



Finding the God particle of the sustainability business case: Greener Pastures for Shareholder Value

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Finding the God particle of the sustainability business case:

Greener Pastures for Shareholder Value

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THE start of the 2000s saw a flurry of international publications on “the business case” for sustainability, seeking to map out the returns on investment and to differentiate recommended actions from cases of corporate philanthropy. Reports by business organisations and others identified different categories of justifications, incentives, benefits and levels of making the business case.¹ Research over the last decade has pointed to a complex relation between sustainability and financial performance.² Results have been influenced by different input and output variables applied, by what is defined as: “sustainability” or “socially responsible” actions, the scope of the agenda covered and the definition of what is the ultimate goal (e.g. increased profit, shareholder value or longer term success and value of the business).

What is clear from research and experience today is that sustainability actions do not have a *negative* or *neutral* impact on the financial performance of a business. Rather, it is a question of the degree to which sustainability actions have a *positive* impact on financial performance. Some still raise the question of causality and ask whether the chicken or the egg comes first. It is likely that more profitable companies have more cash available to spend on sustainability initiatives, but this can merely serve to further strengthen their performance and financial health. Fundamentally, the company that starts off with a sustainability programme has a critical factor boosting its performance ahead of a peer that sets off from the same point with no sustainability programme. Evidence of this will be explored in this article, providing a framework that goes beyond anecdotal evidence to systemic

evidence of impact on financial performance and business value.

There is no lack of business benefits suggested in analyses over the last decade. A recent research overview has identified over 60 benefits, clustered into seven overall business benefit areas.³ These are:

- Brand value and reputation
- Employees and future workforce
- Operational effectiveness
- Risk reduction and management
- Direct financial impact
- Organisational growth
- Business opportunity

The order of these benefits represents the frequency with which they were cited. At the top was brand value and reputation, an area that featured equally prominently in findings of a business survey in 2011 by the Economist Intelligence Unit.⁴ It found that 61 percent of business executives polled agreed that the benefits of sustainable investments outweighed the costs. From its survey of more than 3 000 senior managers from organisations located around the world, the MIT found that almost 60 percent of companies indicated an increase in their investments during the last two years, in search of competitive advantage via sustainability and improved resilience. A majority indicated that their organisation’s sustainability-related actions have increased their profits.

The GreenBiz Group reported from its stocktaking of market developments that

¹ See Zadek (2000), UNEP and SustainAbility (2001), Reed (2001), WWF (2001) and BITC (2003)

² See Margolis and Walsh (2003); Margolis et.al. (2007); Barnett (2007); Devinney (2009).

³ The overview was done by the Doughty Centre for Corporate Responsibility in an update of the 2003 business case report by Business in the Community. It involved analyses of articles published and business practices over 2003-2010. (BITC 2011)

⁴ KPMG and the Economist Intelligence Unit (2011)

companies are thinking bigger and longer term about sustainability – a sea change from the traditional short-term mindset.⁵ Even during challenging economic times, many have expanded their sustainability activities and commitments. This comes at a time when sustainable business was reportedly suffering from a “recessionary hangover” in 2011.⁶ The broader trend since the early 2000s has been one of a variety of businesses awakening to green. This includes some giants experimenting with advanced life cycle approaches and new natural resource accounting tools.

In the following pages we present a model in which sustainability initiatives are assessed in an economic manner and pursued on the basis of a clear link to financial performance.⁷ We present a business case model that puts sustained financial performance and market value as the ultimate test, with cost benefit analysis at the heart of its approach. As far as the dependent variables are concerned, we suggest research and analysis should focus on the core financial value drivers defined by Alfred Rappaport and others since the 1980s. These help to define a longer term approach, one that is forward-looking and strategic.

A NEW BUSINESS CASE MODEL

Business case analysis traditionally works with two sets of indicators – namely sustainability actions on the input side and indicators of financial performance on the output side – seeking to prove causality or a positive correlation between the two.

Understanding of the key indicators to focus on has evolved considerably. With respect to the input side, the last decade has seen extensive analysis and stakeholder dialogue on preferred actions and indicators to steer sustainability performance. These include multistakeholder processes such as those convened under auspices of the ISO 26000 standard and the Global Reporting Initiative (GRI), as well as theme-specific disclosure initiatives such as the Carbon Disclosure Project.

With respect to the output side, there has also been substantial evolution in the understanding of the ultimate purpose of business and in how far the goals of profit maximisation and shareholder value live up to this. Business managers, analysts and scholars have come to new understandings of how different aspects of organisational performance create value in a more sustainable and longer term way. This includes moving away from some outdated accounting concepts and fixation with quarterly earnings, to more forward-looking understanding of what really drives value and creates economic value added.

An examination of past analysis shows the need to highlight a set of intermediary factors that connect or facilitate the link between sustainability actions and financial performance. This was also recognised by European researchers under a two-year EABIS project that resulted in the development of a Value Creation Framework through which companies, financial analysts and investors can communicate more effectively.⁸ The model lists (i) “drivers” of social performance or sustainability, as well as (ii) intermediate “performance measures” such as operational efficiency and (iii) financial outcomes.⁹ The EU CSR Alliance Laboratory has described it as a linkage between sustainability factors (indicators), core non-financial value drivers and financial value drivers.

What the EABIS group did in adding a listing of intermediary factors is really to better define drivers of sustainability or social responsibility. This follows the traditional tendency of sustainability experts to focus on the input side indicators, including aspects such as the scale and scope of, for example, an environmental problem, its point sources and required mitigation. What has been lacking however is improved illustration of the link with relevant commercial metrics and consideration of different aspects of financial performance.

⁵ Makower et.al. (2011)

⁶ Makower et.al. (2012)

⁷ Cf approaches highlighted by Berger et.al. (2007); Conference Board (2011a).

