

# An Investigation into the Strategic Importance of GBFIs within the Listed Property Market

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33

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## Abstract

**Purpose** - The purpose of this paper is to investigate the level of importance that green building features and initiatives (GBFIs) have with regards to decision strategies in the South African listed property market.

**Design/methodology/approach** - The paper extrapolates qualitative data in the form of a multiple case study analysis as the overarching research methodology. Three South African real estate investment trusts (REITs) participated in the research. Pattern matching in conjunction with semi-structured interviews was implemented to determine whether patterns in the literature could be matched to the empirical data.

**Findings** - It was found that each REIT is at different stages with regards to the implementation of GBFIs, thus relating to the decision strategy adopted by each REIT. The strategies applied had different drivers; either to reduce costs or to gain a competitive advantage in local and international markets. REITs that had been implementing GBFIs for a longer period of time were found to have more advanced strategies and a higher degree of GBFI consideration in their decision strategies. The main conclusion revealed that there is a range with regards to the level of how reactive/proactive of each of the three participating REITs in terms of their decision strategies with specific reference to GBFIs. This is mainly due to the fact that green building is still in its infancy in the South African property market, thus resulting in delays regarding the full implementation of GBFIs in the South African listed property market.

**Research limitations/implications** - This paper is indicative and highlights a number of issues surrounding the decision strategies in the listed property market with regards to the level of implementation of GBFIs. There is scope for a more comprehensive investigation by increasing the number of cases, so as to reduce interpretation of the results as generalizable.

**Practical implications** - The findings indicate a broad spectrum in the level of integration of GBFIs in the decision strategies with the South African listed property market. The level of integration is dependant on when a particular REIT started implementing GBFIs. Those REITs that were proactive in implementing GBFIs into their portfolio are starting to accrue benefits that are resulting in a competitive advantage.

**Originality/value** - This is the first paper to investigate the role GBFIs play in the decision strategies in the South African listed property market.

**Keywords** Decision strategies, Green building features and initiatives (GBFIs), Real estate investment trusts (REITs)

## 1. Introduction

Green building features and initiatives (GBFIs) are assessed with regards to the design of new buildings and the retrofitting of existing buildings. GBFIs can be found in both certified green buildings and in conventional buildings (Nurick *et al.*, 2013). Many argue that future-proofing a building protects it from unexpected fluctuations of operating costs. This means these buildings are not susceptible to energy and water costs increases and depreciation (King, 2013; Sayce, 2009). A building may not necessarily be certified as a green building by the Green Building Council of South Africa (GBCSA), but can still contain GBFIs. An example of features would be the use of natural or energy efficient lights (Altman *et al.*, 2008), while an example of an initiative would be installing showers in a building to promote cycling or walking to work (Moody, 2009), thus reducing the carbon footprint of the building occupants.

The South African listed property market is displayed on the Johannesburg Stock Exchange (JSE) and has gone through restructuring in the past year. All previous Property Loan Stocks (PLS) and Property Unit Trusts (PUT) were converted to real estate investment trusts (REITs) as of 1 April 2013. The conversion to REITs has standardised the South African listed property market with the international market (Boshoff and Bredell, 2013).

Environmental consciousness and energy efficiency in buildings are transforming the property market (Bauer *et al.*, 2011) as property companies are starting to implement GBFIs within buildings. Generally, good environmental performers are large listed companies with strong financial performance (Nelson, 2008). However, some listed property companies do not necessarily commit in terms of implementing GBFIs, as there is a strong disconnection between implementation of environmental management and, environmental policy and communication (Bauer *et al.*, 2011). McGraw-Hill Construction (2013) state that in South Africa there have been few firms investing in green buildings, which is a result of a lack of information regarding the benefits of greening buildings. Between 2008 and 2011, real electricity prices have risen by 78% and, going forward, South Africa will continue to experience a rise in electricity prices (Deloitte, 2011). The rising electricity price has knock-on inflationary effects, which have an impact on companies in terms of operating costs (Amra, 2013). Of all markets in South Africa, the property market is one of the most reliant on electricity in terms of their operating costs, as results of a survey conducted by the South African Property Owners Association (SAPOA) indicating that electricity accounts for 23% of total operating costs in the retail sector, followed by 22.6% and 16.5% in the office and industrial sectors respectively (Deloitte, 2011).

Following the substantial increase in electricity prices, South Africa has seen a shift towards adapting green practices (Milne, 2012). The listed property market will see the implementation of GBFIs, provided that they can be implemented in a cost effective manner, as South African companies are pressured to reduce their impact on the environment (Hedley, 2014). A significant amount of energy can be conserved by incorporating GBFIs in buildings, such as good heating, ventilation and air conditioning (HVAC) design, use of natural lights or energy efficient lights, or the use of solar panels (Altman *et al.*, 2008). GBFIs can therefore decrease operating costs,

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which lead to the implementation of GBFIs as an economic motive (Eichholtz *et al.*, 2010a).



The shift towards environmental consciousness have been said to influence business actions of REITs (Banerjee, 2002). Decisions are made within REITs to either: do the basic and comply with environmental regulations, or go above and beyond to adopt their own environmental strategies (Ghobadian *et al.*, 1995). 'Green' corporate strategies have been formed to mitigate environmental degradation, as well as to sustain public acceptability and credibility (McCloskey and Maddock, 1994). A strategic decision will be taken by a company, if the decision will add value to the core objectives of the company (Lindholm and Leväinen, 2006) by means of potential cost savings from resource use efficiencies, reduced risk of legal non-compliances, and marketing benefits from improved environmental consciousness (Banerjee, 2002). As a result, in order to make the decision to incorporate GBFIs, the REIT will have to determine the strategic influence of GBFIs, and whether they add value to the core business objectives (Heerwagen, 2000). The extent, to which GBFIs are integrated in the business objectives, can vary over companies resulting in different levels of strategic considerations (Sharma and Vredenburg, 1998). Mansfield (2009) and Realpac (2010) states that social, economic and environmental principles of the Triple Bottom Line (TBL) have direct impact on the decision-making process in the property market. GBFIs should therefore be assessed based on social, economic and environmental principles in order to determine their role on the strategic decision-making process (Walsh, 2013).

