perhaps simply wishful thinking. If the world’s soils and fisheries are already being over-stressed, water supplies being pressed to their limits, and the climate being overheated by human energy use even now, how could one conceivably provide more materials and energy for human use – even for the 3 billion poorest people even today, let alone 3-4 billion more – without even more severely damaging these ecosystems?

There is no simple, reassuring ultimate answer to this question. There is no obvious way that a population of 9- 10 billion people could achieve and sustain the material lifestyle of Americans today, for instance, with the known environmental resources of planet Earth. Nor could these resources simply be physically redistributed in any obvious or practical way. If Americans were to consume less, for instance, it would not suddenly make those products available to the Asian poor instead: rather, it would cause poor people in Asia and elsewhere to earn less and have less jobs making those products, and thus to have less sustainable livelihoods with which to purchase their own material needs.

Paradoxically, however, this last point suggests a more fundamental argument in favor of the sustainability vision: not that it is desirable, but simply that it is necessary. Economic sustainability is a necessity, not an alternative to ecological sustainability: all human households must have sustainable livelihoods, means of supporting themselves and meeting their own material needs on an ongoing basis, not simply charity or starvation. Social sustainability is also a necessity: business and financial enterprises themselves, let alone individuals, cannot thrive without just, effective, and stable governance institutions as a context, and without the trust in transactions that comes with access and transparency.

And not least, ecological sustainability is a necessity. No economy or society can survive that destroys the ecological systems and environmental processes that provide its material resources. The great civilizations of the Middle East’s “Fertile Crescent,” as well as Egypt and Carthage and others, are buried under sand today, and the cedars of Lebanon and once forested hills of Greece denuded and barren (Marsh 1965 [1864]). In principle, markets adjust to scarcity, but historically they often have not adjusted with sufficient foresight and flexibility to prevent irreversible destruction of ecosystems and natural processes and of the civilizations that depend on them. Will today’s civilization, so dependent on coal and oil and on large-scale mechanized transformation of other resources, prove more resilient and adaptable? Or is it even now failing to recognize and adapt to the signals of increasing scarcity and risk?

The more practical and tractable question, then, is not whether we can now imagine a fully sustainable society, but whether the forces of business, finance and investment enterprise today are at least moving in the right direction or not, toward greater sustainability or toward less. Are they generating and using wealth in ways that integrate economic, ecological, and social sustainability, or are they pursuing profits and other organizational interests at the expense of these longer-term criteria of sustainability?

Many obvious things can in fact be done to make enterprises – and societies, and the world economy – more ecologically sustainable. At a minimum, gross inefficiencies in the use of energy, water, and other environmental resources could be dramatically reduced, benign materials substituted for toxic ones, and systematic reuse and recycling of materials used to minimize the extraction and primary processing of additional materials from nature. Accounting practices that obscure the full costs of ecosystem damage, environmental liabilities, and the increasing scarcity of environmental resources, could be corrected.¹⁹ Subsidies, price supports, tax benefits, and other incentives that continue to promote over-investment in extractive industries rather than in more efficient re-use of materials and energy could be reformed. Reporting and labeling practices could be used to introduce sustainability costs and benefits into market transactions throughout the value chain, from initial and subsequent business customers to ultimate consumers. Investment capital itself could be directed more systematically toward innovations that enhance sustainability, and away from those that erode it. Perfect sustainability may be difficult to envision, but far more could be done – by enterprises themselves, and by the finance and investment community – to promote a more active and systematic transition toward it.

Recommendations: Sustainable Enterprise and the Finance/Investment Community

In short, the Sustainable Enterprise Model offers a creative set of propositions as to how business enterprises could generate dynamic forces toward a more sustainable society. So far, however, this outcome is neither fully demonstrated nor assured, nor are the market, policy, and other conditions that could promote this outcome. If sustainability is a Schumpeterian force, there are also other such forces at work that may be far less sustainable in their outcomes.

If sustainable enterprises are to emerge and prosper, however – and more fundamentally, if a sustainable global society and economy are to emerge – the global finance and investment community must accept a key leadership responsibility. Given its enormous influence on the allocation of capital resources worldwide, and on the rules that promote and constrain such allocations, the global finance and investment community itself must acknowledge a large share of the responsibility for sustainability's success or failure, and

¹⁹ Many environment-related costs, for instance, are often buried in central overhead accounts – insurance, waste management, and workers' compensation, for instance – rather than charged to the individual processes that generate them. Activity-Based Cost Accounting (ABC) could be used to identify and charge these sorts of costs and thus improve the incentives for sustainable management.

for the consequences of the outcome. It must actively address, adopt in some form, and act on the case for sustainable enterprise, and promote it, if a more sustainable economy and society are to emerge. No neutral position is available: anything less leaves it as a dominant element of the problem.

