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Lorne Butt
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Editors

Institute for Sustainable Leadership
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FOREWORD

The Institute for Sustainable Leadership, a non-profit research organisation based in Sydney, Australia, is delighted to issue this book of conference papers.

The Institute’s purpose is to assist business, government and non-profit organisations in achieving high levels of performance and resilience, using evidence-based leadership practices.

After observing successful enterprises that have survived many crises over their long existences, ISL discerned 23 practices that distinguish sustainable from less sustainable organisations worldwide. We refer to the sustainable enterprises as “honeybees” (as opposed to “locusts”). Overall, “honeybee” leadership enjoys enhanced brand and recognition, customer satisfaction, financial performance, investor returns and long-term stakeholder value.

The photo on the cover of this book captures a honeybee at work, reminding us of sustainable enterprises. Like sustainable organisations, honeybees build community and collaborate with a range of stakeholders, adding value to their own group as well as to the entire eco-chain and the environment.

You can read more about sustainable leadership principles and examples of how real organisations implement them in Avery & Bergsteiner’s (2011) book, Sustainable Leadership: Honeybee and Locust Approaches.

In pursuing its mission, the Institute collaborates with researchers and practitioners from around the world as we continue to investigate sustainable practices and their relevance in different cultures and economic sectors. ISL disseminates its findings through executive programs, networking activities, study tours in which leaders meet their honeybee peers, publications and conferences.

In 2014, the Institute held its 9th International Symposium on Sustainable Leadership in Salzburg, Austria, June 3-6, and this book contains the papers presented at that conference.

A huge “thank you” is due to all the reviewers who provided extensive feedback via a double-blind process to authors before the papers were accepted for presentation and publication. The authors were also impressive in the way they embraced this feedback in the interests of providing a high quality outcome.

The Institute for Sustainable Leadership welcomes all those who are interested in creating sustainable enterprises and making the world a better place. Visit our website, become an affiliate, follow us on LinkedIn, and participate in our future conferences, study tours and other events.

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ARTICLES AND ABSTRACTS

SUSTAINABLE RENEWABLE ENERGY THROUGH TIME OF USE RETAIL PRICING

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ABSTRACT

The share of renewable energy in the overall production of electricity has been increasing in recent years. However, there are worries that increase in share of solar and wind power could destabilize the grid owing to their being intermittent resources. We explore the impact of a Time of Use (TOU) retail pricing in a capacitated and deregulated electricity market that is supplied from a finite mix of intermittent renewable and steady non-renewable resources. Our modelling attempts to address a research void by considering both demand (retail) and supply (renewable energy) as variable. Our models and the numerical experiments reinforce the existing literature that increasing share of renewable energy reduces energy prices under both pricing schemes. Our experiments indicate that with increasing share of renewable energy, and demand and supply uncertainties, TOU retail pricing results in higher meeting of demand, higher expected revenues for the energy firms and higher utilisation of non-renewable supply when compared to fixed retail pricing. Our experiments also indicate that fall in prices that occurs as a consequence of increasing share of renewable energy is lesser in TOU pricing compared to fixed pricing, which makes it less disadvantageous to existing non-renewable energy suppliers and potential investments in non-renewable energy. Thus, we conclude that TOU retail pricing is superior to fixed retail pricing in the context of increasing share of renewable energy, and uncertainties in demand and supply.

Keywords: capacitated deregulated electricity market, intermittent resources, sustainable renewable energy, Time of Use (TOU) retail pricing, uncertain supply, variable demand

INTRODUCTION

The atmospheric CO₂ level is at a record high of close to 400 ppm and is expected to continue with its steady climb as fossil fuels continue to be the principal energy source in most parts of the world. The resulting changes to climate and ocean levels have been a topic of considerable global debate. A response to this has been the encouragement provided by governments across the world to investments in renewable energy. It was recently reported that the worth of the top 20 energy utilities of Europe declined from roughly €1 trillion in 2008 to less than half of that in 2013 (Economist, 2013). This has been attributed to the increasing share of renewable energy, which has helped push wholesale electricity prices down. However, the article also points to the worry that increase in share of solar and wind power could destabilise the grid owing to their being intermittent and in turn increase the chances of blackouts or brownouts. Also in the news are countries with severe energy shortages like India, where the share of renewable energy is much lesser than in Europe, but still sees many of its energy utilities in poor financial health owing to low tariff and dependence on costly imported fuels (Economist 2012; Jayaram and Avittathur 2012). Owing to environmental considerations, the share of renewal energy in the total electricity production is expected to increase in coming years in both developing and developed countries. Though renewable energy helps in reducing the carbon emissions per dollar of GDP, they have also contributed to a set of uncertainties, which is expected to increase as their share of total production increases. At the core of the problem is the fact that electricity demand is not uniform and could fluctuate within the day as well as between different times of the year. However, energy sources like coal-based and nuclear power plants are not technically suited for operating under widely fluctuating loads, while energy sources like solar and wind are intermittent. Apart from its greater availability driven by the shale gas revolution in the USA, the importance of gas as an energy source is also because of the flexibility of gas-based utilities to operate easily at different utilisation levels (Economist 2013). However, this would imply that these utilities would also operate at lower utilisation levels compared to when share of intermittent resources was negligible, which would result in higher cost of electricity generation.
We explore the impact of a Time of Use (TOU) retail pricing in a capacitated and deregulated electricity market that is supplied from a finite mix of intermittent renewable and steady non-renewable resources. The intermittent renewable resources are sources like solar and wind, and the steady non-renewable resources are sources like gas and coal. In our modelling, consumer demand and renewable energy supply are variable. We compare TOU retail pricing against fixed retail pricing with the objective of understanding its potential advantages in (i) matching demand and supply, (ii) managing the demand and supply variabilities, and (iii) better utilisation of the energy resources. Section 2 describes the literature, section 3 describes the retail pricing models, section 4 describes the numerical experiments and their results, and conclusions are described in section 5.

LITERATURE

An argument common in much of the literature on electricity markets is the fact that electricity cannot be stored. Hence, supply must equal demand at a given point in time and has been one of the major managerial and technological challenges faced by this industry. Before the arrival of competitive pricing, the electricity sector was considered a natural monopoly where efficient production required a monopoly supplier that was subject to government regulation of prices, entry, investment, service quality and other aspects of firm behavior (Joskow 1997). The author argues that “traditional regulatory pricing principles based on the prudent investment standard and recovery of investment costs, implicitly allocates most of the market risks associated with investments in generating capacity to consumers rather than producers.” Oum, Oren and Deng (2006) is one of a stream of electricity market literature reporting their transit in the past decade from regulated monopolies to deregulated competitive ones where generation, transmission and distribution are no more by the same firm. They state that electricity is now bought and sold in the wholesale market by numerous market participants such as generators, load serving entities (LSEs), and marketers at prices set by supply and demand equilibrium. Pricing has been an important tool in attracting new investments in energy utilities and managing demand in electricity markets. Borenstein (2000) argues in favor of competition instead of regulation in determining prices in wholesale electricity markets.

However, the market equilibrium through competitive pricing is still pertaining largely to the wholesale markets only. Borenstein and Holland (2005) describe the strong disconnect between retail pricing and wholesale costs in restructured electricity markets, where retail prices remain steady even though wholesale prices fluctuate extremely. They argue that flat-rate retail pricing has the problem of preventing hour-by-hour prices that reflect wholesale costs and fails in a competitive market in maximising customer welfare. Allcott (2011) evaluates a program to expose residential consumers to RTP and found that enrolled households are price elastic. They responded by conserving energy during peak hours but did not increase average consumption during off-peak times. The program increased consumer surplus by $10 per household per year which is one to two percent of the electricity costs. Chao (2010) explores the benefits of demand-response programs that pay consumers to reduce their demand during high-price periods against a baseline, which is the demand had it not been reduced. He identifies fixed uniform retail rate as a barrier to price-responsive demand, which is essential for realising the benefit of a smart grid. Yang et al. (2013) report various studies on electricity pricing and report that while some investigated peak pricing considering demand uncertainty only others investigated peak pricing considering supply uncertainty only. They argue that most studies focused on pricing in the peak period only and thereby ignored the possibility of consumption shifts from peak hours to off-peak hours. They propose a time-of-use tariff with consideration of consumer behaviour that could create a win-win situation for both the producer and consumers. Smart Grid and Smart Metering are necessary for the implementation of real-time or time-of-use tariff in retail markets. Blumsack and Fernandez (2012) describe the rapid advent of the smart grid and discuss its potential to act as an enabling technology for renewable energy integration, price-responsive electricity demand and distributed energy production. Allcott (2011) report that though the customer surplus from RTP is meagre compared to the $150 per household investment in retail smart grid applications, many utilities are investing in them as they offer substantial cost savings and provide the option of offering RTP.

The literature on renewable energy has two streams relevant to our study. The first one is regarding feed-in-tariff (FIT) that is necessary to encourage investment in renewable energy. Frondel et al. (2010) while critiquing the German renewable energy model argue that “supporting renewable technologies through FITs imposes high costs without any of the alleged positive impacts on emissions reductions, employment, energy security, or technological innovation.” Garcia et al. (2012) argue that neither a FIT nor a renewable portfolio standard are independently capable of inducing the socially optimal level of investment in renewable energy. Couture and Gagnon (2010) describe different ways to structure FITs. These could broadly be categorised into two groups based on whether the remuneration is dependent or not on the electricity price. While the former encourage electricity generation when it is needed most, the latter has the advantage of lowering investment risks. Thus FITs that are dependent on electricity price help in easing peak supply pressures and improves market integration.
of renewable energy sources. Lesser and Su (2008) argue that a FIT structure should be economically efficient and propose a two-part FIT consisting of a capacity payment and an energy payment that is tied directly to the market price of electricity. The second stream of literature on renewable energy addresses the issues associated with its being an intermittent resource. A contribution of this paper is that both demand and supply are considered to be variable, with the supply uncertainty including the variability from intermittent renewable energy sources. His simulation study, based on this modeling, shows that the introduction of renewable energy and dynamic pricing reduces the average cost of electricity. Ambec and Crampes (2012) analyse the interaction between a reliable source of electricity production and intermittent sources such as wind or solar power. They argue that fixed retail pricing distorts the optimal mix of energy sources and that a large share of renewable energy would be sustainable only with a structural or financial integration of the two types of technology.

Lastly we review some literature on hour-ahead and day-ahead forecasting of renewable energy. Potter et al. (2009) suggest that the smart grid operations can be considerably improved by accessing information about the likely behaviour of renewable energy. Apart from longer-term assessments they highlight the value of hour-ahead and day-ahead forecasts in better management of a grid. Kavasseri and Seetharaman (2009) use fractional-ARIMA or f-ARIMA models to forecast wind speeds with reasonable accuracy one day in advance. Foley et al. (2012) review different wind power forecasting methods and their performance over different forecast horizons. They report that with wind farm pooling and hour-ahead or day-ahead forecasting it is possible to predict wind energy accurately. Mellit and Pavan (2010) study the 24 hour solar irradiance forecast using artificial neural network and report a high forecast correlation (above 94%) with actual irradiance. Perez et al. (2013) too report the advances in solar irradiance forecasting.

THE MODEL

We extend the literature in this field by modelling a capacitated and deregulated electricity market with multiple suppliers (generating firms) and buyers (distribution firms) for a particular time horizon. The suppliers comprise of renewable and non-renewable energy firms. Like Chao (2011) we too consider uncertain demand and supply. However, the supply variation is only owing to the intermittent renewable energy sources. The demand variation is modelled explicitly with two components – an inter-day variation and an intra-day variation. Based on the intra-day demand variation, a day is divided into $I$ equal duration time periods that are denoted by $i$ ($i = 1, 2, ..., I$). The time horizon could be a period of three, six or 12 months, which would be referred now onwards as the planning period. There is no electricity storage facility with the distribution firms and their purchase of electricity from the generating firms during any time period is equal to the demand for electricity during that period. The electricity demand at retail price $p$ during period $i$ of a day, $Q(p)$, is a variable that is expressed as:

$$\epsilon Q_i(p)$$

where $\epsilon$ is a variable indicating inter-day variation ($\epsilon > 0$ and $\epsilon = 1$) and $\bar{Q}_i(p)$ is the expected demand at retail price $p$ during period $i$.

Let $\bar{Q}(p)$ indicate the expected demand at retail price $p$ at any instant during the planning period and:

$$\chi_i = \bar{Q}_i(p)/\bar{Q}(p)$$

As all periods are of same duration it is easy to note that:

$$\sum \chi_i = 1.$$

We assume a maximum retail price that the consumers are willing to pay, indicated by $p_{\text{max}}$. The stochastic demand curves could then be expressed as:

$$\epsilon \bar{Q}_i(p_{\text{max}} - p)$$

where $b_i$ is the slope of the demand curve in period $i$. Then, $\bar{Q}_i(p)$ and $\bar{Q}(p)$ can be expressed as:
\[ b_i(p_{\text{max}} - p) \text{ and } \tilde{b}(p_{\text{max}} - p) \text{, respectively.} \]

From the definition of \( \chi \), it can be seen that:
\[ b_i = \chi \tilde{b} \quad \text{or} \quad \tilde{b} = \sum b_i / i \]

The generating firms produce electricity from both non-renewable and renewable sources. We assume that during the planning period the non-renewable supply does not exhibit variation while the renewable supply exhibits variation that is a function of the time of the day and day of the planning period. \( C_R \) and \( C_N \) are the aggregate generation capacities from renewable and non-renewable sources, respectively, of all the suppliers that is available for sale in this market, and we assume that \( C_N \) is fully available at all times. The electricity available for sale from renewable sources during period \( i \) of a day, \( A_i (A_i \leq C_R, \forall i) \), is a variable that is expressed as:
\[ \delta_i \bar{A}_i \]

where \( \delta_i \) is a variable indicating inter-day supply variation in period \( i \) (\( \delta_i > 0 \) and \( \delta_i = 1 \)) and \( \bar{A}_i \) is the expected supply from renewable sources during period \( i \) (\( \bar{A}_i < C_R, \forall i \)).

Let \( \bar{A}_i \) indicate the expected supply from renewable sources at any instant during the planning period \( \bar{A} = \sum \bar{A}_i / i \).

Owing to different types of non-renewable fuels and technologies, the suppliers of electricity from non-renewable sources are assumed to be having different marginal costs and a particular supplier would be in the market only if the wholesale price covers its marginal cost. Wholesale price of electricity from non-renewable sources is expressed as:
\[ \alpha + \beta Q_N \]

where \( Q_N \) is the demand met from non-renewable sources (\( Q_N \leq C_N \)), \( \alpha \) is the marginal cost of the most efficient non-renewable source and \( \beta \) is the slope of the electricity supply curve from non-renewable source. We assume \( \alpha < p_{\text{max}} \) and \( \beta > 0 \).

The marginal cost of electricity supplied from any renewable source is assumed to be lesser than \( \alpha \). Owing to this assumption and an environmental regulation mandate argument, the demand is met first by electricity from renewable sources. This consideration is similar to Chao (2011) and Ambec and Crampes (2012) who have assumed that marginal cost of renewable sources is less than that of the non-renewable ones. Electricity from renewable sources is purchased at an efficient feed-in-tariff (FIT) \( F \) that is linked to the wholesale price of electricity from non-renewable sources. In our model:
\[ F = \alpha + \beta Q_N \]

which is similar to the energy payment suggested by Lesser and Su (2008). While the model in Chao (2011) looks at the optimal investment in capacity, the objectives of our modelling are to understand the advantages of TOU retail pricing against fixed retail pricing in (i) matching demand and supply, (ii) managing the demand and supply variabilities, and (iii) achieving better utilization of the energy resources.

If \( Q \) is the total demand, the wholesale price during period \( i \) can be expressed as:
\[ w_i(Q) = \alpha \text{ for } Q \leq A_i \text{ and } = \alpha + \beta(Q - A_i) \text{ for } A_i < Q \leq A_i + C_N \quad \ldots(1) \]

The distribution firms charge their customers a retail price that is either constant throughout the planning period or varying within (the different periods of a day) and between days. They will be referred to as fixed retail
pricing and time of use (TOU) retail pricing, respectively. A competitive distribution market is assumed in both retail pricing scenarios. Accordingly, at equilibrium the retail price is equal to the wholesale price. In fixed retail pricing (Figure 1), the price at which expected retail demand during the planning period equals the expected supply is taken as the retail price. In this model, we assume that the price at which expected retail demand during the planning period equals $\bar{A}$ is greater than the wholesale price at this supply, which is $\alpha$. This implies that expected retail demand is greater than the expected supply of electricity from renewable sources. Similarly, we assume that the price at which expected retail demand during the planning period equals the maximum expected supply, $\bar{A} + C_N$, is always less than the wholesale price at this supply. This implies that expected retail demand is lesser than the expected supply of electricity from both renewable and non-renewable sources. These assumptions imply that:

$$\bar{b}(p_{\text{max}} - \alpha) > \bar{A} \text{ and } \bar{b}(p_{\text{max}} - \alpha - \beta C_N) < (\bar{A} + C_N) \quad (2)$$

**Figure 1: Fixed Retail Pricing**

**Figure 2: TOU Retail Pricing**

In TOU retail pricing (Figure 2), the equilibrium retail price varies continuously from one period to another. The literature regarding renewable energy forecasting indicates high accuracy in predicting supply one day ahead. Hence, we assume that the market has accurate information regarding supply before a period commences. As is common today in energy trading, we also assume that the market has reasonably accurate demand information before a period commences. Hence, the wholesale prices are known with reasonable accuracy before the start of a period. Chao (2011) considers the retail price to be equal to wholesale price when the retail pricing is dynamic. We too make a similar assumption and also assume that the distribution firms have a smart grid mechanism of communicating this retail price to their customers just before start of the period, which enables them to adjust demand according to the TOU price. In TOU retail pricing, the equilibrium retail price at an instant is the same as the wholesale price at that instant. It is equal to:

$$\alpha \text{ and } \alpha + \beta (Q - A_j) \text{ for } Q \leq A_j \text{ and } A_j < Q \leq A_j + C_N$$

At $Q = A_j + C_N$, the wholesale price curve becomes a vertical line. In scenario 1 (see Figure 2), the supply curve is vertical when it intersects the demand curve.

The equilibrium demand and price are $A_j + C_N$ and $p_1$, respectively.

**Fixed Retail Pricing**

Inverse of the expected retail demand during any period, $\bar{Q}(p) = \bar{b}(p_{\text{max}} - p)$, can be expressed as:

$$p = p_{\text{max}} - Q/\bar{b}.$$
Let \( Q_F \) and \( p_F \) be the demand and price at equilibrium. From Figures 1 and 2, it can be seen that we need to consider only \( \bar{A} < Q \leq \bar{A} + C_N \) for fixed retail pricing. For \( \bar{A} < Q \leq \bar{A} + C_N \), the wholesale price by Figure 1 is:

\[
\omega = \alpha + \beta(Q - \bar{A}).
\]

Equating \( p \) and \( w \), we get the expressions:

\[
Q_F = \bar{b}(p_{\text{max}} + \beta \bar{A} - \alpha)/(1 + \beta \beta) \quad \text{and} \quad p_F = (\beta \beta p_{\text{max}} - \beta \bar{A} + \alpha)/(1 + \beta \beta) \quad \text{for} \quad \bar{A} < Q \leq \bar{A} + C_N
\]

\( \text{…(3)} \)

From (3), it can be seen that \( p_F \) is decreasing with \( \bar{A} \). If there is no electricity supply from renewable sources, then \( \bar{A} = 0 \) and solution of (3) is:

\[
Q_F = \bar{b}(p_{\text{max}} - \alpha)/(1 + \beta \beta) \quad \text{and} \quad p_F = (\beta \beta p_{\text{max}} + \alpha)/(1 + \beta \beta)
\]

\( \text{…(4)} \)

For fixed retail pricing model, the demand and total electricity available for sale in period \( i \) of a particular day can be expressed as:

\[
Q_i(p_F) \quad \text{and} \quad A_i + C_N, \quad \text{respectively},
\]

or

\[
\varepsilon X_i /Q_i(p_F) \quad \text{and} \quad \delta_i \bar{A} + C_N, \quad \text{respectively}.
\]

In this model, distribution firms cannot exercise a pricing based strategy to manage demand. This implies that when:

\[
Q_i(p_F) > A_i + C_N
\]

the excess demand is either not met (distribution firms would resort to electricity rationing) or is met through back-up sources whose marginal costs are far higher than the marginal cost of any of the regular supplies. While the former results in lesser customer welfare, the latter results in economic loss for the distribution firms. Understanding the impact of available supply is an objective of studying a capacitated electricity market. This is facilitated by the assumption that demand in excess of \( A_i + C_N \) is lost and distribution firms resort to rationing on such occasions.

Please refer Appendix 1 for description of performance measures for this pricing.

**Time of Use (TOU) Retail Pricing**

In the TOU retail pricing model, the demand and total electricity available for sale in period \( i \) of a particular day can be expressed as:

\[
Q_i(p) \quad \text{and} \quad A_i + C_N, \quad \text{respectively}
\]

or

\[
\beta_i /p_{\text{max}} - p \quad \text{and} \quad \delta_i \bar{A} + C_N, \quad \text{respectively}.
\]

In this model, the distribution firms employ pricing as a strategy to manage demand with supply. The shaded
zone in Figure 3 is the area in which the equilibrium lies for a given $C_N$ and given range of $\varepsilon$ and $\delta_i$.

Inverse of the retail demand during period $i$, $Q_i(p) = \delta b_i(p_{\text{max}} - p)$, can be expressed as:

$$p = p_{\text{max}} - Q_i/\delta b_i$$

![Diagram of TOU retail pricing equilibrium zone for period i](image)

**Figure 3: TOU retail pricing equilibrium zone for period $i$**

For a given $C_N$, $\varepsilon$ and $\delta_i$, equating $p$ and $w$, we get:

$$(p_{\text{max}} - Q_i/\delta b_i) = \alpha$$ for $Q_i \leq \delta_i \overline{A}_i$ and 
$$(p_{\text{max}} - \delta_i Q_i/\delta b_i) = \alpha + \beta(Q_i - \delta_i \overline{A}_i)$$ for $\delta_i \overline{A}_i < Q_i \leq \delta_i \overline{A}_i + C_N$

Let $Q_{Ti}$ and $p_{Ti}$ be the demand and price at equilibrium in period $i$. Then,

$$Q_{Ti} = \delta b_i(p_{\text{max}} - \alpha) \text{ and } p_{Ti} = \alpha \text{ for } Q_i \leq \delta_i \overline{A}_i$$

... (5)

And

$$Q_{Ti} = \delta b_i(p_{\text{max}} + \beta \delta_i \overline{A}_i - \alpha)/(1 + \varepsilon \delta b_i) \text{ and }$$

$$p_{Ti} = (\varepsilon \delta b_i p_{\text{max}} - \beta \delta_i \overline{A}_i + \alpha)/(1 + \varepsilon \delta b_i) \text{ for } \delta_i \overline{A}_i < Q_i \leq \delta_i \overline{A}_i + C_N$$

... (6)

Beyond $\delta_i \overline{A}_i + C_N$, the equilibrium retail price is such that:

$$\delta b_i(p_{\text{max}} - p_{Ti}) = \delta_i \overline{A}_i + C_N$$

or

$$Q_{Ti} = (\delta_i \overline{A}_i + C_N) \text{ and } p_{Ti} = p_{\text{max}} - (\delta_i \overline{A}_i + C_N)/\delta b_i$$

... (7)

Please refer Appendix 2 for description of performance measures for this pricing.
NUMERICAL EXPERIMENTS AND RESULTS

For the experiments we consider six time periods per day, each of four hours duration (see Table 1).

Table 1: The Periods

<table>
<thead>
<tr>
<th>Period</th>
<th>$\chi$</th>
<th>$\bar{A}$ ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>02:00a-06:00a</td>
<td>0.90</td>
<td>0.60</td>
</tr>
<tr>
<td>06:00a-10:00a</td>
<td>0.93</td>
<td>0.85</td>
</tr>
<tr>
<td>10:00a-02:00p</td>
<td>0.97</td>
<td>1.00</td>
</tr>
<tr>
<td>02:00p-06:00p</td>
<td>1.00</td>
<td>0.85</td>
</tr>
<tr>
<td>06:00p-10:00p</td>
<td>1.25</td>
<td>0.60</td>
</tr>
<tr>
<td>10:00p-02:00a</td>
<td>0.95</td>
<td>0.60</td>
</tr>
</tbody>
</table>

These periods were identified based on the distinct intra-day demand and renewable supply patterns noticed in the Indian context. The demand is highest after sunset while renewable supply availability, which is a mix of wind and solar power, is highest during mid-day. When faced with power shortages in the evening hours, when the demand is highest, are typically chosen for rationing by the distribution firms. Based again on estimates in the Indian context, the values of $p_{\text{max}}$, $\alpha$, $\bar{b}$ and $\beta$ are taken as $250$/MW-hr, $25$/MW-hr, 50 and 0.01, respectively.

We consider two levels of overall availability (8,500 MW, 9,000 MW) and four levels of renewable energy as a proportion of total energy (0%, 10%, 20%, 30%) for our experiments. This implies eight experiments (see Table 2).

Table 2: The Experiments

<table>
<thead>
<tr>
<th>Experiment</th>
<th>Availability (MW)</th>
<th>Share of Renewable Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8,500</td>
<td>0%</td>
</tr>
<tr>
<td>2</td>
<td>8,500</td>
<td>10%</td>
</tr>
<tr>
<td>3</td>
<td>8,500</td>
<td>20%</td>
</tr>
<tr>
<td>4</td>
<td>8,500</td>
<td>30%</td>
</tr>
<tr>
<td>5</td>
<td>9,000</td>
<td>0%</td>
</tr>
<tr>
<td>6</td>
<td>9,000</td>
<td>10%</td>
</tr>
<tr>
<td>7</td>
<td>9,000</td>
<td>20%</td>
</tr>
<tr>
<td>8</td>
<td>9,000</td>
<td>30%</td>
</tr>
</tbody>
</table>

For each experiment we study the different measures for two levels of inter-day demand uncertainty (coefficient of variation values of 0.05 and 0.10) and two levels of inter-day renewable energy uncertainty (coefficient of variation values of 0.10 and 0.20). We use the terms “L, L”, “L, H”, “H, L” and “H, H” to indicate the different combinations of inter-day demand and renewable energy uncertainties, where L indicates low and H indicates high. In each term, the first letter indicates the demand uncertainty level and the second letter indicates the renewable energy uncertainty. Based on our assumption indicated by (2), overall availability of at least 8,333
MW is to be considered for the parameters assumed above. By (4), the equilibrium demand and price in the absence of renewable energy supply would be 7,500 MW and $100/MW-hr, respectively. We categorise the results into two broad parts: (i) results pertaining to the inter-day demand and renewable energy uncertainties and (ii) results pertaining to the intra-day demand variation.

**Results pertaining to the inter-day demand and renewable energy uncertainties**

The average price falls with increasing share of renewable energy and total available supply in both fixed retail pricing and TOU pricing. For an available supply of 8,500 MW, the average price in fixed pricing falls from $100/MW-hr for no renewable energy supply to $83/MW-hr when renewable energy is 30% of the total supply. Similar observations are seen for TOU pricing. This reinforces the observation of Chao (2011) and others that increasing share of renewable energy results in lowering of energy tariff. Except in Experiment 5, average price was higher with TOU pricing, with the differential increasing with increasing share of renewable energy (see Figure 4). Uncertainty has negligible impact on fixed retail pricing but has an effect on TOU pricing. The differential increases faster with higher uncertainty and lower available supply.

![Figure 4: Differential in expected (average) price](image)

The 17% drop in average price that is mentioned above for fixed pricing results only in a 11.33% increase in demand potential, implying a revenue reduction to the distribution firms with increasing share of renewable energy. Similar observations are seen for TOU pricing. This phenomenon in reality is raising questions on the viability of investments in the energy sector as a whole in the light of increasing thrust of governments on investments in renewable energy. Though the investments in renewable or non-renewable energy, or the financial viability of energy firms are not study objectives of this paper, the results indicate that TOU pricing results in higher expected revenue for the distribution firms (see Figure 5).

![Figure 5: Differential in expected revenue](image)

This can be explained by the higher average price and the absence of lost demand in the case of TOU pricing. The
differential in expected revenue increases with increasing share of renewable energy and uncertainties, but decreases as the total available energy supply increases.

The price variability under TOU pricing is described in Figure 6.

![Figure 6: Price Variability (SD) under TOU pricing](image)

This increases with increasing share of renewable energy and uncertainties. The effect of demand uncertainty is clearly higher than that of the renewable supply uncertainty. It is also interesting to note that increasing total supply of energy reduces price volatility only at lower levels of renewable energy.

**Results pertaining to the intra-day demand variation**

In all the experiments, TOU pricing results in higher meeting of demand (see Figure 7).

![Figure 7: Higher demand met under TOU pricing](image)
Explanation for this observation is the loss of demand that occurs in fixed retail pricing, indicated by (8) in Appendix 1 and Figure 11. Figure 7 shows that the excess demand met under TOU pricing increases with both the uncertainties as well as with increasing share of renewable energy. The higher meeting of demand with TOU pricing indicated in Figure 7 is explained strongly by the higher demand met in the lean periods (see Figure 8). In the lean periods, the lower TOU prices results in higher generation of demand.

Figure 8: Higher lean demand met by TOU pricing

The decrease in retail price associated with the increase in share of renewable energy contributes to an increase in the demand in both the pricing scenarios. Referring to Figures 9 and 10, it is seen that the utilisation of the non-renewable supply is always higher with TOU pricing at the overall level as well as in the lean time periods. This differential increases with increase in the share of renewable energy and the uncertainties but decreases as the overall energy supply increases. The differential is negative in the peak time periods, when the utilization is high in both the pricing scenarios.

Figure 9: Differential in supply utilisation
Figure 10: Differential in lean time supply utilisation

Figure 11 describes the demand that is not met by the distribution firms in the peak periods under fixed retail pricing as a percentage of the potential demand. This increases with increasing share of renewable energy. The demand and renewable supply uncertainties have a negligible impact on the demand that is not met.

DISCUSSION AND CONCLUSIONS

A capacitated and deregulated electricity market with energy supplied from renewable and non-renewable sources is modeled in this paper to examine the advantages of TOU retail pricing over fixed retail pricing. Electricity from renewable sources is procured in our models at an efficient FIT instead of at constant prices. By assuming a lower marginal cost for generating electricity from renewable sources, demand is met first by electricity from renewable sources in our models. This is clearly aligned with sustainable energy arguments. Our models and the numerical experiments reinforce the existing literature that increasing share of renewable energy reduces energy prices under both pricing schemes. Our experiments also indicate that with increasing share of renewable energy, and demand and supply uncertainties, TOU retail pricing results in higher meeting of demand, higher expected revenues for the energy firms, higher utilization of non-renewable supply and higher utilization of non-renewable supply during lean periods. These differences decrease as the overall supply of electricity increases. Higher expected revenue for the energy firms under TOU pricing
does not imply higher costs for the consumers. Fixed retail pricing results in demand not being met fully, specifically in the peak periods.

In our experiments, the TOU average prices are higher than fixed retail prices except when the overall supply is higher and it is fully supplied from non-renewable sources. This differential increases with increasing share of renewable energy and uncertainties. Rather than interpreting this as a disadvantage of TOU pricing, we argue that this result is explained by the fact that the fall in prices that occurs as a consequence of increasing share of renewable energy is lesser in TOU pricing compared to fixed pricing. The fall in prices as a result of increasing share of renewable energy has been highlighted in recent times as detrimental to new investments in non-renewable energy. Hence, the higher TOU average prices could be viewed as more encouraging for non-renewable energy investments. We assume that even with increasing share of renewable energy, many parts of the world would still be seeing new investments in non-renewable energy in the coming years.

These results have many sustainability implications. Our models have not assumed demand shifts between the different time periods. The increasing accuracy in day-ahead forecasting, as indicated in literature, has great potential in mitigating the destabilisation risk of renewable energy. Accurate forecasting of demand and supply enables accurate forecasting of wholesale price, which in turn enables suppliers to participate and plan their operations more effectively. Awareness of significant price differences between various times of the day would encourage consumers to shift some of their consumption from peak demand periods to the slack demand periods. This in turn would provide encouragement to consumers to invest in smart meters and to equipment manufacturers to incorporate “smart” features in their products. An example of this would be a feature in electric cars to choose the time of charging the batteries. Such demand shifts would in fact contribute to a stabilisation of the grid even if the share of renewable energy is high. This could indeed be a potential area of future research. As pointed by Yang et al. (2013), consideration of consumer behaviour aspects is critical to the sustainability of renewable energy.

Through our results and arguments we conclude that TOU retail pricing is superior to fixed retail pricing. Our models have not considered the investment costs in switching over to TOU retail pricing. This is a limitation of this study. We also recognise that creation of a smart grid that includes all the consumers could still be many years in the waiting, particularly in lower income countries like India and China. However, a hybrid model could be conceived in the interim that allows smaller consumers, for whom the switching cost relative to the consumption is high, to continue with fixed retail price. Such a hybrid model would exhibit the characteristics of a TOU pricing model, if the consumption by the large consumers with smart meters is a substantial proportion of the total consumption.

REFERENCES


**APPENDICES**

**Appendix 1: Fixed Retail Pricing performance measures**

Let difference between availability and demand in period $i$ for fixed retail pricing model be $g_{Fi}$, which can be expressed as:

$$\delta_i A_i + C_N - \varepsilon \overline{Q}(p_F)$$

As $\overline{\varepsilon}$ and $\overline{A}_i$ are defined as equal to 1 and $\overline{Q}(p_F)=\overline{b}(p_{max}-p_F)$, the expected value of this difference, $E(g_{Fi})$, is:

$$\overline{A}_i + C_N - \overline{\varepsilon} \overline{b}(p_{max} - p_F)$$

As the variation in demand is independent of the variation in renewable energy availability, the variance of this difference $\text{Var}(g_{Fi})$ is:

$$\overline{A}_i^2 \sigma_{\delta_i}^2 + \overline{\varepsilon}^2 \overline{b}^2 (p_{max} - p_F)^2 \sigma_\varepsilon^2$$

where $\sigma_{\delta_i}$ and $\sigma_\varepsilon$ are the standard deviations of $\delta_i$ and $\varepsilon$, respectively.

If $\phi(.)$ and $\Phi(.)$ are general representation of probability density function and cumulative distribution function, respectively, then the expected unmet demand as a proportion of expected demand in period $i$, $E(L_{Fi})$, the expected utilization of non-renewable supply in period $i$, $E(U_{Fi})$, and the expected share of renewable supply in the total supply in period $i$, $E(R_{Fi})$, are:

$$E(L_{Fi}) = \int_{s_{Fi}}^{p_{max}} g_{Fi} \phi(s_{Fi}) ds_{Fi} \sqrt{\overline{\varepsilon} \overline{b}} (p_{max} - p_F)$$

$$E(U_{Fi})$$

$$E(R_{Fi})$$

$$\ldots(8)$$
\[
E(U_{Fi}) = 1 - \left( \int_0^{\tau_i} \int_0^{\bar{\tau}_i} \phi(g(x), y) g(x) \, dy \right) + C_N \left( 1 - \int_0^{\bar{\tau}_i} \phi(g(x), y) g(x) \, dy \right) / C_N
\]
\[\ldots(9)\]

and
\[
E(R_{Fi}) = 1 - E(U_{Fi}) C_N / \left[ 1 - E(L_{Fi}) \right] \int \phi(p_F) \, dp_F
\]
\[\ldots(10)\]

Appendix 2: Time of Use Retail Pricing performance measures

Let \( \tau_{\delta}^I \) and \( \tau_{\delta}^V \) be such that \( \tau_{\delta}^I b_i (p_{\max} - \alpha) = \delta \bar{A} \) and \( \tau_{\delta}^V b_i (p_{\max} + \beta \delta \bar{A} - \alpha) / (1 + \epsilon b_i) = \delta \bar{A} + C_N \). Then:
\[
E(Q_{Fi}) = \int \left[ \int_0^{\tau_{\delta}^I} \phi_i (p_{\max} - \alpha) \, d\epsilon + \int_{\tau_{\delta}^I}^{\tau_{\delta}^V} \phi_i (p_{\max} + \beta \delta \bar{A} - \alpha) / (1 + \epsilon b_i) \, d\epsilon + \int_{\tau_{\delta}^V}^{\bar{\tau}_i} \left( \delta \bar{A} + C_N \right) \, d\epsilon \right] d\delta_i
\]
\[\ldots(11)\]

As pricing is a tool to manage demand, there is no unmet demand in TOU retail pricing model. From (5) to (7), the expression for demand met through non-renewable energy sources, \( Q_{Fi}^N \), is:
\[
= 0 \text{ for } Q_i < \delta \bar{A} \\
= \left( \phi_i (p_{\max} - \alpha) - \delta \bar{A} \right) / (1 + \epsilon b_i) \text{ for } \delta \bar{A} < Q_i < \delta \bar{A} + C_N \text{ and} \\
= C_N \text{ for } Q_i > \delta \bar{A} + C_N
\]
\[\ldots(12)\]

The expected utilization of non-renewable supply in period \( i \), \( E(U_{Fi}) \), and the expected share of renewable supply in the total supply in period \( i \), \( E(R_{Fi}) \), are:
\[
E(U_{Fi}) = \int \left[ \int_0^{\tau_{\delta}^I} \phi_i (p_{\max} - \alpha - \delta \bar{A}) / (1 + \epsilon b_i) \, d\epsilon + \int_{\tau_{\delta}^I}^{\bar{\tau}_i} C_N \, d\epsilon \right] d\delta_i / C_N
\]
\[\ldots(13)\]

and
\[
E(R_{Fi}) = 1 - E(U_{Fi}) C_N / E(Q_{Fi})
\]
\[\ldots(14)\]
KELLER AND CASCADE ENGINEERING:  
EVALUATING THE CULTURE OF SUSTAINABILITY LEADERSHIP

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ABSTRACT

Fred Keller, CEO of Cascade Engineering, a certified “B” corporation dedicated to positively impacting the triple bottom line of people, planet and profit, is representative of sustainable leadership designed to ensure human flourishing. From a review of the attitudes, practices and behaviours with regard to the development and implementation of their processes and products – including engineered plastic systems and components for the solid waste, automotive and industrial markets, but also water filtration systems used to create safe drinking water in the developing world – the nature of this integrated approach is evident. The range of products are physical representations (artifacts) of the ways in which Keller envisions innovation that improves the way we live while contributing to, rather than diminishing, the environment and the lives of people served. His perspective is on “doing good”, through strategic innovation conveys an organic and holistic understanding of the firm. Through interviews, observation and analysis this paper addresses the way in which the integration of products, processes and human interactions of a sustainable enterprise capture the organisational values and cultural assumptions, thus demonstrating value creation for the future.

Keywords: Keller, Cascade Engineering, sustainability, leadership, “triple bottom line”

To make what is good for the country good for the enterprise requires hard work, great management skill, high standards of responsibility, and broad vision. It is a counsel of perfection. To carry it out completely would require the philosopher’s stone that can translate the basest element into pure gold. But, if management is to remain a leading group, it must make this rule the lodestar of its conduct, must consciously strive to live up to it, and must actually do so with a fair degree of success. For in a good, a moral, a lasting society, the public good must always rest on private virtue. Every leading group must be able to claim that the public good determines its own interest. This assertion is the only legitimate basis for leadership; to make it a reality is the first duty of the leaders.

Peter Drucker  
The Practice of Management

PRODUCTS AND PROCESSES IN THE SUSTAINABLE BUSINESS AS ARTIFACTS OF CULTURE

Cascade Engineering has worked diligently over the past decade to create a corporate culture and strategy focused on sustainability: increasingly their sustainability strategy has provided successes both “below and above the line in the sustainability equation – that is, in both the ‘denominator’ (eliminating waste and footprint reduction) and the ‘numerator’ (growth in products and services that benefit the world)” (emphasis added) (Cascade Engineering [CE], Triple Bottom Line report, 2010, p.4).

In what ways does an enterprise, focused on the triple bottom line – people, planet and profits – demonstrate the significance and meaning of sustainability in its organisational culture?

Edgar Schein, a distinguished professor at MIT’s Sloan School of Management and the originator of the phrase “corporate culture”, defined three levels of culture: artifacts, values and basic assumptions. Artifacts reflect the shared values and behaviours that distinguish one organisation from another, provide meaning, and in a mature and rich culture, create “a paradigm for understanding how members of the group view the world” (Schein, 1983, p. 16). Artifacts are intended to convey organisational values and the underlying assumptions from which they emerge. Basic assumptions and shared values are clearly communicated in products – anything that can be offered to satisfy a need or want. A product can consist of as many as three components: physical good(s), service(s), and idea(s) (Kotler, 1998). They provide silent testimony to the business’ commitment and values as
well as to engineering expertise, feasibility, and product channel efficiencies. A product can also encompass business strategies, procedures that guide conduct and behaviour patterns (Young, 2013).

Although artifacts tend to be easily discernable and even obvious, Schein (2010) notes that they are difficult to decipher unless one asks insiders what they mean. When insiders explain them, they may express their meaning at a level of values, such as espoused goals, ideals, norms, standards, moral principles, and other untestable premises.

The interaction of these levels can be demonstrated in the process of employee training. It may be provided in an online context, or it may be contained in books or in manuals; however, it is not the knowledge contained in those that transmits the culture, but rather the entire context, the areas emphasised, the practices that are engaged in to convey it, and the attitudes adopted in the process. The “training” arises from the human meaning given to it as interpreted by the trainee. Artifacts are cues in the social and physical environment in which people operate, and generate a sense-making process (Rafaeli and Vltnai-Yavetz 2004; Weick 1995). They provide meaning, direction and focus to the work expected.

Shared values fortify an organisational culture (Bergsteiner and Avery 2007). While generally apparent in such items as mission statements and policies, they can include less concrete norms that are tied to the third level of organisational culture, basic assumptions, which underpin the physicality of artifacts. It is basic assumptions that are foundational to organisational culture and the most difficult thing to change. These are the invisible but identifiable reasons why group members perceive, think, and feel the way they do about external survival and internal operational issues; included are assumptions about mission, means of problem solving, relationships, time, and space.

In a sustainable enterprise committed to the triple bottom line of people, planet and profits, the integration of the three levels of culture should be apparent in the types of products and processes of the business, and in carrying out the primary leadership roles, by conveying a commitment that is both sincere and significant. This integration is unmistakable and materializes in multiple ways. In Keller’s case the basic assumption to “do all the good you can” has resulted in shared values around the opportunity to experiment (and fail), to create change by designing new products, services and roles, and in the execution of “intrapreneurship”, what Keller calls their internal entrepreneurial focus. The message is clear in Cascade’s 2012 report where Keller states that that there are “almost no limits” to how they can apply the Triple Bottom Line: “Whether we are focused on environmental priorities, combating racism or investing in the future of our people, the key is always to find something good to do – and then find a way to make it good business” (CE, Defining purpose, p.4).

The underlying assumptions about the organisation’s relationship to its environment and the nature of human activity and human relationships are critical to culture and the leader has a particularly important role in embedding and transmitting culture via artifacts such as deliberate role modeling and by what they pay attention to, measure, and control (Schein 2010).

Three factors stand out as examples of Keller’s integration of culture into the triple bottom line: 1) personal attitudes, and beliefs, 2) expressed through products, processes and roles, that 3) put people before profits. As the company expanded from a small injection molder to a complex manufacturing organisation serving the automotive, solid waste and industrial markets, Keller’s commitment to the triple bottom line grew apace. As a result, sustainability is not a label from which to market products, but at the core of both his and the company’s identity, with a focus on being ethical and fair; valuing each person, encouraging innovation and continuous improvement, and maintaining state of the art operations.

**INNOVATION**

Innovation is a critical hallmark of sustainability in today’s world of change, variability and complexity. In fact some argue that only companies that make sustainability a goal of the business itself will achieve competitive advantage in the future and that doing so requires rethinking the business model as well as products, technologies, and processes (Ram, Prahalad and Rangaswami 2009). Keller defines innovation as “a creation or new way of doing something that relates to any aspect of our business (products, processes, business models and channels-to- market). The results may be incremental, radical or revolutionary” (CE, Balance, 2010, p.3).

He explains that the basic focus of the company “is around the idea of innovation and sustainability. If you think about the things that are going to be around long term and important, not only of a financial interest but also the social and environmental interests of the world, we find those very intriguing” (Beeke 2010, section 4).
The firm is a manufacturer and marketer of products and services supporting a variety of industries including renewable energy, automotive, commercial truck and bus, solid waste and recycling, material compounding, furniture, radio frequency identification (RFID), and material handling. They are involved in product innovations using recycled content to improve their environmental footprint in automotive, solid waste removal and water filter systems, specifically introducing lightweight items that can replace steel or other metals, acoustical products, and non-volatile organic compound (VOC) coatings. In terms of environmental capital, the innovation lies in finding ways to reduce the energy impact and waste emissions into the air, land and water; they manage environmental progress and initiatives through their Environmental Management System (EMS), which is accredited, to ISO 14001 Standards (CE, Triple bottom line [TBL], 2010, p.9).

One of the company’s founding business units, the automotive group, is an example of using plastics technology to innovate. By replacing heavier metal interior and exterior parts with lighter weight fabrications, vehicles have improved fuel economy. Their efforts around light weighting are a critical driver of innovation – since lighter parts mean less fuel. They also considered the comfort of the vehicle, and as a result, inside acoustics have always been a core technology. The result is that dash mats have been engineered for sound absorption at the vehicle firewall, which separates the engine compartment from the interior cockpit. Likewise, by applying leading-edge technology and state-of-the-art innovation in developing and expanding on the EcoCart® design, a durable solid waste-recycling container made with 30%-50% post-consumer recycled content, they have contributed to making the waste and recycling industry more efficient, environmentally friendly and beneficial for cities. It is evidence of the learning climate and emphasis on continuous improvement.

But products are only one part of Keller’s passion for innovation. As one observer put it, “What really gets him excited – as an engineer and a longtime proponent of Japanese quality management, or kaizen principles – is improving processes” (Bluestein 2011, section 3). When CEO, Keller worked through ideas in product and people development with the team, exemplifying a willingness to explore new products and new ways of doing business. Their product and business ideas appear to evolve and get on the books because the people who develop them are passionate and share that passion with senior management. By incorporating RFID, for example, into the EcoCart® technology, they have achieved a more sophisticated product. It would not have happened but for this willingness to embrace the ideas of others. The freedom to experiment and to incubate new products is viewed as a fundamental practice for innovative business (Moran 2011). With Cascade’s strong culture of experimentation, the firm is nimble and able to seize opportunities; projects can become business units without a lot of fanfare. Even the name of their central office – The Learning Community (a LEED platinum building) – exemplifies this openness. Outspoken about making a positive impact on society and the environment as well as making a profit, Keller calls it “sustainability as a driver for innovation” (“Corp! Interview, 2012”).

The Hydraid® BioSand Water Filter is representative of the firm’s focus on social capital innovation. Not only do Hydraid filters provide clean water to people in need in developing economies, but they also decrease deforestation and greenhouse gas pollution by eliminating the need to treat contaminated water by boiling it. Over 58,000 Hydraid filters have been sold in 36 different countries, bringing clean water to half a million people, making it the number one point-of-use water technology in terms of sustainability, affordability, and scalability (TripleQuest, 2013, para.3). The firm’s sustainability imprint has been a powerful differentiator – “and customers with sustainability agendas have gravitated to Cascade to pursue partnerships” (Bluestein 2011, section 4). Cascade became one of the first vendors involved in Home Depot’s Energy Center, a store within a store that features home-efficiency products.

One of the ways that Keller has extended his influence in the range and creation of products as well as in production methods is through a commitment to design and quality. The stated vision of the company incorporates “sustainability and innovation in everything we do”. Design and production are inextricably linked; it is standard practice to be seeking new ways to not only reduce waste and conserve energy but also develop new solutions. Design “affects gross margin performance through its contribution to a range of critical management issues which determine the nature and so the profitability of the product” (Gorb 1990). It does so by being a critical part of the innovation process, contributing to ensuring quality and playing a strategic role in developing a range of products and responding to market demands or opportunities (Almendra 2004, p.16). Keller’s commitment to design quality is reflected in Cascade’s role in Herman Miller’s office furniture line. They molded the first Equa™ chair, co-developed the successful Aeron Chair, and through their development of the Mirra chair back, provided a custom design and manufacture of a complex ergonomic seat back that could provide structural strength at a mid-level price point, while providing alternatives for non-recyclable materials.
Don Chadwick, co-designer of the Aeron chair, specifically mentions his confidence in Cascade engineering’s ability to solve a complex problem the chair presented, recognising that they did so through a process design. It was their positive and competent attitude that gave Chadwick the commitment to proceed: “I had the confidence with these particular engineers that we were working with on this encapsulation process. I mean, they were confident. And I mean, they were so positive, so optimistic, that that wore off on me” (Chadwick video 2009).

Moving forward with new products, processes and services represents integration in stimulating innovation that occurs as a result of Keller’s role as founder. Schein saw it as a process of “hybrid evolution” – over time experienced managers with a new range of assumptions add new elements. The founder often recognises that these new assumptions are better solutions, and will delegate increasing amounts of authority to those managers who are the best “hybrids”: those who maintain key old assumptions yet add relevant new ones. As a result employees believe at the level of basic assumptions, and are willing and able to make decisions that are consistent with, and build out, the organisation’s overall strategic directions. Successfully engaging in this process creates the opportunity for success: from a theoretical standpoint, evolution through hybrids is probably the only model of culture change that can work (Schein 1983, p.28).

Just as emphasising light weighting in the plastics industry has enabled Cascade to develop creative acoustical solutions, innovation in design tied to strategic initiatives has led to organisational success.

**STRATEGY**

Strategy, defined as an overarching plan, or sometimes as a pattern of decisions to achieve one’s goals under conditions of uncertainty, includes both short-term and long-term perspectives and is intimately connected to the core business. It provides the business with the ability to say “no” to opportunities that distract from their mission. Leaders must manage a number of factors when executing strategy – one of the most important is organisational culture (Higgins and McAllaster 2004). Shrivastava (1985) demonstrated how strategy is greatly affected by an organisation’s culture, including its cultural artifacts. By influencing the strategic planning and decision-making process, organisational culture can indirectly and directly influence the content of the strategy. Culture can “affect the organisation’s orientation toward the future, its planning horizons, its view of the environment, and, consequently, its perceptions of opportunities and threats” (Shrivastava 1985, p.106). Value systems expressed through the vision and ambitions of top management are important to corporate strategies, impacting not only the economic choices of the organisation, but also its social responsibility posture (Shrivastava 1985, p.108). Shared values and basic assumptions can overlap into corporate strategy (Young 2013).

When Cascade poses the question “sustainability or business growth?” and offers a response, the reality may be a much deeper phenomenon. Their response of “both/and” – expressing that sustainability is both the right thing to do and good for business – is short and simple (Cascade, Certified B Corporation, The Change We Seek section). However, beneath lies a complex culture, deeply rooted leadership, and pervasive community-wide influence. Considered to have world-class engineering, technology and manufacturing competencies, while maintaining a strong commitment to lean manufacturing and environmental stewardship, Cascade bills itself as offering “leading-edge solutions”.

Identifying sustainability as an emerging megatrend, Lubin and Esty found that sustainability market leaders evolved through four stages of value creation. They focused on (1) reducing cost, risks, and waste and delivering proof-of-value; (2) they redesigned selected products, processes, or business functions to optimise their performance – in essence, progressing from doing old things in new ways to doing new things in new ways; (3) they drove revenue growth by integrating innovative approaches into their core strategies; and (4), they differentiated their value propositions through new business models that used these innovations to enhance corporate culture, brand leadership, and other intangibles to secure durable competitive advantage (2010, p.3). Cascade has progressed to where Keller and his senior team clearly integrate the organisation’s cultural products and processes into corporate strategy formulation for competitive advantage; in fact it is arguable that one cannot separate one from the other. The artifacts created by strategy development, as well as the execution of strategy – the process itself – reflects Keller’s commitment to core values and basic assumptions.

The company is motivated by solutions, and for that reason can innovate around the product itself, the processes required to design and manufacture the product, and the human element needed to market and distribute it. Internally, teams are allowed to innovate on products that are their passion, and externally Cascade is willing to partner with others to greater effect, irrespective of the need to control the relationship. Keller and the team aim first to get the ideas out so that greater innovation can occur, then leading to testing and improving the
innovation. They are successful at solving two problems simultaneously: formulating a vision for value creation by rethinking what they do in order to capture the evolving source of value, and executing, expanding their capacity with new management structures, methods, executive roles, and processes tailored to sustainability’s demands (Lubin and Esty 2010, p.4). This advantage may result from having an engineer/scientist founder – one who understands the need to experiment and test. Many leaders and CEOs with other backgrounds are afraid of failure and cannot see the value in letting employees test out their ideas. Cascade maintains 14 separate business units, and Keller expects each to be strong. They represent his willingness to support new ideas and to keep the tension between current focus and future momentum...a symbiotic relationship. (One program even forms new relationships for other parts of the company). This strategy creates diversification that keeps the company strong and, as Keller has observed, “help[s] to demonstrate what companies can do to help solve some of our intractable and difficult social problems” (“Corp! Interview,” 2012).

Cascade’s product and business model transformation leads to a strategy for value creation. It includes a commitment to viable and lasting solutions and long-term investments for the future – a drop in a particular area does not affect the company to the same degree as in others driven by short-term profits. Success generated strong financial results even through the recession, with an overall growth of 20 per cent in 2012.

Other key strategic initiatives emerged: certification and designation as a “B” corporation, (one of the largest in the world); incorporating low weight concepts into all product development; and continuing its evolution from making parts for OEMs to branding, marketing, and selling its own products and leveraging its manufacturing strengths to increase direct-to-market opportunities. In the process Cascade introduced sustainable products and processes that added value. Keller alludes to this when he states the firm’s commitment “to being single-minded in our goal to enable customers and consumers to achieve their own sustainability objectives. Helping them get there, too, has continued to be the primary driver of our creativity and innovation” (CE, TBL, 2010). This expanded their reputation and is in large measure the reason for the numerous awards Keller or the company has won, including the Lifetime Achievement Award for Innovation from Business Review West Michigan, the Environmental Stewardship award and a Greener Environment Award from the Society of Plastics Engineers, Accelerate Michigan Innovation Competition’s Spirit of Michigan Award, and the Ron Brown Award for Corporate Leadership.

The combination of sustainability and innovation is seen in the company’s products. In mid-2007, Cascade Engineering’s Container Division launched the EcoCart®. To meet the tough demands, they used a coinjection process, which sandwiched a layer of recycled plastic between two layers of virgin plastic, providing rigid strength in an eco-friendly design. In the development and distribution of the Hydraid® BioSand Water filtration system the added value resides not only in the product, but also in the business model that benefits the communities for whom the filter was designed.

**SUSTAINABLE LEADERSHIP THROUGH A POSITIVE LENS**

It has long been recognised that effective leadership is vital for improving management development and sustained competitive advantage in organisational performance (Avolio 1999). Avery and Bergsteiner (2011) propose that sustainable leadership can lead to five performance outcomes: (1) brand and reputation, (2) customer satisfaction, (3) financial performance, (4) long-term shareholder value, and they propose that (5) long-term stakeholder value is the ultimate goal of a sustainable enterprise. Jing (2009) also sees multiple performance measures – financial performance, customer satisfaction, staff satisfaction, staff turnover and manager turnover – as enhancing the validity of the outcomes. Participative and devolved decision-making - where power tends to be dispersed throughout the organisation, appears to be a major factor in organisational success, perhaps as a reflection of personal humility and the recognition of the complex adaptive challenges of a sustainability focus. Features identified as “enlightened leadership” in Cascade’s own culture include positive and high trust relationships with employees, active support for an inclusive culture, sincere care for people, humble listening with a willingness to be influenced by employee feedback, and emotional intelligence. Evaluating Keller against these qualities, one is reminded of the Level 5 leader Collins describes, leaders who “channel their ego needs away from themselves and into the larger goal of building a great company. It’s not that Level 5 leaders have no ego or self-interest. Indeed, they are incredibly ambitious---but their ambition is first and foremost for the institution, not themselves” (Collins 2001, p.21).

Keller admits to not liking the concept of “giving back”, a position taken by many business firms, since it raises the question of “why did you take it in the first place...start with something that's good, and then make it good business.” He emphasised that sustainability is “all about a positive – the absence of a negative” (Keller, TBL, 2003, p.2). Inherent in this comment is a focus on the positive. In the literature the use of "positive"
declares "an affirmative bias” and orientation toward exceptional, virtuous, life-giving, and flourishing phenomena, elevating processes, excellence, human strength, resilience, vitality, and meaningfulness (Cameron and Spreitzer 2013). Four convergent uses of the concept of positive are applied: adopting a positive lens, investigating extraordinarily positive performance, espousing an affirmative bias, and exploring virtuousness or eudaemonism.

Avery and Bergsteiner’s (2011) sustainable or honeybee approach adopts a positive approach particularly in using a positive lens and investigating positive leadership elements through a humanistic management approach that includes valuing people and considering the firm as a contributor to social wellbeing, practices and principles Keller exhibits. The company’s actions demonstrate how the key performance drivers of innovation, staff engagement, and quality drive Cascade’s organisational performance. Keller successfully integrates organisational culture around a core set of values and artifacts that emphasize product and process innovation, world-class competencies and employee engagement, which facilitates an effective triple bottom line viable over the long term. The results or performance outcomes, as described by Avery and Bergsteiner, likewise represent a workplace of positive business outcomes and flourishing – a strong reputation among a diverse clientele, recognised integrity of the brand, and customer satisfaction, which in turn provides solid financial performance and long-term value for multiple stakeholders. The alignment of acted values with the stated values results in organisational integrity, which in turn, is one of the fundamentals for human flourishing. “To flourish means to live within an optimal range of human functioning, one that connotes goodness, generativity, growth, and resilience” (Frederickson and Losada 2005). While the exact relationship is still unclear between leadership/ performance and corporate sustainability (Avery 2011, p.530), with over $250 million in sales and more than 1,000 employees, the firm has come through a period of enormous challenge for American manufacturing, and under Keller’s leadership it has continued to innovate with new products, processes and markets resulting in annual double digit growth. To accomplish these results has required authentic, conscious and empowering leadership.

Schein (1983) found that founder/owners are more often intuitive and holistic in their thinking, able to take a long-range point of view while also more wiling to take risks and pursue non-economic objectives. Keller seems aware of his holistic thinking, admitting that in his leadership style he is “ruled by his heart first and his brain second” (Yakowicz, “Giving second chances” section, 2014). Foundational for not only this priority but for all the good work Keller focuses on is a quote from the 18th-century theologian and social reformer John Wesley: “Do all the good you can.”

Behaviour flows from belief and character, exposing true values. Integrity, of course, is the alignment of stated values with acted values – when we do what we say we will do – when we behave consistent with whom we claim to be. When acted values are aligned with stated values, organisational integrity results (Kouzes and Posner 2003). As a leader Keller embodies these values. In interviewing the senior leadership team, stories emerge of how people can and have challenged him personally and emphasise his humble way of responding to them. Respondents describe his willingness to let people explore their strengths and interests, and emphasise a behaviour flows from belief and character, exposing true values. Integrity, of course, is the alignment of stated values with acted values – when we do what we say we will do – when we behave consistent with whom we claim to be. When acted values are aligned with stated values, organisational integrity results (Kouzes and Posner 2003). As a leader Keller embodies these values. In interviewing the senior leadership team, stories emerge of how people can and have challenged him personally and emphasise his humble way of responding to them. Respondents describe his willingness to let people explore their strengths and interests, and emphasise a behaviour flows from belief and character, exposing true values. Integrity, of course, is the alignment of stated values with acted values – when we do what we say we will do – when we behave consistent with whom we claim to be. When acted values are aligned with stated values, organisational integrity results (Kouzes and Posner 2003). As a leader Keller embodies these values. In interviewing the senior leadership team, stories emerge of how people can and have challenged him personally and emphasise his humble way of responding to them. Respondents describe his willingness to let people explore their strengths and interests, and emphasise a
followers to own responsibility for choices and actions while simultaneously seeing potential. At the same time, the reverse must also be true – healthy organisations create space for failure, which then creates a learning opportunities.

Keller and his leadership team clearly express this. Executives can switch jobs or take on new positions and responsibilities because they become passionate about a product or service, or choose to seize an opportunity that is personally meaningful. One prominent example involved Jo-Anne Perkins, Vice President of Cascade Environmental Services, who turned a family tragedy into something restorative to individuals and communities. She designed and implemented a high-profile breast cancer advocacy initiative resulting in the creation of the Pink Cart – a result both good for the business and good for the participating communities. She reflected the organisational culture by noting she had “the opportunity to use the position she was in at Cascade Engineering to do something significant” and that came from “working for Fred Keller – a great situation for me”, which in turn produced a clear example of individual flourishing inside the firm (Perkins video, 2012).

Developing an “Employer of Choice” strategy enabled Cascade to share and promote its practices, creating workshops for other companies to replicate the approach or enhance their own culture. Cascade fielded its own consulting group, after recognising that “we were hiding one of our greatest strengths – the awareness and respect of the Cascade Engineering name in our region and beyond, thanks to our TBL culture, social programs and our innovative engineering achievements” (CE, Defining purpose, 2012, p.10).

Cascade and Keller are an example of a company and a leader who envision the world holistically. The culture demonstrates a commitment to system-wide implementation of the basic assumptions and core values of the enterprise. Sanford (2011, p.23) describes the value of working systemically, recognising that compartmentalising is the “enemy of ecology, social justice, purposeful motivation, and market and financial success” which is “overcome by working with wholes, not parts: whole businesses, whole people, whole watersheds, and whole systems.” Cascade engages all of their systems in a coherent and integrated approach to people, planet and profits, with results leading to a solid reputation, innovative products and a workplace of inspired and empowered colleagues.

CONCLUSION

There are many other aspects of the firm and its leadership to explore, including the extent and effectiveness of Keller’s connectedness and networks, and the manner in which this engagement promotes products and processes, but more importantly supports the broader community. Another consideration will be the assessment of the impact on culture and the firm of the founder stepping down from key operational roles. The other side of this same issue concerns Cascade’s community engagement. While the company has always cared about its community, the focus of Keller’s attention since stepping down as CEO has been on the social aspects of the business. It will be interesting to see if “hybrid” managers and leaders can carry on the same commitment over the long-term.

Cascade engages all of their systems in a coherent and integrated approach to people, planet and profits and uses artifacts that create a solid reputation, innovative products and a workplace of inspired and empowered colleagues. As some assert, “the quest for sustainability is the most significant human development opportunity of the 21st century” and Keller exemplifies the principle that “when people learn about and work toward building a sustainable world they too are poised to flourish in ways that elevate innovation, personal excellence and workplace well-being” (Stuart 2013, para.2).

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THE ETHICS OF PERPETUATING SERIOUSLY FLAWED COUNTRY RANKINGS

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ABSTRACT

This paper evaluates Bergsteiner and Avery’s (2012) claim that the Global Competitiveness Report (GCR) is significantly biased towards the Anglo/US business model and results in Anglo countries achieving unrealistically high competitiveness rankings, thereby reinforcing an essentially discredited business model. These authors predicted that removing the bias would result in the US, the main proponent of the Anglo/US business model, slipping in global competitiveness from among the top 10 to somewhere between 30th and 60th place out of the 139 countries included in the 2010 GCR survey, equivalent to places 20 and 40 on a 100-point scale. This paper examines the veracity of this assertion using 28 existing ranking instruments and creating a composite 100-point ranking scale to locate a selected group of 20 countries. The resulting composite ranking places the US at point 62 on a 100-point scale, scoring 41, 91 and 53 on the economic, environmental and social themes respectively.