⁸ EABIS (2009); cf the value chain levers in Heskett et.al. (2008), MIT et.al. (2009)

⁹ Perrini et.al. (2009)

Figure 1: The Green Business Case Model



To more effectively speak to the finance and investment community, it is critical to use a refined set of factors related to financial performance and the drivers of financial value. This can be done by incorporating a list of “financial value drivers” commonly agreed by financial analysts as key indicators.¹⁰ These include the cost of capital employed, namely the cost of borrowed capital (debt) and owners capital (equity), as well as capital invested in the form of fixed assets and working capital.

The financial value drivers are listed in figure 1 on the right (output side). It sets the scene for illustrating how sustainability actions can ultimately help the company increase its revenues, widen its operating margins, use assets more efficiently to reduce its capital expenditure, lower its applicable tax rates and reduce its cost of capital. The list of drivers do not include ratios often used in business case analysis¹¹ – such as Return on Assets (ROA), Sales (ROS), Equity (ROE), Investment (ROI) and Capital Employed (ROCE) – it rather focuses on key indicators that feed into the calculation of these. Whether an analyst is more interested in the evaluation by shareholders (ROE), creditors and investors (ROA, ROI, ROCE) or trading partners and consumers (ROS), the financial value drivers are key building blocks in the analysis. Also, the model does not imply a judgement in favour of shareholder interests versus interests of other constituents such as the management, employees or clients of the enterprise.

¹⁰ Cf Rappaport (1998), Stewart (1999)

¹¹ See e.g. Iwata et.al. (2010), Molina-Azorín et.al. (2009), Ambec et.al. (2007).

In addition, the revised business case model includes a list of intermediary indicators that serve as connectors between sustainability actions and the financial value drivers. The logical flow in the model is therefore one of a financial value driver – such as sales or operating margin – which is boosted by a precursor or leading indicator – such as customer attraction or operational efficiency – which is again boosted by relevant sustainability actions – such as environmental product improvements and environmental process improvements.

Our business case model therefore moves beyond a simple two-dimensional matrix to a value chain of cause and effect that has three components: (i) sustainability actions and (ii) precursors or leading indicators that connect their impact with (iii) financial value drivers. Mainly, a one-to-one relation between each input, intermediary and output indicator in the model is explored here, mindful that in a real world situation cross linkages between the three sets of indicators also exist. The one-to-one relations are illustrative of the overall business case logic.

A GREEN BUSINESS CASE MODEL

We propose a Green Business Case Model with key environmental factors or action areas on the input side. Social investments in for example workplace conditions, human rights and local community development, remain equally critical. What our Green Business Case Model does however is to focus on environmental actions by business as *entry*

point to deliver not only enhanced business financial performance but also broader socio-economic goals. The environmental actions as intervention entry points are key building blocks in the larger puzzle of what many debate today as a possible new form of responsible capitalism or values-based capitalism.

Based on the evolution of the field of environmental performance management over the last 20 years, the Green Business Case Model provides a listing of environmental action areas that expands on the simple distinction between “process and product interventions”. These are listed in figure 1 on the left (input) side. They are:

- Eco-design
- Goods and services
- Standards (incl. life cycle, eco-efficiency, cleaner production)
- Technologies (incl. cleantech)
- Supply / value chain management (incl. product service systems)
- Education, training
- Risk management
- Communications, reporting (incl. stakeholder engagement)

This listing is not comprehensive in detail but meant to include the full spectrum of environmental action areas for consideration by business. It covers a range of management tools and approaches that have been developed and tested by businesses worldwide. Some of the action areas are not exclusive to the environmental field. While education, training, communications and reporting are listed with an environmental focus in mind, they also have direct application in improved management of human capital and collaboration with a range of stakeholder groups.

APPLYING THE NEW MODEL

The following sections cover the seven financial value drivers, addressing under each the most related connectors and providing evidence from some case examples of how environmental actions lead to improvement at the level of the intermediary and output set of indicators. In each section, a one-to-one relation between the input, intermediary and output indicator is discussed. Illustratively, the

most obvious one-to-one relations are addressed. We start with sales growth.

Growth of Sales

As market and regulatory demand for sustainability grows, the business that (i) makes effective use of design for sustainability and delivers greener products and services will be in a position to (ii) boost its innovation ability and attract more customers, which (iii) will show positive results in its growth of sales. This implies the introduction of new products¹², revamping of existing product lines, entering new markets and doing these better than competitors – i.e. gaining market share and a more sustainable competitive advantage. The differentiating advantage of green products is time-bound and requires continual improvement.

Whole Foods Market, a Fortune 500 company and largest retailer of natural and organic foods in the USA, has seen its sales grow from US\$ 92.5 million in 1991 to US\$ 10.11 billion in 2011, at a compounded annual growth rate of 26 percent¹³

A company’s ability to attract and retain customers through interesting products, targeted pricing, attractive brands and customer services are all critical in driving sales. The growth in customer interest in green products and services, as well as the progressive mainstreaming of these today, signal that business innovation in design for sustainability and the development of green products and services are increasingly paying off. It confirms the proposition by management experts such as CK Prahalad that sustainability has become the key driver of innovation – in new products and

¹² New products include “green” or “greener / cleaner” goods and services, considering their attributes and production processes, as well as goods and services that provide “green solutions” – i.e. environmental goods and services (EGSs) such as pollution-control technologies. The EGSs market by 2010 was estimated at US\$ 688 billion (UN-EMG 2011).

¹³ Whole Foods Market (2011)

services as well as business models.¹⁴ Take-up of such products and services is boosted by more reliable information (e.g. labelling), client willingness-to-pay and imitation barriers (e.g. green patents).¹⁵

Today, not only consumers (B2C) but also business customers (B2B) with sustainability strategies, are more and more demanding, focusing on implementation of green targets and ensuring their suppliers meet new standards on, for example, carbon footprints and environmental quality. In the USA some refer to this as “the Walmart effect”. An example from Europe is PUMA, whose “environmental profit and loss (P&L) account” places a monetary value on environmental impacts along its entire supply chain.