REITs can diversify their property portfolios by holding different property types, namely; office, retail and industrial. Each type of property can result in different returns as they are driven by different economic factors (Eichholtz, 1995). The strategic decisions across the three property sectors can be examined within the South African listed property market, thus different strategies should be adopted by REITs investing in different sectors of green properties (Hin Ho *et al.*, 2013). Due to the fact that REITs are continuing to implement GBFIs, the research attempts to determine the influence GBFIs have over the strategic decision-making process, across the companies and property sectors by analysing three South African REITs.

## **2.1 Green Buildings**

Over the past three decades, there has been a paradigm shift from the obsolescence of scientific research of global warming to a growing environmental concern within the business sector (Nelson, 2008; McGrawHill, 2013; Slabber, 2013). Internationally, research around green building has increased indicating that there is a global issue (Zuo, 2014). Green building is no longer the view of only environmentalist, but is embraced by governments, construction and property industry stakeholders (Abair, 2008). The listed property market has limited the implementation of green building over the past three decades due to the concept of "the circle of blame" (Cox and Cadman, 2000; Brownhill and Yates, 2001; Pivo and McNamara, 2005; Ellison and Sayce, 2006; Cole, 2011; Lorch, 2011). The "circle of blame" is a concept used to describe the criticism between developers, designers and constructors over each others

lack of implementation of GBFIs (Lutzkendorf, 2012; Yang, 2012). Yang (2012) states that one of the problems towards this is the difficulty in defining mutually beneficial action plans. SAPOA and GBCSA (2012) also define this as a dispute in green building, in terms of the relationship between tenants and landlords. In South Africa, a number of stakeholders are becoming involved in green building practices, which includes building owners and managers as well as tenants, retailers and manufacturers, and government (Milne, 2012). McGraw-Hill Construction (2013) predicts a positive increase of green building in South Africa as GBFIs are becoming standard building procedures.

### **2.2 Real Estate Investment Trusts (REITs)**

REITs are fundamentally property funds (Chun, 2007) that were converted from previous Property Loan Stocks (PLS) and Property Unit Trusts (PUT) to become consistent with key international property markets (Thornton, 2012). The first REITs were formed in the United States to enable small investors to invest their wealth in a single tax transparent property vehicle that improved access to investments in larger income producing commercial properties (McCall, 2001). The formation of REITs creates an investment instrument that provides opportunities for investors to invest in real estate without having to physically own properties (Hin Ho *et al.*, 2013). Ciochetti *et al.* (2002) states that REITs have gained popularity among investors as REITs form a way to invest in property without problems relating to illiquidity and intense management. Furthermore, REITs offers investors easy access to a diversified portfolio of properties among the three property sectors, which include office, retail, and industrial properties (de Witt, 1996; Hin Ho *et al.*, 2013).

### **2.3 Green Building Features and Initiatives (GBFIs)**

The motivation behind the choice of companies and industry participants to implement GBFIs is the ability to outperform in the market due to improved company Corporate Social Responsibility (CSR) (Eichholtz *et al.*, 2010b; Newell, 2009), but also because of incentives put in place by the government (Doak, 2009; Milne, 2012). The development of rating systems incentivises the market to adopt GBFIs due to competitor advantage, building efficiency and improved CSR (Kok *et al.*, 2010; USGBC, 2014). The implementation of green rating tools strengthens the argument for the need to be green (WGBC, 2013).

CSR describes a company's choices about its inputs, internal processes, and publicity (RICS, 2009; Eichholtz *et al.*, 2010b). The inputs, internal processes, and publicity can all be affected by the implementation of GBFIs. GBFIs can affect the choice of inputs, as the raw materials used by a company will follow green features. In terms of its internal processes, GBFIs have positive effects on the satisfaction of the inhabitants of a building. Greening of buildings are said to improve the reputation of a company (Eichholtz *et al.*, 2010b). The inclusion of GBFIs therefore improves the CSR of a company, which works towards a motivation for a company to go green (Babiak and Trendafi, 2011). An improved reputation leads to less intrusion from activists and government regulations while improving a company's profitability through lower operating costs and higher worker productivity (Eichholtz *et al.*, 2010b).

It is recognised that many new buildings can easily achieve a higher level of green certification as they are designed and built with this aim in mind. There is, however, little evidence and help with regards to the greening of existing buildings, which account for most of the buildings in the market (Miller and Buys, 2008). There is minimal financial cost to the implementation of GBFIs (Kozłowski, 2003), differing from the views of the expected premium of industry experts (WGBC, 2013). WGBC (2013) shows that it is expected that the premium for an 'as built' green building is between 1% and 29% whereas, in actual terms, the premium ranges between -0.4% and 12.5%. Kats *et al.* (2003) affirms that there is a 2% premium on initial costs but a 20% life cycle savings on total construction costs. The initial costs are offset by the long-term life cycle costs (WGBC, 2013). The cost premium of retrofitting a building is said to be between 0.3% and 40% (WGBC, 2013). The retrofitting of an existing building is often seen as a difficult procedure in industry to implement. Miller and Buys (2008) affirms this notion by commenting that retrofitting is harder to incorporate as it requires cooperation and participation of the stakeholders and interrupts building inhabitants during refurbishment. There is also less emphasis on the retrofitting of existing buildings compared to 'as built' green buildings, creating doubt on the effectiveness and costs of retrofitting (Devenish, 2014). It must be noted, that the majority of buildings are already in existence, and therefore retrofitting is an important factor regarding the implementation of GBFIs. Retrofitting existing buildings can be done through the adoption of GBFIs to ensure energy savings, less rigorous maintenance requirements, and the ease of future refurbishment and change (WGBC, 2013).