Keywords: Competitiveness, ranking flaws, ideology, country rankings

INTRODUCTION

The number of instruments for ranking countries has mushroomed in recent years, probably the most widely promoted among them is the GCR. Along with their many criticisms of this tool, Bergsteiner and Avery (2012) argue that the GCR is substantially biased in the direction of the Anglo/US business model. The result is that Anglo countries achieve unrealistically high competitiveness rankings that support a business model that has long been essentially discredited both in theory (Kennedy 2000) and practice (e.g. the global financial crisis). Bergsteiner and Avery (2012) postulate that removal of the bias would result in the US, a key protagonist of the Anglo/US business model, falling in global competitiveness ranking from among the top 10 to somewhere between 30th and 60th place out of the 139 countries included in the 2010 GCR survey.

This paper examines the veracity of this rather bold claim. We derive a composite 100-point ranking scale from 28 existing rankings to discover where on this scale a group of 20 countries is located. Before testing Bergsteiner and Avery’s (2012) proposition, we address a somewhat unexpected discovery made in our study, namely that many existing rankings that we wanted to use in order to develop our composite scale are subject to a variety of flaws. We discuss some of the most common flaws next before describing our own study.

COMMON METHODOLOGICAL AND OTHER FLAWS

Table 1 categorises 10 flaws that frequently occur in ranking instruments. These flaws fall into three categories enumerated by Moldan et al. (2004: p2 of 10) and others, namely whether the indices are salient, credible and legitimate. Salience means that the indicator is interesting, useful and policy-relevant, shows something “that really matters”; “policy implications should be obvious and unambiguous”; and “the indicator should be able to serve as a benchmarking instrument, to show trends in time and set targets”. Credibility “deals with the scientific validity of … data used for its construction, the methodology of aggregation, and other transformations, adequacy of presentation and similar issues”. For Moldan et al., legitimacy is the most difficult to define: “It touches the perception of the indicator, its methods of construction and the competence of the producer as seen from the point of view of a wide range of potential users and stakeholders whose interests, values, or beliefs might be affected by the indicator.”
Table 1: Nature of flaws identified in country ranking instruments based on Moldan et al. (2004)

<table>
<thead>
<tr>
<th>Statement of Flaw</th>
<th>Description</th>
<th>Moldan’s Flaw Type</th>
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<tbody>
<tr>
<td>Mixing dependent and independent variables</td>
<td>The paper by Bergsteiner and Avery (2012) identified this as one of the key flaws of the Global Competitiveness Index (GCI). For example, of the 118 indicators examined in the 2012 GCR, only around 10% are clearly output factors (e.g. GDP, gross national savings). The rest are contextual parameters that allegedly facilitate or enhance competitiveness (e.g. ease of hiring and firing, prevalence of fixed telephone lines). Whilst such factors may improve competitiveness, causality along the line, if you do this, you will be more competitive, cannot be assumed. As Bergsteiner and Avery state, the proof is in the pudding, not the recipe. That is, contextual factors such as education or R&amp;D budgets are nothing more than a “promise” of competitiveness. Whether this promise turns into reality is another matter entirely. Since composite rankings such as the GCI and the Global Innovation Index are prone to this problem, we avoid using composite rankings.</td>
<td>Undermines credibility</td>
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<td>Ranking small numbers of countries</td>
<td>Ranking small numbers of countries relative to each other rather than relative to a large pool of countries can significantly distort information, particularly if such rankings are then transformed to a common measurement scale as we have done. For example, let us imagine in a group of 100 countries we are interested in 20 specific countries. As luck would have it, 19 of these countries occupy the first 19 positions, but the 20th country occupies the last place in the group of 100. In other words, it ranks last in the group of 100 but also last in the group of 20. The crucial difference is that in the first case there is a separation of 80 places, in the second case a separation of one. These are vastly different results that are hidden in small sample sizes. To avoid this flaw, we try and use rankings of 100 or more countries.</td>
<td>Undermines credibility</td>
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<tr>
<td>Including small countries</td>
<td>While performance data of small countries such as Fiji, Macau, Monaco or Brunei is intrinsically interesting (especially for those countries), and may be entirely credible, the highly specialised nature of their economies (respectively tourism, gaming/tourism, gaming/banking/tourism, petroleum/gas) limits their salience as “model economies”, except, perhaps, for other small countries. Furthermore, including small countries in some lists, but excluding them in others can skew comparisons.</td>
<td>Undermines relevance and hence salience</td>
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<td>Using ideologically contaminated questions</td>
<td>Many rankings include or exclude measures because of ideological biases or deeply held belief systems. For example, the GCI asserts that high market capitalisation of listed companies confers innovation competitiveness on countries. The case for this is weak. One, an analysis of capitalisation scores and performance scores can yield rather paradoxical results. For example, Germany, a country that tends to rank highly on numerous economic measures, ranks low in market capitalisation (49 out of 141), whereas Zimbabwe, which ranks 132/144 overall on the 2012-2013 GCI, ranks in eighth place on market capitalisation. What might explain this paradox? In the case of Germany, strong economic performance is generally attributed to the strength of the German Mittelstand, which makes up 99% of all German firms, almost all of which are privately held (Federal Ministry of Economics and Technology 2014). Two, given the financial markets’ counterproductive tyranny of short-termism (Barton 2011), a case could be made that market capitalisation is a mixed blessing at best and a bane at worst.</td>
<td>Undermines credibility and/or legitimacy</td>
</tr>
<tr>
<td>Statement of Flaw</td>
<td>Description</td>
<td>Moldan’s Flaw Type</td>
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<td>Unnecessarily relying on naïve perceptions</td>
<td>Some rankings are based on data derived from responses to opinion surveys, rather than drawing on available empirical research data. A perfect example of this is a question in the 2009/2010 GCR about the perceived soundness of banks. The rankings are based entirely on perceptions of essentially naïve respondents to a 2009 questionnaire survey, perceptions that the 2008/2009 Global Financial Crisis revealed to be totally out of sync with reality. The meaninglessness of this question appears to have been recognised by the World Economic Forum, which publishes the GCR, because after 2009 the question disappeared from the questionnaire.</td>
<td>Fails the test of credibility</td>
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<tr>
<td>Unequal weighting of economic, environmental &amp; social factors</td>
<td>Composite rankings sometimes simply take an average of all rankings in a sample. This is acceptable when there is good category resemblance. When there is no category resemblance (e.g. economic, environmental and social indices), each category needs to be averaged separately and a judgment needs to be made whether there should be any weighting or not.</td>
<td>Fails the test of credibility</td>
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<tr>
<td>Not converting data to per capita measures</td>
<td>For example, the World Intellectual Property Organisation ranks countries according to absolute numbers of patent applications. Such absolute figures are meaningless for comparative purposes. It comes as no surprise that the US with a population of around 314 million is going to do much better than Switzerland with only around 8 million in absolute terms. However, on a per capita basis, Switzerland significantly outperforms the US with respectively 4,884 versus 1,403 applications per million population.</td>
<td>Undermines salience by its presentation</td>
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<td>Inclusion of irrelevant data</td>
<td>Many economic rankings include irrelevant indices. For example, the GCI and the Global Innovation Index both include the percentage expenditure on research and development (R&amp;D) as a measure of competitiveness. There is no research that establishes such a link. There is a link to systemic innovation, however, few indices that we are aware of pose the question how effective a country, or for that matter an organisation, is in systemic innovation.</td>
<td>Undermines credibility</td>
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<tr>
<td>Forgetting to invert scales</td>
<td>Some reports with multiple rankings assign a number 1 ranking to the highest number irrespective of whether the high number is indicative of high or low performance. For example, the CIA’s World Factbook ranks South Sudan, which has the highest number of maternal deaths per 100,000 live births, No. 1 on maternal mortality rate. In other words, it ranks in first place even though it has the worst score. This is unhelpful and potentially misleading given that the World Factbook generally uses the No. 1 ranking for best scores.</td>
<td>Undermines credibility</td>
</tr>
<tr>
<td>Transcription error</td>
<td>Ranking scores are sometimes erroneously stated in the reverse order. For example, the World Factbook (2013) correctly states: “If income were distributed with perfect equality . . . the [GINI] index would be zero; if income were distributed with perfect inequality ... the index would be 100”. A study undertaken by the Economist Intelligence Unit (EIU) on behalf of the Society for Resource Management and the Australian Human Resources Institute correctly states that the GINI score ranges from 0-100, but erroneously adds: “where 100=perfect equality” (Economist Intelligence Unit, 2012: 18). In other words, the EIU’s ranking is completely back to front.</td>
<td>Undermines credibility</td>
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</table>
In short, many rankings are subject to one or more of the above flaws and so present a sometimes grossly misleading picture of a country’s relative performance. These problems can be camouflaged by another issue identified by Freedman (1985), Britt (1997) and others, namely, authors carrying out complex regression analyses based on large volumes of data rather than addressing the more urgent need to understand basic variables, processes and how clusters of variables interact in causal and associative ways. Given that many extant rankings are seriously flawed on multiple dimensions, we adopted the following research methodology to test Bergsteiner and Avery’s (2012) proposition in a salient, credible and legitimate way.

**METHODOLOGY**

In avoiding the flaws identified above, our study endeavours as far as possible to:

- Rely on rankings based on dependent variables, that is, outcome measures;
- Avoid composite rankings since many of them include independent and dependent variables;
- Avoid rankings with small sample sizes (that is, fewer than 100 countries);
- Eliminate all countries with populations of less than three million;
- Avoid ideologically biased questions;
- Rely on objective data rather than naïve perceptions;
- Give equal weighting to economic, environmental and social measures;
- Use per capita measures where applicable; and
- Avoid transcription and similar errors.

Database sizes vary. For example, the CIA typically ranks 144 countries in its World Handbook; others rank as many as 200+ countries; some fewer. This variation is partially a result of certain information not being available for some countries, a degree of arbitrariness in sample composition, and some studies including small countries whereas exclude them. After eliminating all countries with fewer than three million people from our comparison, this typically left between 100 and 130+ countries. To make the resulting ranking lists comparable, all rankings have been converted to a 100-point scale based on three indicator categories: economic, environmental and social.

**Sample: Choice of countries**

The rankings of a selected group of 20 countries were placed in the context of a larger pool of 100 or more countries, except in three cases where slightly fewer than 100 countries were ranked. The 20 countries specifically named in our ranking table include those in the G8 group, the BRIC countries, all Anglo countries, some high-performing European countries, Thailand, and Singapore. The inclusion of the G8 group and the BRIC countries requires no explanation given their economic and political significance. The Anglo countries are included to test the proposition implicit in Bergsteiner and Avery’s (2012) paper that rankings for these countries tend to be overstated due to ideological biases and methodological flaws. Several high-performing European countries and Singapore are included for comparison purposes because they rank very highly on the GCR notwithstanding that study’s flaws. Their relative performance therefore becomes all the more interesting when the flaws are removed. Thailand is included because the Sufficiency Economy Philosophy (SEP), promulgated by the king of Thailand in response to the 1997 East Asia crisis (Panyarachun 2011), stands in sharp contrast to strictures imposed by the IMF that clashed with the SEP and that Stiglitz (2002) termed “market fundamentalism”. There are many other countries that could have been included in our list of 20 named countries for one reason or another (e.g. some or all of the G20 countries); however, the main purpose of this paper is to test Bergsteiner and Avery’s (2012) proposition that out of a pool of 100+ countries, the ranking of the Anglo countries would slip significantly when certain ideological and methodological flaws were removed. A specific mention of all 100+ countries is not necessary for this.

**INDICATORS**

A brief discussion of each of the economic, environmental and social indicators that make up the composite ranking scale follows.

**Economic indicators**

A reasonably large range of economic indicators was included because reducing country performance to one or two metrics can be misleading. For example, Sapir (2006) analyses Europe’s economies on the basis of just two metrics – efficiency (i.e. sufficient incentive to work, keeps employment high) and equity (i.e. the risk of poverty is kept relatively low). Sapir concludes that the Nordic model manages to combine equity and efficiency, the
Anglo-Saxon models are efficient but not equitable and the “continentials enjoy far more equity but far less efficiency” (p.380). Our analysis does not support this conclusion but suggests that the US and the UK are neither efficient nor equitable, and that both the Nordic and the Continental models are far more equitable (see GINI Index) and perform far better economically (see average of economic indices in Table 4) than current research suggests. Indeed, even on Sapir’s solitary proxy for efficiency – unemployment – our analysis shows that the Nordic/Continental countries studied performed better or no worse than the US and UK. Most of the economic indicators draw heavily on World Bank definitions and explanations. Table 4 below includes 12 economic indicators that complied reasonably well with the above research methodology. Two indices require special mention, namely GDP and S&P’s Sovereign Credit Rating:

1. **Gross Domestic Product (GDP) per capita (pc):** GDP is included because of its extensive use in economics, notwithstanding its many flaws (e.g. Bergh 2009). GDP is blind to inequalities and deficiencies in factors such as health care, education and life expectancy, and it ignores the informal/grey economy. On the other hand it includes; so-called defensive expenditures that do not add to wealth (e.g. prisons, cleaning up pollution, and repairing smashed cars), the production of resources that are being wasted (e.g. packaging), and products and services that are wasteful (e.g. all poor-quality goods). In other words, it takes no account of matters that diminish per-capita wealth and human well-being, or contribute little to it.

2. **Standard & Poor’s Sovereign Credit Rating:** The scale shown in Table 2 is an average of Standard & Poor’s three sub-ratings being “sovereign local currency ratings”, “sovereign foreign currency ratings” and “transfer and convertibility assessment”. These ratings are expressed in terms of letters ranging from “AAA” (best) to “D” (worst). In all, there are 26 letter combinations. For the purposes of our table with its 100-points scale, we allocated 4 positions on the scale for each letter combinations, except for “D”, which none of the countries rated anyway. In other words, the letter combinations assumed the following numerical values (Table 2).

<table>
<thead>
<tr>
<th>SSI Value</th>
<th>Rating</th>
<th>T&amp;C Equivalent</th>
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</thead>
<tbody>
<tr>
<td>AAA 1-4</td>
<td>A 21-24</td>
<td></td>
</tr>
<tr>
<td>AA 9-12</td>
<td>BBB+ 29-32</td>
<td>BB- 49-52</td>
</tr>
<tr>
<td>AA- 13-16</td>
<td>BBB 33-36</td>
<td>B+ 53-56</td>
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<tr>
<td>A+ 17-20</td>
<td>BBB- 37-40</td>
<td>B 57-60</td>
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</tbody>
</table>

Note: T&C (transfer and convertibility) rates the likelihood of the sovereign restricting non-sovereign access to foreign exchange needed for debt service.

To get an average of three rankings for any particular country, say Thailand, which ranks “A-”, “BBB+” and “A” on the three components, we calculated the mean of the numerical equivalent values ((25+29+21)/3 = 25). This then provides the ranking for Thailand out of the 93 countries that remained after all countries with a population of under three million were removed from the sample. We then multiplied each ranking result by a factor of 1.075 to bring the results to a 100-point scale.

Note that nine of the 20 countries (AUS, CA, FI, FR, DE, SG, SE, CH and UK) rate “AAA” on the three sub-ratings and so the average rating is “AAA”, hence they all rank 1; China rates “AA-” on all three sub-ratings and so ranks 13x1.075=14. The other 10 countries have mixed ratings for the three sub-sales and so we used the formula described above.

**Environmental indicators**

Since these indicators shown in Table 5 are less well known than most of the economic indicators, we provide a brief description of them.

1. **Sustainable Society Index (SSI) – Environmental component:** The SSI ranks 151 countries on the basis of 21 indicators grouped according to three broad “dimensions” of human, environmental and economic wellbeing. The environment indicators are: air quality, biodiversity, renewable water resources, consumption, renewable energy and greenhouse gases (GhG).

2. **Ecological Footprint:** “The Ecological Footprint tracks humanity’s demands on the biosphere by comparing humanity’s consumption against the Earth’s regenerative capacity, or biocapacity. It does
this by calculating the area required to produce the resources people consume, the area occupied by infrastructure, and the area of forest required for sequestering CO\textsubscript{2} not absorbed by the ocean” (Living Planet Report 2012:36).

3. **Gasoline Consumption per Capita**: Road sector gasoline fuel consumption expressed per capita (kg of oil equivalent).

4. **Carbon Footprint**: Refers to GhG emissions (CO\textsubscript{2}, CH\textsubscript{4}, N\textsubscript{2}O, and F-Gas) from a variety of sectors including energy, industrial processes, agriculture, waste, bunker fuels, land use change and forestry.

5. **Domestic Material Consumption Indicator (DMC)**: DMC refers to the total amount of materials directly used in the economy from domestic extraction and imports, minus materials that are exported. Very broadly, materials of domestic origin comprise the three main groups of minerals, biomass and fossil fuels, whereas imports are classified in terms of the materials that go into their production and packaging.

6. **Material Footprint (MF)**: Proponents of this measure argue that for both national accounting and national comparisons the MF provides a more accurate assessment of resource productivity than DMC because it includes upstream raw materials related to imports and exports originating from outside the domestic economy (e.g. Wiedmann et al. 2013).

7. **Genuine Saving or Adjusted Net Saving (ANS), pc**: Although ANS is often used as an economic indicator, this measure is included under environmental indicators because genuine or adjusted net saving is a sustainability indicator building on the concepts of green national accounts. ANS measures the true rate of savings in an economy after adding investments in human capital minus the depletion of natural resources and damage caused by pollution. Among several other benefits, this metric makes the growth – environment conflict explicit, since countries focused on short to medium term growth at the expense of their own future will be identifiable by their depressed rates of ANS. For Switzerland, Germany and New Zealand we had to use 2006, 2007 and 2006 data respectively.

**Social indicators**

Since the social indicators in Table 6 are also less well known than most of the economic indicators, we provide a brief description of them:

1. **Sustainable Society Index (SSI) – Social component**: The SSI ranks 151 countries on the basis of 21 indicators grouped according to human, environmental and economic wellbeing dimensions. The social indicators are: sufficient food, sufficient to drink, safe sanitation, healthy life, clean air, clean water, education, gender equality, income distribution, good governance.

2. **GINI Index, Distribution Family Income**: The GINI index measures the degree of inequality in the distribution of family income in a country and plots the cumulative family income ranging from the poorest to the richest. Perfect equality is rated at zero (zero difference between all) and perfect inequality would be 100.

3. **Obesity (Body Mass Index – BMI)**: Obesity is defined as an adult having a BMI equal to or greater than 30.0. For most people, BMI provides a convenient indicator of body fatness and identifies weight categories that may be prone to health problems.

4. **Life Expectancy at Birth**: The average number of years to be lived by defined groups of people born in the same year, if mortality at each age remains constant in the future. Life expectancy is an indicator of overall quality of life in a country and is used in various actuarial measures.

5. **Happiness Ranking (World Happiness Report)**: This ranking represents the composite total of seven sub-scales: a so-called base country ranking, GDP per capita, social support, healthy life expectancy, freedom to make life choices, generosity and perceptions of corruption.

6. **Maternal Mortality Rate (MMR)**: MMR is the number of female deaths per 100,000 live births per year from any cause related to or aggravated by pregnancy or its management, apart from accidental or incidental causes. According to the CIA’s World Factbook, it includes deaths during pregnancy, childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, for a specified year.

7. **People in Prison or Jail**: The International Centre for Prison Studies records the number of prisoners held in 222 independent countries and dependent territories. (Small countries have been deleted from the sample.)
RANKINGS NOT USED

We excluded several rankings from our composite table because of one or more of the flaws identified above. Table 3 depicts which flaws a particular ranking was prone to. Space constraints prevent us from providing a detailed rationale for our findings here. Having said that many rankings are flawed, we found – not unsurprisingly – that the relative position of a country on our composite table moved less and less with each additional ranking. This suggests that there is fairly strong concordance between rankings that comply with our methodological framework. Inversely, a lack of concordance in extant research may be explained by biased or otherwise flawed research questions. For example, oekom (2003) drew attention to an anomaly in research investigating the link between a country’s sustainability performance and its credit rating and competitiveness. They found that “Scandinavian and Central European countries which top the sustainability rating generally had a credit rating of at least AA+, while the countries doing badly in the Country Rating, such as Mexico, Turkey and Russia, failed to score higher than a BBB. Only the USA, which in the sustainability rating of 31 countries was ranked in only 25th place, achieves a high credit rating of AAA that is unusual for a country in this position” (oekom 2003: p.6 of 8). Oekom, however, had no explanation for this anomaly. Bergsteiner and Avery (2012) also reported on this anomaly, proposing that the anomaly disappears when the US’s competitiveness ranking is adjusted nearer to where they argued it is more likely to be.

Table 3: Extant rankings and methodological flaws

<table>
<thead>
<tr>
<th>INDICES</th>
<th>Flaws</th>
<th>1</th>
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<td>Economic indices</td>
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<td>Global Innovation Index</td>
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<td>Net government debt</td>
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<tr>
<td>Soundness of banks</td>
<td>X</td>
<td>X</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Net international investment position</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Investment gross fixed</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Industrial production growth rate</td>
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<td></td>
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</tr>
<tr>
<td>Global Competitiveness Index</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Market capitalisation</td>
<td>X</td>
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<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global Index of Workplace Performance &amp; Flexibility</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Social indices</td>
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<td></td>
<td></td>
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<tr>
<td>UNICEF Child Well-being Index</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Human Development Index</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Flaw 1: Relies on independent variables
Flaw 2: Small sample size
Flaw 3: Too many small countries in sample (can be dealt with by removing them, subject to Flaw 2)
Flaw 4: Ideological bias
Flaw 5: Too much reliance on naïve perceptions
Flaw 6: Too much weighting on economic factors
Flaw 7: Data not converted to per capita measure
Flaw 8: Data lacking in relevance or applicability
Flaw 9: Failure to invert scale
Flaw 10: Transcription error

Note, where a ranking was rejected because of an obvious defect such as reliance on independent variables or small sample size, we did not investigate this ranking any further. This explains why Flaws 6, 7, 9 and 10 on Table 3 are blank. We found no reasons to reject any of the environmental indices.

ANALYSIS OF COMPOSITE RANKINGS

The next four tables depict 28 scorings grouped into economic, environmental and social themes. We first examine the three individual themes by looking at the first six and the last six countries only, and then the average scores across all 28 rankings.

Economic scores (Table 4)

The leading six countries in our group of 20 (remembering that this is in the context of scoring 100+ countries) are Switzerland, Singapore, Sweden, Germany, The Netherlands and Australia, which score 9, 14, 15, 20, 21 and 24 points respectively. Switzerland is the standout country by far, scoring in first place on 5 of the 14 measures
and second place on another 2 indices. The two dominant Anglo countries – the US and the UK – are in the bottom six of the 20 named countries. Australia stands out by having the lowest score of all countries on Current Account Balance (CAB), scoring in 100th place on the 100-point scale; however, overall it still scores in the top 6 of the 20 countries named. The UK and the US are not far ahead on the CAB score respectively scoring 98 and 97 on this measure.

Table 4: Economic scores - first six and last six

<table>
<thead>
<tr>
<th>Country</th>
<th>CH</th>
<th>SG</th>
<th>SE</th>
<th>DE</th>
<th>NL</th>
<th>AU</th>
<th>TH</th>
<th>UK</th>
<th>IT</th>
<th>US</th>
<th>BR</th>
<th>IN</th>
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<tbody>
<tr>
<td>Population in million</td>
<td>7.93</td>
<td>5.35</td>
<td>9.10</td>
<td>16.7</td>
<td>22.0</td>
<td>20.0</td>
<td>67.1</td>
<td>63.0</td>
<td>61.3</td>
<td>314</td>
<td>199</td>
<td>1205</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>4</td>
<td>1</td>
<td>8</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>44</td>
<td>12</td>
<td>18</td>
<td>2</td>
<td>39</td>
<td>66</td>
</tr>
<tr>
<td>Gross National Income (US$), pc</td>
<td>9</td>
<td>4</td>
<td>11</td>
<td>7</td>
<td>3</td>
<td>47</td>
<td>14</td>
<td>15</td>
<td>5</td>
<td>28</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Gross Nat'l Savings (% GDP), pc</td>
<td>2</td>
<td>13</td>
<td>4</td>
<td>32</td>
<td>31</td>
<td>23</td>
<td>30</td>
<td>15</td>
<td>76</td>
<td>60</td>
<td>77</td>
<td>56</td>
</tr>
<tr>
<td>Inflation Rate</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>19</td>
<td>30</td>
<td>16</td>
<td>36</td>
<td>30</td>
<td>42</td>
<td>18</td>
<td>59</td>
</tr>
<tr>
<td>Direct+PCT patent applications/mio pop</td>
<td>5</td>
<td>1</td>
<td>14</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>18</td>
<td>45</td>
<td>15</td>
<td>19</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>8</td>
<td>3</td>
<td>51</td>
<td>28</td>
<td>24</td>
<td>22</td>
<td>2</td>
<td>52</td>
<td>59</td>
<td>53</td>
<td>26</td>
<td>53</td>
</tr>
<tr>
<td>Budget Surplus or Deficit, % of GDP</td>
<td>17</td>
<td>8</td>
<td>23</td>
<td>16</td>
<td>65</td>
<td>56</td>
<td>70</td>
<td>90</td>
<td>49</td>
<td>86</td>
<td>7</td>
<td>77</td>
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<tr>
<td>Current Account Balance</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td>100</td>
<td>39</td>
<td>98</td>
<td>72</td>
<td>97</td>
<td>73</td>
<td>51</td>
</tr>
<tr>
<td>Public Debt as a % of GDP</td>
<td>67</td>
<td>93</td>
<td>41</td>
<td>85</td>
<td>80</td>
<td>30</td>
<td>56</td>
<td>89</td>
<td>97</td>
<td>79</td>
<td>74</td>
<td>64</td>
</tr>
<tr>
<td>Foreign Exch Reserve (billion US$), pc</td>
<td>1</td>
<td>2</td>
<td>10</td>
<td>21</td>
<td>20</td>
<td>30</td>
<td>27</td>
<td>37</td>
<td>22</td>
<td>61</td>
<td>35</td>
<td>73</td>
</tr>
<tr>
<td>Stock of Broad Money (billion US$), pc</td>
<td>1</td>
<td>3</td>
<td>9</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>32</td>
<td>5</td>
<td>17</td>
<td>13</td>
<td>27</td>
<td>63</td>
</tr>
<tr>
<td>Stock Direct Foreign Inv- Home, pc</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>20</td>
<td>8</td>
<td>12</td>
<td>58</td>
<td>16</td>
<td>35</td>
<td>30</td>
<td>53</td>
<td>94</td>
</tr>
<tr>
<td>Stock Direct Foreign Inv- Abroad, pc</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>17</td>
<td>6</td>
<td>18</td>
<td>49</td>
<td>14</td>
<td>24</td>
<td>20</td>
<td>47</td>
<td>72</td>
</tr>
<tr>
<td>Sovereign Credit Rating (S&amp;P)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>27</td>
<td>1</td>
<td>22</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>Average of economic indices</td>
<td>9</td>
<td>14</td>
<td>15</td>
<td>20</td>
<td>21</td>
<td>24</td>
<td>39</td>
<td>39</td>
<td>39</td>
<td>40</td>
<td>47</td>
<td>62</td>
</tr>
</tbody>
</table>

Environmental scores (Table 5)

India, Thailand, China, Brazil, Switzerland and Sweden lead the group of 20. This is not very surprising for the first four of them given their stage of development. However, this high scoring result is unlikely to continue as they grow in wealth. A study by Hertwich and Peters (2009: 6415) found that “…as nations become wealthier the CF [carbon footprint] increases by 57% for each doubling of consumption”. Notably, five of the countries in the bottom six are Anglo countries, with the US scoring lowest with a score of 91 on the 100-point scale. The high scores for Switzerland and Sweden are a considerable achievement given their advanced state of economic development. The Global Competitiveness Report does not include any environmental indices.

Table 5: Environmental scores - first six and last six

<table>
<thead>
<tr>
<th>Country</th>
<th>IN</th>
<th>TH</th>
<th>CN</th>
<th>BR</th>
<th>CH</th>
<th>SE</th>
<th>NZ</th>
<th>IE</th>
<th>NL</th>
<th>AU</th>
<th>CA</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population in million</td>
<td>1205</td>
<td>67.09</td>
<td>1343</td>
<td>199.3</td>
<td>7.926</td>
<td>16.7</td>
<td>9.104</td>
<td>36</td>
<td>17</td>
<td>53</td>
<td>83</td>
<td>313.8</td>
</tr>
<tr>
<td>Sust. Society Index (Envir. wellbeing)</td>
<td>46</td>
<td>38</td>
<td>55</td>
<td>33</td>
<td>36</td>
<td>52</td>
<td>54</td>
<td>94</td>
<td>84</td>
<td>97</td>
<td>93</td>
<td>85</td>
</tr>
<tr>
<td>Ecological footprint</td>
<td>10</td>
<td>54</td>
<td>52</td>
<td>64</td>
<td>88</td>
<td>92</td>
<td>79</td>
<td>94</td>
<td>95</td>
<td>96</td>
<td>95</td>
<td>98</td>
</tr>
<tr>
<td>Gasoline consumption per capita</td>
<td>14</td>
<td>49</td>
<td>33</td>
<td>55</td>
<td>93</td>
<td>90</td>
<td>96</td>
<td>88</td>
<td>82</td>
<td>97</td>
<td>99</td>
<td>100</td>
</tr>
<tr>
<td>Carbon footprint (greenhouse gases)</td>
<td>16</td>
<td>50</td>
<td>61</td>
<td>77</td>
<td>54</td>
<td>62</td>
<td>91</td>
<td>83</td>
<td>89</td>
<td>97</td>
<td>94</td>
<td>95</td>
</tr>
<tr>
<td>Domestic material consumption t/c/yr</td>
<td>24</td>
<td>56</td>
<td>57</td>
<td>77</td>
<td>75</td>
<td>90</td>
<td>99</td>
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<td>86</td>
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<td>96</td>
<td>95</td>
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<tr>
<td>Material footprint (tons/cap/year)</td>
<td>32</td>
<td>50</td>
<td>66</td>
<td>69</td>
<td>95</td>
<td>83</td>
<td>84</td>
<td>93</td>
<td>89</td>
<td>97</td>
<td>95</td>
<td>91</td>
</tr>
<tr>
<td>Genuine adj. net savings (Sust. Indicator)</td>
<td>5</td>
<td>17</td>
<td>1</td>
<td>61</td>
<td>8</td>
<td>11</td>
<td>53</td>
<td>51</td>
<td>83</td>
<td>25</td>
<td>50</td>
<td>74</td>
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<tr>
<td>Average of environmental indices</td>
<td>21</td>
<td>45</td>
<td>46</td>
<td>62</td>
<td>64</td>
<td>68</td>
<td>79</td>
<td>86</td>
<td>87</td>
<td>87</td>
<td>89</td>
<td>91</td>
</tr>
</tbody>
</table>

Social scores (Table 6)

Sweden, Japan, Switzerland, Finland, The Netherlands and France lead on social themes with scores of 13, 17, 17, 17, 19, and 23 respectively. Standout scores are Sweden’s two highest rankings on the Sustainable Society Index and the GINI Index. The US shares the lowest six scores with five developing countries and has the worst possible score of 100 on the number of people in prison or jail.
Overall composite scores (Table 7)

Looking across the three themes, a consistent pattern emerges. Four European countries, and Japan and Singapore dominate the first six places of the economic and social themes. The leading environmental country by far is India (attributable to its low stage of development), followed some distance behind by Thailand and China, and then some distance further along Brazil, Switzerland and Sweden. The results across the three themes for the last six countries are more mixed; however, the US is in the last six for each theme.

In rating the economic, environmental and social themes of equal value for the composite scale, we simply used the mean of the three averages. This changed the relative positions of the 20 countries, creating a somewhat unexpected pattern. The first six positions are occupied by four European and two Asian countries: Switzerland (score 30), Sweden (31), Germany (38), Japan (39), Singapore (42) and The Netherlands (43). None of the Anglo countries are in the first six or even the first ten countries. The best-scoring Anglo country is Australia with a score of 46, and the worst Anglo country is the US with a score of 61, which is the lowest score overall of the 20 countries investigated.

CONCLUSIONS

Bergsteiner and Avery (2012) boldly asserted that the US’s high GCR ranking is substantially overstated. They proposed that the US’s high ranking, on a more objective and methodologically correct examination, was likely to lie somewhere between 30th and 60th place out of the 139 economies ranked, the equivalent of between positions 20 and 40 on our 100-point scale. The present study indicates that this was a conservative estimate. Our analysis places the US at point 61 on a 100-point scale, with scores 41, 91 and 50 on the economic, environmental and social themes respectively. The major detractor from a higher scoring is clearly the US’s extremely poor environmental record. Comparing this result with the GCR exposes a huge disparity, with the GCR’s overall score for the US being 7 on the 100-point scale, a shift of 54 points. Similarly, the UK’s and Canada’s scores appear significantly inflated on the GCI.
Ethical implications

The role of science is to discover the truth and to use these truths to improve the human condition. Unfortunately many so-called facts produced by scientists are ideologically contaminated and methodologically flawed. Perpetuating such contaminated facts, in the knowledge that they are flawed, is unethical because it reinforces behaviours and systems that may materially, socially, psychologically and environmentally impoverish individuals and societies. Unfortunately, as we have shown, many country rankings are based on data that our analysis shows to be irrelevant, biased and/or incorrect. This (mis)leads key decision-makers and the public at large to make and accept poor decisions. The results can be catastrophic as the 1997 East-Asia crisis and the 2007–2008 Global Financial Crisis showed.

REFERENCES


ABSTRACT
Organisations are increasingly being asked to respond to local environmental issues, however, due to competing interests, initiatives that are led by organisations can often be viewed with skepticism and mistrust. In addition, research on organisationally led initiatives to respond positively to environmental issues is lacking. Using qualitative methodology, this case study explores the drivers of a successful sustainable water allocation strategy implemented in the town of Griffith NSW, part of the Murray Darling Basin in Australia, facilitated by the local irrigation authority. Content analysis indicated that community engagement in the initial planning and scoping phase was an important step in fostering support and project success. Furthermore, equity in engagement, and facilitation via a combined top-down/bottom-up management style, increased trust. Organisational understanding of the needs of each stakeholder group appeared to generate better engagement in the project, regardless of project outcomes, indicating that authentic consultation was a significant factor. This research suggests that increasing openness and transparency between the organisation and community has a strong connection to an organisation’s successful facilitation of environmental sustainability and that, given the appropriate stimulus, communities can “emerge” their own sustainability.

Keywords: Murray Darling Basin, sustainability, stakeholder engagement, organisationally led initiatives

INTRODUCTION
Organisations are increasingly being asked to respond to local environmental issues, however evidence designed to guide organisational responses is limited. This study asks whether organisations can act as a resource to drive sustainability within communities, and what impact organisational stakeholder engagement may have on local environmental issues. The present paper is a case study of a town in the Murray Darling Basin (MDB) in Australia, and demonstrates how the actions of a water authority in the local area assisted the community in “emerging” its own version of sustainability, which included social and environmental aspects of sustainability.

Corporate social responsibility (CSR) and Corporate Sustainability (CS) have received much attention from scholars for more than four decades (Margolis and Walsh 2003; Linnenluecke and Griffiths 2013) and is widely recognised to be ambiguous and a complex umbrella term of contested meaning (Matten and Moon 2005). CSR can be defined as organisational activity referring to “the firm’s consideration of, and response to, issues beyond the narrow economic, technical, and legal requirements of the firm” (Davis 1973, p.31) and is argued to be a tool organisations all over the world use in an attempt to redress social ills (Margolis and Walsh 2003). The majority of this research however, tends to focus on the relationship between corporate financial performance and CSR i.e. the “business case”. It fails to address the environmental and social aspects of sustainability, and to advise organisations on what they should actually do. In essence, the problem is the amount of complexity, for organisations and for the communities they interact with.
THE COMPLEXITY OF SUSTAINABILITY

Sustainability has been acknowledged as a complex problem, not only for communities, but experts and organisations as well (Metcalf and Benn 2013). This complexity arises from the notion that sustainability occurs as part of a larger system, incorporating organisations, society, and the environment as agents (Loorbach 2010). Thus achieving sustainability calls for transformation of the entire system through innovation, rather than a change in one segment or agent of the system (Gaziulusoy, Boyle and McDowall 2013).

System innovation is defined as “a transition from one socio-technical system to another” (Geels 2005, p.2) and occurs when society shifts fundamentally from one way of doing things to another, for example, the evolution of transportation from horse and cart to cars (Gaziulusoy et al. 2013). These types of fundamental transitions impact not only individuals in terms of lifestyle, and experience with their environment, but also organisations in terms of product development, innovation, and business direction. Furthermore, these transitions ultimately impact society at large as they drive changes in markets, legislation, and the development of cultural and social norms (Gaziulusoy et al. 2013). A requirement of effective system innovation is therefore argued to be addressing the needs, rewards, and expectations of all agents operating within that system (Berkhout 2002; Kemp and Rotmans 2005; Geels 2006; Sartorius 2006).

Addressing these needs however, is problematic, particularly for organisations. In terms of system innovation towards sustainability, there is a lack of applied research into the relationship between business operation and the larger systemic changes at the societal level (Korhonen and Seager 2008). What little research exists tends to favour creating business cases for organisations to participate in sustainable initiatives, rather than the impacts these have on society at large (Parrish 2010). In other words, organisations that proactively engage in incorporating sustainability initiatives within their business, tend to do so to ensure meeting regulatory requirements, maintain a standard of legislative or industry compliance, or engage in more efficient and cost-effective methods of conducting business (Gaziulusoy et al. 2013), rather than as a result of knowing that an innovation will impact larger sustainability issues such as climate change. Motivations for moving toward sustainable practices are then largely driven by the need to respond to external pressures (Ervin et al. 2013) rather than a sense of “global” or environmental responsibility.

Complex problems are defined as those which require large-scale problem solving, are inter-connected, and dynamic in nature (Metcalf and Benn 2013). They involve limited insight or transparency into the relationship between connections, and for which a linear solution is impossible, thus necessitating various solutions to various aspects of the problem (Metcalf and Benn 2013). The complexity of sustainability is argued to have multiple levels that include environment, economy and society (Holling 2001). Therefore, rather than being organisationally driven, successful truly sustainable innovation needs to include the perspectives of all of these agents (Espinosa, Harnden and Walker 2008). Given the interconnectedness of these agents, and the dynamic nature of achieving sustainability in terms of environmental and social changes, neither of these agents can be substituted as all need to be well considered in order to achieve sustainable outcomes (Gaziulusoy et al. 2013). In essence, taking only self interested action is unlikely to provide a sustainable human future in and of itself.

According to Metcalf and Benn (2013), organisational sustainability requires organisations to look beyond immediate organisational boundaries, including financial interests with the understanding of operating within a wider system such as the environment.

THE CHALLENGES OF ORGANISATIONS TO BE SUSTAINABLE

Since 1972, the majority of CSR research has focused on the relationship between CSR and organisational financial performance (Margolis and Walsh 2003; Linnenluecke and Griffths 2013), or proving the “business case”. Financial growth is important for organisations, and also assists the community on which the organisation then depends for workers. Profit-making organisations are sustainable in at least one sense: they produce goods and services, provide employment, and increase shareholder value, which in turn demonstrates at least some increase to social welfare. The financial sustainability of organisations is therefore at least one component in providing long-term benefits for social wellbeing (Linnenluecke and Griffths 2013), but is it sufficient? Despite the increasing body of published work investigating the many facets of CSR and organisational financial performance, we are yet to arrive at an answer to the question posed by Margolis and Walsh (2003) as to what impact, if any, CSR has on society.

Orlitzky, Schmidt and Rynes (2003) claimed “breakthrough” evidence of a positive link between CSR and financial organisational outcomes after their meta-analysis of CSR studies up to that time. By quantitatively
combining 52 studies, Orlitzky et al. (2003) demonstrated a convincing case for CSR’s value to organisational financial outcomes, however even they realised that implementation made a big impact. Essentially, the way you connect organisations to environmental and social issues matters. This has paved the way forward for reconceptualising the problem in terms of resolving the need for continued debate and instead focusing on looking for viable solutions, or how to implement sustainability.

In its worst form, inadequate implementation of sustainability in organisations takes the form of “greenwashing”. The academic literature on “greenwashing”, or the dissemination of information designed to mislead the public about an organisation’s environmental and social responsibility practices (Parguel, Benoit-Moreau and Larceneux 2011), indicates that organisations often provide misinformation when reporting on CSR activities (Lauffer 2003), although it may not be intentional. “Greenwashing” is generally associated with overstated or misrepresented communications about environmental activities. Often this disingenuous use of language is used to manipulate the public, for example making promises that an organisation does not deliver on (de Vries et al. 2013), rather than the blatant fabrication of statistics or details in their CSR reporting, making it difficult for regulators or the public to hold organisations to account (Vos 2009). It is questionable though as to how much of this misrepresentation is intentional and how much is due to a misunderstanding of the difficulties of implementing sustainability initiatives, as these were once seen as legitimate marketing.

Although, there are organisations that engage in legitimate and accurate CSR reporting as a marketing strategy, many organisations do not (Lauffer 2003). In addition, much of this misleading information is used in order to promote or restore organisational reputation or image (Lauffer 2003). In fact, CSR communication has been widely used as a marketing tool by many organisations to promote their business practices despite the legitimacy in their actual CSR practices (Parguel et al. 2011).

Given the complexity of sustainability, the complexity inherent in all business activities, and the impact each individual activity has on the environment (Parguel et al. 2011), it is likely that “greenwashing” is also a form of misunderstanding of how difficult sustainability is to achieve. Perhaps, it is no wonder that organisations have opportunity to either willfully or inadvertently provide misleading CSR information, or that the public and other various stakeholders find it difficult to determine an organisation’s legitimacy in their CSR reporting practices. It is simply much more complex than organisations are used to dealing with.

In support of this is CSR’s links to organisational reputation, which has been argued as one of the highest regarded intangible assets an organisation can have (Dangelico 2013), particularly in regard to the implications for stakeholders as described in stakeholder theory (Freeman 1984; Mitchell, Agle and Wood 1997). The problem for organisations is that strong organisational reputation appears based on trust. Trust, which for better or worse, can be created or destroyed through corporate responsibility initiatives, and the communication of these to the public at large (Lewis 2003). An organisation’s reputation reflects an organisation’s values and promises to their community (Lewis 2003). Disclosing environmental policies in annual reporting has been found to increase environmental reputation (Toms 2002). Reputation impacts market value, and is perceived as having economic value (Chauvin and Hirshey 1994; Unerman 2008). In addition, recent studies have indicated that a reputable environmental image can provide organisations with competitive advantage with consumers (Salama 2005).

According to Campbell (2006), the likelihood of organisational engagement in corporate social responsibility rests on the following motives: well-defined and regulated legislation; embedded systemic industrial self-regulation practices; and pressure from community groups, investors, stakeholders, or the press. Furthermore, industries in which sustainability is normalised tend to also be more motivated to engage (Campbell 2006). It therefore seems clear that unless there is a business case for engagement in CSR initiatives, which is then promoted by society or industry, organisations are unlikely to engage.

This evidence indicates that organisations tend to react to, rather than be the driver of, sustainability initiatives. Although community pressure has steadily increased over the last 15 years with individuals demanding increased transparency and responsibility from organisations in terms of their CSR and obligations to society (de Bakker and den Hond 2008; de Hond, de Bakker and de Haan 2010), given the scope of resources available to an organisation, and the obligation an organisation has to the community in which it operates, it would be beneficial for organisations to operate independently of this pressure. In addition, it would be useful if researchers were able to advise organisations on what that operation should be. The question that remains is still: what impact do organisationally driven CSR strategies have on society?
THE CHALLENGES FOR COMMUNITIES TO ENGAGE IN SUSTAINABILITY

Just as local communities struggle with the impact many businesses have on their local environments, they have also long struggled with implementing sustainability initiatives themselves (Summers et al. 2014), and in particular, the equitable management of common-pool resources (Anderies et al. 2011).

Scholars in this field believe that the common-pool resource dilemma rests on the assertion that every individual is invested in benefiting from harnessing common-pool resources without making any sacrifices, based on the expectation that others instead will make that sacrifice in their place (Anderies et al. 2011). Continuing to exhaust the planet of its resources however, is unsustainable (Keikkurinen and Bonnedahl 2013) and individuals need to work together to better manage the planet’s resources.

According to Conrad and Hilchey (2011), community engagement in the sustainable management of natural common-pool resources increases when information of anthropogenic or “man-made” impacts on the environment have been clearly communicated. In other words, communities are more likely to respond to, and take action on ensuring the sustainability of common resources when there is a clear understanding of the effects that particular community has had on the environment. Given that the individual is in essence “self-interested” (Hardin 1968), shedding light on anthropogenic activity appears to be the lynchpin for getting communities to work together on sustainability initiatives.

Community education programs targeting sustainability however, have had mixed results. According to Huey-Li (2006), the environmental education movement has polarised the ethical, political and pedagogical values within communities, with some proposing respect for nature and the resources it provides by minimising impact, and others who promote optimal natural resource use to protect economic well-being. Many of these educational initiatives have particularly polarised the farming community who know water is necessary for economic survival while also recognising the environmental impact of inadequate water resources (Lemly, Kingsford and Thompson 2000).

Educational programs may also be problematic if a top-down approach is used. An investigation of cattle farmers in the Macquarie Marshes, Australia, found that the farming community was somewhat less receptive to education on equitable water allocation practices due to the directive nature of the communication strategy (Lemly et al. 2000; Stewart and Jones 2003). Although farmers acknowledged the devastating environmental effects extraction of water for irrigation had caused, they continued to state that water was wasted if diverted to wetlands, and that their current methods provided more economic benefit to communities over ecological sustainability (Lemly et al. 2000; Stewart and Jones 2003). Local-level management approaches are thought to spur the development of social capital, being the benefit derived from individuals cooperating as a group, and a shared dependence on the common resource, allowing for more successful establishment of, and adherence to policy (Acheson 2006).

Bottom-up approaches can also be problematic. Research has indicated that purely bottom-up approaches often fail due to the lack of legislative and government support, while also lacking the credibility and organisation necessary to drive and implement change (Mullen and Allison 1999; Bradshaw 2003; Conrad and Daoust 2008; Sultana and Abeyasekera 2008). A review of case studies on the management of natural resources revealed that a “collaborative governance” approach, whereby decisions were governed by a board and included all sectors of community, was more likely to develop social capital and yield more desirable outcomes, compared with a purely top-down directive, or bottom-up community driven approaches (Conrad and Hilchey 2011). These findings indicate that an isolated governance structure or an isolated community driven approach is problematic, making broad stakeholder involvement necessary for environmental strategies (Conrad and Hilchey 2011).

Given that sustainability, and more specifically common resource management, has been identified as a complex problem, attempting to resolve resource problems without larger stakeholder involvement is impractical. In fact, research indicates that the act of collaborative problem solving for complex problems yields far superior results than single stakeholder group involvement (Zurba et al. 2012). Broad stakeholder involvement also assists with the development of social capital and trust (Beunen and de Vries 2011). According to Pretty (2003), social capital and trust is developed through strong social networks between stakeholders of various community groups.

A recent study investigating sustainable water allocation through community engagement, found strong social capital amongst members within the same community groups, but little to no social capital between members of different community groups (Memon and Weber 2010). Due to scepticism of the political and economic
motivations of various sectors, this community was unable to effectively resolve their resource disputes (Memon and Weber 2010). Social capital and trust may therefore, be a key component of the behaviour change process in relation to sustainability.

Hence, communities with strong social capital appear to collaborate, be more informed, create ownership, and be better able to resolve community disputes (Daniell et al. 2010). In a study exploring community participation and decision-making on wind energy projects, Loring (2007) found that involving community in the decision-making process facilitated more constructive and proactive methods to generate publicly accepted solutions. Specifically, community was most engaged when each sector believed their views were represented, and their needs and goals were clearly defined and communicated (Loring, 2007). This study demonstrates that where there are mechanisms that can be used to assist communities in generating sustainable outcomes, and at least one of these is the collaborative process, it may have been an important precursor to achieving agreement, cooperation and behaviour change.

THE CURRENT CASE STUDY

To investigate the connection between organisation and communities, the current case study explores a “positive” case in the Murray Darling Basin (MDB), often referred to as “Australia’s food bowl” (Figure 1).

Figure 1: Map of Australia illustrating the Murray Darling Basin

The waters of the MDB are among the most heavily exploited natural resources in Australia (Kingsford 2000; Frazier and Page 2006) due to the chronic overharvesting of water from both agricultural and local community sectors (Laurance et al. 2011). Exploitation has led to the decline of many plant species (Colloff and Baldwin 2010), along with a decline in the migration and breeding of wildlife (Loch, Bjornlund and McIver 2011). Due to inter-jurisdictional debates over water allocation, human interference, and volatility of average rainfall (CSIRO 2007), the problem shows little signs of abating. Much of the environmental degradation in the MDB over the past 20 years has been attributed to over-allocation of water resources (Jones et al. 2002), through extracting more water from the ecosystem than the ecosystem needs to ensure survival (National Water Commission 2009). The majority of this over-allocation is attributable to consumptive uses for the purposes of agriculture. Consumptive uses are also those which drive economic benefit as a result of irrigation (Lemly et al. 2000).

The need to use fewer resources and change human consumption practices is clear (Brownlee and Kueneman 2012) however little is known as to “how” to do this. Research on adopting sustainable water allocation practices is scarce, and that which exists has widely varied outcomes (Conrad and Hilchey 2011). This lack of knowledge impacts most heavily on the authorities responsible for managing water resources, including the Murrumbidgee Irrigation Authority (MIA) as discussed in this case study, including how to manage stakeholders such as community, farming and environmentalists.

Given the nature of the debate across the political, social, and cultural arenas, this study aims to explore whether organisationally led initiatives can enable and empower communities with the development of their own version...
of sustainability within their own local context by investigating a “positive” case, i.e. the successful management of a common resource in the Barren Box Swamp, a natural ephemeral wetland located 30km north-west of Griffith NSW in the MDB (Figure 2).

Figure 2: A photograph of the division of the Barren Box Swamp

Through retrospective interviews with all stakeholders involved in the Barren Box project, this study aims to determine whether organisationally led initiatives can enable and empower communities to develop their own version of sustainability within their own unique context. Based on the above literature review, it seems most logical to propose that transparency in the process, and engagement of all relevant stakeholders, should foster belief and trust in an organisationally led sustainability initiative. Further, engagement in the process will foster trust between various stakeholders and their competing interests, and success of the project is likely to depend on the progress of the Murray Darling Irrigation Authority (MIA) to develop this trust or mechanisms for trust. In essence, we propose that communities, given the appropriate stimulus by organisations, can emerge their own form of sustainability.

METHODOLOGY

The case

The current study investigated the successful implementation of a water saving initiative in 2006 in the MDB in Australia. Facilitated by the MIA, the success of the water saving initiative was attributed to the collaboration of all stakeholders including irrigators, government, environmentalists and local community members. So substantial were the water savings, environmental improvements, and cultural protection, that the water saving initiative was awarded the Environment and Heritage Award in the Sydney Engineering Excellence Awards and was showcased at the Sydney Powerhouse Museum throughout 2007 (Murrumbidgee Irrigation 2012). Prior to implementation of this water saving initiative, the Barren Box Swamp was subject to high water loss through evaporation, rendering it an extremely inefficient water storage facility. Furthermore, concerns of water quality including salinity and mineral build-up were evident. Redevelopment of the site enabled equitable allocation of water to all stakeholders, including the environment, resulting in significant improvements in sustainability both financially and environmentally. Redevelopment of the site involved the division of the Barren Box Swamp into three separate cells: an active storage cell to be used under a normal season the majority of the time (38% of the site), a smaller cell or intermediate cell designed to store small flows during dry periods to reduce water loss through evaporation (10% of the site), and a third cell comprising more than half of the Barren Box Swamp area (52% of the site) which was restored to a natural wetland state. Although the water saving initiative was facilitated by the MIA, the farming community was heavily involved through the negotiation of land ownership and the water licencing process. Furthermore, given the culturally sensitive heritage nature of the Barren Box Swamp, the Indigenous community was also heavily involved with the relocation, and in some cases, removal of over 1,000 cultural artifacts. In conjunction with the water saving initiative, the local Indigenous community and the MIA negotiated a Cultural Heritage Management Plan aimed at preserving sites and artifacts with Indigenous cultural significance (Murrumbidgee Irrigation 2012).

Participants

Initial telephone contact was made with the Director of the MIA to whom the researcher outlined the basis of the research and then requested the Director participate in the interview process. At the completion of this telephone
interview, the Director was asked to provide contact details of key stakeholders from various sectors of the community who were involved with, or impacted by the water allocation initiative implemented in the Barren Box Swamp in 2007. These potential participants were then contacted, briefed on the aim and method of the study, requested to participate in the interview process, and subsequently asked to recommend additional participants who they believed could provide valuable information to the study. Using this snowballing technique, the researchers were able to identify and contact key stakeholders from all sectors of community. The snowballing technique also enabled researchers to ensure that participants were representative of the community being studied and were involved in the change process itself. This snowballing technique has been successfully used in previous research to recruit participants (Angus-Leppan, Metcalf and Benn 2009).

Procedure

Semi-structured open-ended interviews were conducted with participants, these were based on an extensive literature review of the themes and issues surrounding effective collaborative processes and community trust in organisational initiatives (see Appendix A). The questions were designed to speak to the individual about their own unique experiences during the consultative process. Data was then collected, transcribed verbatim and analysed to provide concepts and relationships between themes.

Analysis

Data was de-identified, transcribed, and uploaded into the commonly used content analysis software, Leximancer (2005) for coding and analysis (Penn-Edwards 2010). The Leximancer (2005) software analyses and extracts meaning from text to identify “concepts” based on clusters of related terms within the text, providing opportunity to investigate the inter-connectedness and co-occurrence of themes in qualitative data. Output is in the form of a conceptual map illustrating the main concepts located in the data and their relationships.

The use of Leximancer (2005) ensures the researchers’ interpretations of the data do not skew the coding process. This further improves reliability of the concepts generated and their associated meanings as identified through the use of machine learning (Leximancer 2005; Angus-Leppan et al. 2009). This machine learning contains techniques adopted from the areas of “computational linguistics, network theory, machine learning, and information science” (Smith, Grech and Horberry 2002, p.1). Leximancer (2005) can either utilise a text search functionality to explore a data set and provide key themes, concepts or ideas, or alternatively perform a search of specific themes and concepts as directed by the researcher. Content analysis employs the use of the text search functionality: firstly identifying the key global themes or concepts occurring in the data, and secondly highlighting the significance of these themes as they appear. This enables the discovery of unexpected relationships within the data that researchers may not have been aware of during the data collection phase (Smith and Humphreys 2006).

Given that researchers are able to specify how many concepts and themes used in the analyses, it is therefore important to understand the nature of the settings used to generate each Leximancer (2005) analysis.

Leximancer settings used for this analysis

The entire data was uploaded into Leximancer (2005) using automatic default settings to create the initial output. Initial analysis generated a list of keywords from the dialogue to ensure the integrity of the coding process and eliminate any subjective bias or misinterpretation on the part of the researcher. This process also allows for the revelation of new ideas about the consultative process that may not have been identified in the existing literature. Leximancer (2005) was thus able to provide concepts and themes based on their prevalence and arrangement within the dialogue based on an extensive thesaurus within the software.

The initial analysis indicated distinct connections between the collaborative process and the concepts within the literature, and also revealed various colloquial themes such as “guess”, “stuff”, and “suppose” used by participants. An analysis of the transcripts revealed that these terms offered little semantic value and researchers decided to remove these from the concept list. Individual themes that were identified as being similar in nature, such as “environment” and “environmental”, “swamp” and “Barren Box”, were merged, as researchers believed these concepts did not provide a semantic difference, as ascertained through examination of the original transcripts.

Themes were then tabularised to provide a definition of each theme in Table 2 (refer end), and Table 3 (refer end) lists exemplary quotes from each sector of the community in relation to each of the themes outlined above.
**Findings**

Figure 3 Leximancer “maps” the dialogue from the 30 transcripts in terms of frequency and relationships between “concepts” (text labels) and “themes” (circles). Concepts are groups of words that travel together through the text. The “themes”, represented as spheres, group concepts with contextual similarity. The size of the themes can be adjusted; for this map we increased the size to 100% to capture all relevant concepts. The name of the theme is taken from the name of the largest concept within the theme sphere. Overlapping themes show interconnection: in Figure 3 the “environment” theme overlaps “different” and “water” suggesting that management of the environment in terms of water allocation strategies depends on communication between all stakeholders and the different issues each stakeholder group has in this context. “Different” also overlaps with “people” indicating that individuals experienced varying issues in terms of the project and environmental outcomes.

**Figure 3: Leximancer output mapping the themes associated with community collaboration from the 30 interview transcripts.**

Overall, the map demonstrates that community was not central in this project. The central theme is “involved” i.e those who were requested to participate in the communication and collaboration of ideas in terms of project outcomes, and also that the process was environment-centric with the “environment” theme in the centre of the map. Furthermore, the map demonstrates the existence of division between the project and community, and can be distinguished by two loosely linked sub-maps; the first incorporating the “sustainability”, “water”, “environment”, and “Barren Box” themes, and the second incorporating the “community”, “people” and “different” themes linked through the “involved” theme.
Farmers

There was a distinct difference in responses from farmers who sourced their water upstream of the Barren Box Swamp, to those who sourced their water downstream. The division of the swamp into 3 cells removed water from Mirrool Creek, eliminating the use of this waterway for upstream farmers “I just haven’t got the full use of the swamp water that I had before”. Downstream farmers however, expressed satisfaction with the cell division as they were able to directly order and access water from the intermediate and storage cells with little disruption to their current farming practices “how it works well for me is that they can store water for downstream in peak periods as well and not lose it going up in evaporation”. Overall, downstream farmers were happier than upstream farmers with the changes made in Barren Box “I don’t really believe there could have been much done better”. Upstream farmers however, expressed serious concerns at the beginning of the project in terms of their ability to access water.

Specifically, farmers believed their concerns were ignored as the MIA sectioned off land in the swamp without the appropriate permits or approval from the landholders “[MIA] originally put the DA [development application] in on land they didn’t own”. This essentially led to a halting of the works whilst legal counsel was sought, resulting in a substantial financial outlay by both the MIA and the landholders to ensure equity in the process “we collected money from each [Mirrool Creek farmer] and we had to engage a solicitor from Sydney to help us...it was quite costly really”. In essence, upstream landholders believed they had to fight for a fair outcome in terms of their water entitlements.

Murrumbidgee Irrigation Authority

In comparison, the data indicate that the MIA believe they discussed the project with all sectors of the community fairly and reasonably, although they did acknowledge that in hindsight the process could have been run more smoothly:

“People [at MIA] could have done a lot more work earlier to talk to these people [farmers] about what was happening in the valley and how that was going to be shared by all of the system users, not just those upstream of the swamp”.

Moreover, the MIA maintain that the instant they were made aware of discrepancies, every attempt was consciously made to include these stakeholders in the decision making process “…a lot of these arguments went along in hearings and we had to justify these in our proposal to the planning department”.

Indigenous Community

The data indicate that the Indigenous Community experienced complete engagement in the process

“...consulting the Aboriginal Land Council was one thing they did well...before anything started out there they approached the Land Council and the Land Council put it to a meeting, with the [Indigenous] community members”.

and

“...that’s one thing MIA are really big on, community consultation, and doing it in a culturally appropriate way, and they engaged our guys, all of our members, our members were given the opportunity to go out there and do some training, learn how to do the stuff, it was really good”.

They felt they were integral to project success, and believed that had they not approved the relocation of traditional artifacts from the Barren Box Swamp, the project would not have proceeded:

“...they [MIA] had to get permission to go ahead with it all, after we found all the [Indigenous] sites and that, we brought it back to the Land Council once we did the site survey and they basically put it to the land council ‘will we give them permission to do what they want to do?’ Didn’t see any harm in doing it. So it’s doing it’s bit for the town, it’s keeping the town alive, and the farmers, they need that food growing and we need the water”.

Environmentalists

The data indicate that, as a whole, environmentalists viewed the process and outcomes as fair and well considered. “I think all along they tried to get public opinion and advice. Certainly they kept the public aware of
what processes they were going through...I think it was a very open project” and “The environmental community couldn’t be better pleased I think. We now have an area set aside for environmental usage”.

**DISCUSSION**

The aim of this study was to determine whether organisationally led initiatives can enable and empower communities to develop their own version of sustainability within their own unique context. The proposition that transparency in the process, and engagement of all relevant stakeholders, will foster belief and trust in an organisationally led initiative was supported. Furthermore, the proposition that engagement in the process will foster trust between various stakeholders and their competing interests, and that success of the project will depend on the development of this trust was also supported. Finally, the proposition that sustainability within communities can occur as a by-product of using this collaborative approach to facilitate resource dispute resolution was also supported. Specifically, the difference in engagement between the two sectors of the farming community and the Indigenous community offers the strongest support for these propositions. In essence then, this study supports the notion that organisations can assist communities in developing a sustainable local context and provides perspective on the potential mechanisms for doing this.

Upstream farmers overwhelmingly expressed dissatisfaction with the changes in water entitlements, which essentially reduced access to water they previously had. Consistent with previous research, ensuring all stakeholders are fairly represented in organisational decisions was imperative when seeking alignment, alliances and cooperation amongst various stakeholders (Fassin 2012). Failure of the MIA to adequately address the concerns of these stakeholders during the initial planning and implementation process, ultimately led to increased distrust in the MIA and their motivations behind the project amongst this sector. Upstream farmers believed decisions were made irrespective of consultation, and expressed a sense of unfairness in the process. Hence these stakeholders perceived a shift from a consultative approach to a purely top-down directive approach, which the literature has demonstrated is likely to be inefficient in terms of community behaviour change (e.g. Lemly et al. 2000).

Change amongst the Indigenous community however, was created in a consultative manner. The MIA focused on transparency during consultations, ensuring respect and consideration for the Indigenous community in the process. Engaging the Indigenous community through the Land Council at the very beginning of the project appeared to develop trust between these two groups, and a sense of fairness in the process. Although some researchers may argue that bottom-up approaches are problematic (e.g. Bradshaw 2003), it is clear that, in this case, including the Indigenous community in the decision making process led to favourable project outcomes.

Including all sectors of community in negotiations also appears to assist in the development of social capital and trust (Pretty 2003), facilitating problem solving and the formation of alliances between various stakeholders (Bodin and Crona 2009). Throughout the process, the MIA believed they had engaged all stakeholders in the change process. Strong relationships had been formed with the Indigenous community, and downstream farmers appeared to be approving of the proposed changes in water entitlements. These changes however, impacted both of these stakeholder groups favourably. Upstream farmers however, would receive a reduction in their entitlements and thus did not align well with these two stakeholder groups. Consistent with previous research, failure to develop social capital and trust between all stakeholder groups appeared to lead to increased scepticism and problematic negotiation processes (Memon and Weber 2010). Had the MIA been clear on the different types of stakeholders, including upstream versus downstream farmers, and had they measured and managed trust across the stakeholder groups during the change process, barriers to change may have been identified and addressed more appropriately to ensure consistency in engagement levels across all stakeholders.

