

**What factors affect the design of
corporate responsibility performance measurement
systems in the utility sector ?**

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corporate social responsibility performance measurement
systems in the utility sector ?**

supervisor: Dr. Lance Moir

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Executive Summary

The proposed research question seeks to ascertain the key factors that should affect design considerations of corporate social performance measurement systems in the utility sector. This thesis forms a foundation for a literature review within a future PhD research programme.

The academic fields of performance measurement and corporate social responsibility, incorporating corporate social performance and stakeholder theory were selected as key academic fields to begin the research.

Although literature in relation to the specific nature of the question appears sparse, the application of the scoping and systematic review process identified a number of factors and influences, including organisational culture, values and structure, the nature of the sector and the institutional frameworks and socio-political pressures from both local and global corporate social responsibility-related issues and associated stakeholders. Findings from this research were instrumental in the development of models that illustrate key considerations on the design of corporate social responsibility performance measurement systems.

The research process applied follows a new, more systematic evidence-based approach to literature reviews (Tranfield, Denyer & Smart 2003). With the nature of emerging fields and the specific nature of the question, an adaptation for practitioner-based quality criteria considerations was incorporated (Boaz & Ashby 2003).

The scoping study identified that performance measurement, corporate social responsibility and therefore corporate social performance are all emerging fields. The challenge included exploring these emerging fields, trying to identify overlaps that would assist in identifying convergence of the fields' findings in order to provide a more informed perspective with the topic area and nature of the question.

The systematic review, with a process of establishing clear search string combinations for the research question, applies a number of filter and quality-review stages. A pre-developed selection criteria was applied to the papers identified from different search parameters, followed by a full quality assessment and data extraction methodology. This framework identified some key papers which, together with the scoped academic fields, described more fully the complexity of design considerations in relation to the question. Though the quality criteria required contextual assessment in relation to the conditions of a sparse and evolving field, the process was flexible enough to generate useful findings and recommendations.

Though challenging for a new researcher, new to the field, the process was under-pinned by an expert panel of academics and research staff from Cranfield University, as well as practitioners in the field of corporate social performance.

The dissertation was designed to meet academic quality requirements for an academic thesis as well as enlightening the author with regards future PhD research considerations. It was also anticipated to provide useful material for presenting to practitioners and company sponsors who will become involved in the future research.

The thesis also contains details of the methodology, researcher bias and typology of literature assessed, allowing another researcher to gain a more informed position to continue the research already conducted; significantly easier than through traditional, less systemised and documented approaches.

The systematic review, was able to identify some key and supporting papers, highlighting a number of issues and challenges around which the proposed research question encouraged convergence; namely the approach and operationalisation of identifying and prioritising key issues and decisions in relation to performance measurement systems. This includes identifying and establishing what is meant by performance through a range of perceptions and

stakeholders (Pedersen 2006, Sirgy 2002, Keeble et al 2003, Neely, Adams & Kennerley 2002), identifying the challenge and need for linking CSP measures to strategic performance systems and strategic goals (Veleva et al 2001, Epstein & Wisner 2001, Bourne et al 2000), coupling new measures to existing systems (Tanzil & Beloff 2006, Lohman et al 2004), developing critiques for measures and developing understandings about both the positive and negative behaviours induced by performance measurement systems (Neely et al 1997, Tangen 2005a), and issues that relate to corporate culture, unwritten rules, personal values and behaviour (Atkinson et al 1997, McKenzie & Shilling 1998, Neely et al 2005) .

In summary, the systematic review did identify a few papers that specifically related to the question. The quality and comprehensiveness expected from the proposed research questions however have not been satisfactorily clarified, indicating the emergent nature of the research. It has demonstrated there is interest for this area of research, both academically and pragmatically. It has highlighted that as of now, the published research knowledge is sparse and there are significant opportunities to add granularity to research practice, particularly in the areas of identification, clarification, prioritisation and the use of robust CR performance measures and fundamental improvements in the understanding of stakeholder salience, prioritisation, engagement and influence on company-specific performance. The systematic review identified a need for making corporate social performance measurable (Carroll 2000) and the fundamental need to develop robust corporate social performance measures in the field of practice for corporate social performance (Searcy et al 2005). This is one of the intended areas of study being considered with company-specific participation.

The author has gained significant experience from this initiative. Not only in terms of the research and knowledge that will be invaluable for developing a forthcoming PhD thesis, but also in relation to gaining significant insight to the research process itself as a practitioner and provides further understanding with respect to the role, methodology and skills required to conduct rigorous research.

1. Introduction

This report acts as preliminary research that is able to contribute towards a forthcoming PhD research initiative. The PhD will focus on sponsor-company specific factors that affect the design of particular corporate social performance measurement systems that have emerged within the European energy utility sector. This scoping study seeks to answer the questions relating to key factors that affect the design of corporate social performance measurement systems within the utility sector, which will be transferable into future research. To this end, the key academic concepts, propositions and observations from the fields of corporate social responsibility, stakeholder theory and performance measurement are under consideration within this thesis.

Corporate social responsibility, as an over-arching term, has grown in significance over the last decade. It has gained an increasing interest and attention from academics, scientists, journalists, governments, regulators, think-tanks, media and policy makers alike. With this growing awareness of business' mutual inter-dependence with society, there is a greater emphasis on the social impacts and outcomes of business' actions and inactions; with calls from a broad spectrum in society for business to be more responsible and provide more solutions to society's ailments (Garriga & Mele 2004).

Corporate social responsibility (CR) is how a business responds to expectations from society, and is anticipated to stay and most probably continue to grow over the next decade. It covers a broad scope of themes from the social, environmental and economic spectrum; including human rights, anti-corruption, climate change, natural resource conservation, employee welfare, workforce diversity and corporate governance (ACCA 2004). Corporate social performance (CSP) is defined as "a business organisation's configuration of principles of social responsibility, process of social responsiveness, and policies, programs and observable outcomes as they relate to the firm's societal relationships" (Wood 1991). This is a key construct for achieving an effective business and

society relationship and gaining recognisable CR benefits. Performance in CR is beginning to establish itself as a relevant strategic component for business applications (Miles & Conin 2000, KPMG 2005).

There is no reason not to expect corporate social performance to become a key source of wealth creation in the future. This has led to a growing need to establish the “business case” for activities; whether for legitimacy, reputation, or operational efficiency. The CR business cases of developing performance from improving reputation and mutual trust (Jones 1995) are believed to contribute towards access to new markets, new sources of innovation, retained knowledge from high quality employees and customers as well as improved supply-chain relationships, reduced operating costs, reduced cost of capital and business risk (Arthur D. Little 2002, ACCA 2004, KPMG 2005).

A key question therefore emerges, how does an organisation respond to social issues and be responsive to society, as well as, for the investors in the business, both now and in the future. How does it balance the tensions within and between the stakes, how does it behave in relation to generic and industry specific expectations from stakeholders, how should the organisation behave to maximise value for all concerned. What is ‘good performance’, what would ‘good performance’ look like.

The broad problem for business managers is to accurately interpret and appropriately implement their company’s relatively new “wealth”-optimisation responsibility strategies alongside existing obligations and routines. This requires entering into what can be highly complex resource decisions which should involve the use of performance management decision-making tools and processes to analyse, prioritise, measure and manage their investments. It also requires being able to articulate this performance to senior management, relevant stakeholders and ultimately the shareholders.

The fundamental challenge for the manager is:

“ if they undertake costly initiatives that their rivals don’t embrace, they risk eroding their competitive positions. And if [by not responding to social requirements] they invite government review, they will be hampered by costly regulations that impose onerous costs without generating meaningful societal benefits in return” (Martin 2002)

With more and more businesses publishing annual performance and future intentions in corporate responsibility reports alongside their annual reports (KPMG 2005), the debate on what to measure in determining corporate social performance, how measures have materiality, how the data was robustly and objectively obtained, and issues of external verification and validation remain highly relevant issues (AccountAbility & ACCA 2004).

Developing organisational performance competency and the establishment of responsive, dynamic, effective and efficient performance measurement systems for the business is of growing importance for establishing ongoing business performance (Neely et al 1995, Kennerley & Neely 2003). In relation to CR, how should a corporation design and implement corporate social performance measurement systems, how can a company understand where it has been successful and where it can significantly improve, so as to remain competitive in this field. Have the measures and management systems delivered all the expected outcomes. Towards the business unit level, questions include, how an organisation correctly prioritises resources for such activities, what it should accurately measure, how does this affect the business unit’s overall performance, and how is this rewarded or appraised.

Academic literature from the business and society field has, over the last thirty years, produced a range of theories, models and frameworks to explain corporate social responsibility, corporate social performance and stakeholder theory, (e.g. Sethi 1975, Carroll 1979, Wartick & Cochran 1985, Wood 1991, Clarkson 1995, Mitchell, Agle & Wood 1997, Schwartz & Carroll 2003). This has resulted in different models that explore corporate behaviour and approaches to

normative corporate social performance systems and stakeholder salience. Scholars in the field of corporate social performance have developed theories to incorporate the influence of organisational theory with regards the motivations and influences of the corporation, particularly in relation to resource-based theory, institutional theory and social network theory, (e.g. Oliver 1991, Jones & Wicks 1999). Strategic management theories in relation to corporate social performance are also being explored and encouraged, (e.g. Husted 2000, Berman et al 1999). Such organisational behaviours and cultural norms affect the decision-making process, which will ultimately affect the corporate social performance management systems.

The initial scoping has identified significant opportunities to conduct research in the field of corporate social performance, with particular relevance to empirical performance measurement and performance management areas. There is an interest in empirical micro-level analysis that seeks exploration and observation at the granular level on specific factors and influences facing companies from particular sectors and on specific social issues (Griffin 2000, Rowley & Berman 2000). This level of focus and categorisation can make fundamental contributions for empirical robustness, and create dependable and in time, generalisable building-blocks within this emerging field. There are requests within the academic field for descriptive richness that can reinforce or challenge the implicit underpinnings of theoretical models within the CSR field, particularly the corporate social performance model (Wood 1991, Swanson 1999). There are also requests for researching the relevance of instrumental influences on management in relation to the prioritisation of engagement and stakeholder orientations (Friedman & Miles 2002, Harrison & Freeman 1999, Berman, Wicks, Kotha & Jones 1999, Donaldson & Preston 1995). In terms of performance measures, there is a need for constructing further research into developing robust measures of performance (Carroll 2000, Searcy et al 2005).

The scoping study maps some of the key academic concepts within the fields of corporate social responsibility, stakeholder theory and performance

measurement. This is a preliminary review of academic fields that provide context for the question, 'what factors affects the design of corporate social performance measurement systems in the utility sector'. The accompanying systematic review protocol describes the process of how a more focussed literature research will be planned, conducted, managed, reviewed and supported; including a literature review search string process, a selection criteria and a detailed quality assessment methodology. The systematic literature review builds upon the fields already identified from the scoping study. It generates a more focussed view and provides additional clarity to the issues and considerations surrounding the research area and the specific nature of the question (Tranfield, Denyer & Smart 2003).

As detailed, the systematic review was able to identify some key and supporting papers, highlighting a number of issues and challenges around which the proposed research question has identified convergence and complementary contributions from the fields selected. Some key areas identified included the approach and operationalisation of identifying and prioritising key issues and decisions in relation to performance measurement systems, identifying and establishing what is meant by performance through a range of perceptions and stakeholders (Pedersen 2006, Sirgy 2002, Keeble et al 2003, Neely, Adams & Kennerley 2002), the challenge and need for linking CSP measures to strategic performance systems and strategic goals (Veleva et al 2001, Epstein & Wisner 2001, Franco and Bourne 2003, Bourne et al 2000), identifying the need for coupling new measures to existing systems (Tanzil & Beloff 2006, Lohman et al 2004), and developing critiques for measures and developing understandings about the positive and negative behaviours induced by performance measurement systems (Neely et al 1997, Tangen 2005a, Tangen 2005b).

Along with the developments and discussion of models that describe issues and findings in relation to the question, the majority of this thesis describes the process and key academic discussions that led to the formulation of the models and highlights key questions to take forward in future research.

2. Situating the research

The utility sector is a rich area to study corporate social responsibility, stakeholder theory, corporate social performance and performance measurement systems. In many countries, including the UK, what were once state-owned companies that provided public services of energy, gas and water supply for the nation's social and economic needs are now run with increasingly commercial interests. Access to safe, plentiful, potable drinking water and steady uninterrupted power and heating supply are of high social and political importance in terms of social and environmental responsibility; identifiable as areas of corporate social responsibility. The newly commercialised utility companies are subject to significant government regulation and regulatory intervention to establish measurable performance levels and encourage appropriate corporate social performance and behaviour. By the nature of the recent privatisation and deregulation, these companies are also establishing new relationships with investors, employees, governments, customers, suppliers and the general public alike in relation to trust and working relations so as to improve their presence and effectiveness as managers and stewards of a going concern. The level of stakeholder interest and the utility firm's relationships with different parties is expected to be described and explained within the fields of stakeholder theory and corporate social performance.

The research area relates to the factors that affect the design of corporate social performance-related performance measurement systems within the utility sector. The CR-related driver for the company-based interest comes as a result of the emergence of a specific environmental EU Climate Change obligation for the energy utility sector and other energy-intensive industries. The Emissions Trading System (ETS) involves quotas relating to multi-national governmental agreements initiated from the Kyoto protocol that was enacted within the UK on January 2005. This involves the energy utility companies receiving allocated certificates for volumes of carbon dioxide generation that they are permitted to produce, which they can subsequently buy and sell to other energy utility

companies within Europe (Godal & Klassen 2003). There is an incentive and opportunity therefore to maximise wealth by ensuring the performance measurement systems are well-designed to be both efficient and effective for the company, both operationally and strategically in relation to future energy demand and investments, (including energy demand management). This raises questions such as how does a firm respond to this external pressure on the marketplace, how will it incorporate this as a measure of firm performance, in what way will it ensure it is deriving maximum wealth from the initiative.

Utility companies are a particularly relevant sector to explore. First, they are in established sectors, with established environmental performance measurement systems and policies. Second, from a global perspective, as well as, a CR perspective, national energy, oil and gas companies are of strategic and public importance; especially in relation to national economic stability, global climate change and social necessity.

‘the twin pressures of climate change and energy security are raising the energy policy to the top of the agenda, in the UK and around the world’ Tony Blair, UK Prime Minister CBI conference
May 2006 (Guardian 2006)

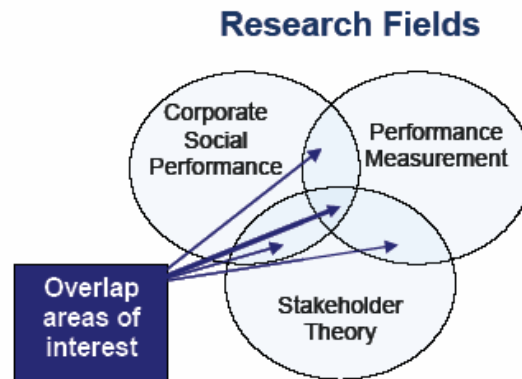
There are CR measures and reporting materials available in the sector, such as the generic framework and sector-specific supplements from the Global Reporting Initiative, and some relatively well defined stakeholders at the macro level. Water companies and power generation utilities, once public service companies in the UK, are arguably subjected to societal expectations of responsible behaviour, much of which is enforced by regulation, e.g. climate change levy. Others may be taken more voluntarily, for example, electricity companies are expected to address issues relating to fuel poverty and the oil, gas and water companies are encouraged to reduce disconnection rates of defaulting customers, especially the poor and frail members of society, which otherwise would not be in the economic interests of shareholders.

Utility companies are generally, like the aggregates industry and the oil and gas sector, high profile and under significant scrutiny; from regulators, local communities and environmentalists. In this respect, these companies already have corporate social responsibility reporting mechanisms and performance measurement systems in place.

To this end, the scoping study and subsequent systematic review aims primarily to establish an up-to-date description of the key areas and concepts around the area of research and secondly to highlight key research issues in the context of the research area.

The initial areas of focus for this systematic review are the emerging fields of:

- corporate social performance
- performance measurement and
- stakeholder theory.



The aim is to gain a developed understanding of these areas of literature and distil key findings in relation to the influence it may have on future research.

The next section identifies four key questions that the research will be seeking to address.

3. Research Propositions

Anticipating a lack of research in the sector-specific influences from the utility sector within the research (as incorporated within the systematic review criteria), broad issues which might be addressed in relation to the fields of performance measurement, corporate social performance and stakeholder theory include:

- 1. What are the factors that influence the design choices in relation to the creation of a corporate responsibility performance measurement system?**
- 2. Does a corporate social performance measurement system require a different treatment to any other non-financial performance measurement system?**
- 3. What specific issues and factors influence the design of corporate responsibility performance measurement systems within the utility sector?**
- 4. Which stakeholders influence the organisation most in the design of performance measures?**

The first question seeks to identify generic components for consideration in designing a system. The second questions what ‘additionally’ is required (or not) for CR-related issues as opposed to generic performance measurement issues. The third relates to identifying specific influences and factors for the utility sector and the fourth seeks to elicit the stakeholder dominance or influence within the design process.

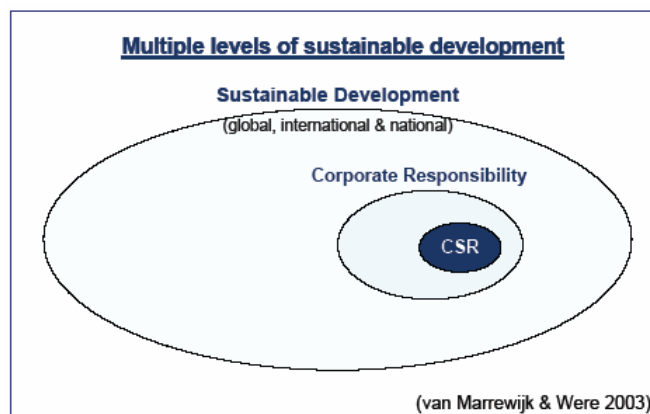
The next three sections explore the evolution of the three key academic fields. It starts with an introduction to corporate social responsibility and corporate social performance exploring the definitions and theoretical constructs. This is followed

by reviewing the development of stakeholder theory and how it has evolved within the business context. Finally, the area of performance measurement systems is explored, highlighting key generic issues and concepts facing the creation and use of performance measures and performance measurement systems within business.

4. Corporate Social Responsibility

4.1 Sustainable Development & CR

Corporate social responsibility is a complex phenomenological challenge for business (Pedersen 2006, Carroll 2000, Werhane & Freeman 1999, Logsdon & Yuthas 1997, Shrivastava 1995), and is itself nested within sustainable development, a larger more global perspective (van Marrewijk & Wempe 2003). The over-arching



global socio-political concept of sustainable development is a significant component, alongside changing competitive market environments and societal expectations, for driving the current business-related CR agenda. The global, scientific and socio-political interest and involvement in this crucial element of human subsistence now permeates everyday life in most developed countries.

4.1.1 Introduction to Sustainable Development

Sustainable development, as a concept, originated from the term 'sustainability' at the Club of Rome 1972 and the Stockholm Conference 1973 (Reid 1997). The key issues of sustainable development were defined by the World Commission on Environmental and Development Report, as a result of significant multi-national discussion. Commonly termed the 'Brundtland Report', sustainable development is defined as that which:

[Sustainable development] '**meets the needs of the present, without compromising the ability of future generations to meet their own needs**'

(WCED 1987).

This was carried forward to the Earth Summit in Rio de Janeiro in 1992, which **‘as the biggest gathering of heads of state and governments in all human history’** resulted in the adoption of global conventions on conservation and the agreement of the Agenda 21 strategy for sustainability at global and local (national and regional) levels (Weizsacker, Lovins & Lovins 1997). It was at the Earth Summit that the UN translated many of the issues into sustainability indicators and metrics (Tanzil & Beloff 2006).

Sustainable development includes: trade, economics and poverty alleviation; human rights, equality, education; human and social health; and the preservation and enhancement of natural resources and each national government submits their sustainable development plans and strategies to the Commission for Sustainable Development at the United Nations (Garvare & Isaksson 2001, Shrivastava 1995). It is however still an ambiguous subject with at least seventy definitions, and this vagueness, though essential for the original consensus, now causes challenges to operationalisation (Kirby, O’Keefe & Timberlack 1995, Reid 1997).

Global sustainable development therefore is the antecedent driver within the corporate environment for what is termed corporate social responsibility and provides a framework and social-political point of reference.

4.1.3 Shifting politics, economics and social responsibility

Other significant changes in the macro environments that affect business and their interaction with society include the shifting balance of economic power and the changing political arena (Anderson, Cavanagh & Lee 2005). Multi-national companies are individually richer than national states, e.g. of the top 100 revenue streams, fifty two are corporations and forty-eight are countries. The shift in socio-economic power of corporations explains why many businesses in different sectors and geographical locations are being requested to take more responsibility for elements of their effects on the socio-environmental issues;

previously the bastion of national governments, regional public sector bodies, NGO's and charities.

In contemporary society, economic activities are no longer seen as decoupled from their socio-ecological impacts, causes or effects. From an economics perspective, the understanding of sustainable growth has involved exploring ways of decoupling economic growth from environmental degradation (Turner 1993). In economic terms, 'if you want to be sustainable, you live off the interest and don't use up the capital' (Zink 2005). As the influence and roles of governments, businesses and public services change to adapt to modern

society, the clarity and distinction between an economic activity and a socio-economic and eco-efficient economic activity have become blurred, particularly from the view of sustainability, sustainable development and corporate social responsibility (Harrison &

Freeman 1999). The links between business and sustainable development have been defined in relation to *environmental integrity*, *social equity* and *economic prosperity*, and this perspective elicits the scope, scale and complexity of the issue for business (Bansal 2005).

Fundamentally corporations exist within larger political and social entities. They are therefore subject to pressures from other members of those networks, be they citizens concerned about environmental pollution, employees seeking to strike a balance between work and

3 principles of Sustainable Development:
with business-related elements

- 1. Environmental Integrity** – do not erode Earth's land, air & water resources- nor Earth's regenerative capacity – **greenhouse gases, waste management, deforestation, toxic spills.**
- 2. Social Equity** – all members of society have equal access to resources and opportunities. – **health care, education, political freedom, equal opportunities.**
- 3. Economic Prosperity** – creation of goods that help raise standards of living around the world – **open competition, innovation, efficiency and wealth creation, equal income-related benefits.**

(Bansal 2005)

Corporate social responsibility

is a broad school for a number of specific social issues, environmental and ethical issues, including

- **human rights**
- **anti-corruption**
- **corporate governance**
- **natural resource management**

(ACCA 2004)

family, or political authorities protective of their tax bases (Martin 2002). These are all relevant issues that relate to corporate social performance and represent new spheres of activity for business (ACCA 2004).

4.2. Corporate Social Responsibility – an evolving field

Corporate social responsibility may be one of the ‘new buzzword terms’ used by business (Pedersen 2006), however the concepts and academic and practitioner interests in the subject certainly are not new.

4.2.1 Historical perspective of CR

From a literary perspective, Carroll attributes the first concept of ‘responsible business’ was first identified by Bowen in his 1953 seminal work *Social Responsibilities of businessmen* (Carroll 1991). From a practical business perspective, elements of what is now termed social responsibility were quite evident in the UK during the 1930’s, from family businesses such as Bourneville and Cadbury’s which provided education, housing and other social ‘health’ contributions for its workers and their local communities.

Since that period business has undergone a phenomenal transition, with significant changes in business ownership through institutional, individual and private investors coupled with the evolution of global stock markets. Average CEO tenure and leadership has recently reduced from eight years in 1980 to four years in 2000, alongside growing realisation that corporations seem less able to predict true earnings (Funk 2003). The influences and pressures that relate to CR are valid considerations for future corporate value and are gaining strategic importance, with practitioner-orientated business cases now tentatively emerging (ACCA 2004, ADLittle2002, KPMG2005, PriceWaterhouseCoopers 2002).

4.2.2 CR, the evolving concept

As with the hierarchically higher-level of Sustainable Development, CR¹ is also predominantly a philosophical concept that underpins the levels of CR-related performance activities from the business towards society (Munilla & Miles 2005, Carroll 1979); essentially the 'new' paradigm is that business and society are ***“interwoven, rather than distinct entities”*** (Wood 1991). Today, CR still remains an ambiguous and very much debated concept (Pedersen 2006).

Davis's Iron Law of Responsibility encompasses the key essence of CR as:

“ consideration of and response to, issues beyond the narrow economic, technical and legal requirements of the firm... to accomplish social benefits along with the traditional economic gains the firm seeks” csr definition: Davis Iron Law of responsibility (Davis 1973)

Corporate responsibility is therefore perceived as the organisation making decisions and taking actions that appropriately balance the tensions between the shorter-term wealth creation requirement of shareholders and the more longer-term needs of the general public and stakeholders within society (Dowse 2005, Cramer 2005, WBCSD 2002), relating to: the areas of societal expectation on the firms, to whom corporate social performance relates to and how well the firm performs in CR-related issues.

The CR academic field is relatively new and the process of literature and empirical theory testing is in its infancy, with a variety of disparate views and interpretations (Wood & Jones 1995), providing a rich source of theoretical and empirical business practice research (Swanson 1999, Griffin 2000, Carroll 2000).