The benefits of GBFIs can be described through the different stages of the building's life cycle. The benefits are the positive effects of employing GBFIs in buildings felt by a business, these are the effects on: design and construction costs, asset value, operating costs, workplace productivity and health, and risk mitigation (WGBC, 2013). In South Africa it has been researched that the most important factors to the decision makers to go green is improved CSR, lower operating costs and the environmental regulations (McGraw-Hill, 2013). Part of Corporate Real Estates (CRE) portfolio strategy performances' main objectives is to maximise utility and productivity, minimise costs and mitigate risk (Owen, 2014). TBL incorporates the social, economic and environmental benefits of a company as the recognition for the need for equality between environmental protection, where promoting social justice and equity, and the pursuit of economic growth (RICS, 2009). All three components of TBL can be addressed through the implementation of GBFIs as a result of company policies revolving around CSR and Socially Responsible Investing (SRI), which in turn can result in influencing decision strategies at a company level (Lorenz and Lutzkendorf, 2008; Newell, 2009; RICS, 2009).

## 2.4 Decision Strategies

Banerjee (2002) state that corporate environmentalism is the level of impact on companies' decision-making processes with regards to the integration of environmental issues. Decision strategies may include alliances with other business firms, environmental agencies, or governmental agencies, which are being formed as a strategic move towards corporate environmentalism (Banerjee, 2002). Interest in

environmental issues has caused corporate environmentalism to be one of the key management concerns since the 1990s. Environmentalism has caused competitiveness between companies and involves the mitigation of environmental degradation as well as public acceptability and credibility (McCloskey and Maddock, 1994). To accomplish this, a 'green' corporate strategy is necessary and as a result, more companies are starting to consider policies for implementing environmental strategies (McCloskey and Maddock, 1994; Judge and Douglas, 1998; James *et al.*, 1999). In order to assess the adoption of environmental business strategies, the drivers between proactive and reactive companies needs to be assessed (Starik and Marcus, 2000). Companies focused on profit making are shown to be less involved in environmental change than that of proactive companies (Sharma and Vredenburg, 1998). The degree in which environmental strategies of a company are applied is dependent on the awareness over the threats and opportunities, and the perceptions managers have over these opportunities (Sharma, 2000). Ghobadian *et al.* (1995) believes that these threats and opportunities are key factors that will influence the environmental decision-making process. Threats, pertaining to the legal and social pressures of companies, and the opportunities relating to business advantages, need to be considered to achieve competitive advantage. Companies therefore need to balance threats and opportunities by balancing responsibility and bottom line considerations (Ghobadian *et al.*, 1995). Andrews (1998) argues that the ideal proactive firm adheres to the regulatory trends and that it incorporates environmental considerations into its strategic plan. A company that chooses to be environmentally proactive is a strategic choice of the managers, whereas alternatively, a company may choose to rely on society and the regulations to revise its operations to act as a reactionary firm (Andrews, 1998). Andrews (1998) found that proactive firms make a utilitarian decision to be proactive as they view it to maximise profits in the long run. Other benefits found by proactive firms in driving their decisions to be proactive are innovation systems, improved corporate reputation, and improved relationships with stakeholders (Sharma and Vredenburg, 1998; Buysse and Verbeke, 2003).

### **2.5 Companies**

Decision makers in REITs are not only focused on their shareholders, but also on the internal operations of the company (Heerwagen, 2000). This suggests that there are different focal points of a company which can be to either focus on reducing operating costs and thus looking internally, or focusing externally on increasing demand (Nguyen, 2014). Nourse and Roulac (1993) suggest that strategies applied within a company may vary. The focus may be put on reducing costs in the long-run, on the choice of location and amenities to promote human resources, or on facilitating the managerial process and knowledge of work (Nourse and Roulac, 1993). Nguyen (2014) comments that these property strategies can add value to the general business strategies. The operating decisions of a company need to be consistent with the property strategies in order for the operations to be efficient (Nourse and Roulac, 1993; Gibler and Lindholm, 2011).

Hin Ho *et al.* (2013) believes that the implementation of GBFIs in REITs will result in a competitive advantage over REITs with conventional building types (McGraw-Hill Construction, 2013). CSR has become a strong part of REIT actions (de Sousa Filho *et*

*et al.*, 2010). This is congruent with Husted and Allen (2000) who state that there is a link between strategic CSR and competitive advantage. Applying the definitions, in order to create sustained competitive advantage, good CSR performance should be valuable, rare and inimitable (de Sousa Filho *et al.*, 2010; Cajias *et al.* 2011). CSR is viewed to be a group of internal intangible resources such as good corporate values, business ethics and relationships with stakeholders (Jones and Bartlett, 2009). REITs that have implemented GBFIs will be deemed to have good corporate values, business ethics and relationships with shareholders that will result in intangible benefits that are valuable, rare and inimitable (Zhiliang and Yongheng, 2013). Consequently, sustainable competitive advantage will be created from CSR activities, which will lead to financial benefits that will help in achieving the maximisation of shareholders wealth (Mishra and Suar, 2010; Derwall *et al.*, 2011). CSR activities therefore result in not only social and environmental considerations, but the transformation of social and environmental activities leads towards the achievement of business goals, which is considered as a strategic tool to promote the economic objective of a company (Mishra and Suar, 2010). Van der Chijs (2008) states that economic performance is measured through accounting indicators such as return on asset, return on equity and earnings per share. These indicators measure the internal efficiency and give a reflection of a company's internal decision-making capabilities and the managerial performance (van der Chijs, 2008). The combined effect of the economic, social and environmental principles of TBL and the effect of CSR on wealth, value and stakeholders has impacted directly on the property decision-making process (Mansfield, 2009).