Interestingly, the dissatisfaction of upstream farmers was directed towards the process rather than project outcomes. In fact, all of the participants interviewed unanimously agreed that the project was successful as a “great water saving initiative”. However, the failure of the MIA to include these stakeholders, the upstream farmers, during the initial planning process limited the initial development of trust necessary for an effective negotiation process for that group, which the MIA was ultimately required to resolve.

Identifying and resolving barriers to stakeholder engagement appears to be essential in the initial stages of the change process. Decisions made at the beginning of the planning process in terms of community engagement, influence the formation of social networks, their evolution, and the ability for organisations to overcome potential problems (Beunen and de Vries 2011). After the initial planning stages, the MIA recognised that upstream farmers were disengaged with the proposed changes, and attempted to rectify this. However, these attempts proved problematic: upstream farmers became sceptical of the process and the intentions of the MIA,
believing the MIA was intentionally evasive in order to obtain land and pumping rights without subsidising the landholders who rightfully owned them. Engaging these stakeholders from the very beginning may have reduced scepticism, particularly with regards to mistakes or oversights with the planning approvals process, and may have eliminated the need to engage costly legal resources and the delay of the project.

The contrast between upstream and downstream farmers also lends support to the propositions of the study. Participatory processes appear to be best devised by ensuring all stakeholders are involved in the process (Hourdequin et al. 2012). As downstream farmers felt involved, they were free to communicate their views, and understood the benefits and risks associated with the proposed changes, they were engaged from the beginning of the process. Downstream farmers were also more inclined to promote the added benefit of efficiencies in water savings for both consumptive uses and the environment. An important distinction between upstream and downstream farmers however, is that changes would enable downstream farmers increased access to water during dry periods, whereas proposed changes would reduce current water entitlements for upstream farmers. Again, placing greater emphasis on engaging upstream farmers from the beginning of the process could have potentially increased project success with some alteration that could assist them.

The data for the current study indicate that the project was also environment-centric, with environmental outcomes occurring as a consequence of pursuing social goals, i.e. equitable access to water for all stakeholders. It is difficult to encourage stakeholders with vested interests in a common resource, and one on which their livelihood depends, to put environmental benefits ahead of financial outcomes. According to Gibson (2012), persuading organisations to balance financial outcomes with environmental outcomes by viewing the environment as a stakeholder is an impossible feat. Instead, Gibson (2012) theorises that organisational focus needs to be directed towards human sustainability through resource preservation, combined with stakeholder management principles of avoiding unnecessary harm. Similarly, stakeholders in the Barren Box swamp area saw the change process as beneficial to both the community and the environment. Therefore, involving and engaging stakeholders in the process, enabling ownership of the issues, and focusing on improved outcomes for stakeholders, rather than advocating for environmental outcomes, may have been more effective.

The data clearly indicated two separate theme “sub-maps”: the first being the “sustainability”, “water” “environment”, and “Barren Box” collection of themes, and the second “community”, “people” and “different” collection of themes, which were connected via the “involved” theme, which we take to mean communication/participation channels. This indicates a disconnect between project outcomes and process. Although the project was considered to be successful by stakeholders, the process itself may not have been. Evidently stakeholders experienced a host of various issues, with communication channels driven towards improved efficiency both in terms of water allocation and environment. It is possible that if a more community-centric approach was used, rather than an environment-centric approach, this may have increased alignment.

There were several limitations in the current study. Firstly, and most notably, is the Australian context of the study and the generalisation of the findings across broader contexts. Furthermore, the initiative undertaken by the MIA was one out of necessity – water extraction had reached a crisis point following a 10 year period of drought in the region. Community values and pressure to improve current water infrastructure were not investigated and therefore may have impacted the community’s willingness to participate in the initiative proposed by the MIA, ultimately impacting their opinion on the process the MIA used. In addition, the snowballing technique used to recruit participants limits randomness (Yin 2003) and thus may have created some sample bias. Finally, the study was conducted retrospectively thus exposing the data to the potential of hindsight bias, or the tendency for recollection of favourable events over unfavourable events (Yin 2003).

The results of the current study indicate that in this context, organisationally led successful management of a common-pool resource is dependent on levels of stakeholder engagement and that organisations can assist communities in “emerging” their own sustainability with appropriate mechanisms. It supports the notion that successful stakeholder engagement is dependent on the transparency and availability of information to all stakeholder groups from the initial planning process, which ultimately influences the development of trust, social networks and the ability to identify and resolve potential common-pool resource problems. In essence, it appears as though, an investment in the development of trust amongst and between various stakeholder groups, improves the likelihood of success of the sustainability project, alongside this is the recognition that the closer the organisation is to the community the more trust it is likely to have from that community.
FUTURE RESEARCH

The current study has only begun to scratch the surface of the question posed by Margolis and Walsh (2003) in terms of organisational utility with enabling and empowering communities towards improved health and welfare, as well as protecting the natural environment. We explored the necessary drivers for effective collaboration between an organisation and community to improve sustainability and demonstrated that closer ties to community are most beneficial.

Whilst the current case is a positive case study, the question as to how an organisation selects and implements CSR strategies outside of corporate financial performance and organisational reputation motivations is yet to be explored. Given the complexity inherent in organisational structure and process, it would also be valuable to investigate whether employee or stakeholder engagement in community and environmental initiatives would impede or facilitate sustainability outcomes, it may be that the more “employees” are also “community” the more likely sustainable outcomes become, calling for an increasingly “porous” organisational boundary. Investigation into these areas would enable the development of a model which organisations can use to further enhance decision-making when implementing CSR.

REFERENCES


### Table 1: Interviewee details

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(Table adapted from Harley, Metcalf and Irwin 2012.)
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<tr>
<th>Theme</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Water</td>
<td>Water use, availability and importance within the community</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Environmental and financial outcomes as well as farming practices</td>
</tr>
<tr>
<td>Environment</td>
<td>Environmental outcomes and the current state of the local area</td>
</tr>
<tr>
<td>Barren Box</td>
<td>The geographical location of the project</td>
</tr>
<tr>
<td>Involved</td>
<td>Collaborative and communication channels from those involved in the project</td>
</tr>
<tr>
<td>Different</td>
<td>The multitude of issues people from each sector experienced in relation to the discussions around implementing the changes in Barren Box. It relates directly to communication channels and the way the project was managed.</td>
</tr>
<tr>
<td>People</td>
<td>Various individuals who were involved with the project</td>
</tr>
<tr>
<td>Community</td>
<td>Various sectors of community, emergent leaders within different sectors of community, the entire Griffith community as a whole</td>
</tr>
<tr>
<td>Theme</td>
<td>Downstream Farmers</td>
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<tr>
<td>Water</td>
<td>“they can store water in small areas and they don’t have evaporation so that we’re not losing as much water”</td>
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<td></td>
<td>“they have company savings which they pass onto shareholders which are added to our allocations”</td>
</tr>
<tr>
<td></td>
<td>“It’s a great water saving project. It’s a fairly simple project and it was expensive but I think it can be used in a lot of places around Australia”</td>
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<td>Theme</td>
<td>Downstream Farmers</td>
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</tr>
<tr>
<td>Sustainability</td>
<td>“to be profitable in the future, that I’ll be able to pass something onto my kids or the people I sell it to that it’ll be profitable” “it’s economic, it’s environmental, it’s a combination of these, it’d doing both of those things well and improving them” “to have the ability for your farming system to go into the future without degrading the environment, or the productivity of the farm”</td>
</tr>
<tr>
<td>Environment</td>
<td>“it seemed like a good idea at the time, I mean the benefits for irrigators and irrigation companies being recognised for their environmental stewardship” “it gets a bit frustrating from our point of view that when we do stuff that does contribute to the environment we don’t get the credit”</td>
</tr>
</tbody>
</table>
### Stakeholder Group

| Theme       | Downstream Farmers                                                                                                                                                                                                 | Upstream Farmers                                                                                                                                                                                                 | Murrumbidgee Irrigation Authority                                                                                                   | Indigenous community                                                                                                                                                                                                 | Environmentalists                                                                                                                                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Barren Box  | “MIA decided to split it into 3 cells to remove evaporation and save water basically, to deliver more water to shareholders”                                                                                       | “Barren Box are a natural ethereal wetland system connected to Mirrol Creek...a natural water way”                                                                                                                                                                      | “We did a lot of studies on what would be the best way to improve Barren Box’s efficiency while also acknowledging that it is a natural system and we wanted to restore its environment as much as we possibly could”                                                                 | “basically the swamp was divided into 2, to make half of it a wetlands and the other half as irrigation for the farmers around the town’”                                                                                                                                                             | “Barren Box swamps is 3200 hectares, traditionally used within the MIA system as a water storage point...being 6km in diameter and 3200 hectares we were losing a lot of water to evaporation...to the order of 23,000 mega litres per year” |

Barren Box swamps is 3200 hectares, traditionally used within the MIA system as a water storage point...being 6km in diameter and 3200 hectares we were losing a lot of water to evaporation...to the order of 23,000 mega litres per year.”
### Theme Involved

**Downstream Farmers**
- “they consulted local landholders over a period of time”
- “our local irrigation company communicated about what were going to be the benefits of those, of that efficiency thing, so there was a lead up to the work being done exactly...the timeline was a good couple of years before the work was done”
- “I think the consultation was pretty good”

**Upstream Farmers**
- “with the water licencing, they could have handled that better by communication. They knew what they were doing and tried to hide the fact we were disenfranchised within the EIS under volumes of information”
- “they could have dealt with it better by sitting down with us and sorting it out”
- “I wouldn’t say there was too much community involvement overall in the process. It was mainly dealing with stakeholders and people downstream of the swamp”
- “how to deal with water through the creek system - they haven’t dealt with that very well”

**Murrumbidgee Irrigation Authority**
- “early on in the project we spent a lot of time trying to explain how it would work, where the savings were coming from, how it would actually improve their efficiency, how it wouldn’t limit their access or reduce their access to what they’ve historically had”
- “I think particularly in communities like this trust is a very important thing. Because if you’re not trusted in a relatively small community, then you will not get the support of the people...even if they don’t necessarily like the decision that you’ve gotta make, because they trust you they’ll understand that it’s done for the right reasons”
- “you’ve got to be able to communicate to the one audience at a level that captures everyone...you need a range of communication skills from highly technical depending on the audience, down to just average day-to-day stuff that people can understand”

**Indigenous community**
- “actually approaching the [Indigenous] community, the way they went about it was good, and whenever we had trouble we actually spoke to each other so communication goes a long way”
- “they actually were upfront with the [Indigenous] community”
- “my role was very much about [Indigenous] community I suppose, consultation and information”
- “we formed a steering committee to advise so that was better because we got a lot more input from a lot of different groups”
- “consulting the Aboriginal Land Council was done well”

**Environmentalists**
- “I think working with the landholders and them understanding that their water quality is much better now because we can get it in and out quite quickly and it’s not sitting there for long periods of time and that has not impacted them at all except they’ve got improved water quality”
- “there was substantial community consultation in the project before the actual embankments were constructed. It took over 2 years that they had this whole process of environmental assessments and community consultation”

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<tr>
<th>Stakeholder Group</th>
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<th>Upstream Farmers</th>
<th>Murrumbidgee Irrigation Authority</th>
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**Stakeholder Group**

- **Involved**
- **Downstream Farmers**
- **Upstream Farmers**
- **Murrumbidgee Irrigation Authority**
- **Indigenous community**
- **Environmentalists**

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**Theme Involved**

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<th>Indigenous community</th>
<th>Environmentalists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different</td>
<td>“it was all done fairly well. We had a few issues with water licences on Barren Box. I think negotiations with them could have been done better”</td>
<td>“we had a conflict with the irrigation company who wanted to disenfranchise us so we had to employ a lawyer and get that sorted out”</td>
<td>“we spent a considerable amount of time on planning [the] project as opposed to just going and doing it...from how to bring the community on board. There was a lot of angst about doing this project because no-one likes change, particularly farmers, they don’t like change, and they saw it as a threat to their water entitlements”</td>
<td>“what we did as part of the consultation was we looked at best options, where sites had been previously disturbed, we had to ascertain what kind of information those sites had in them...that then informed the planning for the engineers and so we got as low impact as we could out of the project. We recorded about a 120 odd sites and we got consent to destroy about 10 or 15”</td>
<td>“the overall structure worked quite well because MIA had control through a steering committee but they weren’t sort of the only people involved I suppose...a broad range of people, not only community but also various scientists”</td>
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<td></td>
<td>“I think they’ve managed it fairly well...it’s working fairly well and the things that probably need to change are flood mitigation”</td>
<td>“There were a whole stack of issues with different growers along the waterways between Griffith and Barren Box, and with the effects of harvesting that water downstream as well”</td>
<td>“what didn’t work well was the NSW planning approvals process,...this was probably the first project they’ve ever had to assess that was about improving the environment. And the planning system just didn’t cope with that...what could have been done better I guess was how we explained what we were going to do...communicate, you can always communicate better and you can always engage better”</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>“There were a whole lot of stakeholders who got trampled on a bit in the EIS”</td>
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<tr>
<td></td>
<td></td>
<td>“they didn’t deal with the water licences in a good way”</td>
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<td></td>
<td></td>
<td>“from a straight out engineering point of view I think everything was handled reasonably well. I think the intended outcomes have been achieved”</td>
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<tr>
<td>Theme</td>
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<tr>
<td>People</td>
<td>“they had consultation meetings with community but I don’t think many people turned up actually. I think it was more driven by the board and shareholders”</td>
<td>“we had issues with the irrigation company and more specific to that, the president of the company, or the chairman who was supposed to be a grower representative and he was not that across it all so we had to fight to maintain the rights we had”</td>
<td>“community was absolutely engaged from the start, through public meetings, newsletters, one-on-one’s...those who were going to be particularly affected, those who lived around the swamp, they had a lot more one-on-one sessions, small group sessions to explain the process”</td>
<td>“MIA was open to discussion and collaboration, they were really good to deal with”</td>
<td>“we had regular technical panel meetings and then I would take what was discussed at those technical meetings back to the neighbouring farmers so we would have regular meetings to relay to them what was being discussed and what was being proposed and how that might impact them”</td>
</tr>
<tr>
<td></td>
<td>“The Aboriginal community had a bit to do with it because they had artifacts out there and they were brought onsite”</td>
<td></td>
<td>“in terms of the interaction with the farming community, we had a lot of engagement with the land-holders...they get very nervous about changes...that is going to impact on their ability to farm. So they were involved from a very technical level, they wanted to understand the detail behind what we were doing, they challenged quite a lot and this was a good thing, they challenged the assumptions we were using and how we calculated water savings, what that meant to their own long term future”</td>
<td></td>
<td>“there was face-to-face contact with most of the neighboring properties...we didn’t get any negative feedback that they were opposed to the project”</td>
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<td></td>
<td>“The general community, I don’t think they were all that interested”</td>
<td></td>
<td>“the broader, non-farming community were supportive of it simply because this was about shoring up the sustainability of the area”</td>
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<tr>
<td>Community</td>
<td>“local irrigators and the people most affected by it had a better understanding of how it would work, and see the benefits of it, so from that perspective it started locally from irrigators”</td>
<td>“If we hadn’t done all that planning and all of that consultation, including consultation with the Aboriginal community... we wouldn’t have had everyone on board and there would’ve been complaints, there would have been people trying to delay the process. And we wouldn’t have got it right either, we would have made mistakes”</td>
<td>“it’s been successful from building relationships, particularly with the local Indigenous community. Until that project we had pretty poor relationships with them, they didn’t trust us... we set out to include them in every step of the way, to protect, restore and preserve any artifacts that we found. We’ve now developed a cultural centre out at Barren Box, to the point they’re now bringing other cultural artifacts and putting them out at that centre, moving them from the Land Council”</td>
<td>“I think our reporting back to the [Indigenous] community worked well. I think our establishing and developing and maintaining a partnership with MIA worked well”</td>
<td>“one of the local landholders who lived adjacent to Barren Box and obviously several of the staff were locals were also involved in the committee”</td>
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<td></td>
<td>“before anything started out there they approached the Land Council and the Land Council put it to a meeting with the [Indigenous] community... the elders were taken out and shown the place, what we found... basically the [Indigenous] community approved of what they did and the elders were a big deciding factor in that”</td>
</tr>
</tbody>
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APPENDIX A

Interview Questions:
1. What sector of the community do you most identify with? (general, farming, environmental etc)
2. How do you see your role in the community?
3. Do you work for an organisation? How do you see your role in that organisation?
4. Tell us about the time when the Barren Box swamps were altered to improve sustainability, from your perspective, what happened?
5. What was your role in that process?
6. What worked well?
7. What could have been done better?
8. How did the community interact to bring about the change? What did they do?
9. Has the Barren Box swamp process been successful in your opinion?
10. What do you like about your role?
11. Is there someone who you model your behaviour on, admire or emulate?
12. How would the people you interact with in the community describe you as a leader?
13. How (if at all) do you communicate your vision for the community?
14. What type of people skills are necessary to communicate your vision effectively?
15. Do you consider yourself a leader in your community?
16. What are your priorities as a leader? (what should a leader’s priorities be?)
17. What are your strengths as a leader? (what strengths should a leader have?)
18. What does sustainability mean to you?
19. What do you believe is the next step for the Barren Box swamps?
20. Who should we speak to next about this?
ABSTRACT

This paper will examine the activist role of women in leadership in post-Qaddafi Libya, propositioning the Courageous Followership Model as a resource for sustainable transformation. Effective sustainable leadership is activist, fully engaging with the environment, motivating others toward transformational change. Many Libyan women inspired by the Arab Spring have shown signs of social activism in which they seek dignity and hope as they work for human rights and justice.

This paper offers a first-hand account of Libyan women leaders seeking models for restructuring society on the basis of human rights and principles of justice that recognises an ethic of care and nonviolence. The challenge for conflict resolution is creating effective models which sustain free dialogue when cultural norms and political unrest reassert themselves after a period of protest. Courageous Followership, if utilised at a micro-social level with leaders, can become strong enough to counteract leaders own inner desires, creating an environment which stresses accountability, trust building and challenges thoughtfully through mutual influence and a focus on the common purpose of social restructure. How did these women effect change through courageous followership to make a difference in Libyan society?

OVERVIEW

This paper proposes the activist role of women in leadership in post-Quaddafi Libya, propositioning the “courageous followership” model as a resource for sustainable transformation. Effective sustainable leadership is activist, fully engaging with the environment, motivating others toward transformational change. The outcome of transformation raises the importance of human rights and justice, the outcome which is dignity and freedom. Sustainable leadership which transforms requires courage and the willingness for relationship building to transpire between leaders and followers to help build a better community. This requires a paradigm change away from command and control to long-term solutions where leadership and followership are one in the same.

Followership is an emerging field which defines followers as a role in the leadership process (Kelley 1992; Hollander 1993; Chaleff 1995, 2008; Shamir 2007; Carsten et al, 2010; Fairhurst and Uhl-Bien 2012). This puts followership at the same level as leadership. In order to effectively motivate others toward transformational change, it is necessary to “reverse the lens” of leader-follower beyond a hierarchical role which puts the leader at the center toward a shared role (Shamir 2007). Kelley (1992) first advocated that followership was best achieved through active engagement and courageous conscience. In theory, followers would chose to actively challenge leadership to support the values of the community or organisation. Chaleff (1995) built on this premise arguing that effective leadership is effective followership. According to Chaleff (1995), effective followership requires followers who are accountable and willing to stand up to and for the leader toward the common purpose. Chaleff (1995, 2008) informs our understanding of “courageous followership” and suggests refining and expanding this model to explore its applicability to a global framework.

According to Chaleff (2008) a possible avenue to pursue further development of this concept is to consider how being courageous in our engagement with leaders will help us prepare if one day we need to stand strong and...
challenge leadership so to allow accountable followership within the fabric of the culture. Both leaders and followers serve a common purpose where courage is presumed to be necessary. Central to this paper is modeling courageous followership to develop a culture that places the highest value on human dignity and standing up firmly against oppression (Riggio, Chaleff and Lipman-Blumen 2008, p.69). In this context followership requires partnering with leaders to achieve worthy ends and leadership means stewardship of follower’s dignity and interest.

Kellerman and Lipman-Blumen (2008) argues that human beings follow purveyors of hate and death and in doing so become purveyors themselves unless they stand up for injustice (p.67). To show courage and stand up requires a great risk. In a culture where individuals enjoy some choice over the situations in which they work and make a living the most powerful motivation for not speaking up is the fear of losing acceptance not the fear of physical survival (Riggio, Chaleff and Lipman-Blumen 2008, p.80). In post-conflict environments fear of physical survival is a real reality. Many Libyan women inspired by the Arab Spring have shown signs of social activism standing up for what they believe at great risk. These women risked it all to empower others to stand up for human justice.

Empirical research that looks at the role of followership during social restructure in the Middle East is still in its infancy stage though recent testimonies provide significant contributions towards the first-hand accounts of those experiences. This paper aims to highlight and propose a model, as presented in Figure 1, which could be used to help educate other post conflict women leaders to strengthen the common purpose of promoting human justice.

This model proposes that when effective leaders are present in a global context of crisis their actions allow followers to trust their intentions. In this same context effective followers become accountable and engaged. Central to the Courageous Followership model (Chaleff 1992, 2008) are five dimensions modified to meet a global context: (1) the courage to support social activism, (2) the courage to assume responsibility for the common purpose through trust building, (3) the courage to participate in transformation needed to improve the leader-follower relationship, (4) the courage to constructively challenge the group’s behaviours if they threaten the common purpose and (5) the courage to take a stand when warranted to strengthen the common purpose.

Figure 1: Global Adaptation of the Courageous Followership Model

What is common among both the leader and the follower is the outward display of courage and the acknowledgment that influence is mutual, through a common purpose which stresses the values of human justice over the desire to pursue personal power centers. “Courageous followership” if utilised at a micro-social level with leaders, can become strong enough to counteract leaders own inner desires, creating an environment
which stresses accountability through trust building. Micro-social level in this context is designated by Megas (2008) as a small group of individuals in a shared social context that impacts the larger culture. Within this environment, leaders and followers can challenge and hold each other accountable through mutual influence while focusing on a common purpose of social restructuring.

Many prominent Libyan women during and following the Arab Spring had the opportunity to leave the country but chose instead to demonstrate their courage to stand and engage others to participate in transformation. For many women, the concept of courage and trust was not well understood, as most feared daily life under dictatorship. How then were these same women able to coalesce together to affect transition toward sustainability, a fight which is still present in Libyan society today?

THE COURAGE TO SUPPORT SOCIAL ACTIVISM

Many Libyan women inspired by the Arab Spring have shown signs of social activism in which they seek dignity and freedom as they work for human justice. After the revolution Libyan women asserted themselves after experiencing the traumatic and degrading loss of human rights through Quadafii's rule. His exploitation of the female population who were highly educated and knowledgeable of western cultures has been well documented. To intimidate women he constructed jail cells in the basements of university buildings where both women professors and coeds were subjected to demoralising tactics with reports of beatings and rape.

Even after the revolution, due in part to a lack of knowledge among students regarding their new found rights of freedom and democracy, there continued to be threats of violence towards female professors, especially those with knowledge of western education practices who used contemporary learning theory and advanced curricular materials. Stories persisted of women threatened by rape and death only added to the complexity and the frustration of university trained Libyan women. These women advocated for change and demanded dignity for their students and people but were muzzled in the process. New hope arose when Quadafii’s regime was toppled and a sense of freedom sprung forth. Libyan women both professors and students began to find their voices and appeared empowered to now assert for change. Libyan women educators advocated for their rights and publicised their stories of trauma and fear.

They pressed for social justice and the need to create change for the sustainable transformation within the university setting. Libyan women, especially in Benghazi and Tripoli became more empowered to negotiate and engage in social action through effective leadership. This was demonstrated in a spirit of “courageous followership” in both Benghazi and Tripoli. They wish to be granted human justice; along with decision making powers something the Quadafii era robbed them.

THE COURAGE TO ASSUME RESPONSIBILITY FOR THE COMMON PURPOSE THROUGH TRUST-BUILDING

Completely eliminating the prevailing leadership structure in Libya is neither considered plausible nor desirable. Libyan women of influence helped shift a mindset that required taking orders from one sole voice to a representative collective group of change influencers. These women engaged in an intentional and self-reflective process which required shifting from a “me” perspective to an integrated “we” perspective with the goal of nurturing other effective leaders over seeking shelter outside the country.

Researchers have observed and described effective leadership as present when the actions of leaders fostered the development of others through trust-building, especially during times of transition and transformation (Burns 1978; Greenleaf 1996; Avolio 1999; Collins 2011; Wallo, Ellstrom and Kock 2013). Trust has been defined using several different perspectives based upon psychological processes, individual perceptions or expectations (Roberts and O’Reily 1974; Lewicki 1998; Kramer 1999). Trust is influenced by individual psychological processes that are influenced by the risk resulting from an individual’s uncertainty concerning the motives of others (Kramer 1999). Trust is based on others’ perceptions (Roberts and O’Reily 1974). Lewicki, McAllister, and Bies (1998) defined trust in terms of one’s expectation regarding their conduct. If trust is recognised positive expectations can be expected; if negative expectations are expected, distrust results (p.439).

In general, it can be stated that the current development of trust theory is bounded by some key perspectives, but very much open for new ideas, insights and work in the field, especially from a global context. Trustworthy behaviors and building trust during change initiatives or crisis impact change recipient’s actions. Distrust, if left alone, creates an environment conducive for retaliation and resistance. Ford, Ford and D’Amelio (2009) further highlight the importance of trust during change. “Trust is a key aspect of the relationship between leadership
and followers and an integral dynamic necessary during a changing environment. Leaders who have repaired damaged relationships and restore trust, both before and during change, are less likely to encounter resistance than leaders who do not” (p.365).

PARTICIPATE IN TRANSFORMATION TO IMPROVE THE LEADER-FOLLOWER RELATIONSHIP

The post Quadaffi era led many Libyans to return to their country to bolster leadership and to guide educational reform. Many leaders in the health and education could have chosen to immigrate but chose instead to stay and contribute their talents to rebuilding of the country they so dearly love. Their hope is in the new generation. They created trust with the young people who had initiated the Arab Spring and who participated in the overthrow of Quadaffi’s regime. Building trust was a key component of success if positive change development was to occur and if risk of retaliation and resistance was to be diminished. Experienced Libyan women academics mentored young women and engaged them in leadership activities to improve relationships and transform. Libyan women seek a vision for seeking models to restructure society on the basis of human rights.

They have empowered themselves and others to say “enough is enough” and “war and violence must stop” while at the same time demanding their birth right of dignity. Such forthrightness is evidenced by the number of Libyan women willing to engage in social activism in Benghazi and Tripoli to transform others. In several instances, women have taken to the streets, heads held high with their children in tow. Dignity, that inherent value or birthright, and hope penetrate the very core of these women leaders which trumps any desire for personal power and allows these women as this paper shares to be courageous to transform the relationships of themselves and others.

THE COURAGE TO CONSTRUCTIVELY CHALLENGE THE GROUP’S BEHAVIORS IF THEY THREATEN THE COMMON PURPOSE

According to Alter (1994) and May (1988), courage ignites leadership. It challenges those who disguise truth to expose the mask and face reality as it is. Courage confronts the fear of the new and the unexpected, the fear of eminent danger, the fear of isolation and separation, the fear of difficulty and pain. “Life for people overly concerned with status and honor, therefore, lose openness and compassion in its anxious grasp at certainty and security” (Alter 1994, p.95).

During interpersonal conflict, an individual primarily focuses on what they expect to gain from the situation in accordance with their own goals. Thomas (1992) defined conflict to be a “process that begins when one party perceives that the other has negatively affected, or is about to negatively affect something that he or she cares about.” When individuals become emotionally involved with something that is personally affecting them, the tendency is for that individual to handle the conflict situation according to their own terms.

Avoidance is the most popular approach world-wide to deal with conflict (Tjosvold 2008). Evidence, however, supports that if conflict is resolved appropriately, if leaders and followers choose to accept the need to work through conflict, conflict may strengthen relationships and communities. To state that conflict avoidance is always harmful is an unfair assumption. Filey (1975) argued that conflict avoidance requires substantial tolerance. Those individuals that tolerate the difference in others with an open mind typically engage in activities that are mutually acceptable. Not all conflict situations can satisfy completely both parties.

Quadaffi’s public display of the “Amazon Women” who were a constant presence with him was a source of degradation felt by Libyan women.

Libyan women of Benghazi specifically felt demoralised and stripped of their dignity when these public displays of exploitation occurred. When American Ambassador Christopher Stephens and several of his protectors were murdered, Libyan women accompanied by their children took to the streets in a public expression of their sorrow for the killing. They protested against violence and against violence to women. This mutual display of courage by Libyan women was not known before.

THE COURAGE TO TAKE A STAND WHEN WARRANTED TO STRENGTHEN THE COMMON PURPOSE

When followers avoid conflict, they are allowing themselves to be bystanders0 (Gerstein and Shaw 2007). Bystanders are usually witness to inefficiencies which they could challenge in order to help improve the
situation but often are afraid of engaging through constructive conflict. It has been found that bystanders are afraid of the costs associated with becoming a “whistle blower.” These individuals fear for their reputation and position or safety. These individuals subjectively calculate the cost to speaking out. Bystanders weigh the upside of being right, the downside of being wrong, and the cost of not taking any action (Gerstein and Shaw 2007). If the calculation could potentially lead to failure, oppression or even death, bystanders will not pursue the risk. Engagement through effective followership requires the courage to take risks and stand up for what one believes.

Followership in this context has been widely supported (Rost 1991; Dixon 2003; Baker 2007; Chaleff 2008; Kellerman 2008; Agho 2009). Being courageous in a global crisis community as a follower requires a solution to the following question: What are we to do when speaking the truth to power is risky or dangerous? During the Arab Spring, followers demonstrated courage, assumed responsibility, and actively challenged authorities by asserting their voices and presence.

Dixon (2003) argues that actions could jeopardise the common purpose if followers were unable to recognise the need for transformation. Effective followership as displayed by the Libyan women may have lacked authority but not power and influence.

Effective followership requires being engaged and accountable to leadership. According to Kanu (2009) responsibility and credibility are two of the most important elements of leadership. Credibility is developed through trust and respect. Followers need to feel that they can trust and respect their leader and their leader’s values and through this shared trust and respect become willing to be accountable. Leading women activists in this context are considered first followers. It was through their first actions group norms were strengthened. It was these women who displayed strong convictions to the common purpose and their own value system. The goal for these first followers is to change follower’s own internal estimations of their ability to influence others and generate an increased sense of agency and responsibility (Riggio, Chaleff and Lipman-Bluemen 2008, p.77). These Libyan women have lived with indignity too long and they desire a universal source of well-being and safety. They desire acceptance of their former identity, an identity the pre-Quaddafi era robbed them of and something their cultural heritage has diminished for them.

Every social and political movement such as the Arab Spring is rooted in its own cultural and religious context. Libyan women leaders in Benghazi desire for a common purpose of social restructure. This common purpose mirrors closely, The Beloved Community, a term made popular by Martin Luther King. King (1958) believed that when a critical mass of people committed to a particular goal, that goal is achievable, realistic, and could be attained. His vision was a global one, where peace and justice prevailed over civil wars and military conflict. King believed the universe is on the side of justice.

Libyan women leaders particularly in the health and business arenas are, despite mitigating, political, cultural and religious contexts, able to bring a refreshing voice to human rights and justice issues. In asserting their political will, within this past year, Libyans elected 33 women to Libya’s General National Congress in the first free elections. Although small, this vote represents approximately a 17 percent representation in the 200-member transitional authority, the same percentage of women in the U.S. Congress (Herizons Fall 2012).

Quaddafi’s 41-year rule was demeaning and tragic for women in Libya, but fortunately the Arab Spring rekindled a spark igniting a torch that they hope to pass on to the next generation. During the revolt against Quaddafi’s regime women and children were the ones who designed protest signs and who joined side by side in public demonstrations. Women also took leadership roles on the National Transitional Council and pushed for changes in education at all levels encouraging students to become more knowledgeable and informed in their disciplines. Some male students had participated in reprisals against the new-found freedoms of women, but those had been effectively resisted for the most part. To their credit women are now working to establish themselves within the political and social arenas by using social media to organise efforts and form groups focused on equality issues.

So, how do Libyan women leaders pursue human rights and justice issues? The most important task, no doubt, is for all of us to become knowledgeable of their challenges and achievements. The broader international community can advocate for Arab women through inclusion in such organizations as The United Nations Committee on the Elimination of Discrimination against Women (CEDAW), an expert body that monitor’s women’s issues from around the world.
Social media now makes it possible to connect with Libyan women to stay abreast with newer developments and to share information. Twitter, Facebook, and other multi-media tools are being adopted quite readily even though most skills are self-taught.

In addition, social media continues to promote social justice and equality for women through tweets and postings of articles through organizations such as the Libyan Civil Society. A substantial number of Libyan women have studied abroad and are now mentoring and encouraging the younger generations about leadership roles they can take to ensure equal rights and social justice issues for women. Libyan women are engaged and involved in discussions at all levels. They are particularly interested in conflict prevention, building school and university infrastructure, and rebuilding Libya’s political, social and economic institutions. Libyan women are working hard to gain acknowledgement, respect and dignity as they strive to play important roles within their societies.

CONCLUSION

This paper proposes a model, presented in Figure 1, which expands previous work on “courageous followership” as proposed by Chaleff (1995, 2008). The model proposes that when effective leaders are present in a global context of crisis their actions allow followers to trust their intentions. In this same context effective followers become accountable and engaged. This model proposes that when effective leaders are present in a global context of crisis their actions allow followers to trust their intentions. In this same context effective followers become accountable and engaged.

Central to this model (Chaleff 1992, 2008) are five dimensions modified to meet a global context: (1) the courage to support social activism, (2) the courage to assume responsibility for the common purpose through trust building, (3) the courage to participate in transformation needed to improve the leader-follower relationship, (4) the courage to constructively challenge the group’s behaviors if they threaten the common purpose and (5) the courage to take a stand when warranted to strengthen the common purpose.

What is common among both the leader and the follower is the outward display of courage and the acknowledgment that influence is mutual, through a common purpose which stresses the values of dignity and freedom over the desire to pursue personal power centers. It is the hope that the applicability of this model will be expanded to explore the application in a larger empirical research study in Libya and other post-conflict regions.

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SUSTAINABLE SUPPLY CHAIN CONSTRUCT DEVELOPMENT: 
A FRAMEWORK FOR CONCEPTUALISATION AND IDENTIFICATION 
OF VALID AND RELEVANT MEASURES

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ABSTRACT

Sustainability has opened up new growth avenues for the corporate sector even during the times of global recession. Companies are now aiming to incorporate the concept of sustainability in their supply chains. However, lack of practical measures, which could address all three dimensions of sustainability – social, environmental and economic, is the main obstacle in achieving this objective. Therefore, a concrete effort is required to operationalise the construct of sustainable supply chain management (SSCM) that is deeply rooted in academic literature. The first stage in the scale development process is to conceptualise the construct domain, generate a list of items and ascertain their content validity. However, most of the supply chain research inadequately explains this stage and it is generally considered equivalent to a simple literature search. This lack of focus on construct conceptualisation and measure identification leads to flawed scales with no practical significance. Also, such scales cannot be used to further develop theories. This paper will put forward a framework for identifying valid and relevant measures for the SSCM construct. The analytical techniques, strategies and methods, used in this study, can be easily adapted to operationalise constructs in other domains.

Keywords: Sustainability, scale development, supply chain, content analysis, NVivo

INTRODUCTION

The idea of sustainability is not recent and its understanding has considerably improved in the last decade (Haugh and Talwar 2010). Its main objective is to improve the environmental and social performance of a firm in addition to the financial bottom-line (Elkington 1998; Carter and Rogers 2008). Several organisations have attempted to implement sustainability in their business processes (Baumgartner and Ebner 2010), as there is a general agreement that sustainable operations can help to achieve competitive advantage in the market (Flint and Golicic 2009; Carter and Easton 2011). However, even the most sincere efforts have only resulted in cursory solutions with insignificant improvement in the social and environmental performance of the firm (Ramus and Montiel 2005). One of the main reasons is that these implementations lack the supply chain perspective (Baumgartner and Ebner 2010; Lubin and Esty 2010). Despite the fact that the relationship between sustainability and competitive positioning is well researched, the literature lacks the insights into how a firm can operationalise sustainability in its supply chain. Consequently, researchers have concluded that, “the state of SSCM [Sustainable Supply Chain Management] implementation in practice can still be considered low” (Brockhaus et al. 2013). Therefore, there is a dire need to operationalise the concept of SSCM for a focal firm.

In this regard, it is imperative to develop a valid and reliable scale for SSCM that can help in advancing theory construction. The scale development process mainly starts with the conceptualization phase and culminates in validity tests. **Figure 1** shows seven broad steps of the process divided into three stages. In **Stage I**, the domain of the construct is outlined, a formal definition is presented, item pool is generated and content validity of measures is assessed. In **Stage II**, a pilot study is conducted on a small scale to further refine and screen the items. The questionnaire is finalised and then circulated to the target population for data collection. In **Stage III**, collected data is subjected to exploratory and confirmatory analysis to assess dimensionality, reliability and validity of the construct. However, the first stage is the most pivotal juncture in this entire process as it sets the platform for the remaining stages. DeVellis (2003, p.60) investigated the rigour of Stage I in various studies and observed that “many researchers think they have a clear idea of what they wish to measure, only to find that their ideas are more vague than they thought. Frequently, this realisation occurs after considerable effort has been invested in generating items and collecting data – a time when changes are far more costly than if
discovered at the outset of the process”. The situation is quite the same in SCM regarding Stage 1 of the scale development process. Most of the research inadequately explains the content domain specification (step 1) and it is generally considered equivalent to simple literature search; details about item pool generation (step 2) are usually neglected; and content validity of items (step 3) is often overlooked. Same findings were presented by Slavec and Drnovsek (2012) in their recent “review-paper” focusing on scale development process. They calculated that only 16.9 percent of the papers specified the domain of the construct and proposed a relevant definition; about 24.7 percent omitted the item pool generation process; and only 16.9 percent of the articles evaluated measures for content validity. The lack of emphasis on “Stage 1”, results in irrelevant measures with no practical significance. Also, constructs represented by such erroneous scales (measures and dimensions) lead to invalid and flawed theories. DeVellis (2003) is of the view that scales are not “developed” carefully, and are rather “assembled”. This is due to the absence of a systematic framework that could explain all the primary and secondary steps related to Stage 1. Therefore, this paper will propose a “construct conceptualisation and measure identification” framework. It was developed for the SSCM phenomenon but is intended to be generic in nature and easily adaptable to any domain. The remaining paper will present different steps of the framework, further research directions, and concluding remarks.

THE CONCEPTUALISATION AND MEASURES IDENTIFICATION FRAMEWORK

The framework consists of five steps as shown in Figure 1. In step 1.1, a definition of the SSCM concept was developed based on broad literature review germane to sustainability, supply chains and operations management; review of already existing SSCM definitions; feedback received from industry experts; and analysis of relevant theories. In step 1.2, the SSCM domain was carefully assessed and it was decided to treat SSCM as a broad phenomenon that is a combination of six (6) supply chain constructs. The first two steps resulted in a high-level research framework as shown in Figure 2. Next, in step 2.1, literature pertinent to SSCM was collected in a systematic manner that was then analysed using NVivo in step 2.2. This rigorous analysis of SSCM literature helped in the identification of comprehensive dimensions and measures for SSCM constructs. Finally, content validity of the measures, for each SSCM construct, was assessed in step 3.1 using the quantitative technique suggested by Lawshe (1975).

Step 1 – Content Domain Specification

Specification of the content domain is the basis for all remaining steps (Netemeyer et al. 1995), as it identifies the conceptual purview of the construct (Nunnally and Bernstein 1994).

Step 1.1: Construct (SSCM) Definition

The first and foremost step in domain specification is to develop a “broader understanding of the construct” under consideration. The main purpose is to comprehend the evolution of the construct over time; its usage by different researchers; the current description of the construct; contexts in which it is applied; and different fields that contributed to its development. This helps to identify the boundaries of the construct that would subsequently assist in developing relevant measures that could adequately capture only the domain of the construct under investigation (Netemeyer et al. 1995). In addition, a broader understanding of the literature also ascertains that no important dimension of the construct is overlooked, which is an important criterion for scale development (Nunnally and Bernstein 1994). Therefore, a comprehensive review of sustainability, supply chain and operations management was conducted which showed that although sustainability made its debut through the Brundtland Report (Brundtland 1987), abhorrence to social injustice and environmental degradation were voiced even decades before the report. Nonetheless, the efforts of the Brundtland Commission paved the way for the Rio Declaration in 1992 which proved to be the foundation stone for stimulating sustainability research across many disciplines such as materials science, engineering, energy, medicine, agriculture, environmental sciences, economics and management (Linton et al. 2007). In management, Shrivastava (1995, p.955) defined sustainability as “the potential for reducing long-term risks associated with resource depletion, fluctuations in energy costs, product liabilities, and pollution and waste management”. More recently, Carter and Rogers
Stage I: Conceptualisation & Development of Measures

Step I.1: Construct (SSCM) Definition
i. Broad Literature Review (Sustainability, Supply Chain & Operations Management)
ii. Review SSCM Definitions
iii. Expert/Practitioner Feedback
iv. Review of Relevant Theories

Step I.2: Construct (SSCM) Dimensionality
i. Identification of SSCM Constructs
ii. Reflective/Formative
iii. Ontological Issues

Step 2.1: Focused Literature Collection (SSCM)
i. Search Based on keywords “Sustainable Supply Chain” and “sustainability” AND “supply chain”
ii. Supply Chain Process-Wise Search
iii. Validation of Publication Sample

Step 2.2: Literature Analysis Using NVivo
i. Development of High Level Sustainability Themes
ii. Development of Dimensions and Measures for SSCM Constructs
iii. Validation for Completeness & Relevance (Face Validity)

Step 3.1: Content Validity (SSCM)
i. Assurance of Content Validity Through the Quantitative Procedure Developed By Lawshe (1975)

Figure 1: Framework for Construct Conceptualisation and Measure Identification
(2008) developed a conceptual high level framework for sustainable supply chain management based on the triple bottom line (TBL). Also, the European Logistics Association (ELA) has proposed a scale (Cetinkaya 2011) which was subsequently used by researchers for sustainability assessment (Soosay 2013). However, this scale is generic and lacks psychometric properties. A broader review of the literature showed that SSCM must take into consideration the end-to-end supply chain that encompasses suppliers, vendors, customers and local communities. It also clarified that within a firm, SSCM stretches horizontally and encourages collaboration of the supply chain function with other departments; and vertically by encompassing intra-organisational practices within each supply chain process that range from high-level policies to operational procedures. Thus SSCM measures can be developed in two ways: (1) The “triple bottom line (TBL) approach” can be adopted and measures pertinent to environmental, social and economic sustainability can be broadly developed irrespective of supply chain (SC) processes; or (2) The “Supply Chain Operations Reference (SCOR) model” can be used and each supply chain process (planning, procurement, manufacturing, transportation, warehousing and reverse logistics) can be separately analysed for various ecological, communal and financial measures (TBL) that could help to instil sustainability in that process and, ultimately, the entire supply chain of the firm. An “analysis of SSCM definitions” was done and it was found that many SCM researchers have narrowly defined it as “the management of supply chains where all the three dimensions of sustainability, namely the economic, environmental, and social ones, are taken into account” (Ciliberti et al. 2008, p.1580) and broadly described it as “the set of supply chain management policies held, actions taken, and relationships formed in response to concerns related to the natural environment and social issues with regard to the design, acquisition, production, distribution, use, reuse, and disposal of the firm’s goods and services” (Haake and Seuring 2009, p.285). Clearly, in many definitions, researchers adopted the process-based perspective emanating from their insights and understanding of the SSCM domain.

As the major emphasis of this research study was to develop operational measures directly applicable in industry, it was decided to obtain “expert feedback” from professionals in the supply chain domain. Consultation with practitioners in logistics, supply chain planning and manufacturing made it clear that the general TBL perspective has a strong tendency to overlook the unique requirements and setting of supply chain processes. From this, it seemed that the SCOR model would be more appropriate, as it focuses on process-wise assessment of economic, social and environmental measures. Moreover, after a thorough analysis and “review of management and supply chain theories”, it was decided to base the research framework on the Resource Based View (RBV) of the firm. RBV suggests that a firm can achieve competitive advantage due to its distinct resources that are rare, inimitable, valuable and non-substitutable (Barney 1991, p.117; Penrose 1995). According to recent research on RBV, a firm’s resources include its assets, policies, culture, knowledge, strategies, products, processes, information technology systems, human resource, equipment, and corporate relationships (Rai et al. 2006; Capaldo 2007). Researchers have also discussed RBV with the perspective of a supply chain. They are of the view that in today’s global arena, competition is usually based on “supply chain vs supply chain” and thus it can be a source of long term competitive advantage (Gold et al. 2010; Soler et al. 2010). Supply chains can develop a unique blend of the above mentioned resources which will prove to be a stronger security shield against any imitation by competitors (Kleindorfer et al. 2005; Lee and Klassen 2008; Pullman et al. 2009). According to the literature, the implementation of sustainability in the supply chain facilitates the development of high level organisational capabilities which are very specific to a firm and thus hard to imitate by other market players. Therefore, the purpose of this research study is to further extend the RBV and develop sustainability measures for each supply chain process that could provide a unique competitive advantage to the firm in the market. Based on step 1.1, this research study defined SSCM as “the strategic collaboration and coordination between a firm’s supply chain processes – planning, procurement, manufacturing, warehousing, transportation and reverse logistics and those of its customers, suppliers and service providers with an aim to maximise the environmental, social and economic value of the end-to-end supply chain”.

**Step 1.2: Construct (SSCM) Dimensionality**

Once the SSCM phenomenon was defined, its dimensions were assessed by MacKenzie et al. (2011) as per the recommendations. After much deliberation, literature review and consultation with experts, it was agreed to treat SSCM as a broader phenomenon that is a combination of six (6) different constructs, namely sustainable planning (SPlng), sustainable procurement (SP), sustainable manufacturing (SM), sustainable transportation (ST), sustainable warehousing (SW) and reverse logistics (RL). Each of these was considered a separate and standalone construct, as shown in Figure 2. This approach supports the fact that different sectors of industry have different supply chains. For instance, third party logistics providers (3PLs) mainly deal with transportation or warehousing with a small percentage of procurement functions while manufacturing companies have extensive procurement, manufacturing and reverse logistics but they usually outsource logistics to 3PLs. Thus it makes
sense to treat each construct as a discrete entity and then determine its sustainability dimensions and measures based on TBL. Finally, the literature showed that all dimensions for a particular SSCM construct should be formative in nature. This means that they all collectively make-up the construct and eliminating any one of them would impact the sustainability performance of that particular supply chain process.

Figure 2: High Level Research Framework based on SCOR model, TBL & RBV

Step 2 – Item Pool Generation

Item generation is crucial in the scale development process (Reynolds 2010) and, in this study, was completed through the following two steps.

Step 2.1: Focused Literature Collection (SSCM)

The main objective of this step was to identify dimensions and measures for each SSCM construct. Peer-reviewed SSCM research articles published during the last 20 years, from 1992 to 2012, were systematically analysed. The “filtration criteria” excluded all papers written in a language other than English, as well as papers with a strong focus on pure mathematical approaches, quantitative modelling, human psychology, political science and organisational governance. A keyword search was conducted in major electronic databases and library services such as Emerald, ScienceDirect, Wiley and Springer. Search strings consisting of the terms “sustainable supply chain management" and “sustainability" and “supply chain” resulted in 633 articles. Abstracts were perused, filtration criteria were applied, and only 231 articles were found relevant. Next, search strings consisting of <sustainable or ethical or green> and <purchasing or procurement or sourcing or transportation or mobility or logistics or warehousing or storage or manufacturing or production> were used, which produced 561 papers. Again, perusal of abstracts; application of filtration criteria; and elimination of duplications reduced the number to 115. Finally, these 346 papers were validated against the publication sample used in seminal “review papers” of Seuring and Muller (2008) and Ashby et al. (2012). Consequently, three more papers were added which resulted in a final dataset of 349 articles.

Step 2.2: Literature Analysis Using NVivo

The resulting dataset from step 2.1 was analysed through a rigorous three phased methodology which involved content and thematic analysis; inductive and deductive approach; constant review and comparison; analysis strategy suggested by Richards (2004); and use of qualitative data analysis (QDA) software as shown in Figure 3. These strategies and techniques were selected after extensive deliberation and brainstorming. For instance, NVivo was selected as it has state-of-the-art features to organise unstructured information; powerful query and modelling tools; and a user-friendly interface. Also, NVivo does not dictate a specific analysis procedure. It rather provides general conceptual elements and analytical tools so that researchers can tailor the coding mechanism according to their research design (Tesch 1990). The analysis strategy recommended by Richards (2004) was used in all the three phases. It consists of four steps: (1) interrogate interpretations; (2) scope data for profound analysis; (3) achieve saturation to ensure completeness; and (4) maintain audit trails. Thematic analysis
was used in phase I while content analysis was used in phase II and III. This decision was based on the understanding that both analyses are similar, as they allow for qualitative analysis, but thematic analysis concentrates only on the qualitative dimensions of the text while content analysis also focuses on the descriptive analysis of the attributes of selected text (Gbrich, 2007). Both analytical techniques used coding to examine data in each phase using the NVivo software. According to Lockyer (2004), coding is “a systematic way in which to condense extensive data sets into smaller analyzable units through the creation of categories and concepts derived from the data.” In NVivo, coding was done through “nodes” that may be understood as material containers or objects representing an idea or a concept. Initially, “free nodes” were developed which represented emerging themes and these were later grouped into “tree nodes” that represented various dimensions and measures for each SSCM construct.

In **phase I**, high level sustainability frameworks such as Natural Capitalism, Biomimicry, Cradle to Cradle, Life Cycle Analysis, Social Return on Investment, The Natural Step, Sustainability Helix and Triple Bottom Line were analysed through NVivo. Thematic analysis helped to develop a basic taxonomy of themes discussed in these frameworks. It became evident that, at its core, sustainability is about efficiency; risk mitigation; systems perspective; resilient enterprises; diversity of workforce; decentralisation of power, control and resources; and institutionalisation of cooperation, collaboration and competition among the stakeholders for continuous innovation. Thorough analysis showed that all the frameworks focused on the three main dimensions of sustainability – economic, social and environmental. The terminology used by them might be different but focal themes were almost the same such as biodiversity, air quality, water contamination, toxic materials, hazardous emissions, renewable resources, recycling, freedom of speech, work-life balance, child labour, regulatory compliance, transparency, accountability, risk management, cost-reduction, product design and economic value.

In **phase II**, the publication sample of the 349 papers was perused and articles were segregated into groups based on SSCM constructs. It was found that 88 papers were related to sustainable planning (SPlng), 40 papers discussed sustainable manufacturing (SM), 24 papers were pertinent to sustainable transportation (ST), 88 papers analysed various aspects of sustainable procurement (SP), 19 papers examined the reverse supply chain (RL), and 12 papers broadly discussed sustainable warehousing (SW). Also, 78 papers that generally focused on different facets of SSCM were grouped as general sustainable supply chain management (GSSCM) papers. Since the aim of the analysis was to identify dimensions and measures for each SSCM construct, seven folders were created in NVivo, and papers were imported into the software through its “data import” feature. Content analysis was then carried out, using the strategy suggested by Richards (2004). Initially, preliminary “interrogation” was done and general sustainability themes identified in phase I were used as the guiding principle to extract sustainability dimensions for each SSCM construct. For example, papers related to SP and GSSCM were coded onto the “sustainable procurement” node. Text search query, word frequency query, tree maps, tag clouds, cluster analysis and summary tables were used for analysis. The resulting ideas or themes were scrupulously studied from literature, thoroughly debated, critically analysed and incessantly compared with each other and then coded onto new free nodes. The same procedure was repeated for each SSCM construct and numerous free nodes were generated. Next, “scoping” was done which refers to profound analysis into a specified subset of data (Gibbs 2002). Each broader theme identified during interrogation was meticulously studied and further refined into many new free nodes (or codes). The scoping of data, based on constant review and comparison, continued until a clear repetition was observed in the new nodes by the authors. This actually meant that “saturation” was achieved and all free nodes sufficiently cover the SSCM construct under examination (Selden 2005). Once saturation was achieved, free nodes that represented similar technical concepts were connected with each other to form “tree nodes”. These tree nodes actually represented the dimensions and measures for each SSCM construct. Finally, “log and audit trails” were maintained in all phases to keep track of various decisions and judgements, as coding of SSCM constructs was a “highly iterative and non-linear” process". 
Figure 3: Identification of Dimensions and Measures for SSCM Constructs Through Literature Analysis Using NVivo
In **phase III**, “data triangulation” was used for “face validation” of the output of phase II.  O’Donoghue and Punch (2004) state that triangulation is a “method of cross-checking data from multiple sources to search for regularities in the research data”. Major themes discussed in the Global Reporting Initiative (GRI) framework and highlighted by companies in their annual sustainability reports were determined through content analysis and tools provided in the NVivo software. Once themes were finalised, these were compared with the output of phase II. All major inconsistencies triggered further literature review, analysis and recoding of nodes. Thus “constant review and comparison” was carried out and academic literature was rigorously examined to extract evidence for further addition, modification or deletion of codes. Consequently, valid sustainability dimensions and measures emerged for each SSCM construct.

**Step 3 – Content Validity Assessment**

Dunn, Seaker and Waller (1994) highlighted the importance of this step and stated that “content validity exists when the scope of the construct is adequately represented by the items as a group….if content validity doesn’t exist then there is no reason to proceed with the analysis because the desired construct is not being properly represented by the group of items. This means that researchers will not be able to use the scale to test hypothesis”.

Content validity (SSCM) can be determined by different qualitative and quantitative methods. It was decided to use the technique suggested by Lawshe (1975). The finalised measures were circulated among six (6) industry experts who had prior experience in procurement, logistics, customer services and supply chain planning at both operational and strategic levels. They also had extensive experience of working in cross-functional teams, both locally and internationally, with members from product development, brand, sales and human resources department. Firstly, they were asked to review each dimension of SPlng, SP, SM, ST, SW and RL. Secondly, they were requested to rate each measure (or item) to show if it was “relevant”, “relevant but not essential” or “irrelevant” to a dimension on the scale. The responses were used to calculate the content validity ratio according to the formula CVR = (n – N/2) / (N/2) where “N” is the total number of industry experts and “n” is the frequency of “relevant” responses. The CVR for each measure was checked against the table published by Lawshe (1975) to determine its statistical significance. Some of the statistically insignificant measures were dropped accordingly.

**FUTURE RESEARCH DIRECTIONS AND CONCLUSION**

The framework presented in this research paper is based on extensive academic literature related to sustainability, SCM, management theories and scale development. It walks out a step-by-step procedure for construct conceptualisation and measure identification. It also incorporates expert feedback at different steps to develop measures with sound psychometric properties and high industry relevance. It explains a unique three-phased methodology for “item generation” that is usually the weakest aspect of scale development research studies. Overall, it presents the first stage of the scale development process in a cohesive and coherent manner.

This paper also shows that the use of qualitative data analysis (QDA) software makes it possible to organise and analyse voluminous data in a strategic manner. Even though it is the decision of the researcher to select the relevant tools and optimally exhaust the capabilities of the software to achieve the research objectives, it cannot be denied that software enhances the validity of the results through a rigorous and transparent coding mechanism. Brainstorming, deliberations, critical analysis, close examination of literature, and constant review and comparison are still at the core of the entire analysis process and their value should never be underestimated; but the use of the software relieves the researchers from the worries of data organisation, storage and presentation; and enables them to focus more on the analytical part of the research. This can be seen as a leap forward in the research arena and is clearly reflected in this research paper.

This research framework is also extremely useful for academics and researchers as it can be adapted to disciplines other than SCM to generate relevant sustainability dimensions and measures. Some of the steps might change accordingly but a major portion of the framework, coding methodology, techniques and strategies will remain the same. Also, this study clearly shows that content and thematic analyses are powerful techniques that could be effectively applied to embryonic fields such as sustainable supply chain management. Further, this framework will subsequently help in expanding theory construction in supply chain literature. Researchers can use it to develop valid and reliable constructs. In addition, this piece of research has strong implications for “practising managers” as it helps to understand that SSCM is not just equivalent to green supply chains, i.e., green supply chains are a subset of sustainable supply chains. It is now observed that sustainable supply chain management is a broader phenomenon that is a combination of six different constructs that are extensive knowledge domains in their own capacity. The research framework can also be used to develop specific
sustainability measures for different types of supply chains such as services supply chains, retail supply chains, defence supply chains, government supply chains, and emergency response supply chains.

REFERENCES


EMPLOYEE ENGAGEMENT AT A FACULTY OF MEDICINE IN THAILAND

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ABSTRACT

Employee engagement has become one of the popular issues in both the business arena and in academia. It is considered an element that potentially influences an organisation to be effective, innovative, competitive, and sustainable. Sustainable enterprises aim to engage their employees emotionally with the workplace. Employee attitudes are often influenced by the work environment created by the combination of many elements. This study thus aims to examine the effect of task elements, comprising physical job resources and job characteristics; relations, including leadership and peer support; and organisational elements, comprising organisational support, reward and recognition, and procedural justice, on three dimensions of employee engagement, namely job engagement, organisation engagement, and colleague engagement. Data were collected from 2,065 employees in a Faculty of Medicine in a university in Thailand. Multiple linear regression was employed to test the result, which indicated that job characteristics, reward and recognition, and leadership have predictive power on all three dimensions of engagement. Job characteristics have highest predictive power on employee’s job engagement and colleague engagement, while reward and recognition most strongly affects organisation engagement.

Keywords: employee engagement, sustainability, hospitals, higher education.

INTRODUCTION

Employee engagement is a relatively new concept, first introduced in the business arena; its popularity then extended to academia. It received much interest from those involved in human resources management (HRM) and HR consulting firms (Shuck and Wollard 2010). It was not exactly known what employee engagement originated from. However, traced back, its use first appeared in a practitioner domain by Gallup consulting firm in 1990s (Schaufeli 2012). Leaders and managers world-wide pay close attention to engagement as it is considered an element that potentially influences organisations to be effective, innovative, competitive, and sustainable (Welch 2011). Based on global surveys conducted with CEOs, employee engagement ranked among the top-five most important goals organisations aimed to achieve (Wah 1999).

Engaged employees are those who find meaning, self-fulfillment, and inspiration in their work, and, therefore, are more dedicated, concentrated, and engrossed in their tasks. Sonnentag (2003) reported that engagement predicted in-role behaviours, proactive behaviours, and extra-role behaviours. Research has shown that engagement plays a role in creating better employee performance with Menguc et al. (2012) reporting that there exists a positive and significant relationship between work engagement and employee performance in the service industry.

An analysis conducted by Cheese and Cantrell (2005) reported that companies having engaged employees are able to build cultures that nurture motivation, commitment, and passion for work. Employee engagement tends to foster employees’ greater attachment to their companies (Schaufeli and Bakker 2004). In addition, it enhances productivity, profit, safety, and reduction of turnover (The Gallup Organisation 2001; Harter et al. 2002; Buchanan 2004; Wagner and Harter 2006). Engaged employees are also healthier, less absent and more willing to exercise discretionary effort on behalf of their companies (The Gallup Organisation 2001; Buchanan 2004; Wagner and Harter 2006). They are also more likely to create a social context that facilitates teamwork and other discretionary behaviours, which enhances the effectiveness of organisations (Podsakoff, Whitting, Podsakoff and Blume 2009), and they engender customer satisfaction and loyalty (Harter et al. 2002).
Additionally, employee engagement contributes to resilience in sustainable enterprises. Avery (2006) and Kantabutra and Avery (2011) define corporate sustainability as an enterprise having a capacity to deliver strong financial performance, endure difficult economic and social situations, and maintain a leadership position in its relevant market. Roger, Jalal and Boyd (2008) define corporate sustainability as having a capacity to balance the “triple bottom line”, which includes measuring and managing social, environmental, and economic outcomes. Most recently, Avery and Bergsteiner (2010) suggest that a sustainable enterprise is one that has excellent brand and reputation, enhanced customer satisfaction, solid financial and operational performance, long-term shareholder value and long-term stakeholder value. A sustainable corporation operates with an integrated set of business practices by not only creating a “green” strategy aiming towards the natural environment, but taking into consideration every dimension of how a business operates in the economic, social, and cultural environments. A sustainable organisation also fosters longevity through transparency and proper employee management. It endures over time and weathers inevitable organisational and economic crises.

The Sufficiency Economy Philosophy in Thailand is one approach to sustainability. It has been bestowed by His Majesty King Bhumibol Adulyadej to his subjects through royal pronouncements proclaimed on many occasions during the 65 years of His reign. It stresses a “middle” path, balance, and sustainability as the key principles for Thai people’s conduct and way of life at an individual, family, organisation, and community level (Kantabutra 2006). This philosophical framework comprises the three components of “reasonableness”, “built-in resilience”, and “moderation”; plus two underlying conditions of “knowledge” and “moral values” (Wibulswasdi, Piboolsravut and Pootrakool 2010). The philosophy of a “Sufficiency Economy” is a means toward more sustainable development to be better able to meet the challenges arising from globalization and other changes (Avery 2005). Specifically, after the Asian economic crisis in 1997 and 1998, which resulted in the bankruptcy of many enterprises in Thailand, the philosophy was recommended to cope with Thailand’s economic problems and bring about a more sustainable economy.

There are increased efforts globally to drive enterprises towards becoming more sustainable. In terms of employee engagement, research by Hewitt Associates (2009) shows that the economic environment has sparked increased interest of Canadian employers in the study and the role of employee engagement in successfully addressing challenging times. The findings suggest that organisations that invest in maintaining an engaged workforce will have greater sustainability even as turnover increases post recession. Avery and Bergsteiner (2010) propose that sustainable enterprises aim to engage their employees emotionally with the workplace. Staff engagement is one of the three key performance drivers of “Honeybee Leadership” that drive long-term organisational performance and contribute to resilience in sustainable enterprises. The above forms the background of this study, which aims to examine the effect certain elements in the work environment have on employee engagement.

The paper starts with a literature review on employee engagement, sustainability and antecedents of employee engagement. Then the methodology of the study is described, followed by its findings. Finally, the discussion is provided.

**LITERATURE REVIEW**

**Employee engagement**

Social exchange theory (SET) posits that individuals are likely to reciprocate for what they receive. SET concerns the “rules” of exchange that relationships between parties eventually evolve into trusting, loyal, and mutual commitment when one party reacts or repays to the actions of the other party (Cropanzano and Mitchell 2005). Following SET, employees tend to be more engaged when they are provided with resources by the organization. Such connection aligns with Robinson et al. (2004) who argued that engagement is a two-way relationship between an employer and employees. However, it is unclear into what aspect employees engage.