A survey of CFOs and investment professionals by McKinsey and Boston College has cited innovation, new products, new customers and new markets as specific areas where sustainability factors have demonstrable impact on overall organisational growth.¹⁶ For some, this involves entrepreneurial spirit in setting up new businesses to meet local development needs. An example is Celtel, which went from start-up in West Africa to telecom giant acquired for US\$ 3.4 billion in 2005 and present in over 15 African countries today.¹⁷ Some are involved creating new product lines and diversification of business, while others are transitioning to a whole new business model or complete new business. Originally a family textile business in India, Suzlon transformed itself into major player in the renewable energy sector. The catalyser was its struggle as textile business with unreliable or expensive power, which led it to use wind turbines to secure supplies.¹⁸

Responses from most of the world’s 500 largest public companies in the FTSE Global Equity Index Series (Global 500) in 2010 showed high interest in commercial opportunity associated with the development and marketing of products and services that enable customers to

reduce their GHG emissions.¹⁹ Facing climate and broader resource efficiency challenges, green leaders will need to continue their excellence in product and service innovation. This can be seen from the history of Brazil’s cosmetics producer Natura, which built a strong reputation internationally as an eco-friendly company through unconventional R&D investments. It has maintained a rate of innovation higher than industry norms.

Consumer interest in green products is progressing. Initially, assumed higher costs were a fear, then green became a trend, and now the assumption is that environmental quality becomes an inherent part of overall product quality. While some suggest that the romance with green and sustainable products may be short-lived, evermore-connected customers will increasingly expect all products to be environmentally friendly and socially responsible. Rather than waning interest in environmental quality, this is a positive sign of mainstreaming. The green benefits of a product become part of the core characteristics that differentiate a brand (i.e. price, quality and effectiveness).

CEOs seem convinced that consumer demand for environmental and social quality is here to stay. In the 1 201 interviews conducted in 69 countries for the PwC 14th Annual Global CEO Survey, almost half of the CEOs expected consumers to factor environmental and corporate responsibility practices into purchasing decisions.²⁰ They indicated that they intend to change their strategy in the next three years to capture this sentiment.

Major retailers are among those who progressively see positive sales impacts. With a solid overall growth in sales of 5.5 percent in 2010, retail giant Carrefour had almost 60 percent more own-brand organic food products by 2010 compared to 2007, and 220 percent more fair-trade products on its shelves.²¹ Having set itself the target in 1993 to become the first major Swiss retailer to provide customers credible and affordable organic products, by 2011 Coop had over 2 000 organic

¹⁴ Nidumolu et.al. (2009)

¹⁵ Ambec et.al. (2007)

¹⁶ Boston College Centre for Corporate Citizenship (2009)

¹⁷ WRI and IFC (2007)

¹⁸ WEF (2011a)

¹⁹ CDP (2010)

²⁰ Craren (2011)

²¹ Carrefour (2011)

food products on its shelves and sales of around CHF 800 million. Its turnover from sales of its full range (not only food) of own-label sustainability brands and labels (including e.g. Slow Food, Max Havelaar, MSC and FSC) was approaching CHF 2 billion by 2011.²²

Duration of Sales

The business that (i) introduces greener goods and services to the market, backed up consistently by recognised standards and labels, will (ii) reap the benefit of greater brand value and reputation, which again will (iii) enable the business to sustain a good growth of sales with longer duration. The latter will reflect greater loyalty among existing, satisfied customers and continual improvement in reaching new ones.²³ Brand and reputation management needs to consider B2B relations with care as well. If brand is to provide a guarantee of product safety and quality, and consumers want to know more of what is behind the product, the ongoing performance of all tiers of suppliers in the value chain becomes critical.

Samsung Electronics has reported to the CDP that a one percent decrease in brand value of the company, due to unfavourable evaluations from investment organisations and/or NGOs, caused by insufficient climate change response, is equivalent to losing about US\$ 200 million²⁴

Any assessment of the financial health of a company needs to consider not only its “growth of sales” over the last quarter or year, but also the “duration of sales”, looking at trends over a five-year period for example. Examining the

²² Coop (2011)

²³ These can be measured by metrics such as number of customers, frequency and amount of purchase, years of service to customer and surveys of whether and why the customer uses competitors. With respect to listed companies, the IIRC (2011) has noted that the greater percentage of their market value today is explained by intangible assets such as R&D, intellectual property, brand loyalty, brand identity, brand image and reputation.

²⁴ CDP (2010)

impact of a greener product offer on revenues, management needs to know whether the boost in sales of a greener product is simply determined by the latest seasonal fashion or whether it reflects a longer term trend of growing consumer demand and customer appreciation of its offer. The ability to not only reach new customers but also maintain their loyalty and trust over the longer term is determined by a range of factors, all of which serve to build company or product brand value. Factors that determine brand strength are listed in table 1.

Table 1: Ten criteria used by Interbrand to determine brand strength (with suggestive sustainability questions added)²⁵

- **Clarity:** Does the brand clearly stand for the values of greening and sustainability?
- **Commitment:** Is the business internally committed to the green or sustainable brand?
- **Protection:** Is the green brand globally secure?
- **Responsiveness:** Is the brand in touch with greening opportunities and sustainability challenges?
- **Relevance:** Does the brand fit with customer / consumer sustainability needs?
- **Authenticity:** Is the brand built on a heritage or well-grounded values of environmental care?
- **Differentiation:** Does the brand offer a distinctive green solution?
- **Consistency:** Does the brand reflect commitment to sustainability at all times?
- **Presence:** Is the green brand talked about positively by all and open to dialogue for improvement?
- **Understanding:** Do customers understand the distinctive qualities of the brand and its sustainable company?

As the greening of goods, services and the processes behind them enter the mainstream, a more direct positive impact of offering green goods and services on brand value can be expected. Companies who took the initiative early will reap greater benefits. This is where sustainability attributes will show their value as differentiators for consumers and business clients who seek environmental quality and proven green solutions.