## **2.6 Property Sectors**

Nelson (2007) observes that the property industry is behind in implementing GBFIs into building operations and strategies, however, Nelson (2007) notes that some property sectors will implement GBFIs sooner than other sectors. The office sector is said to be implementing GBFIs more quickly than other sectors, the retail sector follows closely due to greater tenant demand, while the industrial sector is lacking in the integration of GBFIs (Nelson, 2007). The commercial property sector has shown to consider GBFIs as an indicator of the choice of location, territorial attractiveness, space planning and the well-being and performance of employees, which is said to form part of the corporate decision strategies (Nappi-Choulet and Décamps, 2011). Hin Ho *et al.* (2013) conducted research to determine whether the effect of GBFIs on REIT performance is consistent across different property sectors namely, office and retail. The findings showed that the effects of GBFIs varied across the office and retail sectors, which suggest that different strategies should be adopted by REITs investing in different property sectors, which implement GBFIs. The different strategies can enhance the performance of REITs and thus create value for the company (Nappi-Choulet and Décamps, 2011; Hin Ho *et al.*, 2013).

## **3. Methodology**

A qualitative study comprising of three South African REITs resulted in multiple case study analysis as the over-arching research methodology. Semi-structured interviews were conducted with a number of senior managers within each of the companies. A

coding structure was developed in order to ensure respondent and case anonymity. Figure 3.1 gives a breakdown of the coding structure.

Case Study 1 (CS1)	Non-Executive Director (R1-1) Financial Manager (R1-2)
Case Study 2 (CS2)	Development Manager (R2-1) Regional Development Manager (R2-2) Regional Operations Manager (R2-3) CEO of Subsidiary Company (R2-4)
Case Study 3 (CS3)	Development Manager (R3-1) Facilities Manager (R3-2) Portfolio Manager (R3-3)

Figure 3.1: Coding structure of cases and respondents

Both purposive and convenience sampling techniques were applied in selecting the chosen cases. These two sampling techniques ensured that the selected cases were aligned with the requirements of the researchers.

Pattern-matching was deemed to be the optimum method of analysis. Yin (1994) states that pattern-matching is one of the most appropriate strategies for case study analysis. Pattern-matching compares an empirically based pattern with a predicted one. Several pieces of information from the same case are therefore compared with some theoretical proposition. If the patterns correspond, the results can help a case study support its internal validity (Yin, 1994). Pattern-matching involves linking the empirical data to the literature, specifically focusing on the key patterns that emerge from the literature (Trochim, 1989). The following four patterns emerged from the literature: (1) proactive vs. reactive, (2) decision strategies, (3) property sectors, and (4) triple bottom line (TBL). Each case was analysed separately in relation to the aforementioned patterns. The researchers were also weary of any new patterns that may emerge. A cross-case analysis was conducted to compare the cases with regards to the prominent patterns.

## **4. Findings**

### **4.1 Case Study 1 (CS1)**

CS1 has been listed on the JSE since March 2006. CS1 predominately invests in the office sector, with almost half of its portfolio consisting of office space.

Andrews (1998) suggests that a proactive firm strategically places importance over its environmental consideration, while a reactive firm answers to the demand and the regulatory environment in which it is situated. This reactive approach to decision-making is seen throughout CS1 as emphasis was placed on remaining competitive in the market. CS1's main driver for implementing GBFIs was based on operating cost savings, with no reference made to environmental impact. In the years 2004-2014 South African electricity prices increased by 238%, thus resulting in CS1 implementing GBFIs (R1-1). Both R1-1 and R1-2 state that GBFIs have lead to a reduction in operating costs, which has resulted in CS1 becoming more competitive in the market. It can therefore be assumed that CS1's initial decision to go 'green' was that of a reactive company's decision. As stated in the literature by Andrews (1998)

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and Sharma and Vredenburg (1998) reactive company's decision to go green is entirely dependent on reduction of risk and improved public perceptions. This can be seen in CS1 through implementing GBFIs only for the sake of reducing the risk of paying higher operating costs, and improving public perception through remaining competitive within the market.

CS1 is aware of the long-term benefits that GBFIs can provide to their portfolio. These benefits take the form of an increase in: asset value, flexibility, innovation, productivity, employee satisfaction, and the promotion of marketing and sales. All of these benefits are centred around a reduction in operating costs, which have a knock on effect on the tenants.

Both respondents, R1-1 and R1-2, suggest that there is not much difference in the decision strategies over the sectors, but admit that each sector is fundamentally different in its operation. Due to CS1 predominantly focusing on cost saving regarding GBFI implementation, the same decision strategy that is applied to its office buildings (majority portion) is applied throughout the entire portfolio.

The only TBL component that is directly addressed by CS1 is that of economic benefit, due to CS1 reactionary approach regarding the decision to implement GBFIs. The remaining two TBL components (environmental and social) are indirectly addressed by CS1 as a result of GBFIs having a positive impact on both the environment and society.