One modest but useful first step would be to **support initiatives for mandatory and comparable annual reporting of the economic, social and environmental impacts of all publicly traded corporations.**²⁰ Such information would benefit the financial and investment community itself, by providing more complete and accurate information for distinguishing among firms that have varying levels of risk and liability for their actions, including for instance “cleaner” firms within “dirty” sectors. It would benefit the public more generally by providing a clearer basis for comparing the full economic, social, and environmental performance of each firm. And arguably it would even benefit many firms themselves, by substituting a single reporting mechanism for the multiple screening surveys that many firms are now asked to complete for different social investment funds.

A second step would be to convene a deliberation among sustainability leaders within the international finance and investment community itself, to **identify the most promising and appropriate leverage points for introducing sustainability criteria more explicitly into finance and investment decisions.** The rules and documentation requirements of financial and investment transactions would seem to be one obvious starting point. For instance:

- ?? Could sustainability criteria be made explicit elements of pre-investment due-diligence reviews?
- ?? Could they be made explicit elements of the required documentation distributed with stock offerings and other financial proposals?
- ?? Could some aspects of sustainability be recognized more explicitly as liability issues, thus requiring risk premiums and perhaps insurance consideration, and making less sustainable proposals more costly relative to more sustainable alternative investments?²¹

Third, the financial and investment community could **speak out with a common voice against subsidies, tax breaks, and other government incentives that distort finance and investment markets against sustainability,** such as those favoring the fossil fuel, agribusiness, and other extractive industries.

Finally, a fourth step would be a far more fundamental initiative, by leaders of the financial and investment community, to **design mechanisms for helping the poor to participate more equitably and sustainably in both producing and using the world’s wealth.**

²⁰ See for instance the Global Reporting Initiative, <http://www.globalreporting.org/>.

²¹ Traditional liability rules in accounting, for instance, often recognize liabilities only when they are brought to the surface by lawsuits, regulatory actions, or other specific crisis events. Before such triggering events occur, some firms may well be carrying far larger hidden liabilities than their competitors – old toxic dumps, for instance – yet normal information sources may not reveal these differences to potential investors.

Over the past several decades, both ownership and effective control over this wealth have become enormously more concentrated, in small numbers of individuals and in large, impersonal transnational corporations and institutions. How then might this wealth be used to create a more sustainable world? How might those who control it help to channel it into creating the physical and social infrastructures, the basic health and education and nutritional prerequisites, and the sustainable livelihoods, to help all the world's people share in its benefits?

The financial and investment community cannot do this without engaging the cooperation of governments and other institutions as well. But it is a key source of potential leadership for it, and in today's global financial and investment markets, governments and other institutions cannot do it without this community's leadership either. Here and there some voices have begun to emerge from within and around this community with proposals for its consideration: George Soros, for instance, and Hernando DeSoto, and arguably Bill Gates and Jeffrey Sachs, among others. Perhaps a "Marshall Plan" advanced by the finance and investment community itself, rather than by government *per se*, would be worth consideration. In some way, the financial and investment community must focus its leadership and leverage on creating a sustainable economy and society, and significantly improving the lives, livelihoods, and environmental conditions of the world's poor.

Afterword

This paper has been written in a tone of optimism, a tone that presumes the possibility of successful leadership on the part of the financial and investment community to achieve significant social and environmental as well as economic progress by taking seriously the idea of "sustainable enterprise" and acting collectively to promote it and to introduce it more explicitly into the rules and norms of financial and investment decision-making.

It is possible that such optimism is misplaced, and that the only likely outcome is tragic. The trends highlighted at the beginning of this paper are sobering, even for a 20-year period during which far more wealth was being created than appears to be happening at present. There is great skepticism toward proposals for "voluntary" self-regulation by businesses, often well founded in historical evidence (Andrews 1998). It may be that even the idea of a "financial and investment community" is merely an artifact or figure of speech, and that such a "community" remains in fact merely a congeries of separate, self-interested individuals and firms, too fragmented and too deeply bound – by personal values, or by impersonal fiduciary obligations or institutional incentives – to short-term, self-interested objectives regardless of their longer-term, collective consequences. If so, the prospect is not hopeful. But it seems worthwhile at least to posit such a community – recognizing that it may fail, but that it is nonetheless worth trying to motivate – and challenging those who control and direct such enormous resources to act on the collective responsibility that such power places upon them.

The question then remains: what would a sustainable financial and investment enterprise look like, what are its essential elements, and what would be necessary for it to develop, to prosper, and to help create a more sustainable global economy and society?

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