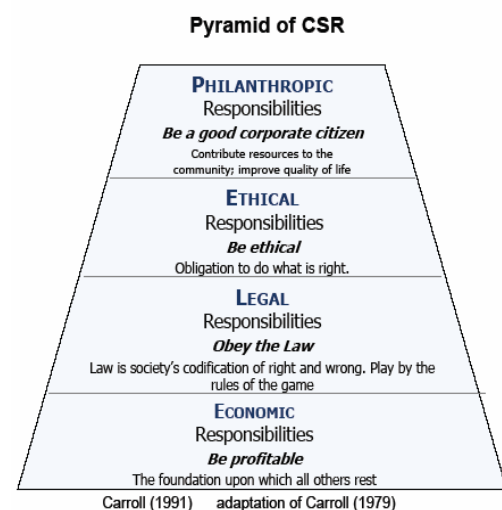
As highlighted, the business and society field includes different terms, including corporate social responsibility, corporate responsibility, social responsibility, sustainable development, corporate social performance, social and

¹ Corporate social responsibility and corporate responsibility do not appear to have any significant differentiation of terminology. To this end the term **CR** will refer to both terms, alongside the more contemporary business use (or misuse) of the more socio-political term sustainable development.

environmental performance, corporate citizenship and aspects of corporate public affairs. The problem for the academic field is that over the last thirty years the CR scope has diverged over time and different theories and models have been established (Sethi 1975, Carroll 1979, Wartick & Cochrane 1985, Wood 1991, Wood & Jones 1995, Clarkson 1995, Swanson 1999, Schwartz & Carroll 2003). Some consolidation of these theories and models do now provide useful theoretical frameworks and tools for reference.

Sethi, in 1975, and later, Carroll in 1979, pioneered theoretical constructs of CR.

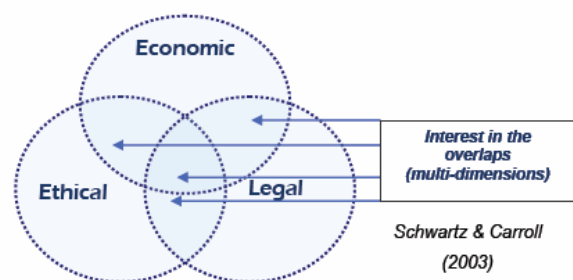
Sethi developed a three-stage organisational classification model for social need in terms of *social obligation*, *social responsibility* and *social responsiveness*. Archie Carroll provided the **CSR “pyramid”** as it was referred to at the time (Carroll 1979, Carroll 1991). This construct identifies the guiding normative principles to what Wood, later in 1991, refers to as the ‘domains’ of activity for business. As CR became more understood, the hierarchical



interpretation has been criticised, and the over-simplicity of the model as a descriptive tool (Schwartz & Carroll

2003). Dividing the world into economic and social ultimately is arbitrary, as economic effects are also social, and social effects are also economic (Harrison & Freeman 1999). The model has since been refined into three

Corporate Social Responsibility Model



domains by Schwartz and Carroll (2003), combining the ethical and philanthropic dimensions into one domain, whilst quite significantly introducing the interplay of boundaries representing the multiplicity of relationships between the three behavioural themes of *ethical*, *legal* and *economic*. This model appears more

descriptive of the complexities of issues faced by organisations, though it is still a theory in its infancy.

Incorporating both Carroll's 1979 conceptual framework and Sethi's 3-stage model, Wartick and Cochran (1985) integrated different business and society relationships into one conceptual framework, categorising the domains of the *principle-stage of social responsibility*, the *process-stage of corporate responsiveness* and the *social issue-management stage involving policies and programmes* (Wartick & Cochrane 1985).

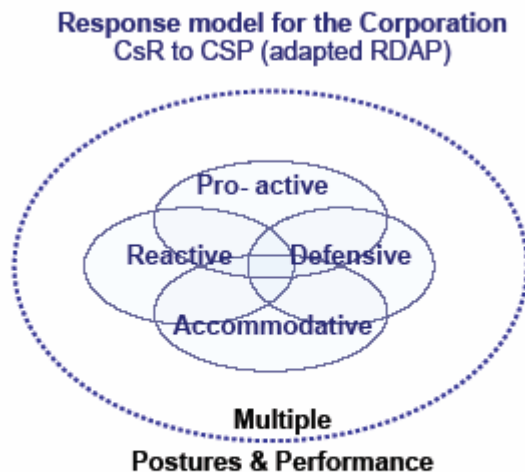
In 1995, Clarkson proposed a conceptual understanding for integrating behaviour, strategic assessment and risk-management approach towards some notion of corporate performance. He emphasised the need for the corporation as an organisation to strategically address the needs of primary stakeholders, and that senior managers should no longer focus purely on generating wealth maximisation for only one stakeholder, the shareholder, but also for other strategically important stakeholders, including customers, governments and employees (Clarkson 1995). Building on the work of Wartick & Cochran (1985) and Carroll (1979), Clarkson developed the RDAP scale further, by conceptually identifying the organisation's posture or strategy in relation to corporate responsibility and the expected approach and level of associated performance.

<i>Reactive-Defensive-Accommodative-Proactive (RDAP) Scale</i>		
<u>Rating</u>	<u>Posture or Strategy</u>	<u>Performance</u>
1. Reactive	<u>deny</u> responsibility	<u>do less</u> than required
2. Defensive	<u>admit</u> responsibility, but fight it	<u>doing least</u> that is required
3. Accommodative	<u>accept</u> responsibility	<u>doing All</u> that is required
4. Proactive	<u>anticipate</u> responsibility	<u>doing more</u> than is required
(Clarkson 1995)		

Although a pioneering and significant contribution, the model appears to over-simplify the assumption of the organisation, as one singular and overriding posture. As with the re-orientation of Carroll's 1979 model to represent the duality

nature within business on CR issues, Clarkson's RDAP scale could also be viewed in terms of the multiplicity and complexity of CR and the pluralisms of business responses and elements of performance, as illustrated.

The next two sections explore further the aspects of drivers and influencers of CR on corporate performance in relation to business cases and external institutional pressures and standards of practice.



Adaptation of Clarkson 1995's RDAP scale to reflect multiplicity within the corporation. Authors 2-d representation of a 3d re-orientation

4.3 Business case for CR

Although probably still in a stage of infancy, the business case for CR is being openly discussed. Establishing a business case has always been an important concept for the corporation, as it aids in decision making, transparency and comparison with alternative actions. Business cases resulting from improved performance that itself creates improved reputation and mutual trust (Jones 1995) are proposed to result in the following corporate advantages; access to new markets; new sources of innovation; retention of knowledge from high quality employees; retention of clients over long term; improved supply-chain relationships; reduced operating costs; reduced cost of capital and improved business risk mitigation (Szekely & Knirsch

Business Case for Improved corporate social performance

- reduced operating costs from resource efficiency
- the development and retention of valued human capital
- improved company reputation and public relations
- brand value differentiation advantages
- increased innovation, knowledge and product development
- reduced business risk and financial risk
- increased access to capital
- extended business license-to-operate timescales
- additional business trade opportunities.

(A.D.Little2002, ACCA 2004, KPMG 2005, Willard 2002).

2005, UNEP/SustainAbility 2001, Arthur D. Little 2002, KPMG 2005, Alfonso & Sharma 2005,). The issue remains, however, in developing supporting evidence for the business case.

The challenge is to identify the strategic elements most suitable for the company (Husted 2000) and robustly carry these forward as long-lived visions (Waddock & Smith 2000). Triple-bottom-line reporting has become a familiar business term, whereby companies add the social and environmental perspectives to the economic financial 'bottom-line' principle, adopting the 3 P's of *people*, *profits*, and *planet* to the business reporting principles (Elkington 2001). This issue is also one of belief, with strategic-mapping, value-trees and risk-based strategies required as methods to engage with the 'unbeliever' minimalist camp in understanding the fundamental business case (Dowse 2005).

Three CR business-context categories have been identified for CR; *generic social issues*, *value chain impact* and the *competitive context* (Alfonso & Sharma 2005) and three CR positions have been identified to explain economic orientation for business decisions:

- Compliance based - the least costly, yet creating an unsustainable regulatory environment.
- Forced CR - reactionary and no basis of competitive advantage and adverse long-term reputation issues.
- Strategic CR - more pro-active and creates possible long term opportunities.

Munilla and Miles (2005)

There is a rising interest in the area of corporate reputation. Not only has CR received attention from a marketing and brand and reputation aspect, but also from the fact that a brand can take time to build up, and through one scandal or public disaster, it can be easily lost. Stakeholder engagement and issues management are a fundamental requirement of the business case (ACCA 2004, Peacock 1993, UNEP/ SustainAbility 2001). Microsoft's book value (assets) represents only 10% of market value, the remainder being intangible assets. For

knowledge management, stakeholder value are key intangible assets, and direct and indirect value drivers such as reputation and stakeholder trust are highly significant issues, with organisations becoming more sensitised to developing a corporate responsibility reputation (Miles & Covin 2000, Dowse 2005, Kristensen & Westlund 2003, Wall & Doerflinger 1999).

Analysis of intangibles	
- Stakeholder contributions:	
• investors	12%
• employees	32%
• clients	35%
• potential clients	14%
• partner firms	3%
• employee candidates	3%
• academics	1%
(Wall & Doerflinger 1999)	

Many corporate social responsibility tools are gaining greater recognition and application. Over the last five years, an increasing amount of corporations are producing annual corporate responsibility reports in addition to, and sometimes alongside, the company's financial accounts (KPMG 2005). The influence of emerging CR standards is a recognised driver for CR.

4.4 Standards, guidelines and codes of practice for CR

Institutions, ngos and governments have responded to the practical issues with a variety of instruments and tools for practice, which are in effect, ways of expressing the societal need. Two key purposes identified are to drive and improve corporate performance through more accountable and responsible business practices and to provide clear and common understanding of sustainable CR concepts, e.g. Royal Dutch Shell has incorporate the Global Reporting Initiative, ISEA3000, UN's Global Compact and WBCSD/WRI's GreenHouse Gas Protocol within its reporting and performance measurement systems (Ligteringen & Zadek 2003).The effect however is now the plethora of over 300

CSR Performance-related tools & instruments

Reporting Frameworks:

- GRI – Global Reporting Initiative (UN origin)

Codes of Practice:

- UN Declaration on Human Rights Guidelines

Process/System Standards:

- AA1000 & ISEA standards – stakeholder engagement standards
- SA8000- supply-chain orientated standards
- ISO14000 – environmental management system standard
- OHS18000 – Health & Safety management system standard

reporting standards, codes of practice, technical guidelines and business indexes and ratings that companies need to navigate (Ligteringen & Zadek 2003, Chatterji & Levine 2006, Szekely & Knirsch 2005).

An organisation's response will not only influence organisational performance, but the corporation may also influence the criteria, measures or standards needed to evaluate performance (Oliver 1991), e.g. corporate involvement was fundamental for the multi-stakeholder and globally accepted Global Reporting Initiative (under the UN) and BiTC's business-membership use of Corporate Sustainability index.

CR standards and guidelines can be classified in different ways relating to different emphasis (Cramer 2005, Szekely & Knirsch 2005, Tanzil & Beloff 2006, Morhart, Baird & Freeman 2002):

1)The scope:

- **Generic** standards or guidelines that cover all generally relevant areas of corporate social responsibility.
- **Theme specific** guidelines or standards such as environment, corruption or human rights.
- **Targeted** standards and guidelines that focus on specific stakeholders, sectors or regions.

2) The orientation:

- **performance** orientated (in social, environmental and economic areas), e.g. UN Guidelines on Human Rights, Millennium Development Goals.
- **process** orientated, e.g. Global Reporting Initiative, ISO14000, SA8000.
- **process & performance** orientated, e.g. Business principles for Countering Bribery, CERES Principles.

Companies are found to report on different areas within the range of performance indicators (Morhart et al 2002). *Process and system* standards establish a level of management system performance in areas such as environmental

management and health and safety, e.g. ISO14000 and OHS18000 (Zwetsloot 2003). Similarly, financial services have developed *ratings and indices* against a variety of business aspects. FTSE4Good and Dow Jones Sustainability Index (DJSI) publish their *rankings* of the top 100 e.g. FTSE100 and companies refer to this within their corporate communications. The AccountAbility Sustainability ratings review Fortune 100 companies and publishes a ranking in relation to the areas of CR accountability, strategy and performance (AccountAbility/csr network 2004), e.g. in 2004, BP was ranked 1st, EDF (electricity utility) ranked 8th and Eon (power utility) was 66th (anon 2005a). Benchmark systems have also evolved, e.g. Business in the Community's Corporate Responsibility Index, e.g. in 2005 publication, the utilities RWEpower was placed 14th, and EDF Energy placed 29th out of 131 companies (Grainge 2006). Finally there are *award* recognitions from external organisations assessed on the basis of their CR reporting and performance disclosure, e.g. ACCA Sustainability Awards (ACCA 2004, Cramer 2005).

Although corporate social reporting is a recognised activity for assessing corporate social performance and providing reliable information to external constituencies (Wood 1991b), caution is recommended in interpreting corporate social performance rankings and comparisons. This is in relation not only to different emphasis and weightings of the composite and aggregating process employed by assessing bodies, or the validity and completeness of the self-assessment data provided by companies, but also in the context

that it is generally difficult to make direct comparisons amongst companies, even those in the same sector (Krajnc & Glavic 2005). Standards for stakeholder engagement and stakeholder management issues also exist. The ISEA3000 and

CSR Performance-related tools & instruments

Rating Indices:

- **DJSI Index & FTSE4Good**
Stock Market screening
- **Accountability rankings**

Benchmarking Indices:

- **Corporate Responsibility index** – Business in the Community benchmarking
- **London benchmarking Group** – community giving benchmarking initiative by Corporate Citizenship Company

Awards:

- **ACCA Sustainability Award**
by the Association of Certified Chartered Accountants.

AA1000 both seek to assure that stakeholder-related process occurred in a transparent, material and effective manner (Blyth 2005, ACCA2004, AccountAbility/csr network 2004)).

Generally however, there are also challenges that some prescriptive standards are inflexible and restrictive, effectively restraining CR development and innovation at the business unit and the corporate level (ACCA 2004, Chatterji & Levine 2006). That being the case, reference to external standards in terms of external reporting is suggested as a useful route for identifying CR issues for the company in relation to creating action plans for developing suitable performance measurement systems (Cramer 2004, Waddock 2002, Szekely & Knirsch 2005). Much of this depends on the CR issues and business-related contexts, which is the subject of the next section.

4.5 CR-related generic and specific issues

CR-related issues can be categorised into economic, social and environmental themes (GRI 2006, ACCA 2004, Elkington 2001). Within each theme there are specific issues that can be identified. The typology overleaf illustrates the breadth of issues and complexity of CR and corporate social performance. Not only does this indicate the complexity of CR-related areas, it also highlights the need for identifying methods of decision-making and prioritisation in order to develop appropriately comprehensive corporate responsibility performance measurement systems with some ability to rationalise why particular measures of performance are selected.

In summary, the business and society field has provided improved understandings in relation to organisational behaviour, organisational culture and organisational attitudes to domains of corporate social responsibility. It has also identified their influences on corporate social performance, including the approaches and systems employed, the aspirations and rationale of application, the interpretation and communications, not only in terms of their corporate social

performance and performance management, but also as to the degree of integration of CR across the business. The CR debate is therefore moving away from *should we do CR?*, to *what CR should we be doing?*

CR Thematic Typology

Overview CR Theme	Theme descriptive
ECONOMIC	
Money / cash flow movement	sales, profits, taxes, subsidies, dividends, shares allocated, fines paid, Goods purchased
Business investments	productivity investments, capacity investments, risk reduction investments, training investments, research & development investment, supply-chain investments, community investments
Employee contributions	wages, benefits, profit-sharing, bonuses, pensions, social security, health benefits, employment profiles, profession types / levels
Financial Ratios	financial ratios, return on assets, RONA, liquidity, ROCE, return on capital, Internal rate of return IRR, Net Present Value NPV, Payback, Investment Appraisals
Productivity Indicators	number of patents, number of partnerships, timely payment of suppliers,
Economic impact assessments	outsourcing, restructuring, GDP contributions, supplier location, selection, numbers, sizes, attraction of additional inward investment, multiplier effects
Corporate ethics	corporate governance, minority shareholder rights, anti-trust, anti-bribery/corruption, fair trade, animal welfare, anti-competitive, political lobbying & association, operational & business risk disclosure, shareholder profiles, Board/CEO remuneration
ENVIRONMENTAL	
Environmental impact assessments	product lifecycle efficiency, product impact assessment, project impact assessment, environmental impact assessment, product lifecycle impact, ecological footprint, new build,
Resource use and conservation	energy, water & material use, management & conservation, renewable energy, alternative technology, material utilisation, waste management & conservation, re-use, recycling, packaging, fines, offences, awards, certification, supply-chain performance,
Emissions and pollution conservation	effluent and water quality release and reduction, greenhouse gases, ozone-depleting gases, air quality, emissions and reduction, noise pollution, transport and distribution
Sustainable product development	recyclability design, eco-design, product substitution, endorsement, supply-chain certification, material substitution, process change, consumer product disposal, consumer product (eco)-labelling, producer responsibility,
SOCIAL	
Core labour standards	diversity, equal opportunities, gender balance, human rights, collective bargaining, forced labour, child labour, freedom of association, redundancy support
Working conditions	employee satisfaction, health & safety, training, working conditions
Community engagement	employee volunteer programmes, health programmes, HIV/AIDS, water and sanitation projects, energy projects, enterprise programmes, agriculture programmes, food aid programmes, school/education programmes
Stakeholder engagement	ngo memberships, stakeholder representation in decision-making, stakeholder consultations
Corporate philanthropy	voluntary programmes, charitable donations, foundation incorporation

Author's typology from Global Reporting Initiative, BiTC Winning with Integrity & ETHOS Institute CSR Reporting Guidelines

In recent years there is a move towards the strategic dimension, that of establishing the company value and the company's performance in a particular area of CR activity. Generally there is growing interest to establish the 'business case' for activities, whether for legitimacy, reputation, or operational efficiency and there are a number of standards and guidelines with a variety of policies, processes and measures that allow any business to embark on the CR route and create what is termed corporate social performance.

The challenge of developing corporate social performance in practice, however, should not be underestimated,

'considerable gaps between CSR rhetoric and CSR on the ground exist because of difficulties in making it operational'

(Grayson & Hodges 2004).

Corporate social performance, as the identified mechanism for identifying CR, is the subject of the next section.

5. Corporate Social Performance

5.1. Corporate Social Performance

Corporate social performance (CSP) is the fundamental linkage between the conceptual issue of CR and practical outcome and measurable impacts of CR-related activities. CSP can be defined as the interaction among the principles of social responsibility, the process of social responsiveness and the policies, programs and outcomes from societal relationships and social issues (Wartick & Cochrane 1985, Wood 1991), with strategic CSP performance being described as the process for closing the gap as a function of fit between specific strategies and structures applied by the corporation and the nature of the social or environmental issue or concern (Husted 2000).

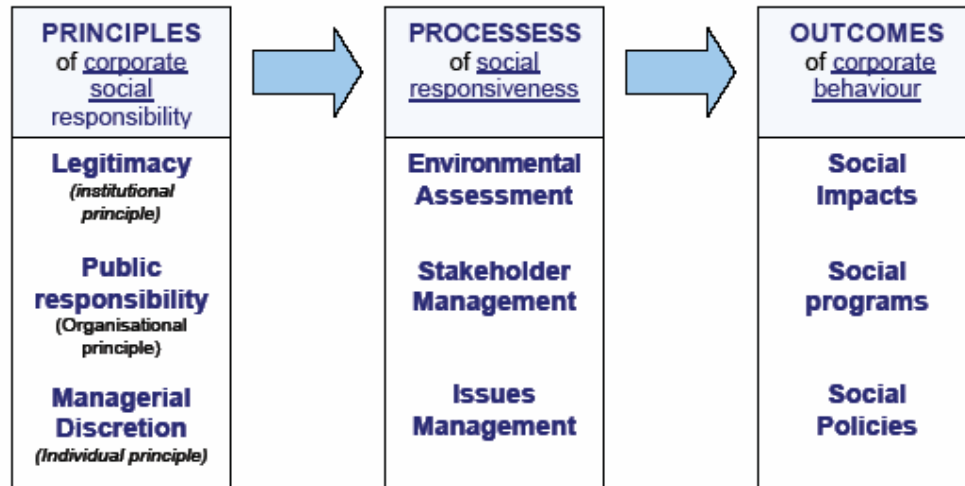
5.2 Corporate Social Performance frameworks

Building on Wartick & Cochran's work, one of the most significant contributions to CSP is the **Corporate Social Performance model** (Carroll 2000), developed by Donna Wood in 1991. Wood expands the social responsiveness aspect in relation to the elements of environmental management, issues management and stakeholder management, as distinct processes of corporate social performance. Wood goes on to expand policies as but one social output or outcome, alongside the social impacts from the action and the performance of the social program itself, as illustrated overleaf.

Wood suggests that it is not necessary to have a "good" connotation to this framework for CSP, it basically defines the 'domains of activity' and elements that contribute to performance. The *principles* relate to the motivating reasons and behaviours of the firm to an issue, whether for legitimacy, public responsibility or through managerial discretion. The *processes* relate to the process of scanning the external and internal environment for relevant issues, conducting stakeholder management through stakeholder engagement as the process of managing key social issues. The *outcomes* of the corporate activity can be categorised by the

social policies and programmes developed, and an ability to measure the effectiveness of the programmes and policies in terms of societal outputs.

Corporate Social Performance model



(Wood 1991)

The outcomes domain has been further re-orientated from the perspective of 'owners' of outcomes, namely the *internal*, *external* and *institutional stakeholders*, providing insight to assessment mechanisms for CSP (Woods & Jones 1995).

Swanson also used Wood's CSP model for re-orientation in relation to

institutional and organisational decision-making and corporate culture in the context of personal values and management decision-making at macro and micro levels in relation to social impacts. This links with Miles' (1986) social responsiveness concerns of executive's awareness and the need for an ability to listen and respect stakeholders.

social responsiveness is improved with the:

1. extent company executives listen.
2. the extent of awareness of (have identified and analysed the impact) of potential public policy issues (awareness).
3. the extent to which company executives respect the legitimacy of outsiders (stakeholder legitimacy) - receptivity, awareness & legitimacy.

(Miles 1986)

Mitnick proposes that 'good' performance measurement in itself can have questionable sources of achievement, whether it is a result of its actions or despite it (Mitnick 2000), i.e. did it do bad, though its intentions and actions were to do

good, but its execution was poor, or perceptions of doing good when the intentions were not necessarily good but the execution was good.

Although of high academic regard there are claims that Wood's 1991 CSP model contains intuitive domains and categories as opposed to being a fully integrated theoretical model (Swanson 1999, Husted 2000, Davenport 2000). One key criticism of the Wood model is that it does not serve to a firm's need for operational performance (Ruf et al 1998), the need to determine the actual measures of corporate social performance.

5.3 Corporate Social Performance measurement

Sustainable development indicators and corporate social performance systems developed by business still appear decoupled from core business functions (Lawton, McKeivitt & Millar 2000, Weaver Trevino & Cochrane 1999) with little evidence of explicit links between measures used for external reporting and those used for internal performance management (Innes & Norris, 2005).

Clarkson takes a results orientated stance, encouraging internal and external audits as methods of assuring performance, stating:

**‘ performance is what counts.....
[it] can be measured and evaluated’** (Clarkson 1995)

Compared with external reporting audits, company specific internal audits are less common (Waddock & Smith 2000). As illustrated overleaf, a process can be applied that assesses the internal and external mismatches. Beginning with a dedicated steering committee and an assessment of corporate culture and mission statements, the matches and underlying issues are clarified followed by industry-based research and stakeholder interviews, and the preparation of a report for senior management and steering committee members.

The measurement of CSP is a complex issue, with as much importance placed on the belief from the claims of performance by stakeholders being just as

relevant to the commitment and efforts of the company conducting the measures (Mitnick 2000, Husted 2000 Ruf et al 1998), requiring a balance of both objective measures by the firm and subjective perceptual appraisal of performance by stakeholders.

Approaches to evaluating the appropriate measures include an internal bottom-up approach, involving external assessment and internal identification and iterative prioritisations from

comparison with strategy (Wokutch & Fahey 1986) or a more external approach of selecting external measures and standards, then screening and ranking process to identify key priorities and measures (Keeble et al 2004).

Care is recommended to include ethical considerations in corporate strategy to ensure they are not developed devoid of ethical components (Stead, Stead & Gray 1990), recommending three key ethical considerations:

- **stakeholder's values & interests.**
- **executive's value systems.**
- **societal issues faced.**

It is also strongly recommended that CR performance measurements and achievements be linked to financial and other remuneration packages (Haigh & Jones 2006).