From the interviews with CS1, an emergent pattern was established that was not a pattern evident in the literature. The literature did not define a clear link between the challenges and the implementation of GBFIs, possibly because the literature was based from an international context, which suggests that this pattern is subject to a South African context. R1-1 indicated that in the short-run CS1 has faced challenges with regards to implementing green technology. These challenges included the initial capital expenditure, as well as the skills and training needed to implement such technology. Ultimately, the issues arise out of the infancy of the 'green' movement in South Africa. CS1's portfolio comprises of existing buildings, however the majority of the research conducted on GBFIs in South Africa is on new buildings, therefore implementing GBFIs into existing buildings was viewed as challenge as there is a general lack of local knowledge and experience. These challenges experienced by CS1 are most likely the core reason resulting in their reactionary approach.

#### **4.2 Case Study 2 (CS2)**

CS2 has been listed on the JSE since February 2000, and became a REIT in September 2013. CS2 owns an equal amount of office and retail property, which comprises 80% of its portfolio. CS2 is aware of their environmental responsibility, as they are a member of the GBCSA. In order to assess their environmental performance, CS2 implements various GBFIs which include: implementing globally accepted environmental management systems, conducting detailed audits and assessments of their buildings in order to minimise their environmental footprint.

CS2 is moderately proactive regarding the implementation of GBFIs as part of their decision strategies. The underlying drivers include sustainable long-term profits, innovation systems, improved corporate reputation and relationship with stakeholders, which is consistent with Sharma and Vredenburg (1998) and, Buysse

and Verbeke (2003). CS2 exhibited a focus on risk mitigation and to remain competitive with other green companies, which is indicative of a reactive firm according to Sharma and Vredenburg (1998).

All three respondents from CS2 indicated that the main motivating factor regarding GBFI implementation was financial, specifically focusing on the reduction of electricity costs. R2-1 and R2-4 also highlights that the benefit of reducing costs is passed directly onto the tenants, emphasising again that tenants are important in their decision-making. CS2 therefore attempts to reduce operating costs in order to retain tenant satisfaction.

According to R2-1 GBFIs are expected to contribute to the decrease in capitalisation rates, which is the markets acceptance that there will be a reduction in the risk factor of a building containing GBFIs. R2-1's opinion is based on the positive impact of GBFIs on commercial property values in the developed economies. R2-1 believes that this will permeate into the South African market, therefore placing the implementation of GBFIs as a long-term strategy for CS2. CS2 further acknowledges that GBFIs are mutually beneficial for all parties, with focus being placed on the durability of their buildings, thus illustrating CS2's flexibility in terms of their decision strategies regarding the implementation of GBFIs. CS2 is attempting to show innovative signs by contributing to the development of new a rating tool in conjunction with the GBCSA. CS2 is not driven by the marketing and sales attributes of GBFIs but is rather focused on the importance of durability of their buildings. GBFIs are implemented to enhance tenant demand resulting in tenant retention and acquisition, which is an indicator of employee satisfaction. CS2 indicated that the implementation of GBFIs improves indoor environmental quality (IEQ), which has a positive impact on occupant productivity.

CS2 indicated that there was not much differentiation between decision strategies across the different property sectors. R2-4 stated that TBL principles could only be addressed by firstly examining the sustainability of a building in terms of the GBFIs. This is due to the fact that CS2 is a REIT and therefore holds shareholders interests as a top priority. CS2 acknowledges the social aspect of TBL by identifying that the implementation of GBFIs is the right thing to do, however according to R2-1 there are social issue that need to addressed in South Africa that are more important than GBFIs. CS2 was not directly focused on the environment, but rather on the long-term sustainability of the company.

CS2 experienced similar challenges regarding the infancy of green building in South Africa, and the lack green building data, knowledge and experience in the market.

#### **4.3 Case Study 3 (CS3)**

CS3 has been listed on the JSE since October 1987, and became a REIT in July 2013. CS3 was included in the JSE's Social Responsibility Index (SRI) in December 2009 and is the largest property investment holding company listed on the JSE. CS3 has a fairly balanced portfolio consisting of office, retail and industrial properties. CS3 is greatly aware of their environmental consciousness, as they are a founding platinum member of the GBCSA. CS3 was therefore the one of the first REITs to implement GBFIs. CS3 is the African leader in Carbon Disclosure Project, which rates companies based on their disclosure of emissions and activities and their response to climate change. To be

included in the JSE's SRI Index, a company must show positive social, economic and environmental sustainability practices in accordance with good corporate governance. As a result, CS3 considers the importance of TBL principles in their strategic thinking. CS3 is clearly a proactive firm in terms of their environmental consideration, which is consistent with Andrews (1998). This drives their decision strategies towards long-term considerations, rather than the immediate benefit of reducing costs.

R3-3 acknowledges that they sign long term leases with their tenants, and therefore it is of the benefit to themselves and to the tenants to keep operating costs at a minimum in the long run. R3-3 understands that in South Africa, operating costs need to be reduced as a result of above inflationary increases in electricity prices. CS3 indicated that greening their buildings is a way to mitigate the increase in energy costs as a long-term decision strategy. R3-1 and R3-2 both shared the opinion that there is a need to mitigate future costs that are expected to arise, such as carbon taxes. There is currently no drive to reduce the impact, however it is considered a long-term decision strategy.

CS3 recognises that reducing costs for tenants through the implementation of GBFIs as a short-term strategy, as the majority of their tenants (specifically in the retail sector) sign short leases.