²⁵ Based on www.interbrand.com/en/best-global-brands/best-global-brands-methodology/Overview.aspx, which describes Interbrand's methodology for determining the top 100 most valuable brands in the world each year.

Negative shock events can cause an overnight erosion of reputation and brand value. But in the long run, the sustained offering of quality products and services that provide solutions to recognised environmental and socio-economic challenges will serve to protect brand value and secure positive duration of sales. Recent experience from brand management, at times of industrial disaster and environmental crisis, has shown the importance of clear and deeply internalised sustainability values in pre-empting crisis and avoiding longer-term damage.²⁶ Accompanying the attributes of greener products and services with greener standards in operations will serve to further boost the reputation of both product and company.

A recent survey of 1 375 consumers and 575 senior executives of companies with revenues of over US\$ 500 million in China, Brazil, USA and UK found that 78 percent of the respondents indicated they do not buy a product if they do not like the parent company.²⁷ In addition, 67 percent indicated they check product labels to find the parent company and 56 percent would think twice if they could not find information about the company behind it. The survey showed that more Internet-connected consumers in emerging markets and elsewhere are progressively making the link between a company's reputation and its product brands. This suggests a game-change in branding and corporate reputation.

New surveys of senior managers and investment professionals in global firms have found that brand equity and corporate reputation are perceived as the most important areas where sustainability actions bring benefit and add value.²⁸ This applies to both so-called "embracers" and "cautious adopters". While the latter was more concerned about benefits such as reduced risk, the embracers also saw greater significance in improved market access, market share and competitive advantage.

Operating Margin and Capital Expenditure

²⁶ Murray (2011)

²⁷ Weber Shandwick and KRC Research (2012)

²⁸ MIT et.al. (2011), KPMG and EIU (2011), Boston College Centre for Corporate Citizenship (2009)

Operational efficiency. Through (i) the use of recognised standards and cleaner technologies in its own operations to use resources more sustainably, as well as advancing those through its supply chain, a business can (ii) improve its operational efficiency – its ability to turn inputs into productive outputs in a cost-effective manner²⁹, as a result of which (iii) it will improve its operating margin or net profit margin, earning more per dollar of sales thanks to lower production costs, and optimise its capital expenditure.

McKinsey has found that 70 percent of productivity opportunities today – from improving the energy efficiency of buildings to moving to more efficient irrigation – have an internal rate of return (IRR) of over 10 percent at current prices³⁰

Greater operational efficiency also serves to improve investment expenditure related to fixed capital and working capital. Improved efficiency in use of resources will for example drive more optimal use of fixed assets (e.g. land, buildings, equipment, machinery, vehicles). The use of product service systems (PSSs) in the form of leasing rather than buying equipment may bring significant savings alongside its environmental benefits. This includes efficiencies due to services provided at scale, on site or off site, by an external business partner.³¹ More sustainable land management and protection of bioregions can raise the valuation of properties. This comes in addition to steering a business clear of liability and operational risks associated with the supply of key services by local ecosystems.

In the case of working capital, green efficiency improvements can serve as a driver for innovation in the way inventory and customer

²⁹ The implication is that pollution is associated with waste of resources, as signalled by the so-called Porter hypothesis in the 1990s (Porter and Van der Linde 1995).

³⁰ McKinsey & Co (2011)

³¹ See the examples cited by Willard (2012)

or supplier relations (receivables or payables) are managed. Sustained growth in sales of greener products and services will boost the number of accounts receivable.

Amidst growing evidence of resource scarcities, the role of resource efficiency in operations is increasingly recognised today. It is especially critical in industries that find themselves in very competitive markets. Cutting production costs has certainly been a top priority for many businesses at a time of economic recession. European CEOs in a 2011 survey cited cost optimisation as a top priority, even though globally most of the over 700 CEOs surveyed cited business growth as a top priority.³²

Traditional analysis on the business case has tended to start off by highlighting cost savings, in particular ones related to energy use. Driven by the climate debate, the field of energy efficiency is one on which most business case studies can be found. Yet energy efficiency remains a “low hanging fruit” area where much room for improvement remains. In addition to cost savings, more companies have also started to focus on increased revenues and competitive market position. This implies that the business case for operational efficiency is getting more strategic, moving from the site level to corporate headquarters. Noting this trend, McKinsey concluded that companies that succeed in improving their resource productivity are likely to not only develop a structural cost advantage, but also improve their ability to capture new growth opportunities.³³

Increased revenues and profit margins featured prominently in a 2011 survey of reporting by the world’s largest corporations. KPMG found that almost half of the G250 companies and a third of N100 companies report gaining financial value from their CSR programmes.³⁴ Companies who reported financial benefits were most likely to cite (i) increased revenues, (ii) improved cost savings and (iii) market share. From its survey of 378 corporate senior

executives of all regions, KPMG also found similar recognition of positive financial returns.³⁵ In 2008 it found that only 31 percent of respondents thought that the biggest benefit of adopting sustainability would be increased profitability. Three years later, 48 percent of executives believed implementing sustainability strategies would boost financial performance either by cutting costs (27 percent) or increasing profitability (21 percent). Along with this trend came more effective use of sustainability-related metrics for management and reporting purposes.

The cost of raw material inputs is impacted by growing natural resource constraints, which puts at risk the profit margins and earnings before interest and taxes (EBIT) of a range of sectors. The past decade alone has reversed a 100-year decline in resource prices.³⁶ Analysis of fast-moving consumer goods companies by WRI and ATKearney considered the impact of commodity price rises.³⁷ They calculated an eco-flation scenario in which natural resource constraints cause a reduction of 13-31 percent in EBIT by 2013 and 19-47 percent by 2018 for companies that do not develop strategies to mitigate the risks posed by environmental pressures. Examining data from six firms with a global presence in producing food, beverages, personal care and household care items, they found that on average raw materials and packaging costs each equalled 15 percent of revenues.