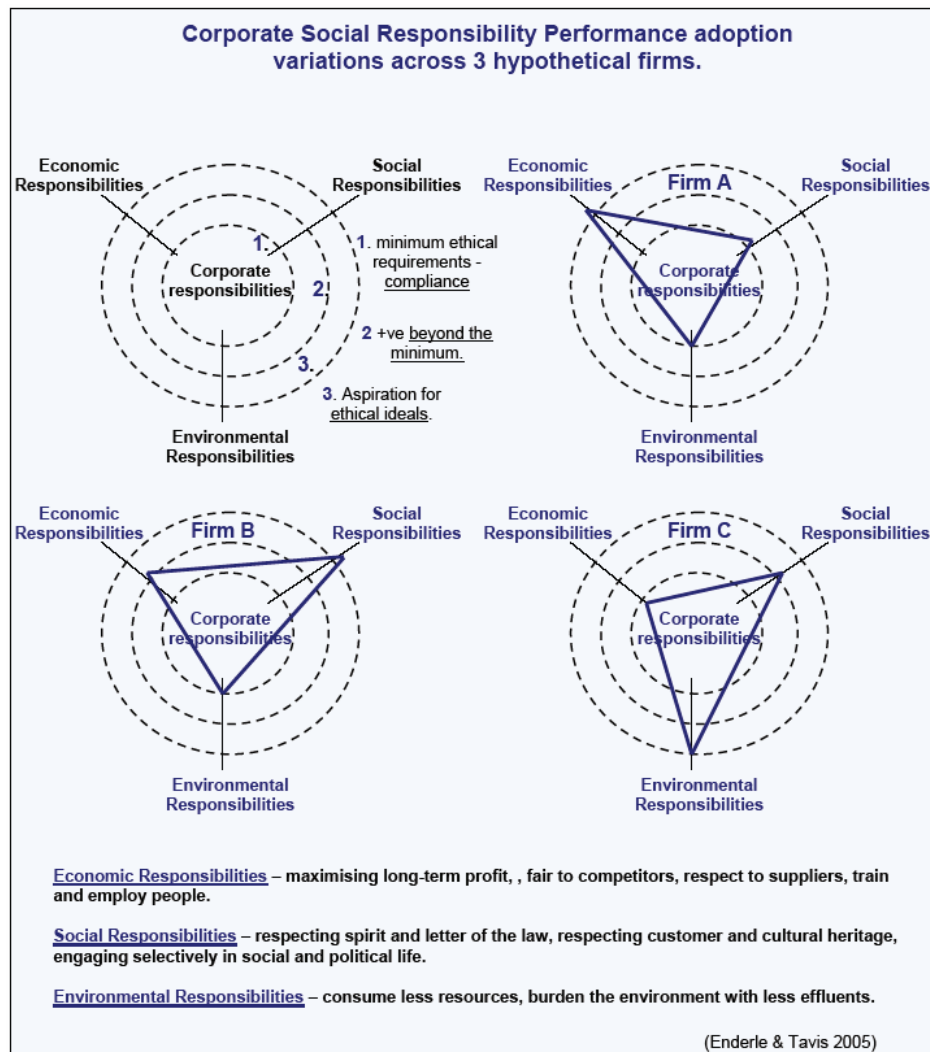
CSP performance management -

developing a Responsibility Audit:

1. **CEO commitment to audit & steering committee to guide audit.**
2. **Diagnose corporate culture and designated areas** (human relations, community, quality, environmental practices) .
3. **Analyse mission statement, identify mission and performance mismatches.**
4. **Seek fundamental or underlying reasons that performance and goals not consistent .**
5. **Collect industry information, existing benchmark studies and available information on competitors, industry standards for each designated area.**
6. **Interview relevant stakeholders involved in the functional areas about perceptions of firm's socially responsible performance.**
7. **Compare internal data and external stakeholder perceptions.**
- 8.. **Write final report for corporate managers and steering committee.**

(Waddock & Smith 2000).

It is expected that corporations will demonstrate different capabilities across CR issues and areas of performance (Enderle & Tavis 2005), leading to different levels of CR adoption in the different arenas of economic, social and environmental performance, illustrated below.



Firms A, B & C all would have the same total aggregated CSP score, though achieving this through different CR theme performance. This supports claims that companies can develop opportunities from CR by developing inimitable resources (Shrivastava 1995), whether as internal skills, knowledge, motivation, systems and activities or from developing unique relationships and trust factors with appropriate stakeholders (Aguilera et al 2005); fundamentally challenging

the claimed isomorphism aspects of coercion, mimicry and normative isomorphism (Lawton, McKevitt & Millar 2000). This model does not take into account of the fact that economic and environmental integrity terms are well understood and developed, however social equity is taking longer to establish corporate commitment (Bansal 2005). To this end, practical challenges for the firm includes prioritising objectives, balancing corporate consistency needs for management with local stakeholder issues and the inherent difficulty in 'predicting the future' in relation to strategic and operational requirements (Enderle & Tavis 2005).

5.4 Organisational theory and CR

The organisational behaviour of the firm can also be described in terms of organisational theory and different organisational orientations and perspectives.

From an *institutional theory* perspective, isomorphism brings about certain CR-related behaviours, standards and codes of practice some of which become a normalised institutional norm, e.g. global corporations and the adoption and adherence to the Global Reporting Initiative (Bansal 2005).

The *resource-dependency* approach, would approach stakeholder-agency theory essentially based on power differentials (unequal resource dependencies) between managers and stakeholders, with less powerful stakeholders being less able to demand management make themselves accountable (Frooman 1999). Changes in stakeholder power can occur through exogenous shocks or by innovations in the way stakeholders do business (Hill & Jones 1982).

The *resource-based* view seeks to develop non imitable and valuable resources within the firm. Examples of resource-based view approaches would include developing unique relations with relevant stakeholders, developing understanding, knowledge and capacity in areas of strategic importance to the future (Miles & Covin 2000, Husted 2000, Bansal 2005, Litz 1996).

Legitimacy theory occurs when a powerful enough alliance of stakeholders become concerned with an issue legitimacy gap. This gap between the firm and social perceptions of the company, the company must manage and prioritise the perception issue, which is expected to be championed by at least one stakeholder (Lawton, McKevitt & Millar 2000, Nasi, Nasi & Philips 1997).

Social network theory, proposes recognising, understanding and responding to changes in the social network and determining the role and capability of the company and where it can best fit in. This is a useful perspective for the company in relation to the highly complex arena of corporate social responsibility (Phillips et al 2003, Rowley 1997, Heuer 2001, Kohren 2003).

5.5 Corporate reputation, branding, CR and CSP

Corporate brand and business reputation is where there is most consensus on the business case for corporate social performance (SustainAbility/UNEP 2001). Corporate reputation is a recognised intangible asset, with credibility, trustworthiness, reliability and responsibility providing the foundation for superior reputation advantages (Miles & Covin 2000). Corporate reputation in relation to CSP has different focal-point CR issues that vary with the industry and sector (Brammer & Pavelin 2006), with a clear positive effect of environmental protection for the utility sector. Corporate reputation has also been related to a firm's ability to navigate complexity and have clear strategies that relate to CR (Werhane & Freeman 1999). Mutual trust and co-operation are drivers of competitive advantage (Jones 1995), and with the firm acting as if the stakeholder mattered, the firm can generate an improved corporate reputation (Jones & Wicks 1999).

corporate social performance is assessed in terms of a company meeting the demands of multiple stakeholders ' (Ruf et al 2001).

Stakeholder theory is the subject of the next section.

6. Stakeholder Theory

This section describes the salience of stakeholders from the firm perspective, the organisational theory perspective, the stakeholder theory perspective and from a management perspective. As discussed the perspective of organisations and managers to stakeholders underpins CR, CSP and therefore elements of the outcomes of corporate responsibility performance measurement systems. The challenge remains that:

‘ the term [stakeholder] means many different things to many different people’ (Donaldson & Preston 1995, Philips et al 2003).

Stakeholder theory fundamentally challenges the tradition view of the firm. Elements of stakeholder theory also underpin fundamental approaches within corporate social responsibility and corporate social performance literature (Clarkson 1995, Wood & Jones 1995, Donaldson 1999).

6.1 The Societal perspective of the firm

In the neo-classical view of the firm, the stockholder has sole property rights for the firm and executive managers are the *agents* working on behalf of the *principal* (the stockholders) (Jensen & Meckling 1976). Stakeholder theory is one of the strongest critics to the neoclassic issue of ‘property rights’ in that property rights do not belong solely to the shareholder (Donaldson & Preston 1995). Stakeholder theory recommends mutual trust and endorses public responsibility activity with all legitimate stakeholders (Jones 1995). The notion that local communities, employees as well as the regulators all have stakes in the property rights of the firm opens the debate to consider a broader definition and perspective of the firm; a stakeholder view of the firm. From this perspective, the firm is characterised by relationships with many groups and individuals (stakeholders), each with the power to affect the firm’s performance and a stake in the firm’s performance (Jones 1995). In relation to strategic stakeholder management, as the consideration of stakeholders within the business

environment and for the organisation to develop responses through a strategic assessment and management of stakeholders (Freeman 2004). R. Edward Freeman produced a stakeholder definition twenty years earlier, a stakeholder being;

‘ any group or individual who can affect or is affected by the achievement of the firm’s objectives’ (Freeman 1984).

Stakeholders are identified as providing three key roles, as a source of *expectations*, as recipients of corporate *experience* and as *evaluators* of meeting societal expectations (Wood & Jones 1995).

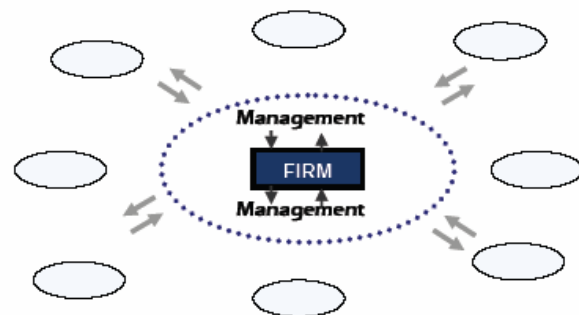
Stakeholder theory views the firm as an organisational entity, as a diverse multi-dimensional discourse with a broad range of actors (stakeholders) that have a relationship and interest in the firm so as to ensure the firm (organisation) is a going concern (Donaldson & Preston 1995).

Stakeholder Model - View of the Firm:



source: Donaldson and Preston 1995

Management as stakeholders in the Firm



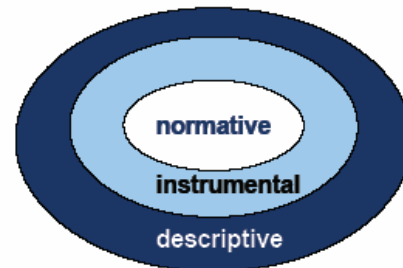
Adaptation of Donaldson & Preston 1995

Stakeholder theory also perceives the managers as another stakeholder in relation to the firm (Donaldson & Preston 1995). For stakeholder theory, the perspective of the overall roles of management and the broader goals of the firm has altered.

One basis for accepting the stakeholder model for the firm is with the conditional elements of direct relationships or ‘social contracts’ between the stakeholders

and the firm (at the nexus) and vice versa, in a dyadic relationship (Jones 1995), evolving from Hill and Jones' (1982) 'agency-stakeholder' model. Stakeholder theory has incorporated viewpoints of transactional economics, resource based and institutional theory of the organisation (Jones & Wicks 1999). Stakeholder network theory is also being considered to reflect the dynamics and contemporary views of social network systems theory (Oliver 1991, Rowley 1997, Mitnick2000). As opposed to dyadic relationships, this theory proposes that an aggregation of stakeholder influences affect or influence the firm's behaviour (Rowley 1997, Donaldson 1999).

Stakeholder Taxonomy Model



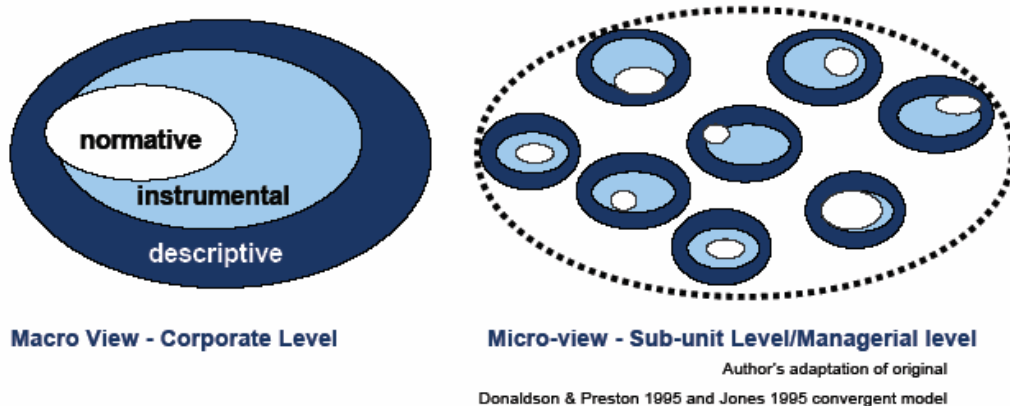
Donaldson & Preston 1995

Donaldson and Preston contributed to the taxonomy of stakeholder theory in 1995; through concentric normative, instrumental and descriptive elements of stakeholder attitudes from the firm. The *normative* approach relates to what the manager *should* do. The *instrumental* role links stakeholder approaches strategically to company objectives and *descriptive* (empirical) theory is used to explore and explain specific corporate behaviour and characteristics, e.g. the way managers think about managing (Donaldson & Preston 1995).

Donaldson and Preston's stakeholder theory created discourse in academic circles as to the causality and dominance of the different taxonomy classifications (Jones 1995, Harrison & Freeman 1999.) A controversial evolutionary proposal comes from convergent stakeholder theory (Jones & Wicks 1999, Swanson 1999), whereby normative and instrumental stakeholder attitudes can exist simultaneously and in parallel with each other; a significant adaptation of the original concentric theory assumption (an illustrated example of the variance is provided below).

Adapted Stakeholder Theory model

An eclectic and dynamic mix of instrumental and normative behaviours, without the previously assumed encapsulation of a normative core.



Welcomme, Cochrane, Rands & Haggerty (2003) identified support for firms' corporate social responsiveness on the strength of its stakeholder relations, indicating that firms work with stakeholders from both the instrumental and the normative bases.

One key issue for strategic stakeholder management is that without the normative component a manager can treat stakeholders as a means to an end, e.g. personal rewards and shareholder gain (Berman et al 1999), compared within a broader perspective that stakeholders are themselves the ends and the means, with their own intrinsic value (Jones & Wicks 1999). The issue is more about developing good, sound stakeholder relationships ensuring mutual interests are considered, even when not everyone's needs or interests can in fact be met ' (Waddock & Smith 2000), as the ideal of goal congruence requiring stakeholder consensus is a relative phenomenon (Pedersen 2006).

Countering claims of disproportional allocation of resources towards NGO issue-orientated stakeholder (Sethi 2001), the development of cross-sector partnerships as strategic stakeholder alliances for improving corporate social performance and adopting voluntary codes of practice have recently been identified as improving corporate social performance (Arya & Salk 2005).

6.2 Business ethics, personal values and CSP

The application of business ethics is considered an important aspect for corporate social performance. An organisation is described as an enhancement of 'shared reality' (Bowen 2004) and business ethics, top management values and personal beliefs shape and develop an organisation's consciousness as

**'the images of organisations
and their leaders are intertwined'** (Roberts 2003).

The issue of morality and behaviour has been analysed into three behavioural categories (Carroll 1991); acting *morally*, *immorally* (being aware of the morality of an issue and acting immorally) and *amorally* (being unaware of moral issue and acting without moral consideration of the consequences). Though there are claims of corporations being analogous to moral persons, accountability of a corporation is challenged on the basis that it is neither an individual nor a total social system (Werhane & Freeman 1999). The American Law Institute however identified that corporate officials are no less morally obliged than any other citizen to take ethical considerations into account (Donaldson & Preston 1995).

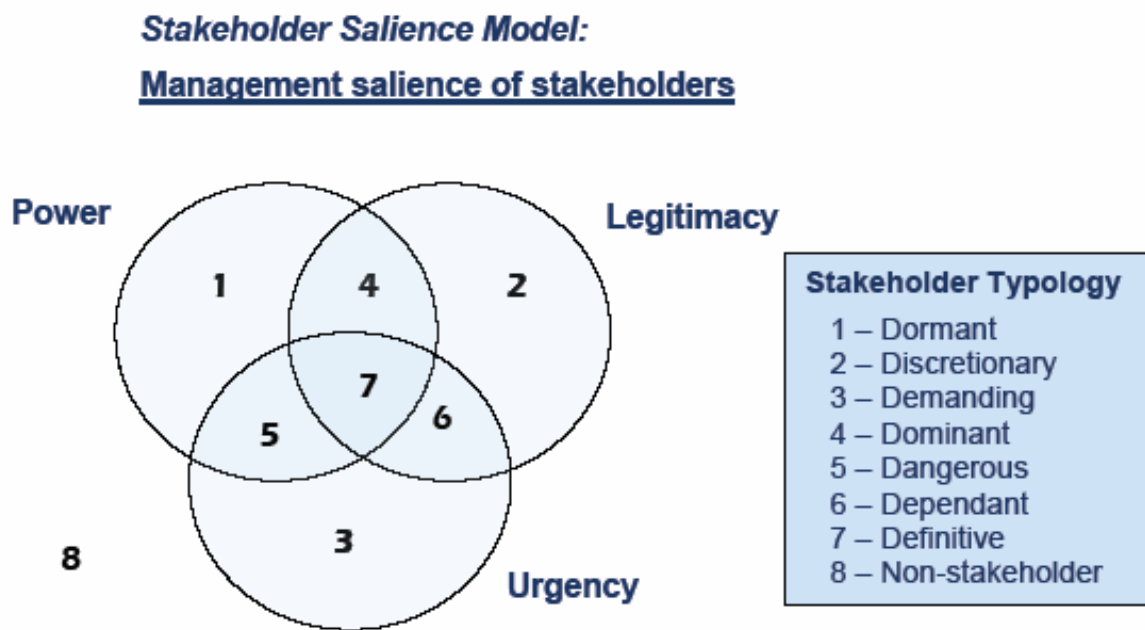
In terms of dealing with issues and ethics within society, managers can manage relationships with stakeholders but cannot deal with 'society' as a concept (Clarkson 1995). Top management has a significant role in creating organisational processes that shape the reorganisation and institutional components of corporate social performance (Logsdon & Yuthas 1997). External pressures and top management commitment influence the nature of corporate ethics programs and executives need to consider their personal roles and values in corporate social performance (Weaver et al 1999, Atkinson et al 1997, Riordan, Gatewood & Bill 1997).

Personal value issues are also unavoidable in any attempt to combine performance into an overall measure of corporate social performance (Wokutch & Fahey 1986, Ruf et al 1998, Swanson 1999), and the corporation's

relationships have an effect on performance, with managers as allocators of resources affecting the strengths of stakeholder relationships (Berman, Wicks , Kotha & Jones 1999). The quality of internal, external and distil stakeholder relationships being critical to uncovering the ‘true’ issues for corporate social performance (Sirgy 2002).

6.3 Stakeholder identification and salience

Mitchell, Agle and Wood’s 1997 model of stakeholder salience assists with the identification and prioritisation of stakeholders (Donaldson 1999) and for the salient categorisation of stakeholders by managers (Freeman 2004). Using the terms *power*, *legitimacy* and *urgency*, they identify eight stakeholder behavioural types; ranging from *definitive*, to *dormant*, as illustrated.



Mitchell, Agle & Wood (1997).

This allows the manager to cognitively assess the stakeholders and to understand the behaviours or motivations of the stakeholder more constructively. In application however it was found to be difficult to operationalise with objective measurement (Harvey & Schaefer 2001).

Other literature explores strategic stakeholder management of risk and primary and secondary stakeholder analysis (Clarkson 1995), with distinctions in the weightings such as importance and power (Hill & Jones 1982), outputs and inputs (Phillips et al 2003) and debates on the utilitarian or the libertarian view to stakeholders and their stakes (Donaldson & Preston 1995). The literature also explores internal and external views of the stakeholder and equality and equity engagement behaviours by the firm.

Most scholars agree that stakeholders have intrinsic value, though the debate centres on whether each stakeholder has an equal status (Donaldson 1999) and those that argue the case for “preferential” stakeholders with a more equitable attention from the organisation or manager (Philips et al 2003). Friedman and Miles (2002) emphasise the need to look at individual relationships and differentials in the stakes, emphasising also that organisation and stakeholder relationships change over time as a result of social change, with Bhambri and Sonnenfeld (1998) recommending that depth of involvement is better related for high social performance than breadth of contacts, though shareholders, for example, should not be treated as a homogenous group, (Bhambri & Sonnenfeld 1998, Johnson & Greening 1999), and for example, in the utility sector regulatory bodies as a stakeholder group, create dysfunctional tensions (Harvey & Schafer 2001).

Having established the significance of stakeholders and stakeholder theories to corporate social performance, the field of performance measurement explores the key contributions that can inform the operationalisation of corporate social performance.

7. Performance Measurement Systems

Performance measurement systems (PMS) are an essential component for determining and improving corporate social performance, assuming that formal, balanced and integrated performance measures improve a company's ability to perform (Bititci et al 2004). This section identifies the key elements of non-financial performance measurements systems and considerations for CSP performance measurement system design.

7.1 Evolution of PMS

Every business has developed (or is in the process of developing) performance measurement systems, adopting the performance measurement concept of: '**you can't manage what you can't measure**' and '**what gets measured gets done**' (Eccles 1991, Kaplan & Norton 1992).

Financial management and accounting was the first performance criteria developed and many measures used today were developed and established by the end of the 1890's (Otley 1999, Ghalayini & Noble 1996). Du Pont, in 1903, was amongst the first to establish aggregated financial performance approaches performance, as profit and rate of return were not considered valid composite indicators of the organisational success, as they did not identify areas for improvement and effectively were responsible for creating dysfunctional behaviour (Otley 1999, Neely et al 2005, Globerson 1985, Ghalayini & Noble 1996)

Traditional financial measures were being identified as inflexible, expressed in irrelevant terms and not directly related to the company's strategy, and subsequently failing to inform long-term goals sufficiently (Maskell 1989, Cross & Lynch 1992, Keegan et al 1989, Otley 1991, Eccles 1991, Eccles & Pyburn 1992, Kaplan & Norton 1996). Companies discovered that new strategies and rapidly,

changing competitive markets required new types of non-financial measurement systems (Otley 2003, Kaplan & Norton 1996, 2001b).

The increasing effects of competition and globalisation, changing external demands and environmental context of the firm and the recent ability to harness information technology to measure performance are factors towards the importance now being placed on performance measurement (Neely 1999). In establishing a performance measurement system, a company should have assessed the purpose of the measures, how the measures were identified, what the long term progressive target measures are, how they reinforce the company's strategies and culture and how much it will cost to implement (Moullin 2004, Neely et al 1997, Tangen 2005b).

A consistent challenge though is the tendency towards short-termism and issues that are less easy to quantify and measure generally receive less emphasis (Otley 2003). From different organisational structures, performance measurement can also encourage 'silo' mentality and a lack of cross-functional performance activity (Kutucuoglu et al 2001).

These are concerns for corporate social performance, where some measures are less tangible than others to clearly establish and the system itself relies on the entire organisational structure's co-operative involvement.

7.2 Definitions and considerations for measures and PMS

Measurement involves concepts, as what is to be measured is a standpoint. Measurement focuses on abstraction, choosing one issue over others. What gets measured appears important and therefore measurement grants importance (Enderle & Tavis 1998).

**'performance itself is an ambiguous term, as it does not specify
to whom the organisation is delivering the performance'**

(Otley 1999).

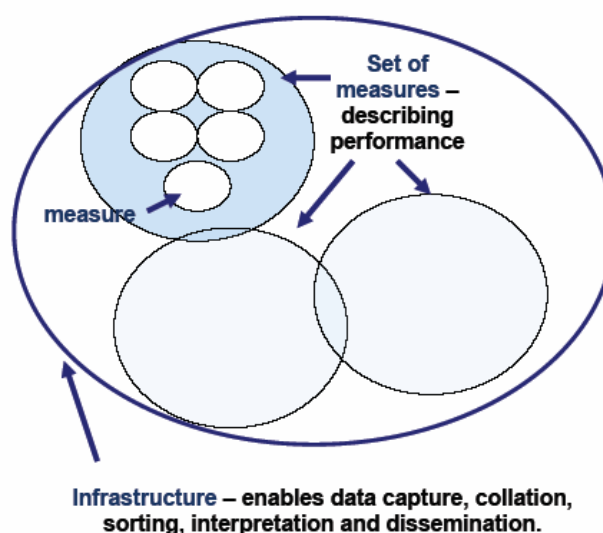
Ambiguity originates from bounded rationality and the fact that performance measurement is not a purely rational function. It is filled with limitations, conflicting interest, uncertainties, paradoxes and ambivalences, which make performance measurement a 'tricky undertaking' (Vakkuri & Meklin 2006). Attention is recommended towards actually defining performance and also clarifying the perspectives having identified who are the relevant stakeholders to assess performance (Otley 1999).

Even with different uses for performance measures and different designs of performance measurements systems, general definitions are important to clarify.

- **Performance measurement** can be defined as the process of quantifying the efficiency and effectiveness of action.
- **A performance measure** can be defined as a metric used to quantify the efficiency and/or effectiveness of an action.

- **A performance measurement system** can be defined as the set of measures used to quantify both the efficiency and the effectiveness of an action. (Neely, Adams and Kennerley 2002; Neely, Gregory & Platts 2005).

Elements of performance measurement system



(Kennerley & Neely 2003)

Efficiency refers to the economic measures of the firms' application of resources, when providing a given level of stakeholder satisfaction, with the *effectiveness* being the level of stakeholder satisfaction met (Neely, Adams & Kennerley 2002).

7.3 Dysfunctions to consider from PMS

Performance measures can be too powerful as mechanisms for influencing behaviour (Otley 2003, O'Mara Hyland & Chapman 1998), highlighting the need to design PMS to reduce the effects of dysfunction. Smith identified seven key areas where performance measurement dysfunctions occur: the *tunnel vision* effect of focussing on measuring certain areas; *sub-optimisation* by creating conflicting goals; *myopia* and impatiently generating long-term performance; the power of *convergence* and creating 'average' performance; *ossification* for entrenchment in old routines; *gaming* for personal self-interest and *misrepresentation* whereby the true performance is not captured, (Smith 1995).

Dysfunctions of Performance Measurement Users:

- 1. Tunnel Vision** - due to procedural limitations, performance measurement is confined to the 'measurable' areas of the organisation's activities.
- 2. Sub-optimisation** - pursue goals that are different and contradictory to higher order system goals.
- 3. Myopia** - requires patience to see the effects realised.
Performance measurement concentrates on the short term, the reason for impatience is usually the inter-temporal comparability of data.
- 4. Convergence** - difficult to compare heterogeneous and unique organisations against each other, standardising organisations makes them more easily manageable, and simultaneously induces them towards the 'average'.
- 5. Ossification** - performance measurement encourages old routines to be exploited instead of exploring new ones.
- 6. Gaming** - may create potential gains in altering behaviour to measurement system.
- 7. Misrepresentation** - performance indicators are surrogates for real measure, there is chance of the match between reported and actual behaviour, e.g. improve your performance or 'improve' the reports of performance.