Due to CS3's proactive stance regarding the implementation of GBFIs, there is a shared opinion amongst all of the respondents that GBFIs will increase asset value, and are mutually beneficial for all parties. CS3 can be viewed as one of the more innovative South African REITs as they are a founding platinum member of the GBCSA, and are assisting with the development of a new rating tool. CS3 views themselves not only as a leading local competitor but also with the ability to compete in international market, thus resulting in a marketing and sales policy that is consistent with these objectives.

CS3 implement GBFIs to meet tenant demand, which is underpinned by employee satisfaction. This is linked to improved IEQ as a result of GBFIs, which positively contributes to an improvement in occupant productivity.

CS3 is driven by the need to be a good corporate citizen, which is consistent with Babiak and Trendafi (2011) who suggest that a company should consider their social responsibility in business operation. CS3 is driven to consider the business case in all decision-making, thus their strategies are fundamentally based on the economic aspect of the TBL. The decisions of CS3 are all based on the going concern of the company, and thus the decision strategies are considered on a long-term basis. CS3 considers environmental consciousness as part of their mission statement. The findings clearly indicate that CS3 address all three components of TBL.

CS3 experienced more advanced challenges due to them being more proactive in their GBFI decision strategies. CS3 do not face challenges regarding the implementation of GBFIs, but rather cite the management and metering of GBFIs in their portfolio as an obstacle that needs to be addressed.

#### **4.4 Cross-Case Analysis**

The findings indicated that there is a wide range of reactive/proactive decision strategies across the three cases in terms of GBFI implementation. CS1 is primarily reactive, CS2 is moderately proactive, while CS3 is primarily proactive. The

underlying drivers regarding decision strategies also varied across the cases. CS1's strategy is to reduce costs, and by doing so remain competitive to retain tenants. CS2 is driven to reduce costs, however, the strategy is considered over the long term through in-depth analyses in order to ensure benefit to tenants and financial feasibility. CS3's primary strategy to implement GBFIs is to gain a competitive advantage in the South African listed property market, and to remain competitive internationally. Both CS1 and CS2 indicate that there was no difference between the influence of GBFIs on strategies across property sectors. CS3 indicated that they were attempting to formulate sector specific decision strategies regarding the implementation of GBFIs. Both CS1 and CS2 primary focus in terms of TBL principles is economic factors. CS3 indicated that they are attempting to incorporate all three TBL principles in their decision strategies. Both CS1 and CS2 cite the infancy of the green building movement in South Africa as a major challenge regarding the implementation of GBFIs. CS3 does not experience any challenges with regards to implementation but rather cite the management of GBFIs as a barrier that needs to be addressed.

### 5. Conclusion

The research identified that decision strategies of REITs regarding the implementation of GBFIs varies according to a number of factors. These factors were identified in international literature and subsequently emerged from the empirical data. The underlying reason resulting in the level of engagement of GBFIs across the cases is a result of when each of the cases actively adopted GBFIs in a proactive manner. The REIT (CS3) that indicated to be the most proactive was one of the first REITs in South Africa to embrace the green building movement. Conversely the other two REITs that participated in the research have only recently started to embrace the role GBFIs can play in their portfolios.

Therefore the length of time of GBFI integration is linked with the effect of GBFI consideration in the decision strategy. The longer GBFIs have been integrated, results in the formulation of more in-depth strategies, which not only target cost reduction but also simultaneously address all three TBL components.

### References

- Abair, J. (2008), Green buildings: What it means to be "green" and the evolution of green building laws. *The Urban Lawyer*. 40(3): 623-632.
- Altman, M., Davis, R., Mather, A., Fleming, D. and Harris, H. (2008), The Impact of Electricity Price Increases on the South African Economy. *Human Sciences Research Council*.
- Amra, R. (2013), Back to the drawing board? A critical evaluation of South Africa's electricity tariff-setting methodology. Economic Society of South Africa Bloemfontein, South Africa, 25-27 September 2013.
- Andrews, C. (1998), Environmental business strategy: Corporate leaders' perceptions. *Society and Natural Resources: An International Journal*. 11(5): 531-540.
- Babiak, K. and Trendafi, S. (2011), CSR and Environmental Responsibility: Motives and Pressures to Adopt Green Management Practices. *Corporate Social Responsibility and Environmental Management*. 18: 11-24.
- Banerjee, S. (2002), Corporate environmentalism: The construct and its measurement. *Journal of Business Research*. 55: 177-191.