Operational efficiency can be enhanced by maximising both resource efficiency (inputs) and resource productivity (outputs). Pro-active companies are closing the cycle and realising opportunities for turning the waste stream into a value stream. Cisco traditionally viewed used equipment it received as scrap and recycled at a cost of US\$ 8 million a year. Realising that 80 percent of the returns were still in working condition, it tasked a value creating team to investigate opportunities for its use. It identified a number of internal customers, including labs that provide technical support. In 2005 Cisco designated a recycling group as a business unit with its own P&L account. Its re-

³² Conference Board (2011b)

³³ McKinsey & Co (2011)

³⁴ The survey research sample included the top 250 companies listed on the Fortune Global 500 (G250) for 2010, and the 100 largest companies by revenue (N100) from 34 countries. (KMPG 2011)

³⁵ KPMG and EIU (2011)

³⁶ McKinsey & Co (2011), PWC (2011)

³⁷ WRI and A.T.Kearney (2008)

use of equipment rose from almost zero to 45 percent in 2008. Recycling costs fell by 40 percent. The recycling unit has become a profit centre that contributed US\$ 100 million to Cisco's profits in 2008.³⁸

More business case evidence is also emerging from collaboration with suppliers for efficiency improvements along with programmes to improve quality and reliability. External spending on everything from production components to outsourced services is the largest cost centre for most companies. Savings on that spending have a direct impact on profit. From its assessment of the climate actions of 1 000 suppliers of 57 leading global companies, the 2011 Carbon Disclosure Supply Chain Report found that 25 percent of suppliers achieved cost savings linked to emission reduction programmes.³⁹

Human capital and productivity. The (i) use of recognised environmental and other standards, combined with quality human resource management including education and training in the use of such standards, as well as the promotion of related education and training among suppliers, enables a company (ii) to improve its attractiveness to employees and the productivity of its employees and those of its suppliers, which (iii) serve to boost operating margin and optimal capital expenditure. The latter results from better-trained employees, for example, who manage fixed assets more efficiently, operating under better environment, health and safety conditions.

Well aware of the importance of a content work force for productivity, enterprises succeed to varying degrees in effectively engaging their employees and achieving the status of highly desired employer. What is of special interest here is the ability of greening programmes to achieve more than just environmental goals but also human capital benefits. These relate to both the recruitment and retention of employees, including their productivity, safety and sense of satisfaction at work. Agencies are seeing how many talented employees are more attracted to businesses with green or socially responsible credentials. They remain with businesses where

they are recognised and awarded for initiating sustainability innovations. Green building councils in the USA and elsewhere are also reporting impressive evidence of how daylight, natural ventilation and other innovations for improved indoor air quality result in measured improvements in productivity and sales gain.⁴⁰

The life and material sciences company *Royal DSM* links almost one-quarter of management compensation to the company's performance in eco-product development, energy efficiency and employee engagement. Its 22 000 employees deliver annual net sales of about €9 billion. ECO+ products constituted 40 percent of running business sales in 2010⁴¹

Leading business organisations today recognise the business case for incorporating sustainable development measures into employee rewards and incentives, seeing how sustainability programmes can motivate employees to perform to their highest potential.⁴² One of the key characteristics of leading sustainability innovators is that they engage their workforce effectively.⁴³ Natura from Brazil invests heavily in training its managers to identify socio-environmental challenges and turn them into business opportunities. South African retailer Woolworths pays special attention to boost employees' pride in their jobs, ensuring they are rewarded for contributing sustainability ideas that improve the business.

The war for talent is taking on new colours. "green talent" has been described as the goal of organisations to nurture talent and develop new environmentally friendly skills and behaviour

⁴⁰ See research findings reflected in the buildings chapter of UNEP (2011).

⁴¹ Royal DSM. 2010. Integrated Annual Report 2010. JH Heerlen: Royal DSM N.V. www.annualreport2010.dsm.com/downloads/DSM-Annual-Report-2010.pdf

⁴² WBCSD (2011)

⁴³ WEF (2011)

³⁸ Nidumolu et.al. (2009)

³⁹ CDP (2011a)

of their employees.⁴⁴ BT has for example set up an online sustainable marketing programme in 2006 to promote best practice and provide training to develop the green talent of its marketing staff. A BT carbon club scheme encourages employees to collaborate on climate action, and a BT Green Apprentices Club exchanges ideas for applying cleaner technologies.

Programmes in support of physical and mental health are also well suited to including exposure to nature as part of inspirational and recreational activity. In 2002, HSBC launched “Investing in Nature”, a US\$ 50 million partnership with conservation organisations focused on the environmental and social education of its own employees. It included sending employees on field research projects around the world. They bring their new knowledge of biodiversity and ecosystems back to the company. They act as “environmental champions” within the business. An independent evaluation concluded that 80 percent of senior HSBC managers agreed that the programme contributes to embedding sustainability into the “DNA” of the business, while 83 percent agreed it is worth the investment because of the competitive advantage it gives HSBC.⁴⁵

Tax Rates

Having (i) procedures in place for systematic and principled stakeholder engagement is key for (ii) securing the local license to operate, on the basis of which a company (iii) can improve the conditions under which it operates, including an optimal tax regime under which its green innovations are recognised and awarded. This is especially significant in as far as norms of sustainability and responsible behaviour become an implicit or explicit qualification for operating in a given market (and entry barrier for laggard competitors).

While tax rate as financial value driver normally refers to revenue or income tax, in our analysis it is given broader meaning to consider possible tax benefits for the company of taking sustainability actions and reducing its

environmental footprint. As more governments pursue green growth strategies, a tax shift could see social taxes reduced in return for new sources of public revenue from the introduction of taxes such as carbon taxes, green duties on imported goods, severance taxes on extracted resources, product taxes, waste disposal taxes, landfill taxes and site value taxes or licence fees. Compared to other policy interventions, these taxes are seen by many governments as instruments that leave businesses with more flexibility to determine least-cost ways to reduce environmental damage.⁴⁶ They provide an ongoing incentive to innovate and improve.