The majority of previous studies on employee engagement focused on engagement in relation to work roles and job aspects. Some researchers (e.g. Schaufeli 2012) refer to the term engagement interchangeably with work engagement. Occasionally, it is referred to as job engagement (Vaijayantti, Shreenivasan and Prabhakaran 2003). Although typically the terms “job engagement”, “work engagement” and “employee engagement” are often used interchangeably, the latter is used in this research. It is used as an umbrella term that may also include the relationship of the employee with his or her work, the organisation, and their peers. The terms “job engagement” and “work engagement” are more specific, referring to only the relationship of the employee with his or her work.
There should be a distinction to clarify with which aspect of the broader work context employees engage, for example, patients, co-workers, managers, and professional associations. According to several researchers (e.g. Purcell 2012), engagement should cover all aspects of the workplace including the job, coworkers, customers, immediate manager, senior managers, and the organisation. Hutchinson and Purcell (2010) conducted an interview with ward managers in five National Health Service (NHS) hospitals and found that the level of their engagement varied across each aspect. The majority of them had high commitment toward their patients, co-workers, and to the profession, yet low opinion toward senior managers and NHS Trust. Thus, it is doubtful whether the level of engagement of employees would score well in an engagement index notwithstanding their high engagement in their work. In addition, the outcomes of Saks’s (2006) study which decomposed employee engagement into job engagement and organisational engagement showed that although job and organisation engagement constructs were related, they are distinguishable. This is to be expected given the determinants and consequences of job and organisational engagement differ.

Further, Menguc et al. (2012) stated that employees may also seek co-workers support. Support received from colleagues is different from supervisor support in that it is horizontal rather than vertical, which could satisfy that gap in receiving support from superiors only. Additionally, employees having interpersonal interactions with their colleagues tend to find their work more meaningful and feel a sense of belonging (May et al. 2004). It is worth the effort to guide the study into co-workers dimension as well, aligning with Purcell’s (2012) argument that decent tools in measuring engagement should seek for proof at different levels, including co-workers.

This study, therefore, decomposes employee engagement into three facets – job engagement, organisation engagement, and colleague engagement. Although more than 50 definitions of engagement are offered by both academicians and practitioners (MacLeod and Clarke 2009), this study adopts the one defined by Schaufeli et al. (2001), who argued that rather than being a momentary state, engagement is a more pervasive and persistent emotional and cognitive state and behavioural readiness. This study focuses on evaluation of overall engagement, rather than brief momentary states of engagement that can fluctuate even on a single working day. In terms of job engagement, this study adopts Schaufeli, Bakker, and Salanova’s (2006: 656) definition that job engagement is “a positive fulfilling work-related state of mind that is characterized by vigor, dedication and absorption”. Employees with vigor are highly energetic, resilient, and unyielding when they encounter difficulties. Dedication entails characteristics of employees who involve themselves in work, are enthusiastic, inspired, and proud in their job. Absorption refers to the state of being immersed in work, oblivious of time passing by, and that one experiences difficulty to detach oneself from work (Salanova et al. 2005). Organisation engagement, however, differs from job engagement in that it “recognizes the firm as a social entity, a source of identification beyond the job” (Purcell 2012: 7). Colleague engagement defines engaged workers as those who exhibit prosocial behaviour (e.g., being kind, cooperative, and helping others), which are aimed at other individuals in the workplace.

**Employee engagement and sustainability**

One theoretical model “the Sustainable Leadership Pyramid” developed by Avery and Bergsteiner (2010) has proposed 23 practices that research indicates are likely to enhance the performance of a business and make it more sustainable. In their model, engagement is included among the 23 elements of the “Honeybee Leadership”. Engagement is one of the three key performance drivers which depend on the presence of some or all of the lower-level practices. Avery and Bergsteiner (2010) suggested that sustainable “Honeybee” enterprises value emotionally committed staff. High engagement levels are regarded to be an important contributor to individual and organisational performance, and a key performance driver in the sustainable leadership pyramid. In contrast to Honeybee Leadership, Locust Leadership requires only that employee relate at a rational and cognitive level to the organisation. Financial rewards suffice as motivators.

There is an abundance of literature on the relationship between employee engagement and sustainability. Much research has taken into consideration how employee engagement contributes to the way a business is conducted that enables it to be sustainable, surviving and thriving in both flourishing and declining economies. Empirical studies on this relationship also focus only on how employee engagement contributes to “green” practices aimed at the natural environment or community and local environments (Liebowitz 2010).

The distinctive contribution of this paper is that it studies three categories of employee engagement (job engagement, organisation engagement, and colleague engagement). This is often overlooked in the employee engagement literature, which tends to focus mostly on job engagement. It investigates the effects of antecedents on each employee engagement category.
Antecedents of employee engagement

Previous studies showed that employee engagement is antecedent by several factors (Saks 2006; Purcell 2012; Sharma and Raina 2013). It is important to tailor organisational practices, particularly human resources practices, to the needs of different employees in order to engage them. In this study, three groups of elements are proposed to have an impact on engagement, that is, **task elements**, comprising of physical job resources and job characteristics; **relationship elements**, consisting of leadership and peer support; while organisation support, reward and recognition, and procedural justice fall into the category of **organisation elements**.

Physical job resources

Physical job resources are critical in achieving goals and objectives (Van Emmerik et al. 2009). This includes ergonomics aids, and tools relevant to the completion of job demands. De Jonge and Dormann (2006) stated that physical job resources can be considered as employees’ source of energy when they encounter job demands. Employees having high physical job demands, presumably, tend to have less complaints when equipped with physical job resources (de Jonge, Dormann and Vanden Tooren 2008). Arguably, employees’ willingness to endure tasks is more likely to increase, perceiving that physical job resources to lessen the burden are provided. In addition, based on Kahn’s (1990) pioneering framework of engagement and disengagement, May et al. (2004) conducted an empirical study in an insurance firm and reported outcomes supporting Kahn’s (1990) theory that meaningfulness, safety, and availability had significant predictive power on personal engagement. Resources available are found in May’s study to positively predict psychological availability. In other word, resources are found to indirectly predict job engagement.

Job characteristics

Hackman and Oldham (1980) argued that job characteristics consist of skill variety, task identity, task significance, autonomy, and feedback. Their study showed that job characteristics have predictive power over job engagement, aligning with Moussa’s (2013) study with employees in healthcare and information technology industries. Avery and Bergsteiner (2010) argue that self-management directly contributes to staff engagement. Seiber, Silver and Randolph (2004) found that self-management and empowerment directly contributes to staff engagement. Self-management creates trust, which in turn creates engagement. Positive variance in engagement can also be explained by the daily experience of autonomy.

Leadership

Leadership is a key antecedent of engagement (Macey and Schneider 2008; Armstrong 2009). Significant relationships between various types of leadership (for example, charismatic, transformational, and authentic) and employee engagement were reported (e.g., Nemhard & Edmonson 2006; Papalexandris and Galanaki 2009; Babcock-Roberson and Strickland 2010). Visionary leaders, who provide a clear and shared vision, inspire and motivate, offer intellectual challenges, and show interest in the needs of the employees, are successful in fostering engagement (Densten 2005). Authentic leader’s interests are in the well-being of the employees, which leads them to recognize individual differences in values and goals. According to studies by Saks (2006) and Moussa (2013), no significant relationship was found between (authentic) leadership and engagement. Similarly, a study of service employees by Mengue et al. (2012) found no support for relationship between supervisory support (authentic leadership) and job engagement. However, at high levels of perceived autonomy, supervisory support was related positively and significantly to job engagement. Employees may feel that simply being listened to and being taken care of in terms of work-related issues and employee welfare was not sufficient. They also needed to be reassured that they could control and implement decisions on their own without necessarily seeking supervisor approval and consent. In addition, visionary (transformational and charismatic) and organic (distributive) leadership style was found to be associated with employee engagement (i.e. stay, say, and strive) (Zhang 2010). Given that the present research site is a medical school with highly specialised knowledge workers, visionary and distributive leadership is selected to be used in this study.

Peer support

Peer support is the job and social aid that employees receive from their work peers. Such support may signify a different dimension of support (i.e., horizontal as opposed to vertical support), which could be lacking from managers. Coworker relations have been found predictors of job engagement in previous empirical studies (e.g., May et al. 2004; Schaufeli and Bakker 2004; Bakker, van Emmerik and Euwema 2006). Furthermore, research has shown that job appreciation from peers is most predictive of job engagement under conditions of high job demands (e.g., emotionally demanding interactions with clients, high workload).
Perceived organizational support (POS)

POS refers to the perception of an employee that the organization sees his/her contribution valuable and put his/her well-being into concern (Eisenberger et al. 1986). Erdogan and Enders (2007) consistently stated that POS is the degree of employees’ belief that the organisation cares about them, values their input, and offers them help and support. When approached by the social exchange theory, when an individual offers something to the others, she/he anticipates that the deed of giving shall be returned by the other party. Likewise, the recipient will also be obliged to repay for the thing she/he is given and is indebted (Blau 1964). Blau further announced that “an individual who supplies rewarding services to another obligates him, to discharge this obligation; the second must furnish benefits to the first in turn” (p.89). Employees receiving support from organisations are more likely to exert extra effort and establish affective attachment to repay caring deeds shown by the employer. In addition, a study of 102 employees working in various types of jobs and organizations shows that perceived organizational support influences both job and organizational engagement (Saks 2006).

Reward and recognition

Employees engagement is expected to be higher when an organisation shows the concern over employees’ voice, supports, and acknowledge their contributions (Bernthal, Rioux and Wellins 1999). Koyuncu, Burke and Fiksenbaum (2006) conducted a study with bankers in Turkey and reported that reward and recognition antecedied job engagement. The finding is consistent with the research in Saudi Arabia which revealed that job engagement and organisation engagement is present when reward and recognition is in place (Moussa 2013). In contrast, Saks’ study (2006) of 102 employees working various jobs in different organisation in Canada found that reward and recognition had no significant relationship with job and organisation engagement.

Procedural justice

As posited by Thibaut and Walker (1975), procedural support is a concept pertaining to judgments about the procedures or ways by which allocation decisions are made. Purcell (2012) argued that organisational and managerial activities designed to create trust, fairness and organisational justice lead to employee engagement. Saks’ study (2006) showed that procedural justice antecedes organisation engagement.

In sum, the available evidence shows some agreement and mixed results. This study ventures to find the impact of these various constructs on engagement in all three aspects, namely organisational engagement, job engagement, and colleague engagement. The relationships of antecedents and each facet of engagement are hypothesised in the framework in Figure 1. As previously stated, there is a dearth in studies regarding each facet of employee engagement and thus it limits the empirical evidence of potential factors positively affecting organisational engagement and colleague engagement. Therefore, the hypotheses regarding all three aspects of engagement proposed are identical to one another as the following.

H1. Physical job resource is positively related to (a) job engagement, (b) organisation engagement, and (c) colleague engagement.

H2. Positive job characteristic is positively related to (a) job engagement, (b) organisation engagement, and (c) colleague engagement.

H3. Leadership is positively related to (a) job engagement, (b) organisation engagement, and (c) colleague engagement.

H4. Peer support is positively related to (a) job engagement, (b) organisation engagement, and (c) colleague engagement.

H5. Organizational support is positively related to (a) job engagement, (b) organisation engagement, and (c) colleague engagement.

H6. Reward and recognition is positively related to (a) job engagement, (b) organisation engagement, and (c) colleague engagement.

H7. Procedural justice is positively related to (a) organisation engagement and (b) colleague engagement, but (c) not job engagement
SAMPLE AND PROCEDURE

The survey method was utilised in the study, using a questionnaire to gather information from respondents. There were a total of 2,995 employees working in a Faculty of Medicine in a government university in Thailand, which had its own teaching hospital. A pilot test was conducted with employees in a variety of departments in a random manner to ensure the face validity of the questionnaires. Employees were asked to return the questionnaires into a box in order to ensure anonymity. The number of returned completed questionnaires was 1,667, rating 55.66% of the total employees. Cronbach’s αs were employed to confirm the reliability of variable used.

INSTRUMENTS

Respondents were asked to indicate their opinion on all measures using a five-point Likert scale ranging from (1) strongly disagree to (5) strongly agree.

Employee engagement antecedents

As for task elements, the physical job resource measure was developed by the authors (α = 0.83) and Hackman and Oldham’s (1980) six-item questionnaire was adopted to test respondents’ opinion on job characteristics (α = 0.89). Relation elements concerned with leadership and peer support, which were measured and developed by Jing (2009) (α = 0.95) and four items from job content questionnaire (JCQ) (α = 0.90) respectively.

Regarding organisation elements, a nine-item short form of the survey of perceived organisational support (POS) was adopted to assess the respondents’ opinion (α = 0.91). Reward and recognition measure was taken from Saks’ (2006) 10-item scale (α = 0.91). Procedural justice was assessed by Colquitt’s (2001) 7-items scale (α = 0.93).

Employee engagement factors

In this study, three categories of measures were used to measure employee engagement, namely job engagement, organisation engagement, and colleague engagement. Job engagement was measured by 17-item Utrecht Work Engagement Scale (UWES), consisting of three subscales, namely vigor, dedication, and...
absorption (α = 0.95), while organisation engagement was assessed with six-item scale (α = 0.89) designed by Saks (2006). Colleague engagement measure was adopted from Organisation Citizenship Behavior – individuals (OCBI) (Williams and Anderson 1991) (α = 0.95).

RESULTS

Table I. Correlation

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<td>2.Reward &amp; recognition</td>
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<td>3.Procedural justice</td>
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<td>0.62**</td>
<td>0.69**</td>
<td></td>
</tr>
<tr>
<td>4.Physical job resources</td>
<td>5.Leadership</td>
<td></td>
<td>0.54**</td>
<td>0.57**</td>
<td>0.53**</td>
<td>0.56**</td>
<td>0.62**</td>
<td>0.69**</td>
<td></td>
</tr>
<tr>
<td>5.Leadership</td>
<td>6.Peer support</td>
<td></td>
<td></td>
<td>0.68**</td>
<td>0.62**</td>
<td>0.56**</td>
<td>0.62**</td>
<td>0.69**</td>
<td></td>
</tr>
<tr>
<td>6.Peer support</td>
<td>7.Job characteristics</td>
<td></td>
<td></td>
<td></td>
<td>0.37**</td>
<td>0.38**</td>
<td>0.42**</td>
<td>0.47**</td>
<td>0.58**</td>
</tr>
<tr>
<td>7.Job characteristics</td>
<td>8.Job engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.38**</td>
<td>0.43**</td>
<td>0.47**</td>
<td>0.58**</td>
</tr>
<tr>
<td>8.Job engagement</td>
<td>9.Organisation engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.42**</td>
<td>0.47**</td>
<td>0.58**</td>
</tr>
<tr>
<td>9.Organisation engagement</td>
<td>10.Colleague engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.20**</td>
<td>0.41**</td>
</tr>
</tbody>
</table>

*p≤0.05    **p≤0.01    ***p≤0.001

Table I reports correlation of the variables. There are moderate correlations between job engagement and organisation engagement (r = 0.68**, p≤0.01); job engagement and colleague engagement (r = 0.68**, p≤0.01); and organisation engagement and colleague engagement (r = 0.55**, p≤0.01). However, they do not exceed .90 which indicates multicollinearity (Tabachnick and Fidell 2007). In addition, proposed anteceding variables are found to relate to engagement constructs as anticipated.

To test the hypotheses of the factors antecedent employee engagement, multiple linear regression analysis was employed on each dimension of engagement. Each dependent variable was simultaneously regressed on all seven factors. As shown in Table II, the result indicate that the variables explained 48 % of the variance of job engagement ( = 0.48, p≤0.001); 36 % of organisation engagement ( = 0.36, p≤ 0.001); 49 % of the colleague engagement ( = 0.49, p≤ 0.001).

Four variables are positively related to job engagement: job characteristics (0.44, p≤0.001), reward and recognition (0.24, p≤0.001), physical job resources (0.10, p≤0.001), and leadership (0.07, p≤0.05). The study also shows that five variables have predictive power over organisation engagement: reward and recognition (0.35, p≤0.001), job characteristics (0.21, p≤0.001), organisational support (0.10, p≤0.01), peer support (0.07, p≤0.01), and leadership (0.08, p≤0.001). With regard to colleague engagement, four variables are found related to it: job characteristics (0.41, p≤0.001), peer support (0.23, p≤0.001), reward and recognition (0.14, p≤0.001), and leadership (0.10, p≤0.001).

Table II Multiple linear regression analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Job engagement</th>
<th>Organisation engagement</th>
<th>Colleague engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational support</td>
<td>0.03</td>
<td>0.09**</td>
<td>-0.07**</td>
</tr>
<tr>
<td>Reward and recognition</td>
<td>0.24***</td>
<td>0.30***</td>
<td>0.14***</td>
</tr>
<tr>
<td>Procedural justice</td>
<td>-0.09**</td>
<td>0.02</td>
<td>-0.05*</td>
</tr>
<tr>
<td>Physical job resources</td>
<td>0.10***</td>
<td>0.05</td>
<td>0.01</td>
</tr>
<tr>
<td>Leadership</td>
<td>0.07*</td>
<td>0.07*</td>
<td>0.10***</td>
</tr>
<tr>
<td>Peer support</td>
<td>0.04</td>
<td>0.06**</td>
<td>0.24***</td>
</tr>
<tr>
<td>Job characteristics</td>
<td>0.46***</td>
<td>0.19***</td>
<td>0.43***</td>
</tr>
</tbody>
</table>

*p≤0.05    **p≤0.01    ***p≤0.001

Results from the relationship’s testing show that job characteristics, reward and recognition, and leadership have predictive power on all three aspects of engagement. Job characteristics have highest predictive power on employee’s job engagement and colleague engagement, while reward and recognition most strongly affects
organisation engagement. Peer support predicts organisation engagement and colleague engagement. Its predictive power on colleague engagement is higher than its power on organisation engagement. Physical job resources are found to antecede only job engagement. Organisational support predicts organisation engagement. However, organisational support also has negative impact on colleague engagement. In addition, procedural justice has negative impact on job engagement and colleague engagement.

DISCUSSION

The findings confirm previous studies and arguments (Saks 2006; Purcell 2012) that job engagement, organisation engagement, and colleague engagement, despite being relative, are distinctive. The study reveals that only job characteristics, reward and recognition, and leadership predict all three facets of engagement.

In line with previous studies that examined both job and organization engagement (Saks 2006; Moussa 2013), the finding from this study confirms that job characteristics predict job engagement. The predictive power of job characteristics on job engagement is the highest among all antecedents. While the previous studies found only a relationship between job characteristics and job engagement, this study finds a significant relationship between job characteristics and all three facets of engagement.

The finding here also confirms a previous study by Kayuncu and the team (2006) who examined only job engagement of the workers in Turkey and found that reward and recognition predicted job engagement. It also supports a study’s finding of workers in Saudi Arabia (Moussa 2013) that reward and recognition predicted both job engagement and organisation engagement. However, this study also reports that reward and recognition predicts colleague engagement.

In addition to job characteristics and reward and recognition, visionary and distributive leadership is also an influential predictor of all three types of engagement. The finding here is in line with May and team’s study (May et al. 2004) that supervisor relations was found to positively predict psychological safety, which in turn was found to predict job engagement. The supervisor support used by May and team included encouraging employees to develop new skills, to participate in important decisions and to speak up when employees disagree with a decision, praising employees, and keeping employees informed. Furthermore, supervisors should be true to their words, treat employees fairly and protect their interest. These behaviours will create mutual trust between both parties.

The present study reports that job characteristics, reward and recognition, and leadership predict all three facets of engagement. Therefore, the findings here illustrate that social exchange theory plays a role in explaining the emergence of employee engagement. Employees’ perception of satisfying job characteristics along with rewards in monetary form and career advancement and the encouragement, respect, and employee involvement in decision making provided by supervisors bring a sense of reciprocity in employees. In this study, employees repay the organisation by being engaged with the job, organisation, and colleagues. This might be because reciprocity is very common in Thai culture. In addition, Thai culture is high in collectivism (Hofstede 1984). Thus, positive attitude toward the job and the organisation also supports collaborative attitude and behaviours towards colleagues.

Physical job resources are found to antecede job engagement, but not organisation and colleague engagement. The finding here is in consonance with May and the team’s study (2004) that resources available was found to positively predict psychological availability, in turn was found to predict job engagement.

In the present study, the peer support factor predicts only organisation engagement and colleague engagement, but not job engagement. The finding contradicts a previous study on Dutch police workforce and general workers by Bakker, Van Emmerik and Euwema (2006) that peer engagement predicted job engagement. Past research has shown that job appreciation from peers was most predictive of work engagement under conditions of high job demands (e.g., emotionally demanding interactions with clients, high workload). Peer support was significant in the Dutch study, as policemen, who were in a high risk and dangerous work environments, were more likely to perceive that police partner support was very important to their jobs. In this study, peer support is found to have no significant relationship with job engagement. This might be because part of medical lecturer work (i.e. teaching) can be regarded as autonomous work that can be accomplished alone without peer support. The Dutch study also examined only job engagement, not organisation engagement.

In terms of Perceived Organizational Support (POS), this study’s finding is in line with Saks’ study of employees working at different organizations and jobs (2006), that POS had a significant positive relationship with organisational engagement. However, in contrast to Saks’ (2006) study, the present study finds no
significant relationship between POS and job engagement. This might be because medical professions tend to engage in their jobs due to intrinsic value in medical work, rather than organisations valuing their jobs or caring about their well-being. In addition, the present study finds that POS has a significant negative relationship with colleague engagement. The evidence here supports the finding from a study by Kaufman, Stamper and Tesluk (2001) that POS reflects the attachment employees experience with respect to the broader organisation, the types of interactions employees will most likely engage in are those that benefit the larger organisation rather than specific individuals or colleagues.

Regarding procedural justice, this study yields negative relationship on job and colleague engagement. The finding contradicts previous studies that reported positive impact of procedural justice on organisation engagement (Saks 2006) and job engagement (He, Zhu and Zheng 2013). This might be because medical professions tend to prefer being governed by professional norms rather than management processes in the organisation. They may view government management processes as cumbersome, bureaucratic, unnecessary, and restricting their professional autonomy and judgment.

In sum, the present study reveals that some antecedents of engagement are valid in the Thai context. In addition to the national culture, organisational culture, such as one at the government-owned medical school in our study, may have been as important as the national culture in delivering effects on employee engagement. The nature of the profession is also important in determining the proper antecedents. Thus, antecedents of engagement in sustainable organisations will vary with national culture, organisational culture, and the local professional context. This also supports a proposition by Avery and Bergsteiner (2010) who suggested that staff engagement, which is one of the key performance drivers in the sustainable leadership pyramid, may be achieved from a mixture of foundation practices. Most likely this mixture will reflect many contextual factors. Thus, the system is dynamic.

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THE TREATMENT OF SUSTAINABILITY AND RESPONSIBILITY THEMES IN POPULAR BUSINESS JOURNALS

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ABSTRACT

Journals such as The Economist, the Harvard Business Review, Forbes and Fortune have a strong readership among business executives and enjoy the mantle of respectability. The authority of these journals with their readers castes them as powerful institutions for the promotion of particular ideologies. This article uses an analysis of treatments by these journals to demonstrate an apparent intent to undermine the sustainable leadership of organisations, principally by redefining sustainability in retrograde ways that reduce and heavily delimit the responsibility of managers. In doing so, they effectively sell themselves to their readership by supporting comforting delusions that their strategies support responsible management.

THE TREATMENT OF SUSTAINABILITY AND RESPONSIBILITY THEMES IN POPULAR BUSINESS JOURNALS

“Since when has success in business been about goodness rather than earnings growth? To paraphrase the 13th-century management theorist Genghis Khan, isn’t it more about crushing your competitors, seeing them fall at your feet, and taking their horses?”

Fortune. 2 August 2010, 161(2), pp 90-95

This paper presents an analysis of how sustainability and social responsibility themes are treated by the Harvard Business Review (HBR), The Economist, Forbes and Fortune magazines. The analysis shows that they are oblivious to emerging themes of sustainable leadership and global responsibility, and while they are cognisant of more established ideas such as sustainability and corporate social responsibility, they are largely antagonistic to them. Set against the standards of sustainable leadership and global responsibility, which embody the most advanced research, thinking and practice, the thinking in these popular journals not only lags the academic literature but also the behaviour and successes of “best-practice”, “best-employer” and “most reputable” corporations. So why should academics care? The analysis in this paper assumes a normative position that academics’ strategic aim should be to get new knowledge into the public arena in the hope of influencing the wider discourse and engaging those who make decisions. This is based on the assumption that capital has an enormous power to shape the world. While there has been some progress in building supportive institutions; which includes global organisations such as the GRI, the UN Global Compact and Sustainability Indexes that give companies the chance to tout their sustainability credentials; there remains a significant gap in the degree to which academic research influences opinion leaders, who generally do not read academic research.

Business-related popular journals do not suffer/benefit from the rigour of high level, academic review, but are read widely by the people academics hope to influence. The influence of these four publications on the people who deploy capital is difficult to overstate. The HBR reported its circulation in June 2013 as 260,315 (261,864 according to Audit Media 2014). The magazine is also developing new channels for distribution and claims 14,639 digital subscribers (Boston Globe 2013). In addition, business schools buy case studies and copies of articles from HBR for inclusion in their reading packages to students. The influence of the Economist is strong and growing. In 2006, it claimed 1.5 million readers. At the time of writing (March 2014) it claimed to have over six million readers, largely due to its digital editions (Economist 2014). Forbes and Fortune magazines
have a recorded circulation of 931,558 and 857,431 respectively (Audited Media 2014). However, the Forbes home page claims that its open source website has 14 million visits a month.

But do these journals really have much of an impact? The following excerpts from a lead article in HBR written by George Stalk and Rob Lachenauer (Stalk and Lachenauer 2004), respectively Senior VP and VP of the Boston Consulting Group, and both with an MBA from Harvard, suggest that they may to an alarming extent:

“plagiarize with pride”

“. . . steal any good idea . . . As long as it isn’t nailed down by a robust patent . . .”

“. . . squishy issues – leadership, corporate culture, customer care, knowledge management, talent management, employee empowerment – [have] encouraged the making of softball players”

“The nicest part of playing hardball is watching your competitors squirm”

But it gets worse: according to the HBR, the article was rated by readers as one of the magazine’s five best articles on strategy in the past 10 years.

The treatment of sustainability and responsibility positions in these journals ranges from a subtle undermining to full frontal attack. The aim in this paper is not to take up and refute every point made in these articles, which given the multiple prongs of the attack would send the paper off in many different directions, but to demonstrate a pattern which indicates an editorial position to either oppose or limit a more global sense of responsibility by firms. In particular, they narrow the agenda and focus on strategic positioning to the great neglect of a study of the internal fabric of organisations or their integration as part of a community.

The selection of articles reviewed for this study is all those in the four magazines that were published in the last decade and that distinguish themselves through a lack of reference to the broad areas of sustainability and responsibility, but more particularly to “Sustainable Leadership”, “Corporate Social Responsibility” (CSR) and “Global Responsibility”. The essential difference between these three concepts is that CSR – at least in terms of the terminology – is heavily bounded in addressing social impacts of the corporation. In its more enlightened form it also addresses environmental issues and thereby overlaps with the concept of the Triple Bottom Line (TBL). Sustainable Leadership’s focus is much wider and deeper than CSR in that it rejects the notion that social and environmental responsibility are outcomes as per the TBL; rather it demonstrates by reference to practice and a substantial body of research that socially and environmentally responsible leadership behaviours, practices and systems within organisational contexts not only deliver superior organisational outcomes, but benefit a wide range of stakeholders including employees, customers, suppliers, local communities and even competitors. Global Responsibility takes the notion of responsibility beyond the organisation and puts it in a global context of “globalised poverty, environmental decay and human rights that … need to be addressed in a holistic manner” (Jones 2010, p.5). That is, it is inclusive of a wider range of concerns than is traditionally required in – let us say – the economic orthodoxy of Milton Friedman.

Perhaps another difference between Global Responsibility and Sustainable Leadership is that Global Leadership makes the moral, ethical and, indeed, existential case for globally responsible behaviour, whereas Sustainable Leadership provides a theoretical framework and some tools that help organisations achieve this. From a historical perspective, the two most recent concepts are Global Responsibility (2005) and Sustainable Leadership (Avery and Bergsteiner 2010). However, while the terms themselves are relatively new, their philosophical roots go back to at least 1968 with the founding of the Club of Rome. No such recency excuses are available for the term CSR, which can be traced back to at least the 1960s in the Anglo world. However, in at least one jurisdiction – the US – the very notion of CSR was problematic until quite recently in so far as the legislature tended to assign an over-riding legal status to companies’ shareholders. This was only resolved with the introduction of the so-called Benefit-Corporation, defined as a for-profit entity that wants to materially benefit owners, society and the environment. However, even this “excuse” is weak since there are numerous high-performing companies in the US that acted in the way of a quasi-B-Corporation, and yet were never challenged for what Milton Friedman regarded as a misappropriation of shareholders’ money.

Since the readership of the magazines reviewed here is likely to be more interested in the practical “how” rather than the philosophical “why” of the responsibility/sustainability subject, we shall delve into Sustainable Leadership a little further. The theoretical framework underpinning Sustainable Leadership is the Sustainable Leadership Pyramid (SLP) (Figure 1).
Essentially the SLP proposes that sustainable organisations are characterised by “practices” that build on each other in a hierarchical fashion (Avery and Bergsteiner 2010). At the base are the so-called foundation practices, the first six of which characterise the internal life and vitality of the organisation: that is, developing people continuously, amicable labour relations, long term staff retention, internal succession planning, valuing people and top team leadership. The final six represent the more external or strategic life of the organisation: considered organisational change, independence from financial markets, environmental responsibility, social responsibility, stakeholder approach and strong-shared vision. Numbers 7 (ethical behaviour) and 8 (long-term perspective) may be said to address both internal and external life.

These matters have a very limited coverage in any of these journals. There is one work published in HBR that deals with the internal life of organisations through a sustainability lens (Kanter 2011). She argues for more sustainable institutions with broader goals. In particular, she specifies six elements of a more sustainable institution. These are, in her analysis, a common purpose, a long-term focus, emotional engagement, partnering with the public, innovation, and self-organisation (Kanter 2011). All of these are to be found in the SLP, albeit by somewhat different names. While this paper constitutes a singular attempt to focus on the internal organisational dynamics, they are framed as an input to the more important outcome of competitive advantage. The alleged bottom line with these journals is always a desire to improve competitive advantage. We say “alleged” because research shows that organisations that embrace Sustainable Leadership outperform those that do not on a wide range of organisational outcomes including financial performance, long-term shareholder value, share-price volatility, long-term stakeholder returns, customer satisfaction and brand and reputation. Importantly, these outcomes manifest themselves at the organisational and national level with countries that lean towards Sustainable Leadership dominating the top positions on the Global Competitiveness Index (GCI) published by the World Economic Forum. This, despite the fact that the GCI is heavily biased towards the so-called Anglo/US model of capitalism (Bergsteiner and Avery 2012) which tends to eschew the notion of sustainability.

Of the elements of sustainable leadership that cover both internal and strategic sustainability, the long-term perspective gets some coverage but the bar is set very low. HBR (Ignatius 2012) crowned Uniliever CEO Paul Polman with the extravagant headline “Captain Planet” as someone ready to challenge the short-termism of financial markets, because he had moved Uniliever from quarterly to six monthly reporting. Companies that actually take strong stand and take risks in the cause of long-term perspective rarely get a mention. Porsche was more resolute here; it informed the German Stock Exchange (DAX) that it did not believe in quarterly reporting and so would not do so. In the resultant stand-off, Porsche was expelled from the DAX, promptly sued the DAX, but eventually settled out of court. It is now listed on another exchange. Berkshire Hathaway is one of the world’s most admired (even envied) companies. It practices low leverage and is proud of its triple AAA credit rating, which surpasses even the credit rating of the United States Government. It largely invests for the long-term. Porsche gets three mentions in the HBR over the last decade, but these are for its marketing strategy (Eisingerich and Kretschmer 2008; Hildebrand, Gerald and Landwehr 2013) and innovation (Harryson 2005).
Berkshire Hathaway gets a single acknowledgement of its capacity to generate shareholder value (Rappaport 2006). There is little interest in the sustainable leadership approaches that make these companies great. Fortune does an even more heroic portrait of the CEO of Exxon-Mobil in an article entitled “the Defiant One” (Colvin 2007). The article opens with the line: “Unlike its rivals, Exxon Mobil doesn't much care about alternative fuels and doesn't try to please the greens. Is CEO Rex Tillerson nuts—or shrewd?” The article goes on to make the case for “shrewd.”

The only form of sustainability endorsed by these journals is “sustainable” competitive advantage, as defined by Michael Porter (Porter 1996). However, this kind of “sustainable” competitive advantage is not sustainability as we understand it or as it was defined in the Brundtland report, namely that “meeting present needs does not compromise the ability of future generations to meet their needs”. A “sustainable” competitive advantage is said to be a positioning in relation to a market that is difficult for competitors or potential competitors to replicate. This version of sustainability has no particular resemblance to the concept of Sustainable Leadership and falls a long way short of Global Responsibility. Porter has written in the HBR that investment in environmental sustainability can provide some improvement to financial returns in a market, conditional on there being strong government regulation, but that those returns can be expected to reach a point of diminishing returns, where further investment cannot be justified (Porter and Van Der Linde 1995). His writing is therefore in the vein of the Milton Friedmans, in as much as individual company’s profit motive is the sole motive irrespective of any wider implications. The ultimately dysfunctional ramifications of this were amply demonstrated during the Global Financial Crisis of 2008/2009 of which the U.K. Parliamentary Commission on Banking Standard’s Report said:

“Banks in the U.K. have failed in many respects. They have failed taxpayers, who had to bail out a number of banks, including some major institutions, with a cash outlay peaking at £133 billion, equivalent to more than £2,000 for every person in the U.K. They have failed many retail customers with widespread product mis-selling. They have failed their own shareholders by delivering poor, long-term returns and destroying shareholder value. They have failed in their basic function to finance economic growth with businesses unable to obtain the loans that they need at an acceptable price”.

*Changing Banking for Good, 2013, p.14*

And yet all of the above was done in the name of competitive advantage. In fact, it was a race to the bottom. Porter acknowledges resource productivity initiatives as a form of operational efficiencies and regards the search for operational efficiencies as worthwhile, whether or not they reduce the impost on the environment. However, he deprecates their importance because they are easy for competitors to replicate and according to him replication is the enemy of “sustainable” competitive advantage (for a more complete rendition on the limited role of efficiencies in strategy see Porter (1996)).

In all of his HBR-based writing he continuously moves the focus onto positioning with regard to new markets. In arguing for a strategic approach to climate change, he writes:

“For some, but not all, companies, the approach to climate change can go beyond operational effectiveness and become strategic. Some firms, in the process of addressing climate change, will find opportunities to enhance or extend their competitive positioning by creating products (such as hybrid cars) that exploit climate-induced demand, by leading the restructuring of their industries to address climate issues more effectively, or by innovating in activities affected by climate change to produce a genuine competitive advantage”.

*HBR October 2007, 85(10), pp 22-26*

Climate change transforms from something we must all contribute to preventing and/or mitigating, to become instead a mere source of business opportunities. To Porter, it creates new areas of demand and a range of needs as we learn to adapt to more volatile weather.

Porter and Kramer have applied the same logic to the analysis of CSR. All four journals tend to treat CSR as synonymous with philanthropy. Occasionally, they include environmental sustainability and fair trade examples in the overall span of CSR decision, but mostly the discussion is directed to corporate philanthropy, which involves some sort of giving, whether cash or in-kind contributions to worthy causes. Giving is depicted as only being morally acceptable once wealth has been generated: that is, as “giving back” (e.g. HBR Novak and Noer 2013). Again, in the HBR, Porter and Kramer write that the only form of CSR they recommend is that which
By providing jobs, investing capital, purchasing goods, and doing business every day, corporations have a profound and positive influence on society. The most important thing a corporation can do for society, and for any community, is contribute to a prosperous economy. Governments and NGOs often forget this basic truth. When developing countries distort rules and incentives for business, for example, they penalize productive companies. Such countries are doomed to poverty, low wages, and selling off their natural resources. Corporations have the know-how and resources to change this state of affairs, not only in the developing world but also in economically disadvantaged communities in advanced economies”.

**HBR Strategy and Society: the link between competitive advantage and CSR**

The tactic here is to carefully and tightly circumscribe the kinds of contributions that business leaders need to make and limit the degree to which they will take on broader responsibilities. Porter and Kramer call this form of sustainability “shared value”: the idea that good works can be to the mutual advantage of the community and the business and that therefore the members of the community will be willing to pay. They have further elaborated this idea more recently, again in the pages of HBR. In “Creating Shared Value” (HBR 2013), Porter and Kramer argue that companies can redeploy any impulse they may feel to do good for communities into innovation of new products.

“The solution lies in the principle of shared value, which involves creating economic value in a way that also creates value for society by addressing its needs and challenges. Businesses must reconnect company success with social progress. Shared value is not social responsibility, philanthropy, or even sustainability, but a new way to achieve economic success”.

**HBR Creating Shared Value September 2013**

They profile Vodaphone arguing that low priced cell phones are accessible to third world farmers and give them ready access to the banking system, which in turn assists their business. True enough, but low priced cell phones were not developed from an impulse to sustainability or as an expression of CSR, they are a product of globalisation and represent an industry-wide trend. They would have occurred whether or not Vodaphone invested a single dollar in finding a more sustainable solution. This is just old-fashioned innovation dressed up as sustainable leadership. The shared value of which they speak is the same mutual advantage that Adam Smith wrote of as the basis of a normal market transaction.

In the same article, and to provide a further illustration of shared value turned to a sustainability use, Walmart is profiled because it has been able to achieve economic efficiencies in its packaging and transportation and economic efficiencies mean less use of resources, which is good for the environment. True enough, but the examples tend to hammer home the underlying message that the only sustainability that is allowed is that which increases competitive advantage. In the pages of HBR, social enterprise is also only tolerable as long as it makes a profit (Sabiti 2011). We take umbrage with this; not because making profits is somehow immoral or unethical – companies need to make profits to survive – but because it puts morality and ethics at the mercy of profits. The Economist’s argument can be framed in another way along this line; if the price of profit is immorality and

1 Smith’s view: “But the annual revenue of every society is always precisely equal to the exchangeable value of the whole annual produce of its industry, or rather is precisely the same thing with that exchangeable value. As every individual, therefore, endeavours as much as he can both to employ his capital in the support of domestic industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. I have never known much good done by those who affected to trade for the public good. It is an affectation, indeed, not very common among merchants, and very few words need be employed in dissuading them from it”.

Book 4 Chapter 2 An Inquiry into the Nature and Causes of the Wealth of Nations
unethical behaviour, then so be it. This sanctions making profits at the expense of others’ health and/or environment (e.g. selling cigarettes or polluting others drinking water) and is deeply immoral and not worthy of a society that purports to be civilised. Furthermore, when there is overwhelming evidence that ethical and moral behaviour actually delivers superior performance outcomes at both the organisational and national levels (Avery and Bergsteiner 2010), the argument condoning or even lauding unethical behaviours rests on very shaky foundations. More importantly it reveals the anti-sustainability and anti-responsibility argument to be either ill-informed or disingenuous or both.

The journals that we reviewed other than the HBR are more overt in their attacks on calls for business to adopt a wider range of responsibilities. The Economist (Jan 2011) published a commentary on the results of a survey of the degree to which educated people in various countries subscribe to the dictum that was expressed in the title of Friedman’s famous essay “the social responsibility of the company is to make a profit”. It introduces the argument in the following way:

“The issue of whether businesses should promote corporate social responsibility (CSR) is hotly debated. Many of the world’s biggest companies (including BP and the now defunct Enron) have embraced the notion. So have politicians. Britain’s 2006 Companies Act requires businesses to report on their CSR records”.

"Milton Friedman goes on tour; Attitudes to business." The Economist 29 January 2011, p.63

CSR is linked here with companies that have dubious credentials (BP and Enron). In Britain it is cast as a creation of politicians and an imposition on business. The Friedmanite countries are cast as the freedom fighters as the paragraph ends with a rhetorical flourish which is withering of the very notion of CSR.

“But the world’s Friedmanites have waged a relentless guerrilla war against the idea, denouncing it as a farrago of value-destroying nonsense.”

"Milton Friedman goes on tour; Attitudes to business." The Economist 29 January 2011, p.63

The journals are also keen to redress the current calls for an extension of corporate responsibility down the supply chain. In response to the disaster at the Rana Plaza in Bangladesh in 2013, where a poorly constructed garment factory collapsed killing 400 employees, The Economist surveys reasons why governing the supply chain is not possible and characterises any call to do so as “Utopian”.

“Fine, but whatever the safeguards, there will be a gap between the cavalier promises of ethical supply chains and the reality of corrupt politics and dodgy pillars. CSR has always had a Utopian element. That was exposed in Bangladesh”.

The Economist 4 May 2013, p.12

HBR, Forbes and Fortune eschew the critical approach in their more positive reportage of sustainability. They provide a platform for profile pieces on companies that allow them to get their PR returns on marginal contributions to the community. These articles tend to provide a platform for what Dryzek (1997) has described as weak sustainability. Weak sustainability consists of actions that see environmental sustainability solutions as subordinate to economic growth. Pfizer, Wal-Mart, Nestle and Procter & Gamble have been profiled by Fortune for their philanthropy (Fortune 2010). Pfizer is especially adept at using these journals to get free publicity. It has also been profiled in Forbes (October 2008), Fortune (August 2010) and HBR (September and October 2013). Walmart has been profiled several times for its sustainability and CSR (Fortune May 2007, 2010; HBR October 2007, January 2011, September 2013a, September 2013b, October 2013; Forbes July 2009; The Economist May 2013; September 2013) without any attempt at a critical approach or even so much as a caveat. It is worthy of note, that in addition to the many useful products that Walmart provides and that provide a genuine shared value along the supply chain, what is never mentioned is that Wal-Mart sells guns and ammunition in a department store setting. This is a controversial issue, even in the United States, but these profile pieces take a partisan role by promoting the positive social contributions of these companies.

Sustainability and CSR are also the butt of satiric treatment. The headlines are particularly biting. “The 500 (i.e. the Fortune 500) Gets Religion” (Fortune April 2007) is Fortune’s way of introducing a range of companies who are trying to elevate their sense of responsibility. The Economist creates the headline – “The New Green: Disability and Business” (The Economist 2012) – an article which criticises the employment of people with disabilities by casting it as a fashion statement and implicitly inferring that environmental sustainability is last
year’s fashion. In adding to the argument that sustainability is a mere fashion, *Forbes* described the Triple Bottom Line as the “fad of the moment” a mere ten years after the idea was introduced (Forbes 2003). The opening line of this particular article reads: “Social justice? Environmentalism? Let's judge a company on how well it grinds out profits”. Let’s indeed!

The Economist accuses those who profess an interest in sustainability of being more interested in conferencing:

“In the days when CSR was just about public relations, it was probably bad for the reputation of business in general. Companies seemed to concede that profitmaking was a bad thing. Too often, they bowed to anti-business activists and made "amends" through good works. Today's iteration of CSR is less self-abasing and more constructive. It is encouraging businesses to become more frugal in their use of resources and more imaginative in the way they think about competitive advantage. Perhaps one day CSR types will even deserve all those conferences they arrange for themselves by sun-kissed beaches”.

The Economist 19 May 2012, p.76

There is a tone of resentment here that companies have been subjected to an illegitimate use of power by an intellectual aristocracy. Business leaders need to emancipate themselves by recognising that they are being hoodwinked by hypocrites and that they are being outperformed by the very “types” *The Economist* so vociferously disparages. Let’s judge who is making profits and who is not, and on a larger scale, who are the debtor countries and who are the creditor countries!

In a moment of high satire, *The Economist* published details of philanthropic contributions made by drug lords in a piece entitled “from HR to CSR: lessons from Mexico’s drug lords” (The Economist 2012) The article laments what it calls an HR problem: that of the drug lords having to turn to the ranks of ex military as a labour supply of trained killers and points to a CSR solution, which lends legitimacy to operations and increases their ability to attract talent.

“When the pope raised an eyebrow about such “narco alms”, a Mexican bishop, Ramon Godinez, replied that when Mary Magdalene washed Jesus's feet with expensive perfume, he didn't ask her how she paid for it. ‘There is no reason to burn money just because its origin is evil. You have to transform it. All money can be transformed, just as corrupted people can be transformed,’ he said. With God as its money launderer, Mexico's dirtiest industry should stay on a high”.

The Economist 28 July 2012, p.61

These journals further aim to reduce the impost on businesses through interest-based lobbying. Consider the following argument put by *Forbes* (October 2008):

“Consumer charity is inefficient under our present tax code. If you pay $15 for a pound of fair-trade coffee instead of $10 for regular coffee, you can't claim a deduction for the $5 difference. The additional cost is a non-deductible donation. We think the tax law should be changed to equalise the deduction shareholders get for corporate and personal contributions. Individuals should also be allowed to deduct donations embedded in consumer products. Firms are increasingly doing good because shareholders and consumers want them to, and taxes should not favor one form of doing good over another”.

Forbes. 3/10/2008, 181(5), pp 30-30

The argument here is that private and corporate contributions to society ought to be tax deductible. However, by doing so, the cost would be shifted from a private contribution to a public contribution. While this is already allowed for donations to charity, it also ought to be allowed for any marginal cost increase along the supply chain that arises from a decision to source more responsibly. In other words, the act ceases to be one of philanthropy and becomes one of public policy investment in social capital. The attempt is to further limit responsibility for corporations. While the proposal is inherently unrealistic, it does serve the purpose of providing a rationalisation for business leaders who wish to remain disengaged. The message is that social good is the job of government and ought to be paid for by the government.

These journals tend to promote a small number of very large companies for whom they provide an uncritical platform. This presentation gives the impression that all is well because powerful interests are behind
sustainability and CSR. These representations provide a smoke screen for a deeper discourse that restricts the role of companies in sustainability to that which exploits a market for sustainability and responsibility. Even the popular notion of giving something back, which is thematic in these journals, presupposes that you must make your pile first. In this world view, corporate social responsibility legitimises a more traditional pursuit of competitive advantage. In this regard, the HBR is more subtle than Forbes, Fortune and The Economist. These magazines attack sustainability as dangerous nonsense and at best let managers off the hook with regard to their obligations to the community and planet. As non-refereed journals, these media can chase market opinion to the very bottom of the barrel, rather than seeking to elevate it. Unfortunately, their monthly circulation figures compel our attention to their particular view of the world and call for some form of redress. This is especially urgent in the light of the growth in their penetration as a result of open access materials.

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SUSTAINABLE HUMAN RESOURCE MANAGEMENT: CONCEPTUAL FRAMEWORKS

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ABSTRACT

Sustainable human resource management (HRM) literature has been emerging over the last decade as an alternative approach to managing people. The literature is diverse, piecemeal and fraught with difficulties. The Sustainable HRM literature can be categorised into three groups. These groups have been labelled “Capability Reproduction”, “Promoting Social and Environmental Health” and “Connections”. Although each group has a different emphasis on different internal and external outcomes, there is a common thread which unites the Sustainable HRM approach. Unlike the literature on Strategic HRM (SHRM) which focuses on economic and financial outcomes, Sustainable HRM emphasises social and human outcomes as well as the economic and financial outcomes.

When the Sustainable HRM literature is taken as a whole some of the limitations of SHRM can be overcome. The literature explicitly recognises the different perceptions of HRM by a variety of stakeholders, the inconsistency of HRM practices, the importance of the CEO, line managers and middle managers in implementing HRM policies and the tensions and ambiguities of organisational outcomes. The paper presents three frameworks which describe Sustainable HRM. One framework describes a general Sustainable HRM model. Another framework describes the issue of paradox in Sustainable HRM and a third framework describes the processes of implementation.

INTRODUCTION

During the last decade a new approach to the management of people emerged. This approach explicitly recognises the impact people management policies have on both human and financial outcomes. Unlike the emphasis of the Strategic Human Resource Management (SHRM) approach, this approach explicitly recognises the legitimacy of organisational practices, particularly HRM practices in furthering a wider range of outcomes. These outcomes could include impacts on individuals or groups within an organisation (human outcomes) and impacts on groups of people and the relationships between people (social outcomes). This alternative approach also includes writers (Avery 2005; Dunphy et al. 2007) who explicitly acknowledge the impact of HRM on ecological/environmental outcomes. In addition, this approach explicitly acknowledges the shadow side of HRM – that is, it acknowledges the possibility of the negative impacts on human, social and ecological/environmental outcomes. This more recent approach has been labelled Sustainable Human Resource Management (Sustainable HRM). The term Sustainable HRM has been conceptualised in a variety ways. It has referred to in different countries and HR-related literatures (Wilkinson et al. 2001; Mariappanadar 2003, 2012; Ehnert 2006, 2009; Clarke 2011). The literature on Sustainable HRM has developed during the past decade and it represents an attempt to grapple with the relationship between HRM practices and outcomes beyond predominantly financial outcomes.

This paper is concerned with exploring the nature of Sustainable HRM The first part of the paper examines Sustainable HRM as an approach to managing people. The second part draws out the features at the heart of Sustainable HRM. This is followed by a conclusion which draws out the possible future development of Sustainable HRM.

SUSTAINABLE HRM

The term Sustainable HRM has been used for more than a decade. The literature is piecemeal, diverse and fraught with difficulties. There is no one precise definition of the term and it has been used in a variety of ways. The writings on Sustainable HRM differ in terms of the emphasis given to particular internal and external outcomes. It has been used to refer to social and human outcomes which contribute to the continuation of the organisation in the long term, that is, to a sustainable organisation. It has also been used to refer to HRM activities which enhance positive environmental outcomes Green HRM (GHRM), and positive social and
human outcomes for their own sake, rather than just as mediating factors between financial outcomes and strategy. As with the terms HRM, SHRM and sustainability, there are definitional issues with the term Sustainable HRM.

A number of terms have been used to link sustainability and HRM activities. These include sustainable work systems (Docherty et al. 2002), human resource sustainability (Gollan 2000; Wirtenberg et al. 2007), sustainable management of human resources (Ehnert 2006, 2009, 2011), Sustainable Leadership (Avery 2005; Avery and Bergsteiner 2010) and Sustainable HRM (Mariappanadar 2003, 2012). In addition, the term Sustainable Organisation (Dunphy et al. 2007) has been used. Although these terms differ in the extent to which they attempt to reconcile the goals of economic competitiveness, positive human/social outcomes and ecological outcomes they are all concerned with acknowledging either explicitly or implicitly human and social outcomes of the organisation. They all recognise the impact human resource outcomes have on the survival and success of the organisation. All of the above terms are subsumed in this paper under the broad term of Sustainable HRM.

Unlike SHRM which proposes HRM practices should be designed to further organisational strategy and economic outcomes, a common feature of the writings on Sustainable HRM is that HRM practices contribute to the development of human and social capital within the organisation. In addition, some of these writings (Mariappanadar 2003, 2012; Dunphy et al. 2007; Avery and Bergsteiner 2010) also acknowledge that there is growing concern about the impact of HRM policies on externalities, such as the environment and social and human aspects of society. Some of this literature also (Jackson et al. 2012) acknowledged that HRM practices will influence the extent to which people are attracted to work for an organisation or to purchase its products and services.

The literature on Sustainable HRM can be categorised into three groups. A common feature of all of these groups is an understanding that sustainability refers to long term and durable outcomes. However, the writers in these various categories understand sustainability and its relationship to HRM in different ways. The groups are categorised in terms of their outcomes. One group emphasises economic outcomes and the creation of “sustainable competitive advantage”. This group, known as “Capability Reproduction” focuses on the internal impacts of HRM policies. Another group, titled “Promoting Social and Environmental Health” emphasises external outcomes, such as broader performance outcomes including ecological/environmental and/or social and human outcomes. A third group, labelled “Connections” moves beyond just HRM practices and examines the interrelationships between management practices, including HRM and organisational outcomes, including environmental outcomes and sustainability. This includes the literature on Sustainable Leadership (Avery 2005). This literature acknowledges the influence of national contexts on management practices while the literature on Sustainable Organisation explores the relationship between HRM policies and environmental sustainability (Dunphy et al. 2007) and is concerned with the explicit connections between a variety of internal and external outcomes and HRM practices. These groups are not mutually exclusive. However, these three categories provide a simple means of drawing out the major distinctions between the writings on Sustainable HRM.

**Capability Reproduction**

There is a substantial body of literature (for instance Ehnert 2009; Clarke 2011; Delaye 2011; Wells 2011) which links HRM practices to internal outcomes, particularly economic outcomes. As discussed in the previous section, research using the SHRM framework demonstrates that HRM practices contribute to financial outcomes through mediating factors which represent human outcomes. These outcomes include job satisfaction, engagement and positive psychological contract. Unlike the SHRM literature, Sustainable HRM writers who emphasise economic outcomes explicitly identify two performance outcomes for the organisation: economic and social/human. These writers are particularly concerned with fostering economic outcomes and organisational sustainability in the longer term through HRM practices which contribute to positive human/social outcomes.

According to these writers the concept of Sustainable HRM represents a new, holistic approach to people management and it represents an extension of SHRM. This approach argues particular HRM practices are essential for the development of the human capabilities required to operate in an environment facing environmental, demographic and social pressures (Wilkinson et al. 2001; Ehnert 2009; Clarke 2011). Ehnert (2009, p.74) provides a definition of Sustainable HRM which recognises the presence of ambiguity and duality. Sustainable HRM is the pattern of planned or emerging human resource strategies and practices intended to enable a organisational goal achievement while simultaneously reproducing the human resource base over a long-lasting calendar time and controlling for the self induced side and feedback effects on the HR.
base and thus on the company itself (Ehnert 2009, p.74). According to Ehnert “the main objectives of Sustainable HRM are (1) to balance the ambiguities and duality of efficiency and sustainability over a long-lasting calendar year, (2) to sustain, develop, and reproduce an organisation’s human and social resource base eg help the mutual exchange relationships and (3) to evaluate and assess negative effects of HR activities on the HR base and on the sources for HR (Ehnert 2006, p.14). This definition extends the previous definitions which focus primarily on outcomes, by also acknowledging the processes involved in Sustainable HRM.

According to this definition, Sustainable HR assumes an organisation is an open system which needs to develop and regenerate its human resources at least as fast as it “consumes” them. Dualities and dilemmas for HR practitioners are recognised in sustainable management of HR. HR practitioners are faced with the need for further efficiency and at the same time invest in the development of human capability. The literature in this area focuses on long term social/human outcomes by the Sustainable HRM writers. For instance, Wilkinson et al. 2001 argue human resource sustainability requires a “shift in focus from short term corporate survival to long-term business success” and a focus on positive employee outcomes (Wilkinson et al. 2001, p.1498-1499).

Most aspects of this approach have been captured in a model described by Ehnert (2009, p.172). The model is based on an open systems framework. The model does not adequately capture the negative external and internal consequences of HRM practice. However, these consequences could be added to the model. The model also fails to capture the difference between policy and the practice resulting from implementation and the dualities, complexities and ambiguities in HRM policy and practice. Although the model identifies the socioeconomic context of organisations it does not adequately identify the influences of these contexts, nor do they demonstrate how strategy could be influenced by an organisation’s actions.

Promoting Social and Environmental Health

The second group of writers (such as Mariappanadar 2003, 2012; Orlitzky 2003; Branco and Rodrigues 2006; Collinson et al. 2007) on Sustainable HRM identifies the relationship between HRM and external outcomes which are typically representative of corporate social responsibility (CSR) and the triple bottom line (economic, social and environmental outcomes). It is noteworthy that much of this literature identifies the way in which social/human outcomes and/or environmental outcomes contribute to economic and financial outcomes. Therefore many of these writers reflect the efficiency oriented approach to sustainability.

Performing well on social/human and environmental indicators represents a form of strategic investment and is a means of satisfying a variety of stakeholder expectations.

This emphasis on economic outcomes from social/human and ecological/environmental outcomes is reflected in the focus of research and the practitioner understanding of the term sustainability. Walsh et al. (2003) demonstrated that of the 121 papers which empirically examined the relationship between CSR outcomes and corporate financial performance, 100 of these “attach CSR to an economic rationale” (Walsh et al. 2003, p.868). This is supported by research on the understanding by HR professionals on “sustainability in HRM” in eight European countries. This research demonstrated that in all countries except Switzerland, the economic outcomes were given primacy (Zaugg et al. 2001).

Other writers (Mariappanadar 2003, 2012) within this broad groups focus on the impact of HRM on externalities, particularly social and human externalities. These outcomes include family and community well-being, employee health, government policy and expenditure. These writers are primarily concerned with negative externalities (NE). NE refers to “something that costs the organisation nothing for their actions or business practices, but those actions or business practices are costly to third parties” (Mariappanadar 2011, p.5).

Connections

This group examines the interrelationships between management practices, including HRM and organisational outcomes, including environmental, social and financial outcomes. Implicit in these writings is a moral concern with organisations behaving responsibly. The literature on Sustainable Leadership acknowledges the influence of national contexts on management practices (Avery 2005; Avery and Bergsteiner 2010), while the literature on change for sustainability and Sustainable Organisations (Dunphy et al. 2007), and the GHRM literature (Renwick, Redman and Maguire 2011) recognises the interrelationships between environmental practices and HRM and other management practices.

It has been argued environmental and human/social outcomes are interrelated and contribute to organisational sustainability. The development and implementation of advanced environmental policies and capabilities are
dependent on the creation of HRM policies that create trust between employees, management and the communities in which the organisation operates. Dunphy et al. (2007) propose that in order for organisations to provide positive ecological/environmental outcomes organisations need to also manage their staff in particular ways. They propose a six stage model which represents various stages of human and ecological/environmental sustainability. These stages are rejection, non-responsiveness, compliance, efficiency, strategic proactivity and the sustaining organisation. According to these writers a sustaining organisation is one “which fully incorporates the tenets of human and ecological sustainability into its own operations” and also works to support the application of sustainability more widely (Dunphy et al. 2003, p.62). Such an organisation has strong corporate values, culture senior executive support. It also is a networked, flexible structure, with HRM which builds the capabilities of the workforce, participative decision making, diversity management, high levels of workplace health and safety and performance indicators that reflect ethical concerns.

Similarly, GHRM literature draws out the relationships between environmental management (EM) and HRM (Jabbour and Santos 2008). It seeks to expand SHRM so it includes sustainability issues (Osland and Osland 2007; Kramar 2012) and address the role of HRM on environmental outcomes such as pollution prevention (Bunge et al. 1996; Jackson et al. 2011; Renwick et al. 2011). A variety of HRM policies associated with attracting and selecting, training and development, performance managing, pay and reward systems, and especially employee involvement, and empowerment and engagement have been found to create cultures, climates and capabilities required for positive environmental outcomes (Renwick et al. 2011).

As mentioned previously, there are some writers who explicitly recognise the impact of the national context on the approach to Sustainable HRM. This was demonstrated in a comprehensive study (Zaugg et al. 2001) in eight European countries (Germany, Italy, France, Spain, Austria, Great Britain, the Netherlands and Switzerland) and in the Sustainable Leadership literature (Avery 2005; Avery and Bergsteiner 2010). In the first study it was found in all countries except Switzerland, “sustainability in HRM” was associated with an economic goal orientation. This approach was derived from the view that human resource outcomes contributed to financial outcomes and the organisations survival.

According to this research, organisations in Switzerland regard Sustainable HRM as part of the “Swiss tradition of harmonious co-existence of employees, corporations and society” (Ehnert 2006, p.8). Employees are regarded as equal partners with management, are assumed to participate in decisions and take responsibility for their careers. HRM practices improve the long term development of employees so they are useful to their families and the community. Three practices are regarded as particularly significant: employee development, reward systems and the integration of sustainability into company strategies, goals and culture (Thom 2002, in Ehnert 2006).

According to Avery and Bergsteiner (2010) Sustainable leadership “refers to achieving futures in which humans live within their ecological and social means, without exploiting other parties” (Avery and Bergsteiner 2010, p.30). They (Avery 2005; Avery and Bergsteiner 2010) argue that this approach is dominant in European countries which adopt the Rhineland approach to economic theory, and although it is influenced by the national institutional and social contexts, it is an approach to managing people and a “leadership” philosophy which can be adopted in a variety of national contexts.

SUSTAINABLE HRM: WHAT IS AT ITS HEART?

Although the diverse Sustainable HRM literature does not represent a coherent body of literature the focus of the three groups of Sustainable HRM writers is on the development of human capital as an essential outcome of HRM processes. The literature does challenge the premise that the primary purpose of HRM is the achievement of business outcomes. In addition, a dominant concern involves the longer term survival of the organisation and the HRM processes and outcomes that can contribute to this survival. Even the GHRM literature recognises the importance of the interrelationships between environmental and human outcomes, and organisational sustainability and performance (Renwick et al. 2011, p.11).

The Sustainable HRM literature raises theoretical, moral, practice, outcomes and process issues. These issues are interdependent. Central to all of these issues is a clear focus on the purpose of the HRM practices. In SHRM the clear focus is furthering organisational performance, primarily in terms of economic outcomes. A focus for the Sustainable HRM literature would be furthering a variety of outcomes, not just economic outcomes, for their own sake (Kramar 2012). These outcomes would include a range of social and ecological outcomes. Such a focus recognises the interconnectedness of the many aspects of the organisation, the people in the organisation and the external environment.
The Sustainable HRM literature raises theoretical issues such as the dynamic nature of HRM and its outcomes, the interconnectedness of external, internal and individual people aspects of organisations, and a requirement to consider outcomes in terms of not just organisational economic outcomes, but in terms of economic, social and ecological outcomes for a variety of stakeholders. An open systems framework as elaborated in Figure 1 provides a framework which can be used as a model for framing Sustainable HRM.

This model builds on Ehnert’s model (2009, p.172). It takes into account the literature on negative externalities (Mariappanadar 2003, 2012) and SWS (Kirra 2002) and highlights the importance of making explicit the moral position underpinning a Sustainable HRM framework. It recognises that some stakeholders will lose as a result of HRM policies. They will lose in the short term (e.g. employees losing their jobs or being overworked) and in the long term (e.g. governments needing to provide for these employees). Therefore the model acknowledges HRM processes will have negative and positive outcomes on different stakeholders. It also acknowledges the influence of the institutional contexts of an organisation. The economic, social, regulatory and technological contexts are influenced and influence the development of strategy and HRM policies.

**Figure 1: Sustainable HRM model**

As Figure 1 reveals the outcomes of Sustainable HRM can be measured by evaluating organisational, social, individual and ecological outcomes. Measures would need to evaluate outcomes such as the quality of the employment relationship, the health and well-being of the workforce, productivity (organisational); the quality of relationships at work, organisation being an employer of choice and being recognised among a range of potential sources of labour (social); job satisfaction, employee motivation and work-life balance (individual); use of resources, such as energy, paper, water use, production of green products and services and costs associated with work travel (ecological). The appropriate measures would need to be developed for an individual organisation and then cascaded down to all employees using HRM practices, such as role design, performance indicators and rewards.

Some of the writers on Sustainable HRM raise issues for the practice of HRM. These issues focus on the capabilities, the complexity and ambiguities associated with HRM execution and implementation and the role of HR professionals. The specific capabilities identified are those required to operate in the current and future environment (Clarke 2001; Wilkinson et al. 2001; Enhert 2006, 2009) and particularly in an increasingly fragile ecological environment (Renwick et al. 2011).
Paradoxes can be represented as two or more contradictions which operate simultaneously. Ehnert (2009) developed a paradox framework for Sustainable HRM which illustrates the key tensions between the efficient use of people and maintaining the human capabilities, the tensions between efficiency and substance rationality and relational rationality, and developments over time. This is a very useful framework, however, it is unable to deal with the issue of execution and implementation.