- Bauer, R., Eichholtz, P., Kok, N., Quigley, J. (2011), How Green is your Property Portfolio? *International Journal of Pension Management*. 4(1): 34-43.
- Boshoff, D.G.B. and Bredell, E. (2013), Introduction of REITs in South Africa - Transformation of the Listed Property Sector. Paper presented at the 2nd Virtual International Conference on Advanced Research in Scientific Fields.
- Brownhill, D. and Yates, A. (2001), *Environmental Benchmarking for Property Portfolio Managers*. Watford: BRE Centre for Sustainable Construction.
- Cajias, M., Fuerst, F., McAllister, P. and Nanda, A. (2014), Do responsible real estate companies outperform their peers? *International Journal of Strategic Property Management*. 18(1): 11-27.
- Chun, J. (2007), Are REITs Built to be Green? An Environmental Analysis of Real Estate Investment Trust Law in Singapore. *Singapore Academy of Law Working Paper*. 19(1).
- Ciochetti, B.A., Craft, T.M. and Shilling, J.D. (2002), Institutional investors' preferences for REIT stocks. *Real Estate Economics*. 30(4): 567-593.
- Cole, R.J. (2011), Keynote on 40:40 looking back and looking forward: Environmental issues past, present and future: changing priorities and responsibilities for building design. *Proceedings of the 2011 World Conference on Sustainable Building*. Helsinki: Finnish Association of Civil Engineers and VTT Research Centre of Finland. 6-9.
- Cox, J. and Cadman, D. (2000), *Commercial Property Markets in a Sustainable Economy*. UCL, London: School of Public Policy and Jackson Environment Institute.
- de Sousa Filho, J.E., Wanderley, L.S., Gómez, C.P., and Farache, F. (2010), Strategic Corporate Social Responsibility Management for Competitive Advantage. *Brazilian Administration Review*. 7(3): 294-309.
- de Witt, D. (1996), Real Estate Portfolio Management Practices of Pension Funds and Insurance Companies in the Netherlands: a Survey. *The Journal of Real Estate Research*. 11(2): 131-148.
- Deloitte. (2011), *The Economic Impact of Electricity Price Increases on Various Sectors of the South African Economy*. Available: [http://www.eskom.co.za/CustomerCare/MYPD3/Documents/Economic\\_Impact\\_of\\_Electricity\\_Price\\_Increases\\_Document1.pdf](http://www.eskom.co.za/CustomerCare/MYPD3/Documents/Economic_Impact_of_Electricity_Price_Increases_Document1.pdf). [28 March 2014]
- Derwall, J., Koedijk, K., and Horst, J.T. (2011), A Tale of Values-Driven and Profit-Seeking Social Investors. *Working Paper*.
- Devenish, C. (2014), Greening of Existing Buildings. (Unpublished). Presentation on 15 April 2014 Cape Town, South Africa.
- Doak, J. (2009), An inspector calls: Looking at retail development through a sustainability lens. *Journal of Retail and Leisure Property*. 8(4): 299-309.
- Eichholtz, P., Hoesli, M., MacGregor, B. and Nanthakumaran, N. (1995), Real Estate Portfolio Diversification by Property Types and Region. *Journal of Property Finance*. 6(3): 33-59.
- Eichholtz, P., Kok, N. and Quigley, J.M. (2010a), Program on Housing and Urban Policy: The Economics of Green Building. *Working Paper Series*. 10(3).
- Eichholtz, P., Kok, N. and Quigley, J. M. (2010b), Doing Well by Doing Good? Green Office Buildings. *The American Economic Review*. 100(5): 2492-2509.
- Ellison, L. and Sayce, S. (2006), Assessing sustainability in the existing commercial property stock. *Property Management*. 25(3): 287-304.
- GBCSA (2012), *The 'Rands and Sense of Green Buildings' is launched*. Available: [https://www.gbcsa.org.za/news\\_post/the-rands-and-sense-of-green-buildings-is-launched/](https://www.gbcsa.org.za/news_post/the-rands-and-sense-of-green-buildings-is-launched/) [15 June 2014].
- Ghobadian, A., Viney, H., and Liu, J. (1995), The influence of environmental issues in strategic analysis and choice: a review of environmental strategy among top UK corporations. *Management Decision*. 33(10): 46-58.
- Gibler, K. and Lindholm, A. (2011), A test of corporate real estate strategies and operating decisions in support of core business strategies. *Journal of Property Research*. 29(1): 25-48.

- Hedley, N. (2014), *More Green Buildings in SA*. Available: <http://alive2green.com/greenbuilding/more-green-building-in-south-africa> [2014, 29 March].
- Heerwagen, J. (2000), Green Buildings, Organizational Success, and Occupant Productivity. *Building Research and Information*. 28(5): 353-367.
- Hin Ho, K., Rengaraian, S. and Han Lum, Y. (2013), Green Buildings and Real Estate Investment Trust's (REIT) Performance. *Journal of Property Investment and Finance*. 31(6): 545-574.
- Husted, B. W., and Allen, D. B. (2000), Is it ethical to use ethics as strategy? *Journal of Business Ethics*. 27(1-2): 21-31.
- James, P., Ghobadian, A., Viney, H., and Liu, J. (1999), Addressing the divergence between environmental strategy formulation and implementation. *Management Decision*. 37(4): 338-347.
- Jones, K. and Bartlett, J. (2009), The strategic value of corporate social responsibility: A relationship management framework for public relations practice. *Prism*. 6(1): 1-16.
- Judge, W. and Douglas, T. (1998), Performance Implications of Incorporating Natural Environmental Issues into the Strategic Planning Process: An Empirical Assessment. *Journal of Management Studies*. 35(2): 241-262.
- Kats, G., Alevantis, L., Berman, A., Mills, E. and Perlman, J. (2003), The costs and financial benefits of green buildings- a report to California's Sustainable Building Task Force.
- King, C. (2013), Going the extra green mile. *South African Property Review*. [Online] no. November, pp.22-26.
- Kok, N., McGraw, M. and Quigley, J. (2010), The Diffusion of Energy Efficiency in Building. *The American Economic Review*. 101(3): 77-82.
- Kozlowski, D. 2003. Green gains: where sustainable design stands now. *Building Operating Management*. 50(7): 26-32.
- Lindholm, A. and Leväinen, K. (2006), A Framework for Identifying and Measuring Value Added by Corporate Real Estate. *Journal of Corporate Real Estate*. 8(1): 38-46.
- Lorch, R. (2011), Keynote on 40:40 looking back and looking forward: The relevance of time. *Proceedings of the 2011 World Conference on Sustainable Building*. Helsinki: Finnish Association of Civil Engineers and VTT Research Centre of Finland. 2-5.
- Lorenz, D. and Lutzkendorf, T. (2008), Sustainability in property valuation: theory and practice. *Journal of Property Investment and Finance*. 26(6): 482-521.
- Lutzkendorf, T. (2012), How to BREAK the Vicious Circle of blame? The contribution of different stakeholders to a more sustainable built environment. *Abstract Book of Sustainable Building Conference*. Brazil: 50.
- Mansfield, J.R. (2009), The Valuation of Sustainable Freehold Property: a CRE Perspective. *Journal of Corporate Real Estate*. 11(2): 91-105.
- McCall, J.H. (2001), *A Primer on Real Estate Trusts: The Legal Basics of REITs*. Transactions Special Report.
- McCloskey, J. and Maddock, S. (1994), Environmental Management: It's Role in Corporate Strategy. *Management Decision*. 32(1): 27-32.
- McGraw-Hill Construction. (2013), World Green Building Trends: Business Benefits Driving New and Retrofit Market Opportunities in Over 60 Countries. *SmartMarket Report*.
- Miller, E. and Buys, L. (2008), Retrofitting commercial office buildings for sustainability: tenants perspectives. *Journal of Property Investment and Finance*. 26(6): 552-561.
- Milne, N. (2012), *The Rands and Sense of Green Buildings*. GBCSA.
- Mishra, S. and Suar, D. (2010), Does Corporate Social Responsibility Influence Firm Performance of Indian Companies? *Journal of Business Ethics*. 95(1): 571-601.
- Moody, K. (2009), Sustainable Travel Plan. *Staffordshire University*