Analysis of an emerging markets portfolio benchmarked against the S&P/IFCI LargeMidCap Index shows varying carbon exposure at the company level. At US\$ 108 per tonne of CO₂e in 2030, carbon costs could equate to more than 100 percent of EBITDA for 16 firms from emerging markets⁴⁷

Tax benefits also influence a company in the way it structures its debt versus equity capital. Analysis in the USA has confirmed that companies that apply higher levels of environmental risk management reap higher tax benefits arising from their debt financing.⁴⁸ This implies that the firm with more effective environmental risk management systems in place, being perceived as holding less risk by the market, is able to shift its financing from equity to debt capital. This increases its leverage and ability to have more income shielded from taxation, since debt interests are tax deductible.

The ability to make optimal use of tax benefits and find common ground with the regulator on most effective tax instruments is highly

⁴⁴ BITC (2009)

⁴⁵ Bishop (2011)

⁴⁶ OECD (2010)

⁴⁷ Trucost. 2010. Carbon Risks and Opportunities in Emerging Markets - Trucost study on the exposure of different regional equity strategies to carbon costs. London: Trucost Plc.

⁴⁸ Sharfman et al. (2008)

dependent on a healthy license to operate and a common understanding of local market conditions. License to operate refers to the level of acceptance of the company by its stakeholders. The license can be “granted” by stakeholders such as regulators, politicians, local communities, the general public and the media. In the case of regulators, it refers to actions such as being registered as a business and granted a permit to operate a facility. These permissions come with certain obligations, including the duty to pay tax. Improved relations and collaboration with the regulator may result in benefits such as tax breaks and concessions.

Improved relations and reputation are dependent on effective communications. It is however not an exact science. In the local environment, perceived poor performance can significantly erode a company’s welcome. The impact of the Deepwater Horizon disaster in 2010 and the subsequent reputation of BP in the USA is a case in point.⁴⁹ The level of influence of external stakeholders is particularly strong where they have a high level of (commercial) power and legitimacy with respect to the industry involved.⁵⁰

Stakeholder engagement and sustainability communications via non-financial reporting has become increasingly scientific in the last decade, boosted by the use of standards such as AA1000 and the GRI Guidelines. Research shows that companies with a culture of sustainability are more pro-active, more transparent and more accountable in the way they engage with stakeholders.⁵¹ Improved reporting and stakeholder management supports superior shareholder wealth creation by enabling companies to develop intangible assets in the form of strong long-term relationships that become a source of competitive advantage.

⁴⁹ BP’s accounts for 2010 set aside US\$ 41 billion to pay for the spill, two and a half times more than BP’s entire profit in 2009 (www.bbc.co.uk/news/business-13120605). Following the 1999 oil slick caused by oil tanker Erika off the coast of France, a lengthy trial resulted in Total Fin Elf being required by 2008 to pay a Euros 375,000 fine and Euros 192 billion in victim compensation. (Forget 2010)

⁵⁰ Peloza and Papania (2008)

⁵¹ Eccles et.al. (2011)

Cost of Capital

A company that (i) has effective environmental risk management systems in place, and communicating its use effectively through reporting and other means, is in a position to (ii) secure a better risk profile which again opens the way for (iii) obtaining capital at lower cost. This applies to both debt capital and equity capital, and overall its weighted average cost of capital (WACC).

From their analysis of a matched sample of 180 American companies, researchers from Harvard found that investing US\$ 1 in 1993 in a value-weighted portfolio of sustainable firms would have grown to US\$ 22 by 2010, whereas investing that US\$ 1 in a value-weighted portfolio of “low sustainability companies” would have grown to only US\$ 15.4 by 2010⁵²

Banks that integrate environmental and broader sustainability criteria into their existing products and services can offer debt capital at a lower cost. Banks that offer new products and services that are thematic and specifically labelled as “green” or targeting cleaner technologies, can do the same. It’s fundamental for the bank to be able to incorporate criteria related to environmental risk management in all phases of its credit risk management process – rating, costing, pricing, monitoring and workout. The fact of being legally and financially responsible for environmental degradation caused by clients has driven North American banks to incorporate environmental risk into their credit risk policies.⁵³ Experience in emerging markets from banks such as Santander (Brazil) and FirstRand (South Africa) have shown the importance of adequate training of staff from relevant departments in

⁵² Eccles et.al. (2011)

⁵³ UNEP FI (2007)

applying appropriate credit risk management frameworks such as that of the Equator Principles.⁵⁴

Emerging opportunities for green thematic products and services relate to green commercial real estate (recognising the growth in green building standards), growing carbon markets and clean technologies. Some banks have started to specialise in one or more clean technology types, such as WestLB and BNP Paribas with its focus on wind energy. Surveys by the UNEP Finance Initiative has shown that green products and services are also being introduced by banks from developing markets, where in 2010 investment in renewable energy bypassed that in developed markets. Bloomberg reports that new financial investment in renewable energy technologies in developing countries rose from US\$ 17 billion to more than US\$ 72 billion from 2009 to 2010.⁵⁵ New equity raisings on public markets by renewable energy companies worldwide reached US\$ 15.4 billion in 2010, up from US\$ 12.8 billion in 2008. At the same time, greater availability of bank debt was signalled by an increase of up to 30 percent in the share of debt deals in asset financing (renewable energy generation projects).

Companies of all sectors will increasingly see that improved environmental risk management enables them to obtain equity capital at a lower cost. Socially responsible investment funds are progressively more effective in penalising laggard firms. Statistical analysis in the USA of companies listed on the Standard & Poor's 500 dataset has shown that firms that lower their systemic risk profile, through improved environmental risk management, experience less volatility in performance and are rewarded by lower costs of equity capital.⁵⁶ Financial markets are therefore willing to accept lower risk premiums on their equity. Such firms are also likely to be more attractive to institutional investors, those explicitly applying green or responsible investment criteria as well as those

simply rewarding a firm for better economic performance (having more resource-efficient processes and effective environmental risk management systems in place).