Writers (Kramar 1992; Bowen and Ostroff 2004; Becker and Huselid 2006; Purcell and Hutchinson 2007; Stanton et al. 2007; Teo and Rodwell 2007) using an SHRM approach have paid attention to the issue of execution and implementation of HRM policies. These studies are useful in identifying the reasons for inconsistent understandings of HRM within an organisation, the failure to implement formal policy and the experience of HRM practices.

CEOs, middle and line managers play an essential role in implementation (Mayrhofer et al. 2004; Purcell and Hutchinson 2007). The CEO provides legitimacy to HRM policies, commits resources and influences within-group agreement within the organisational hierarchy (Bowen and Ostroff 2004; Bartram et al. 2007; Stanton et al. 2010). Middle and line managers are essential for the implementation of HRM policies and plans (Purcell and Hutchinson 2007; Teo and Rodwell 2007). These managers are critical for developing employee commitment and they need to behave in ways that are consistent and reciprocated by employees.

Implementation of HRM policies can be enhanced with CEO support, the receipt by line middle managers and employees of consistent messages. These messages should indicate desired employee behaviour, the link between HRM and performance and the relevance of the policies and at the same time be perceived as fair and be understood. In addition there needs to be a perception of agreement among principal decision makers and legitimacy of authority (Bowen and Ostroff 2004; Bartram et al. 2007; Stanton et al. 2010). Other factors, such as the use of cultural and structural changes in developing effective HRM systems, employee involvement, family-friendly policies and making HRM departments accessible (Khilji and Wang 2006) have been found to contribute to effective implementation. The implementation of HRM is not a neutral process but involves political aspects (Kramar 1992; Bartram et al. 2007; Sheehan et al. 2007), social, cultural and power factors (Kramar 1992). The practice of HRM cannot be explained by rational choice because people involved in developing and implementing HR policies operate in a context of conflicting pressures. In order to understand the actual practice of HRM, the factors influencing implementation need to be explicitly represented in a model. Figure 2 provides a preliminary attempt to represent these influences. This figure provides additional detail about the translation of policies into practices. This figure can be used in conjunction with Figure 1 to understand the purpose and processes embodied in Sustainable HRM.

Human outcomes, either for the purpose of organisational survival or for their own sake, are a consistent theme of this literature. In addition, some of the literature explicitly raises the importance of HRM practices for ecological outcomes. The identification of these outcomes has implications for the metrics and indicators of HRM performance. As mentioned previously, the identification and therefore the measurement of negative outcomes, not just positive outcomes would be an important component of Sustainable HRM. In addition these outcomes would include outcomes, within the organisation and outside the organisation. This is done in Figure1.

Ehnert’s (2009) definition of Sustainable HRM can be modified to take into account these broader outcomes and variety of processes. Sustainable HRM is the pattern of planned or emerging human resource strategies and practices intended to enable the achievement of financial, social and ecological goals while simultaneously reproducing the human resource base over a long term. It seeks to minimise the negative impacts on the natural environment and on people and communities and acknowledges the critical enabling role of CEOs, middle and line managers, HRM professionals and employees in providing messages which are distinctive, consistent and reflect consensus among decision makers.
CONCLUSION: THE NEXT STEP TOWARDS SUSTAINABLE HRM?

Sustainable HRM literature represents an alternative approach to people management. Literature does highlight a number of implications of a Sustainable HRM approach for research and the possible practice of HRM. Although it does not represent a coherent body of literature, it does raise the importance of explicitly acknowledging the impact of HRM on more than just organisational economic performance.

It therefore challenges the existing focus of HRM contributing to only financial outcomes, the role of the HR professional as a business partner and the role of human and social outcomes of HRM merely in terms of their contribution to business outcomes. It raises the importance of making explicit the moral dimensions of HRM policy, the interests that are served by policy and the interconnectedness of internal and external outcomes resulting from these policies. A critical aspect of these requirements is the explicit statement of the assumptions which underpin the purpose of HRM.

Within the current uncertain global economic, social and ecological climate the literature on Sustainable HRM will continue to evolve. Sustainable HRM represents a new approach to managing people, having broader purposes, recognition of complexities of workplace dynamics and explicit recognition of the need to avoid negative impacts of HRM practices to those of SHRM. It is important to acknowledge that aspects of SHRM and PM are an integral part of Sustainable HRM. Therefore organisational outcomes such as return on investment, market share and profit are still part of Sustainable HRM, as are operational activities. A body of knowledge on Sustainable HRM is developing; however, the challenge of integrating these into management practice in the workplace is indeed problematic.

Some of the suggested measures for evaluating Sustainable HRM practices are already used in organisations. These measures include climate, well-being and work-life balance surveys, prediction of future demand and supply of capabilities through workforce planning and the estimation of the carbon footprint of an organisation. However, the implication of a Sustainable HRM approach is that these measures are systematically adopted and form part of a broad HRM strategy.
Sustainable HRM will continue to develop as a concept in the future. It takes an explicit moral position, requires a multi-disciplinary approach and needs to be informed by theories which enable an understanding of ambiguity, feedback between action and outcomes and complexity. Critical processes will involve iterative and emergent processes, stakeholder management and a recognition of the interdependence of processes at a number of levels. Sustainable HRM offers many opportunities for researchers from a variety of disciplines and an opportunity to improve management practice.

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CRITICAL REALITIES OF SUSTAINABILITY EMBEDDEDNESS IN DECISION-MAKING

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ABSTRACT

Purpose: Sustainability appears to be an often misunderstood and complex phenomenon. The concept of sustainability embeddedness in decision making has become a “front of mind” concept and it is, in our opinion, critical to develop a clear understanding of sustainability in order to achieve improved strategising.

Problem investigated: There is a need to understand why management fails to embed sustainability, despite their protestations to the contrary. A conceptual framework is proposed with the purpose of “unveiling” realities about the embeddedness phenomenon for improved strategising.

Methodology: A “grounded theory” approach supports the interpretation of the case analysis. For this, an investigation was carried out on responsible leadership and practitioners in a stock exchange listed company. Data was collected by means of individual in-depth interviews, focus groups and researcher field notes. The analysis was inductive from the triangulated data sources.

Originality and value: Responsible leaders consistently need to make choices with strategic implications. This includes making decisions about sustainability options and behaving responsibly. Much of the focus around responsible leadership involves the call for sustainability in behaviour and in decision making in the business environment. This study investigates decision making at a job level for the embeddedness of sustainability and contributes to conceptualising the realities.

Research implications: The research is based on a context-specific study and interpretation by the researchers is central to its development. The framework has been supported by practitioners and academics and is probably generalisable.

Findings: The study proposes a conceptual framework with seven realities about achieving embeddedness (or not). Responsible leaders should consider these realities when choosing a strategic message addressing sustainability and making decisions on embeddedness.

Keywords: Strategising, Sustainability, Decision-making, Responsible leadership

INTRODUCTION

If the views and values of the majority of people world-wide are recognised as important in shaping global and local decision making, then we should expect to find these views represented in the decision-making outcomes of leading organisations. One such value concerns sustainability and responsible leadership in this regard. Specifically, sustainability embeddedness may be a key concept with a far-reaching impact on strategising, providing challenges to the “business as usual” modus operandi.

The contemporary business environment purports that sustainability is an unavoidable reality for businesses (Hallstedt et al. 2010, p.703; Hillestad, Xie and Haugland 2010, p.441). Sustainability is the creation of long-term stakeholder value by leveraging opportunities and managing associated risks that derive from financial, social and environmental developments as well as governance. It is the creation of what some may call “shared”, “integrated” or “total” value in a triple context environment (people, planet, profit) (King and Roberts...
2013, p.17). This value is not the company’s profit or its book value but embodies an approach that seeks to create benefit for itself, its stakeholders and the resources it relies on (Crews 2010, p.5; Elmualim et al. 2010, p.59; Laszlo and Zhexembayeva 2011, p.2; King and Roberts 2013, p.28). It encompasses the development of profitable business strategies that deliver tangible social and environmental benefits. This thinking is creating major new opportunities for profit and competitive advantage. Some would even say that sustainability is vital for companies to survive and thrive (Adams and Frost 2008, p.289; Porter et al. 2011).

Sustainability has been said to be the “missing ingredient in strategy”, which supports the notion of sustainability “embeddedness” in strategising (Bonn and Fisher 2011, p.5) and importantly, decision making (Pretorius and le Roux 2012). Embeddedness is the process of becoming part of a structure, (Jack and Anderson 2001, p.467) having access to and influence on key resources within it, where there is an enhancement of trust create benefit for itself, its stakeholders and the resources it relies on (Crews 2010, p.5; Elmualim et al. 2010, p.289; Porter et al. 2011). Sustainability embeddedness is a company’s response to a radically different market reality and business dimension, one that unifies the profit, ecological and social resources in a single integrated value-creation space (Laszlo and Zhexembayeva 2011, p.2). Thus, sustainability embeddedness is the process of integrating sustainability into organisational strategising and decision making for long-term favourable results. It occurs when the elements of sustainability become part of the fabric of the organisation and leadership. Embeddedness is achieved when there is a significant mind-set shift and deliberate choice (King and Roberts 2013, p.41).

Sustainable decisions are decision-making outcomes that reflect sustainability embeddedness. These involve related trade-offs between the elements of sustainability – profit, society and the environment, and governance choices – in an integration of potentially conflicting stakeholder criteria and the making of strategic and operational decisions that reflect integrated thinking and understanding of the long-term consequences of decision-making on strategy (Sustainable Definition 2014).

There has been a plea for an increased consciousness towards the making of sustainable decisions and the sharing of a wider and more sustainable and holistic view on profit by those in business enterprises. Responsible leaders are those called to perform effectively and ethically in their leadership role and sphere of influence (Fourie et al. 2012, p.82). They include those in formal leadership positions but also employees carrying out the work of strategy (Whittington 2002, p.3). They have been tasked with an expanded responsibility and must cope with constant change. There is an expectation for responsible leadership to ensure that all the material elements of sustainability have been embedded in their long-term strategy, in the strategic and daily decision making of the organisation, and in their actions (Fourie et al. 2012, p.72; King and Roberts 2013, p.27).

Strategic decisions pertain to the process of evaluating the current strategic situation and then making decisions regarding the type of strategies that drive organisations (Louw and Venter 2013, p.264). These decisions are made on a daily, monthly, and annual basis. Strategic decisions consider the resources, strategic intent and positioning of an organisation in its pursuit of competitive advantage (Louw and Venter 2013, p.264). It is important that responsible leaders transfer the ability to make decisions concerning sustainability to all employees. They need to initiate a culture of sustainability and make sustainable decision making a practice. All those involved in strategising, including those in leadership and management, but also, the employees or “strategy workers”, are considered practitioners of strategising (Whittington 2002, p.3). It is important for every person to identify themselves and their role in the strategic fabric and ethical network of the organisation. These practitioners are tasked with collaborating, sharing and sustaining sustainability embeddedness in the organisational culture and decision making (Fourie et al. 2012, p.85). This process is not automatic and relies on overcoming many liabilities, starting with clear communication.

Responsible leaders are confronted with various (and sometimes conflicting) models, frameworks, suggestions and tools for embedding sustainability into strategising and decision making (Lacy, Arnett and Lowitt 2009, p.485; Reilly 2009, p.33; Searcy 2009, p.50; Crews 2010, p.15; Elmualim et al. 2010, p.60; Holton, Glass and Price 2010, p.152; Leon-Soriana, Munoz-Tirress and Chalmeta-Rosalen 2010, p.249; Bonn and Fisher 2011, p.6). King and Roberts (2013, p.27) suggest that directors ask themselves ten questions, among these, the direct question: “Has the company embedded the sustainability issues materially in the business in its long term strategy?” Not all practitioners are necessarily responsible leaders. Implementers of strategy often execute strategy “regardless” of whether or not they bought into the mind-set of their leaders in sustainability.

The “well justified” and supported case for strategising for sustainability (Leon-Soriana et al. 2010, p.249; Brice 2012, p.12), accompanied by models and tools for embedding sustainability, has provided leadership and management with the “how to”, yet embedding sustainability into strategising remains a complex task and there
are challenges in its implementation (Crews 2010, p.17; Elmualim et al. 2010, p.58; Pretorius and le Roux 2012).

KEY FOCUS OF THE STUDY

Whilst sustainability embeddedness in decision making is critical to the making of sustainable decisions and the achieving of long-term value, there are concerns around the extent to which practitioners embed sustainability. We (Pretorius and le Roux 2012) previously researched sustainability embeddedness in strategising at the same company level using publicly available information. The findings highlighted potential gaps or challenges around the embeddedness of sustainability in decision making at a job level, which had not been researched previously. Top management, of a case company, inferred their concern around this issue. They noticed that decision making often fails to reflect sustainability. Various “signs” were identified by the case company’s management, which highlighted the issues for the study. For instance, it does not appear that their risk assessments are comprehensive or holistic in the risks identified. They do not clearly reflect sustainability embeddedness. Managers have observed that decision-making processes do not always reflect a balance between the elements of sustainability. Furthermore, decision-making outcomes often do not mirror a concern for all stakeholder groups. Overall, the management is concerned that sustainability, at a job level, may not be as embedded in decision making as desired, expected and, even, communicated publically.

RESEARCH QUESTION

This research sets out to understand the embeddedness of sustainability in decision making amongst practitioners at a job level in the case company. In order to explore this, we thought it crucial to understand the prevalent realities around sustainability embeddedness in decision making. We need first to understand and conceptualise sustainability embeddedness in decision making which is the purpose of this paper. The research question is thus:

What are the realities concerning sustainability embeddedness in decision making?

BACKGROUND AND ORIENTATION TO THE STUDY

Sustainability has become a boardroom-level strategic business issue and has inserted itself decisively into the business and academic agenda. Being a relatively new phenomenon, the topic is still being understood and the theory is being conceptualised.

This study, therefore, contributes to the building of theory around sustainability embeddedness. The process relies on past literature, empirical observation and the experience and insight of the researchers (Eisenhardt 1989, p.548). We (Pretorius and le Roux 2012) developed a tool to measure the embeddedness of sustainability in strategising (the SSI tool). The research determined the status of strategising for sustainability amongst the ALSI JSE Top 40 companies. The status was measured using each company’s external and publically available communication including annual and other reports. Each company received a score for embeddedness of sustainability in strategy formulation and strategy implementation (strategising).

The case company found the findings to be interesting and useful and its management confirmed their sustainability embeddedness in strategising as measured by the SSI tool. After presenting the findings, the case company shared a management dilemma that they felt was still unanswered. They found that sustainability embeddedness at a job level was unclear. The job level refers to the amount of responsibility, impact and scope that a practitioner has within a company and the liberty to influence decision-making outcomes affecting strategising. It includes how they see their job and their understanding of it.

Various signs suggested a limited or unclear level of embeddedness of sustainability in decision making amongst practitioners of strategising (those tasked with the work of strategy) and this was noted in the decision-making outcomes and practices (Whittington 2002, p.3). The researchers considered the management dilemma (referred to above) to be unique enough to utilise a single case-study design, as the situation is likely to be potentially informative for understanding sustainability embeddedness in decision making in other organisations. We determined that the findings could potentially support the identification of challenges and themes around sustainability embeddedness for long-term success and reporting. We propose that understanding how sustainability is embedded (or not) in decision making would have far-reaching consequences for this relatively new and complex phenomenon.
The potential value-add of the study

This study aims to understand and describe the embeddedness (or not) of sustainability in decision making by practitioners of strategising who have been called upon to behave responsibly. The study contributes to theory building around the concept of sustainability embeddedness, decision making and responsible leadership, and supports understanding around integrated reporting. It contributes to identifying the key realities necessary for improving decision-making outcomes and the making of sustainable decisions.

The interpreted findings are relevant for the academic body of faculty and students but also to those who practice in the organisational environment. The study reports on a “real-world situation” and contributes to shared learning around the relevant topics in the study and research methodology. We also report on a conceptual understanding of the study for the case company (Yin 2014, p.180).

Key scientific beliefs of the researchers

To build a conceptual framework, we, the researchers, are aware of our own methodological values, beliefs and particular philosophical assumptions. These ontological and epistemological assumptions could influence the way in which the research was conducted and are stated here to convey the “intellectual climate” in which the research was undertaken (Guba & Lincoln, 1994; Jabareen, 2009, p. 49).

Ontological positions

This position states the researchers’ views and the nature and essence of their research reality. Researcher A was a previous employee of the case company who measured the status of sustainability embeddedness in strategising as part of her Master’s degree and in her contribution to her previous employer. She then became an external consultant for the company before becoming an academic at a higher education institution. She seeks the truth through objective judgement of best practices and scientific proof. Researcher B is an objective realist who believes that knowledge comes from facts associated with the case and the context. If repetitive and consistent conditions of sustainability embeddedness are found in decision making at a job level then they can be generalised. His interest was to approach the research question from a strategy-as-practice view in his role as supervisor, consultant and researcher.

Epistemological positions

The theory of knowledge (epistemology) of the researchers diverged to some extent, allowing for interplay on how interpretations of social phenomena are perceived and how knowledge can be demonstrated. Researcher A worked from an academic learning paradigm in order to meet the requirements for a PhD and simultaneously report on her findings as a consultant tasked with the role of explaining and describing the embeddedness of sustainability in decision making to the leadership of the case company. Researcher B primarily worked from a scientific paradigm supported by a consultant paradigm. Working as a strategy consultant and professor influenced the search for factual directives, business patterns and answers to existing situations of a similar nature.

Method of review

The research approach focused on understanding the dynamics present in single case settings. The aim of the study was to build on past literature and research related to this specific case with the ultimate aim to contribute to theory development. We focused on understanding and introducing some rich (thick) description applicable to this specific case as opposed to the development of generalisable theory, although we anticipate the findings to be potentially applicable to other organisations (Eisenhart 1989, p.536).

Research approach

An inductive qualitative approach to the object of this research led to the development of concepts and themes for the proposed conceptual framework. Camp (2001, p.5) defines a conceptual framework as “a structure of what has been learned to best explain the natural progression of a phenomenon that is being studied”. Qualitative methods serve as adequate tools for investigating complex phenomena such as sustainability embeddedness in decision making (Jabareen 2009, p.42). The specific research needed was one of better understanding and sense making.
Why a case study?

We wanted to “get up close” to understand the contextual conditions of decision making and for this a case-study research strategy was designed. Yin (2014, p.21) suggests the uniqueness of a situation as sufficient rationalisation for using a single case. The specific case company under investigation is a leader in its industry and it is listed on the JSE. The general conditions under which it operates are those common to most listed South African companies with large portfolios of assets and diverse income streams. We spent time understanding the context of the case company as this was considered critical to the interpretation of the phenomenon (Corbin and Strauss 1990, p.11).

The choice of a single case design allowed us to become richly and intimately familiar with the case as a stand-alone entity (Eisenhardt 1989, p.540). The case company offered sufficient actions, insight and conditions to represent the concept of sustainability embeddedness in decision making. Comprehensive data collection with its depth and number of persons involved contributed to an understanding of the phenomenon (Corbin and Strauss 1990, p.9).

In the pursuit of completeness in the case study, the sample purposely included practitioners from all management levels (and not just the managerial elite) where there would be a fair representation of diverse views and responsibilities around the topics of strategy, sustainability embeddedness and responsible leadership. Our thinking was: if leadership is tasked with embedding sustainability into decision making then the concept should be transferred by leadership to all levels of management and operations (Whittington 2002, p.3; Yin, 2014 p.204). Transferred sustainability should feature as part of decision making at a job level by all practitioners and it should be visible in the decision making. Furthermore, the strategy-as-practice approach (Whittington 1996, p.735) supports the view of strategy as being a social practice of acting and interacting. It also highlights the curious absence of middle and lower managers in the study of strategising and their role in the discourse of strategy. We agree that it is not one elite group that can act strategically and make strategic decisions (Jarzabkowski and Spee 2009, p.70)

15 individual in-depth interviews were conducted, spanning approximately one and a half hours, with ample time set aside for explanation, elaboration and discussion. Four small focus groups were conducted with practitioners. A total of 35 practitioners (staff members) participated. The sample included representation from across management levels, across divisions (functional and line) and across the demographic regions from which the company operates including the offices in Johannesburg, Cape Town and Durban. As explained in the previous paragraph, we considered it important to include all management levels in the sample and not limit the study to top management.

Data collection methods

Case studies typically combine data collection methods (Eisenhardt 1989, p.535; Corbin and Strauss 1990, p.5). Data was collected by using three methods: individual in-depth interviews, focus groups and field notes. Focus groups included similar questions to the interviews but the questions were phrased to suit a group dynamic as opposed to an individual, and their purpose was to confirm the data from the interviews but also to increase understanding around the phenomena. The researchers sought to understand the phenomenon of sustainability embeddedness in decision making and gather more data to substantiate construct and category development.

The data inquiry strategy for interviews and focus groups made use of a recently proposed strategy called “interview-to-the-double” (ITTD). The method supports a study of the social practice of strategising applicable to this study and aided the articulation and representation of sustainability embeddedness in decision making. This technique required the interviewees to imagine that they had a double who would replace them at their job the next day. The interviewee is then asked to provide the necessary detailed instructions which will ensure that the “ploy” is not revealed and the double is not unmasked. ITTD is coherent with the critical aims and assumptions of practice-based studies (Nicolini 2009). The explanatory introduction to ITTD was slightly adapted for this study because time spent familiarising ourselves with the case company served to inform us that an adjustment to this approach would be necessary. Further, the context and economic climate of South Africa caused us to adapt the ITTD method slightly. We were concerned that communicating with a replacement or “double” could be associated with the loss of one’s job. In order to remove all potential hindrances to the data collection process and research, the interviewer instead asked that responses be explained with “explicit detail as if explaining to another person...and that this person should be able to make your current decisions, without you, with the information you provide”.

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Additional data was collected using a measurement instrument that was designed by the researchers based on literature on the topic of sustainability and previous research (Pretorius and le Roux 2012) that also measured the embeddedness of sustainability. The measurement tool was designed to gather data on sustainability embeddedness in decision making. It was validated by the second researcher and by practitioners in the case company who worked in management positions but who did not form part of the study.

The measurement tool included questions pertaining to responsible leadership, strategy and integrated reporting. The aim was to gather data that would help the researchers understand the phenomenon. The first part of the measurement instrument was an interview questionnaire that included a combination of open-ended and semi-structured questions designed to gather qualitative data and to understand relationships (Eisenhardt 1989, p.538; Bashir, Afzal and Azeem 2008, p.4).

Finally, field notes formed a part of the data collection methodology and were used to capture the impressions by the researcher of the situation. The primary researcher engaged in a running internal commentary where she asked: “What am I learning?” “How am I reacting to this encounter?” The insights and learning were regularly shared with the second researcher in reflective sessions or “conversations”. He played a key role in bringing a sometimes different and objective perspective to the collected evidence. This served to refine thinking and begin the development of constructs in the overlap between data collection and analysis. It also served to increase reliability and reduce bias (Eisenhardt 1989, p.539; Corbin and Strauss 1990, p.9).

**Data collection procedures**

Yin (2014, p.88) emphasises the importance of communicating the operational procedures associated with data collection for the purpose of improved case study protocol. Access to interviewees was arranged via a secretary who supported the head of sustainability and utilities at the case company. She set up appointments according to a pre-determined schedule. Data was collected cross-sectionally and analysed over a six-month period but the study’s preparation and development took more than two years. This time-frame allowed for interim data analysis and corroboration to ensure a match between findings and participants’ reality. It also attributed to the quality and rigor of the research (Bashir, Afzal and Azeem 2008, p.4). Resources such as printing, flipcharts and meeting rooms were provided by the case company. The interviews were digitally recorded and the data was transcribed. This allowed for the precise recording of data. The case company signed a permission and consent letter, which supported the research study (Yin 2014, p.91).

*Entre nous:* each participant participated on a voluntary basis. The research purposes and outcomes were explained and they were assured of the confidentiality of their answers. They agreed by accepting the meeting invitation and by also signing a consent form. Ethical clearance was obtained for the research study.

**Data analyses**

The research applied a “grounded theory” approach to data analysis for the development of constructs and formation of categories. The analysis of case study evidence is one of the least developed aspects of doing case studies (Yin 2014, p.133). This approach was not only suitable to understanding sustainability embeddedness in decision making but also supported the explanation and description of the phenomenon’s conditions (Corbin and Strauss 1990, p.5).

The researchers worked from the “ground up” by triangulating multiple data sources with the purpose of providing stronger substantiation of the constructs and minimising researcher bias. Constructs were developed from the interpretation of qualitative data, using an adapted process by Bourgeois and Eisenhardt (1988). The process led to the development of a conceptual framework (Eisenhardt 1989; Patton 2001; Bashir, Afzal and Azeem 2008, p.4; Yin 2014, p.136).

The following section describes the process followed:

1. The primary researcher first analysed the initial pieces of information while collecting data and mapping the data sources.
2. She then read the responses intricately and started developing categories. She began identifying and naming concepts, which were described epistemologically and ontologically.
3. She then moved to analysing the data from the focus groups. Concepts had to “earn their way” through repetition into the study.
4. After analysing incidents the researchers noted potential indicators of the phenomena and gave them conceptual labels as opposed to merely making constructs from the words in the data.
5. By contrasting and comparing the evidence from these data sources, patterns, themes and potential relationships emerged. These were either in support of the previous findings and collaborated the emerging patterns or conflicted with emerging constructs.

This process of constant comparison served to strengthen the findings and reduce biases developed from only using one angle or data source (Eisenhardt 1989, p.540; Corbin and Strauss 1990, p.9; Yin 2014, p.136). Part of the process included a deconstruction of each concept in order to identify its main attributes, characteristics, assumptions, and roles. This assisted us in grouping concepts together and reducing the number of concepts to seven from the original 13. The process and the refining of concepts were overseen by the second researcher. It was important that it not only made sense to him but that he could see the development of the findings (Corbin and Strauss 1990, p.9; Palmquist, Carley and Dale 1997, p.171; Jabareen 2009, p.52). A “grounded theory” approach as a method to interpret data and build the conceptual framework is considered “adequate and extremely useful for building conceptual frameworks from multidisciplinary texts” (Jabareen 2009, p.51). The aim was to generate, identify, and trace the phenomenon’s major concepts.

Literature helped the researchers frame and support the problem, synthesise the knowledge base and create a need for the study.

FINDINGS AND DISCUSSION:

A conceptual framework containing key insights or rather “realities” around sustainability embeddedness in decision-making has been conceived and proposed (Figure 1). It portrays the realities about and around embedding sustainability and alludes to aspects of the decision-making process although these allusions are not the main focus. The framework rests on the perceptions and insights of the researchers after considering all the data and participating in extensive conversations. Each data source was scrutinised for confirmation of concepts, additional concepts and differences (variance) under the conditions in a single case design context. The aim of the framework is to improve understanding around sustainability embeddedness in decision making (Jabareen 2009, p.49). Even where these realities emerge as liabilities they are nevertheless framed as realities. Each concept in the framework is discussed.

CRITICAL REALITIES OF SUSTAINABILITY EMBEDDEDNESS IN DECISION-MAKING

![Figure 1: A Conceptual Framework for Critical Realities of Sustainability Embeddedness in Decision-Making](image)

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The framework governs the thinking and reporting for the rest of the study. The proposed framework is actually the final result of the study process, but it is reported at this early juncture as it contains the main themes or concepts around sustainability embeddedness.

**Reality 1: The present (now)**

Some people would rather live in the present and not worry about the future, because it, (the future), will “worry” about itself and comes with its own set of troubles. The present time forms part of strategising, as practitioners make daily and strategic decisions towards company goals and objectives. The present can also be a hindrance when it is used as an excuse for the avoidance of critical actions or practices – such as in the case of sustainability. The present excuse of “now” affects those tasked with making sustainability and integration decisions. It seems that the case company practitioners are caught up in the present and its demands with little thought for the future (sustainability). Today, now and the present pose daily challenges and problems for responsible leaders and practitioners who appear to address what is happening in their current circumstances and consequently pay less attention to the making of sustainability decisions. “Now” reveals itself as a hindrance to long-term thinking.

Haugh and Talwar (2010, p.387) point out that in order to embed sustainability into an organisation, employees need to become fully integrated in the organisation and its pursuit of sustainability goals. Sustainability embeddedness is achieved when employees align their behaviour and daily practices and decision making towards well understood “long-term” goals (King and Roberts 2013, p.9). Some researchers have suggested reasons for making “now” decisions. These include a shortage of detailed options to choose from, the unpredictable environments within which decisions are made and the often broad, open-ended directions given to practitioners (Badaracco 2013). The pressure and pace of organisations appear to be a challenge to the making of sustainable decisions.

Many practitioners (leadership and employees, the subjects of the interviews) used focusing on the present as an excuse. Some described this reality by using language such as “what needs to be done” and the “issues” or “problems” that “pop up” that need to be dealt with. The reality was supported by mention of a “short term view”, the seizing of “present opportunities” and the “present work-load”. It was clear from subjects that there was a misalignment between current actions and thinking and the long-term view of sustainability. This was confirmed when a practitioner said “sustainable decision making is based on current circumstances that present themselves”.

Sustainable development refers to meeting the needs of the present without compromising the needs of future generations to meet their own needs (Brundtland 1987). It appears that practitioners are focused on meeting the present needs to an extent that they are, in fact, compromising and impacting on future generations. When practitioners get caught up in dealing with the present circumstances, their focus on the future appears to get lost.

This prioritising of present over future requirements could be attributed to a narrow view of sustainability’s association with accountability or a belief that they are addressing the sustainable future – by prioritising the present. This could be an inhibitor to the achievement of medium and long-term views of sustainability (Fourie et al. 2012, p.72).

**Reality 2: Past performance anchor**

Sustainability is both a journey and a destination guided by strategising and decision making. It could be said that the practice of sustainability should have one eye on the future and one on the present but this research shows that some practitioners are holding on to the past for strength and focusing less on the future. In fact, they do not appear to know that their strength might lie in letting go.

The anchor of past performance (effect) is an analogy to explain a barrier to sustainability embeddedness and the long-term view. The anchor keeps practitioners away from a focus on sustainability. Past actions have yielded financial success and the thinking is that sustainability lies in replicating good performance in the past. Practitioners refer to their past “experience”, “knowledge” and “budgeting” as examples of these anchors, as proof that they worked. They kept referring to the fact that the company performed “exceptionally well in the past”. They emphasised that there were “good historic returns” and even compared the present problems with how they were dealt with in the past. Instead of making sustainable, integrated and sometimes tough stakeholder choices about the future consequences of their strategy, management and practitioners rather asked whether the
decision was “budgeted for” or about the comparative financial effects. This anchor perspective limits the making of long-term, sometimes wiser, decisions.

Klaine and Von Hauff (2009, p.520), Reilly (2009, p.33) and Hillestad et al. (2010, p.440) similarly report that while there are powerful forces for sustainability, the embeddedness of sustainability may be impeded by equally strong forces against its implementation – such as the anchor effect that we propose here.

Embedding sustainability is not a trivial task (Holton et al. 2010, p.152). Despite the existence of sustainable development policies and plans, and despite an organisation’s efforts to increase the sustainability of decision making and operations, these efforts are hampered by the anchor effect. A gap between policies and practices exists (Ramus 2001, p.85) as a result. This is heightened by the fact that there are no “universally accepted sustainability standards or methodologies for measuring, and assessing and or monitoring a company’s progress towards sustainability” embeddedness (Ameer and Othman 2012, p.65).

The sustainability goal is known to be both complex and often elusive (Crews 2010, p.17; Elmualim et al. 2010, p.58; Haugh and Tower 2010, p.385) which could explain the reality of the past performance anchor.

**Reality 3: Professing what is right**

Those tasked with embedding sustainability into strategising and with making sustainable decisions know that it is the right thing to do. In fact, they profess it. Practitioners know that a sustainable future requires integrated decision making and balancing the elements of sustainability. They understand that to be sustainable they need to “think differently”, “improve systems of decision making” and “balance requests”. Most subjects postulated that they understood that sustainability rests on the consideration of “the people, planet and profit”. In turn, they know that they should seek out “win-win” situations, work “together”, act “responsibly” and “share information”. However, they revealed their difficulty in doing what they knew to be right.

It appears that some form of hypocrisy exists where one thing is said (professed) but another is done (execution) in practice. Subjects all appeared convinced that sustainability embeddedness is the right thing to do while little is seen in their daily practices. Subjects acknowledge the concept of “integrated thinking”. This thinking is associated with a change in business mind-set from separateness to integration of the elements of sustainability. It is an expanded view and a holistic consideration of a company’s financial performance with its social and environmental performance (Fourie et al. 2012, p.72). The subjects profess to know that it is important to integrate the social, economic and environmental dependencies and issues pertinent to the company’s business (Ameer and Othman 2012, p.62; King and Roberts 2013, p.14). In fact, they know this is the right way to think and do as far as sustainability integration is concerned – but implementation does not necessarily follow.

**Reality 4: Not my problem view**

Despite knowing that it is the right thing to do, when it comes to taking responsibility for sustainability embeddedness, there appears to be a strong feeling or belief that the role of sustainability is somebody else’s job. “It’s not my job, it’s not my role, it’s not my problem” are comments supporting the prevailing modus operandi for dealing with sustainability implementation. Despite a generally accepted belief that sustainability embeddedness is a reality whose importance is not to be doubted, the practitioners interviewed believe that it is not their problem. They tend to operate in silos where focusing on their job and taking on sustainability is associated with more work and not part of their performance. Thus, ownership for sustainability appears to be a major challenge. Instead of taking personal responsibility for sustainability, our subjects see sustainability as the responsibility of the “Sustainability or Utilities department”. They think it is “excellent” and “encouraging”, in fact, it is the “big energy drive”, but sustainability, in their view, is the other department’s responsibility (to “change globes”; and “deal with the green stuff”). They felt, too, that sustainability decisions are “beyond” their “level of authority”, not part of their job but rather initiatives belonging to another department.

Much of the focus around responsible leadership is the call for the display of accountability, transparency and sustainability in behaviour and in decision making in the business environment. It is a call for practitioners of strategy to be credible and trustworthy (Fourie et al. 2012, p.74). Responsible leaders need not only to make sustainable decisions pertaining to governance, the environment, society, the business organisation and a variety of stakeholders, but also to champion awareness and understanding around these topics amongst key stakeholders, including those in the organisation (King III 2009; Maritz, Pretorius and Plant 2011; Pless, Maak and Waldman 2012; King and Roberts 2013). This requires taking responsibility for the strategic message of sustainability embeddedness. The process is not automatic.
It appears that practitioners have either not yet come to understand their role in displaying responsible behaviour or they do not experience a culture supporting an embeddedness attitude (Brook 2005, p.615). It could be that they struggle to see the relationship between the benefit of being sustainable and decision making in their job.

**Reality 5: The Green Distraction**

In most cases, green means go, but when it comes to sustainability embeddedness, one needs to look out for the Green Distraction. Sustainability and being green are often confused. “Going Green” may sound positive and a green light in the right direction but it should rather be seen as a warning signal that sustainability is misunderstood and has been side-tracked or worse, attacked.

In spite of an understanding around sustainability as part of strategy claims and strategising (Pretorius and le Roux 2012), many practitioners continue to see two separate sustainability types: a green one and a financial one. This Green concept appears to be a hindrance to sustainability embeddedness, especially when decisions are made from this perspective.

One could say that sustainability has been attacked by the green monster. There is confusion between sustainability and “anything related to green”. Sustainability is seen as being “reputationally better” and about “fossil fuels and rhinos”. Unfortunately, the triple complex view of sustainability is seen as totally separated from a discussion about financial sustainability and green applications. In fact, some subjects would go as far as to purport that “sustainable decisions don’t include ‘green’” and are not a factor in “deal-making or strategic moves”. Sustainability is associated with “green buildings”, “green technologies” and “green stuff”. The green monster is a force against sustainability embeddedness and it is a reality.

Ameer and Othman (2012, p.61) allude to this finding. They point out that there have been challenges in understanding and defining sustainability, which has led to unsustainable practices or sustainable practices being “indistinguishable from green-washing and branded as delusional, misrepresentation and hypocritical”. Its misrepresentation has sometimes led to a “display of unsustainability, poor accountability and ignorance of stakeholder benefits and demands” – for which there been detrimental consequences for businesses.

Sustainability is, in fact, more than “being green” (Brice 2012, p.18). The environment is a critical element of sustainability but it appears that it is detracting the attention of practitioners away from a balanced view of sustainability.

**Reality 6: Harmony**

The reality is that some practitioners and organisations are “in harmony” and others show evidence of being “out-of-harmony”. In the context of sustainability embeddedness, a harmonious state is one where the organisation and its practitioners align their thinking around sustainability embeddedness with what they say and what they do. Recent evidence suggests that the current status around sustainability embeddedness in decision making is discordant, for example where goals are set without appropriate resource allocation for implementation.

There is clear evidence of this discordance between what practitioners think, what they say (reality 3), and what they do… or don’t do (realities 4 and 5). Sustainability is considered by all as “integral” to the business but in reality, they are not behaving as if it is. When it comes to making key decisions, practitioners refer to the “profit status of financials” and the “performance of shares”. This suggests that there is a lack of a comprehensive, triple-context view of sustainability.

The practitioners in the sample emphasised overall performance as still being about sustained “income streams” and “driving the bottom line growth and distribution”. Financial sustainability formed the largest part of their thoughts but they also communicated the importance of preserving the “streams” of income. This suggests a void in thinking around longevity and sustainability. Despite professing sustainability, it appears that, when it comes to making key decisions, sustainability embeddedness does not feature in what they do. Rather their actions support a single bottom line view of sustainability as opposed to a balanced view. It would appear that harmony only exists between financial goals, measures, conversation and actions.

Practitioners who observe this misalignment attribute it to a lack of rewards “linked to operating in a sustainable way”. They describe their situation as a “lack of congruence between current decisions and strategy” where there is “no comparison to strategy” and where everything is being “broken down into silos” and “fragmented
information”. Poor communication around strategy and a misaligned reward system are seen as challenges to making sustainable decisions and result in the lack of a harmonious state or a lack of integrated thinking.

**Reality 7: Strategic discourse**

Imagine how walking in the dark without illumination of one’s path could conjure feelings of fear and confusion. Imagine being tasked with making strategic choices between different strategising possibilities whilst needing to inspire the confidence of others, when the road map is unclear and the lamp is dim (Whittington 1996, p.731). Sustainability embeddedness falls into this category. Its strategising requires clear communication, established legitimacy and mile-stone goals. The reality is that when the path is unclear practitioners of strategising feel “in the dark”.

Responsible leaders, sometimes referred to as “enlightened leaders” but also, “sustainable leaders” and “innovative leaders” (King and Roberts 2013, p.3), need to do far more than “embrace the notion of being a good corporate citizen” (Laszlo and Zhexembayeva 2011, p.18). Instead, they are required to embed sustainability into strategising and establish a shared embeddedness in decision making amongst practitioners. This requires clear discourse around sustainability embeddedness in the practice of strategising. It should be a continuous conversation.

Many practitioners in the case company shared that they could not comment on strategy because they were not executive management or top management. Those who did comment suggested that “strategy was not communicated”. They reported that there were not enough “discussions around strategy” and “limited communication around sustainability”. Some even stated that the company “does not have a strategy” whilst others called it an “opportunistic emergent strategy”. Many referred to it as “vague” or simply, “not shared”. Those who were out of the loop suggested that the problem could lie in the communication of strategy outside of top management. There was emphasis that strategy is “not communicated all the way down” and that there is a lack of clarity which results in practitioners feeling left “in the dark”. In our experience, the strategic message is seldom heard by lower level management and employees and the “opposing nature” of the sustainability message makes it even more difficult. Few leaders would jeopardise their financial performance message for the sake of sustainability goals.

Practitioners pointed towards “not having clear vision from leaders on sustainability” or not being able to participate in the conversation as contributing to the realities discussed so far. This highlights challenges in the discourse of strategy, responsible leadership and the sustainability message.

When conceptualising the research, we considered “The seven deadly sins of sustainability embedding…..” as a possible title for this paper. The realities we have identified are these “sins” and require deliberate efforts from responsible leaders if they are to be overcome. The findings of the research as summarised in the conceptual framework (Figure 1) point clearly to the themes and concepts relevant to sustainability embeddedness in decision making. Inter-connectedness between different realities is implied here but it should form the topic of future research. It is clear that the realities are interrelated and overlapping, suggesting that there is probably no one elixir to fix the associated problems.

**MANAGEMENT IMPLICATIONS AND SUGGESTED FUTURE RESEARCH**

It is our firm belief that one can only be a leader if one’s strategic message is able to convert the audience into willing participants. This research has highlighted that non-participation is specifically the case as far as sustainability embeddedness is concerned. The realities we outline give direction to overcoming the liabilities by responsible leaders.

Embedding sustainability was further shown to be a complex process. Managers have to consider all the realities simultaneously owing to their inter-relatedness. They need to ensure that key realities are in harmony and that the message is clear. As resources allocation is mostly under pressure, if managers must focus, they should use the strategic message as their key “mediator” to all the other realities. Leaders distinguish themselves by the effectiveness of their message.

Those who want to influence decision making for sustainability could apply these realities when planning to address the liabilities associated with each reality. The framework can also serve to initiate a strategic conversation.
The proposed conceptual framework has highlighted various realities considered critical to sustainability embeddedness in decision making. Each reality has the potential to be further explored in detail. Future research could build on these findings and answer key questions about decision-making processes and the practices involved. The conceptual model and the findings could be supported by gathering quantitative data on the embeddedness of sustainability in decision making at a job level. This could serve to further confirm the theory being built (Patton 2001). There is also potential to revisit the evidence and determine mediators and moderators enabling or disabling the process of embedding sustainability in decision making. Our research interfaces with research on the tasks and roles of responsible leadership. Further research could review what is (and what isn’t) being done by responsible leadership to influence decision making for sustainability amongst the practitioners of strategising. The findings in this research could ignite further research to focus on the ways (discursive practices) in which practitioners tasked with embedding sustainability are enabled (or not) by organisational and wider social practices in their decisions and actions (Vaara Whittington 2012, p.286; see Jarzabkowski and Spee 2000, p.69 for an explanation of resulting strategies).

It is well established that discursive modes and processes can fundamentally influence meanings and understandings of the same concept or word in the minds of different groups – even in the same organisation. It can be difficult to achieve an outcome of sustainability embeddedness when its meaning is not made clear and it is not made free of ambiguity (Bourke and Meppem 2000, p.300).

LIMITATIONS OF THIS RESEARCH

While our methodology has been an illuminating process, it has one main limitation that should be considered when interpreting the results. At the outset of our research, there was no framework. During the collection of data (reading and rereading of data) several frameworks developed which were repeatedly adapted to account for new insights. Consequently the final proposed framework is the interactive conceptualisation of the researchers, who are by nature subject to their own biases as well as experiences. Many iterations of the framework came to the fore as suggested by Corbin and Strauss (1990) when they described the methodology associated with grounded theory research.

The proposed framework tends to categorise related and unrelated issues into “boxes” in order to improve understanding through analysis. Using such a framework obviously has limitations but we believe that its advantages outweigh these limitations if the reader considers the high level of interrelatedness between the realities identified in this study.

CONCLUDING THOUGHTS

Our beliefs influence our choices. King and Roberts (2013, p.xiii) surmise that the decisions we make on a daily basis emerge from our beliefs, which, aside from our flashes of inspiration, often come from what society and business believe. We agree. We feel it is important that the beliefs of those in business encapsulate high levels of accountability, transparency and sustainability (Fourie et al. 2012, p.74). This research has identified what it is that people in business, involved in the work of strategy, believe, and the basis for their decision making. The realities presented in this article pose an opportunity for businesses to change but the desired outcome is to see more than a change in thinking. We want to see an alignment of a sustainability belief system to behaviour and change in daily practices. Despite the focus of our research on one case study, we believe the results could be usefully extrapolated to a more general conclusion in regard to the making of sustainable decisions. It’s time to change business as usual to business as unusual (King Roberts 2013, p.xiii).

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DEVELOPING SELF-OBSERVATION SKILLS TO SUPPORT PERSONAL TRANSFORMATION PROCESSES IN LEADERSHIP DEVELOPMENT

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ABSTRACT

In this paper I approach the research field of sustainable leadership from a developmental perspective. This perspective distinguishes a horizontal mode of development in terms of the acquisition of more and more sophisticated knowledge from a vertical mode of development that requires a personal transformation that is more fundamental. The vertical mode is described as the unfolding of successive stages.

Expectations towards responsible, ecologically and socially sound and still economically successful leadership become ever more demanding in today’s complex world. The foundation and higher-level practices of the Sustainable Leadership Pyramid advocated by the Institute of Sustainable Leadership exactly address this point. From the developmental perspective, the more advanced the stage a leader is in the more holistic and comprehensive his or her considerations and actions can be expected.

The question is how personal transformation processes can be supported. I maintain that the ability for self-observation and sustained mindfulness is at the core of developing from one stage to the next. I propose a set of simple but still powerful reflection techniques that foster self-observation and the stabilisation of mindfulness and that can be implemented in leadership training and development. These techniques comprise introspection, mindfulness, phenomenological inquiry and affective dynamics.

Keywords: mindfulness, sustainable leadership, developmental perspective, personal transformation, self-observation

INTRODUCTION

In this paper I approach the research field of sustainable leadership from a developmental perspective. Over the last thirty years it became obvious that human development operates in two different modes: (1) horizontal development or knowledge acquisition and (2) vertical development or personal transformation. Horizontal development refers to acquiring more and more sophisticated knowledge. It has been, and very often still is, the conventional mode of learning and development. Vertical development, on the other hand requires a personal transformation that is more fundamental. It is about recognising and questioning one’s basic mental models and assumptions.

Particularly the latter mode of learning seems promising when it comes to sustainable leadership and the complex and multi-causal array of questions and challenges raised by this particular perspective on leading people, organisations and change. The personality of the leader in terms of his capacity to critically question his mental models and behavioral patterns then becomes an even more important focus point for leadership development. This has been described in terms of self-actualisation or self-integration (see e.g. Maslow 1986).

My aim with this paper is to challenge a one-sided and monolithic approach to leadership that concentrates on mere horizontal development with a more holistic and sustainable approach that also makes the personality integration of the leader a topic for consideration. After a short outline of some basic ideas of the developmental perspective I relate this perspective to the topic of sustainable leadership and the Sustainable Leadership Pyramid and conclude that the capacity for sustained self-observation is of central importance for sustainable leadership development. The following chapter constitutes the key part of the article and presents four different approaches to self-observation: introspection, mindfulness, phenomenological inquiry and affective dynamics. Besides providing a short overview of each approach particularly the transfer into practice matters to me. The concluding chapter identifies crucial benefits of self-observation.
HOW DO HUMANS MATURE ACROSS THEIR LIFE SPAN?

The basic question is how human adults and thus leaders mature. Besides biological maturation there is a process that can be described as consciousness or personality maturation. From a neo-Piagetian developmental perspective human consciousness develops through different stages across the life span. Consciousness thereby covers the entirety of psychical processes through which a human being becomes aware of him-/herself and of the external environment as a German dictionary defines consciousness (Duden online). More exactly for the purpose of this paper it is the human meaning making capacity or worldview that develops through a number of increasingly comprehensive, differentiated, and effective stages. Jane Loevinger for example summarises this frame of reference to create meaning from intrapersonal and interpersonal experiences with the term ego development (Hy and Loevinger 1996; Manners and Durkin 2001).

Earlier worldviews or stages thereby remain part of the response repertoire of successive worldviews or stages. An underlying assumption of this neo-Piagetian approach thus is that there are identifiable patterns of meaning making that people share in common with one another. These patterns moreover develop in complexity over time.

There are a number of different models that entertain this perspective today. They have been developed mainly during the past 40 to 50 years or so and differ primarily in their details. The number of stages for example varies depending on the model. See David Rooke and William Torbert (2005) for a concise overview on the stages of one model and Huan Hy and Jane Loevinger (1996) for a detailed account of how to recognise and measure them for yet another model.

As the space available here does not allow for a full outline of these stages I rather focus on one of the baselines namely the meaning making capacity. With respect to this issue the developmental progress can broadly be described in terms of the steps illustrated in Figure 1. The development in meaning making proceeds from naturalism to constructivism to systemic thinking and finally to non-dual thinking.

Naïve naturalism or naïve rationalism argues that the world is exactly as it is perceived. The world is naturalistic occurrence through and through. This is also the belief that science can describe the ultimate truth or that there is the right and only leadership model. Critical naturalism on the other hand takes in the position that only parts of all the information one perceives by the senses do accurately represent external objects, properties, and events, while others do not. Both approaches to meaning making embrace a linear logic or reasoning. According to constructivism the world is still independent of the human mind, knowledge of the world however is considered to be a construction of the mind. Knowledge in general and thus also scientific knowledge is constructed knowledge. With respect to leadership this might mean that different times in history give rise to the preference of different types or ideals of leaders. Systemic thinking is based on the belief that the component parts of a system can best be understood in terms of their relationships with each other and with other systems or the environment. This addresses for example what Peter Senge or Otto Scharmer translate into the fifth discipline or the theory U (Senge 1990; Scharmer 2007). Mutual co-dependencies, feedback loops and self-organisation are central features of this viewpoint. Non-dualism finally describes a kind of natural awareness without the split between subject and object. This forms the link to spiritual development however and is beyond the scope of this article.

Figure 1: The progression in worldview from a developmental perspective

For the purpose of this paper I specifically focus on two important sub-systems of the consciousness. Remember that the term consciousness describes the entirety of meaning making. The first sub-system is the cognitive aspect of the self or rather, relating to Loevinger’s notion, the ego-structure. This sub-system basically
comprises mental schemata and models thus the cognitive side of meaning making. The second sub-system is affective dynamics and is concerned with emotions and emotional arousal.

Both sub-systems exhibit their own dynamics in terms of specific internal rules and processing guidelines. These specify how one relates to, experiences and evaluates whatever one perceives and encounters when moving around in the world. Both systems obviously function not independently of each other. Rather they are interwoven and interconnected in multiple ways. Recent advances in the neurosciences and neurophenomenology stress this close interconnectedness of both sub-systems when it comes to understand human behaviour (Varela, Thompson and Rosch 1991; Rudrauf et al. 2003; Thompson 2007). For practical purposes it is helpful however to differentiate between both due to the different levers they ask for to work on.

SUSTAINABLE LEADERSHIP AND INDIVIDUAL DEVELOPMENT

Expectations towards responsible, ecologically and socially sound and still economically successful leadership become ever more demanding in today’s complex world. The foundation and higher-level practices of the Sustainable Leadership Pyramid advocated by the Institute of Sustainable Leadership exactly address this point. From the developmental perspective, the more advanced the stage a leader is in the more holistic and comprehensive his or her considerations and actions can be expected.

Leadership effectiveness and success is frequently related to psycho-physiological maturity and is understood to unfold with the development of consciousness (see for example Rooke and Torbert 2005; Harung et al. 2009). The point here is that with changes in self-development and self-knowledge one’s cognitive understanding, social behaviour and moral and ethical reasoning become more comprehensive and encompassing as well. This addresses qualitative differences in how a leader perceives and explains the world and constructs meaning from it. Of particular importance seem the transitions to a constructivist and subsequently to a systemic approach to meaning making. It has been argued for example that the difference between transformational and transactional leaders relates to differences in developmental stages (Kuhner and Lewis 1987). Higher development stages related to systemic thinking have also been connected to successfully lead and implement transformative organisational changes that focus on fundamental changes of culture, practices and underlying assumptions of core aspects of organisational functioning (Rooke and Torbert 1998; Torbert and Associates 2004). This for example relates to foundation practice number nine “considered organisational change” in the Sustainable Leadership Pyramid. Reflecting, rethinking and altering one’s basic assumptions as a leader seems a necessary precondition to lead through such a comprehensive change.

Gaining insight into the limitations of one’s mental schemata and meaning making structures is thus essential for the developmental journey. It subsequently is also essential to successfully deal with the demands of sustainable leadership. The basic question is how one can successfully move from one developmental stage to the next. I maintain that the ability for self-observation and sustained mindfulness is an important driver of developing from one stage to the next. So then let me introduce the different approaches to self-observation I would like to discuss.

THE SELF-OBSERVATION TOOLBOX

This brings me back to the two aspects of consciousness discussed earlier: the ego-structure and affective dynamics. In this section of the paper I will explore pragmatic and easy-to-use methods that can readily be implemented in leadership programs, coaching processes or individual development efforts.

As mental schemata and models are the building blocks of the ego-structure they offer themselves as starting point for developmental purposes. Important to consider thus is how they are constructed, how they function and what one could do to alter them.

To influence affective dynamics on the other hand one needs to be able to verbalise and map them and to learn to regulate them in a way that they can be used effectively. The point with emotions is that they are an important energising resource driving behavior in general.

I will turn to the ego-structure first introducing three different approaches to work on it, namely introspection, mindfulness and phenomenological inquiry.
**Introspection**

The aim of focused introspection is to deepen the skills for critical self-observation and self-reflection. This leads to the ability to better understand and question one’s own and others’ basic assumptions, beliefs and thought patterns.

Research shows that low-reflective persons tend to use feedback they receive on behavioural aspects in a self-affirming way. That is they tend to favor feedback that corresponds with and confirms their self-concepts. Feedback that does not confirm or challenge the self-concept is rather avoided or neglected (Hixon and Swann 1993).

The nature of the introspection process itself is important however. One can basically differentiate two approaches to introspection. The first is called descriptive introspection. This approach considers what one’s personality is like and translates into questions like “Do I have/not have behavioural traits A and/or B?” or “To what extent do I have/not have them?” Explanatory introspection on the other hand focuses on why one does/does not think of oneself in a particular way. Related questions might sound like “Why do I have/not have a particular trait?” or “What are the reasons for this?” The “why” thus makes the difference. Descriptive introspection is expected to strengthen psychological stability whereas explanatory introspection is considered to be an agent of psychological change (Hixon and Swann 1993, Sedikides et al. 2007). This seems intuitively right as answering the question of why I’m behaving in a particular way requires one to put the question in a larger context – for example, relating it to past events and experiences from childhood. It thus draws attention to one’s systems of origin and their influences on cognitive and behavioural patterns as an adult.

From a practical perspective transcribing one’s findings or thinking process compared to only contemplating about them has been found to positively influence the effectiveness of introspection (Sedikides et al. 2007). This could be done in the way of journal writing if introspection is done individually. In both cases however, mere contemplation or journal writing, introspection should become a regular activity in one’s daily or weekly routines. Setting apart dedicated times for this undertaking is thus important. A couple of minutes in the evening for example to reflect upon one’s successes and failures of the day and how they possibly relate to one’s assumptions and patterns of thinking and acting will do. In the group setting of a workshop or in a coaching process verbal exchange with the coach or peers in the group might be additional levers to enhance the effectiveness of introspection.

Introspection is the most readily approachable self-observation tool presented. Everyone has probably already asked him- or herself the question “Who am I?” So there is a kind of familiarity with this approach. The possibility to identify via explanatory introspection some hitherto unknown thinking and behavioural patterns and to then discuss about them allows a certain kind of distance that might be helpful for certain people.

**Mindfulness**

This approach originally stems from Eastern meditation techniques and traditions and has been made accessible in various ways. Particularly the work of John Kabat-Zinn (e.g. 2003) to use mindfulness as a tool for stress reduction is widely known and well established today (MBSR - mindfulness-based stress reduction). He defines mindfulness as:

“(...) the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment.”

Kabat-Zinn 2003, p.145

Mindfulness is thus a specific state of consciousness.

The first step towards mindfulness begins when attention is drawn to the experience of the moment. This means nothing more than the attentive observation of inner perceptions, thoughts and the constant flow of feelings and mood states. This is not mere thinking about experience, but the direct perception of this inner experience. Thinking about something usually happens through the filter of our beliefs, assumptions and expectations. Exactly these filters should be made obvious through mindfulness however.

The second step then is to attentively stay with the moment. It is important to engage in an open and curious stance toward one’s inner observations. It's not about artificially producing or amplifying certain sensations or deliberately pushing a relaxed state. Rather it is about perception of what arises in just this moment. This is
attentive inquiry with the attitude of “What is this?” towards whatever arises (Kabat-Zinn 2003). This does mean to accept all perceptions, thoughts and feelings that arise. And it is not about judging of whatever arises. It is not about labeling one’s emotions in positive and negative or about differentiating one’s thoughts in good or bad. It is thus important to consider that specific qualities relate to mindfulness. Attending this state in a non-judgemental, openhearted and compassionate manner are among these qualities. This non-judgemental attitude together with the notion of attentive inquiry is the key aspect that differentiates mindfulness from introspection. The insisting “why”-focus of introspection is exactly the step towards thinking over one’s thoughts and perceptions that rather are avoided in the attentive inquiry of mindfulness.

A major challenge of mindfulness training or meditation is the capacity to keep attention focused with an open and attentive attitude over a longer period of time given today’s fast paced world with its myriad of stimuli that attract attention. John Kabat-Zinn also stresses the importance of practice. He considers mindfulness more to be an art form to develop over time (Kabat-Zinn 2003).

Long-term oriented practices of mindfulness and meditation training lead to inner centering. Centering and inner focus are central in their supportive and focusing effect on consciousness. Mindfulness in particular can bring about a shift in perspective. This does mean that one is able to differentiate in observing the contents of the consciousness. It becomes obvious then that the depression is not me or that the role of a leader is not me. I’m not any longer fused with the depression or my professional identity. I’m able to perceive them from a distance. What was subject (I’m fused with) now becomes an object (it is there). We thus are not only “it”, we must be more than “it”, as Shauna Shapiro and her co-workers state (Shapiro et al. 2006). This shift in perspective can lead to enhanced cognitive, emotional and behavioural flexibility because one simply has more action alternatives at hand then before.

How to implement mindfulness? I like to use a short mindfulness meditation at the start or in-between a workshop to center the mind and focus the attention. Three to five minutes will do for such an exercise. I invite participants to close their eyes and start with a short body scan to re-focus attention inwards. Then I move on to observing the movement of breath and would then move further to a couple of focus questions like “Are there any pictures or feelings that come up this morning?” or “If you consider the topic of the morning session whatever is going to arise within you?” I would then stay some time in silence to allow participants to settle with their observations and then end the session in that I invite participants to come back with their attention to the here and now of our social setting. I usually remind participants to keep a non-judgmental and compassionate attitude either before I start the meditation or even in-between whenever I find it suitable. I usually also would invite participants to share their observations or sometimes make the group aware of whether they are able to recognise any atmospheric or mood-focused changes within the group compared to before the exercise.

Even though this is a punctual intervention there is a centering effect on the individual and on the group as such. To profoundly thrive on the positive effects of mindfulness however one needs to integrate it in terms of a practice in one’s daily routines. This can for example be a practice of sitting meditation, 10 or 15 minutes every second or third day on a regular basis to start with. Nowadays there is a plethora of CDs available with meditation music and instructions. What one can do in addition is to anchor the feeling of centeredness somewhere within the body.

**Phenomenological inquiry**

Phenomenological inquiry basically goes back to the work of the famous German philosopher Edmund Husserl. The starting point of the phenomenological approach is to not use any form of theoretical explanation in the inquiry. The primacy of the lived world or lived experience is important instead.

The approach comprises three basic steps: (1) A phase of suspension of habitual thought and judgement, (2) a phase of conversion of attention from external events to inner events and (3) a phase of receptivity towards the experience or close self-observation. The second step includes a change in the quality of attention from the attitude of looking-for to an attitude of letting-come. All three steps involve the active movement of attention (Varela and Shear 1999; Deprazaand, Varela and Vermeersch 2000). Figure 2 provides a tentative description of the process.

At the beginning of the practice it is helpful to restrict ones actions in the world to support the conversion of attention and to not be distracted. This would mean to find a quiet place where one is undisturbed and then find a relaxing position like on a sofa or on a meditation cushion. As one succeeds in mastering the practice, in particular to master the conversion step, the practice can be carried over into one’s daily routines.
As already mentioned the lived world in terms of one’s experiences and perceptions matter. This does mean to describe one’s experiences and perceptions as they arise in the process. Whatever thus occurs is noted down in a journal or a sheet of paper. It is thus helpful to keep the eyes open throughout the inquiry. The structured process of the phenomenological reduction is particularly suitable for cognitively oriented participants or groups. It offers the possibility to explore the field of meta-level reflection and analysis in some depth. The habit to put target expectations on hold (see step (1) allows the mind to readily focus on the thinking process thereby offering the chance to discover judgmental frames.

**Differentiating between the three self-observation tools**

What distinguishes the three approaches to self-observation discussed so far? The different approaches primarily differ in their basic attitude and in the manner they proceed with whatever findings come up.

The phenomenological approach asks for a written report to process and analyse the obtained information at a later moment in time. Obtaining information to better understand oneself is thus a key feature of the phenomenological approach. This holds true as well for introspection. The phenomenological inquiry however differs from introspection because of its lesser emphasis on the looking-for or thinking-over. Mindfulness on the other hand is not concerned with obtaining information in a structured manner. It is less concerned with understanding oneself in terms of looking for something to explain and understand the functioning of the self than it is with being fully present in the moment and entering a state of being that points to a space even beyond the self. In the quest to understand and explain one’s cognitive and behavioural patterns introspection thus represents the analytic pole, mindfulness the opposite pole of witnessing with the phenomenological inquiry being midway in between these two poles.

**Figure 2: Phenomenological inquiry as reflexive self-observation**

Let me now turn to the second sub-system of consciousness namely affective dynamics. Here I would like to describe another approach to self-observation in some detail:

**Affect regulation**

I will use the words emotion and affect interchangeably for the purpose of this paper. Emotions are subjective and conscious experiences that are characterised by and tied to psychophysiological expressions (e.g. mimics, body language), biological reactions (e.g. influence on immune system), and mental states (e.g. influence on cognition and the processing of cognitive data). Emotion is a driving force. It evokes motivation and action tendencies that translate into behavioral and cognitive expression. Affect regulation is a process that involves three basic steps (Greenberg 2011).
First one needs to become familiar with one’s emotions. At the first impression this seems an easy undertaking. But actually this step is not that easy as it might appear. Many people have never arrived at the point where they have learned to name and frankly share their emotions, neither in their families during their upbringing nor later in the education system. This is more so for men and even more the case in the professional environment, particularly with respect to leadership and leading. Professional role understanding matters, saving one’s face matters and leaving the impression of strength and toughness matters. The colorful, unpredictable and at times ambivalent world of emotions seems to not readily fit these role expectations. Would this not make me a weak leader if I would show my emotions? Thus the simple task to name and verbalise one’s emotions in a given situation can turn out to be a quite challenging undertaking. To practically approach this step one can for example start to develop emotional maps or emotional journals. An emotional journal would be filled in during the daily routines in regular time intervals, say every hour or every two hours for a certain period of time, a week for example. Emotional maps are the descriptions of one’s emotions caused by specific situations.

The second step is to understand when certain emotions appear and what triggers might have caused them. This includes an analytical stance towards one’s emotions. From a practical perspective a given situation or context that caused emotional arousal is in the center of the investigation. Again the question is what kinds of emotions have been present in the situation. Noting them down on a sheet of paper is next. Finally one tries to identify what specific aspects of the given situation might have caused the emotional outbreak. This can be done individually but the help of a peer allows for sharing one’s thoughts and considerations.

The third stage finally is concerned with the question of how one actually can regulate one’s emotions. This stage is the most difficult. Two possible gateways characterise the regulation. The first gateway is early in the emotion-generative process and focuses on changing the way a stimulus in a given situation is construed and emotionally labelled. One’s attention can for example intentionally be directed towards or away from the emotional stimulus. Also can a negative emotional stimulus be reinterpreted in terms of its meaning. This is called re-appraisal. One can for example broaden one’s perspective to place the emotional stimulus within a bigger and more holistic framework. The goal is to decrease the emotional impact of the stimulus. The second gateway is at a much later stage in emotion generation and is directed towards inhibiting the outward signs of inner feelings (Gross 2002).