(Smith 1995)

7.4 Introducing PMS design and enablers

The process of PMS design is an interactive dialogue (Haas & Kleingeld 1999). A performance indicator is a rule that evolves the quantification of performance, by adding symbols (figures) to phenomena (performance) through a set of procedural rules (indicators), requiring a 'fit' of performance measurement

systems with organisational goals and organisational behaviour. Senior management are required to identify exactly what they understand are the relationships between performance and the associated management actions and results before developing the PMS (Eccles & Pyburn 1992). Developing solutions for performance measurement is however, a confusing, complex task, with many choices and dysfunction occurs just through the 'shifting' dynamics of the business context (Halachmi 2005).

According to Neely et al (2000), much of the academic and practitioner literature about performance measurement has been too superficial, ignoring the complexity involved in actually designing measurement systems. Lohman et al (2004) agree, highlighting the fact that most literature assumes an almost “greenfield” situation, whereas in reality the existence of other measures and parallel performance measurement initiatives changes some of the emphasis from a *design approach* to a *co-ordination approach* (Lohman et al 2004). Some of the key issues facing many businesses relate to there being too many performance measures, many are not consistent with strategy and over time measurement systems have become less valuable. They become more complex with new measures added, with obsolete measures rarely deleted; ‘ghosts-of-management-past’ derived from different strategies and legacy systems. This effectively creates unwieldy, sub-optimised systems (Keegan et al 1989, Eccles 1991, Neely et al 2000).

Balancing measures to generate performance involves trade-off of different and sometimes competing aspects of the business. Essential considerations for developing comprehensive performance measurement systems include understanding the business performance model, agreeing the measurement approach and specifications and adjusting the performance reward system to re-orientate and prioritise the initiative (Eccles & Pyburn 1992).

Although the design process is valuable the real challenge is implementing it (Bourne et al 2000). People have reasons to undermine the credibility of the

measures, 'some seek to game from the system and others purely want to prevent it ever being implemented'. The design process is as a cognitive exercise, translating views and needs into business objectives and appropriate performances and therefore the two essential design stages are essentially the

identification of the key objectives to be measured and the actual *designing* of the measures (Bourne et al 2000). One of the main reasons for poor implementation are the disagreements and tensions created from poorly defined and imprecise measures (Neely 1999), emphasising the need for deeper design considerations. Designing measures that can assess the implementation of strategy and challenging the strategic assumptions need to be considered at the design stage (Bourne et al 2000) and there is a need to have an adequate understanding of the whole system even when developing a micro or sub-system (Dervitsiotis 2004).

Design-related Performance measurement system issues:

1. **resistance to measurement.**
2. **computer system issues.**
3. **top management commitment distracted.**

(Bourne 2000)

The enablers of successful performance measurement systems such as *process*, *people*, *systems* and the *culture* (Kennerley & Neely 2003) are useful design concepts areas for consideration.

Enablers for a successful PMS

- **Process** – existence of a process to review, modify and deploy measures.
- **People** – availability of skills to use, reflect on, modify and deploy measures.
- **Systems** – availability of flexible systems to enable collection, analysis of appropriate data.
- **Culture** – a measurement culture, valuing measurement, appreciating relevant and appropriate measures.

(Kennerley & Neely 2003)

Studies in practice have identified performance-related information overload in business and issues whereby performance measures in many organisations are rarely integrated with one another or aligned to the business process (Neely et al 1997).

7.5 Early lessons learned about PMS design

The question for performance measurement systems centre around;

“What should be measured ? “ and “How should it be measured ?”

(Tangen 2005b).

The ‘how should it be measured’ relates to the characteristics of the measure, the performance measure requirements. The ‘what should be measured’ relates to the overall system requirements, the balance of financial and non-financial issues (Tangen 2005b).

7.5.1 PMS design lessons for performance measures

In relation to considerations for the measures within a performance measurement system there are established recommendations from the empirical literature. In the first instance measures should be derived from strategy, business process and consultations on performance with relevant stakeholders (Globerson 1985, Keegan et al 1989, Maskell 1989, Eccles & Pyburn 1991, Fortuin 1998, O'Mare, Hyland & Chapman 1998, Bourne et al 2000, Neely et al 2002). It is vital also to incorporate an understanding of cause and effects and relationships with other aspects of the business (Keegan et al 1989).

Performance measure characteristics required include being relevant, simple, quick to measure, visually presentable and easily understood (Globerson 1985, Maskell 1989, Crawford & Cox 1990, Fortuin 1998). It needs to be based on an explicit purpose and has an accurate formula that is comparable and consistent, can measure trends, encourages improvement and incorporates target setting (Globerson 1985, Crawford & Cox 1990, Olian & Rynes 1991, Fortuin 1998). It is preferred that the measures are collectable from existing data systems (Globerson 1985); and that they use objective, measurable ratios rather than absolute numbers or subjective data (Globerson 1985). The performance measure must be in direct manageable control of the person responsible for that

aspect of performance (or in co-operation with others) (Globerson 1985, Fortuin 1998) and where possible the responsible person(s) actually collect the data (Crawford & Cox 1990). It is also critical to ascertain agreement on the meaning and relevance of the measures between the 'suppliers' of the measure and the 'consumers' of the measure (Fortuin 1998). The measure needs to be within a closed management loop so that responses or actions can be fed back (Globerson 1989, Fortuin 1998). Care is recommended to ensure the performance measure is aimed at the process, team or group level as opposed to the individual level. As illustrated above, Neely et al (1997) collated many of these key areas in their performance measurement characteristics literature review.

**Performance Measure Characteristics
– a review of the literature:**

1. derived from strategy.
2. simple to understand.
3. timely & accurate feedback.
4. quantities that can be influenced/ controlled by user along or in co-operation.
5. reflect "business process" –(customers and suppliers involved in the definition of the measure).
6. relate to specific goals (targets).
7. be relevant.
8. part of closed loop management system.
9. clearly defined.
10. have visual impact.
11. focus on improvement.
12. be consistent (maintain significance with time).
13. provide fast feedback.
14. explicit purpose.
15. based on explicit formula and source of data.
16. employ ratios rather than absolute numbers.
17. use data that is automatically collected whenever possible.
18. reported in simple consistent format.
19. based on trends rather than snapshots.
20. should provide information.
21. be precise – about what is measured.
22. be objective – not based on opinion.

(Neely, Richards, Mills, Platts & Bourne 1997)

Comparing performance indicators is not recommended as not only is it misleading due to inherent specific variations and business cycle variations of each business unit's area, but also it creates dysfunctional behaviour by establishing a competitive internal situation. The main use of a performance measure is as a measure of improvement of that particular area, or element, over time (Eccles et al 1992); the measure is only relevant for itself in that context. A measure on its own is also misleading and affects the behaviour and rationale of the management decisions (Nicholson-Crotty, Theobald & Nicholson-Crotty

2006). As such it is the design and development of the performance measurement system as a whole that elicits the performance priorities and requirements.

7.5.2 PMS design lessons – performance measurement systems

A successful performance measurement system is a set of performance measures that provides a company with useful information that helps to manage, control, plan and perform the activities undertaken in the company (Tangen 2005b).

There are a number of recommendations from the literature in relation to designing and developing performance measurement systems. A thorough understanding is required about the existing measurement systems, including unwritten or implicit perceptions (Blenkinsop & Davis 1991, Atkinson et al 1997, Lyon 2004), and in relation to the corporate culture and organisational structure (Blenkinsop & Davis 1991, Rouse & Putterrill 2003, Lyon 2004, Neely et al 2005).

The measurement system requires a balance of integration between hierarchical cascading measures and process-based (horizontal) measures within the organisation (Keegan et al 1989, Olian & Rynes 1991, Cross & Lynch 1992, Dervitsiotis 2004). There are recommendations for all organisational functions to set performance goals for the system, ensuring that performance

Performance Measurement Systems Design Considerations:

- 1. departmental goal setting without creating interdepartmental conflict.**
- 2. Whether the measure is a valid indicator of the performance of the group.**
- 3. A balance of integration and differentiation (horizontal and vertical in organisational chart).**
- 4. Thorough understanding of existing measurement systems, written, unwritten, spoken or unspoken rules as perceived.**
- 5. Management consensus concerning objectives.**
- 6. The corporate culture.**
- 7. Long, medium & short-term goals (financial & non-financial).**
- 8. Part-ownership of problems – cross-boundary solutions established.**
- 9. Total commitment of all involved.**

(Blenkinsop & Davis 1991)

measures are relevant up to the group level and consideration is given to the effects on other areas to ensure no conflicts or tensions, and where part-ownership of issues and cross-boundary solutions can be established (Blenkinsop & Davis 1991, Wisner & Fawcett 1991, Kaplan & Norton 1996, Neely et al 2005).

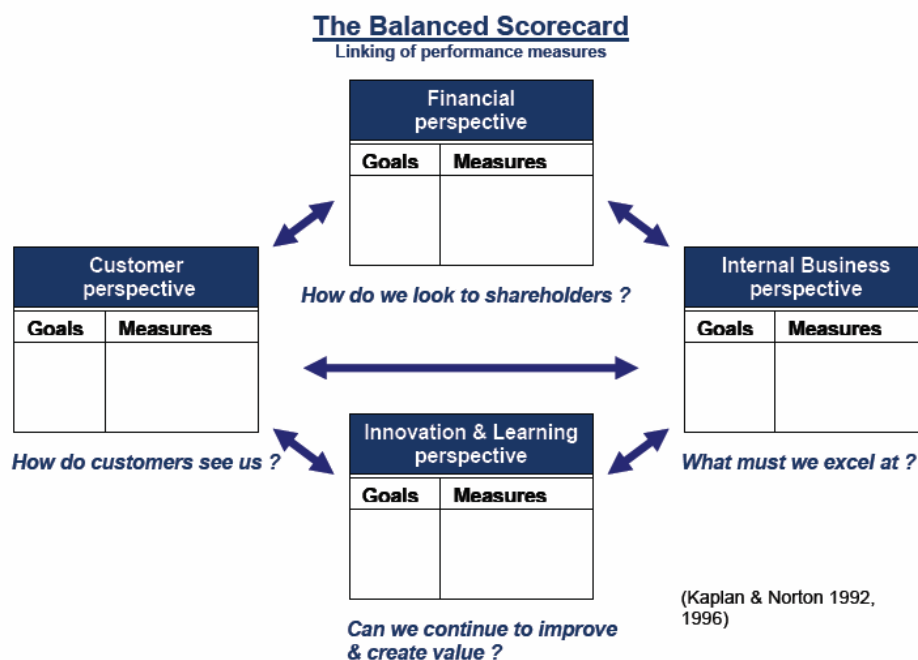
In relation to goals, these are recommended to include a mix of long, medium and short-term goals (Blenkinsop & Davis 1991) as well as both financial and non-financial targets (Eccles 1991, Fitzgerald et al 1991, Kaplan & Norton 1996, Kaplan & Norton 2001b, Lohman et al 2004). The reward and appraisal system is required be adjusted to accommodate the re-orientations of performance system priorities (Eccles & Pyburn 1992, Lyon 2004) and the encouragement of total commitment along with strong leadership and constant communication is necessarily to ensure the system remains effective (Blenkinsop & Davis 1991, Olian & Rynes 1991, Wisner & Fawcett 1991, Waldman 1994, Hacker & Brotherton 1998, Crandon & Merchant 2006). The system and its measures must be reviewed in light of changing environment factors and to ascertain the system continues to remain dynamic and operate in line with strategic objectives (Wisner & Fawcett 1991, Olian & Rynes 1991, Bourne et al 2000, Kennerley & Neely 2003, Otley 2003).

7.6 Business Performance frameworks

A range of performance frameworks have been developed to balance traditional financial measures with non-traditional measures. This includes the *performance matrix* (Eccles 1991), the *results and determinants model* (Fitzgerald et al 1991) and the *performance pyramid* (Cross & Lynch 1992). The most dominant frameworks now are the Balanced Scorecard, the Business Excellence Model and the Performance Prism (Marr & Schiuma 2003).

7.6.1 The Balanced Scorecard approach

The Balanced Scorecard is the most popularly used framework (Francis & Michington 2002, Kennerley & Neely 2003) and incorporates four perspectives for the business (financial, internal, innovation and learning and customer). Kaplan describes the balanced scorecard as dials and instruments on an airplane cockpit, with operational measures being the drivers of future financial performance. In the cockpit, further descriptions of reliance on a balance is illustrated by the fact that one cannot rely on only one measure, the pilot must rely of six key indicators, from the array of other performance measurement dials and indicators that exist (Kaplan & Norton 1992, 1996, 2001a). The scorecard seeks to minimise information overload by limiting the number of measures used, and put strategy, as opposed to control, at the centre of the performance approach.

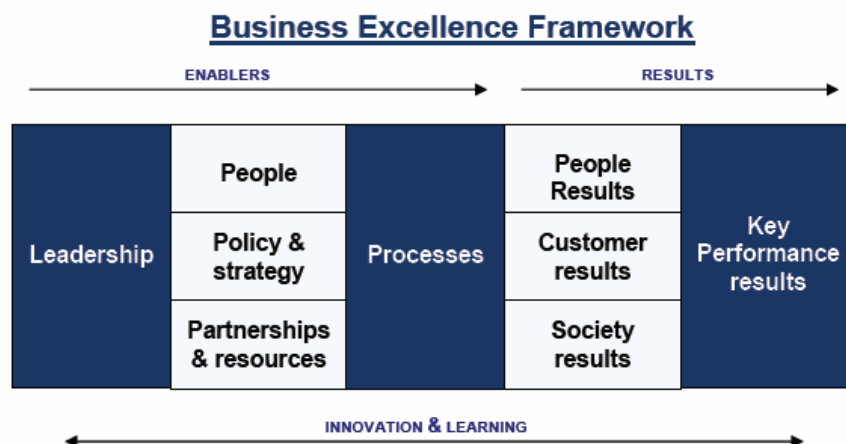


A strength of the balanced Scorecard is that it combines lagging financial indicators with drivers and leading indicators of future financial performance and the Balanced Scorecard program starts with the recognition that it is not a just a "metrics" project, it is a change project. (Kaplan & Norton 2001b).

The Balanced Scorecard though highly popular (Kennerley & Neely 2003), and praised for developing the strategic to operational link (Otley 1999), has been criticised by academics and practitioners for a lack of theoretical underpinning (Hazell & Morrow 1992), for not measuring or benchmarking the competition within its existing framework (Neely, Gregory & Platts 2005) and for not incorporating the perspectives of employees and suppliers in strategic and operational performance (Neely, Adams & Kennerley 2002). It has also been criticised in the weakness of operationalising in the selection of performance measures to be placed in the balanced scorecard boxes (Otley 1999) and a lack of integration between top level strategic scorecard and the operational scorecard making strategy execution difficult (Pun & White 2005). There are also fundamental practical decision-making challenges from using the framework in practice (Lipe et al 2002).

7.6.2 Business Excellence Model

The business excellence model (BEM) was produced by the European Foundation for Quality Management and is the leading performance model in Europe & Dubai (Zink 2005); composed of two key areas of performance measurement; *enablers* and *results*. Enablers such a people, strategy, and partnerships are the levers that management can use to drive the results that relate to people (employees), customers and society.

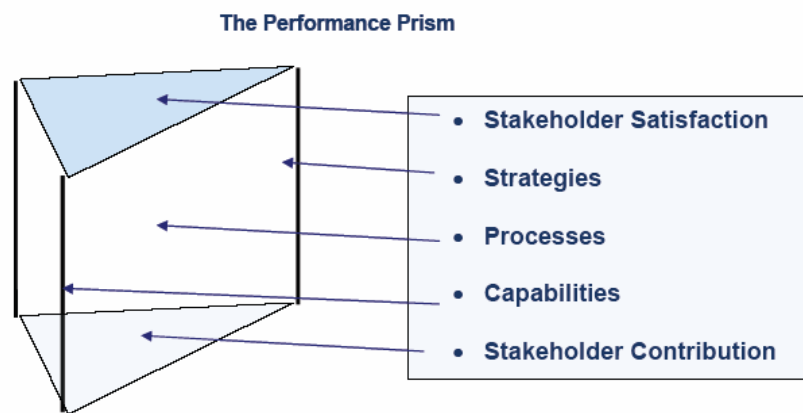


A challenge of the Business Excellence Model is that it has areas within which to measure performance, but it does not help to operationalise the conceptual model. Different managers within the same firm can therefore populate the model in different ways (Neely et al 2000).

7.6.3 Performance Prism framework

The Performance Prism is an example of a stakeholder-orientated performance measurement system (Neely, Adams and Kennerley 2002).

This model is particularly useful for consideration with the development of measurement systems concerning



corporate responsibility issues. The process begins by looking at what the *stakeholder's wants and needs* are from the organisation, and what the *organisation's wants and needs* are from the stakeholders. Following this analysis, the outcomes or stakes can then be examined in terms of the *capabilities* required for achieving different scenarios, an assessment of the *processes* required to achieve it and to develop the *strategies* required to enable the process; including the development of useful and appropriate performance measures (Neely, Adams & Kennerley 2002).

7.7 A design process approach

An alternative approach is to develop principles and processes that will underpin whatever measurement system is required to be developed (Neely, Gregory &

Platts 2005). The challenge from framework models is that they can be too simplistic or too superficial for the complexities of actual performance measurement (Neely et al 2000).

Wisner and Fawcett (1991), made the first contribution to this area with their nine step process for developing a performance measurement system, later adopted by Neely et al (1997). Starting from scratch, *steps 1, 2 & 3* involve reviewing the business goals, defining the firm's objectives and understanding each function's role towards the objectives. *Steps 4, 5 & 6* require developing global performance measures for all functions, eliciting lower level measures and assessing the strategy. *Step 7* requires an audit to assure to ensure the compatibility of measures for all functions. *Steps 8* refer to using the measures and *step 9* are for reviews and re-evaluation of the system itself as a whole, in view of changes to the firm's competitive environment (Wisner & Fawcett 1991).

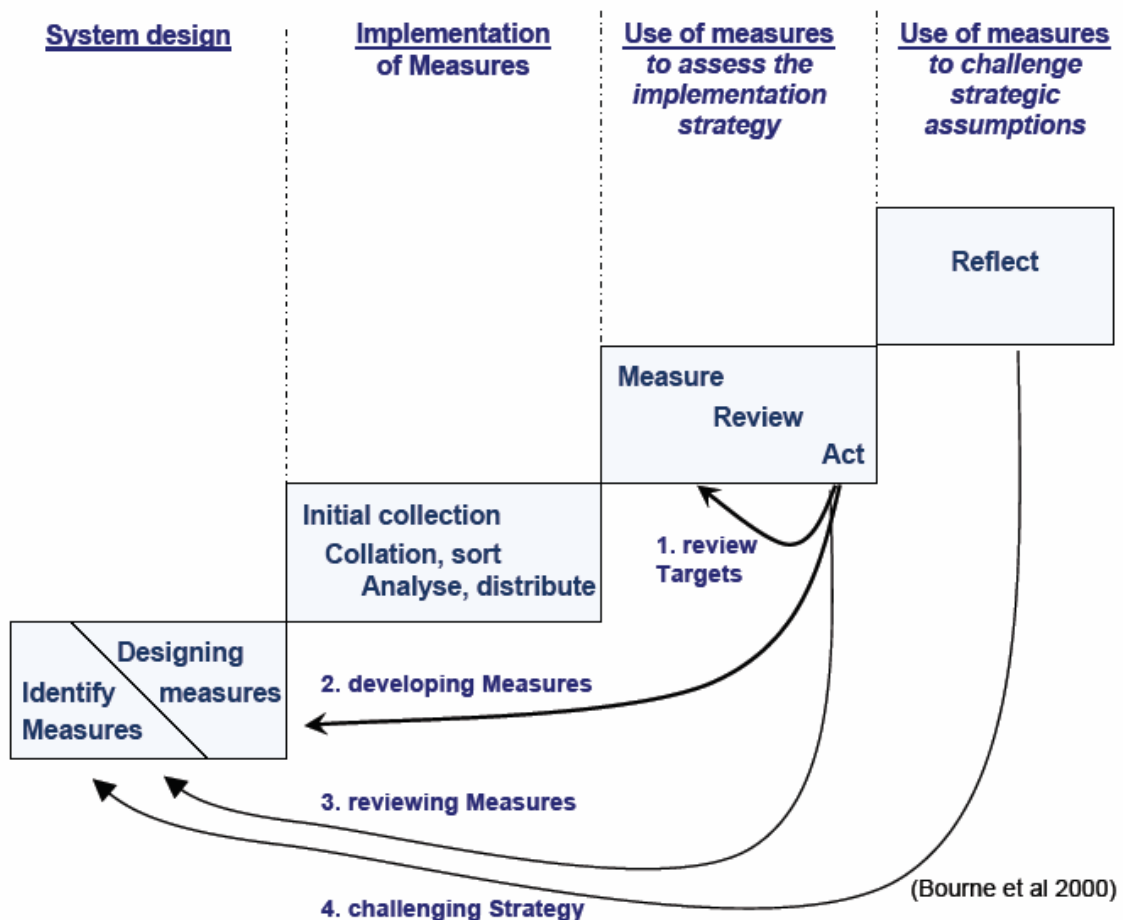
**Performance Measurement Systems
9-step Process for developing pms:**

- 1. clearly define firm's mission.**
- 2. identify strategic objectives.**
- 3. understand each function's role in achieving objectives.**
- 4. develop global performance measures for all functions.**
- 5. communicate strategic objectives to lower levels. Establish more specific measures at lower levels.**
- 6. Assure consistency of measures to strategy at each level.**
- 7. Assure compatibility of measures for all functions.**
- 8. Use measures to identify positions, makes tactical decisions, measurement changes and facilitates feedback.**
- 9. Periodically re-evaluate the system in view of current competitive environment.**

(Wisner & Fawcett 1991)

The Cambridge PMS Process provides the most comprehensive coverage of important aspects of pms design (Punn & White 2005). The model proposed comprises of four stages. The first, involves *system design* composed of identifying the key objectives and designing the measures. Second is the *implementation* of systems stage, the data collection, sorting, analysing, distribution of data. The third and fourth stages are the actual *use stages* in terms of measures that implement strategy and later measures to challenge the strategic assumptions (Bourne et al 2000).

Performance Measurement System Process Model



Complementary to this generic development of a performance measurement system, Neely et al (2000) developed a generic 12-phase process for the design of performance measures. *Phase 1* begins with consultation and dialogue to identify a list of performance measures, *phase 2* encourages the prioritisation based on the highest pay-off areas, resulting in a list of both core and additional performance area lists (*phases 3 & 4*). *Phase 5* encompasses creating a detailed list of measures for each manager, including issues and criteria for the performance measures. *Phase 6* requires an assessment towards the best integration at the business unit level. *Phase 7* requires a contextual assessment

to ensure a comprehensive set of performance measures are developed for each manager. *Phases 8, 9, and 10* involve inter-functional testing, environmental factor considerations and the critical testing of measures to ensure they are appropriate at the business level, with *phase 11* involving training and audits to ensure that it is being adopted and applied at the institutional (corporate) level. Finally, *phase 12* is the systematic and ongoing maintenance component to ensure the constant validity of the measures being used (Neely et al 2000).

12 phase process of designing performance measures.

Phase 1 what performance measures are required ? - list areas for performance measurement.

Phase 2- cost-benefit analysis - list high pay-off areas for performance measurement.

Phase 3- purpose for measurement - list of core areas for performance measurement.

Phase 4- comprehensiveness check - list extra areas for performance measurement.

Phase 5- detailed design (function) - series of record sheets each summarising the key issues associated with given manager's performance measures.

Phase 6-integration (function) integrated set of measures for a given business.

Phase 7- environmental considerations (function) appropriate to current environment, set of appropriate and comprehensive performance measures for given manager.

Phase 8- inter-functional testing - testing integration of managers' measures - producing an integrated set of performance measures for a given business.

Phase 9- environmental considerations (inter-functional) checking appropriateness to organisations environment.

Phase 10- destructive testing (inter-functional) how to be played to maximise apparent rather than actual performance - destructive testing check-sheets.

Phase 11- institutionalism- introducing training and audits.

Phase 12- ongoing maintenance - to reduce redundant measures - systematic process by the management group.

(Neely et al 2000)

One of the practical problems with performance measurement systems is the challenge of dealing with the paradox that whilst creating useful and informative measures, each has positive and negative affects on behaviour (Tangen 2005b, Neely et al 1997, Otley 1991). There are systems-based challenges in relation to the inconsistent management action, the requirement for long-term targets and the measurement and verification of all outputs and outcomes (Enderle & Tavis 1998, Franco & Bourne 2003, Kuwaiti 2004). The literature also highlights the need to consider integrating performance measures with other corporate measures, considerations for individual and team-based rewards and for benchmarking activities and performance appraisals (Neely et al 1997, Bititci et al 2004).

7.8 Methods for evaluating PMS measures

One useful approach to improving performance measurement is to identify the strengths and weaknesses of the current performance measurement system to identify what measures are current and sound, those that are current but require adjustment and those that are essentially dysfunctional, ineffective or redundant (Dixon et al 1990). This approach is proposed to be followed by workshops to revise and re-focus the set of performance measures.

As with the performance measurement questionnaire approach (Dixon et al 1990), the truth test (Kennerley & Neely 2003) or the measure property record sheet (Neely et al 1997), this form acts as a clarification and reference tool, capturing the merits of all the measure's aspects ,as well as seeking to categorise the measure itself in terms of its importance as the measurement type (A,B & C ratings) (Tangen 2005a).