Stock markets are very susceptible to short-term events such as political boycotts, industrial disasters, announcements of liability charges or environmental fines and disclosures of pollution inventories. Yet evidence is starting to paint a picture in which longer term factors, such as environmental performance and risk management, are having more fundamental impact.⁵⁷ As the market is more confident that a company will provide high returns on invested capital and is able to reduce the systemic risk of an investment, it is more willing to pay for the opportunity to capture the expected returns. Conversely, as the price of "dirty" stocks fall, investors will demand compensation with higher return and the cost of capital for the companies implied will increase.⁵⁸

Analysis by asset manager RCM of the performance from 2006-2010 of stocks on the MSCI World, MSCI Europe and MSCI US indices, found that investors' portfolios are not negatively impacted by the use of sustainability criteria in stock selection.⁵⁹ There is also a probability of outperformance over the longer term. Investors could have added 1.6 percent a year to their investment returns by allocating to portfolios that invest in companies with above-average sustainability ratings. The research reviewed also indicated that analysts are showing growing awareness of sustainability factors.

Researchers from Harvard recently analysed a matched sample of 180 American companies, 90 "high sustainability companies" who have adopted clear sustainability policies since the early 1990s and 90 "low sustainability companies" that have not adopted such policies,

⁵⁴ UNEP FI (2011)

⁵⁵ Bloomberg NEF et.al. (2011). Clean energy investments in India reached US\$10.3 billion in 2011, the highest growth figure of major economies in the world. This was driven by a seven-fold increase in funding for grid-connected solar projects. (<http://bnef.com/PressReleases/view/186>)

⁵⁶ Sharfman et.al. (2008); cf Mackey et.al. (2007)

⁵⁷ Cf Sharfman et.al. (2008), Videen (2011)

⁵⁸ Of different approaches to analyzing the impact of environmental performance on stock selection and share performance – e.g. event studies, portfolio analysis and regression analysis – the latter two with its longer term focus are likely to provide greater insight and is increasingly showing a balance of results pointing to a positive relation. Cf the overview of studies of the last two decades by Ambec and Lanoie (2007).

⁵⁹ RCM (2011)

to compare their longer term performance.⁶⁰ Examining their performance from 1993 to 2010 showed that the sustainability-committed companies outperform their traditional peers in both stock performance and accounting performance (e.g. ROE and ROA).⁶¹ The former displayed higher performance and lower volatility.

INVESTMENT DECISION-MAKING: TIME MATTERS

Critical in investment decision-making and exploring the business case is the time frame a particular company works with, as well as the level of (un)certainly associated with longer term scenarios. Consider the payback period, a classical technique applied by many a businessperson in investment decision-making. Time frames typically applied vary by industry sector. More often than not these are not synchronised with time frames in the regeneration and recovery rates in the health of natural processes and systems. Due care for the environment in which the industry operates requires an improved alignment of industrial, human and natural time frames.

The CDP reports that 59 percent of GHG emissions reduction activities reported by Global 500 respondents have a payback period of three years or less and 41 percent of initiatives have paybacks of over three years⁶²

Businesses often struggle to reconcile the long-term thinking of sustainability strategies with the punishing short-term pressures of financial and consumer markets. In the mid-2000s a survey of 401 chief financial executives of public and private firms in the USA showed that 78 percent of them admit to sacrificing long-term value to maintain short-term predictability in earnings and financial

disclosures.⁶³ This is driven by the need to meet earnings benchmarks, motivated by considerations such as stock price, employee bonuses and career motivations. More recent evidence of greater involvement of CFOs in sustainability strategy raises the opportunity to more effectively engage them in planned investment in cleaner technologies, large-scale capital projects, mergers and acquisitions, investor dialogue and integrated reporting with a longer-term focus.⁶⁴

Among investors, the nature of the asset class continues to play a role in the likelihood of applying longer term perspectives aligned with greening or other social responsibility criteria. The likelihood of applying longer term approaches is also related to the nature of the technology and the natural resource problem involved. The area of climate action is illustrative. Shortfalls in investment in cleaner technologies relate to not only high upfront investment costs and large scale – investments in low carbon technologies also suffer from the fact that the new technologies take time to mature and become commercially viable.

Experience shows the importance of education and training of managers from the finance sector to familiarise them with current sustainability challenges. This includes being literate in the climate debate and its financing aspects. Its benefit can be seen from the banking sector in Central and Eastern Europe. A World Bank survey on energy efficiency in the industrial sectors of Armenia, Azerbaijan, Belarus, Georgia, Russia and Ukraine found that investors and banks are becoming more familiar with energy efficiency investments.⁶⁵ This was evident as companies' expected payback periods and the durations of loan facilities offered by banks in the energy efficiency field are increasing.

Key in deciding on appropriate time frames for investment decision-making and forecasting is the following message from Rappaport and

⁶⁰ Eccles et.al. (2011)

⁶¹ For their research on the adoption sustainability policies and governance they used the Thompson Reuters ASSET4 database and proprietary data provided by SAM based on its analysis of over 2000 of the largest corporations in the world.

⁶² CDP (2011b)

⁶³ Graham et.al. (2005)

⁶⁴ See Ernst & Young (2011), Deloitte (2011). The move to greater involvement of financial managers also signals greater focus on financial asset opportunities, as opposed to a traditional focus on compliance for which mainly engineers are made responsible.

⁶⁵ IFC (2010)

other believers in “shareholder value” as the ultimate yardstick: Value is driven by long-term, risk-adjusted cash flow performance and not short-term earnings.⁶⁶ The focus on the seven financial value drivers used in shareholder value calculations therefore serve to capture the real value creation potential that lies in the longer term (three to five years and beyond). Ultimately the market relies on long-term valuation of cash flows and not short-term earnings. This includes due consideration of value at the end of planning periods, longer term aspects typically ignored by traditional accounting methods such as ROI.