- Nappi-Choulet, I. and Décamps, A. (2011), Is Sustainability Attractive for Corporate Real Estate Decisions? *Research Center ESSEC Working Paper*. 1106.
- Nelson, A. (2007), The Greening of U.S. Investment Real Estate—Market Fundamentals, Prospects and Opportunities. *RREEF Research*. 57.
- Nelson, A. (2008), Globalisations and Trends in Green Real Estate Investment.
- Newell, G. (2009), Developing a socially responsible property investment index for UK property companies. *Journal of Property Investment and Finance*. 27(5): 511-521.
- Nguyen, M. (2014), *Green Buildings, Corporate Social Responsibility, and Stock Market Performance*. Bachelor of Science in Finance and Supply and Logistics Management. Portland State University.
- Nourse, H. and Roulac, S. (1993), Linking Real Estate Decisions to Corporate Strategy. *The Journal of Real Estate Research*. 8(4): 475-494.
- Nurick, S., Le Jeune, K., Dawber, E., Flowers, R. and Wilkinson, J. (2013), Incorporating GBFIs into Commercial Property Valuation. *In Proceedings of the 2013 European Real Estate Society (ERES) Conference*, Vienna, Austria, 3-6 July 2013.
- Owen, D. (2014), Corporate Real Estate. (Unpublished). Presentation on 29 April 2014 Cape Town, South Africa.
- Pivo, G. and McNamara, P. (2005), Responsible property investing. *International Real Estate Review*. 8(1): 26-42.
- Real Property Association of Canada (Realpac) (2010), Canadian Commercial Real Estate Sustainability Performance Report.
- Royal Institute of Chartered Surveyors (RICS) (2009), *Sustainability and Commercial Property Valuation*. Valuation Information Paper No.13.
- Sayce, S. (2009), Greening leases: Do tenants in the United Kingdom want green leases? *Journal of Retail and Leisure Property*. 8(4): 273-284.
- Sharma, S. (2000), Managerial interpretations and organizational context as predictors of corporate choice of environmental strategy. *Academy of Management Journal*. 43(4): 681-697.
- Sharma, S. and Vredenburg, H. (1998), Proactive Corporate Environmental Strategy and the Development of Competitively Valuable Organizational Capabilities. *Strategic Management Journal*. 19: 729-753.
- Slabber, G. (2013), The emergence of green building practices: Case study of Stellenbosch. *Stellenbosch University Working Paper*.
- Starik, M. and Marcus, A. (2000), Introduction to the Special Research Forum on the Management of Organisations in the Natural Environment. *Academy of Management Journal*. 43(4): 539-546.
- Thornton, G. (2012), *REITs to boost SA property investment*. Available: <http://www.southafrica.info/business/investing/opportunities/property-010812.htm#.U1a90vmSznE> [22 April 2014].
- Trochim, W. (1989), Outcome Pattern-Matching and Program Theory. *Evaluation and Program Planning*. 12: 355-366.
- USGBC (2014), *LEED and Green Building Codes*. Available: <http://www.usgbc.org/Docs/Archive/General/Docs9246.pdf> [29 April 2014].
- van der Chijs, L. (2008), Green Building Performance: An Investigation of Real Estate Investment Opportunities. MSc International Business - Accounting. Maastricht University.
- Walsh, K. (2013), *How Building Green Can Help Your 'Triple' Bottom Line*. Available: <http://i95business.com/2013/06/building-green-triple-bottom-line/> [25 July 2014].
- WGBC.(2013), Business Case for Green Building.
- Yang, J. (2012), Editorial: promoting integrated development for smart and sustainable built environment. *Smart and Sustainable Built Environment*. 1(1): 4-13.
- Yin, R. (1994), Case Study Research: Design and Methods, 2nd ed. United States of America: Sage Publications.

Zhiliang, L. and Yongheng, D. (2013), Towards Sustainable Property Investment: Perspective from Asian Emerging Markets. Doctor of Philosophy. National University of Singapore.

Zuo, Z. (2014), Green building research—current status and future agenda: A review. *Renewable and Sustainable Energy Review*. 30: 271-281.