I would like to conclude this excursion into affective dynamics with a practical example: An arousal diagram I frequently use in role-play settings in leadership programs (Liska 2004). The task is that the two role players after the activity let us say a performance appraisal with a subordinate in a leadership training group independently draw an arousal diagram as depicted in Figure 3. The two diagrams can then be compared and similarities or differences identified. The figure shows only one of these diagrams. I usually also ask for a verbal labelling of the emotions. Such a diagram together with the labelling of the emotions focuses on the first and second step of the regulation process.

Figure 3: Arousal diagram
CONCLUDING DISCUSSION

In this concluding chapter I would like to emphasise two crucial benefits of sustained self-observation and how they relate to sustainable leadership.

The first point is making one’s internal dynamics more transparent to oneself. Getting a better understanding of one’s needs for example is a direct outcome of such an undertaking as well as fully acknowledging how our minds and bodies work together to form the basis for functioning. This can help to find a better balance in life between the poles tension ~ relaxedness. In using the tilde to describe this pair I make use of the specific notation for a complementary pair proposed by Scott Kelso and David Engstrom to denote the reciprocal relationship between the two poles of the pair (Kelso and Engstrom 2008). The demands of todays business life make it quite common to primarily focus on only one side of this complementary pair namely tension. Tension then translates into performing, achieving and competing. This however is a situation that in the mid- and long-term most probably will lead to physical and psychical burnout and also keeps attention focused in a rather narrow and problem-centered manner. Self-observation offers the possibility to consciously influence the internal dynamics. One then is not at the mercy of these processes, being one’s mind’s plaything. One is able to apply a more unfocused and flexible scope of attention.

Emotion regulation and mindfulness are the self-observation tools most helpful here. Emotion regulation allows one to shift attention from negative and self-critical emotions towards positive emotions that are considered important drivers for mental and physical wellbeing. Positive emotions for example help to broaden the scope of attention and cognition, enabling more flexible and creative thinking. This initiates upward spirals toward increasing emotional well-being (Fredrickson and Joiner 2002).

Mindfulness allows for an enhanced sense of one’s inner centeredness as well as of unfocused attention. Mindfulness training specifically strengthens self-regulatory skills associated with emotion and attention, self-representations, and social skills like empathy and compassion, that are now discussed as central aims of education in the 21st century (Davidson et al. 2012). Mindfulness training has also been shown to positively influence the ability to regulate and sustain a broad and unfocused scope of attention and executive functions, also when stimuli are unexpected (Jha, Krompinger and Baime 2007; Chiesa, Calati and Serretti 2011). Unfocused, flexible and sustained attention for example strengthens the ability to readily recognise the interrelatedness of various topics and issues. This is particularly important when one needs to consider and deal with different layers of complexity and influence as articulated by the 14 foundation practices that enable six higher-level practices, which, in turn, facilitate three key performance drivers of the Sustainable Leadership Pyramid.

The second point is that self-observation helps to better understand that and how we construct our individual worlds. This is key to fostering and supporting the transition from one developmental level to the next. I thereby maintain that this transformation from one stage to the next can be pursued in an intentional manner. In addition as one gets known to one’s own thinking and behavioural patterns one also gets a better and more comprehensive understanding of how other people might think and behave. It is thus important that leaders and managers maintain a deeper understanding of self-observation – both as practice to improve their own minds and meaning making structures and as a template to judge potential for concerted and mindful action in their professional environments (Weick and Putnam 2006).

Primarily introspection and phenomenological inquiry are helpful self-observation tools to this end. They allow one to better understand the current patterns of meaning making and to anticipate the next step or stage in the developmental process. This becomes specifically important given the growing challenges and demands of sustainable leadership. I have already presented research findings that demonstrate the relation between the developmental stage of a leader and the demands of a full-ranged sustainable leadership approach like the Sustainable Leadership Pyramid in terms of skills and competences. Managers on earlier development stages (Naïve and Critical Naturalism) might for example tend to view issues of sustainable development rather reactively, primarily considering them in terms of costs and efforts. Managers on later stages (Systemic Thinking) might approach these topics more proactively, conceptualising them in terms of chances, future successful development and sources of progress (Boiral, Cayer and Baron 2009).

Another crucial skill is the ability to meta-reflect thus to mentally step back and take a broader perspective on what one does, how this relates to a given situation or context and what consequences one’s actions might have. More developed leaders, thus leaders with more differentiated meaning making structures and mindsets have a broader and enhanced world-centric perspective and concern as one of the reviewers of this paper puts it.
The presented approaches to self-observation can readily be practiced on one’s own or as part of an individual coaching contract with the coach offering and supporting the particular tools. They can also be implemented in leadership programs. Particularly intense development programs like group or team coaching programs where a group or team of leaders goes through a series of workshops as a closed group provide an ideal environment to anchor self-observation techniques (Schulte and Liska 2014). Practical hints have been given for both the individual and the group setting. All need practice however to internalise and to successfully make use of them. This does mean it is time to pick one of the presented approaches and to sit down for practice.

REFERENCES


PATHWAYS FOR IMPROVING SUSTAINABLE LEADERSHIP IN THAILAND

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ABSTRACT

Sustainable Leadership across all aspects of Thailand’s society is under stress.

The traditional expectation that leadership is created and delivered by one individual, the nominated leader, is questioned. To this end attention is drawn to the work of J.R.Meindl and others. Sustainable organisations are seeing leadership as a function of a group working collaboratively. The resistance of many Thai organisations to engage the idea of collaborative leadership is a key motivation for this study.

The goal of this research report is to illustrate where investment and transformation are needed if Thailand’s leadership is to embody and manifest those new sustainable leadership capabilities that the country needs to thrive.

This paper focuses on the second phase of the research, which follows up on the findings of Phase 1, which investigated the questions “What capabilities will future Thai leaders need? Why these?”

The purpose of Phase 2 was to explore the question “What actions can be taken that will together build Thailand’s leadership capability in the areas identified in Phase 1 of the research as inadequate?” Collections of sequential activities to improve leadership in each Gap are identified.

Keywords: leadership, systemic enquiry, follower-centric, collective wisdom.

OVERALL CONTEXT OF THE LEADERSHIP 2020 RESEARCH PROJECT

Leadership across all aspects of Thailand’s society is under stress. This is true globally, however, Thailand’s history and culture is special. The future shape and capabilities of effective leadership in Thailand must grow from the seedbed of its unique identity. Blindly grafting “leadership practices” from Western business authorities fails to recognise the inherent strength and limitations of Thai organisations.

Leadership is not a static resource; it must evolve to meet the challenges from changing organisational demands. Every leader faces the questions of why evolve, when to evolve and how to evolve; uncertainty about the action to take is generating significant leadership stress in Thai organisations.

The traditional expectation that leadership is created and delivered by one individual, the nominated leader, also adds to the stress. Today and tomorrow the complexity of organisations and their relationships with the world around them is too much for any one person to comprehend. More and more, organisations are seeing leadership as a function of a group working collaboratively. The resistance of many Thai organisations to engage the idea of collaborative leadership is seen as one reason for the leadership gaps discussed in the reports associated with the Leadership 2020 Research. Throughout this research we have used the term “leader” in a way that allows it to be interpreted as a single “nominated person” or as a “collective of people”. However, it is emphasised that few examples exist where the gaps in leadership have been filled through the actions of a single person.

The research has involved a diverse pool of Thai individuals and leaders as participants. This diversity, utilising systemic thinking techniques, helps to illuminate the intersection of an uncertain future with the current Thai leadership norms, tendencies, and practices.
It is important to note that the participants in this research have varied life experiences. Some participants are living temporarily overseas for study and work whereas some have never travelled outside of Thailand where their life has been entirely shaped by the culture and opportunities at home. Some participants have come from the professional sector, while others come from industrial or educational enterprises.

The goal has not been to fault-find, but rather to illustrate where investment and transformation are needed if Thailand’s leadership is to embody and manifest those new leadership capabilities that the country needs to thrive. Some of the traditional capabilities need to be “unlearned,” because they will cause trip-ups and breakdowns. Some capabilities, although counter-intuitive and counter-culture, need to be “learned” and adopted as the new norm. The research findings are impersonal: the insights are born of the collective intelligence and wisdom of diverse participants over the months of January to June 2013.

**Purpose of Phase 1**

Phase 1 of the project was designed to identify the gaps in leadership capability, perceived by Thais, in their leaders across community, business and government organisations. Attention being specifically focused on leadership capabilities that are considered essential to Thailand’s stability, progress and sustainability in the next 10 to 20 years.

The research question addressed was “What capabilities will future Thai leaders need? Why these?”

A full discussion of Phase 1 was presented at the 2013 Institute for Sustainable Leadership Conference held in Nice and is available in the conference proceedings. The key finding of Phase 1 and comments that have been made since their publication are summarized below.

**Findings of Phase 1**

**Leading to build resilience through uncertainty and ambiguity**

The need to “build for resilience” and how to appraise uncertainty stand out above all other required leadership competencies. Any business, community or government that cannot withstand discontinuities to its supply network, productivity, or markets, and rebuild from negative circumstances, will struggle to survive in this era where change is a daily occurrence and not something that appears slowly over, say, ten years.

_Thais have lived in a predictable environment for a long time, unlike its neighbours who have experienced wars and other post-colonialism disruptions, blunting their attention of change._

**Leading with flexibility to improvise and innovate**

The capability to improvise is almost a universal trait of Thai people. However, this capability is used only after a challenge is well established and is of short-term duration, rarely being the basis for longer term and innovative change. This action reinforces the perception that Thais tend to be more adaptive than creative in crisis.

_Thailand rarely suffers from natural disaster, or man-made crisis that disrupt routine activities; unlike Japan, which has the threat of earthquakes. Political turmoil is seen as housekeeping._

**Leading conversations across generational boundaries**

There are two distinct arenas of conversation going on everyday in Thailand. On the one hand older persons often in positions of responsibility are conversing about what they are doing and how this will advance their organisation or the country. On the other hand there are millions of conversational interactions between younger people using social media for a parallel conversation about what would be good for the organisation and the country. These two conversations rarely integrate.

_Even Thai language gives special status to seniority as it combines the English words “believe” and “listen” with the meaning that younger people through “respect” should always listen to their elders. It is culturally appropriate for seniors not to “listen” to younger generations but rather to “tell” them._
Leading to restore and sustain trust in leaders and their institutions

This category has some close connections with the previous category since the breakdown in communication between generations is one of the underlying factors that has led to a global collapse in confidence and trust of leaders and their leadership practices. Restoring trust is a challenge being confronted by all levels of business, government and community organisations.

Younger Thais dare not challenge or give feedback to an older person even when it could help the older person and improve the overall situation. As well as the seniority issue, Thais cannot separate personal relationships from work as illustrated by the tangle of cultural greetings they live in of Brother/ Sister, Uncle/ Aunt and Grandpa/ Grandma.

Leading into the future through continuous learning

One of the clearest demarcations in the research data is that between those whose see leadership as continuous learning and those who consider learning is for others, “they know”. Admitting to not knowing has been seen in many spheres of leadership as a weakness. With the level of interconnectivity between entities, the facts are that no one can know all that is necessary to provide the breadth and depth of leadership required, in time of rapid change. Change has so many different contexts, meaning “content driven” groups are now dependent on the learning, the knowledge, and wisdom of everyone in the group.

The Thai proverb [with Thai script]

In English this claims “the seniors have already experienced life and therefore can learn nothing from the younger or from others who may want to suggest something different”.

Leading simultaneously in both short and long term frameworks

The concept of time emerged as a key influencer on the leadership capability of organisations in Thailand. Time is used in the sense that everything that happens in the current timeframe has consequences for future timeframes.

This links to #1 when Thais see things “For Sure” we assume next week and next year is the same. Thus long term is equal to continuing several short terms.

Purpose of Phase 2

Phase 2 of the project was designed to identify what actions should be taken and in what order to build the capabilities identified as leadership gaps in Phase 1 of the research, through searching for “pathways” made up of many “stepping stones” that will guide leadership capability building in Thailand.

The purpose of Phase 2 was to identify how filling these gaps will enhance the resilience and innovation of Thai organisations in the future.

The research question addressed was “What actions can be taken that will together build Thailand’s leadership capability in the areas identified as inadequate in Phase 1?”

The researchers, in this phase of the project, have been cognisant of the fact that so many leadership development programs fail. In particular they have given attention to the four failure factors explained in the McKinsey study, published in January 2014, by Gurdjian, Halbeisen and Lane – (1) absence of context; (2) decoupling training from real work; (3) underestimating entrenched mind-sets; and (4) failing to measure outcomes.

The details that follow describe how pursuing this purpose has contributed to the recorded body of knowledge about leadership in organisations facing increasing complexity and national cultural changes; the techniques used to assemble the collective wisdom of Thais; the sense that can be made of that wisdom to improve the nation’s leadership capabilities in respect to the “gaps” identified in Phase 1 of the research; and how the results can be implemented to immediately stimulate improvement of leadership in all Thai organisations.
REVIEW OF LITERATURE

The body of literature that focuses on building specific leadership capabilities that have been identified by “followers”, to meet emergent challenges in a national environment, is small. In most cases the research of leadership capabilities focuses on capabilities identified by theory and/or successful leaders. The criteria for the research are primarily about performance in current circumstances from which future expected performance is extrapolated. As a result the majority of leadership theories and studies tend to emphasise the personal background, personality traits, perceptions and actions of individuals. To a greater or lesser extent the guiding philosophy originates from the “command and control” paradigm. This study strives to take a more holistic view and contend that leadership is a function of the whole organisation and not vested in a small number of nominated leaders.

The body of work inspired by J. R. Meindl and his associates in the latter part of the 20th century and over the last decade has challenged this leaders-centric approach to leadership (Meindl et al. 1985; Grint 2000). Meindl offered a follower-centric approach that views both leadership and its consequences as largely constructed by followers. In Follower-Centred Perspectives on Leadership (2004) Meindl, Postor and Mayo postulated that “new insights into the processes of leadership can be gained by focusing attention squarely on processes connected to followers and their contexts, independently of what leaders are actually doing”. Riggio, Chaleff and Lipman-Blumen (2008) contributed significantly to this perspective with their edited volume entitled The Art of Followership: How Great Followers Create Great Leaders and Organizations. Michelle Bligh (2011) in her review of follower-centric research concluded that “there is evidence that followership is entering the second stage of conceptual development, one of evaluation and conceptual development” (p.431).

Overall the studies focused on followership show that the insights and behaviours of all members of an organisation contribute to the quality of leadership capabilities required to guide the performance of their organisation.

Insights from other disciplines also reinforce this conclusion; especially work in the field of social and organisational complexity. In their award winning Harvard Business Review paper (November 2007) David Snowden and Mary Boone argued that the complex issues increasingly impacting on organisations cannot be resolved, managed or even explored from a single perspective (a single individual, a leader). Such issues require the attention of multiple perspectives and hence their leadership needs to be vested widely in the organisation. Arguments like Snowden’s blur the relationship between leader and follower and draw attention to the concept of leadership as a characteristic of an organisation that is contributed to by many people with a variety of capabilities.

Even a cursory review of the findings of Phase 1 of this research indicates how individuals cannot fill all the gaps identified in Thai leadership. Hence Phase 2 was designed to enable both existing leaders and followers to identify the types of activities they considered were necessary for an organisation to navigate and prosper in the future. This research breaks new ground in formulating strategic pathways of how “participatory leadership capabilities” can be created and implemented in organisations of any size, any function and of any orientation.

PHASE 2 RESEARCH METHODOLOGIES

Overview

As with Phase 1 of this research program it was assumed that people who belong to organisations and contribute daily to their performance (success and failure) know a lot about what the organisation needs to perform better. Each individual member has a ringside seat as the organisation’s leaders struggle with the many complex problems that challenge its performance, sustainability and resilience. Each one of these front row participants sees something different due to their varying training and life experiences. While individually they may each only know a little about the whole, together they know a lot.

On the basis of this assumption hundreds of Thais associated with many organisations from several sectors of Thai society, individuals with a multitude of roles within those organisations, were invited to participate in Open-ended Workshops. The Workshops were designed to respond to the question “How can the nominated six gaps in Thailand’s leadership capabilities be closed?”

Each workshop had three activities: (1) imagining activities that if carried out within an organisation would contribute to closing one of the gaps (known as Transformation Ideas); (2) posting a description of how the imagined activity would work in a cell of a 3 x 3 Grid known as a 3 Horizon Map); and (3) participating in a
group activity to identify and map the relationships that need to be nurtured between the six leadership capabilities to achieve outcomes greater than the sum of individual improvement in the capabilities (known as a Coherence Map).

The research team was responsible for completing the fourth and final sense making activity of collating data from all Workshops.

**Workshop activity 1**

The first activity placed Workshop participants in pairs (preferably with someone they did not previously know). Each pair was asked to select one of the Leadership Capability Gaps that interested them and on the provided colour coded (different color for each leadership capability gap) template, record some activity in an organisation that “ought” to exist if the gap was going to be lessened. Having recorded their “ought” statement the pair then recorded what they considered “is” the current situation with respect to that desired activity. Finally having described both an “ought” and “is”, the pair was required to describe “how” an organisation could move from the perception of “is” to “ought”. During this activity the facilitator reminded participants that it was most unlikely that any single activity could close the gap, so in their imagining participants should focus on ideas that would improve the gap situation. Having completed one Transformation Idea the pair would select another Gap that interested them and repeat the process. Each Workshop allowed approximately an hour for this activity enabling pairs to create several Transformation Idea Statements (TIS).

**Workshop activity 2**

In the second activity the participants placed their TIS in the cell of a 3 Horizons Map that they considered most appropriate in the longer term closing of the relevant leadership Gap. The horizontal axis of the Map depicted three degrees of time – NOW; SOON; and LATER while the vertical axis depicted three degrees of organisational readiness – Resources Immediately Available Inside Organisation; Resources Can Be Sourced Outside Organisation; and Research and Development Required To Identify Resources Required. As pairs discussed the placement of each TIS, they were asked to think in terms of their own organisation and consider on the time axis whether they thought other activities would have to happen before their idea could be implemented and to be realistic about current demands on resources. The facilitator reminded the participants about the natural urge to believe that what they had created should be done immediately and suggested one of the pair play a short-term devil’s advocate. Approximately half an hour was devoted to this activity in the workshops.

**Workshop activity 3**

The third activity required the workshop participants to be divided into six groups with each group adopting one of the six leadership capabilities. As a group they first shared their thoughts about what the capability involved (a discussion that was aided by the two previous activities). Once there was mutual understanding (not necessarily agreement on every detail) the group then addressed the question of what they needed from each of the other leadership capabilities if their capability was to excel in an organisation. Representatives of the group then negotiated with representatives of other groups to ascertain whether that group believed they could provide what was needed. Once the negotiation was agreed on both sides, what was to be transferred between the capabilities (nodes in the Coherence Map) was recorded on the map. Once the negotiations were completed between all the groups and agreed outcomes recorded, the whole group debriefed itself with a view to identifying any mutually exclusive relationships that could lead to dissonance if the map was implemented. Approximately one and half hours were devoted to completing the Coherence Map in each workshop.

**Workshop activity 4**

In a few workshops there was time for a fourth activity, which commenced a bigger activity to be completed by the research team to make further applied sense of the 3 Horizon Maps. In this activity small teams in the group identified an outcome in the LATER cells of the Map that they thought would be a significant indicator that the Gap had been significantly improved if it was implemented. This activity became a desired outcome for the group and was copied into the same cell of a mirror 3 Horizon Map. From this selected outcome the group looked back at activities that had been posted in the SOON cells to identify which activities, if completed, would make it more likely that their selected outcome could be implemented. As these activities were agreed to they were also copied onto the mirror 3 Horizon Map. The group next asked what activities in the NOW column, if implemented, would make it more likely that their selected SOON activities could be implemented. Again after group agreement the selected activities were moved to the mirror map. The outcome of this activity
was a “Strategic Staircase”, which showed how a selected set of activities could progressively improve an organisation’s leadership capability. Such a staircase could also be used to audit an organisation with respect to a particular leadership capability to ascertain the level of its development and appropriate intervention activities to continue the development in that organisation. Due to time constraints in the workshop only a few workshop participants contributed to this activity.

At the completion of the workshops the TIS that had been created and placed on 3 Horizon Maps were collated onto a single 3 Horizon Map for the research team to identify Strategic Staircases that emerged from all the perspectives and creative insights of the hundreds of participants. The technique was exactly the same as the one described above in Workshop Activity 4.

The Strategic Staircases that were identified by the research team are described in the results section of this paper. These staircases are being developed into a diagnostic tool.

RESULTS

733 Thais working and living in a wide variety of circumstances created the data set for Phase 2 of the project. Criteria to assess the diversity of the contributors included, age, gender, province, occupation, work experience, community responsibilities, education and current place of residence.

430 of the contributors were living temporarily outside Thailand when they participated in the project. Some were in Europe, some in USA and the majority in Australia where they were completing studies, gaining work experience, leading Thai international businesses, working for Thai government agencies or accompanying someone in one of these roles. 303 of the contributors were living in Thailand, many of whom had not ever left Thailand. 254 of this number are employed by medium to large Thai companies or hold middle management positions in the nation’s civil service. 49 contributors were graduate students studying in the International, Innovative, and Impact Master of Business Administration (IMBA) program at Thammasat University.

The contributors participated in 29 workshops (described above). The workshop outcomes were in three forms: a collection of Transformational Ideas (TIs) responding to the six leadership gaps; a 3 Horizon Map displaying the created TIs; and a Coherence Map depicting the perceived relationships between the six leadership gaps. Over 2,000 TIs were created, which after collation produced 708 activities for improving Thailand’s leadership capabilities. The 3 Horizon Maps identified the perceived development sequencing of the ideas and these were used to guide the creation of a single 3 Horizon Map during the collation of the contributions from all workshops.

Due to time constraints in the workshops only eight Coherence Maps were completed. All the identified relationships between the six leadership gaps were collated onto a single map. There was a high level of consistency between the identified relationships on the completed maps.

12 Strategic Staircases (called Pathways) emerged from the collated 3 Horizon Maps. 12 strategic programs have been crafted to capture the intent of these staircases. In all pathways three distinct foci were identified – enable, across the organisation, learning opportunities in the competencies needed; engage the people with the competencies in dynamic interaction; and enact and sustain the initiatives created. A brief outline of each strategy and the leadership gap it is designed to improve are shown below:

**Gap 1: Leading to build resilience through uncertainty and ambiguity**

**Strategy 1: Risk mitigation leadership**

Enhancing capability through initially building an awareness of change around the leader roles and responsibilities by monitoring both internal and external indicators of change and the rate of any change. This awareness is tested and assessed through open communication, for potential consequences of an identified change, with a diverse group of colleagues. The identified risk issues are shared across the organisation using organisational protocols that enable wide distribution of knowledge about the perceived risk’s potential impact.

**Strategy 2: Engaging uncertainty leadership**

Enhancing capability through developing awareness that uncertainty is normal and that its sources, potential impacts, and exploration are intentionally included in all conversations about future activities. Further, the outcomes of such conversations should be shared across the organisation to foster an expectation that
identification of uncertainty is a responsibility of all staff and to build open channels for uncertainty issues to be captured and disseminated.

**Strategy 3: Future oriented leadership**

Enhancing capability through selecting leaders who have an inclusive mindset and who are sensitive to the rapid changing environment in which the organisation must perform. Developing skills associated with continuous assessment of the dynamic environment and incorporating the outcomes of such assessment in planning and management of organisational activities to improve resilience and the availability of plan B options for dealing with the unexpected.

**Gap 2: Leading with flexibility to improvise and innovate**

**Strategy 4: Generating innovation leadership**

Enhancing capability through initially identifying the value of innovative activities to the organisation. Then articulating this value proposition throughout the organisation to stimulate exploration across and between agencies (internal and external) to create a flow of innovative ideas into a process that nurtures develops and assesses all innovative ideas. The continual search for innovation is supported by organisational protocols, incentives and investment to facilitate engagement by everyone.

**Strategy 5: Engaging new challenges leadership**

Enhancing capability through engaging leaders to “sweep in” to their thinking alternative points of view that widen both perception and understanding of prevailing challenges. To use this broader perspective to identify different options that can be explored in forums created to respond to the challenge. That contributors of options be rewarded and that both success and failure of effectively engaging challenge be rigorously studied and findings incorporated in future forum deliberation.

**Gap 3: Leading conversation across generation boundaries**

**Strategy 6: Open and inclusive communication leadership**

Enhancing capability through initially increasing the awareness and opportunity for one-on-one conversations across the whole organisation, including greater internal use of social media technology and face-to-face encounters. Intentionally facilitating multi-channel cross-generational knowledge sharing activities that are modeled by leaders at all levels and supported by organisational protocols and process.

**Strategy 7: Inclusive participation leadership**

Enhancing capability through building inclusive behaviours from individual to organisational activities by developing personal inclusiveness skills that can be used to recognise barriers to inclusion in organisational activities; facilitate inclusive behaviours in all aspect of organisational life and ensure that the learning generated from sharing knowledge is channeled to enrich options being considered by decision makers.

**Strategy 8: Respecting knowledge sharing leadership**

Enhancing capacity through recognising, valuing and advocating the unique knowledge held by each individual, no matter what their seniority, responsibilities, or tenure, to improving the performance of the organisation. To further this intention by being an active learner from all colleagues fostering skills for removing personal and organisational boundaries to knowledge sharing and being transparent about limits to personal knowledge as a basis for seeking further knowledge from all available sources.

**Gap 4: Leading to restore and sustain confidence and trust in leaders and their institutions**

**Strategy 9: Building trust leadership**

Enhancing capability through improving personal emotional intelligence so as to empathise with those encountering organisational barriers to meaningful and satisfying engagement; and with those confused by change. Applying the learning from these empathetic insights to model open, transparent engagement that will include mutual and reciprocal accountability.
Gap 5: Leading into the future through continuous learning

Strategy 10: Organisational learning leadership

Enhancing capability through initially promoting how the organisation mission is dependent on the sharing of the continuous learning by all stakeholders, about the external environment, the relationship between section and performance success and failure. The outcomes of the sharing are assessed and validated before being used to update organisational activities that contribute to achieving the organisation’s mission.

Strategy 11: Continuous learning leadership

Enhancing capability through initiating personal learning activities that demonstrate the value of moving publicly from uninformed to informed on issues confronting the organisation. To establish an expectation that “not knowing” is acceptable; but then “not learning” is not acceptable. To encourage reflection on knowledge gaps, a questioning of assumptions, and group collaboration in learning activities.

Gap 6: Leading simultaneously in both short and long term frameworks

Strategy 12: Accommodating short-long term outcomes leadership

Enhancing capability through developing skills to question longer term consequences of short term actions with the intention of involving all decision makers in critically addressing the sustainability of the organisation with respect to every decision made. This capability is further empowered by developing an understanding of the relationship between “today and tomorrow” through use of futuring techniques that focus on both the internal and external dynamics of the organisation.

DISCUSSION

Although all workshops were held independently of each other, there was a high degree of convergence in the data created about what activities should be implemented in organisations to improve leadership of complex issues. Similarly a pattern emerged in the strategic staircases across the Leadership Gaps that may be useful for all leadership development programs.

Participants in the workshops articulated three levels of activities. The first were activities associated with gaining competencies an individual requires to fully participate and contribute to the management and sustainable leadership of complex issues facing the community and business groups. Almost invariably gaining these skills is considered a NOW requirement and that organisations generally have the capacity to develop in-house, the more basic skills nominated, if they have the will. Further, there was a general consensus that while identifying some of the more sophisticated skills may require research within Thailand, such research should be initiated immediately since the skills in this area will be essential during the country’s entry into the Asean Economic Community in 2015.

The skills most referred to were ones that could be loosely categorised as creative thinking. As with the first phase of the Thailand Leadership 2020 research project participants continually identified the inability or unwillingness of Thai managers and leaders to look “outside-the-box” to engage with uncertainty, ambiguity, cultural change, malfunctioning internal communications and essential new knowledge relationships. Achieving the capacity amongst all leaders and emerging leaders to think differently, about complex issues so as to create options for deeper consideration, must be high on the staff development agenda of every Thai organisation.

A second cluster of activities formed around the time concept of SOON, that is after the competencies have been established. This cluster could be categorised as dynamic interaction. In short, people with critical thinking and related skills within an organisation must be intentionally brought into dialogue with each other to tackle the complex challenges. In isolation, people with the competencies identified will make little impression on the quality of leadership, but when several people with the skills can interact the corporate output will be significant.

This cluster highlights that closing the leadership gaps is not just about having better training programs; it is also about how the internal processes of an organisation. Processes need to be shaped to enable teams of people with the skills to apply those skills in dynamic forums that are characterised as being explorative, egalitarian, transparent and freed from boundaries that limit the generation of creative alternatives to present practices. For such forums to be created participants in the research pointed out that all senior staff had to have an awareness
of the current leadership gaps; otherwise such forums may be seen as challenging the authority and standing of those nominally responsible for the forum’s agenda.

This need for senior staff awareness and engagement with a wider approach to sustainable leadership in organisations was reinforced in the third cluster of activities identified in the research that were primarily associated with LATER time frame. In this cluster participants were emphasising the importance of organizations implementing the outcomes from the dynamic forums. Research participants argued that the dynamic forums would significantly advance the resilience of activities to overcome the identified leadership gaps if all can see the recommended actions that they have initiated.

The prospering of the enhanced leadership capability can be assessed through metrics that report on organisational characteristics such as resilience, staff commitment, transformations, shared learning, probing of assumptions, and incentivising options rather than one-off solutions.

CONCLUSION

The creation of the Strategic Pathways has shown how most organisations have some of the stepping-stones in place; very few have linked these facets to build a comprehensive program to develop sustainable leadership. The research will be completed in 2014 when the Phase 3 (Validation) and Phase 4 (Commercialisation) are completed.

REFERENCES


Endnotes

1 Meindl’s The Romance of Leadership was introduced as one of the first explicitly follower-centric approaches in an effort to balance the many leader-centric approaches that dominated leadership research and practice. Meindl pointed out that leaders had attained a seemingly heroic, larger-than-life status and urged us to consider the implications of relaxing the often taken-for-granted assumption that leaders are important in their own right. Particularly in light of the growing appreciation of external factors and the surrounding environment in which organisations operate, he suggested that we needed to question and systemically explore the value and significance of leadership in modern organisations. (Comment from Sage Review).
ABSTRACT

Climate change is one of the greatest challenges facing the world today. Organisations are finding themselves under increasing pressure from governments, shareholders and stakeholders to reduce their environmental impact and associated carbon emissions. The Higher Education (HE) sector has a significant impact on society and is not set apart from challenging carbon reduction targets. In 2005, total HE carbon emissions were 3,339 MtCO$_2$, a rise of 33 per cent since 1990. This paper suggests that the HE sector should aspire to exceed national carbon reduction targets, thus demonstrating leadership. Organisational research on the issue of strategic carbon management is relatively new and seems to be under-developed and under-researched, especially in the context of HE sector. The paper presents research findings from an exploratory study on the current state of strategic carbon management within the HE sector. A critical review of the literature and documentary analysis is combined with 17 semi-structured interviews with middle and senior managers in universities and other stakeholder organisations in the HE sector. A thematic framework is developed for exploring the key strategic carbon management issues to be addressed in, and lessons learned from, universities and the public sector more widely.

Keywords: Climate change, higher education sector, leadership, strategic carbon management, semi-structured interviews, thematic framework

INTRODUCTION

The motivation for this research comes from the widely-accepted need to reduce carbon dioxide (CO$_2$) and other greenhouse gas (GHG) emissions to mitigate climate change (Intergovernmental Panel on Climate Change 2007). The UK government passed the Climate Change Act 2008 as its legally binding framework to tackle climate change under its Kyoto commitments. Higher Education (HE) sector is a growing consumer of energy and resources and generator of carbon emissions. Higher Education Funding Council for England (HEFCE) found that total HE carbon emissions were 3,339 MtCO$_2$ in 2005, a significant rise of 33 per cent since 1990 (HEFCE 2010b). The sector is being encouraged to lead in carbon reduction, because of the privileged position universities occupy as centres of research excellence and in cultivating “thought leaders” for the future (HEFCE 2009). HE needs to play its part in meeting national targets and by demonstrating leadership to other sectors and businesses about how to do so (HEFCE 2010a).
The purpose of this paper is to present research that explores the current state of strategic carbon management in the Higher Education (HE) sector with a focus on universities in England. The paper first sets the scene by presenting the wider policy context around strategic carbon management and then critically presents the theoretical background of this topic. The next section justifies the chosen research methodology including the data collection methods and the research sample and then presents the results and analysis of the qualitative data in a thematic format. At the end, discussion has been provided and conclusions are drawn.

RESEARCH BACKGROUND

Policy background

Carbon emissions reduction has been high on the recent policy landscape. The Stern Review has suggested that a 25% reduction below current levels of emissions is required to stabilise global carbon dioxide emissions ($CO_2$) at levels that will not have adverse impacts and continues that the cost of not acting on climate change is greater than the cost of acting now (Stern 2006). The UK is the first country to introduce a Climate Change Act 2008 aiming for 80% carbon emissions reduction by 2050 and 34% by 2020 as compared to a 1990 baseline (Her Majesty’s Stationery Office 2008). HEFCE has adopted the same national targets of reducing the direct carbon emissions (scope 1 and scope 2), which against a 2005 baseline is equivalent to a reduction of 43 per cent by 2020 and 83 per cent by 2050 (HEFCE 2010b). The World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) classify scope 1 as direct emissions that occur from sources owned or controlled by the organisation and scope 2 accounts for emissions from the generation of purchased electricity. Scope 3 are all other indirect emissions that arise as a consequence of organisational activities, but occur from sources not owned or controlled by the organisation (WRI and WBCSD 2004). HEFCE asked universities to develop institutional carbon management plans with the success in meeting specific targets being a contributory factor in future capital allocations (HEFCE 2008).

Theoretical background

Carbon management has been moving up the corporate agenda and many organisations now understand the need to reduce their carbon emissions (Carbon Disclosure Project 2010), although there is a significant relationship between a firm’s carbon strategy, the sector it operates in and the size of the organisation (Lee 2012). Research into the strategic response to climate change in public and private sector organisations found that carbon reduction was dependent upon how those organisations “thought” about carbon emissions (Bebbington and Barter 2011). Frameworks underpinning corporate climate strategies have been developed to reduce carbon emissions in energy intensive companies within the manufacturing and process industries (Kolk and Pinks 2004). There is, however, also a considerable grey literature on public sector carbon management, focused on higher education, local authorities and National Health Services (NHS) trusts. This suggests that, despite much good practice (The Carbon Trust 2013) proactive actions are required by the public sector organisations to reduce carbon and other greenhouse gas emissions. It is also suggested that the most cost effective opportunities to achieve further carbon reduction exist within the Further and Higher Education sector (Bryan, Cohen and Stepan 2011).

In response, HE institutions are increasingly reporting greenhouse gas emissions as part of their sustainability performance measurement (Klein-Banai and Theis 2011). Much of the focus on greenhouse gas emissions reductions and sustainability strategies within universities has been on the energy consumption of buildings; this is largely because they are major contributors to an institution’s carbon emissions and they are usually under their direct control (Klein-Banai and Theis 2011). HE institutions should consider how a carbon management strategy will fit into the wider context of their operations, integrates with existing policies and strategies and can contribute to the delivery of regulatory obligations (HEFCE 2010a). There seems to be a lack of direct academic knowledge on strategic carbon management within universities (Mazhar, Bull and Lemon 2012) and much of the existing literature and related research is focused on wider sustainability or green issues. This is a topic in much need of urgent attention of universities.

RESEARCH METHODOLOGY

The research reported in this paper has adopted a qualitative approach to develop an improved understanding of strategic carbon management in HE sector. The research was inductive and exploratory mainly using semi-structured interviews and documentary analysis to support a thematic analysis. Carbon management plans of the universities and the Higher Education Funding Council for England’s (HEFCE) documents were reviewed as part of the documentary analysis. A short list of questions relating to strategic carbon management was drawn.
up in response to analysis of the documents and initial discussions with members of the environment team at the researcher’s university. 17 interviews were held with university managers and other key individuals from the HE sector organisations. These were conducted either face to face (11) or by telephone (six), depending upon the location and time commitments of the respondents and lasted for between 40 minutes and an hour. The interviews were recorded with both a digital recorder and an iPhone 4s; hand written notes were also taken.

The context for the overall research is English universities, however for the study reported below, nine universities were selected. These were drawn from both pre (four) and post (five) 1992 universities. The distinction between the pre and post-1992 universities is made to elaborate some of the issues being faced by the two groups of universities in the UK. The results indicate some of their specific organisational issues around strategic carbon management. Keeping in view the available time and resources, one interviewee was selected from each university to represent the organisation, apart from the researcher’s home university, where seven interviews were conducted. The reason for one person being interviewed in majority of the universities was the responsibility for implementing carbon management or a close link being in the same department. That one person was suitable to talk about strategic carbon management issues, because of his/her primary role. The details of the research participants are given in the Table 1 below, by presenting their job title, type of the interview and the organisation. The interviews were transcribed and organised in a qualitative data analysis software package, NVivo 10, for the thematic analysis reported in the next section.

Table 1: Research participants with job titles, types of interview and organisation

<table>
<thead>
<tr>
<th>Interview No.</th>
<th>Job Title</th>
<th>Type of Interview</th>
<th>Type of Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Environmental &amp; Sustainability Officer</td>
<td>Face-to-face</td>
<td>Post-1992</td>
</tr>
<tr>
<td>2</td>
<td>Energy Manager</td>
<td>Face-to-face</td>
<td>Pre-1992</td>
</tr>
<tr>
<td>3</td>
<td>Energy Officer</td>
<td>Face-to-face</td>
<td>Post-1992</td>
</tr>
<tr>
<td>4</td>
<td>Energy &amp; Carbon Manager</td>
<td>Face-to-face</td>
<td>Pre-1992</td>
</tr>
<tr>
<td>5</td>
<td>Sustainability Manager</td>
<td>Telephonic</td>
<td>Post-1992</td>
</tr>
<tr>
<td>6</td>
<td>Environmental Manager</td>
<td>Telephonic</td>
<td>Post-1992</td>
</tr>
<tr>
<td>7</td>
<td>Transport Coordinator</td>
<td>Face-to-face</td>
<td>Post-1992</td>
</tr>
<tr>
<td>8</td>
<td>Director of Estates &amp; Buildings</td>
<td>Telephonic</td>
<td>Pre-1992</td>
</tr>
<tr>
<td>9</td>
<td>Director of Estates</td>
<td>Telephonic</td>
<td>Post-1992</td>
</tr>
<tr>
<td>10</td>
<td>Head of Estate Management</td>
<td>Face-to-face</td>
<td>Post-1992</td>
</tr>
<tr>
<td>11</td>
<td>Deputy Procurement Manager</td>
<td>Face-to-face</td>
<td>Post-1992</td>
</tr>
<tr>
<td>12</td>
<td>Environmental Officer</td>
<td>Telephonic</td>
<td>Pre-1992</td>
</tr>
<tr>
<td>13</td>
<td>Director of Sustainable Development</td>
<td>Face-to-face</td>
<td>Post-1992</td>
</tr>
<tr>
<td>14</td>
<td>Research Fellow</td>
<td>Face-to-face</td>
<td>Post-1992</td>
</tr>
<tr>
<td>15</td>
<td>Director of Climate Change Policy</td>
<td>Face-to-face</td>
<td>Post-1992</td>
</tr>
<tr>
<td>16</td>
<td>Head of Sustainable Development</td>
<td>Telephonic</td>
<td>HE sector organisation</td>
</tr>
<tr>
<td>17</td>
<td>Chief Executive</td>
<td>Face-to-face</td>
<td>HE sector organisation</td>
</tr>
</tbody>
</table>

ANALYSIS AND RESULTS: CURRENT STATE OF STRATEGIC CARBON MANAGEMENT IN THE HE SECTOR

The analysis of the data has resulted in ten key themes relating to strategic carbon management. The following themes and sub-themes of the thematic framework represent the way of organising the findings in a more systematic and comprehensive way.

Understanding of carbon management

The issue of “carbon” has grown over the last decade as a result of various policy drivers. It is increasingly seen as an umbrella for environmental issues and is increasingly being recognised by universities both as a cost and an opportunity. Interviewees were initially asked to define “carbon management” in order to find out their perception and understanding of the process. While the term is well understood by the university practitioners and the interviewees defined it in different ways, but agreed that the ultimate goal is to reduce carbon emissions arising from different sources. Two of the interviewees considered “carbon management” a misleading term by
forcing universities to think that “carbon” is the only sustainability agenda. They argued that there are wider sustainability issues, which need to be addressed. The environmental managers seem to have better conceptual understanding of carbon management than other managers in estate and procurement department. On the other hand, nearly all of the interviewees consider carbon management to be a strategic issue and documentary analysis is evident that six out of total nine universities have environmental sustainability in their strategic plans.

**Leadership**

Senior management leadership was one of the most important components of carbon management and was mentioned by more than half of the respondents. Senior management commitment varied from university to university; although in theory almost all of the universities have senior management buy-in reflected through their carbon management plans and other strategic documents. Its success depends on actual leadership and commitment through the deployment of resources. While eight interviewees felt their senior management was really committed and the six mentioned that there is a lack of leadership, all of the carbon management plans are signed by either a Vice Chancellor or a senior manager and the funding has been allocated to the projects, which indicate institutional leadership. Few of the interviewees mentioned that they are still trying to engage them. Senior management teams are key stakeholders and the middle managers need their full support to embed carbon management in university operations. Leaders have decision-making power and authority over the stakeholders and as such are able to influence their behaviour, if not their attitudes.

An Environmental Officer at a pre-1992 university argued that every head of department and school needs to be engaged, particularly in universities where devolved administration exists. The Carbon & Energy Manager at a pre-1992 university indicated lack of senior leadership in universities and said:

“I think senior management is still perhaps getting used to the idea of carbon management and I don’t know whether enough emphasis is actually given on the business decisions for carbon management”.

The Directors of Estate relatively seem to be committed and in most cases, they are the people who are responsible to lead an environment team based in estate and facilities management department. It was interesting to find that interviewees from the same university have different views on senior management commitment. One of the middle managers said that the university has a committed and strong leader, but conversely their middle management lacks in commitment. It is an important point to be noted that a middle manager himself is critically looking at the potential role of his fellow colleagues. It was not mentioned by any other interviewee and the criticism has been more on senior leadership. Two of the executives from the two HE organisations gave their opinions that the cost of energy is directly linked with senior management commitment. One of them said that the increase in energy cost has helped universities to drive carbon management forward. The other interviewee clearly stated that the prices of electricity are low and a further increase will make a difference.

**HE Sector Leadership**

There is a debate in the HE sector on its leadership in sustainable development and carbon reduction. There hasn’t been found any research or statistical evidence of its leadership over other public sector bodies and businesses. But, it is considered that the HE sector has distinguished itself from others as per the senior executive of a HE organisation. The HE sector has demonstrated a strong commitment to carbon reduction. There is substantial good practice in universities’ business operations; evidence shows that many HE institutions have successfully reduced their direct environmental impact (HEFCE 2013). If we narrow it down, many universities wants to be a leader in sustainability as reflected by their vision and carbon management plans. Also, a large number of institutions have started to recognise sustainability within their strategic documents and formal policies (Tilbury 2010).

**Funding and resources**

The majority of the respondents agreed that funding and resources are important for implementing carbon management strategies. There were two views on the issue of funding. Majority of the participants declared that funding is very important for implementing carbon management whereas, three interviewees said that funding tends not to be a problem for it. There are low and no cost measures of behaviour change and management to reduce energy and carbon emissions. These low hanging fruits must be utilised as one of the first options in universities. The Director of Climate Change Policy argued that funding should not be an excuse for inaction and quoted on the role of funding:
“You have to have some money, but it’s not always important, of course it’s important, but it tends not to be the problem in most cases”.

The majority of the interviewees (13 out of 17) mentioned lack of funding as one of the major barriers to carbon management. There were three interviewees who said that it is perceived to be a barrier and universities have various funding options available to them. An Energy Manager at a pre-1992 university argued that there is an issue of competing carbon management funds against internal budget for other important core business activities. The Energy Manager commented on the issue of core business priority:

“At some stage big numbers as in millions of pounds need to be invested to deliver the tones of CO₂. What the university has said in delivering these targets and delivering the sustainable campus, they won’t bankrupt the university”.

Four of the interviewees meant resources as human resources and their skills. It was found that universities have both internal and external funding sources available to them and most of the universities have ring-fenced internal budget to invest on carbon management and also utilise external funding. The sources of internal funding include tuition fees, commercial income, properties disposal and maintenance budget. The external funding sources are capital funding from HEFCE, Revolving Green Fund (RGF), Salix Finance Ltd. loans and recycling fund, funding from the research councils, renewable energy incentives and charity donations. Hence, it can be concluded that universities have funding and resources available, but some of the interviewees said that more funds would facilitate the process.

Carbon management planning

Universities in England are required to develop individual carbon reduction targets, strategies, and associated carbon management plans for addressing scope 1 and scope 2 carbon emissions (HEFCE 2010a). This study found that all of the participant universities have developed carbon management plans, which are focused on key strategic themes related to both technical and change management issues. These plans are publicly available on their websites. Three of the nine universities are in process of updating their carbon management plans to measure their previous performance and include the future strategies. There was one university where the academic faculty plans have a separate section on environment and sustainability issues and it is a good practice. The interviewees were also asked about the overall effectiveness of carbon management plans in the HE sector. There was a difference of opinions on this particular issue. Three of the interviewees criticised some aspects of these plans and mentioned the gaps. One of them said that carbon management plans are good to start and get the required recognition from senior management and other stakeholders. Another Environmental Manager explained that the university has reduced its emissions from business activities, which were not even mentioned in the plan. It indicates that carbon management plans need to be flexible to include any future changes and should be updated on a regular basis. The majority of the interviewees said that universities have been fairly successful in developing their carbon management plans. A senior manager of the HE sector organisation said that universities are quite structured in strategic planning and their committee structures. He was fairly confident in saying that the plans have been helpful for universities. The Director of Estates and an Environmental Manager commented both positively and negatively on the effectiveness of the carbon management plans respectively:

“Yes, carbon management plans are making progress and they are pragmatic. We also have a standard sector language”.

“The problem with carbon management plan is you write it at a point in time and try to predict what’s going to happen over the next few years in terms of student numbers and new buildings and other things, but you can’t predict accurately, so things happen and decisions are made that you didn’t know at the time when you wrote it, so yes things change, so it’s difficult”.

Boundaries of carbon measurement and management

The participant universities have started to monitor energy and fuel consumption and calculate subsequent tonnes of carbon emissions. Documentary analysis indicates that carbon measurement is an important part to benchmark carbon management performance. Unexpectedly, there were only two senior executives who mentioned monitoring and measuring carbon emissions as an integral part of strategic carbon management process. More emphasis was on the boundaries of carbon emissions measurement and management. Currently, the universities are mainly focused on scope 1 and scope 2 carbon emissions in their carbon accounting, targeting and management plans. It mainly consists of direct emission sources, where the data is readily
available. Indirect carbon emissions (scope 3) are a starting headline in the HE sector, where universities do not have targets and plans. There are some universities that have measured parts of scope 3 emissions. The selected scope 3 emissions are arising from waste and water. Procurement is a significant part of scope 3 emissions and an overall carbon footprint, as per the statistics of the researcher’s university, but the universities are still struggling to measure scope 3 emissions. It is considered challenging in terms of data and universities are first trying to collect the data for its correct measurement. HEFCE proposed that the HE sector commits to making reductions in scope 3 emissions (any other indirect emissions from sources not directly controlled by the organisation) (HEFCE 2010b). HEFCE also advised universities to monitor and report scope 3 carbon emissions, including the measurement of a baseline of carbon emission from procurement by December 2012 and setting target(s) for scope 3 emissions by December 2013 (HEFCE 2010b), but unfortunately the sector has missed this deadline. HEFCE has produced guidance for measuring scope 3 emissions, but it is still in the initial stages. Currently, the calculation of scope 3 involves estimations and assumptions. The majority of the interviewees believe that universities can have a significant impact on reducing scope 3. The Sustainability Manager explained the boundaries of carbon management in his relatively new post-1992 university and also indicated lack of policies for scope 3 emissions:

“We predominantly have been focusing on scope 1 and 2 at the moment. Scope 1 and 2 are most important for us in estates and it also gives us best payback in terms of spending money. It’s the thing that we have target set from HEFCE. The mandatory targets are for scope 1 and 2 only, whereas scope 3 is not mandatory, also scope 3 is more difficult to tackle”.

As far as procurement is concerned, the Deputy Procurement Manager highlighted that universities are using regional purchasing consortiums as a framework agreement. Among scope 3 emissions, transport and travel have not received much attention. There were three interviewees who gave their perspective on travel related emissions. A Chief Executive of the HE sector organisation stated that universities are not focused on transport and travel related emissions. Historically universities have not looked at carbon aspects of their travelling activities and they are only trying to convince people not to use cars. He went on saying that overseas students’ travel is very challenging. It is also in clash with internationalisation strategies of universities. The Transport Coordinator said that carbon output and carbon management is a side effect of his job. It was noticed that walking, cycling, car sharing and use of public transport are being encouraged in universities.

Carbon management projects

The participant universities are implementing carbon management plans with a range of energy efficiency and carbon reduction projects. The projects are both technical and non-technical and are listed in their carbon management plans. The market and legislative drivers for low and zero carbon and renewable technologies are encouraging universities to take up these technologies. There were more than half universities that are currently implementing low and zero carbon renewable technologies. The others are planning to do so in the near future, but there is a very small portion of total energy produced from these technologies. Solar PVs, solar thermal, combined heat and power (CHP) and biomass boilers are the most common and predominant renewable energy technologies in the participant universities. Wind turbines are not very common within the universities. It may be because of geographical location or other barriers associated with it. Ground source heat pump and air source heat pump are also functioning in some of the universities. There were two universities (one pre-1992 and one post-1992) that are connected with district heating scheme in the city. Renewable technologies require heavy investment with longer payback period, so the universities seem to be reluctant for making such investment. The interviewees were asked about the low carbon building technologies on the campus. The most common low carbon building technologies in the participant universities are lighting upgrades, LED lighting, boiler upgrade, voltage optimisation, insulation, variable speed drivers, evaporative cooling system and thin client computers for green Information and Communication Technologies (ICT) infrastructure. The non-technical projects include awareness raising campaigns, behaviour change and engagement related projects.

Carbon reduction targets

All of the nine universities, where participants were interviewed, have set carbon reduction targets. These ambitious targets are for the years 2020 and 2050 in response to the national and the HE sector targets. The majority of the universities have 2005/06 as the baseline year, because of the data availability. Some of the universities have very ambitious targets and some have relatively less. For example, one of the pre-1992 universities have 60% reduction target by 2020. These targets are only based on scope 1 and scope 2 carbon emissions. Some of the universities also have intermediate and/or annual targets to track their progress. Interestingly, an Environmental Officer of a pre-1992 university called these targets unrealistic and more of an aspiration, but the universities report their targets and the subsequent progress both internally and externally.
The senior executive of the HE sector organisation revealed that individual institutions that have produced the targets for 2020, make an aggregate of 38%. The sector’s overall reduction target is 43%, so there is a gap of 5% between the collective institutional targets and the agreed target of the HE sector. HEFCE has published this in the recent sustainable development consultation that sums of the individual targets do not meet the overall HE target (HEFCE 2013). This probably indicates further collective actions from universities. The Sustainability Manager argued the importance of carbon reduction targets as:

“It is important to have a target, a target which is a stretched target, but also realistic and achievable”.

**Absolute and relative targets**

There is a discussion on the issue of absolute (actual) and relative targets in the HE sector. HEFCE and the national targets are absolute targets. There were only two interviewees who differentiated between absolute and relative carbon reduction targets. The relative reductions allow universities to continue to grow. In spite of being more efficient, carbon emissions still rise with growth, but relative carbon emissions are reduced. The relative targets are measured against matrices of per Full Time Equivalent (FTE) student, per meter square floor area or per unit turnover of a university. Currently, the universities are more focused on relative targets for performance measurement and they are starting to realise that they are not achieving real reductions with relative targets, whereas absolute targets are very difficult to meet for a growing university.

**Communication**

Four interviewees mentioned communication as an important part of strategic carbon management process and declared that they have strategies in place to communicate to different university stakeholders. They were of the view that ideally carbon management targets and strategies need to be communicated to all of the stakeholders to achieve better results and then the performance should also be communicated through different channels to motivate them about their achievements. The terminologies of “sustainability” and “carbon” seem to be quite complex for common people and there is a lack of clarity. An Environmental Manager pointed out that his university brought other stakeholders together to discuss the development of the carbon management plan, so that everyone can have an input in the long-term vision through effective communication. Three interviewees discussed that a lack of communication exists in the universities. The need for effective communication was described by the Carbon and Energy Manager to spread the message across:

“Still people are not comfortable with the carbon management language, so it’s important that they actually get used to that language and get used to the concept of why are we actually doing it”.

**Stakeholders engagement – staff and students**

University entails a range of internal and external stakeholders including staff and students. Staff and students’ engagement is a bottom-up approach to strategic carbon management. There is very little engagement from staff and students’ population within universities. It is evident by five interviewees that there is a need to change the behaviour of stakeholders, as they make the culture of a university. It might be because of the lack of knowledge on environmental issues and more focus on their main duties. The universities have a huge population of staff and students and it is very challenging to engage them. There were ten interviewees who mentioned that it as an important part of the strategic carbon management process and all of them are trying to achieve the results through engagement initiatives. There was an Environmental & Sustainability Officer who mentioned “Green Impact” and “Students Switch Off” as the engagement tools, although many other universities are doing this. Students’ Unions have been active recently to reduce carbon emissions, but there is not much involvement as universities would like to see across the staff and students’ population. The Carbon and Energy manager declared that behavioural change programs can reduce 10% to 15% carbon emissions. The Director of Sustainable Development in a post-1992 university presented the challenge of engagement as followed:

“The biggest issue is the engagement of staff, in terms of people in buildings, who use energy and to get them understand the carbon management is a crucial part of their duties”.

The Transport Coordinator said that it is very difficult to change behaviour, because people find easy ways to do things and many of the individuals have wrong perceptions of the environmental agenda. Every university is working on it through behaviour change campaigns and initiatives. Many of the schemes have been effective in
some universities, but a lot of work still needs to be done. Staff and students’ engagement is the key issue in the HE sector. An Environmental Officer mentioned:

“Well the experience is, staff engagement is very difficult; staff and student engagement is really difficult, because most of us think that we don’t pay the electricity or who collects our waste, we don’t care, so yes it’s a part of awareness and engagement”.

Strategic partnerships

Strategic partnerships emerged as one of the sub-themes in the interviews. Six out of 17 interviewees mentioned that their universities are in partnership with other organisations to tackle environmental issues. For example, local councils, National Health Service (NHS) trusts, local communities and businesses. These organisations can play an important role in strategic carbon management through a partnership approach with universities. It was encouraged by these participants that universities should adopt a partnership approach to make a big difference at a local and national level. The Head of Sustainable Development at HE organisation gave an idea of sharing resources such as tools and equipment, but currently, this is not happening in the HE sector. There is a culture that universities want to have their own equipment and tools. The Director of Sustainable Development encouraged universities to promote low-carbon agenda in their local communities as part of their strategic approach and some of the universities are already involved in community engagement projects. The Carbon and Energy Manager encouraged partnership approach:

“We also need partnership working with others. So to make a huge impact, because there is so much reduction in carbon you can actually make, but you need to actually step outside the box, perhaps you could actually do”.

Ownership and governance

Ownership is an important element for implementing carbon management according to many of the interviewees. It needs day to day involvement by university staff, students and senior management, so that it becomes a norm within a university. Estate’s environmental teams own carbon management and it seems to be relatively established at the estates level, but there is a question mark at the top and bottom of the universities. Carbon management does not seem to be embedded at whole organisational level. Environmental managers are working well on this agenda, as it was appreciated in the Environmental Association of Universities and Colleges (EAUC) international conference held in April, 2013 in Nottingham. Some universities have used incentives as a key strategy to build collective ownership. There were two universities (pre-1992 and post-1992) that have developed a scheme that the individual departments get financial incentives on reducing their electricity based on energy budgeting. It can be followed by other universities as a good practice. An Environmental and Sustainability Officer gave emphasis on the sense of ownership and said:

“The other thing to make sure that people understand that their activities effect our carbon emissions, sort of building ownership, so all of faculties and departments understand that it’s not just down to estates to reduce carbon, not just scope 1 and 2, scope 3 as well, but it’s every body’s role to do that, everybody has a role, all staff, all faculties, all the directorates plus all the students have a role as well. Everyone should have an ownership in the process”.

Unexpectedly, there were only three interviewees who raised the governance issue. Estate department of universities has to work with other faculties and departments to make a transformational change for effective strategic carbon management. The Director of Estate stated that the governance of university is taking carbon management seriously, but it is not the case for every university and it needs to be addressed strategically. On the basis of discussions with the university managers, it is anticipated that there is a lack of high level championing. There was little discussion around this important theme of strategic carbon management, but the Director of Sustainable Development suggested a useful technique to build ownership and governance:

“It requires you to talk to different people in slightly different languages with slightly different focus and to be able to understand where they are coming from, so you can suggest to them low carbon solutions that make their jobs easier”.

Responsibility

The interviewees were asked about the overall responsibility for carbon management in their universities. There were three kinds of responses on this matter, which include “everyone”, “estate department” and “Vice
Chancellor/senior management”. Majority of the interviewees (ten out of 17) said that carbon management is everyone’s responsibility and the estate department is responsible for implementing the strategies on behalf of the university. Ultimately, it lies with senior management or Vice Chancellor. Also, many of the interviewees clarified that it is not only estate’s responsibility. For example, an Environmental and Sustainability Officer viewed as:

“I think everybody has got a responsibility, staff and students have got responsibility to play their part, I know lot of the time it is seen as estate’s role, but I think it’s much wider than that. You have to look at lot of other things within a university to think about carbon related emissions, I don’t think it’s just estate, senior management also got a big responsibility in terms of the decisions they make”.

From a hierarchical point of view, it would rest on the Energy Manager, who normally reports to the Director of Estate, who typically might report to a member of the executive team. The estate managers are middle managers and they do not have control over strategic decisions. Their role and responsibility is operational. It was found that environment teams have different structures in different universities. The core responsibility of carbon management also varies in universities, ranging from energy manager, carbon manager to environmental and sustainability manager. It all depends on how the organisational and estate’s structure works.

**Strategic decision-making**

The majority of the interviewees agreed that carbon should be considered as part of every significant business decision. They argued that currently, strategic decisions are not made with carbon management considerations. There were 11 interviewees who mentioned strategic decision-making as an important theme in carbon management process and the decisions should align with what the university wants to achieve in the future, because every decision has its carbon implications. The same applies to procurement decision-making, where carbon management doesn’t influence the decisions and no one has really looked deeply on low carbon procurement according to one of the participants. The Deputy Procurement Manager was interviewed and it was explored that the progress is very slow in this area and the decision-making process is quite unclear. The Carbon & Energy Manager mentioned that carbon management doesn’t have priority at strategic level, but the Chief Executive encourages universities to filter strategic decisions through carbon management:

“I don’t know whether enough emphasis is actually given to the business decisions, enough importance is actually given to carbon management, when business decisions are actually made. Probably, it doesn’t, but it does have an influence when it comes down to saving cost like energy cost, then it becomes a strategic decision”.

**Conflicts and core business priorities**

All of the universities are working on environmental agenda in addition to the core business activities. Carbon management is not prioritised in comparison to other core business activities according to the two of the interviewees. There were two (one senior and one middle manager) who expressed their views about how carbon management has lost its inertia in other core business priorities and it is hard to put necessary resources in a financially tight situation. There are also a series of conflicts between carbon management and university’s core business activities. For example, internationalisation, business travel, students experience and out of hour’s openings of facilities are the main ones, which came up as a result of the study. The senior managers, who are the decision-makers, have to handle these issues at the same time. The potential conflicts and priority to the core business were new themes and were described by an Energy Manager and an Environmental Officer respectively:

“We need to look at upgrading of buildings, spending on capital projects, so we are fighting more and more for budget against smaller and smaller, so I think that’s one of the reasons”.

“I think another one of the challenges particularly in business travel is this tension between perceived need to travel in order to meet the research and academic objectives to the university and trying to reduce emissions from travel, once again I think it comes down to raising awareness, is there a need to travel, not assuming that all travel is bad”.

**Estate development and growth**

The development of estate and business growth is a critical issue in strategic decision-making, because universities are growing in their business (research, teaching and student numbers). The growth in estate size is
producing more carbon emissions, because of faculties, departments and laboratories etc. Three out of 17 interviewees mentioned it as a barrier to strategic carbon management for their universities and they said that it is very hard to manage a balance between environmental aspects and the growing business activities in a university. An Environmental Manager of a growing post-1992 university explained it as:

“You are constrained by the fact that the sector is still growing, as I say we are a relatively new university and we are still growing, so that constraints you because people want to do more things and have more equipment and more laboratories, so when people want more things because the university is growing, obviously the carbon emissions associated with those things increase as well, so I guess that’s a tricky thing from our perspective”.

The government is driving universities to be at the leading edge of research and some parts of research can be highly energy and carbon intensive. It is a challenge especially for research intensive universities and it was recognised that universities conducting research, have particular problems, as indicated by an Environmental Officer of a pre-1992 university. Those problems can lead to high carbon production in laboratories and in other research activities also resulting in high energy bills.

**Benchmarking**

Benchmarking is an increasingly important tool for comparing environmental and sustainability performance of universities. Eight out of seventeen interviewees mentioned benchmarking with other institutions to monitor the ongoing progress and get the sector wide recognition on success. Benchmarking provides a competitive environment within the HE sector. There were three interviewees who mentioned Building Research Establishment Environmental Assessment Method (BREEAM) standard for their buildings and there was one individual who mentioned Leadership in Energy and Environmental Design (LEED). The universities are moving towards BREEAM “Excellence” and “Very Good” standards in new build and retrofit projects. Some of the interviewees mentioned the Green Gown Awards and the People & Planet’s Green League. The Green Gown Awards recognise the exceptional sustainability initiatives being undertaken by universities and colleges in the UK. There are 14 categories at present and one of them is “carbon reduction”. People and Planet’s Green League was also discussed by the interviewees in order to benchmark universities against their peers. It has different categories including “carbon management” and “carbon reduction”. High ranking UK universities are at the bottom of the Green League table (People & Planet 2014), may be because of their highly energy intensive research and per head carbon emissions than a teaching based university. An Environmental Officer from a research based pre-1990 university criticised the Green League ranking and its methodology. They think that their universities are not compared fairly on a like-to-like basis and People & Planet should re-consider its methodology in the future.

**Space management**

An interesting theme emerged as “space management” and five interviewees linked strategic carbon management with it. All of them described the importance of space management and identified huge inefficiency of space in universities. It is more difficult for multi-campus universities, because each of the campus has different issues to deal with. Space management has potential to reduce carbon emissions and the Head of Sustainable Development asked for more space efficiency in the estate:

“Space of course, efficient use of space and I think the sector is definitely got room for improvement in high efficiency, using space and estate pretty much equals carbon”.