Performance Measurement Specification Form:		
For auditing & designing performance measures		
<u>1. General Information:</u>		
Title:	Formula:	Purpose:
Connection to other measures:	Date of next/last review:	
Notes and comments:		
<u>2. Measurement Instructions:</u>		
who measures:	Source of data:	Frequency of measurement:
How is this displayed ?		
<u>3. Analysis Instructions:</u>		
who acts of the data:	Type of Measure:	Target:
what do they do ?:	Known limitations:	
(Tangen 2005) development on Neely et al 1997		

A property evaluation form has also been developed. This incorporates many of the design measure and systems criteria, and should be applied after new performance measure(s) have been developed, or for audit purposes on existing

measures in a system. The process is to involve broad audience who engage with the measure(s) and they assess the property and virtues of the measure against a comprehensive assessment list. As illustrated, this evaluation form is composed of nineteen criteria, with each property evaluated against a Likert scale, covering aspects such as the performance criteria, stakeholder orientation, hierarchical scope, target time-horizon and the information structure (Tangen 2005b).

<u>Performance Measurement System</u>	
Property evaluation Form:	
	<u>Scale (1.....7) comments</u>
<u>Basic requirements:</u>	↔
1. Provides accurate information	
2. Supports objectives	
3. Guards against sub-optimisation	
4. Limited number of measures	
<u>Regarding Used performance criteria:</u>	↔
5. Traditional (financial) criteria used	
6. Non-Financial criteria used	
7. Casual relationships criteria used	
<u>Regarding stakeholders:</u>	↔
8. Internal Needs considered	
9. External needs considered	
10. All stakeholder needs considered	
<u>Regarding Hierarchical levels:</u>	↔
11. Top hierarchical levels covered	
12. Most hierarchical levels covered	
13. All hierarchical levels covered	
<u>Regarding time-horizon:</u>	↔
14. Short-term targets	
15. Long-term targets	
16. Processes for evolution	
<u>Regarding Information Structure:</u>	↔
17. Information easily accessible	
18. Information to the right person	
19. Advanced information architecture	

(Tangen 2005b)

Experience showed that cases of poorly designed measures can be identified and that too many measures, focused on specific areas, imbalanced the system's strategic objectives (Tangen 2005b).

7.9 Corporate culture and behaviour within PMS

Corporate culture is an important component of the design, implementation and use of performance measurement systems (Neely et al 1997, McKenzie & Shilling 1998, Bourne et al 2000, Franco & Bourne 2003). Performance measurement systems need to be compatible with the corporate culture, as culture and strategies are synonymous with each other (Neely et al 2005). Conversely, the way an organisation is structured and the dominance of the corporate or business-unit culture affects the identification of which outcomes are strategic as well as affecting the perspective on evaluating performance (Rouse & Putterill 2003). Therefore, not only does performance measurement influence

behaviour (O'Mara Hyland & Chapman 1998), but behaviour will affect performance measurement.

The issue is that few organisations have behavioural ramifications in mind when designing performance measures, no matter how well the measure is designed, and this can have a major effect of the effectiveness of the performance measurement system (Neely et al 1997, Tangen 2005b).

This indicates a need to encourage dialogue on the effects of culture and behaviour in relation to the selection and use of each measure.

7.10 Implementation and use issues for PMS design

Anecdotal evidence suggests that the implementation and use stages are the most challenging areas in relation to the success of a performance measurement system (Neely et al 2000).

If a company has the vision that the performance measure will improve their management then the company is more likely to implement it and if the company has a paternalistic culture then it is less 'fearful' of the consequence of the measure, which in turn eases implementation.

Greater attention is recommended in the design process in relation to who actually owns and controls the business unit level performance measures and few managers consider the implementation and use elements of the measurements systems they currently design (Bourne et al 1999, Neely et al 2000).

Three areas of implementation issues relating to PMS design have been identified (Bourne et al 2002), namely *context* issues, *processual* issues and *content* issues. This relates to IT systems as well as the original time and expense allocated (McKenzie & Shilling 1998). There is the issue of inactionable company vision and strategy, as well as striving for the ideal 'perfect' measure and system (as opposed to satisfactory system design) (McKenzie & Shilling 1998). The design issue of too many measures diluting impact was also highlighted (Bourne et al 2002), complementing the over-focussed effect (Tangen 2005b) on the generic 'balance of measures' issue.

PMS process design was found not to proceed to plan according to models in the literature (Mettan 2005). Issues include a general resistance to measurement (Tuomela 2005, Mettan 2005), disruption to power structures (Tuomela 2005) as well as management information systems problems and a deficiency in a focus of commitment from managers (Bourne et al 2002, Mettan 2005). Financial measures are described as easy to establish, however as non-financial measures are more difficult and complex to derive, they need to be repeatedly re-focussed (Mettan 2005).

7.11 Strategy, leadership and PMS

Measures should be derived from strategic objectives to ensure employee behaviour is consistent with company goals (Cross & Lynch 1992, Kaplan &

performance measurement Implementation

Design-related reflections:

Context Issues:

1. Need highly developed **IT system**.
2. **Time & expense**.
3. Lack of leadership & resistance to change.

Processual Issues:

1. **Vision and strategy** not actionable, problems identifying "true" drivers.
2. **Strategy** not related to resource allocation.
3. **Goals** were negotiated rather than stakeholder requirement.
4. Striving for **perfection** undermined success.

Content Issues:

1. **Strategy** not linked to departmental indicators, team or individual goals.
2. Too **many measures** diluted impact
3. Metrics too **poorly defined**.
4. Need some **qualitative results** in areas.

All design issues , APART from leadership and resistance to change.

(Bourne, Neely, Platts & Mills 2002)

Norton 1992, Dixon et al 1990, Bourne et al 2002) and careful consideration of the explicit and implicit (unwritten) rules from the employee's perspective is necessary to ensure the strategic success of a PMS system (Atkinson et al 1997).

At the corporate level there is also a need to raise awareness and communicate the links between measurements systems and strategy (O'Mara Hyland & Chapman 1998).

Most organisations appear to still be lacking in strategic organisational alignment and cohesive action to develop their 'superior performance', with many companies possessing a number of flawed measures and measurement driven processes (Crandon & Merchant 2006).

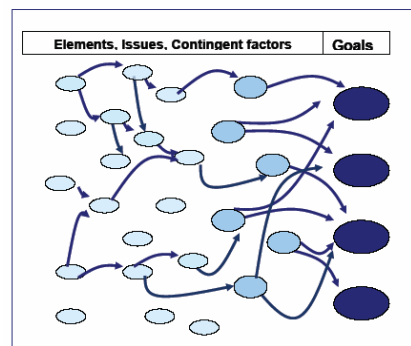
Strategically there is a need to develop relevant measures that continue to reflect issues of importance to business and reviews of PMS essentially so that they continue to reflect the business context (Bourne et al 2000, Kennerley & Neely 2003, Franco & Bourne 2003, Bitici et al 2000). Bitici et al (2000) also support the position for dynamic performance measures, adding the need to develop monitoring systems that are sensitive to changes in external and internal environments.

There are also fundamental strategic challenges to PMS due to different and changing visions across and between corporate, operational and business unit levels (Hacker & Brotherton 1998) requiring greater emphasis on leadership, management and strategic performance management.

7.11.1 Strategy Mapping

Also referred to as challenge-mapping (Bourne et al 2000) or cause-and-effect mapping (Eccles & Pyburn 1992), strategy

Conceptual illustration of development of Strategy Maps, Cause-and-Effect maps, Success Maps



(Author's illustration)

mapping is used to explore the challenges and contributions to achieving strategy as a method of determining useful success factors, drivers and associated performance measures. They are also essential tools for translating strategy into operational terms (Kaplan & Norton 2001b) and as an essential practitioner tool to establish success maps for different cause-and-effect aspects (Tuomela 2005).

7.12 Environmental Performance Measurement

Environmental management systems (EMS) are becoming nested within CR systems, and as such environmental management systems can be identified as antecedent to corporate social performance. In the design of EMS, Peacock identified the selection of the performance measures as the most complicated element, the challenge being to make 'concrete what were otherwise vague policy statements and/or mission statements'. Other challenges related to the principles of using performance measures, i.e. seeking the *measurement of improvement*; a *fairness* in the standard or system to maintain credibility and reduce the desire to cheat and *off-setting measures* that compensate for gaming or behavioural changes (Peacock 1993). Four tensions were identified in creating a system. The first is *simplicity* for ease of use versus *complexity* of accuracy of measurement and decision-making. There is a need to balance objective *qualitative* measures with less objective *quantitative* measures, which reduces the gaming of quantified numbers. Measuring the *ends* (outcomes) is more relevant and progressive than measuring the *means* (the process outputs). There is a need to balance the tension between the *conservation* processes that have marketable reputation building opportunities over the less 'exciting' though fundamental formal *compliance* achievements (Peacock 1993).

Environmental Management Systems:

3 principles performance measure:

1. measurement improvement
2. fair systems/ standards
3. offsetting measures

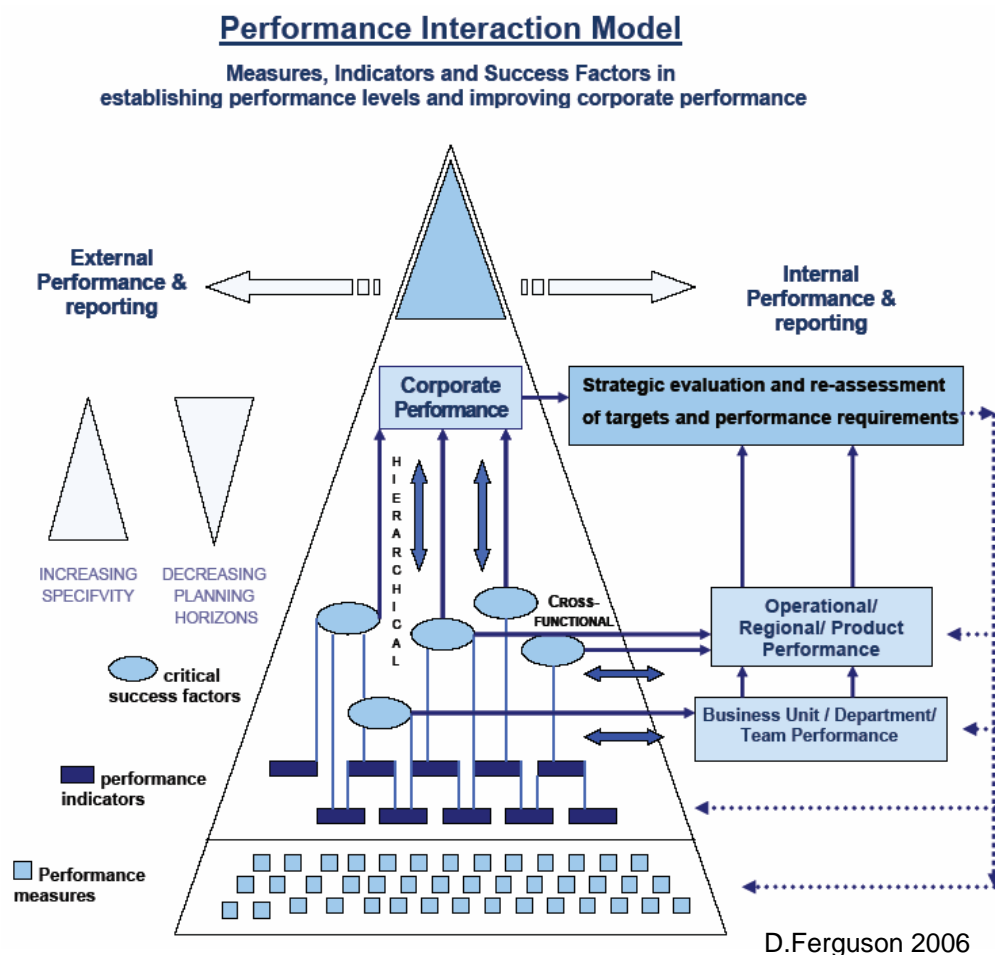
4 tensions of a PMS:

1. Simplicity vs. Complexity
2. Qualitative vs. Quantitative
3. measuring Ends vs. Means
4. Conservation vs Compliance

(Peacock 1993).

In summary performance measurement has provided both frameworks and processes for the design of PMS. Alongside, this literature has identified issues in relation to corporate culture, strategy, information management systems and legacy systems as well a management resistance to measures and disruption to power structures. Challenges alongside the generic identification and selection criteria challenges of performance measures system requirements include the need for integration with goals and reward systems, sound communication and a sustained leadership and management commitment.

The performance interaction model (below) encapsulates the dynamics and complexities of a corporate performance measurement system, irrespective of the added complexities surrounding the CR-related context .



The corporate social performance outcomes and the societal stakeholder perception on performance add emphasis on the robustness and considered design of a corporate social performance PMS.

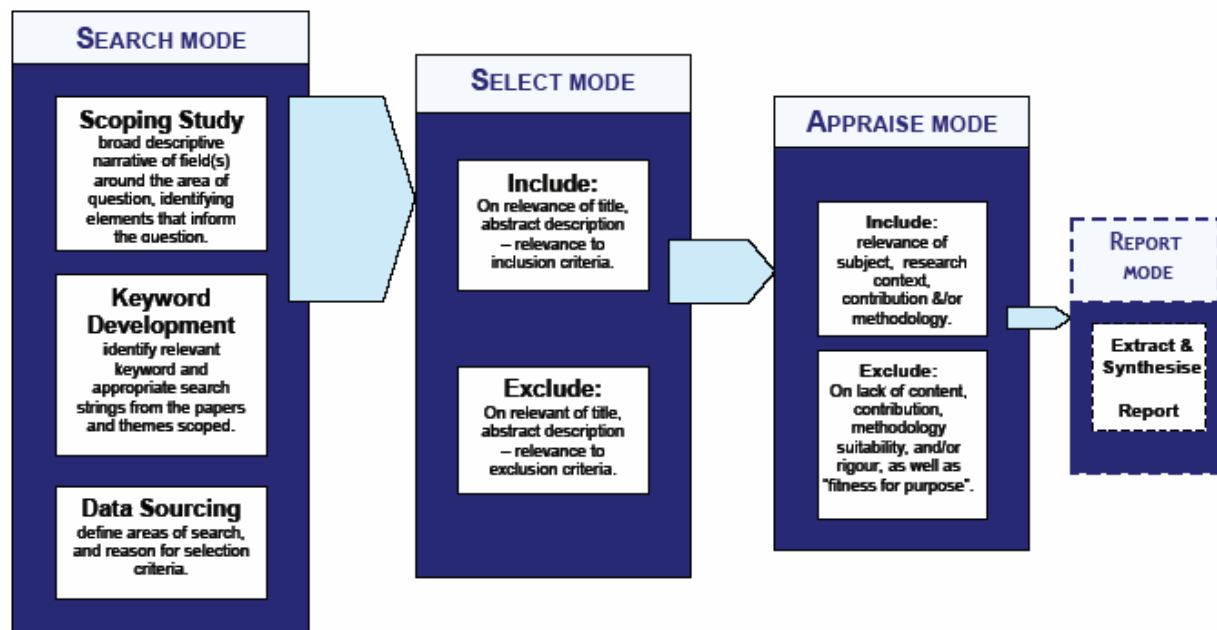
This concludes the scoping of the corporate social performance, stakeholder theory, and performance measurement fields. The next stage of this thesis involves a more systematic synthesis of papers relating to the research question.

The papers have been identified and selected through the application of a systematic review methodology, as described in more detail within the following chapter.

8. Research Methodology

8.1 Overview and introduction

In this section the methodology and approach adopted in conducting the systematic is described. The process follows a more systematic approach to literature reviews (Tranfield, Denyer & Smart 2003), involving broadly scoping, then narrowly focussing on the research area(s) in relation to the general research question or topic; illustrated below.



1. Search

- Scoping Study: broad review of the fields (summarised in section 1 of this report).
- Keyword and search strings: identification and combination testing.
- Review areas: identifying the scope of data sources in collaboration with the expert panel.

2. Select

- Selection Criteria: apply general and specific inclusion & exclusion criteria to scope between fields.
- 1st screening of general data – title/abstract topic relevance to specific and contextual data.

3. Assess

- Assessment Criteria: clarity of description, contribution, methodology (as detailed later in this section).
- 2nd screening of applicability – content and approach for quality aspects of the data sources/papers. Clarification of inclusive quality of papers with expert panel.

4. Report

- Extraction: of data sourcing and key points – topic, method, theory.
- Synthesis: of the key findings, the questions raised and gaps identified.
- Report: on the question area and the underpinning literature & key contributions.

8.2 Review panel and consultation group

An expert panel is an essential element for supporting the researcher, especially, as in this case, a new researcher, new to an emerging field. The purpose of the panel is threefold; to provide guidance on key sources of research in the field, highlighting relevant contextual industry information and adding process quality experience to the review itself

Name of Person	Organisation	Role in review
Dr. Lance Moir	Cranfield School of Management	Supervisor and research stakeholder. Specific expertise in finance & corporate social responsibility field.
Dr. Mike Kennerley	Cranfield School of Management	Supervisory panel member and research stakeholder. Specific expertise in performance measurement field.
Dr. Peter Allen	Cranfield School of Management	Supervisory panel member. Specific expertise in complexity theory.
Vincent Denby-Wilkes	EDF Electricite de France	Research sponsor company representative. CR management practitioner.
Sarah Adams	Global Village Environmental Partnership	External Industry Expert
Gemma McNeilis	Business in the Community	External Industry Expert
Dr. David Denyer	Cranfield School of Management	Research Adviser Specific expertise in systematic review
Heather Woodfield	Cranfield University	Information Officer Specific expertise in data mining and literature reviews.

Regular meetings were set up with my supervisor, Dr. Lance Moir, to review research progress and provide feedback on crucial aspects in relation to the context of the question and the complexity occurring within the 'business and society' field. At the beginning of the systematic review, Dr. Moir provided some key reference papers that were expected to be relevant to the question. The author identified most of these papers within the systematic review, thus providing validity to the search parameters being used in the business and society field. Some book publication references were provided, which although not necessarily satisfying the quality criteria per say, did provide some contextual relevance for the researcher, new to the field. They also provided some cross-

reference validity to industry-related sources that were identified within some academic papers and acted as contributions for some of the extant searches on internet sites. Meetings were arranged with Dr. Kennerley at the beginning of the review process in relation to the scope of the performance measurement literature identified and some key papers were identified as useful papers that were expected to be identified within the review. The fact that the systematic review also identified these papers provided credibility to the search parameters in the performance measurement field, with two book references providing references that were not identified within the database resources used. Dr. Moir and Dr. Kennerley were also available for discussions regarding an improved understanding for using inclusion and exclusion criteria relating to their particular fields, which acted as a very useful reference for the author's development of a robust range of factors and considerations. Dr. Allen kindly provide an observer role towards the outputs of the work, as well as providing particular views in relation to the inherent complexity of CR, CSP and performance measurement, adding a critical, alternative perspective that may otherwise be absent. The industry experts from two of the UK's not-for-profit sector provided an informal reference to key sources of industry-related guidelines and practitioner reports and the company sponsor was able to add context to relevant industry references and information sources for sustainability issues within the utility sector. Unlike the academic panel member's input at the early stages of the systematic review, the industry panel members were consulted towards the later stages of the systematic review. The author developed a list of potentially relevant sources that appeared to be making a contribution to the area of the question, and issued an electronic list to practitioners with a defined response period. The purpose of this was two-fold. The first was to establish the credibility of the source publications and the publication itself, and the second was to identify significant omissions. All but one industry panel member was able to respond within the time period, and the credibility of all the listed articles and publication sources were verified, with one additional reference paper identified as relevant within the utility sector. At the start of the scoping study and later

before the systematic review, Dr. Denyer provided guidance to the process of conducting a systematic review. Later in the process, as the author dealt with some of the complexity and ambiguity of assessing quality from two different and emerging fields, Dr. Denyer provided additional dialogue in relation to managing such challenges and in particular provided reference to quality assessment thinking in the policy and practice fields. Ms. Woodfield and related librarian staff provided useful guidance and approaches to searching sources and conducting literature research processes throughout the process, as and when required.

8.3 Personal statement

With the application of a research question, a researcher's viewpoint in terms of where to begin and orientate the search and what are the perceived initial propositions or concepts, are relevant starting points to explore.

' when engaging in any management research, people need to reflect on their philosophical assumptions, which they inevitably make as there is no philosophical space available'

(Johnson & Duberley 2003)

This section therefore explores some of the researcher's perspectives and biases that may exist and to try and make this as explicit as possible. The author is aware of an ecological and social interest bias towards normative CR behaviour and a positive disposition towards an integrative business within society perspective as opposed to business and society.

This normative and 'ideal' bias, combined with a stakeholder-orientated preference for the organisation in relation to business and society objectives, requires awareness and care to be taken to recognise value-laden approaches and temper it with alternative instrumental and neoclassic views and the pragmatic realism of CR.

Corporate sponsors are aware of this preparatory work and arrangements have been made to present some of findings from the thesis. This will bring a bias to

the research, however there appeared to be no conflict of interest. The findings from this research activity will be used as discussion and development of the PhD research options and approaches. As such there will be a bias for including 'bite-sized' chunks of academic findings, quotes and recommendations as well as descriptive models and schemas that can be communicated and discussed with what those that may become future research participants in this field.

8.4 Search strategy

A range of keywords were shortlisted as key for the research question. These were primarily identified from recurring terms identified from the scoping work on papers, journals and extant literature themes. The keywords were grouped for combination searches under the identified areas of corporate social performance, stakeholder theory, performance measurement and utility-sector (as the specific research context); illustrated below.

8.4.1 Keywords for use in search strings and search phrases:

Subject	Keywords	Description
Corporate Social Performance	corporate social performance corporate social responsibility corporate or business or MNE responsibility corporate public affairs sustainable development business ethics	the key academic term . key academic-related term . related firm-used csr term. pre-csr related thematic term. related firm-used csr term. key academic-related term.
Stakeholder theory	stakeholder theory stakeholder management stakeholder engagement and consultation stakeholder	the key academic term firm applied stakeholder term firm applied stakeholder term general encapsulation term
Performance Measurement	performance measurement performance measure(s) performance metrics measure metric	The key academic term related key term related key term general encapsulation term
Utility-sector context terms	Utility sector Mining industry Aggregate industry Petrochemical industry climate change greenhouse gas	The key utility term & related related sector-term (<i>for CR</i>) global utility CR-related term

The strength of this process lies in the combination of keywords and search-string. The search string combinations seek ideally to identify the overlapping aspects for each of the field definition terms, so as to pinpoint relevant papers that should inform more about, or around, the question. To this end, search string combinations relating to the overlaps of the fields are described in the table below.

8.4.1.1. Search string combinations

Search string number	The search scope of the string		
1	Performance measurement	&	corporate social performance
2	corporate social performance	&	utility-sector context
3	Performance measurement	&	utility-sector context
4	corporate social performance	&	stake-holder theory
5	Performance measurement	&	stake-holder theory

8.4.1.2. Search phrases

Having run the search string combinations, there were fewer papers than expected from the selection process that addressed the question in its specific context. Realising the different algorithm and data categorisation variances within the databases, some search phrases were developed. This approach brought a variation to the search string process in order to determine whether some papers may have been omitted from identification through an inherent weakness in the particular search string combinations used.

Search phrase number	search phrases applied (increasing in specificity to the question)
1	“designing performance measurement systems “
2	“designing corporate performance measurement systems “
3	“corporate social performance measurement”
4	“designing corporate social performance measurement systems”
5	“designing sustainable development measures”
6	“designing sustainable development metrics”

The response from this search was not productive.

8.4.3 Electronic databases:

Electronic databases formed the main foundation for this research. Five recognised academic databases were interrogated;

- **ABI Business Premier**
- **EBSCO ProQuest**
- **Web of Knowledge Social Science Citation Index**
- **Google Scholar**

Along with the relevant additional papers identified by the expert panel, all papers were assessed using an inclusion and exclusion selection criterion as a fundamental pre-quality assessment stage.

8.4.3.1 Summary of search findings:

From a total of 278 papers identified, 204 were selected and referenced within the dissertation, including the scoping of the fields. This was composed of 186 from the combination search strings method applied to key databases (ABI/ProQuest, EBSCO/Business Premier and Sustainability Science), 45 selected for appraisal from cross-citation of selected papers, 0 papers from working papers search phrases and 0 PhD paper from search phrases on Cranfield University's Library Catalogue. The lack of database co-ordination makes sourcing working papers, conference papers and theses difficult to source directly and comprehensively, along with the lack of bibliographical controls for such documents. The following sections provide greater summary details of identified papers and selected papers. Following a quality assessment process, 59 papers were identified as core papers, in that they could sufficiently describe most of the aspects for the questions from the emerging fields of CR, PMS and the research contexts of energy, utilities, and climate change

Search string combinations – summary

Below is a summary of the search string combinations that generated the selection of 180 papers for the quality assessment stage (details in appendices).

Search string number	Total	ABI ProQuest	EBSCO Business Premier	Web of Science
1 pm & csp	53 selected 1,640 reviewed titles & abstracts	22 chosen 237 identified	8 chosen* 13 selection** 130 identified	23 chosen 44 selection 1,273 identified
2 csp & u-s	24 selected 273 reviewed titles & abstracts	16 chosen 142 identified	2 chosen 3 selection 9 identified	6 chosen 12 selection 122 identified
3 pm & u-s	14 selected 770 reviewed titles & abstracts	5 chosen 66 identified	2 chosen 3 selection 35 identified	7 chosen 16 selection 669 identified
4 csp & st	56 selected 1,081 reviewed titles & abstracts	22 chosen 316 identified	32 chosen 43 selection 230 identified	2 chosen 34 selection 535 identified
5 pm & st	33 selected 1,251 reviewed titles & abstracts	21 chosen 127 identified	11 chosen 16 selection 78 identified	1 chosen 27 selection 1,046 identified

Key: ** selection as being appropriate for quality assessment *chosen as unique for quality assessment (not located from previous searches): 1. performance measurement & corporate social performance, 2. corporate social performance & utility-sector context, 3. performance measurement & utility-sector context, 4. corporate social performance & stake-holder theory, 5. performance measurement & stake-holder theory

Cross-reference citations – summary

As well as the database search, relevant cited references were noted for follow-up. Below is a summary of the 45 cross-referenced papers subsequently selected for quality assessment.