TWO APPROACHES TO DYNAMIC COMPLEXITY

Analysis on the business case over the last 10 years has shown two main approaches, one focused on detail complexity and the other on dynamic complexity. First, there are those who believe in the power of numbers and seek to define and calculate cause and effect relations or correlations in empirical terms. This approach focuses on cases that show in physical and monetary terms how a sustainability action resulted in e.g. using a certain resource more productively and how that translated into cost savings and increased profit. The approach is very aware that whatever radical transformation of business is proposed, fundamentally business managers and financial analysts need convincing metrics and financial figures to work with.

Data service providers such as Bloomberg and Reuters have taken note and expanded their services to include millions of indicators related to the performance of companies worldwide. Analysis by LCA experts adds to the complexity of details in calculating an accumulation of physical impacts and flows along the product value chain. When it comes to taking action on these, traditional “hard” performance metrics still need to be part of the decision-making. Fundamentally companies still measure success in terms of units sold, savings realised and dollars earned.

Box 2: Two approaches to making the business case...

The power of numbers (inductive):

Building the business case bottom up, case by case – site level project, product, business line etc, functional case evidence in e.g. HR, operations, supply chain management

Power of ideas (deductive):

Framing the business case top down, underlining overall strategy and vision, excellence of the company, confirmed by external acknowledgement (share performance, ratings).

Second, there are those who argue that the world out there is too complex to spend time doing endless, detailed calculations (while the ship is sinking). More important than the power of numbers is the power of ideas, defining new goals and business models. The business case is best made by the convincing power of arguments in favour of doing business differently, the power of an alternative strategy and vision, based on the gut feeling of visionary leaders and a conviction that quality and excellence requires a different approach. This approach reflects what some called story telling and overall excellence, as opposed to the more empirical approach followed by those focused on risk avoidance and analytical evaluation.⁶⁷ This second approach also reflects the reputation, strategy and new economy levels of making the business case as opposed to the cost benefit analysis and potential financial loss levels of making the case followed in an empirical approach.⁶⁸

More appreciation of the need to quantify and capture impact on financial returns has come, surprisingly, from analysts and practitioners active in the field of corporate philanthropy. This is based on new research on the “Social Return on Investment” of corporate giving. An overview of recent studies on the benefits of corporate philanthropy concluded that “it is no longer sufficient for corporate philanthropy to simply do good”, and that if corporate giving is to succeed it must provide a financial return.⁶⁹

⁶⁶ Rappaport (1998: 164)

⁶⁷ Reed (2001)

⁶⁸ Cf Zadek (2000)

⁶⁹ Lev et.al. (2011)

This approach acknowledges the business-related benefits of corporate philanthropy, which requires an ability to measure and track its impact on the performance of the giving organisation. It also recognises the value of sound accountability measures to ensure the effectiveness of corporate giving. An absence of performance measurement signals the absence of accountability.

Our Green Business Case Model accommodates both the “power of numbers” and “power of ideas” approaches. Both follow a logic of cause and effect or positive / negative correlation, along the logical flow of sustainability action > precursor > financial value driver. We recognise that some prefer to go into the details of physical and monetary numbers along the full chain, building the case bottom up, while others have good reason to focus on the persuasiveness of the argument, looking at it top down and focusing on the power of visionary leadership for fundamental change. There is also the referral of external ratings and evaluations, which confirm that companies that show the necessary vision and excellence in quality perform better than their peers.

DETERMINING THE STRATEGY BEST ADAPTED TO YOUR BUSINESS

Debate on the business case continues, amidst high interest today in alternative business models. After many years of research and analysis on the business case, in addition to a mass of scientific evidence of worrying sustainability trends globally, the pace at which businesses take on the green innovation and sustainability agenda remains slow. The inevitable question that arises is: if the business case is that obvious, why isn't everybody doing it? Reasons cited in the past include inappropriate regulations, lack of awareness, inherent skepticism, the convenience of business-as-usual and siloed organisational cultures.⁷⁰

A key reason we believe sufficient progress is not being made, is the fact that most social responsibility or sustainability analyses do not effectively incorporate key financial parameters

in the discussion. The Green Business Case Model does this by setting out the seven core financial value drivers as the key dependent variables in the analysis. Centrally featuring these is key to capture the attention of financial managers and CFOs, as well as that of investors. Like any discussion on financial materiality, any business case analysis has to make the link with these drivers. The intermediary set of precursor or lead indicators listed in our model further serves to avoid comparing apples with pears. The application of such a standard model would advance comparability and benchmarking between analyses and cases.

Pursuing their different paths to sustainability, each company needs to determine its preferred strategy – focused on e.g. green innovations in process, product, service and / or product service systems. This can involve competitive differentiation through lower cost or higher quality as signalled through different forms of certification, labelling, marketing, communications and customer support. The Green Business Case Model provides an overall framework that can be used to plan and track the relative contribution to financial performance of each innovation.

The model can also help managers to deal with possible trade-offs that may exist between two or more value drivers. A typical example may be trade-off between sales growth and operating margins, as a business considers either a market share building or harvesting strategy. The model can be used to determine the relative value of the different environmental interventions, also taking into consideration what the most leverage-able value drivers are in different business units involved.

Doing the business case analysis, management needs to take care in valuing not only decisions to invest but also the consequences of NOT investing in the environmental interventions listed. This includes due consideration of the opportunity costs of not investing in building competences and capacity to open new markets, based on what future needs of clients are likely to be in a resource-constrained world. The business case evidence from those who have taken the decision to buy in to green innovation during the 1990s and 2000s is increasingly impressive. Their lessons in sustainable value creation are there for the taking.

⁷⁰ Cf Willard (2002, 2012)

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