It is about deciding how a university wants to be seen in the future in terms of its space. Space management involves a lot of strategic decisions in terms of new build, retrofit and demolishing the buildings. The Energy Manager argued that it also considers non-technical measures on how space works, how different departments and faculties work together and how students interact with each other in the designated space. The faculties and departments should work together to produce smart spaces to meet the ambitious carbon reduction targets. Interestingly, the Director of Estate of a post-1992 university proudly said that the university has reduced its size by 30% in the last few years, which is a huge change in terms of space. The Director believed in small and efficient size of the estate rather than a large and inefficient estate. There were only two participant universities that have successfully reduced their estate size.

**Complex building stock**

Some of the universities have old, historical and diverse nature of building stock. This building stock is very complex to deal with in terms of carbon management. The universities are struggling to work with these
buildings. Some of the universities also have listed buildings and they cannot do much with them, because of their historical nature and existing facade. There are four managers who are currently facing this problem with their buildings and require solutions. Older universities especially pre-1992 universities seem to be facing this problem more. An Environmental Officer of an old pre-1992 university said that complexity of the buildings is critical in managing carbon emissions and doesn’t support it:

“The main challenges are around the estate, the diverse nature of it, and the historical listed buildings”.

There was an Environmental Manager who stated that there is always a space to improve a building to a certain extent. There comes a point where you cannot do much more to the fabric of an existing building to make it more energy and carbon efficient. There is always a limit where it can cost a lot more than constructing a new building. The case of higher education institutions’ energy and carbon emissions reduction is more complex, because of the heterogeneity of the sector (Altan 2010). As far as individual buildings are concerned, the Director of Sustainable Development raised an important issue and said that buildings are too complicated for the users, because of the controls. People do not feel the control over their heating, ventilation and lighting. They should have an understanding of how a building works and right level of control to avoid energy wastage. The following Figure 1 shows the “thematic framework” as a result of this research, presenting the themes and sub-themes. The main themes are directly linked with the central research aim “strategic carbon management” in the diagram. The themes adjacent to the main themes are sub-themes.

Figure 4: Thematic Framework

DISCUSSION

This paper has provided insights into the current state of strategic carbon management by discussing various themes and sub-themes more related to management, culture and engagement, as well as technical. One could point to a number of initiatives that distinguish the performance of the HE sector. These include carbon management plans and strategies, carbon footprinting and reporting and implementation of low carbon and renewable energy technologies. These initiatives are at the leading edge in the public sector. There are examples of both good and bad practices in universities. It shows that universities have started their journey, but there is a long way to go. It can be observed from the responses that the HE sector seems to be committed and working towards strategic carbon management. There is an evidence that the UK public sector has a leading role to play (The Carbon Trust 2013). The HE sector considers itself to have the potential to lead the way forward in the
public sector. A large number of universities claim to be environmental sustainability leaders in the UK HE sector, but these universities need to show the evidence. On the other hand, universities are facing different organisational challenges to reduce carbon emissions and they are trying to overcome those challenges. It was also interesting to note that there was a conflict between participants’ opinions on the overall strategic carbon management performance of the HE sector, but the institutions have recognised that they are well placed to take on a leadership role (Klein-Banai and Theis 2011).

The engagement of senior management is a core part of the action plan and it will place carbon reduction at the heart of the organisation’s strategic and operational approach, although this is challenging (Energy Saving Trust 2009). The leadership varies within universities, but carbon management is not prioritised over the core business in this competitive market, especially in the new financial regime. Strategic decision-making power belongs to leadership, where estate managers do not have any control. Carbon management and sustainable development is not central to the universities’ decision-making and management procedures as yet. The HE sector has skilled individuals to deliver carbon management, but middle managers cannot influence strategic policies of universities. They need top level support and an authority. It was explored that the collective targets of universities do not meet the sector target, which informs a strategic and proactive approach. The universities need to work on reducing absolute carbon emissions instead of relative. It is hard for a growing university, but not impossible with proper measures and sustainable options of growth. The Estate Management Statistics Service (EMS) 2010 report says that there has been a significant increase in both student numbers and the estate in the HE (HEFCE 2011).

The HE sector is behind on scope 3 carbon management and universities are not considering low carbon element in procurement activities and other scope 3 emissions (Lozano 2011). Scope 3 emissions are complicated and gathering of accurate data is challenging, but there is an agreement that universities can have an influence on that. If universities make a collective decision on low carbon procurement, then it will make a difference on supply chains. In terms of data, universities might need to make some sensible judgements. Universities have all the right technologies which they can afford, but there are human and organisational barriers, which cause problems. Stakeholders engagement is a crucial part of strategic carbon management and lot of progress need to be made and unfortunately, the process is moving very slowly. The people need to know what is in this agenda for them, because stakeholders look for self-interest. Conflicts management is crucial to strategic carbon management. It demands high level discussions and recognition in order to prioritise and manage the balance between the conflicting strategic issues. The research has implications for universities and the public sector more widely. It is a first attempt to provide learning from the research findings for improving strategic carbon management practices. The current research is indicative of the strategic carbon management issues being faced by a particular sample of the UK universities and is likely to find similar issues in a larger set of universities. This paper is based on the findings from the interviews conducted in the HE sector. The next step would be to carry out detailed documentary analysis of the universities’ carbon management plans and strategies to compare with the interviewees’ perspective on actual implementation. This will also address the issue of bias in the interviews as well as complement the interviews data for validity.

CONCLUSIONS

Strategic carbon management is a new area of research and there is a little research on this topic. This paper is a first attempt to present the role of the HE sector towards strategic carbon management and it provides contribution to the knowledge. The current state of the HE sector indicates that it is moving in the right direction, but there is a lot more to be done in spite the fact that universities have done better in some areas. Strategic carbon management is not embedded at the whole organisational level in universities; rather it is more developed at the middle (estate) level. It needs to be embedded into the strategic thinking and approach of a university. The performance of different universities varies and mixed views on the overall success of the HE carbon management dictate that there is a range of issues to be addressed. The sector bodies are committed to encourage institutions to embrace strategic carbon management. There is a significant guidance in terms of case studies and best practices. Strategic carbon management needs an integrated and comprehensive approach, which universities currently lack. Effective carbon management needs to build systemic change, which requires the alignment of both “bottom-up” and “top-down” approaches (Tilbury 2010). This paper is of value to university senior and middle managers and policymakers, who are expected to improve strategic carbon management by gaining an understanding of the issues around it.
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WORKPLACE SPIRITUALITY IN THE CONTEXT OF SUSTAINABLE LEADERSHIP – NEW VISTAS?

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ABSTRACT

There is growing acknowledgement of the importance of the relationship between leadership and workplace spirituality (WPS), yet the research field is still relatively new, not widely accepted, and rife with debates. This paper is grounded in the sustainable leadership work of Avery and Bergsteiner, and the interpretive stream of the Management, Spirituality, and Religion (MSR) discipline with WPS defined as spirit, or “vital energising force” (Fairholm, 1996:11) of employees manifesting in the context of work and organisations (Todarello and More 2014). We also acknowledge Fry’s model of “spiritual leadership: (2005:17) as “the values, attitudes, and behaviors that are necessary to intrinsically motivate self and others so that they have a sense of spiritual survival through calling and membership.”

Crucial is appropriate research context and methodology. Some apply traditional quantitative measures like surveys. Others (e.g. Case and Gosling 2010) remain convinced that traditional empirical research is unhelpful. Here we use the Avery/Bergsteiner model, acknowledging sustainable leadership as context for enhancing WPS knowledge through a hermeneutic perspective, providing a richer basis for linking them to enhance understanding as a basis for a more pragmatic portfolio of leadership practices. Exemplars are: developing people continuously, valuing people, ethical behaviour, considered organisational change, self-management, and enabling culture.

INTRODUCTION

As Okhuysen et al. (2013) emphasised recently, given that work is the foundation stone of management and organisational scholars, it is somewhat surprising that this central phenomenon in organisation studies remains intangible and rather elusive. They point to some key obstacles that prevent us from the rich understanding that we may otherwise have had after decades of study: the domain of work is vast; and work is content and context, dynamic, can be perceived in diverse ways, and our own personal filters and contexts shape our understanding of and research into this phenomenon.

Key to the concerns of the present paper is the way in which (Okhuysen et al. 2013:492) “work is the content but also the context in which individuals live, act, and interact with others”. Moreover, as the literature reveals, the positivist perspective, emphasising managerialist and functionalist lenses, still reigns supreme but is now being challenged by alternative approaches to contemporary work and workplaces in order that we develop improved tools for understanding the practice and meaning of both work and organisational life. So too are we constrained at times by our personal and disciplinary lenses, that may leave undiscovered important aspects of work and its organisational settings.

One such aspect is that of leadership and workplace spirituality (WPS) in an increasingly secular society, which, given the apparent decline in many religious/spiritual organisations, is growing in importance. Whether religious or not, such spirituality embodies our ultimate values giving meaning to our lives (Kourie 2006, in Winston 2013). It provides perspective on our current situations by offering a context that is a larger, richer and deeper whole (Zohar and Marshall 2000). Yet, as Singhal and Chatterjee (2006:162) claim: “… today’s organisations are impoverished spiritually and … many of their most important problems are due to this impoverishment”.

Herein the meaning and practice of work and, potentially, one’s own organisational identity, may or may not be infused with opportunities for the spiritual self to be revealed, grow or be constrained. Some (e.g. Okhuysen et al. 2013) link this with the issues of employee work ethics and values, and underline the nature of communication
as pivotal. So too do Voegtlin et al. (2012), focussing on the issue of responsibility, ethics and morality and links to diverse types of leadership and communicative engagement with organisational stakeholders.

The fact that a new journal – *International Journal on Spirituality and Organisational Leadership* – has emerged, aimed at integrating the two concepts and enhancing current management praxis, attests to the rising interest in the field. It also stands closer to the Australian *Journal of Spirituality, Leadership and Management*, than the American-based *Journal of Management, Spirituality and Religion*. And for this paper we distinguish between religion and spirituality and focus on the latter, believing that spirituality (more personal, introspective and inclusive) is required for religion but religion (more formal and institutional) is not required for a spirituality that is focused on the search for meaning and interconnectedness (Fry and Nisiewicz 2013; Fry and Wigglesworth 2013; Pruzan 2013).

**THE NEED FOR A CONTEXTUAL HERMENEUTIC APPROACH**

“…spirit can’t be precisely defined, for in defining we delimit; we form boundaries around that which we are defining to differentiate”

_Gull and Doh 2004:130_

Interpretivists discern between “weak” and “strong” interpretive (hermeneutic) positions (Prasad 2002). The former is a broader platform which includes various qualitative methods such as ethnography, grounded theory, and phenomenology; the latter is more specific and based on hermeneutic philosophies such as that articulated by Heidegger (1962/2005) and Gadamer (1989). The need for strong hermeneutics within MSR discourse is dictated by three factors – the mindful relationship with subject matter, appreciation and management of theoretical and practical contexts, and the inherently interpretive pluralist nature of WPS.

The relationship with the subject matter of spirituality at work starts with deciding how to deal with its complex, intangible, amorphous yet mystical nature. Positivists propose following a natural sciences approach and dispassionately and scientifically objectify WPS’ subject matter (Giacalone and Jurkiewicz 2010), desiring a more guaranteed acceptance of the discourse and the concept by organisational science and the corporate world. Critical theorists expose the harm inherent in such an approach (Bell 2008), and philosophical hermeneutics attempts to understand WPS phenomenon like all human existence in its historicity, that is, as the local and temporal mode of being human as being-in-the-world (Heidegger 1962/2005). This implies treating WPS phenomenon both as an object of research, applying the “eye of mind”, and as a subject of research, applying the “eye of contemplation” (Wilber 2001). In this way analytical and objective treatment of the subject matter is complemented with a respectful and mindful appreciation of the importance of the personal experiences of employees and researchers themselves and avoids its instrumental handling.

Furthermore, a hermeneutic perspective is best suited in relating different elements of phenomena and discourses to each other, due to its focus on reflectively managing contexts. This implies a scrupulous familiarity with the contextual elements of the phenomenon of interest (Prasad 2002) and clarity about which elements of the research represent a part and which a whole (context).

With complex, ambiguous and elusive phenomena such as leadership and spirituality, hermeneutics’ strength is in evoking holistic understanding through investigating the contexts in which these phenomena exist (Küppers, 2005). In other words, committing to understand the contexts of work and leadership we come closer to understanding the phenomenon of WPS.

Finally, the need for the hermeneutic perspective is dictated by the complexity and inherently interpretive nature of the phenomenon of WPS and, hence, the impossibility of having one dominant normative definition (Case and Gosling 2010). Spirituality as a construct does not possess a common denominator (McSherry and Cash 2004) with its definition depending strongly on the careful articulation of philosophical, theoretical, and disciplinary contexts which reveal how the phenomenon is then delineated.

**OVERVIEW OF WORKPLACE SPIRITUALITY (WPS) CONSTRUCT**

It seems that humans need to transcend their personality limitations and connect with others in empathic relationships, engaging in spirituality as an existential search for a deeper self-understanding and meaning in life, and living one’s life according to what one finds. Extension into more recent interest in WPS touches on this need for meaningfulness as residing in something beyond the self, an other orientation (Rosso et al. 2010), much as Frankl (1959) suggested last century in his moving and ground breaking work, and a “self-
transcendence” as discussed by Truss et al. (2013). These themes represent the most convergent thinking about WPS at the personal level (Miller and Ewest 2013) and link to Fry’s (2005) spiritual leadership model.

Within the organisational context, individuals’ searches include the search for collective purpose, responsibility and meaning, and for community (Duchon and Plowman 2005). Here the key questions are who is the organisation, why does it exist and for what does it stand, what does success look like for the organisation, and, with respect to others – what is the organisation’s responsibility? (Pruzan 2013).

At the organisational level, WPS is often conceptualised as organisational culture which regards employees as spiritual beings with core values, as opposed to the mechanistic culture or paradigm in which employees are treated as elements of production/service (Winston 2013). The former spurred on WPS research as a new way of optimising and transforming business.

Evidence from leading with WPS suggests benefits both for individuals (seeking transcendence, fulfilment, and community in the workplace) and organisations (seeking increased productivity and performance), including for the latter providing sustainable competitive advantage (Fry and Slocum 2008).

“Sustainable” appears to be one of the key concepts in promoting spirituality because it can reframe the language of unwelcomed instrumentality (with danger of manipulating employees) into the one of viability, balance, authenticity and “deep transformation” (Baets 2013:222) of all aspects of organisational life (with increased profits as positive side-effects!). This potential of the sustainability concept to strengthen the impact of WPS on organisations is yet to be unlocked as, in Puzan’s view (2013, p.38), even sustainable results (triple bottom lines) are used by corporations as a raison d’être for more profits.

In a reframed form, sustainability, as an integral part of leading with WPS, implies thinking beyond self and committing to leaving a better world for future generations (Hicks 2002) as organisational members learn to embrace being an integral part of the environment and operating beyond a purely performance perspective (Zirkler 2013). Self- and organisational leadership become sustainable when they find ways to foster mutual trust and confidence between individuals (Sitter and Longbotham 2013) and uncover obstacles to human spirit hidden and “held hostage within the thick nexuses among institutional structures” (Klenke 2007:86). WPS emerges, then, as both a personal sense of self-transcendence and an organisational sense of unlocked collective energy and authentic relationships as leaders are driven by values and desire to enable employee development and learning, and to create strategies for better alignment among employees, organisation, society and our planet’s needs (Baets 2013).

SUSTAINABLE LEADERSHIP AS A CONTEXT

This paper is grounded in the work of Avery and Bergsteiner, epitomised in the Institute of Sustainable Leadership – “Sustainable leadership incorporates those behaviours, practices and systems that create enduring value for all stakeholders of organisations including investors, the environment, other species, future generations and the community” (ISL website 2013). Sustainability for a growing number of people is becoming the organising principle for our planet and, perhaps, our most crucial challenge, requiring a major transformation in consciousness and action – across spiritual, life, social, economic and material domains in a systemic approach (Baets 2013). Sustainable organisations balance the aims of their economic, social and ecological activities, move beyond mere legal compliance, with the most critical success factor residing in sustainable leadership (Szekely and Knirsch 2005).

Sustainable leadership is closely aligned with recent work on responsible leadership that emphasises going beyond the narrow confines of profit earning as Voegtlin et al. (2012:4) suggest to: “…awareness and consideration of the consequences of one’s actions for all stakeholders, as well as the exertion of influence by enabling the involvement of the affected stakeholders and by engaging in an active stakeholder dialogue.” As they explain, this needs to occur across micro-level personal interactions, meso-level shaping of organisation culture and performance, and macro-level relations with the organisation’s external stakeholders.

Another related area is the work on resilient organisations – those that survive and thrive, especially in times of challenge as the current global context presents itself. Such organisations are grounded in their value, purpose and meaning based approach (Baets 2013). The pivotal role here is that of a constructive value based leadership and culture.

Certainly the notion of sustainable organisations has been endorsed rhetorically if not always in practice by most organisations as part of strategy and long-term stakeholder value, often following the triple bottom line.
approach in relation to economics, environment and society. Grounded in the Brundtland definition, it is focussed on meeting present needs and aspirations without compromising the capacity to meet future ones (UNWCED 1987). However, as Ivory and MacKay (2013) argue, originating in a normative, moral concept, the concept of sustainability has seen the emergence of a market, business case concept and we now have sustainability driven by competing logics of moral and market factors. Moreover, there are varying stages/waves and levels of sophistication in corporate sustainable strategies themselves as many researchers reveal (e.g. Dunphy et al. 2003; Baumgartner and Ebner 2010).

Sustainable leadership requires leaders to instil appropriate institutional logics revealing legitimate organisational goals and guidelines for their achievement as the baseline for enabling members to act. As Winston (2013:21) states: “… leaders must be aware of spirituality in the workplace and understand how the leader’s actions affect the spiritual climate in the organisation.”

Leadership research has examined a variety of styles and persona related to leadership types. For our purposes here, some of the more prominent ones – charismatic and transformational leaders tend to be aligned with a more mechanistic rather than spiritual leadership paradigm. The former builds self-image through impression management whilst the latter focuses on transformational strategies to achieve the organisation’s main values and goals, subjugating both personal and employee’s values as required. Perhaps the more spiritual is that of servant leadership, with a humane orientation and an emphasis on the wellbeing of employees and centred on the leader and followers’ core values, even at the expense of the organisation (Winston 2013). The crux then is a spirituality as evident in values and behavior (Reave 2005).

Just like sustainable leadership, spiritual leadership eschews a focus solely on self-interest and promotes awareness of interconnectedness and interdependencies of individuals and the world. Among its many elements are the building of shared values, consensus vision setting, sharing meaning, enabling, enhanced service and transformation (Korac-Kakabadse et al. 2002). As Fry and Nisiewitz (2013:4) state: “spiritual leadership involves intrinsically motivating and inspiring workers through hope/faith in a vision of service to key stakeholders and a corporate culture based on altruistic love … as a sense of wholeness harmony and well-being produced through care, concern, and appreciation of both self and others.”

EXEMPLARS FROM SL AS A CONTEXT FOR ENHANCING UNDERSTANDING OF WPS

Today, leaders need to create new business models to face the major challenge in maintaining profitability, growing revenue and financial performance, whilst demonstrating ethical leadership, enabling employee well-being, and delivering on social responsibility and sustainability (Fry and Slocum Jr. 2008).

![Figure 1: Model of Spiritual Leadership](image)

Spiritual leadership, with its emphasis on the importance of the individual as well as the organisation’s performance, may provide some answers to this challenge as Figure 1 illustrates (Fry and Slocum 2008:91). Moreover, research by Reave (2005) demonstrates a clear link between effective leadership and spiritual values and practices, as does the work of Fry and Matherly (2006) on improved organisational performance.
Developing people continuously

In recent years, whilst lacking in conceptual clarity, recognition of the distinction between the meaning of work and having meaningful work has been argued as crucial for individuals and for the wellbeing of organisations, with work providing significant benefits of an often intangible nature such as self-identity (e.g. Overell 2008). For Truss et al. (2013:1), meaningful work is “…a psychological state that arises when an individual perceives an authentic connection between their work and a broader, transcendent life purpose beyond the self that is especially significant to the individual… and that meaningfulness is more appropriately understood in terms of a eudaimonic concern for the greater good.” One dimension is organisational tasks which Grant (2008) finds become more meaningful as they become self-transcendent in terms of serving community or society for a higher purpose.

Leaders need to create the context for meaningfulness through a variety of ways, including enabling the development of individuals at a personal and professional level. As Gull and Doh (2004:129) confirm: “…for spirit in the workplace to be fully realised, the organisation must enable the unfolding of each individual through his or her participation in the work of the organization”. Employee development must be the basis for the success of an organisation, with leaders driving sustainability and resilience, and understanding that their success relates to the success of others (Baets 2013).

Valuing people

Given our discussion of spirituality above, the recent emphasis on values in organizational leadership and organizational spirituality is unsurprising (Bekker 2013). As in Figure 1, the centrality of valuing people in both sustainable and spiritual leadership is crucial, both in terms of treating, developing and rewarding them in the best of human resources practice, and acknowledging their contributions to the success of the enterprise. This works both for employees and for leaders themselves given, that for the latter, research has demonstrated that coaching and mentoring employees is a productive way of limiting the stress placed upon leaders in carrying out their leadership role (Boyatzis et al. 2006).

For all people in the organisation, one can only concur with the view that “… we are not here … to control and exploit our environment and each other for material gain [but] … to become more of what we potentially are – this is our real work, to become fully human (Gull and Doh 2004:137).”

Ethical behaviour

Interestingly, ethical behaviour is a necessary but not sufficient cause for spiritual well-being (Fry and Matherly 2006). And, whilst ethical behavior is required to demonstrate spirituality, spirituality is not needed to demonstrate ethical values and practices (Reave 2005).

Whilst the last decade of global business scandals and globalisation itself have pushed a concern with organisation and leadership ethics to the fore, a key question is whether ethical, values based leadership is regarded as more than part of a traditional toolkit to increase profit. As Pruzan (2013:39) states: “… what is missing is a paradigm of leadership that looks upon social responsibility, ethical behaviour, and concern for the environment not simply as instruments, but as fundamental principles and values in their own right”. Undoubtedly, ethical behaviour and an organisation’s culture as managed by its leadership are inextricably linked, especially in terms of integrity, self and other awareness, humility, respect for the values of others, equitable and supportive treatment, effective listening, and reflective practice (Reave 2005). Increasingly, there are calls (e.g. Thomas et al. 2004) for executives to become ethics leaders and establish a social context within which positive self-regulation of ethical behavior is the visible and compelling organisational norm, enabling individuals to routinely act ethically.

Considered organisational change

Some time ago, Korac-Kakabadse et al. (2002) pointed out the need to recognise management and leadership as more than economic effort, with spirituality and consciousness as the core of dynamic evolutionary systems, included in analysis and practice of organisational design, management and change.

But for sustainable organisational change, the crucial dimensions are the more intangible ones of climate and culture. Consequently, people’s mindsets and behaviours must change for sustainable change, not just what
usually occurs superficially in change management, and often because aspects such as structures, networks, technology and the like are essentially more tangible (Schneider et al. 1996).

**Self-management**

A focus on self-management emphasises leadership communication, as a central competency providing credibility and encompassing self-discipline, persistence, self-awareness, resilience, and a learning mindset (Clutterbuck and Hirst 2002) that reveals self-mastery. However, in the context of the current paper, the spiritual dimension of sustainable leadership is grounded in a leader’s own search for meaning and purpose, with self-management relating to this and self-knowledge.

A critical need is to extend work on how best to educate and develop leaders for sustainability (e.g. Hind et al. 2009), including developing mindsets and cultures to enable followers to self-manage appropriately.

**Enabling culture**

For Pruzan (2013:40), what is needed is: “… a new and evolving culture where work can be a primary domain for spiritual growth, individually and collectively”. Here, the value systems of an organisation’s senior executive have a major impact in developing and maintaining corporate culture and, therefore, employee behavior.

Adopting a rational-spiritual mindset that undergirds observation, evaluation and decision making, is a sustainable leadership that endorses a more humane and holistic culture than that of more traditional management and economic based approaches (Pruzan 2013). Indeed, it is even possible to describe the culture of an organisation in terms of its spirituality (Bekker 2013) and moving from traditional methods of unilateral control into mutual learning cultures (Baets 2013).

In their work on designing a questionnaire for ethical leadership at work, Kalshoven et al. (2011) included amongst their seven ethical leader behaviours a concern for sustainability. This is recognised earlier in terms of the key relationship between corporate sustainability and organisational culture. For example, Baumgartner (2009) has argued from case study evidence for the embedding of corporate sustainability activities and strategies within an organisation’s culture and employee and executive mindsets, for success in sustainability endeavours. Perhaps this can be extended to spirituality.

**CONCLUSION**

Two decades ago, Mitroff and Denton (1994:86) warned that: “Unless organisations become more spiritual, the fragmentation and ambivalence felt by individuals cannot be repaired”. This paper has suggested the important role that spirituality can play for both individual and organisation, and its integration with sustainable leadership. We do not, however, impose it on sustainable leadership per se, but rather see it as another dimension of understanding its values, practices and the model itself. As “… a person does not have to be spiritual or religious to provide spiritual leadership” (Reave 2005:663), the link, therefore, is that WPS research can provide new vistas for the work on sustainable leadership and vice versa.

Leaders also have spiritual needs in terms of an inner life alongside their other needs which are carried into the workplace (Fry and Wigglesworth 2013). Given the apparent growth of interest in a leadership based in spirituality and its alignment with sustainable leadership qualities, we believe it is a concept to be seriously considered in the broad concern with sustainable enterprises. As Bekker (2013:88) states:

“The current turn to spirituality .... coincides with the emergence of alternative, post-industrial and global paradigms of leadership where leadership is re-imagined as acts of virtue in community and mutuality rather than the strivings of power and prestige by one privileged individual ... This paradigm shift from extreme individualism to perspectives in communal leadership is a global phenomenon and is contrasted by the individualistic, competitive leadership approaches of the past”.

Consequently, we suggest that WPS, linking individual and organisational spirituality and rationality, can provide a new context for sustainable leadership theory and practice, grounded in a view of organisational life as more meaningful, productive, and sustainable. The spirituality of inner life should be nurtured in organisations through conducive environments, enabling the maximisation of the triple bottom line into fully sustainable leadership and offering the potential to better understand who we are, what we are doing and what we contribute
(Fry and Nisiewicz 2013). However, as Pruzan (2013) warns, leadership through a spiritual lens is not an iron clad guarantee for a healthy and long-lived organisation per se.

REFERENCES


OPEN INNOVATION IN THE CONTEXT OF SUSTAINABLE INNOVATION: FINDINGS BASED ON A LITERATURE REVIEW

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ABSTRACT

Open innovation is increasingly relevant for sustainability-related innovation. Our research thus focuses on the question of how to deal with this new approach in the specific field of sustainable innovation. We relate this to the integration of interest groups into the innovation process, to the enlargement and exploitation of a firm’s innovative potential, and to the fostering of company sustainability. Although several authors highlight the potential of open innovation for sustainability, our literature review reveals that it is not very widely discussed at all. In the period 2003 to 2013 only 12 publications deal specifically with the topic of generating sustainable innovations via the support of an open innovation approach. With reference to the existing literature in this field we discuss open innovation for sustainable innovation. Our results show that while the concept of open innovation can be an appropriate approach for sustainable innovation, there are several drawbacks and barriers that should be taken into account in future research.

Keywords: sustainable innovation, open innovation, literature review

INTRODUCTION

Factors such as increased rates of innovation, rising complexity of global supply chains and markets, the adoption of high-speed communication, and the presence of ever more environmental problems are inducing firms to combine and co-ordinate resources in a multi-stakeholder context (Holmes and Smart 2009). In particular, the fact that environmental constraints may impose limits on company growth is raising the attraction and power of sustainable innovation (e.g. de Medeiros et al. 2014). As a result, many products require rethinking, changing existing processes calls for clear collaboration within a supply chain, new, sustainable business models need to be tested and developed for consumers, and societal themes entail discussion with and engagement of NGOs (e.g. Arnold 2011). As a relatively new approach, the integration of sustainability in production or other processes raises numerous challenges. It is thus likely to involve a diverse range of new activities from (external) partners when attempting to arrive at an appropriate solution, i.e. a more sustainable product or service. Even when the need for sustainable innovation is accepted by all concerned, two questions still remain, i.e.: how may the notion of sustainability be integrated into the process of innovation (Snider et al. 2013), and how can one ensure that innovations are developed “with a maximum level of sustainability, little needs in resources and with less hazardous emissions” (Horn and Brem 2013, p.944). In such a context, fostering co-operation can be seen as a fruitful strategy when attempting to combine the innovative potential of a company’s environment with the goal of developing sustainable innovations.

Over the last decade “open innovation” has been one of the most frequently discussed topics in the field of innovation management (e.g. Chesbrough 2003; Elmquist et al. 2009; Trott and Hartmann 2009; Gassmann et
In addition, practitioners have also contributed to the diffusion of what they view as a new, but highly relevant, innovation strategy. Despite the existence of several good arguments favouring the use of open innovation in sustainable innovation (Mokter 2010; Arnold 2011; Arnold and Barth 2012; Hansen and Große-Dunker 2013; de Medeiros et al. 2014) and despite the fact that “companies worldwide recognise the power of open innovation platforms and collaborative networks to fuel sustainable innovation” (Adamczyk et al. 2011, p.233), relatively little is known about open innovation in the context of sustainable innovation.

This paper attempts to remedy the situation by discussing the existing literature in the field of open innovation for sustainable innovation and tries to show what has been done so far in this area and to identify whatever gaps there may be in existing research. The present paper thus addresses the following questions:

- How deeply has the potential combination of open innovation and sustainable innovation been discussed in the literature so far?
- How is the notion of “sustainable open innovation” specifically understood?
- In which areas of sustainable innovation can the concept of open innovation be applied?

The paper is structured as follows: following the introduction, a systematic literature review of open innovation for sustainable innovation, together with an appropriate descriptive examination, is presented. As the concept of sustainable open innovation is based on open innovation and sustainable innovation, clarification of what these terms mean is clearly needed. We thus discuss these two concepts first, before moving on to a review of the existing research on sustainable open innovation. Relevant conclusions are then drawn, and the outlook for future research is presented in the last part of the paper.

SYSTEMATIC LITERATURE REVIEW ON SUSTAINABLE OPEN INNOVATION

The overall goal here is to reveal the potential challenges and upcoming research gaps in the field of open innovation for sustainability. We highlight the relevant and latest research results in both fields. We first rely mostly on existing literature reviews and then add papers which deal with both topics equally. Regarding the combined topic of sustainable innovation and open innovation, the objective is to structure the research field by engaging in a systematic review of the literature (Booth et al. 2012). A planned and structured research approach was chosen since it demands the use of organised, transparent, replicable, and reproducible methods in order to identify, select and critically assess the literature available. It also ensures a relatively high level of procedural and analytical objectivity (Tranfield et al. 2003; de Medeiros et al. 2014). To enhance the reliability of the research at hand, three researchers were involved in the investigation. In compliance with the research process proposed by Klewitz and Hansen (2014), our research design consists of two major phases: a phase entailing publication selection, followed by a phase entailing publication evaluation.

The literature review itself was conducted according to the following guidelines:

- The literature analysis focusses primarily on papers in peer-reviewed journals written in English. Additionally, we also took conference papers and proceedings into account. As the research area is apparently still in its infancy, we also included research projects found in EU databases. The period of observation was restricted to the period 2003 to 2013. This provided sufficient reliability and data availability so as to allow for quantification. Furthermore, we believe that it only makes sense to evaluate the combined field of sustainable innovation and open innovation in the period following the breakthrough publication on open innovation by Chesbrough in 2003 (even though we are well aware of the fact that open innovation processes were employed prior to Chesbrough’s work – see the following section).
- The main emphasis of the analysis is on content in the fields of business and management, environmental sciences, social sciences and economics. The search itself was limited to abstracts, keywords and titles.
- The search for related publications was conducted by means of a structured keyword search in which we focused on the following keywords: sustainable open innovation, eco open innovation, green open innovation, and environmental open innovation. The emphasis on the term “open innovation” in combination with the words sustainable, green, eco and environmental was essential since many publications already exist which contain the term “open innovation” on its own.
- The following major databases and websites were used for the literature search: Elsevier, Emerald, Springer, Ebsco, Scopus, Metapress, Thomson Reuters Web of Science
• The analysis of the papers was based on the method of qualitative content analysis suggested by Mayring (2003). We thus investigated whether, and to what extent, the papers selected discussed and/or integrated the topics of “Open Innovation” and “Sustainable Innovation”.

Selection phase

The first search in the databases mentioned above resulted all in all in a total figure of 1,225 publications. However, this merely provided a starting point in the literature review. The total figure is not equivalent to the real number of papers dealing with open innovation and sustainability since it captures multiple entries throughout the databases. Regarding publications in conference proceedings and research projects we could not find any additional or appropriate publication which could serve as a basis for the present research. In addition, in several cases proceedings or further project results were not available at all and thus had to be excluded.

We then had a closer look at the articles selected. The titles, abstracts and metadata of the papers were analysed by the researchers in order to exclude papers of unsuitable content from further in-depth analysis. For example, we excluded technical papers on research issues such as open source software development, environmental conditions for open innovation, or spatial environmental information for open innovation activities and political contents. Papers that only dealt with the issue of open innovation in the absence of any connection with sustainability were also rejected for further review, notwithstanding the fact that they may partly be used for discussion of open innovation in general. At the end of this first stage, after having checked titles and abstracts of more than one thousand entries, a pool of publications comprising 33 papers remained. All of these could be classified, at least to some extent, as being related to sustainable open innovation. This set of publications was then subjected to a critical descriptive and thematic evaluation by the three researchers.

Within the second phase of literature selection, the remaining publications were read carefully, coded, and analysed qualitatively in terms of content. To raise the credibility of the classification process, all the papers were quickly analysed by at least two researchers. Reliability was thus increased by executing all the steps of the literature review in terms of a “dual control” principle (Klewitz and Hansen 2014). Furthermore, references cited as secondary sources in the selected publications were also taken into account. This resulted in only four additional papers of high relevance which we added manually to our selection. This result can be taken as an indicator of the validity of the research (Seuring and Müller 2008). Finally, the results of the content analysis were then structured and summarised. Thus, the results presented in the following section are mainly of a qualitative nature, together with some form of additional statistical evaluation, e.g. data on the aggregated number of publications in one specific journal, or on the number of publications per year.

Evaluation phase

At the beginning of the literature evaluation, we used descriptive dimensions in order to classify the field of sustainable open innovation. In doing this, we concentrated on the following questions:

• In which time period were most of the publications written?
• What are the main research methods used within the publications?
• What are the main journals in which such articles are published?

In addition, we divided the papers into the following research categories: (i) theoretical or conceptual papers, (ii) case studies, (iii) surveys, (iv) literature reviews. Our aim here was to allocate each publication to exactly one category manually so as to avoid double counting, and thus prevent overall distortion. Most of the 37 papers are either case studies (17) or deal with theoretical and conceptual models (14). What is also noticeable is the fact that only one literature review dealt to any great extent with the overall topic of open innovation or even dealt at all with the issue of interest, i.e. with sustainability and open innovation (Mokter 2010). Furthermore, only five surveys were conducted and once again they dealt only superficially with the specific issue of sustainable open innovation. With respect to the year of publication, it also could be seen that six papers were published before 2009, while 31 papers appeared between 2009 and 2013. All in all this indicates that the combined field of sustainability and open innovation is still relatively young and certainly not a strong focus of research. Last but not least, when taking the journal types into account, no clear conclusion can be drawn. Five papers were published in the Journal of Innovation and Sustainable Development and three papers appeared in the Journal of Cleaner Production. All the other publications were spread across a diverse range of journals.

Following this rough classification we then went deeper and read the 37 papers carefully. This led to 25 papers being excluded from further analysis since they either only dealt with the issue of open innovation and mentioned environmental influences as mere side effects, or they placed the issue of open source innovation and
environment in the context of sustainable innovation. There was thus no clear connection in these publications to our understanding of open innovation. Consequently, only 12 papers remained. These 12 papers are analysed in Section 4 below (Combining Open Innovation and Sustainable Innovation). Before dealing with this, however, we need to clarify what the terms “sustainable innovation” and “open innovation” mean.

**CLARIFYING OPEN INNOVATION AND SUSTAINABLE INNOVATION**

**Open Innovation**

Open Innovation (OI) is a phenomenon that is widely discussed not only in the research community but also in innovation practice (Gassmann et al. 2010). However, the concept of OI is not well understood, e.g. research on OI in practice is still scarce (Elmqquist et al. 2009; Giannopoulou et al. 2011), often research does not go beyond simply documenting OI as a success story (Chesbrough 2012) and studies about the openness of OI are not always comparable as a result of persistent conceptual ambiguity (Dahlander and Gann 2010). The concept is also subject to criticism since it is commonly noted that collaboration among firms or between firms and external agents is nothing new (e.g. Trott and Hartmann 2009; Duarte and Sarkar 2011).

Chesbrough states that “Open Innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to markets, as the firms look to advance their technology” (Chesbrough 2006, p.XXIV). To this, we need to clarify what the terms “sustainable innovation” and “open innovation” mean. OI in practice is still scarce (Elmqquist et al. 2009; Giannopoulou et al. 2011), often research does not go beyond simply documenting OI as a success story (Chesbrough 2012) and studies about the openness of OI are not always comparable as a result of persistent conceptual ambiguity (Dahlander and Gann 2010). The concept is also subject to criticism since it is commonly noted that collaboration among firms or between firms and external agents is nothing new (e.g. Trott and Hartmann 2009; Duarte and Sarkar 2011).

The term open innovation has acquired several meanings (e.g. Piller and Walcher 2006; Elmqquist et al. 2009; Chesbrough 2012) and overlaps with many other concepts such as open source innovation, user innovation, crowdsourcing, community-based innovation (Mokter 2010) to name but a few. While Elmqquist et al. (2009, p.327) say that “open innovation is becoming a paradigm that connects research from various parts of management sciences”, other authors critically remark that researchers are not that successful in dealing with the topic of OI due to the fact that the concept itself lacks a comprehensive theoretical framework (Giannopoulou et al. 2011). Despite this, the OI literature has grown extremely rapidly over the last few years. Overviews are provided by Elmqquist et al. (2009), Trott and Hartmann (2009), Gassmann et al. (2010), Gianiodis et al. (2010), Giannopoulou et al. (2011), and Chesbrough (2012).

Despite all the above limitations and difficulties, however, three aspects of open innovation in the context of corporate open innovation require clarification: 1) the possible types of open innovation, 2) the parties involved in open innovation and 3) the methods employed in open innovation. Chesbrough basically describes two types of open innovation, namely outside-in and inside-out processes (Chesbrough 2012). Outside-in processes aim at integrating external ideas and organisations into a company’s internal innovation processes, while inside-out processes allow external parties the use of internally generated ideas and know-how (Mokter 2010; Lichtenhalter 2011). Evidently, organisations may also combine several different processes of innovation (Gassmann et al. 2010; Lichtenhalter 2011). Concerning the treatment of intellectual property and the control of the direction of innovation (Euchner 2010) – both of importance for companies – a distinction needs to be made between open innovation and open source innovation (von Hippel, 2005; Euchner, 2010; Chesbrough, 2012). While from the open source innovation perspective the users are expected to share their knowledge freely, this is not automatically the case for open innovation (Chesbrough 2006; Mokter 2010). In open innovation, it is possible for the parties involved to vary, mainly with regard to the purpose of the innovation project. However as Fichter (2009, p.357) states “research on Open Innovation has increasingly emphasised the role of communities in creating, shaping and disseminating innovations”. Thereby different kinds of communities, e.g. communities of practice, scientific communities, innovation communities, online communities, user communities (West and Lakhani 2008), play different roles. Actually the most important aspect is the fact that communities are non-firm actors who are interested in “creating, adapting and adopting or disseminating innovations” (West and Lakhani 2008, p.224); none of which activities need to be related to the companies’ goals. Communities are not the only means by which the innovative potential of a firm may be enlarged. The use of crowdsourcing is also gaining more and more interest in this respect. Crowdsourcing is based on the assumption that the collective intelligence of a large group is greater than that of a few individuals, both in terms of ideas, and in terms of aggregate knowledge (Surowiecki 2004). Apart from such strategic issues, concrete methods for open innovation processes are also needed. The literature suggests employing methods such as
targeted dialogue, innovation workshops, integration of the web community, ideas contests and toolkits (Arnold 2011; Arnold and Barth 2012).

In concert with the previous explanations we consider open innovation as an innovation strategy (Ollila and Elmquist 2011) rather than as a concrete method, whereby we are mainly interested in the outcome of open innovation processes, irrespective of which specific (external) interest groups contribute. From the sustainability point of view it is of particular interest to ascertain the impact of organisational outcomes on the (social and ecological) environment.

**Sustainable Innovation**

Innovation plays a crucial role in fostering a greater level of sustainability in company activities (e.g. Snider et al. 2003; Crossan and Apaydin 2010; Dangelico and Pujari 2010; Horn and Brem 2013; Hansen and Große-Dunker 2013, referring to Hart and Milestein 2003 and Hockerts and Morsing 2008). Innovations can be in the form of some type of “traditional innovation” which contributes to an improvement in sustainability (e.g. process innovation) or may take the form of an innovation which in itself can be considered as generating greater sustainability (e.g. the introduction of a new product using different raw materials) (Steiner 2008).

Sustainability (Elkington 1997), Sustainable Development (WCED 1987) and innovation, are all contested and controversial concepts. Consequently, to date, no clear or unified definition of “sustainable innovation” exists. In accordance with Achterkamp and Vos (2006, p.530) we use the term sustainable innovation to indicate that “the outcome of the innovation process somehow displays sustainability” or whenever innovations contribute to “sustainable development from an economic, ecological and social point of view” (Steiner 2008, p.596-597). This rather broad understanding of the term is also supported by researchers who refer to “sustainability-oriented innovation” or to “sustainable innovation” in the sense that more than environmental considerations alone are relevant (e.g. Hansen et al. 2011; Boons et al. 2013, referring to Charter and Clark 2007 and Charter et al. 2008). For example, the term “sustainability-oriented innovation” is seen by Hansen and Große-Dunker as “The commercial introduction of a new (or improved) product (service), product-service-system, or pure service which – based on a traceable (qualitative or quantitative) comparative analysis – leads to environmental and/or social benefits over the prior version’s physical life-cycle (‘from cradle to grave’)” (Hansen and Große-Dunker 2013, p.2407-2408).

Despite the above proviso, the literature is rife with publications considering the environmental dimension of innovation alone. Here, a variety of different terms, such as “green innovation” or “eco-innovation” are quite common (e.g. Hellström 2007; Horbach 2008; Arundel and Kemp 2009; Carillo-Hermosilla et al. 2010; De Marchi 2012; Horbach et al. 2012; Kesidou and Demirel 2012; Schiederig et al. 2012). Such use is in line with the definition provided by Kemp and Pearson (2007, p.7): “Eco-innovation is the production, assimilation or exploitation of a product, production process, service or management or business method that is novel to the organisation (developing or adopting it) and which results, throughout its life cycle, in a reduction of environmental risk, pollution and other negative impacts of resources use (including energy use) compared to relevant alternatives”. It is evident that this definition is based on the OECD 2005 (Oslo Manual) definition of innovation. From a company’s perspective the environmental orientation of an innovation is often considered as being most important owing to both its innovative potential and its economic impact. According to the OECD (2009) impact refers to the eco-innovation’s effect on environmental conditions, either in terms of product life cycle or in some other relevant dimension. Again, this approach underlines the importance of the impact of the innovation in contrast to the original motives or intentions behind it (De Marchi 2012).

However, objective, dimensions and impact are not the only important determinants in sustainable innovation. In addition, Horbach (2008) refers to the relevance of factors such as supply and demand, or to the influence of institutional and political arrangements. Horbach et al. (2012) also reveal that – besides technology push and market pull – regulatory push and regulatory pull are specifically relevant drivers in innovation processes. We also find of course publications in the literature that focus specifically on one particular aspect of innovation. Examples worthy of mention are, Bönte and Dienes (2013) who investigate empirically whether firms’ improvements in energy and material efficiency are related to the extent to which external partners are involved in the development of process innovations; Lee and Kim (2011) conduct a case study to clarify the role of suppliers in enhancing the manufacturer’s ability to successfully carry out green innovation in product development; Pujari (2006) focuses on the impact of eco-innovation and explores how to make greener products more successful in the market place; Dangelico and Pujari (2010) discuss firm motivations behind green product innovations; Foster and Green (2000), one of the oldest contributions in the field of process innovations, talk about how green issues influence the R&D process; De Marchi (2012) explores the relationship between firms’ R&D cooperation strategies and their propensity to introduce environmental innovations.
From the point of view of the present paper the construct (corporate) sustainable innovation is understood as referring to the introduction or adaptation of a product, process, organisation or system which takes account of the social, environmental and economic dimension of sustainability. That there is a positive (environmental, social or economic) impact is central, although we are fully aware of the fact that sustainability is a moving target with no final or absolute end point. Taking all the dimensions of sustainability into account simultaneously is of course the best option but is not an essential requirement. Moreover, in terms of the definition, it does not really matter whether the innovation itself results more or less by chance in greater sustainability (e.g. the adoption of a new product consisting of recyclable materials) or whether attaining greater sustainability is the main intention behind the innovation process (e.g. the production of motion detectors with which energy regulation can be managed more efficiently, or the production of photovoltaic panels). Thus, our interest here lies not merely on the successful market introduction of an innovation. We attempt to enlarge the above definition of sustainability-oriented innovation given by Hansen and Große-Dunker (2013) by not only considering innovations along the life cycle of a product but also by incorporating the company’s internal perspective together with the impact of innovations on society (Gelbmann et al. 2013).

To start with, sustainable innovation is definitively more challenging and complex than conventional innovation seems to be. In the former, not only does the task itself differ, the externalities and drivers behind the introduction of the innovations also have to be considered (De Marchi 2012; Horbach et al. 2012). Environmentally friendly innovation very often requires changes in the raw materials or components of a product, reveals technological uncertainties (De Marchi 2012), requires new information and additional skills, or demands fundamental changes in the services being provided. Furthermore, none of these may be part of the core competences of a firm (Laperche and Picard 2013). Consequently sustainable innovation implies higher cooperative effort, leads to more intensive partnerships and requires higher complementarities among network partners (De Marchi 2012; Laperche and Picard 2013). It can be argued that more intensive cooperation is not only necessary for the specific phase of innovation development, but also for the entire innovation process. In line with Arnold (2011) we state that it is of high importance how stakeholders and sustainability requirements are integrated into the innovation process. Furthermore, cooperation along the entire supply chain may also be necessary (De Marchi 2012; Hansen and Große-Dunker 2013). The latter results from the fact that in order to be successful, green products must not only address environmental issues but also fulfil market requirements at least as well as their “non-green counterparts” (Niinimäki and Hassi 2011, p.1878, referring to Berchicci and Bodewes 2005). In addition, eco-innovations are not limited to products, processes and marketing methods but also include innovation in social and institutional areas (e.g. Laperche and Picard 2013). For example, Laperche and Picard (2013) found in their case study research that raising customer involvement is a considerable help in the development of product-service-systems. This point is also strengthened by Niinimäki and Hassi (2011), who investigate design strategies in sustainable production in the clothing and textile industry. They find that although “sustainable innovation has traditionally been driven by the supply side” (Niinimäki and Hassi 2011, p.1878) – stakeholders should be given the opportunity to become involved in the problem solution process, to learn collectively and to develop a design outcome with deeper consumer integration and satisfaction. This supports the idea presented in the present paper that sustainable innovation is about opening up innovation processes in order to create room for the integration of a variety of interest groups. Thus, the concept of open innovation provides one particular framework for aiding understanding of sustainability-related innovation which is both technologically radical and socially complex (Wagner 2009). In the light of the preceding theoretical discourse the results of our literature review will now be discussed in the next section.

COMBINING OPEN INNOVATION AND SUSTAINABLE INNOVATION: EVIDENCE FROM THE LITERATURE AND FURTHER CLARIFICATION

The analysis of the literature reveals to some extent how open innovation can be seen in the context of sustainable innovation. Sustainability-related innovation and the use of cooperation is discussed in several studies whereby the focus is normally placed on stakeholders and users. However, the topic is still in its infancy since few publications deal with the concrete term of open innovation for sustainability. The low number of publications within this field, listed below in Table 1, confirms our assumptions. These publications are discussed in order to reveal what has been done in the field so far and to indicate potential gaps in the research. We highlight some typical characteristics of sustainable innovation and examine how such a combination of open innovation and sustainable innovation can be fruitful.

In the following, we explicitly discuss the papers mentioned in the above table. To begin, we would like to point out the paper of Arnold (2011) in which she defines an analytical framework for analysing how company-related factors influence the degree to which open innovation methods are used. She further analyses the contribution of open innovation methods to corporate responsibility. Another paper to be mentioned is Wagner...
Table 1: Results of the qualitative literature review

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<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Journal</th>
<th>Year</th>
<th>Issue</th>
<th>Keywords</th>
<th>Category</th>
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<tbody>
<tr>
<td>Achterkamp and Vos</td>
<td>A framework for making sense of sustainable innovation through stakeholder involvement</td>
<td>International Journal of Environmental Technology and Management</td>
<td>2006</td>
<td>6(6), pp. 525-538</td>
<td>innovation journey, sustainable innovation, stakeholder identification, stakeholder classification/roles/tasks, sustainability criteria, organisational sustainability, reduction of offload</td>
<td>Theoretical/conceptual model</td>
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<tr>
<td>Arnold and Barth</td>
<td>Open innovation in urban energy systems</td>
<td>Energy Efficiency</td>
<td>2012</td>
<td>5, pp. 351-364</td>
<td>energy efficiency, open innovation, bottom-up urban transformation, user integration, service innovation, urban planning processes</td>
<td>Case study</td>
</tr>
<tr>
<td>Arnold</td>
<td>The role of open innovation in strengthening corporate sustainability</td>
<td>International Journal of Sustainable Economy</td>
<td>2011</td>
<td>3(3), pp. 361-379</td>
<td>CR, corporate responsibility, sustainability, OIMs, open innovation methods, innovations, stakeholder or user integration, case study research</td>
<td>Case study</td>
</tr>
<tr>
<td>Chesbrough</td>
<td>GE's ecomagination challenge: an experiment in open innovation</td>
<td>California Management Review</td>
<td>2012</td>
<td>54(3), pp. 140-154</td>
<td>business models; energy policy; innovation</td>
<td>Case study</td>
</tr>
<tr>
<td>De Marchi</td>
<td>Environmental innovation and R&amp;D cooperation: empirical evidence from Spanish manufacturing firms</td>
<td>Research Policy</td>
<td>2012</td>
<td>41, pp. 641-623</td>
<td>environmental innovation, R&amp;D cooperation, two-part logit model, innovation survey, Spain</td>
<td>Survey</td>
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<tr>
<td>Hansen, Bullinger and Reichwald</td>
<td>Sustainability innovation contests: evaluating contributions with an eco impact-innovativeness typology</td>
<td>International Journal of Innovation and Sustainable Development</td>
<td>2011</td>
<td>5(2-3), pp. 221-245</td>
<td>case study; creativity; eco innovation; evaluation; fuzzy frontend; idea contest; idea management; innovation process; innovativeness; open innovation; shoe industry; sustainability innovation</td>
<td>Case study</td>
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<tr>
<td>Hellström</td>
<td>Dimensions of environmentally sustainable innovation: the structure of eco-innovation concepts</td>
<td>Sustainable Development</td>
<td>2007</td>
<td>15(3), pp. 148-159</td>
<td>eco-innovation, sustainability; incremental; radical; innovation; sustainable development; Schumpeter</td>
<td>Survey</td>
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<tr>
<td>Laperche and Picard</td>
<td>Environmental constraints, Product-Service Systems development and impacts on innovation management: learning from manufacturing firms in the French context</td>
<td>Journal of Cleaner Production</td>
<td>2013</td>
<td>53, pp. 118-128</td>
<td>manufacturing firms, innovation management, eco-innovation, open-innovation, Product-Service Systems</td>
<td>Case study</td>
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Table 1 continued: Results of the qualitative literature review

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<th>Author</th>
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<th>Year</th>
<th>Issue</th>
<th>Keywords</th>
<th>Category</th>
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<tbody>
<tr>
<td>Wagner</td>
<td>The links of sustainable competitiveness and innovation with openness and user integration: An empirical analysis</td>
<td>International Journal of Innovation and Sustainable Development</td>
<td>2009</td>
<td>4(4), pp. 314-329</td>
<td>competitiveness; development; empirical analysis; free; innovation; integration; open; revealing; sustainable; user</td>
<td>Survey</td>
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(2009). He argues that “...it becomes obvious that open innovation and user integration are of particular relevance for sustainability-related innovation” (Wagner 2009, p.315) and that in an “…increasingly globalized world the open innovation paradigm has increasing relevance for sustainability-related innovation” (Wagner 2009, p.316). In his survey, Wagner provides evidence of the need for user integration in the context of sustainability-related innovation, thus providing a justification for studying this aspect in more detail.

In a more regional planning context, Arnold and Barth (2012) investigate the use of open innovation methods for urban planning processes and conclude that such integration of users can foster bottom-up urban energy system transformation by addressing the interactive nature of decision making. They further point out that “…there is some evidence that open innovation methods strengthen energy-efficient activities – at least they raise energy-efficient issues” (Arnold and Bart, 2012, p 362).

We were also able to identify some examples where the emerging topic of sustainable open innovation is discussed under a different name (Achterkamp and Vos 2006; De Marchi 2012). To be more precise, De Marchi (2012) discusses the characteristics of sustainable open innovation solely in terms of the concept of cooperation, whereas Achterkamp and Vos (2006) mainly highlight the process of stakeholder integration throughout the whole innovation process. In contrast to the relatively narrow focus employed in these and other publications, we prefer to see open innovation in the context of sustainable innovation in a broader sense by including not only cooperation in general but also by stressing the integration of external parties (not explicitly stressing stakeholders) for specific purposes within the innovation process.

In her empirical investigation, De Marchi revealed that sustainable innovation – due to its systemic character and its technological uncertainties – entails a high level of co-operation and significant complementarities among network partners. Hence, integrating external and internal knowledge seems to be important in supporting sustainable innovation. In this context, De Marchi (2012) emphasises the significance of scientific cooperation partners for sustainable innovation, supporting network activities with external partners by reducing any associated risks and uncertainties. It can also be attractive to use open innovation methods to handle the high complexity of sustainable innovation, as is stated in Hansen et al. (2011). Wagner (2009) further argues that the sustainability-related innovation process tends to be socially very complex, and the knowledge to implement the innovation is widely distributed. Thus, only a very small amount of this knowledge is available in any single firm making it necessary to open up the innovation process to achieve successful sustainable innovation.

When we now have a closer look at the supplier side of the innovation and further the production process, opening the innovation process for sustainable innovation in the direction of suppliers is inevitable for a company. Sustainable innovation very often requires changes in the raw materials or components (De Marchi 2012) and depends on specific information from suppliers, especially regarding materials, ingredients, the nature and characteristics of components, and their impact on the environment. Consequently, intensive, backward cooperation in the supply chain is essential (Arnold 2011). There are clear incentives for companies to cooperate along the supply chain as they need to be sure about the environmental impact of all components used. So, companies need to highly interact with supply chain partners, both to co-develop and to verify their compliance, making the concept of open innovation a helpful instrument to support this process. Admittedly, those methods are to some extent already well-established in supplier cooperation even though they may not be explicitly referred to as open innovation for sustainability.
Another reason for combining sustainable innovation and open innovation is that sustainable innovation requires information and skills that are quite distant to, or distinct from, those found under the framework of traditional knowledge. Firms and their internal R&D departments only have limited knowledge on existing sustainability-related issues (Hansen et al. 2011; Chesbrough 2012; Slotegraaf 2012; Laperche and Picard 2013), and sustainable innovation often implies the need for a more radical approach (Hellström 2007; Niinimäki and Hassi, 2011) and a high degree of innovativeness (Wagner 2009). Sustainable innovation would in that sense be a qualitative extension of common performance and thus requires expert knowledge from both inside and outside the company. Accordingly, the open innovation approach can be seen as an important mechanism for addressing sustainable innovation by enhancing overall awareness of the environmental and social potential embodied in successful innovation.

To integrate external knowledge within companies, stakeholder involvement represents another approach mentioned in the literature. Several publications stress the importance of including stakeholders for market acceptance of innovation outcomes (Achterkamp and Vos 2006; Niinimäki and Hassi 2011) and Achterkamp and Vos (2006, p.536) further state that “…stakeholder involvement plays an important role in the application of sustainability in the organisational practice of innovation, both to define criteria for sustainable innovation more clearly and to activate organisational practices according to these criteria”. By giving the stakeholders the opportunity to be involved in the problem solution and in the innovation process, both companies and stakeholders can collectively learn from each other and develop and design an outcome which provides deeper consumer integration and satisfaction (Niinimäki and Hassi 2011). To summarise this aspect of stakeholder involvement, while there is no doubt about the importance of stakeholder integration for a firm’s competitiveness; however, it is still unclear how this can be related to the sustainable open innovation approach. Traditional stakeholder integration means taking account of stakeholder needs and requirements with respect to the overall company, especially in terms of strategic questions. In contrast, the open innovation approach focuses more specifically on the process of innovation management. As for the process perspective, it has to be noted that the sustainability aspect of the innovation is something that needs to be monitored throughout the entire innovation process, i.e. in the periods of initiation, development, and implementation (Achterkamp and Vos 2006; Arnold 2011). Arnold (2011) also found in her study that stakeholder demands generally make the use of open innovation methods easier; however, dynamic company capabilities are important, and hereby especially values and structures/systems to be the most evident categories.

In contrast to the broader topic of stakeholder integration, the involvement of users as one aspect of open innovation represents a more specific approach. The concept of user integration itself is quite old; von Hippel was one of the first to talk about opening the idea of innovation in the sense of “democratizing innovation” (von Hippel 2005; also mentioned explicitly in the work of Holmes and Smart 2009). For sustainability-related innovation and competitiveness, user integration can be expected to have very positive effects on the realisation of sustainable innovation (Wagner 2009) and the importance of user innovation is demonstrated in various case studies (e.g. Wagner 2009; Carrillo-Hermosilla et al. 2010; the latter talk about stakeholders and their importance for eco-innovation, but do not further discuss the aspect of open innovation for sustainability). The integration of users can also influence the rate and direction of innovation towards environmentally benign practices (Carrillo-Hermosilla et al. 2010), making the importance of open innovation methods for the integration of users within the innovation process even more obvious. However, there is also another side of the coin of user integration. Since such sustainable innovation is often based on environmental technologies that are, at least and to some extent, new to the customers and end users, new solutions do not generally come from user-centred approaches. Users are tied to existing solutions (Wagner 2009; Niinimäki and Hassi 2011), but the development of environmentally friendly products may entail high levels of complexity or technical expertise. Studies on the user-dimension of sustainable innovation also have shown that new products invented by users tend to exhibit a low to medium degree of innovativeness (Carrillo-Hermosilla et al. 2010). Furthermore, end users have difficulty detecting environmental features, particularly where this requires sophisticated technological knowledge (De Marchi 2012). The increasing complexity of sustainable innovation creates barrier. As most companies themselves do not know how to the issue of sustainability should be dealt with, it does not appear realistic to expect end users to be capable of dealing adequately with such a complex issue (Hansen et al. 2011). Summing up, we have to be aware that the introduction of radical, ground-breaking new products goes “…beyond the technological level” (Hansen et al. 2011, p.224), an area where users cannot be seen as experts by tradition.

One positive point related to the integration of users within the innovation process is its ability to raise awareness of specific products and to increase the general level of acceptance for sustainable innovations among a broader public (Arnold and Barth 2012). This is even more important where the specific environmental benefits of products are hidden (De Marchi 2012). Additionally, innovation aimed at the fostering of sustainability very often clearly focuses on changing customer behaviour, e.g. on changing habits with respect to
product use, or on how customer requirements are met (Laperche and Picard 2012). By integrating users in the innovation process the rate of acceptance is likely to be higher than that prevailing in a situation where consumers are merely confronted with fully developed products (Hansen et al. 2011; Arnold 2012).

To summarise, our intensive literature research reveals that while some publications can be found which deal with specific aspects of open innovation for sustainable innovation; however, a clear and understandable definition of this concept is still lacking. In the words of Mokter (2010, p.37) “…literature on open innovation namely deals with business benefits and consideration of sustainable development in open innovation research field remains totally ignored”. From the point of view of the present paper open innovation for sustainable innovation may be seen as an outside-in process where external knowledge is gathered to support the internal development of innovation. We concentrate here on the innovation process and its opening, and this need not include the company. In other words, sustainable open innovation strictly aims at the execution and development of products, processes and services. External knowledge influencing strategic aspects is not taken into account. Additionally, we see sustainable open innovation in a vein similar to that described by Hansen et al. (2011, p.26), as “…a set of such practices to integrate outside innovators into the inside innovation process”. Last but not least, we would like to point out that sustainable innovation is more than a mere integration of stakeholders, it also means the active search for potential ideas outside companies, no matter whether they are from users (in contrast to many user-centred approaches for sustainable innovation), suppliers, research institutes, patents, to name a few.

CONCLUDING REMARKS

Conclusion and discussion

First, we find that there are just a few publications which discuss the topic of open innovation in the context of sustainable innovation. This goes hand in hand with the conclusion of Schiederig et al. (2012) who argue that the majority of publications focus evidently on the meso-level or macro-level of innovation science. Second, due to the fact that the terms eco, green and sustainable innovation as well as open innovation have not been clearly defined, it is not possible to delineate explicitly the many potential dimensions of sustainable open innovation. Basically, while several aspects or connections are discussed, the adaptation of the related concepts and their further combination with the open innovation approach or with sustainable innovation is still in its infancy. Open innovation and sustainable innovation still appear to be two relatively distinct fields. Third, we do see, however, the emergence of an increasing debate on open innovation and sustainable innovation. Not only are researchers awakening to the importance of sustainable open innovation, firms are also becoming aware of the same trend (e.g. Arnold 2011). Ongoing economic changes, increasing complexity, and major environmental problems are forcing companies to change and modify existing innovation methods, or in some cases, to introduce radically new ones. This also provides the context in which open innovation for sustainability is up for debate. Anyhow, even though the search for new ideas with commercial potential is one central part of the innovation process (Laursen and Salter 2006), sustainability has not really been considered as a source of ideas so far.

Fourth, the literature review supports our understanding of open innovation in this context as being more a question of strategic than procedural considerations. It is thus possible that the development of strategic open innovation approaches goes hand in hand with the maturity of companies’ R&D intensity and sustainability management. But as in most of the sustainability discussions it is still unexplained whether there is clear evidence that open innovation also fosters and supports sustainable innovation in an economic sense, i.e. in the creation of added value.

Fifth, although we are aware of all the numerous challenges related to the fields of open innovation and sustainability, our literature review enables us to verify that open innovation is suitable for fostering sustainable innovations, given the basic assumption that innovations result from highly complex but systemic and interconnected processes which depend on different actors and on the interplay of several internal and external factors (Carillo-Hermosilla et al. 2010). Furthermore, we identify a huge potential for open innovation approaches when it comes to functional innovations, changes in existing systems and forms of societal transition. Such transition requires new, fundamental and radical innovations, and an essential prerequisite for such change is early and intensive integration of all relevant actors.