	Corporate social performance	Performance measurement systems	Utility research context
cited- references	24 selected	21 selected	0 selected

from ABI /ProQuest selected papers (post quality review)

Some relevant cited papers did not appear on the search strings combinations as their titles included different language and terms , e.g. 'manufacturing for world-class' and the 'virtue matrix'. Different use of language within different journals and the complexity and ambiguity of emerging fields adds to the research challenge.

Search phrases

As can be seen from the status table there are still search phrases that can be applied. The identification of six papers however is thought to be a relatively low success rate.

Search phrase number	chosen for Quality Assessment	Google Scholar*	ABI/ Pro Quest	EBSCO/ Business Premier	Web of Knowledge SSI
1 dpms	0	0 chosen 1 have already			
2 dcpms	2			0 chosen 2 have already	2 chosen 6 have already 27 identified
3 cspm	4	1 chosen 10 have already	3 chosen 15 have already 94 identified	0 chosen 1 have already	
4 dcspms	0	0 chosen 0 have already 0 identified	0 chosen 2 have already 20 identified		0 chosen 0 have already
5 dsdm	0		0 chosen 1 have already 22 identified	0 chosen 0 have already	
6 dsdm	0		0 chosen 3 have already 57 identified	2 chosen 3 have already 55 identified	

Key:

1. designing performance measurement systems, 2. designing corporate performance measurement systems, 3. corporate social performance measurement, 4. designing corporate social performance measurement systems, 5. designing sustainable development measures, 6. designing sustainable development metrics.

* Google Scholar orders papers in citation number ranking.

8.4.3.3 PhD searches

Cranfield University's Library Catalogue system was utilised to search for compatible papers. Considering this research is in relation to conducting a PhD, it was thought that some specific PhD's theses would also have emerged, in line with the emergence of CR and operational aspects of corporate social performance. Even though the limited search to date has not proven useful, there is a distinct likelihood that other researchers will be exploring similar issues.

	"corporate social responsibility"	"social responsibility"	"performance measures"	"performance measurement"	"performance measurement system design"
thesis search (PhD & Masters)	0 selected 2 identified	0 selected 3 identified	0 selected 15 identified	0 selected 38 identified	0 identified

It is to be noted that at this stage of the review did not include the British Library's 'Index to Thesis' system.

8.4.3.4 Working papers search:

Recent working papers are expected to appear particularly close to this field. Cranfield University's Library Catalogue system was utilised for the search, though it also was not successful.

	<i>"corporate social responsibility"</i>	<i>"corporate social responsibility performance"</i>	<i>"designing performance measures"</i>	<i>"performance measures"</i>
Working papers search	0 identified	0 identified	0 identified	0 selected 2 identified

8.4.3.5 Book search:

Books are published on the area of corporate social performance as well as those describing in detail aspects of performance measurement and business excellence. The academic field of panel experts identified appropriate books from their respective fields and the author identified further material through references from academic papers.

- Managing the Business Case for Sustainability, 2006, Schaltegger & Wagner, Greenleaf Publishing.
- The Business of Sustainability, 2004, Steger, PalgraveMacmillan.
- The Sustainability Advantage, 2002, Willard, New Society Press.
- Sustainable Measures, 1999, Bennett & James, Greenleaf Publishing.
- Leading Corporate Citizens, 2002, Waddock, McGraw-Hill
- The Performance Prism, 2002 Neely, Adams & Kennerley, FT Prentice-Hall.
- The Civil Corporation, 2001, Zadek, Earthscan Publications.
- Systematic design of R&D Performance Measurement Systems, 1999, Kerssens-van Drongelen.
- Managing Operational Networks, 1999, Bartezzaghi et al, SG Editoriali.

8.4.3.6 Extant industry sources:

As a result of the complexity of CR by definition and the multiple stakeholders involved in defining and influencing corporate social performance generally, some extant research for relevant publications on the internet was conducted. The issue of the quality criteria is likely to require re-interpretation in terms of the literary audience and level of academic rigour within researched reports. Their descriptions and contributions in relation to this emerging field are relevant especially where no academically rigorous data exists. In terms of determining the credibility, one area is to determine the reputation of the publishing organisation(s). Organisations such as ACCA, Sustainability and AccountAbility produced a number of publications, some in conjunction with United Nations and UK Government departments. More recent literature papers from the systematic reviews referenced extant trade and industry-related publications within their

research. These referenced extant sources were reviewed for their current related publications.

The following sources of extant information were identified as credible material for assessment:

- The Accountability Rating 2004 - AccountAbility/csr network
- The Future of Corporate Responsibility codes, standards and frameworks 2004, Global Reporting Initiative and AccountAbility.
- International Survey of Corporate Responsibility Reporting 2005, KPMG.
- Nothing but the Truth, Best practice guide for Sustainability reporting, 2004, Price Waterhouse Coopers.
- Buried Treasure: uncovering the business case for corporate sustainability, 2001, SustainAbility and UNEP
- Corporate Social Responsibility: Is there a business case ?,2004, ACCA.
- The Future of Sustainability Assurance, 2004, ACCA and AccountAbility.

The quality assessment for these papers is somewhat different, as their publication is not based on having received academic peer reviewed before publication. These publications brought their own additional issues in terms of academic quality, i.e. some did not discuss the underlying theoretical basis, some did not provide argument or contention, and some did not explain their methodology, if one existed at all. To this end, such papers could not be pivotal quality contributions and would only provide contextual elements. Their main quality contribution was where they provided insights or demonstrated industry-related actions that as yet had not been illustrated by academic research.

8.4.3.7. Expert panel feedback:

The expert panel were essential contributors to this review. As described earlier, academic experts were able to clarify core materials and assist with advising the researcher on synthesis approaches that provide clarity from the diverse materials. Industry experts were able to clarify the relevance and the context of use by identifying the following relevant materials:

- Corporate Social Responsibility, A business contribution to Sustainable Development, 2002, European Commission.
- Sustainability Reporting Guidelines G3, 2006, Global Reporting Initiative.
- Hot Climate, Cool Commerce: A service sector guide to Greenhouse Gas Management, World Resource Institute.
- Measuring Eco-Efficiency - a guide to reporting company performance, 2000, World Business Council for Sustainable Development.
- Review of the comparability and relevance of existing indicators on CSR, 2004, United Nations.
- WBCSD Electricity Utilities Sector project: A Manifesto , 2006, World Business Council on Sustainable Development.
- Sustainability in the Electricity Sector, 2002, World Business Council for Sustainable Development.
- Monitoring, measuring and reporting CSR, 2000, The Corporate Citizenship Company.

8.4.4 Key journals identified:

A number of journal sources were identified in relation to the systematic review. The literature sources for articles were identified and tallied to produce a list of recurring journal article sources that provided relevant articles around the area of question, as identified alphabetically in the table below. This provides a reference list of relevant journals to approach for additional disclosures on the subject.

Key Journals: corporate responsibility, stakeholder theory & performance measurement
<ul style="list-style-type: none"> • Academy of Management Journal • Accounting, Auditing and Accountability Journal • Business & Society • Corporate Responsibility Management • Corporate Social Responsibility & Environmental Management • Corporate Environmental Strategy • Energy Policy • Journal of Business Ethics • International Journal of Operations and Production Management • Measuring Business Excellence • Performance Improvement • The Academy of Management Review
Other relevant journals: see appendices

8.5 Selection criteria

The selection criteria are applied to the range of articles and references identified. This involves reviewing the title and abstracts and gauging whether the paper is suitable for a closer assessment, illustrated below.

8.5.1 General inclusion /exclusion criteria

Inclusion/Exclusion Criteria	Rationale
Academic papers in refereed scholarly journals , from recognised databases addressing the social science disciplines	A primary source of academic literature on stakeholder theory, corporate social performance, and performance management. With regards the contemporary nature, preference is on up-to-date papers 2000+ and secondarily relevant earlier papers 1990+.
Conference papers from recognised academic bodies in the field	A source for the contemporary development of business and society as a new field (IABS & EABiS). A source for developments and business case-studies in performance measurement and management system design and implementation.
Inclusion/Exclusion Criteria	Rationale
International Theses Doctorates	The relatively newness of the field of study and the request for empirical studies of corporate social performance from the academic field in 1999, suggests some recent theses may provide some methodological context and analytical depth.
Industry reports from recognised organisations	With the activity of government, regulators, special interest groups, business and industry in the area of corporate social performance, contemporary sources, environmental opinions and practices are useful and relevant contributions to current thinking. Include consultancy firms (KPMG, ADLittle), not-for-profits (BiTC, AccountAbility), professional/industry bodies (ACCA, CIMA, energy trade magazines etc.), environmental information bodies and governmental sources (DTI, DEFRA Sustainable Development Commission).
Empirical studies at UK and continental Europe level as well as the English speaking nations are to be included.	In its broadest sense CSR, CSP, Performance Measurement and Stakeholder theory are universally understood frameworks, there are expected to be examples in relation to CSP and company based case-studies and other forms of empirical research around the world. However cultural compatibility with English speaking values is preferred such as US, Canada, Australia, New Zealand and Europe, though other continents will be considered if relevant.

Studies at continental/corporate environmental management as a global natural resources issues are to be included.	The environmental context to this research is not unique. There are other companies and sectors experiencing compatible regulatory pressures on global environmental scales, with the existence of eco-tax applications.. Also privatisation and deregulation environments of utilities in France, the UK, Australia, the US and areas of Europe may provide relevant sources. The drivers of climate change greenhouse gas emissions and the multi-national government agreements, should provide some international research from environmental management elements to corporate social performance measurement.
Studies at sector, industry level , regional or national levels are to be included.	As a rationale for an in-company research study within a particular sector, papers and articles that look at empirical sectoral environments and performance would be useful. Areas and sectors such as water (availability and safety), mining& aggregates sector, pharmaceuticals, oil and gas can provide research activities in corporate social performance that are extremely pertinent contextual components for this study and the PhD research.
Inclusion/Exclusion Criteria	Rationale
Studies that mention csr, stakeholders, performance systems and corporate social performance, but <u>do not</u> have it as its main focus will be excluded.	Studies in some of the disciplines for example human resource management and marketing, may touch on themes of csr and thereby infer csp, but do not really focus on the key structural research area of operationalising csp.
Empirical case studies or action research-based methodologies on the design of performance measurement systems, stakeholder issues, csr stakes, perceptions of managers on corporate social performance.	In-company research perspectives are particularly sought in relation to issues of designing performance measurement systems, internalising and prioritising corporate social responsibility and the creation of corporate social performance related systems. These papers are also useful in their methodology, activities and approaches.
Only articles in the English Language will be studies	Researcher can only read, review and assess in English.

To assist in selecting papers that focus on key elements within the research question, the inclusion criteria described above is used in conjunction with the following exclusion criteria, which acts to define partly what is not being looked for in relation to the question.

Other Exclusion criteria NOT:

Not - Performance measurement implementation, except in relation to explicit issues for specific design consideration and factors that influence design processes.

Not - Performance management, except in relation to explicit issues for specific design consideration and factors that influence design processes.

Not - Performance maintenance or use of performance measurement systems, except in relation to design-related conclusions for consideration.

Not - Corporate financial performance or financial performance related measures.

Not - CR specific themes of corporate governance, employee welfare, supply-chain management, community initiatives or corporate philanthropy, except with generalisable design processes and organisational insight in relation to the introduction of new operational or strategic measures.

Other Exclusion criteria NOT:

Not - CR empirical reporting assessments or CR external performance indices links to value, unless there are specific design considerations.

Not – Theoretical aspects of CR from traditional management research fields e.g. marketing (branding), finance (complexity of ratios, estimating intangibles) human resource management (employee motivation), economics (sustainability growth), except in relation to explicit issues for specific design consideration and factors that influence design processes.

All studies identified satisfy the inclusion criteria elements and do not fall into one or more of the exclusion categories are reviewed against the full paper's selection criteria, as described next.

8.5.2 Full text paper - selection criteria

Having selected papers on the basis of the inclusion and exclusion criteria on the papers' title and abstract review, the full papers are reviewed against the following categories and criteria:

Theoretical/ Conceptual Papers:

- Generically explaining the assumptions, dependant variables.
- Clear contributions to knowledge.
- Clear identification of research or knowledge gaps.
- Concise comparisons and reviews of knowledge and up-to-date thinking.
- The aim of the model and relationship with existing theories in the business and society and the performance measurement field .
- Explanations and models of mediating or contingency affects.
- Discussion of theories and models concerning the development of corporate social performance management in a national or global context.

Empirical Papers:

- The positioning and relationship the study has with existing theory and other research works.
- Clear definition of the sample used (nationality, sector, industry environments)
- Clear definition of the unit of analysis, parameters and methodologies applied.
- Clearly stated empirical results, with description and commentary on their interpretation with existing theory and other studies.
- Discussions on the methodological shortcomings and areas for consideration, especially in relation to any generalisations.
- Cases or studies with a focus on the key antecedents of corporate social performance, performance measurement systems or stakeholder-related issues.
- Discussions on the dynamics and interactions of any two of the three areas of corporate social performance, performance measurement and stakeholder theory.
- Explanations for mediating or contingency affects.

Methodological Papers:

- Clear positioning of the methodological approach.
- Clearly identify the assumptions behind and robustness of, the methodological design.
- Provide guidelines on repeating or translating the approach.
- Identify the practical and theoretical limitations of the study.

8.6 Quality appraisal

The quality appraisal stage seeks to differentiate the key papers that inform the question. Quality however is a concept that is open to interpretation. The interpretation of quality involves subjective judgement, even against explicit search criterion and research-type specifications. Limiting factors at this stage include the scope and understanding of knowledge in the field by a researcher new to the field, as well as some of the research bias discussed in the personal statement.

To provide a consistent approach for assessing quality, a checklist was developed to cover key areas of a paper's contributions including the discussion of the concepts, the clarity of recommendations, contribution to knowledge and the appropriateness of the paper's methodology.

Reflection was required for considering the quality criteria in the context of emerging fields. In some areas there was less of a requirement for methodological rigour and "comprehensiveness" in relation to a paper's quality and more of a 'fit for purpose' evidence-based approach applied (Boaz & Ashby 2003), as described earlier in relation to trade publications. The issue of quality may also be expected to vary between a new researcher embarking on a PhD programme than one conducted by an experienced academic in the field(s), even more so with additional experience of the systematic review methodology.

The quality checklist is applied within the context of providing useful reference material as a *starting point* for progressing research on the PhD. Thus a more prudent filtration approach was applied, providing some articles the benefit of the doubt as opposed to the strictest rejection criteria.

Should the articles effectively reach below the 50% level of the quality check guidelines (illustrated overleaf), then they will be excluded.

8.6.1. Quality appraisal guidelines

Although, admitting the subjectivity of this quality appraisal stage, there is a need to create some guiding rules and reference in substantiating the decision to accept or reject the evidence provided by an article. The idea is to keep this relatively simple, though not over simplified, forming more of a checklist for ranking and comparative purposes between papers, illustrated below.

Quality assessment performance checklist

Performance Level Assessment Elements	Score 0 low/absent	Score 1 Medium	Score 2 High	Not Applicable N/A
Discussion of Underlying Theory/Concept	Not enough information to assess	Connection between paper theoretical/ conceptual basis and that in the field.	Excellent description of the model. Sound review of prior literature.	Not applicable to this paper/document
Clarity of Argument/ recommendations	Not enough information to assess	Some loosely identifiable recommendations & part- synthesised conclusions.	Clearly synthesised arguments, recommendations and conclusions.	Not applicable to this paper/document
Contribution to Knowledge	Not enough information to assess	Some limited contributions to current knowledge.	Major contribution to current knowledge.	Not applicable to this paper/document
Use of Appropriate Methodology	Not enough information to assess	Acceptable methodology to explain paper.	Excellent research design, sound contextual relevance.	Not applicable to this paper/document

The general assessment level for in-depth systematic review occurs if:

- **PASS - the paper does not score two 0's and scores at least one 2.**

There is always a risk that some articles that could be very useful are excluded and those with less significance are included. Dr. Moir and Dr. Kennerley have been invaluable second assessors in relation to relevant omissions in the

academic field. The industry and CR practitioner experts clarified additional contextual and credible industry reference sources in relation to the question.

The author's approach to utilising the new methodology was to develop and refine the interpretation as key findings are identified and research gaps become more defined, thereby maintaining the structure and criteria of the quality assessment.

8.7 Data extraction

Papers that meet the selection criteria for the systematic review and subsequently pass the quality criteria are prepared for data extraction and cataloguing. This is a crucial stage in the process, as it becomes a key reference source for assessing the details of the contribution and for tracking and referencing the source. As well as capturing key elements from data synthesis, it includes logging key relevant data sets from the paper, as illustrated below.

DATA Extraction Aspects:

- **Citation details** – author, article title, journal source, year of publication, journal details (volume/issue).
- **Descriptive Information** – role/purpose of paper, research theme (csr, csp, performance measurement & others – combination, organisational behaviour, strategic management), focus (industry, organisation level, business unit/managerial level), geographical location, industry sector.
- **Methodological content** – empirical or theoretical.
- **Thematic data** – key ideas, points, discussions, conditions, contingent aspects, recommendations, conclusions.

The data was profiled on an Excel spreadsheet. As a database, this proved particularly useful for data sorting and analysis, as well as having keyword and searching tools for referencing. It can also provide graphical representations of the literature's typology. The data was collected and stored in the following fields: author(s); publication year; title; publication source; publication issue; source of identification/reference; quality assessment score(s) (see quality assessment framework); type of research paper; country-focus/source of paper; academic field; keyword/themes; methodology details, and a description of key points.

8.8 Synthesis and reporting

The synthesis approach is to review the discrete narratives extracted from papers and articles, build them up into a descriptive picture of the whole that accurately reflects the position of the findings from papers.

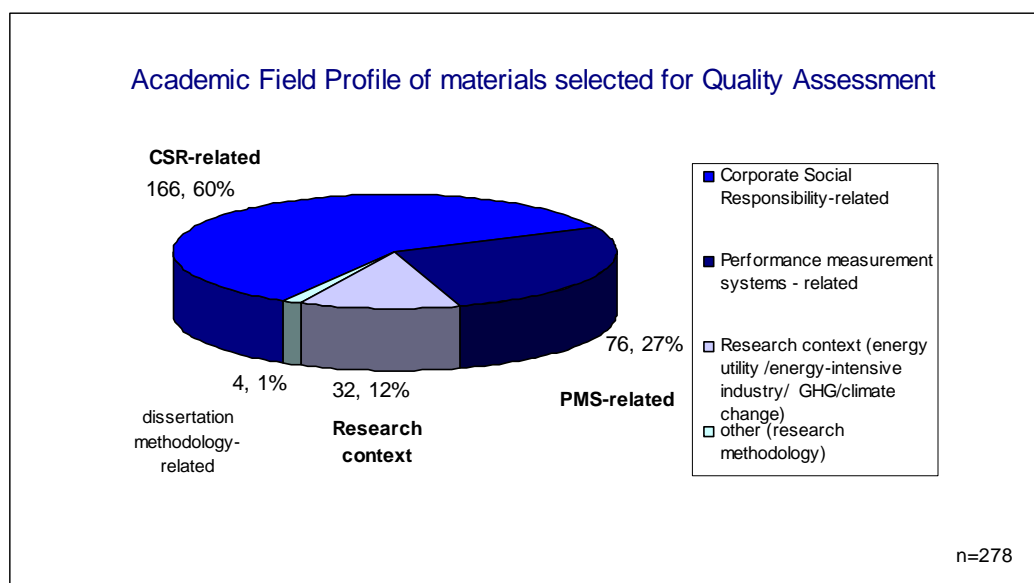
This process includes identifying: **how the papers contribute to the field, how they relate to each other and how they combine to provide a meaningful narrative.**

This includes aggregating the findings into key areas or 'nodes' of reference, assessing the congruence and differences in terms of **models and frameworks, business drivers, definitions of key terms, key philosophical and theoretical stances and recommendations and outcomes from empirical activities.**

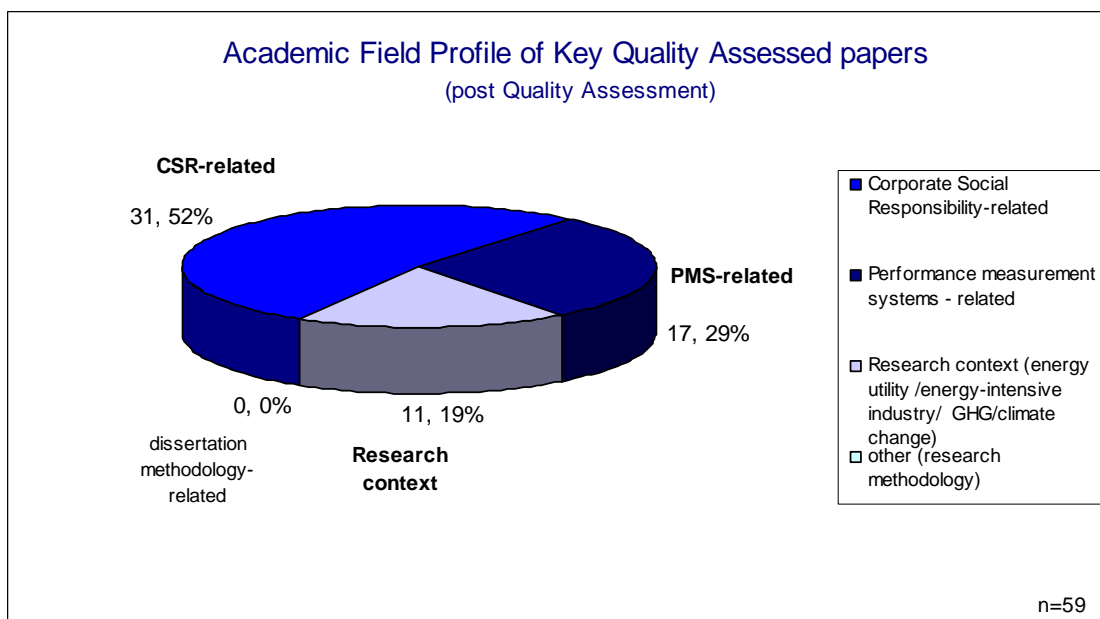
The fundamental aim is to identify the environmental and organisational pre-conditions and the positive and negative factors identified within the fields of performance measurement, corporate social performance and stakeholder theory that may affect designing corporate social performance measurement system within the utility sector.

8.9. Review and typology of selected literature

The following section represents a range of analysis applied to papers at different stages in the process, from the initial selection to becoming key core papers. Using Excel, there are profiles exploring the academic fields of the papers, i.e. corporate social responsibility-related, performance measurement systems-related and the research context. There are also a number of other analytical perspectives, including: the type of papers, e.g. action research, case-studies, conceptual and theoretical, review papers, books, newspaper articles; the audience/role of papers, e.g. academic research-orientated or practitioner-orientated; and the longitudinal time series of the papers identified as they progress from being selected for appraisal. All the findings are illustrated and discussed in Appendix 3, with some summary findings described below.

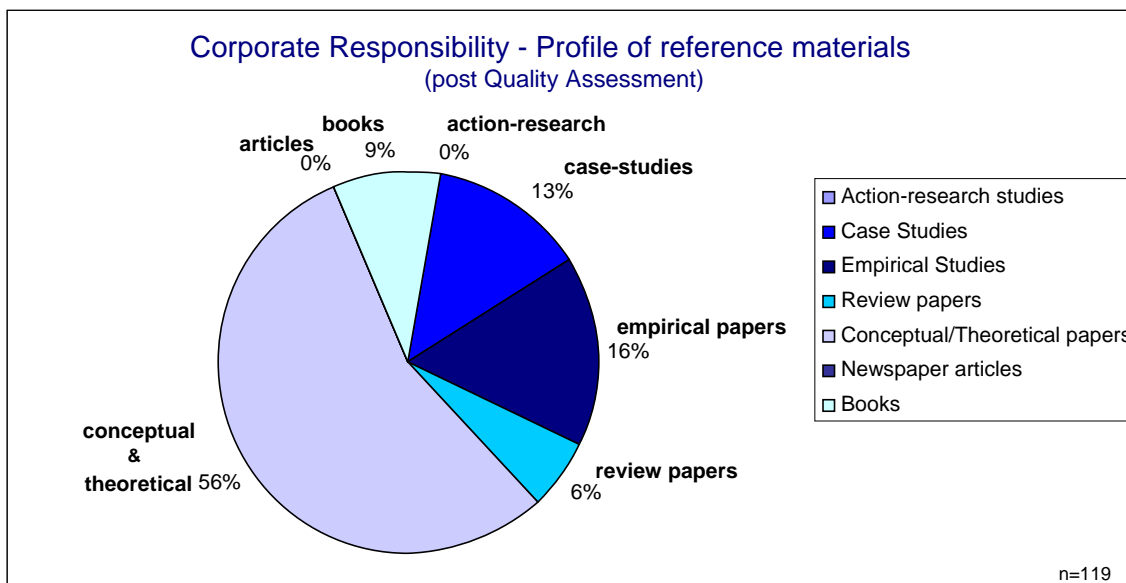


The composition of the papers maintained a consistent order of contribution from the fields investigated. Of the two-hundred and seventy eight papers identified at the start, CR-related papers made the largest contribution (60%), followed by PMS-related (27%) and then research context related (12%). This was of a similar nature to the fifty-nine papers identified as making core contributions.

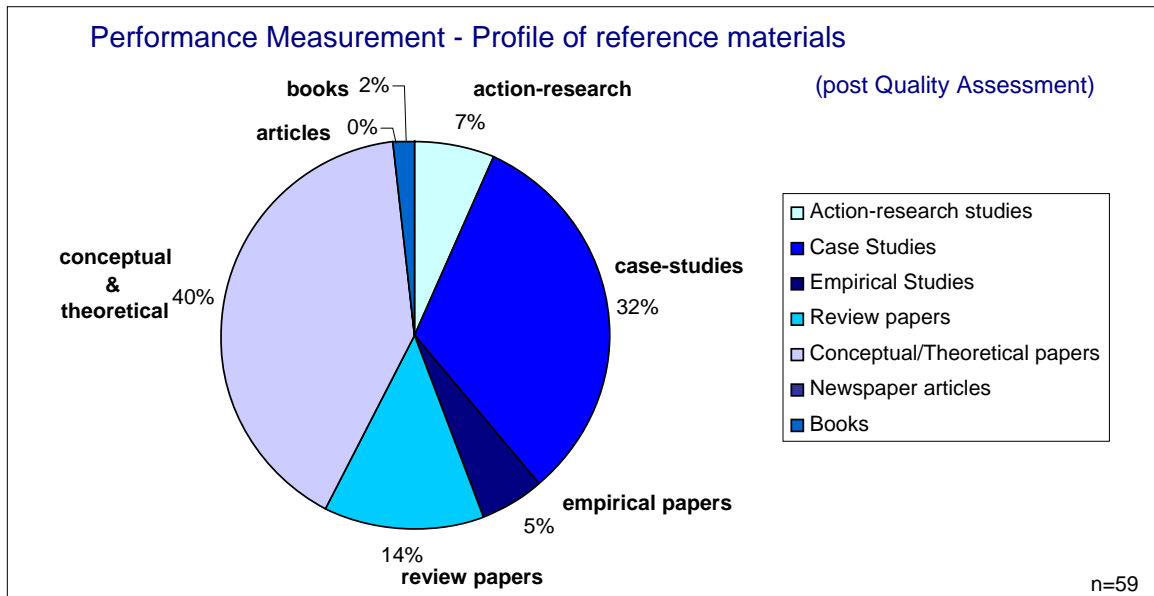


From selection to core paper assessment, the CR-related papers reduced by to less than a fifth,(166 to 31 papers), with PMS papers reducing to just over a fifth (76 to 17 papers) and the industry-context papers reducing to a third (32 to 11 papers).

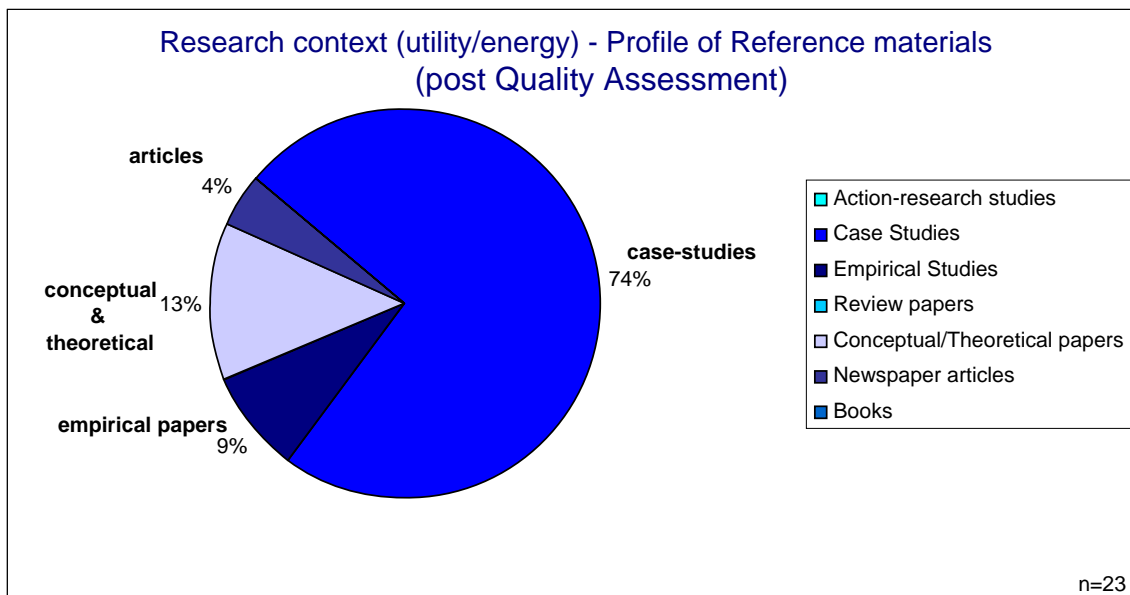
As illustrated below, the CR field is primarily conceptual and theoretical (56%).



The PMS field on the other hand shows a more distinct research balance with that of case studies and action-research (32% and 7% respectively), illustrating the differences from each field's contributions to the research question.



The research context, in relation to the factors affecting what is a recently re-structured electricity sector, the evolving recognition of climate change and the recently introduced European emissions trading systems, reveals different contribution to the other systematic search areas, with less theoretical content.



There is a low conceptual and theoretical basis and a more pragmatic case-study basis as these issues are developed and explored within the sector.

As highlighted, further analysis and details are in Appendix 3.

9 Utility-related CSP and sustainability issues

The aim of this section is to explore the specific influences and factors that could affect the development of CR-related PMS systems within the utility sector and what evidence there is in the literature to support or disprove what has already been identified from other related fields.

9.1 Factors for change in the utility sector

One key finding from the utility sector, is the legacy of cultural weaknesses towards performance management with the recommendation for 'out-of-the-box thinking' as opposed to the 'utilities mindset' alongside the development of strategic performance altering strategies (Metz 2000). From a strategic perspective, the utility companies look at environmental issues as a method for demonstrating a long-term ability to comply with legislation and attention to public image, and not necessarily from a corporate-centric perspective (Schaefer 2004), with the regulator being cited as the main cause behind company initiatives in terms of new management systems and new business ventures (Black et al 1997).

A change of mindset is encouraged in relation to the utility sector structure and the challenge of climate change (Ainger 2006), suggesting that combining utility management in a region will accommodate micro-level aspects and maximise asset investment and management efficiency towards water, gas, electricity, and waste at the regional level as a water-waste-energy management company.

There are distinct institutional and social factors influencing the utility company, and with all organisational change, personal values (particularly from top management) have a strong influence on policy decisions and on organisational culture. Strategically, there is a distinct need for sustainability champions, the encapsulation of the role of personal values, the development of an improved understanding of the equity of property rights and stakeholders, and realising the 'meta level' organisational network effects and requirements (Schaefer 2004).

9.2 Stakeholder influence in the utility sector

The sector has some very powerful and legitimate institutional stakeholders through the government in terms of legislation and regulation (Harvey & Schaefer 2001). It was also highlighted that the government, as a stakeholder, can create conflicting demands, and the standard behaviour from utilities is to retreat to the legislative base. Interestingly, customers and the public, although also considered legitimate, were not identified as directly powerful, nor were they considered to have urgent claims. Shareholders and owners were seen as powerful and legitimate but with no urgency. Employees were considered to be legitimate stakeholders, but the power and urgency aspects were uncertain, though further de-regulation of the electricity markets may change this monopoly company behaviour (Harvey & Schaefer 2001).

Utility firms have only recently started concerning themselves with the social dimension. Different interpretations of stakeholder needs have been identified and the role of the government and regulator is found to be ambiguous, having the effect of hindering social programmes and policies rather than encouraging and supporting them (Schaefer 2004).

9.3 Intensive energy industries and climate change

CR is on the strategic radar of most utility companies, as future energy policy is a strategic component (Roubelat 2006). Although climate change is a factor for most companies (Kolk & Pinkse 2005), it is also one of the most urgent fundamental problems facing energy market policy makers (MacGill et al 2006). Climate change models are unpredictable, with a predicted cost of 1 to 2% of GDP in developed countries, and 2 to 9% of GDP in developing countries (Hansford, Hasseldine & Woodward 2004).

Electricity markets do not fit with traditional commodity markets and can be described as 'designer markets' (MacGill et al 2006). Although energy demand in real terms declined compared to GDP, (Cavanagh 1996), economic growth from developing countries is expected to rise significantly; with a 25% per annum growth in power consumption in China alone (Rainbow 1996). Global power generation was responsible for 40% of all man-made CO₂ produced in 2006 and is expected to double in a 'business-as usual' scenario by 2030 (WBCSD 2006). Regulating the energy market to manage climate change is influenced by asymmetric information on demand management, the dependency on energy for economic growth and a lack of co-ordinated decision-making in the industry (MacGill et al 2006).

The regulatory challenge of climate change:

Energy markets appear to be at risk of market failure because:

- **Natural monopolies.**
- **Wider societal objectives** e.g. economic growth.
- Dysfunctional interactions due to **uncoordinated decision making.**
- Information failures, especially **poorly informed demand-side.**
- Capital intensive and long-lived assets that lead to **cycles of over and under investment.**
- **Significant environmental externalities,** especially GHG emissions.

(MacGill et al 2006).

The International Energy Agency forecasts a 60% increase in energy use, requiring 130% of today's generation to be built over next 30 years (WBCSD 2006). Climate change is one the key challenges for the electricity utility sector, alongside maintaining security of supply, and furthering access to the 1.4b people who are presently without access.

General Global Electricity Challenges:

1. **lack of access** – presently lacking to 1.4billion people.
2. **Security of Supply** - political, competition for resource and high prices.
3. **Global Climate Change** - reduce Carbon intensity in production and energy efficiency.

(WBCSD 2006)

Utility companies are conducting energy scenarios that incorporate Delphi-like futurist methods and include different performance outcomes, e.g. EDF (French-based global power generation company) explores future EU policy influences

and the future of nuclear power within power generation fuel mixes (Roubelat 2006). It is predicted that technology will be a key Schumpeterian creation and destruction influence for the industry in relation to supply productivity and fuel-type diversification as a response to future challenges (Rainbow 1996).

Companies such as ABB (a Swiss-Swedish engineering consortium) have begun divesting from large-scale generation and nuclear holdings into more small scale, micro power units (UNEP/SustainAbility 2001).

It is believed that efficiencies can be better focussed within specialised business functions and the electricity service industry is expected to undergo further de-regulation to improve the competitive market, including perhaps splitting the business into separate generation, transmission and distribution companies (Cavanagh 1996).

Tighter environmental controls and increasing shareholder expectations have been recognised as key elements for prompting utilities to invest in extensive pollution-control technologies (WBCSD 2001). Many companies are investing in Greenhouse Gas (GHG) emission reductions, setting up low-impact renewable power, developing R&D particularly in fuel cell technology and energy storage systems, as well as developing operational efficiencies for the generation and distribution of power. ISO14001 has been identified as an important strategic tool, assisting companies to go beyond compliance and implement continual improvement; admitting

CSR Challenges ahead for Electricity Utility Sector

1. **affordable electricity** in developing countries for economic growth.
2. investigating how **demand-side management** can assist with affordability of electricity and poverty alleviation.
3. expanding **supply-chain management**.
4. more **stakeholder focus**.
5. expanding **use of partnerships** in addressing sustainable development issues.
6. exploring extending **life of existing assets**.
7. balancing centralised economy of scale with inherently flexible smaller **decentralised investments**.
8. resolving barriers to investing in **renewable technologies**.
9. finding ways to make economic **demand side management more widespread**.
10. explore ways of **discussing future energy options with stakeholders**.

Other issues include:

- a. long-term storage and disposal of spent fuel and higher level radioactive waste
- b. development of clean coal technologies and carbon sequestration techniques.
- c. ecological impact barriers for hydro-electric.
- d. gas availability and cost is an issue (though cleaner).

(WBCSD 2001)

however, that the environmental and social pressures facing electric utilities are highly complex. (WBCSD 2001).

The extraction sector (mining, aggregates and oil & gas) is experiencing some organisational challenges in relation to a more stakeholder-responsive orientation for issues concerning environmental and social responsibility. Shell and Rio Tinto are exhibiting increasingly stakeholder-responsive behaviours at corporate and strategic level, however for reasons related to strategy, lack of competency or institutional will, subsidiary-levels still does not reflect corporately-identified stakeholder relationships (Wheeler, Fabig & Boele 2002).

9.4 Sustainable development challenges to the utility sector

The electric utility sector is an industry where the implementation of sustainable development has been difficult in practice (Searcy et al 2005), with a lack of robust measures of corporate sustainability performance remaining an ongoing challenge.

Considering the influence and directions taken from industry regulators and environmental agency institutions, most environmental regulation in industry has focussed on air, water, solid waste and not GHG emissions. In relation to the climate change aspect, companies themselves have not necessarily been encouraged to develop sector or company solutions to this issue (MacGill et al 2006). Companies are still very much in the preliminary phase regarding the implementation of a market strategy for climate change (Kolk & Pinkse 2005).

Another challenge is the complexity of operations, company budgetary systems and the market conditions. Even with a complex array of operational targets and settings, the plant manager is not in control of plant operations, and this blurs the responsibility for achieving overall performance (Athanassopoulos, Lambroukos & Seiford 1999). The volume of production is not under control of a plant manager, it is based on the spot market. As emissions relate to fuel type and plant technology, which are not under the direct control of the plant manager, this

makes operational performance for operational emissions difficult and complex areas to develop. There are a number of external benchmarks and individual measures that can be linked to metrics and measures of performance, e.g. ISO 14000, GEMI Planner and Eco-Value, however this still does not describe the operational level of performance (De Bono 2004).

The energy utility sector is a good example of the complexity of a significant CR issue and the mismatch between the requirement for a company's operational performance and the need for a significant, literally global, sector performance. The challenge is that the decision-making, investment and operations by all generators, network operators and end-users contributes to the overall industry operation efficiency and effectiveness of CO₂ reduction over time (MacGill et al 2006). To this end, part of the solution requires strategic partnerships and co-ordination to deliver any significant impact and to maximise the asset investments, fuel mix use and technology developments (MacGill et al 2006, WBCSD 2006).

Road-map for

Electricity Industry & Stakeholders :

1. Continuously improving energy efficiency.
2. Diversifying and gradually de-carbonising the fuel mix.
3. Investing adequately in infrastructure.
4. Bringing useful technologies to market.
5. Providing wider access to electricity.
6. Building partnerships with decision-makers and civil society.

(WBCSD 2006)

9.5 Privatisation and designer markets for utilities

Privatisation has been a significant feature of the political and economic scene in the United Kingdom since 1980 (Ogden & Watson 1999). Privatisation left the monopoly character on the industry unchanged, though a number of issues remain unresolved. Principally who determines what customer service standards should be? , how are they measured ? , and what is their adequacy in reflecting customer needs ?

In the UK, the regulators (OFGEM and OFWAT) were established by the government with a remit to create greater competition amongst the monopolies

(Schaefer 2004). To some extent therefore increasing the level of competition and the social inclusiveness agenda are incompatible. The regulator makes explicit the interests to be served by the regulation and describe the measures of effectiveness that should be addressed (Ogden & Watson 1999). The regulator is able to allow parts of the cost of improvements to be recovered from customers due to the 'k-factor' in the pricing formula, with individual k-factors based on each company's inherited infrastructure and new investment requirements. Industry analysts also incorporate levels of customer service into their assessment of a company's exposure to regulatory risk and the potential shortfall in performance expected from regulator, along with the cost implications, reputational damage and risk exposure (Ogden & Watson 1999).

The financial management structure for budgeting and investment planning within the water utility sector has caused dysfunctional decision making due to a lack of congruence on objectives in relation to operating costs and capital budgets (Francis & Michington 2002).

9.6 Government & regulatory mechanisms in CR-related issues

Four key mechanisms have been identified that are specifically employed by the government towards the market-place; encouraging voluntary agreements, creating tradable permits, enforcing regulation and applying taxes (Hansford, Hasseldine & Woodward 2004). Voluntary agreements are popular in the US, yet are criticised for lacking transparency, certainty and accountability.

Government mechanisms to influence the market:

1. **Voluntary agreements.**
2. **Tradable permits.**
3. **Regulation.**
4. **Taxation.**

(Hansford, Hasseldine & Woodward 2004)

Regulation however comes with high associated costs and significantly lags the societal need. To this end, taxation and tradable permits appear the most suitable mechanism; supported by ESRC findings that taxation methods are able to permeate all aspects of society (Hansford, Hasseldine &

Environmental Regulation approaches:

1. **technical** – *command & control* ,e.g. maximum allowable limits on equipment.
2. **financial** – *levies & tradable permits* ,e.g. including pollution taxes, tax credits and markets in tradable pollution permits.

(MacGill et al 2006)

Woodward 2004). The regulator's approaches to environmental regulation for utilities have been identified as either *technical* command and control or *financial* incentive based (MacGill et al 2006).

One issue for consideration in relation to compliance with environmental regulations and associated initiatives is that the costs tend to be over-estimated, as the company tends not to value the innovation benefits it may be gaining (Funk 2003), nor perhaps the issues and other expenses they may have unknowingly avoided by taking that course of action.

9.6.1 Emissions Trading Systems

The EU plans to apply the Emission Trading System (ETS) for energy intensive industries (chemicals, mining, metals, utilities, and the oil and gas sectors), whereas for non-energy intensive industries, the EU is adopting a US-style voluntary participation emission reduction program (Kolk & Pinkse 2005). BP and Shell are already active participants in the voluntary programme (Steger 2004).

For tradable pollution permits, the regulator sets the limits and allows the market to resolve how to achieve the objective. This method has been identified as cheaper to operate than command and control systems and has attracted worldwide interest (Soleille 2006, MacGill et al 2006). Issues with regards the fine detail of the tax system, may however inhibit utilities' renewable investment programs (MacGill et al 2006). There is still a high degree of uncertainty with companies with regards the EU's Emissions Trading Scheme (ETS) (Kolk & Pinkse 2005), even though the EU's ETS is not the first of this type of system, e.g. US 'sulphur dioxide' permit programme (Victor & House 2006).

Emission trading allows the buying or selling of certificate emission reductions (CER's). The 'cap & trade' ETS provides the flexibility for each company to decide whether it is cost-effective to invest and innovate specifically in emission reduction and sell their permits, or to purely purchase permits to offset the excess emissions over their set limit. Some company strategies are to off-set

emissions with the make or purchase of low emissions, as opposed to innovating solutions themselves (Kolk & Pinkse 2005).

Each EU country identifies National Allocation Plans, and this significantly affects the sector (Soleille 2006). The setting of a lenient or stringent cap, strict or lax emission limits depends mainly on the political will of decision-makers and not necessarily the regulatory regime itself. Where there is a distinct lack of environmental ambition, as identified by the French government, National Allocation Plan targets for 2005-2007 can actually allow for an increase in industrial CO₂ emissions. As emissions trading is meant to encourage long-term investment in capital projects that reduce emissions by showing the real cost of carbon emissions (Victor & House 2006), such lenient caps in effect communicate a different message which do not appear to be in the 'spirit' of the trading system. There are challenges and trade-offs with regards the cost of monitoring emissions by the company, such as establishing an acceptable level of measurement precision and an agreed protocol for measurement. This has created uncertainty in relation to company claims and rebate applications on their demand management investments (Vine et al 2000).

In summary, the utility sector is a very significant area of study in relation to the tensions within CR and the legacy systems and mindsets from having been public service institutions. There is strong influence from regulators and other stakeholders, which cause conflicts and challenges, including significant influences from issues such as climate change, economic and socio-political security of energy supply and significant future demands from developing countries. Climate change and greenhouse gas emissions are important as a new accepted norm imposed on the industry, with new political emission systems coming from international agreements and voluntary codes of practice. This challenge comes on top of the practical challenges of designing robust CR performance measurement systems within the utility sector. This is the subject of the next section of this thesis, the developments of CR performance and Sustainable Development Indicators (SDi) in the sector.

10 Design of sustainability indicators and CSP measurement system in the utilities

10.1 Evolutionary challenges for Corporate Social Performance

Linking corporate social performance (CSP) measures to corporate performance is highly complex (Carroll 2000), and within the utility sector,

‘the creation and implementation of sustainable development indicators still remains an emerging discipline , existing [sustainable development] indicators are not widely used in management decision-making’ (Searcy et al 2005).

The challenge for most companies appears still to be the issue of genuinely engaging with CR, with most companies tending to implement compensatory measures to counteract the effects of external pressure, as opposed to developing innovative approaches, new technologies and approaches to energy management (Tanzil & Beloff 2006).

‘ CSR still has shallow roots in companies ... more an adoption of form than substance on social and ethical issues ‘

(Carroll 2000)

Corporate social performance needs broad comprehensive and robust measures to qualify as CSP (Carroll 2000), as such, measuring only the environment and measuring only corporate philanthropy is not satisfying corporate social performance.

A key challenge for a comprehensive corporate responsibility performance measurement system (CR-PMS) is that most sustainable development initiatives have been developed in isolation of business activity and are not yet linked to business strategy (Szekely & Knirsch 2005), with manager's requiring convincing of the validity of CR with corporate financial performance (CFP). From the firm's perspective, much of the discretion is attributable to the need for trade-offs from competing pressures and budgetary limitations, along with the fact that managers

do not often know how implement a sustainability strategy or how to translate the strategy into action (Epstein & Wisner 2001).

Companies will still find corporate social performance and sustainability 'excellence' a very demanding task, not least because the local, national and global challenges are permanently changing (Zink 2005); thus the need for designing dynamic and evolutionary CR measurement and management systems is a fundamental issue for this area.

Sustainable development is about creating a long-term planning and risk management horizon, based on impacts to, or by, the company in relation to societal and ecological changes or effects (Szekely & Knirsch 2005), and there are practical reasons to develop these measures in terms of decision-making, comparing processes, identifying impacts and risks, as well as for tracking performance (Tanzil & Beloff 2006). For it to create value, the knowledge gained by the company must not only be shared and developed internally, it must also be marketed (Wall & Doerflinger 1999), with the production of a CR report being a sure way of marketing the company's CSP status to a broad audience of stakeholders (Tanzil & Beloff 2006).

**Corporate use
for Sustainability Metrics
in Decision-making:**

1. technical and business **alternative assessments**.
2. **comparing** operation **processes**, business/facility units.
3. **identifying** environmental aspects and **impacts** of industrial operation.
4. **tracking performance** over time.

(Tanzil & Beloff 2006)

In relation to external reporting however, the French's NRE social environmental reporting activities, compulsory from 2001, identified that the availability and quality of sustainability data were mediocre and the choice of SDi's was found to be overly dictated by the regulator (anon 2005b). This supports the claim that the potential for tunnel vision related to adopting measures for one or two key stakeholders results in the development of ineffective systems.

'externally imposed systems without consultation of major stakeholders can result in the adoption of inappropriate systems'

(Lawton, McKevitt & Millar 2000)

At the corporate level, the company is also expected to incorporate variations at the operational level (Tanzal & Beloff 2006). These variations are described to relate to the specific *operational* variances of the business unit in terms of product and service, as well as *geographical* variations, e.g. with regards customs and culture, *technical* variations in skills and plant and specific local *community factors* and issues.

Corporate Issues & Impact
Priorities
<u>Reasons for Variations</u>
<ul style="list-style-type: none">• Operational.• Geographical.• Technical.• Community factors.
(Tanzal & Beloff 2006)

Technology has provided significant contribution to performance measurement systems in terms information retrieval, data management and expert systems that can compile vast quantities of data (Tanzil & Beloff 2006). Another technological development lies in the area of environmental monitoring, with the increased sensitivity of sensor technology and the capacity to perform real-time measurement, making it recently possible to provide more reliable levels of measurement for toxic substances (Zafar 2004).

External guidelines and practices have been identified as a sound starting point for developing the company's CR stance (Crawford & Scaletta 2005, Keeble et al 2003). The pursuit of institutional measures of performance is recommended as a legitimate and worthwhile expense, with the requisite that local measures are required to sit alongside generic, corporate or national measures (Lawton, McKevitt & Millar 2000).

Top-down approaches can create loose coupling indicators which in turn instil a loss of confidence in the measures by management. The measures can also lack linkage between impetus and operational change, as well as a lack of attention towards the views of the client. Middle managers subsequently can feel distanced from performance measures that are devised without their active participation, limiting not only the effectiveness of the performance measurement system, but the devaluation by middle managers affects the essential strategic change element required for the new paradigm (Lawton, McKevitt & Millar 2000).

10.2. External reporting and measurement techniques

The establishment of sustainable development within the company is an evolutionary process (Veleva & Ellenbecker 2001, Keeble et al 2003). Veleva and Ellenbecker (2001) recommended a company begins with compliance and conformance metrics, before moving on to measure the basic input and output metrics and progressing then onto the effects from business unit activities. This may progress further onto issues within the supply chain and the product or service itself, before finally reaching into the core elements of sustainability (Veleva & Ellenbecker 2001). It is noted here that this model focuses mainly on the ecological impacts and neglects some other aspects of social impacts and well-being. Keeble et al (2003) chose a more strategic management route recommending the company identify a small, simple set of measures, with the idea to improve this position over time and fundamentally avoid getting 'stuck' trying to identify everything at the offset . They selected the Global Reporting Initiative, the Global Compact, ISO14031, the Sullivan principles and WBCSD's Eco-Efficiency Metrics in their corporate adoption of sustainable development indicators Keeble et al (2003).

Learning Curve of Sustainability Indicators and Metrics

An evolutionary level model

- level 1** - Facility compliance/conformance metric (compliance focus - spill rates, no. of fines, injury rates).
- level 2** - Facility material use & performance metrics - input/output focussed (e.g. energy use, toxic release inventory emissions).
- level 3** - Facility environmental & human health 'effect' metrics, beyond inputs and outputs looking at potential effects (e.g. human toxicity potential, global warming potential, acidification potential).
- level 4** - Facility supply-chain and product-lifecycle metrics, extending level 3 to supply-chain and product elements.
- level 5** - Facility sustainability metrics - extend scope to long-term material depletion, the use of natural resources and development of more renewable resources.

(Veleva & Ellenbecker 2001)

GRI Reporting framework

50 core & 47 non-core measures & indicators

- **Economic**
- **Social**
- **Environmental**

+ **sector specific supplements** - financial services, mining & aggregates.

measure issues: aggregation, formulas, accuracy, clarity, comparability and accountability.