Limitations and outlook

The results presented in the present paper have to be seen in the light of their limitations. One important constraint is that the topic of “sustainable open innovation” is very complex. The term “open innovation” is not
always used to describe the integration of external partners into the innovation process, e.g. the topic of collaboration for sustainable innovation can also deal with such aspects. Consequently, this review does not claim to cover all publications dealing with the issue of external cooperation for sustainable innovation. Our sample only serves to provide an overview of the general literature on open innovation AND sustainable innovation. Furthermore, our focus on academic journals in English obviously means that publications in other languages, or in other formats, were automatically excluded from the analysis. Publications of a more practical orientation, as well as publications in books or texts appearing as part of various subsidised projects could not be analysed within the present research design which was based specifically on peer-reviewed scientific publications. Use of a less academic approach, e.g. an investigation into actual applications, might very well serve to reveal potential areas for future research. Clearly, qualitative and quantitative empirical studies are needed to confirm the practical relevance of sustainable open innovation.

It is also possible that the disadvantages inherent in open innovation could also limit the use of sustainable open innovation as a practical method. According to Enkel et al. (2005) the main risks associated with an opening of the innovation process are loss of know-how, increased dependence on customer views, personality or behaviour, the potential limitations of incrementalism, tying oneself to the specificities of a niche market, and the potential for misunderstanding between customers and employers. Overcoming such constraints is essential if one is to achieve successful adaptation of the open innovation approach for sustainable innovation. Last but not least, R&D intensity is also an important influential factor in applying the open innovation approach. According to Gassmann et al. (2010), it is obvious that open innovation methods are mainly tied to the high-tech sector, even though there now appears to be a similar trend emerging in the low-tech sector. Anyhow, open research issues appear to be related mainly to the barriers and drivers for open innovation in the context of sustainable innovation. Thus, the different types of companies involved, as well as the differences between various branches need to be taken into account.

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DO CERTAIN LEADERSHIP PRACTICES RAISE STAKEHOLDER SATISFACTION? AN INVESTIGATION OF MANAGERS IN THAI SMEs

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ABSTRACT

This paper reports on an investigation into the leadership and management practices affecting stakeholder satisfaction by examining relationships between Avery and Bergsteiner’s (2010) 23 leadership and management practices (SL) and overall stakeholder satisfaction (OSS). This study extends current knowledge of the leadership and management practices that positively predict enhanced stakeholder satisfaction, an area in which empirical evidence has to date been largely lacking. Using a cross-sectional survey research design, data were gathered from 439 small-medium enterprise (SME) managers in Thailand. Results show all SL practices except financial-market-orientation were significantly related to OSS, and the more an organisation adopts significant SL practices, the higher the OSS is likely to be. The particular SL practices that positively predict enhanced OSS were amicable labour relations, staff retention, strong and shared vision, strategic and systemic innovation, and high staff engagement and quality.

Keywords: Leadership, Sustainable Leadership, stakeholder satisfaction, organisational sustainability, SMEs, Thailand.

INTRODUCTION

Identifying the leadership and management practices that drive organisational sustainability and create sustainable enterprises has become an important quest for both practitioners and academics. Numerous scholars from around the world (e.g. Albert 1992; Handy 2002; Bennis and Nanus 2003; Karp 2003; Avery 2005; Avery and Bergsteiner 2010, 2011a; Kantabutra 2011, 2012) have called for a new genre of leadership that embraces organisational sustainability practices. These writers urge leaders to look beyond the traditional practice of simply adding on being “green” and “socially responsible” to business-as-usual, and to examine an entire set of organisational systems and processes.

Over the last decade, diverse sustainability concepts at the strategic macro-level of leadership have been proposed, such as Stakeholder-based Leadership (e.g. Freeman 1984; Freeman Wick and Parmar 2004; Maak and Pless 2006; Porter and Kramer 2011), Ethical Leadership (e.g. Brown and Trevino 2006; Resick et al. 2006), Sufficiency Economy Philosophy business practices (e.g. Puntasen, Premchuen and Keitdejpunya 2003; Kantabutra et al. 2010); and the Sustainable Leadership (SL) approach (Avery and Bergsteiner 2010, 2011a, 2011b). These approaches share similar characteristics, to different degrees, in advocating organisational sustainability. Stakeholder-based Leadership calls for leadership acts based on concepts such as stakeholder relationships management and the triple-bottom-line approach, whereas Ethical Leadership underscores the importance of ethical business standards and Sufficiency Economy approach embraces the Buddhist middle path in promoting sustainable development. While most of these concepts focus on particular aspects of leadership linked to creating sustainable enterprises, SL incorporates much of what the other approaches argue for in a systemic model. SL’s integrative perspective reflects the multidimensional nature of leadership practices in promoting a long-term approach towards organisational sustainability that extends beyond these and other atomistic, and often limited, leadership concepts, such as the triple-bottom-line, corporate social responsibility and corporate responsibility.

2 A paper containing the full details of this study has been accepted for publication in the Asia-Pacific Journal of Business Administration.
The literature indicates that most existing leadership research is currently limited to piecemeal variables, rather than developing constellations of leadership behaviours that reflect the complexity of organisational leadership (Boal and Hooijberg 2001). Therefore, there is a need to examine multiple management practices in a holistic manner in creating sustainable enterprises, as the SL model offers. Supported by the literature (e.g. Albert 1992, 1993; Bennis and Nanus 2003; Hamel and Vallikangas 2003; Hamel and Breen 2007; Kantabutra 2011, 2012) and numerous management gurus (e.g. Bennis 2003; Covey 2003; Drucker 2003; Wheatley 2003), SL practices contribute to organisational sustainability by considering multi-faceted management principles, processes and values to create long-term performance and resilience/endurance for an enterprise. For these reasons, the holistic SL model was employed as the underlying theoretical framework for this study.

In addition to driving organisational longevity and performance, SL is predicted to enhance overall stakeholder satisfaction in its quest for sustainability. Leaders of today’s organisations need to understand the rapidly changing business context and how to gain competitive advantage by focusing on different facets of management and in particular, on the interconnectedness of these facets. In addition to human-oriented management (through staff engagement and commitment), management of stakeholders is considered vital (Berthon et al. 2008). As well as testing whether SL leadership contributes to overall stakeholder satisfaction, this study seeks to understand which individual SL practices can enhance stakeholder satisfaction.

Leaders often focus on organisational performance and outcomes, often relying solely on financial measures of performance. However, critics argue that a realistic model of performance is in fact more complex than just using financial outcomes, involves more than a single dimension and requires a set of criteria to define it (Cyert and March 1963; Brown and Laverick 1994). Measuring organisational success should extend beyond superior financial measures to reflect other aspects of organisations (Brown and Laverick 1994). Despite the popularity in practice of simply relying on conventional financial performance measures, there are many calls for measuring overall stakeholder satisfaction instead (Brown and Laverick 1994; Antony, Waterhouse and Wells 1999; Schneiderman 1999; Neely, Adams and Crowe 2002). Recognising this gap in the literature, overall stakeholder satisfaction is proposed as the dependent variable in this study, with a consequent need to explore its links to organisational sustainability.

Although the literature, including the SL approach, underscores the importance of strategic macro-views of leadership, the emerging SL field is still at an early conceptualisation stage. Apart from several case studies by Avery and Bergsteiner (2010, 2011a, 2011b) and Kantabutra and colleagues (e.g. Kantabutra 2011, 2012; Kantabutra and Suriyankietkaew 2013), published research into quantifying the effects and relationships between various SL practices and overall stakeholder satisfaction is absent.

SUSTAINABLE LEADERSHIP: THE RESEARCH FRAMEWORK

SL emphasises an integrative leadership and management approach to organisational sustainability and extends way beyond the popular notion of organisational sustainability implying altruism or charity work, or just being “green” (Avery and Bergsteiner 2010). The objective of SL is to balance people, profits and the planet to promote longevity of a firm through evidence-based management practices, thereby embracing a holistic approach toward organisational sustainability (Avery and Bergsteiner 2010, 2011a). Avery and Bergsteiner (2010, p.7) highlight that "Sustainable Leadership helps an organisation to endure over time and weather the inevitable storms that beset an enterprise”.

Originally, SL was grounded in the Rhineland model of capitalism (Albert 1992, 1993; Avery 2005) but has since been expanded and renamed the “Honeybee” business model (Avery and Bergsteiner 2010, 2011a) to remove any geographic connotations implied by the former name. Avery’s (2005) study of 28 global case studies led to an initial proposal of 19 SL practices. However, Avery and Bergsteiner (2010, 2011a) identified a further four practices, creating a total of 23 Honeybee practices underlying the SL framework. These practices are: CEO and top-team leadership, consensual and devolved decision-making, ethics, challenging financial markets, strong systemic innovation, knowledge-sharing, long-term perspective, promotion-from-within, strong organisational culture, strong people priority, high quality, high staff retention, highly-skilled workforce, strong social responsibility, strong environmental responsibility, broad stakeholder focus, self-governing teams, considered uncertainty and change as process, plus cooperative union-management relations, trust, innovation, staff engagement and self-management. In brief, Honeybee practices are considered essential for driving organisations towards excellent business operations and superior performance; thereby contributing to the sustainability of an enterprise.

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**Overall Stakeholder Satisfaction (OSS)**

As noted above, measuring organisational success should extend beyond financial measures to reflect other aspects of performance (Brown and Laverick 1994). According to the literature Brown and Laverick 1994; Anthony, Waterhouse and Wells 1999; Schneiderman 1999; Neely et al. 2002), OSS can provide an essential emergent, required strategic proxy for organisational performance and sustainability. Since stakeholders ultimately are the final judge of organisational performance (Dickinson, Saunders and Shaw 1998), an organisation should know what its stakeholders’ expectations are and strive to satisfy their reasonable requirements (Atkinson et al. 1997). Scholars (e.g. Freeman 1984; Greenley and Foxall 1997; Harrison, Bosse and Phillips 2010) point out that failure by companies to address wide and diverse interests of stakeholder groups could adversely impact their performance. Clarkson (1995, p.106) further highlights that “if any primary stakeholder group, such as [employees], customers or suppliers, became dissatisfied and withdraws from the organisational system, in whole or in part, the corporation would be seriously damaged or unable to continue as a going concern”. Moreover, Clarkson (1995, p.112) argues that “managers could no longer be held responsible for maximising returns to shareholders at the expense of other primary stakeholder groups; instead managers were now accountable for fulfilling the firm’s responsibilities to [satisfy] its primary stakeholder groups”.

Numerous scholars (e.g. Clarkson 1995; Bititci, Carrie and McDevitt 1997; Neely et al. 2002; Harrison et al. 2010) stress the importance of stakeholder satisfaction as an organisational performance measure, particularly in SMEs (Barnes et al. 1998; Garengo, Biazzo and Bititici 2005). Researchers further suggest that stakeholder satisfaction helps ensure long-term survival, organisational sustainability and success of a firm (Freeman 1984; Freeman and McVea 2001; Hillman and Keim 2001; Post, Preston and Sachs 2002), and that firms can gain competitive advantage strengthening stakeholder satisfaction. As advocated in the literature (e.g. Berrone, Surroca and Tribó 2007; Harrison et al. 2010), OSS is predicted to enhance organisational performance and sustainability.

Despite the importance given to stakeholder satisfaction in parts of the literature, its measurement has been largely overlooked. Since different stakeholder groups have different objectives (Cyert and March 1963), Brown and Laverick (1994) argue that measuring corporate performance is highly complex and needs more than a single criterion to define it. Corresponding with the previous literature, this study advances current knowledge by measuring key stakeholder satisfaction (i.e. customer satisfaction, supplier satisfaction, employee satisfaction) under an umbrella of a single concept termed “overall stakeholder satisfaction”.

**RESEARCH HYPOTHESES**

SL practices are predicted to enhance organisational performance in varying degrees (Avery and Bergsteiner 2010, 2011a, 2011b). Given the lack of empirical research into the relationship between SL practices and OSS, this study tested the following hypotheses:

*Hypothesis H1:* SL practices are significantly related to perceived overall stakeholder satisfaction.

*Hypothesis H2:* There is a positive relationship between SL practices and perceived overall stakeholder satisfaction.

*Hypothesis H3:* The more SL practices an organisation adopts, the higher the level of perceived overall stakeholder satisfaction.

**KEY VARIABLES**

*Sustainable leadership practices:* SL Honeybee practices were measured via a set of 57 items adapted from Avery and Bergsteiner’s Sustainable Leadership Questionnaire (SLQ) with five-point Likert rating scales ranging from 1 = “Strongly disagree” to 5 = “Strongly agree” with 6 = “Don’t know”.

The SLQ was translated from the English language into Thai using a back translation approach.

*Overall stakeholder satisfaction:* Using five-point Likert scales, respondent perceptions of stakeholder satisfaction among four key groups (i.e. customers, investors, suppliers and employees) were assessed. Consistent with the literature (e.g. Carmeli and Tisher 2004; Carmeli and Schaubroeck 2006), the OSS components were measured as perceptions, based on items asking the extent to which respondents believed that the firm overall satisfies its primary stakeholders, when compared with the firm’s competitors (1 = “Much worse” to 5 = “Much better”; 6 = “Don’t know”). This indirect method of measuring perceptions was necessary.
in the absence of being able to measure the stakeholder satisfaction components directly, adopting a technique used by Carmeli and associates. (Note that staff engagement is a separate measure from perceptions of employee satisfaction in this study.)

**METHODOLOGY**

The sample consisted of 439 managers from SMEs across diverse industries in Bangkok, who participated voluntarily. SMEs were chosen as the focus of the study because the literature has highlighted the importance of SMEs worldwide and called for further studies of SME leadership practices (e.g. Swiercz and Lydon 2002; White, D’Souza and McIlwraith 2007). Furthermore, as in many other countries, the SME sector plays a significant role in the Thai economy, according to the Office of Small and Medium Enterprises Promotion.

Table 1 shows the sample characteristics. 46% were male and 54% female managers. Most were aged between 25-34 years old and 35-44 years old whilst 15% of them were in the age range of 45-54 years old. About 88% of the sample had obtained a university degree. Nearly 80% had up to 10-years of tenure with the firm.

A cross-sectional survey design was employed to test the research hypotheses, using a mixed survey method (i.e. online, telephone and mail survey) to maximise response rates. The overall response rate was 57%. Cronbach’s alphas indicated that all items in the questionnaire exceeded the threshold of .70 level of reliability, as recommended by Hair et al. (2010).

**RESULTS**

Multiple regression and correlations were used to examine the relationships between SL practices and (perceived) OSS, yielding the following results. Descriptive statistics and correlations and p-values are available on request. Results show that all SL practices except financial market orientation (FMIN) are correlated significantly at either the 5% or 1% levels. Overall, the correlations reveal that all SL practices, except financial market orientation are significantly related to OSS. Therefore, HI is partially supported, with the exception of FMIN.

Table 1: Characteristics of Sample

<table>
<thead>
<tr>
<th>Demographic information</th>
<th>Number</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Gender</td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>204</td>
<td>46.4</td>
</tr>
<tr>
<td>Female</td>
<td>235</td>
<td>53.6</td>
</tr>
<tr>
<td>Total</td>
<td>439</td>
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</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 25 years old</td>
<td>17</td>
<td>3.7</td>
</tr>
<tr>
<td>25-34 years old</td>
<td>168</td>
<td>38.2</td>
</tr>
<tr>
<td>35-44 years old</td>
<td>171</td>
<td>38.9</td>
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<tr>
<td>45-54 years old</td>
<td>65</td>
<td>14.9</td>
</tr>
<tr>
<td>Above 55 years old</td>
<td>18</td>
<td>4.2</td>
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<tr>
<td>Total</td>
<td>439</td>
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<tr>
<td>Education</td>
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<tr>
<td>Below Diploma</td>
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<tr>
<td>Diploma</td>
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<tr>
<td>Tenure</td>
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<td></td>
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<tr>
<td>Below 6 years</td>
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<tr>
<td>6-10 years</td>
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<td>11-15 years</td>
<td>44</td>
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<tr>
<td>16-20 years</td>
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<tr>
<td>Above 20 years</td>
<td>18</td>
<td>4.0</td>
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<tr>
<td>Total</td>
<td>439</td>
<td>100.0</td>
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Using the enter method, the multiple regression model with all 23 predictors produced $R^2 = 37.1\%$, $F(23, 415) = 10.635$, $p<.001$, indicating that the 23 SL practices can explain about 37% of the variance in OSS among the managers. The model rejects the null hypothesis; therefore, there is at least one independent variable with a significant relationship with OSS. The assumptions of the multiple regression analysis were also assessed.
Although the Shapiro-Wilk test rejects the null hypothesis for normality at p<.01, this potential problem with normality is overcome by the large sample size (n=439). White’s test of homoscedasticity accepts the null hypothesis and indicates that the probability distribution of the errors has constant variance at p<.05. The Variance Inflation Factors (VIF) and tolerance fall within the acceptance range (VIF=1-5, tolerance=.01-1.0), revealing no multicollinearity and indicating that the regression model used in this study is an adequate fit.

Table 2 presents the analysis results for individual practices. Unstandardised coefficients reveal that labour relations (LARE=.115), staff retention (STRE=.079), strong and shared vision (SSVI=.163), strategic systemic innovation (SSIN=.105), staff engagement (STEN=.184) and quality (QUAL=.194) all have a significant relationships with OSS, and positively predict enhanced OSS at p<.05. The remaining SL practices were found non-significant, not contributing to the multiple regression model. Overall, the results indicate a positive predictive relationship between SL practices and OSS, supporting $H_2$.

The absolute values of standardised coefficients (Beta) evidence that certain SL practices have greater impact and predictive strengths on OSS than other SL practices, holding all other variables constant. Amongst the statistically significant coefficients, staff engagement (STEN=.185) had the highest impact and predictive strength on OSS. Quality (QUAL=.176), strong and shared vision (SSVI=.167), labour relations (LARE=.148), strategic systemic innovation (SSIN=.123), and staff retention (SSVI=.079), respectively, have relatively lower Beta and impact on OSS. Therefore, $H_3$ is partially supported since the more an organisation adopts the statistically significant SL practices, the higher the OSS will be.

| Table 2: Multiple Regression Results |

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.342</td>
<td>.347</td>
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<tr>
<td>DEPE</td>
<td>.000</td>
<td>.041</td>
</tr>
<tr>
<td>LARE</td>
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<td>.038</td>
</tr>
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<td>.079</td>
<td>.032</td>
</tr>
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<td>SUPL</td>
<td>.037</td>
<td>.036</td>
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DISCUSSION AND IMPLICATIONS

The purpose of this study was to identify the management practices derived from the SL framework and their effect on overall stakeholder satisfaction in Thai SMEs. The findings and implications from the study are of both empirical and practical importance to both academics and practitioners.

As predicted in H1, adopting SL practices is significantly related to OSS, consistent with Avery and Bergsteiner’s model (2010). The exception was “financial market orientation”. That the financial market orientation practice was not significant could be at least partially explained by the fact that all the organisations studied were SMEs, and not listed enterprises with an interest in external investors or analysts, which is also typical of SME firms in other countries (Avery 2005). SMEs tend to resist outside interference in their firm’s activities and owner managers in particular are often too preoccupied in running the business to worry about outside influences and finances (e.g. Sian and Roberts 2009).

H2’s prediction of a positive relationship between individual SL practices and OSS was supported, confirming similar research findings linking individual SL practices to aspects of stakeholder satisfaction. The major practices linked to OSS were labour relations (e.g. Martinez and Norman 2004; Danford et al. 2005), staff retention (e.g. Kantabutra and Avery 2010; Kantabutra 2011; Jing, Avery and Bergsteiner 2013, 2014), strong and shared vision (e.g. Kantabutra 2009; Kantabutra and Avery 2006, 2010), strategic systemic innovation (e.g. Bhaskaran 2006; Muller and Penin 2006), staff engagement (e.g. Aon Hewitt 2010; Bakker et al. 2008; Berthon et al. 2008) and quality (e.g. Anderson, Fornell and Lehman 1994; Neely et al. 2002). Moreover, the results show a differential relative impact and magnitude for the individual practices on enhancing OSS. For example, staff engagement had the highest impact and predictive strength on OSS, which is not surprising given that employee engagement is also a potential indicator of satisfaction among this stakeholder group.

H3 predicted that the greater the number of SL practices an organisation adopts, the higher its OSS. This was partially supported in this study, particularly by practices such as staff engagement; strong and shared vision; amicable labour relations; strategic systemic innovation; and retaining staff; consistent with Avery and Bergsteiner’s research. In other words, the more an organisation adopts of these particular SL practices, the higher the OSS will be.

As for the practical implications of this study, a major managerial implication is that understanding the contribution of particular practices to stakeholder satisfaction can assist business owners, entrepreneurs and managers in prioritising management practices that could notably affect their business success via enhanced OSS. The findings can also be used to guide business leaders and managers in making strategic decisions to invest in or emphasise particular SL practices. By encouraging amicable labour relations, retaining long-term staff, engaging staff, providing strong and shared vision, promoting strategic, systemic innovation and enhancing product and service quality, organisations can improve business effectiveness and efficiency as well as strengthen their business competitiveness, thereby promoting organisational sustainability as the SL model predicts.

Since the SME sector contributes to the economic and social growth of many countries worldwide (Spence, Schmidpeter and Habisch 2003; Jenkins 2006), including in Thailand, the findings of the research may also help government policy-makers to uncover the key determinants of growth in SMEs. In other words, this study may help the relevant parties to a better understanding of what drives the economic backbone of a country.

Lastly, some authors (e.g. Kantabutra 2011, 2012a, 2012b; Kantabutra and Suriyankietkaew 2013) are reporting a shift towards organisational leadership with a long-term orientation and caring for all stakeholders in creating sustainable businesses in Thailand. Examples of this are evident in the King’s Sufficiency Economy Philosophy business practices. According to Rungfapaisarn (2012), the sustainability revolution creates one of the biggest business opportunities for Thailand. Therefore, this research may help advance the current leadership, strategy and business management and entrepreneurial knowledge in Thailand and possibly in other emerging Asian contexts.

LIMITATIONS AND FUTURE RESEARCH

While the researchers strove for high quality in this investigation, various limitations need to be acknowledged. Since the study context focuses on the SME business sector, the applicability of the results to other kinds of businesses, especially in larger or listed organisations, needs to be verified and further investigated. Similarly, the research was conducted in one emerging economy and should be verified in other contexts. Common method variance must also be considered when interpreting the relationships among the SL practices, since they

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were measured using the same survey. The use of self-reports may create response errors, as may reliance on perceived assessments of stakeholder satisfaction, even though perceptions have been used in other studies where direct measures were unavailable (e.g. Carmeli and Tishler 2004). Since this is a cross-sectional survey, causality may not be strongly evident, and thus interpretation and generalisations from this study should be approached with caution.

Future research could further examine relationships between SL practices and other performance outcomes related to organisational sustainability, particularly examining specific bundles of honeybee practices. Other extraneous or control variables could be taken into account in future research since they may influence the relationships when conducting a similar statistical analysis. Overall, more empirical research is needed to advance knowledge in the multidisciplinary field of leadership, strategy and business management, entrepreneurship and SME businesses.

ACKNOWLEDGEMENT

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ABSTRACT

How might reflecting on their own culture help organisations responsible for the delivery of health and social care improve the quality of their services? This paper seeks to contribute to discourse surrounding the most effective ways to address challenges which compound to create a significant threat to the quality of health and social care.

Based on empirical research carried out in the UK, this paper discusses the impact of an ageing population, many of whom are living longer with conditions that require low or moderate care, and of requirements to reduce levels of public-sector spending in order to address growing public-sector debt levels. The typical response is to promote managerialism as a solution to these concerns, focussing on efficiency and self-responsibility as ways to reduce the overall care bill.

The authors suggest that a more effective and more just solution is to promote an ethic of care through the way in which services are managed and directed. As a first step, organisations with statutory duties to provide such services must look at their own culture and focus on enabling care through an acknowledgement of what Kittay calls “nested dependencies”. As such, the paper will offer a critical perspective on current practice.

Keywords: Social Care, Justice, Ethics of Care, Organisational Culture, Change Management

INTRODUCTION

This paper seeks to identify how organisations with a responsibility for the delivery of adult social care services might promote a more effective mode of engagement with current and potential service users through an evaluation and reflection on their own culture. It draws on the authors’ own research study, which adopted a participative approach in understanding the features of successful care services aiming to support those older people wishing to continue living at home (Hollinrake and Thomas 2014; Thomas and Hollinrake 2014a, 2014b). This previous work highlights the importance of relationships between those providing care (ones-caring) and those receiving care (cared-for) that supports previous work of Noddings (1984, 2002, 2010), Tronto (1993, 2013) and others.

This paper addresses the key issue for those organisations with a responsibility to deliver care: how should the organisation structure services and provide support for those providing care? In seeking to answer this question, the authors draw upon the work of Kittay (1999) whose work on “nested dependencies” offers a partial answer to this organisational challenge.

In three short context-setting sections, the authors provide background to the wider environmental challenges facing the delivery of adult social care in England (and applicable more broadly); the findings of the authors’ empirical study; and an introduction to the ethic of care. The fourth main section of the paper addresses the
organisational challenge: how social care departments might develop an “enabling culture” in which ones-caring are empowered and supported to deliver effective care.

**ECONOMIC AND DEMOGRAPHIC CHALLENGES**

Since 2008, the economic environment in the UK (and throughout much of the rest of the globe) has been dominated by a need to reduce the level of public-sector expenditure. As a result, the delivery of adult social care in England has been under increasing financial pressure (Rogowski 2010). Since the current Coalition Government introduced its program of austerity the adult social care system has made savings in excess of £2.6bn; 20% of net spending (ADASS 2013). More recently, the need for these savings has continued with an additional £800m savings required in the 12 month period to 2014 (ADASS 2013). An inevitable impact of budget cuts has been a requirement to limit service delivery with substantial reductions to the range and extent of services that are offered through the social care system (ADASS 2013; Kings Fund 2013).

At the same time, adult social care services have seen an increase in both demand and the complexity of needs faced by service users (Gilbert and Powell 2012; Harvey 2007). With the number of older people forecast to continue to increase beyond 10 million in 2021 (Phillippson 2008), levels of demand will continue to rise. Only a proportion of older people will need social care services, resulting not from their age per se but from associated ill health, physical impairment or mental health difficulties. Johns (2011) predicts that the number of older people with complex needs will increase suggesting that the demographic challenge is only likely to become more significant.

The dual challenge of reductions in the level of funding for adult social care services and of increasing demand for services as a result of an increasingly long-lived population mean that the system has been, and continues to be, under very significant pressure to reform. The authors describe the impact of these reforms in the light of empirical research with older people elsewhere (Thomas and Hollinrake 2014b).

Whilst this paper, and the experiences of the authors, relate specifically to the English context (adult social care provision is organised differently in other parts of the UK), the situation described above is common in many other countries that continue to be impacted by the Global Financial Crisis and face a population that is ageing. As a result, while the discussion of the research relates specifically to England, many of the themes and conclusions that emerge from it are applicable more widely.

**THE RESPONSE**

In England, the response to the combined challenges of economic austerity and increasing demands for social care of older people has been to significantly reform the social care system. Demands for care delivery to become more “efficient” and to drive costs down have reduced genuine choice for older people (Rogowski, 2010; Grimshaw and Rubery 2012). Both England (2010) and McGregor (2013) note that fewer or shorter home visits may be just one of the ways in which the drive for efficiency is implemented. As a result, the relationship between the one-caring and the cared-for is threatened with Fotaki (2011) suggesting that the reform agenda has served to turn service users into consumers of care services. In doing so, the emphasis is switched from being on care for service users to emphasising choice for consumers. As Stevens et al. (2011) point out this move, defended in terms of increasing choice and equity, creates challenges for the delivery of social care resulting from a move to introduce market forces.

This position is further reinforced by the impact of a move towards “personalisation” of care (Leadbetter et al. 2008) in which those receiving care are expected to take a more active role in shaping and determining the nature of the services they receive (Carr and Dittrich 2008, cited in Duffy 2012). The move towards individual choice (at least as presented in the current reforms) has had the effect of shifting power and responsibility within the caring relationship (Scourfield 2007, cited in Ferguson 2012; Leece 2010). The move towards individual choice (at least as presented in the current reforms) has had the effect of shifting power and responsibility within the caring relationship (Scourfield 2007, cited in Ferguson 2012; Leece 2010). Those previously cared-for are now placed in a position of being “care manager” with those with suitable social capital or support best able to manage these responsibilities (Stevens et al. 2011). These reforms, and their wider impact have been discussed in detail by the authors elsewhere (Thomas and Hollinrake 2014b).

The authors’ own empirical work is reported more fully elsewhere (Hollinrake and Thomas 2014; Thomas and Hollinrake 2014a, 2014b), but key findings are relevant for the current discussion. Most importantly, this...
research highlights the importance of relationships, most typically with family members, in supporting their “independent” lives at home. Any notion of an independent older person living in their own home is fallacious – older people, like those not yet at this stage in life, are fundamentally social and reliant on those around them whether or not they have particular support needs (see also Fine and Glendinning 2005). In approaching the issue of social support from this angle, we risk succeeding in simply isolating those who may find their social capital on the decline anyway. The authors have therefore suggested that the role for statutory providers of care ought to be to promote caring relationships (Hollinrake and Thomas 2014) and that a critique that draws upon the ethic of care provides useful insight into the way that current reforms threaten these important mechanisms of support (Thomas and Hollinrake 2014b).

The following section outlines the ethic of care and focuses on what this might mean for organisations before the authors consider the implications for organisational leadership in attempting to implement this approach.

ETHICS OF CARE

The authors use the “Ethics of Care” as a way to analyse and critically evaluate the relationships that were identified in their empirical study as being crucial to providing the best quality, and most effective, support to older people. This term is used to refer to a family of philosophical approaches, which stress an importance on being responsive to the individual needs of those within caring relationships (Engster 2004). This is contrasted with a number of more traditional theoretical approaches that might emphasise the importance of justice, fairness or equality. As Arendt (1986, cited in Duffy 2010) suggests, by attempting to treat people equally we risk simply reinforcing injustices. This notion is central to a key criticism of the current reform agenda: that by requiring older people to take more responsibility for managing their care the worst off – those with poorer education and limited social connections or capital – will fare less well than those who find themselves in a better position.

An approach inspired by the ethics of care favours partiality: treating individuals as individuals and recognising the specific details of their care requirements. In this way, services can be designed to respond to specific needs and to prioritise those challenges that affect a particular individual most strongly. Rather than being something to be avoided, this partiality therefore acts to inspire and drive caring relationships and to motivate action (Holm 2011; Nortvedt et al. 2011). Our actions, or more correctly our obligations, in any given situation are driven by context (Brannelly 2006) and a professional response to the particular needs of an individual (Engster 2004).

Caring relationships must occur at an individual level between ones-caring and cared-fors. They may be professional-service user relationships or equally a supportive relationship between family or friends and a person in need of support. What is important is the attentiveness to individual need and a responsiveness to motivations based on that attentiveness. However, our system of social care places responsibility in the hands of organisations (local authorities) and so we must attend to ways in which organisations might promote or inhibit caring relationships.

The question of how organisations might move towards an approach inspired by these principles has been addressed by both Tronto (2013) and Held (2006). In Held’s view, organisations must seek to promote: attentiveness (to individuals); trust (between ones-caring and cared-fors); responsiveness to need; narrative nuance (that even small differences between cases may be important); and on cultivating the sort of relationships that we describe as “caring” (Held 2006). Tronto’s (2013) approach is to remind us that organisations delivering care must pay attention to purpose, power and particularity in the way that they act, and that they should take care to ensure that these are promoted in the work that they undertake.

Whilst both these approaches are helpful in addressing organisational issues around the delivery of an ethic of care-based approach one crucial aspect is ignored. Kittay’s (1999) work on “nested dependencies” reminds us that the delivery of high quality care is not dependent simply on a reciprocated caring relationship but on a connection-based chain of obligations, referring to this obligation as “doulia”4. Those delivering care on the front line must be supported if the care-giving is not become a drain on mental (Stanley et al. 2007; Butterworth et al. 2010; Carers Scotland 2011) and physical reserves or a threat to well-being. The one-caring must in turn become cared-for, not in a bilateral relationship in which both parties have, at the same time, roles as one-caring

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4 Kittay uses the term “doulia” to refer to an ethical principle that recognises the provision of care to be a contribution to the overall good of society. As a result of which, there is a duty on society to ensure that those providing care are supported and looked after themselves. This is the implication of the phrase ‘nested dependencies’ which recognises this complex set of interweaving and mutually reinforcing needs of ones-caring and those cared-for.
and cared-for, but as part of a Russian doll-like nest of supportive acts, attitudes and behaviours which enables and supports caring in a more holistic manner.

In particular, the emotional involvement of those working in the care sector must be acknowledged (Morrison 2007) and although features such as effective professional supervision are part of providing that supportive environment (Theodosius 2008; Munro 2011) it is crucial to think about other aspects of the organisation, and its leadership, that might support or hinder the work of professionals trying to embody an ethics of care-based approach. Most crucially, as Wilson et al. note (2011) the managerialist spirit of many of the recent reforms undermine not only professional social work but also an approach that embodies and promotes caring relationships.

How might the ideas of Held, Tronto and Kittay be enacted within an organisation that has responsibility for the delivery of statutory care services? Table 1 summarises these principles as they have been presented in this paper.

**Table 2 - Summary of Requirements for Caring Organisations**

<table>
<thead>
<tr>
<th>Kittay’s (1999) principle</th>
<th>Held’s (2006) principles</th>
<th>Tronto’s (2013) organisational foci</th>
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<tr>
<td>Nested Dependencies</td>
<td>Attentiveness</td>
<td>Purpose</td>
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<tr>
<td>Interdependencies between ones-caring and cared-for</td>
<td>Trust</td>
<td>Power</td>
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<td></td>
<td>Responsiveness to Need</td>
<td>Particularity</td>
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<td>Narrative Nuance</td>
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<td>Fostering Caring Relations</td>
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The next section looks at how these principles might be operationalised and at some of the challenges that might make this task more difficult.

**IMPLEMENTATION OF ETHICS OF CARE**

The quest to reconceptualise the purpose and operation of statutory care services is presented in this paper as a challenge of sustainability. Without considering the reality of challenges faced by those attempting to deliver care services no proposal can be considered practical. These challenges have been outlined above: the economic challenge largely resulting from the global economic crisis; the demographic challenge that sees an ageing population likely to increase demand for care services; and a care challenge in which the organisation and delivery of care services currently fails to deliver the most effective care.

In responding to the first challenge it must be recognised that service providers are not in a position to increase the budget for the delivery of care services. Like all parts of the public sector, social care services face reduced (and reducing) budgets. This point is taken as political reality (at least in the UK) with no serious political party promising dramatic increases in budgets in the near future. It is not the purpose of this paper to consider the value of this standpoint – rather, it is an important aspect of the environment within which these discussions must occur.

A suitable response in terms of the second, demographic, challenge requires that any proposed solutions are scaleable not just to the current level of demand for services but beyond this as the population continues to age. Given the economic challenge, any proposal must look to engage beyond the statutory provider themselves. In this new environment, the role of the statutory authority can only be to address specific areas of responsibility (for example for the most vulnerable or needy) and to act as a facilitator for those who have low to moderate levels of need (Hollinrake and Thomas 2014).

The previous section outlined some of the details concerning responses to the third challenge, that of delivering the very best care possible. To do so, the ones-caring must be supported to attend to and respond to the specific needs of individuals. Rather than seeking to deliver standard care packages these must be individualised. At the
same time, this must be achieved in such a way as to ensure that no-one requiring care is disadvantaged or excluded because of inability to take an active role in this process.

Following a model used by Wong and Avery (2009) the authors of this paper suggest a theory of organisational change (Kotter 1995) might be supported with insight from the 23 principles of sustainable leadership (Avery and Bergsteiner 2011a, 2011b). The remainder of this section suggests how these models might be combined to support organisational change to improve the system of adult social care – for these purposes it is assumed that individual authorities can, and are willing to, act semi-autonomously within a quality assurance framework designed to protect individuals but limiting capacity to act.

**Establishing a sense of urgency**

The urgency required to drive action in this case must come from acknowledgement of the three separate, yet interacting, threats to current social care practice. Whilst separately each is acknowledged in some circles or by some of the relevant stakeholders they are not, in combination being acted upon. One of the most significant drivers of this will be the series of reports or reviews into the care system that portray it in very negative terms (Equality and Human Rights Commission 2011; Brindle 2012; Care Quality Commission 2012; Which 2012; Francis/Mid Staffordshire NHS Foundation Trust 2013).

**Creating the guiding coalition**

In order to successfully discuss the changes needed to achieve change, it is crucial that two features of the steering group are recognised. Firstly, the group must be able to deliver on changes that it sees as required – in other words, it must have sufficient power. Secondly, drawing from the discussions in the previous section, the group must be sufficiently widely-drawn so as to include a plurality of perspectives including those from formal (employed) carers and informal (family, friends or voluntary sector) carers and also those that make use of services themselves: cared-fors. Without this insight any move to improve the organisation risks failing to understand how the current system is experienced in its operation. In recognising and listening to a multiplicity of views, the organisation is able to enter into a debate concerning, and ultimately to agree on, its purpose (not just what it does, but how and why it does it too).

**Developing a change vision**

The third step in Kotter’s framework is perhaps the one that can be expected to cause the most problems. In this particular case, two questions must be answered: what changes are required in order to address the three challenges; and how can these be delivered?

In responding to this, the Principles of Sustainable Leadership may provide some analytical leverage, particularly in guiding thinking around areas of the operation that are most in need of improvement. Several of the 14 “Foundation Practices” identified by Avery and Bergsteiner (2011a) appear to be relevant. Certainly, delivering considered organisational change, valuing people, ethical behaviour and a stakeholder approach seem to be obvious foci for a shared vision of change.

Other practices should also be considered. The nature of the challenges facing the sector suggests that a long-term perspective is critical in ensuring that the system is able to deliver high-quality care now, and in the future. It is also important from the point of view of effective care services: a long-term, preventative, strategy is more effective in delivering cost-effective and socially-effective care than one that responds to urgent or emergency situations. Secondly, and drawing on Kittay’s work, it is critical that the vision for change considers how to develop people continuously. This is important not just from the point of view of ensuring staff stays up to date with current practice, but also in ensuring staff are supported in everyday care delivery.

Higher-level practices that the vision for change will particularly need to address include trust (following Held’s work) and delivering an enabling (and supporting) culture. These practices, without excluding others, will enable change towards the type of organisational approach outlined previously.

**Communicating the vision for buy-in**

Communication of the vision for change must ensure not only, as Kotter suggests, that everyone understands and accepts the vision, but rather that those within the organisation feel that they have a shared ownership of it and that those external stakeholders feel that the vision has been developed with their needs in mind. It must be
clear not only what is going to change and how this change will be enacted but why change has been deemed necessary and the justification for specific actions. Without this, the change program will become unfavourably top-down and distant from those that it is aimed at supporting. As well as outlining changes to the way that the organisation goes about delivering its services, the communication plan offers the chance to share its understanding of purpose.

**Empowering broad-based action**

Leaders and managers within the statutory provider must work to enable changes and to support staff that work to deliver them. In this particular case, this means working to understand where there is scope for change and for action and where legal or quality assurance-determined limits lie.

**Generating short-term wins**

The authors have previously highlighted some ways in which care providers might achieve short-term wins at little or no additional cost (Hollinrake and Thomas 2014). These might include looking at the ways in which information is provided and shared in order to identify how those in need of the information might make best use of it (instead of difficult to use websites or standard leaflets). Service providers might also look at ways in which they interact with other providers, particularly those in the voluntary sector and consider how the effects of organisational boundaries might be reduced.

Other changes, particularly those that look at how those with particular assessments of need might be supported or that look at making changes to the structure of the service (including divestment of service delivery) might take longer to achieve.

**Never letting up**

As changes are incorporated and a vision for change is agreed it is vital that all stakeholders can be kept appraised of progress and achievements. Good quality information is important: transparency in budgets; accurate insight into population changes and changes in patterns of need is part of that. Equally important though is to continue the engagement with stakeholders and to make sure that their voice continues to be heard, and is listened to.

As smaller changes start to take effect and can be seen to be making a difference, it is likely that support for larger or more costly changes can be won. Good formative and summative evaluations of changes to practice are therefore vital in maintaining momentum.

**Incorporating changes into the culture**

Kotter’s final stage in delivering change requires ensuring that attention to the three distinct challenges is not seen as a project that can be completed. Changes to the organisational approach to delivering care must be clearly articulated and discussed at all levels within the organisation and with external stakeholders. Two of the key performance drivers from the principles of sustainable leadership are key here: staff engagement and quality. If these drivers can be used at a strategic level to maintain momentum then the previous work on changing practices further down the pyramid can help to sustain change and facilitate continued improvement in services. The change will therefore be towards a culture that is enabling – in which creativity and responsibility are valued and supported where they contribute towards a shared vision for the future.

Kotter’s model for understanding organisational change is useful in outlining some of the specific challenges that would be faced in delivering change towards an approach based on the ethics of care. Specifically, the formulation of a suitable change coalition and the vision for change are vital in ensuring that this project might be successful. Both aspects require some further consideration.

**LIMITATIONS**

This paper looks at drivers for organisational change within the social care sector in England. Whilst many of these will be shared with similar systems in other jurisdictions some features will not be the same. However, the three distinct challenges that are identified will be common to most if not all in some way.
This paper also looks at organisational change from a distance and considers only headline features of how an ethics of care-based approach might be enacted. Further work to draw out details is required, specifically on the role that leaders or managers might play in this approach and whether the requirements of their role should change.

CONCLUSIONS

This paper has sought to understand some of the key challenges facing organisations with a responsibility for delivering statutory care services. In it, the authors have suggested three such challenges: one economic, one demographic and one care-based. Significant work has been done to consider, at an individual level, how care can be improved and supported. These conclusions are used in the final section of the paper to suggest how (drawing on two theoretical leadership models) an organisation might look to secure change and improve the care that it provides.

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THE RIPPLE EFFECT OF SUSTAINABILITY AWARDS: INSPIRING SUSTAINABILITY LEADERSHIP IN BUSINESS AND BEYOND

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ABSTRACT

The presentation of sustainability awards at prestigious events around the globe is increasing. As a strategy for inspiring sustainability leadership, such awards are considered vital. Yet, all too often, awards are viewed as an end-point that rewards a difficult journey involving incremental implementation of strategic sustainability initiatives.

However, as the awards phenomenon grows worldwide, the fact that it is under researched is surprising. Therefore in this paper we ask; just how is the prestige, privilege and practice of sustainability awards inspiring organisation and industry-wide transformation? Are these awards creating a desired ripple effect that is advancing the agenda of sustainability leadership in business and beyond?

With specificity, this paper offers a preliminary analysis into the efficacy of these awards as a means of advancing sustainability aspirations. In our discussion, we engage social network and mimetic isomorphism theory to contribute to the field of sustainability leadership. Whilst the inquiry is relatively new to the field, the reach and scale of investment in these awards makes it an interesting and important topic.

Keywords: sustainability leadership, sustainability awards, mimetic isomorphism, social networks,

INTRODUCTION

This paper charts progress on a new study underpinned by the following questions: How are sustainability awards inspiring organisation and industry wide change? and, Are these awards creating a ripple effect that is advancing the agenda and aspirations of sustainability leadership in business and beyond? The setting of our study is sustainability awards systems, processes and criteria. We argue this is interesting and important in the context of sustainability leadership, as these awards are designed to honour and award exemplars of sustainability practices and to generate on-going transformation in macro and micro contexts.

The meta-aim of our research is to contribute fresh insights to the field of sustainability leadership (Avery 2005; Boiral, Cayer and Baron 2008; Hind, Wilson and Lenssen 2009; Goleman 2010; Adams et al. 2011; Avery and Bergsteiner 2011; Robinson, Kleffner and Bertels 2011; Metclaf and Benn 2012). We note sustainability leadership aims to create change in the values and actions of people and organisations to align thinking and practice with sustainability aspirations (Avery and Bergsteiner 2010). In terms of positioning, we also draw on a holistic systems approach which views leaders and leadership occurring within interconnected living systems (Senge 2004; Ferdig 2007; Senge et al. 2008; Hardman 2009). Central to this approach is a focus on interdependencies, complex processes, cross fertilisation in dynamic networks, resilience and regenerative learning (Wolfgramm, Flynn-Coleman and Conroy 2013).

In this paper, we first detail the background and context of our investigation offering international examples which highlight the reach, scale and growth of sustainability awards. Second, we highlight the need for further research by offering a review of literature that shows the paucity of empirical research in the field. Finally, we offer a theoretical based discussion which examines links between sustainability leadership, social network and mimetic isomorphism theories, and limitations of the current study.
In doing so, this paper offers a preliminary analysis into the efficacy of these awards as a means of advancing sustainability aspirations.

BACKGROUND/CONTEXT

There are various sustainability award schemes around the globe. The awards systems and criteria are targeted to recognise and honour sustainability leadership initiatives for cities, regions, community organisations, supra nationals and businesses of all sizes and across all sectors. However, global awards are often aimed mainly at multinational corporations.

Our initial survey has elicited many examples. They include the International Green Awards (International Green Awards 2012) considered the most prestigious of international awards model. The organisation proactively seeks companies, organisations and individuals who engage in innovative and creative ways to tackle sustainability issues throughout the world. The awards have specific categories for organisations in different size groups as well as in different industries. For example, the list of categories includes the most sustainable large business, the most sustainable educational institution, and the most sustainable NGO (International Green Awards 2012). Perhaps the most interesting category with potential reach is that of the most sustainable government, a prize previously awarded to the City of Sydney and a Korean city council to name a few. This award scheme sees it as vital that all nominated organisations are able to present real processes and results which can be replicated in other firms, thus encouraging further sustainable business practices in the wider environment (International Green Awards 2012). In addition to International Green Awards, global awards systems which concentrate on sustainable business include the Guardian Sustainable Business Awards, World Business and Development Awards and World Environment Centre Gold Medal Award (International Chamber of Commerce 2012; The Guardian 2013; World Environment Centre 2013). Other examples include the Goldman Environmental Awards founded in 1990 and more recently the Blue Angel award, a German Sustainability Prize awarded to companies who promote ideas for a sustainable society. Like many awards, this initiative involves a cross section of private and public sector organisations and is ranked amongst the most significant German prizes in the area of sustainability.

Indeed, in New Zealand, there are several organisations providing sustainability recognition and awards. A national level example offered by The New Zealand Ministry for the Environment (2013) states that by recognising those businesses, organisations and individuals who do in fact strive to make a difference and create more sustainable communities, it is able to encourage the firms to improve their environmental performance further. In addition to supporting companies who are already engaging with sustainability initiatives, the award schemes work well to inspire other organisations to join and take on the challenge, thus spreading the sustainability message to an even wider audience (Ministry for the Environment 2013).

However, the largest and longest running of those models is the NZI National Sustainable Business Network Awards which is organised annually by the Sustainable Business Network (Sustainable Business Network, 2013). The Sustainable Business Network hosts a prestigious award ceremony where it recognises organisations and individuals who really do make a difference in their respective categories. These categories include innovation and impact awards for renewables, community involvement, efficiency in terms of moving toward new models of production, ownership and consumption, as well as finally giving back to the environment (Sustainable Business Network 2013). In addition to exploring innovation processes implemented by companies and the impact organisations and individuals are able to achieve, the network also gives a few additional awards. These go to a sustainability champion within an organisation, a business effectively and successfully communicating sustainability, and of course the golden award for the sustainable business of the year. However, it is notable that all the awards have an unlimited category meaning that company size or industry have no impact on which award a firm should aim for. In fact, small firms will be rivalling against large companies with better resources and much higher levels of scale and impact, while firms in traditionally dirty industries face organisations that are able to utilise cleaner resources. The network had specific categories for small businesses in the past in order to acknowledge their contributions to the sustainability agenda, but size focused categories have recently been abolished in favour of more general ones (Sustainable Business Network 2013). No reason for this change has been given and it seems as though the network is taking steps back, not forward, by not recognising the unique circumstances surrounding small firms attempting to implement sustainable practices.

Overall, significant investments are made into these prestigious events around the globe which are primarily designed to honour and recognise sustainability leadership amongst trailblazing organisations. These awards also offer important avenues for pursuing maximum reach of sustainability messages to whole industries not merely individual companies. Of note, different award organisers claim that, as well as improved brand reputation and goodwill, they offer candidates valuable feedback about their sustainability strategies. This is
usually undertaken by a panel of expert judges who offer advice to the firms’ sustainability strategies (International Chamber of Commerce 2012; International Green Awards 2012; The Guardian 2013; World Environment Center 2013). In addition, benefits often publicised include gaining access to online programs designed to aid companies to realise the biggest sustainability potential for their company, to illustrate the relationship between sustainability practices and firm financial performance and to offer sustainability mentoring and closer networking opportunities with other participating companies.

These examples detail the aspirations of these awards and highlight that the international uptake is significant which we argue merits further investigation.

**LITERATURE**

From a micro organisational perspective, Rake and Grayson (2009) emphasise that whether a company takes on a role as a sustainability champion is often dependent on the managerial attitudes towards sustainability. If top management strongly and regularly communicate sustainability issues and opportunities to staff, the firm will be likely to maintain its position as a sustainable company leading the industry by example (Rake and Grayson 2009). Yet, Wolf (2013) argues that top management alone cannot make a company an industry leader in sustainability as it needs the rest of the organisation to stand by the strategy. Furthermore, without the engagement and buy-in of employees, even the most enthusiastic sustainability officer will be unable to make the firm seem genuine in its quest for sustainability and, consequently, the firm will not gain the necessary respect to be a trailblazer (Wolf 2013). As a result, it becomes crucial that senior management is able to communicate with the employees and engage them in the values of environmental and social sustainability. If an organisation can achieve this and hence be awarded with a sustainability award, it will be in a position of being an industry leader and it can attempt to inspire further adoption of sustainability principles in the industry as a whole.

**Intermediaries**

As we broaden the sphere of engagement beyond the organisation, arguably, businesses of all sizes and industries benefit greatly from working closely with an intermediary who may offer support and information that enables firms to build their sustainability strategies.

In terms of sustainability awards, Klewitz et al. (2012) found that networking with awards organisers allows firms to meet others in the same situation, creating a platform for further collaboration and cooperation on local or regional level. Subsequently, companies who engage with sustainability practices and receive recognition and perhaps even awards for their environmental strategy have the power to inspire other similar organisations to do the same.

The intermediary may be any sustainability-focused organisation, ranging from governmental departments, business consultancy groups and not-for-profit organisations, all of which are often involved in sustainability award schemes. Key benefits from collaborating with an intermediary are access to sustainable business networks, ability to exchange relevant information about sustainability practices, and increased capacity to absorb valuable sustainability knowledge (Klewitz et al. 2012). This is not to say that companies should enter into contractual arrangements with third party organisations, but rather to form loose networks which have the ability to offer guidance and support in order for firms to improve their environmental performance and inspire each other to reach higher degrees of performance. Subsequently, companies who engage with sustainability practices and receive recognition and perhaps even awards for their environmental strategy have the power to inspire other similar organisations to do the same.

**Industry networks**

In terms of wider networks, organisations which are awarded sustainability awards automatically tend to become sustainability champions and as such are in a great position to support and inspire other firms who might be considering a higher commitment to responsible business. Draper, Hanson and Uren (2006) suggest that in order for sustainable business to become fully embraced by all firms, those in leadership positions hold a duty to improve the whole industry. In fact, after engaging in sustainable practices themselves, organisations should do their best to promote the sustainability message and help transform their respective business sectors to become more responsible (Draper, Hanson and Uren 2006). The final steps, according to Draper and colleagues, involve establishing progressive alliances within the industry to govern the market, and ultimately completely rewriting what it means to be a business. Furthermore, Hockerst and Wustenhagen (2010) believe that the interaction between traditional companies and more sustainable ones often means new entrants to the market
effectively drive a sector to improve its sustainability approach as a whole. Traditional organisations tend to need a rather powerful incentive in order to change their practices, and the emergence of fresh highly profitable firms with clear sustainability values is often exactly what the more mature companies require for them to start making some changes (Hockerst and Wustenhagen 2010).

**International networks**

Whilst there is a lack of empirical based research in sustainability awards that links explicitly to the sustainability leadership literature, the impact of sustainability networks has been investigated in slightly more depth. For example, there is a large number of different national and global business sustainability networks which support and encourage sustainable business practices and provide a network for companies to collaborate with (Wheeler et al. 2005; Collins et al. 2007; Sustainable Business Network 2013). Wheeler et al. (2005) reveal that sustainable business networks in developing countries incorporating communities, NGOs and the private sectors have been extremely effective in encouraging organisations to engage in sustainability. The networks, which are often informal, are able to provide guidance in regions where new businesses are tend to traditionally be left to fend for themselves (Wheeler et al., 2005).

Interestingly, whilst networks increase business involvement in sustainability in the developing nations, the same result is much more difficult to find in the developed world. Collins et al. (2007) based their research in New Zealand and explain that although firms who are members of the New Zealand Sustainable Business Council were more likely to implement sustainable business practices than those outside of the network, overall there was no significant difference between the total waste generated by these companies. In fact, company size was found to be a more substantial factor, as larger firms would engage in sustainable business more than their small counterparts, whether they were a business network member or not (Collins et al., 2007). Consequently, there seem to be no consensus on the effectiveness of sustainable business networks in creating or supporting sustainability leadership.

**Sustainability indexes**

Furthermore, even sustainability indexes seem to fail to encourage long-term sustainability leadership. In fact, while inclusion of a firm in a sustainability index generally increases the company’s share price, the removal of the company only lowers the share price temporarily. As a result, firms who have reached a position in the index can quite easily decrease their sustainability commitment without real long-term effects to company value, even if that leads to losing their place on the list. In addition, indexes such as the DJSI are riddled with bias with most of the information they base their decision on comes directly from the companies themselves (Windolph 2011). Firms will of course present the most favourable pieces of information, conveniently forgetting to include the areas they would be criticised for. According to Windolph (2011) and Searcy and Elkhawas (2012), some of the other major issues include lack of transparency, lack of standardisation and lack of independence. Indeed, there are no universal codes of conduct for these indexes and most do not make all data about their nominating and decision making process publicly available (Windolph 2011; Searcy and Elkhawas 2012). Moreover, sustainability indexes are sponsored by large organisations, which also happen to appear on the index lists, ensuring that the independence of the indexes is questionable at best. These findings indicate that currently there is a definite lack of systems and organisations in place which could realistically encourage and support further sustainability engagement and leadership among companies.

Overall, in reviewing literature, we were surprised at how little empirical studies have been undertaken in this field. This in turns makes salient a general lack of theoretical development or critical analysis that may contribute to sustainability leadership, a gap we aim to address as we progress this research.

**THEORETICAL DISCUSSION**

Our aim in this section is to examine links between social network theory and sustainability leadership. We argue this approach will elicit insight into the role of sustainability awards in advancing the aspirations of sustainability leadership. This is largely due to the fact that the context, breadth and depth in networks as exchange relationships is a critical feature of social network theory (Granovetter 1985). Likewise, power and influence that take into account macro and micro level issues are central concepts of network analysis (Thorelli 1986). As such, we argue it is a useful theory to garner insight into sustainability awards processes and outcomes.
In particular, as a branch of social network theory, cohesion research argues direct interaction with others intensifies socially constructed perceptions. The multiplicity and density of interactions within cohesive networks provide channels for both building and transmitting shared perceptions and cues. Organisations participating in a cohesive network such as offered through the sustainability awards systems interact intensively in learning and innovative activities thus assisting each other to select and develop shared practices (Dickson, BeShears and Gupta cited in House et al. 2004, p.78). The influence mechanisms tend to reflect cooperation both in business and non business networks which are important in the context of sustainability leadership as in practice SL encompasses a broad base of internal and external stakeholder groups.

The sustainability awards models tend to reflect this by recognising various groups and the value and outcomes of what is achieved when different groups work together to effect positive social transformation.

As such, we suggest sustainability awards stimulate the development of dynamic relationships that move fluidly beyond institutional boundaries. In the context of these awards, new networks emerge, both formal and informal, which actively reconfigure behaviour and structures beyond constraints imposed by, or alternatively facilitated though, formal compliance based boundaries. New modes of resource allocation and transactions occur as networks of individuals engage in reciprocal, preferential and mutually supportive action (Thorelli 1986; Goshal and Bartlett 1990; Powell 1990). Both self-interest in terms of companies’ brand, image and corporate social responsibility (CSR) are enhanced through the dynamics of exchange relationships as reciprocity is central to social networks. Complementarity and accommodation become new cornerstones of successful sustainability oriented production networks and strands of reputation, friendship, interdependence and altruism become integral parts of developing and establishing relationships. Open ended relational features enhance ability to transmit and learn new knowledge skills relevant to advancing sustainability aspirations.

As such, social network development that occurs through the sustainability awards system is a dynamic, emergent and transformational process in which emphasis is placed on actions both across and within organisations, a matrix of mutually beneficial relationships. In fact, the instrumental/economic and affective/social aspects of exchange relationships that occur through these prestigious events highlight both the stability and flexibility of collective activities. According to Larsen and Starr (1993), network relationships begin with the dynamics of acquisition, the formation of exchange relationships and processes of layering initial exchange relationships. The final stage, crystallisation, is measured by successful mobilisation of critical resources. The key to transformation is the extension of committed relationships beyond and inclusive of original drivers (Larsen and Starr 1993). As such, a firm or organisation may have begun an innovative process or developed a product that contributes significantly to a sustainability oriented cause without deliberately or consciously recognising this until the transformation has begun. However, this recognition is crucial in the mobilisation of resources and activities to align with sustainability aspirations which the awards are designed to do.

In addition, Dorado (2005) argues that factors defining institutional change include the actors (organisational and individual), agency (motivation and creativity that drives actors to break away from scripted patterns of behaviour), forms of agency (depending on temporal orientations and here he argues although three orientations such as past, present and future may co-exist, one will dominate), resource (cognitive, social and material) and resource mobilisation (accumulation, leverage, organisational fields and convening) (Dorado 2005). These factors warrant further analysis and investigation in the context of our inquiry.

**Mimetic isomorphism**

We turned for further insight to isomorphism theory which focuses on social transformation that takes place in the face of uncertainty (Di Maggio and Powell 1993; Dickenson, BeShears and Gupta cited in House et al. 2004). Mimetic isomorphism theory argues organisations usually mimic other organisations that are either in their field and perceived as more legitimate or successful or outside of their field but similar in complexity.

In terms of prestigious events that offer sustainability awards, this is quite salient. For example, firms that are presented with these awards are seen as exemplars of excellence. As such, other firms wish to emulate and achieve the prestige and status afforded by being bestowed with this public and formal recognition of sustainability leadership. However, one of the inherent problems highlighted by any propensity towards mimetic isomorphism is that it leads to an eventual competing away of any particular strategic advantage. This may be of particular concern for businesses seeking to find competitive niches in the sustainability arena (Wischnevsky and Damanpour 2006, p.6).
PRELIMINARY DISCUSSION

While the significance and the vital nature of innovation is always highlighted, it seems that the organisations offering sustainability awards and stressing creativity have problems with differentiation themselves. Moreover, different awards models seem unable to substantially distance themselves from rivalling award schemes. Of course, one might argue that award schemes supporting sustainable business should not be trying to rival each other to begin with as any raised awareness is beneficial to the cause and as such their levels of differentiation do not really matter. However, surely all of these organisations wish to attract the largest and most prominent companies to their respective award models in order to enjoy increased levels of credibility in the public eye and be able to call themselves the most prestigious awards. As a result, it is questionable whether most award schemes focus on large multinational companies because of their unlimited resources and scope of impact on environmental and sustainability issues, or because these corporations help them create improved brand loyalty and awareness.

In addition, international award models claim to be looking for essentially the same things; innovation, creativity and community orientation. Furthermore, the level of differentiation between the award providers is further decreased as they all emphasise the importance of companies stepping up and realise their power in order to make a significant difference to the environment they operate in and discovering new processes and practices to do so (International Chamber of Commerce 2012; International Green Awards 2012; The Guardian 2013; World Environment Center 2013).

Also, in addition to the lack of creativity and possibly varied motives, another potential issue with sustainability award schemes concerns the nominating process. All of the previously mentioned models work according to the principle of companies registering themselves if they are interested in taking part in the process and receiving an official nomination. This voluntary nature of the award systems would imply good intentions as only those companies who are truly committed to sustainable business initiatives would bother going through the process and registering themselves into the competition. Consequently however, while the idea behind this process is undoubtedly good, it means the awards already tend to block out a large portion of companies; those that do not care enough to register and those who lack the awareness to do so. The World Environment Centre (2013) is the only one of the major international schemes that allows people from outside a specific organisation to nominate it for the coveted Gold Medal Award and it is certainly in a minority with this practice. Of course, even a company which is merely after favourable publicity and yet another certificate to showcase on its products can register for awards, but likely most firms who enter do take sustainable business practices seriously and have integrated them into their everyday operations.

We also draw critical insight from Hockerst and Wustenhagen’s (2010) approach to increasing sustainability engagement which highlights issues of conflict instead of support. They argue companies fail to inspire each other, and rather waged war within the industry, potentially forgetting about the underlying values of sustainability and only focusing on the market share gained. Perhaps this alternative is more realistic too as, it could be questioned whether a company which, as a result of its own hard work and continual investments, wins a sustainability leadership award would wish to share its experience and the lessons it has learnt with other firms in the industry. Especially if the company is now enjoying the first-mover advantages created due to its commitment to sustainable innovation. Surely, a large number of these trailblazer organisations would prefer to continue being an industry leader without trying to help all the rivalling companies to catch up and, consequently, be likely to decrease the leader’s market share and profits. Of course, some might propose that firms who are truly committed to sustainability should not care about a slight decrease in their revenues if it means an increased level of responsible business practices in the entire industry. Yet, as the company’s shareholders are still likely to prioritise profits over improving the industry as a whole, trailblazer companies and their managers may find their hands are tied even if they were in fact interested in providing more support to others in the same field.

As a result, although sustainability awards seem promising as an avenue for inspiring change, more research is certainly needed in the area to investigate their efficacy in inspiring driving long term change and transformation.

LIMITATIONS

There are a number of limitations with this research. At present, our study lacks empirical evidence as it is in a sensitisation or formative phase. However, we are addressing this in the forthcoming months by embarking on a pilot study. Second, our propositions are as yet undeveloped largely because we are in a preliminary phase.
Finally, we have yet to create a substantive theoretical framework which is critical to ensuring our contribution to the field of sustainability leadership is clear and distinctive.

CONCLUSION

At the outset of this paper we asked; just how is the prestige, privilege and practice of sustainability awards inspiring industry-wide transformation? Are they creating a ripple effect that is advancing the agenda of sustainability leadership?

Our preliminary investigation suggests that these awards are inspiring industry wide change and in fact, due to the broad base of stakeholders, the awards generate a ripple effect that moves well beyond the boundaries of individuals, businesses and industries alike. By engaging social network and mimetic isomorphism theory, we have just begun to generate insights into how the awards are transforming thinking and practice that ultimately aligns with and honours the aspirations of sustainability leadership.

In conclusion, our paper has highlighted the paucity of scholarship in this under researched field and we argue the scale, reach and impact of these awards merits further investigation.

REFERENCES


END OF PROCEEDINGS