(UN 2004, GRI 2006).

The GRI guidelines, as an external standard, are highly recommended as a practical resource, as they are composed of both quantitative and qualitative indicators, intended to compliment GAAP (Generally Accepted Accounting Practices) and are regarded as providing a sound basis and precision in non-financial reporting (Crawford & Scaletta 2005). The Global Reporting Initiative (GRI) and Business in the Community's Corporate Impact report are also recognised CR reporting frameworks by the United Nations (UN 2004). The GRI, as a multiple stakeholder initiative, has 97 indicators and sector-specific supplements to assess, undergoing a consultation draft for a third version, the GRI₃ format (GRI 2006). The BiTC reporting framework consists of 44



measures and four progressive reporting stages *level 1*, a data baseline capture and reporting; *level 2*, a baseline, performance and impact reporting stage; and *level 3*, reporting on performance improvement orientation using both qualitative and quantitative assessments (UN 2004). The United Nations are however keen to develop the social aspects further:

‘.... environmental reporting is at an acceptable stage, however social reporting techniques are still lacking.’ (UN 2004)

One of the key challenges in providing a balanced CR is that environmental performance is still at more advanced level than social performance (Schaltegger & Wagner 2006).

10.3 Corporate sustainability and the economy-environment-society model

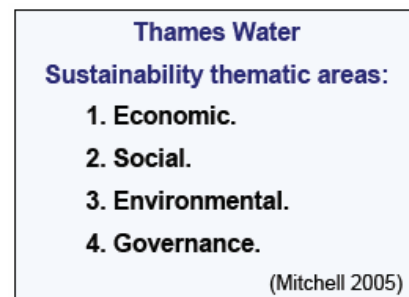
As a useful framework, Searcy et al (2005) adopted the economy-environment-society model, i.e. social, economic and environmental (SEE) themes within the electricity sector's practices. The suitability of using the SEE format being based on a wide acceptance, simple use, direct linkage to internal initiatives, and the

company's previous use and experience of that conceptual model. Concerns of application were highlighted regards the limiting factors of creating 'silo' thinking through analysing within each dimension and therefore inhibiting the creation of the much needed integrated solutions and essentially, the development of integrated performance measures. (Searcy et al 2005).

Severn Trent, a water & waste management utility company, adapted the SEE model slightly. They identified four key 'pillars' of sustainability, namely economic growth and employment, social progress and equality, whilst splitting the environment component into environmental protection and the conservation of natural resources (Epstein & Wisner 2001).

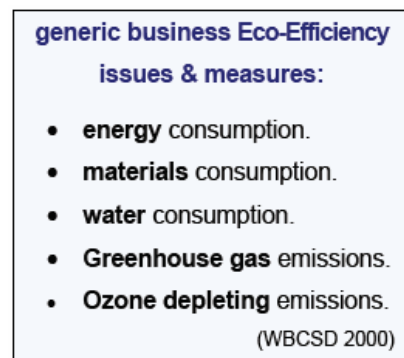


Within Thames Water, four key pillars were also identified for their sustainable development framework. In this case they kept the social and environmental constructs, whilst differentiating economic as separate from issues of corporate governance (which included the number of violations and fines) (Mitchell 2005).



10.4 Environmental reporting and standardised eco-efficiency metrics

The World Business Council on Sustainable Development, following a pilot initiative with twenty two companies from ten sectors, identified a set of generic standardised measures for eco-efficiency around five key areas. Energy consumption,



materials consumption, water consumption, greenhouse gas emissions and ozone depleting emissions were the key generic elements identified. They recommend care however in comparing reported performance data between different companies, even those in the same sector (WBCSD 2000); highlighting the individuality of these issues as firm-specific and the underlying issues of making comparisons on internal measures and aggregates for organisations with different infrastructure or product and/or service portfolio diversity.

In relation to comparability and supply-chain congruence, Schwarz et al (2002) developed six key measurement areas that allowed measurement to extend beyond the 'fence-line' and link to the macro sustainability process flow requirements. They identified material intensity, energy intensity, water consumption, toxic emissions, pollutant emissions and greenhouse gas emissions as generic measures; each of which can be designed with a scalable capacity when described in standardised normalised forms (Schwarz et al 2002).

key Sustainability Indicator Areas:

- **Material Intensity** – e.g. Kg of material wasted (not converted into product) per unit of output.
- **Energy Intensity** – e.g. KJoules' per unit output.
- **Water Consumption** – Litres of fresh water consumed per unit output.
- **Toxic Emissions** – Kg of toxic material emitted by the process per unit of output.
- **Pollutant Emissions** – Kg of pollutants emitted (or standard pollutant equivalent) by the process per unit of output.
- **Greenhouse Gas Emissions** – Kg of carbon dioxide equivalents emitted per unit output.

(Schwarz et al 2002)

10.5 Principles of CSP measures and SDi's

Corporate social performance measurement indicators and metrics are designed to capture ideas and concepts inherent in sustainability and transform them into a manageable set of quantitative measures and indices that are useful for both communication to stakeholders and for management decision-making (Tanzil & Beloff

Indicators vs. Metrics

- **Indicators** – encompass both qualitative measures, narrative descriptions of issues and importance.
- **Metrics** – almost solely for quantitative, semi-quantitative measurement or indices.

(Tanzil & Beloff 2006)

2006). Indicators and metrics though often used inter-changeably have some distinctions, namely that *indicators* are typically more prospect, encompassing qualitative measures, along with narrative descriptions of issues of importance, whilst *metrics* are almost solely used for quantitative or semi-quantitative measurement or indices.

From a systems perspective, Epstein & Wisner (2001) propose the perspective of creating a balanced set of measures within their measurement mix. They suggest combinations of *leading and lagging* indicators, the incorporation of *internal and external* measures, and the inclusion of *strategic and tactical* measures that cover *process and product* and *people and technology*.

The Measurement Mixes:

1. leading & lagging.
2. financial & non-financial .
3. external & internal.
4. strategic & tactical.
5. process & product.
6. people & technology.
7. input & output measures.

(Epstein & Wisner 2001)

10.6 CSP measurement characteristics

Researchers and practitioners have proposed a number of recommendations and considerations in relation to the relative characteristics of corporate social performance measures and sustainable development indicators (Fortuin 1998, WBCSD 2000, Schwarz et al 2002, Keeble et al 2003, Tanzil & Beloff 2006).

The measures themselves are required to have the characteristics of being *well-defined, simple* and *easy* to collect (Fortuin 1998, WBCSD 2000, Schwarz et al 2002, Tanzil & Beloff 2006), *cost-effective* (Schwarz et al 2002, Tanzil & Beloff 2006) and *understandable* to a variety of audiences and stakeholders (WBCSD 2000, Schwarz et al 2002, Tanzil & Beloff 2006). Measures should be *motivational* (Keeble et al 2003), provide *useful decision-making* properties (WBCSD 2000, Schwarz et al 2002, Tanzil & Beloff 2006), have *realistic targets* (Fortuin 1998), be *reproducible* and *consistent* (Schwarz et al 2002, Tanzil & Beloff 2006) and be in *control of accountable persons* (Fortuin 1998, WBCSD 2000, Keeble et al 2003). It is also recommended that the measures are

stackable beyond the company 'fenceline' (WBCSD 2000, Schwarz et al 2002, Tanzil & Beloff 2006), be *scalable* (hierarchical) and have the capacity to *complement existing* regulatory programmes (Tanzil & Beloff 2006). As well as recognising the need to develop measures that identify the inherent *diversity* of business (WBCSD 2000) and include *benchmarkable* characteristics (WBCSD 2000), other recommendations relate more to strategic issues of generating *leading* indicators, providing *new information*, as well as the ability to produce *outcome* information and, where possible, be able to *differentiate* from the competition (Keeble et al 2003). There is also the business-related requisite that the measures will continue to *protect proprietary* information (Schwarz et al 2002, Tanzil & Beloff 2006)

Sustainability Metrics

a measurement selection criteria

1. **simple and understandable** for variety of audiences.
2. **reproducible** and **consistent** in comparing different time periods, business units or decision alternatives.
3. **robust** and **not perverse** i.e. "better" metrics must indicate more sustainable performance.
4. **complement existing** regulatory programmes.
5. **cost-effective** in terms of data collection (making use of **existing data** and data already included).
6. Useful for **decision-making**.
7. **Stackable** along the supply-chain or product lifecycle.
8. **Scalable** for multiple boundaries of analysis.
9. **Protective of proprietary** information.

(Tanzil & Beloff 2006)

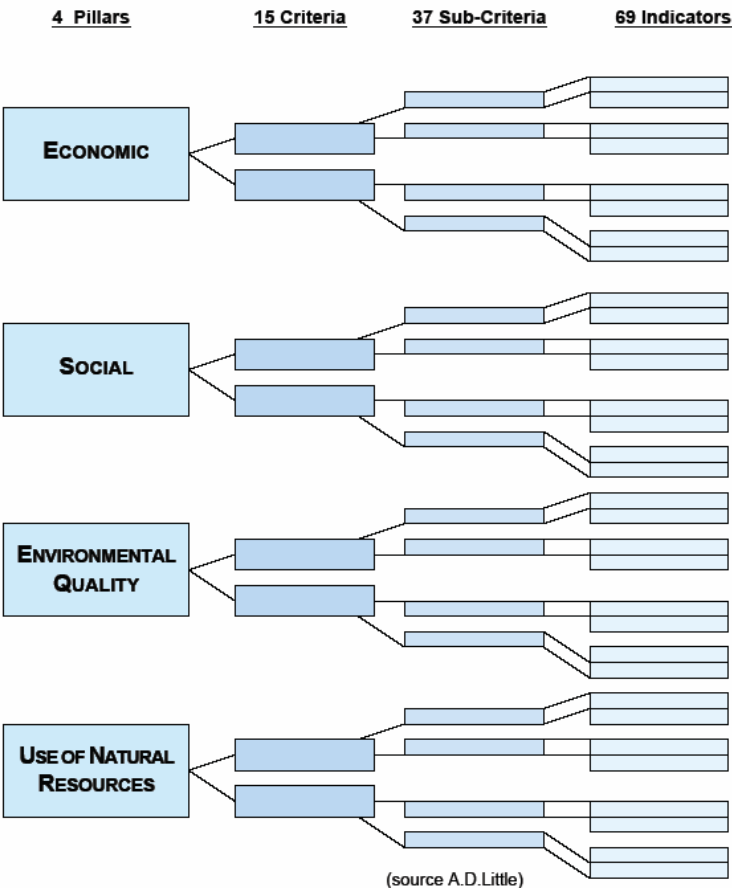
10.7 Aggregation of CSP performance measures and indicators

Another area of challenge for the design of a corporate social performance measurement system is the aggregation of metrics to create key performance indicators (Tanzil & Beloff 2006). Two of the most common methodologies are the *economic* approach and the *panel* approach. The economic approach introduces weighting in terms of the associated economic costs, whereas the panel approach employs a normalising and weighting system as detailed by

ISO14042 standards on Lifecycle Impact Analysis (LCIA). BASF, the German-based chemicals company, applies a normalising and weighting approach to their lifecycle impact analysis LCIA on products and processes (Tanzil & Beloff 2006).

Sustainable Development Indicator Development (SDi) Process

The Corporate Citizenship Company propose that senior management reports will contain approximately twenty-five key indicators supported by approximately one-hundred and fifty to two hundred and fifty key performance indicators and benchmarks (CCC 2000).



Keeble et al, within their facilitative practices, describe how the company chose sixty-nine indicators within thirty-seven sub-criteria from a pool of five hundred indicators. They also finally selected fifteen as key performance

Severn Trent Sustainability Indicators

4 main objectives and 14 headline Indicators

1. Economic growth & employment - (**economic growth, social investment and employment**) .
2. Social progress and equality - (**health of regional service population, employee training days, housing quality**).
3. Effective environmental protection - (**climate change, air pollution, transport, water quality, wildlife, land use**)
4. Prudent use of natural resources (**use of natural resources** (water leaking from ST's water mains), **waste** (total waste disposed by ST's businesses.

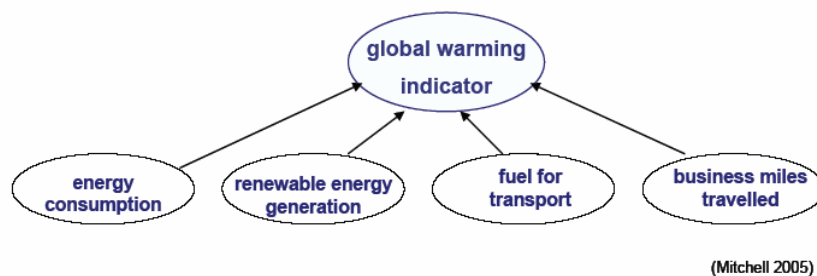
(Epstein & Wisner 2001)

indicators (KPI's) under four key sustainable development themes (Keeble et al 2003); as illustrated.

Severn Trent, chose fourteen headline indicators (Epstein & Wisner 2001), whilst Searcy et al (2005) recommends that three to ten sustainable development indicators should be sufficient at the business unit level.

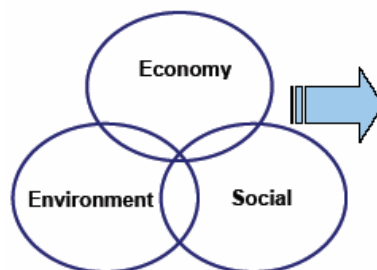
In 2003, Thames Water developed strategic key performance indicators covering social elements of employee relations, diversity as well as health and safety. Fifty indicators were identified in total, from which fifteen became key performance indicators (KPI's). A committee was formed to develop and integrate the indicators, and the indicators were evaluated on a monthly basis, incorporating a red, amber and green rating system for each KPI. Mitchell's work with Thames Water towards developing sustainability performance measures reviewed the clustering of

measures. They piloted the development of a global warming indicator for the company, based on normalised aggregations of energy consumption, renewable energy generation, fuel for transport and business miles travelled, to describe and encapsulate a performance value for this feature (Mitchell 2005).



Transmission Systems (business unit)
Key Sustainable Development issues selected

3 Corporate pillars of Sustainable Development



3 themes & 8 KPI's

Theme 1 – Stakeholder relationships

- Public involvement.
- Staff relations.
- Community relations.

Theme 2 – Land-Use practices

- Private & Crown Land Usage.
- Alterations to the Landscape.
- Vegetation Management practices.

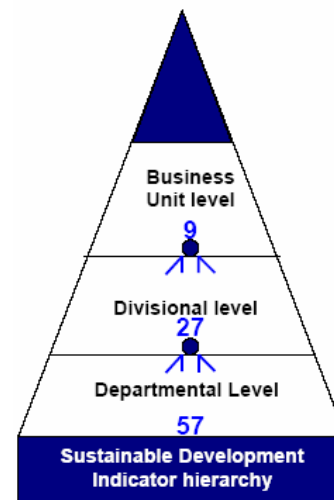
Theme 3 – Governance

- Governance & management issues.
- Benefits to customers & stakeholders.
- Alterations to the Landscape.
- Vegetation Management practices.

(Searcy et al 2005)

Similarly, work within the Canadian electricity sector, Searcy et al (2005) developed over one hundred issues from initial

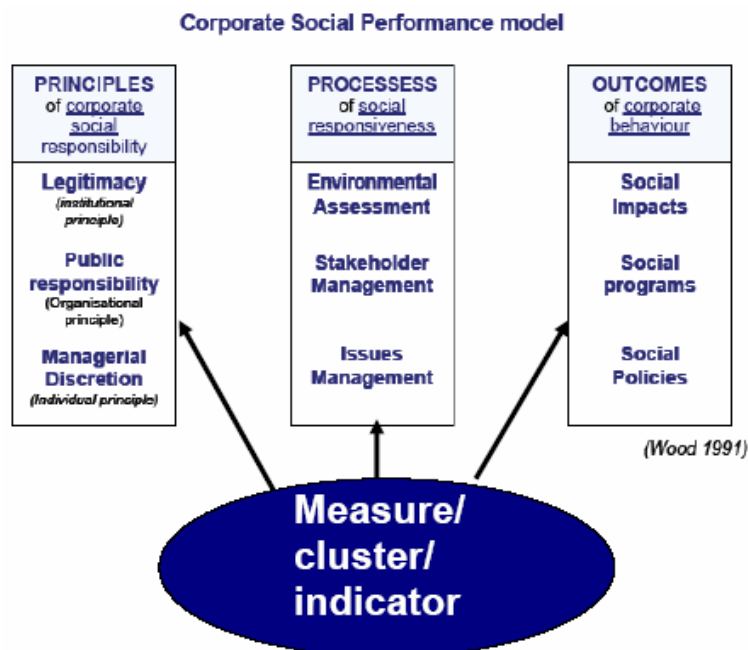
brainstorming, which, with further consultations, reduced to a list of nineteen. This later further reduced to a list of eight key issues organised around the three key themes of stakeholder relationships, land-use practices and governance. In terms of the overall system, a total of 122 indicators were incorporated into the draft system (93 being part of the new process adopted and 29 previously developed by the company). Of the new indicators, nine were created for the business unit level, twenty-seven for the divisional level and fifty-seven for the departmental level; with each indicator accompanied by an analysis linking it to existing data collection systems and business planning goals.



(Searcy et al 2005)

From a theoretical perspective, Agle & Kelly (2001) suggest each CR performance measure should have a validity check and be classified using Wood's 1991 framework, in terms of the principle, the process and outcomes.

This categorisation, it is suggested, can be applicable to a measure and provides definition and clarity to the CSP dimension.



(author's interpretation of Agle & Kelly 2001)

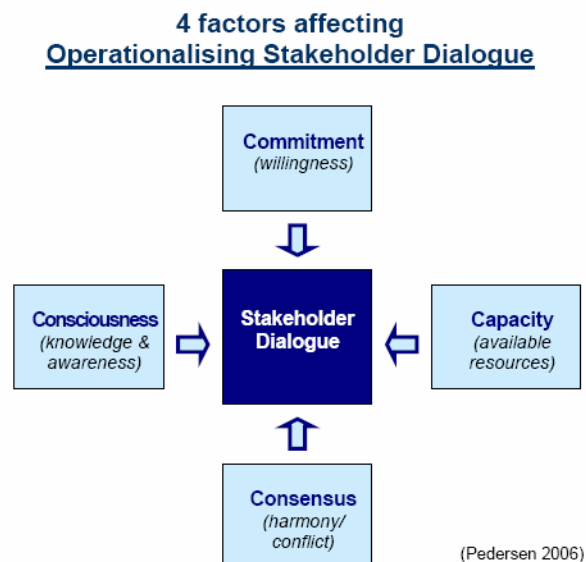
10.8 CR and stakeholder dialogue models

Stakeholder theory has a significant role in underpinning the approaches towards corporate social responsibility and subsequently the company's corporate social performance. The scope and extent of stakeholder dialogue has been identified as a strong indicator for being both responsive and effective in corporate social performance (Pedersen 2006), including levels of inclusion, openness, tolerance and empowerment.

Stakeholder Dialogue:		Levels of Engagement
Inclusion	privilege few	↔ all relevant stakeholders
Openness	fixed set of questions	↔ open questions/problems/issues.
Tolerance	one position over others	↔ new & alternative views respected.
Empowerment	one stakeholder dominates decisions/dialogue	↔ freedom & equality in dialogue and decisions.
Transparency	no access to information	↔ full access about process and dialogue.

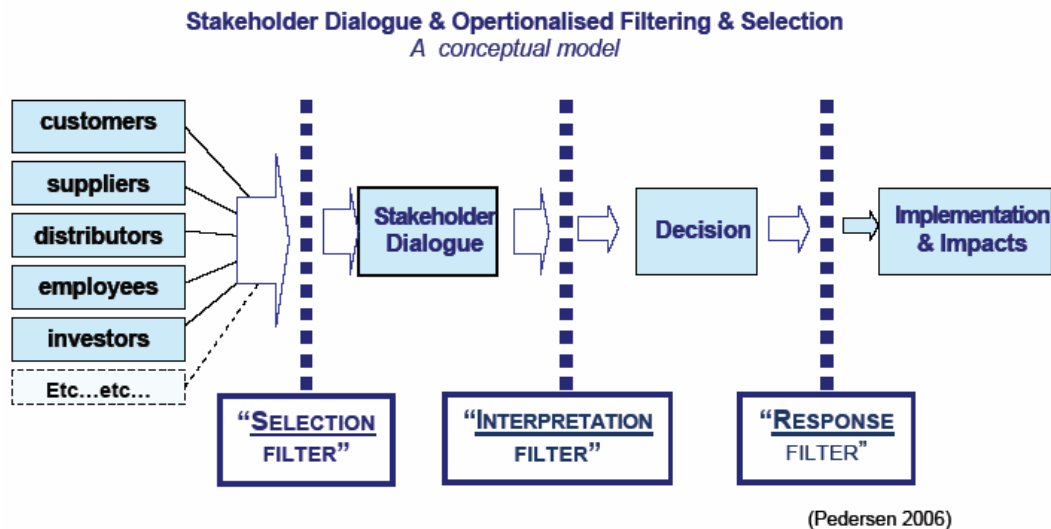
(Pedersen 2006)

Four factors have been identified in relation to stakeholder dialogue, relating to a willingness to engage, the available resources, a knowledge and awareness, and an ability to develop consensus. It is suggested that the corporation engages a series of filters to be able to operationalise and manage a broad range of demands from a variety of stakeholders, as illustrated.



The firm receives an array of expectations from stakeholders, and due to limited capacity, it has to apply a *selection filter* to issues raised, in terms of whether they are central and important, or peripheral and uncontroversial. These issues

are



carried forward into the dialogue arena. The *interpretation filter* further transforms the dialogue into a limited number of decisions. At this stage either intentionally or unintentionally the decisions emerging from the dialogue may diverge from stakeholder interests due to aspects including dominant voices and preferential stakeholder treatment. The *response filter*, as the company's response to decisions taken, involves a rationalisation and interpretation stage. Local interpretations, changing environmental factors, conflicting interests and organisational changes will influence the way the results of the dialogue are implemented.

10.9 Sustainable development – processes, systems and frameworks from management

10.9.1 Process approach to developing SDi's.

Process approaches in performance measurement have been developed for the development of performance measurement systems (Neely et al 1997, Bourne et al 2000). Some process methodologies and recommendations are starting to emerge from practitioners researching, advising and consulting in corporate activities involving sustainable development, corporate citizenship, corporate social performance and climate change (Wokutch & Fahey 1986, Keeble et al

2003, Searcy et al 2005, Veleva et al 2001, Lohman et al 2004, Corporate Citizenship Company 2002, World Resource Institute 2004).

The Corporate Citizenship Company developed a set of generic guidelines (Corporate Citizenship Company 2002), composed of a stakeholder identification and issue prioritisation approach, and a management review, analysis and action stage. The company is encouraged to review corporate strategy, policies and vision from the perspective of stakeholders and societal needs, identify a group of stakeholders. Through engagement and dialogue, the company can then identify, prioritise and apply appropriate CR-related performance measures.

Benchmarking, both internally and externally is recommended, as well as a review and decision-making feedback loop. It is also recommended to initially pilot initiatives in different parts of the company, before roll-out.

7 steps towards corporate citizenship:

1. identify the corporate principles and values which key stakeholders and wider society expect the company to "live".
2. Identify specific group of local stakeholders interested in the companies csr.
3. define 3 major issues, from principles that each stakeholder can evaluate.
4. Identify and apply appropriate performance measures.
5. Benchmark performance against internal and external elements.
6. Review and assess performance based on trends and circumstances .
7. Take appropriate action.

(Corporate Citizenship Company 2002)

Criticisms appear to be where the process overlooks challenges that are important in practice, e.g. the salience of managers about stakeholders, assessing the comprehensiveness of stakeholder and CR-issues representation and for processes of engagement and the balancing of stakeholder dominance. The simplicity of selecting three issues per stakeholder as compared to the key corporate CR-issues overlooks different stakes and strategically important issues, and does not highlight the complexity of selecting the measure (as indicated in performance measurement field). It also describes the taking of 'appropriate action', which is open to subjectivity in relation to whose best

interests the actions are taken or evaluated, i.e. no feedback loop to stakeholders.

As a conceptual process it does allow the company to internally create a starting point from which to progress and to develop its learning and understanding. It is also simple enough to understand, internalise, communicate and develop as a company-specific methodology.

The World Resource Institute developed a set of generic guidelines for greenhouse gas emissions (WRI 2004). This is a more operational process, requiring the allocation of budget and resources for the task, the determination of the terms of reference for the scope of application, as well as conducting an internal audit and preparing an inventory. It requires calculating emissions using standardised formulas, encouraging the establishment of targets, managing the achievement of those targets, with the associated reporting on progress and performance.

Criticisms of this model include the distinct lack of stakeholder involvement, which, like the corporate citizenship process earlier, also has vagueness on the management element of action regarding, in this case emission reductions, which would require prioritisation approaches. Another area is in the vagueness of the reporting process, which does not specify orientations for stakeholder materiality and endorsement.

7 step process to GHG Reporting

1. Determine resource requirements for preparing inventory.
2. Establish facility boundaries for assessment.
3. Gather data for inventory.
4. Calculate emissions (unit conversion factors and emission source factors provided).
5. Manage GHG emissions by establishing a reduction target.
6. Manage emission reductions.
7. reporting on a company's GHG inventory.

(WRI 2004)

The 7-step CSP measurement system methodology

for use within and across industries:

1. **Identify social policy**/guidelines to focus management efforts.
2. **Identify and weight** relevant performance dimensions.
3. identify appropriate measures to assess each performance dimension and collect info relating to the measure.
4. **Rate** each performance dimension.
5. **Compare social performance** with minimum performance criteria identified (*in 1.*).
6. **Compare value-weighted** performance ratings (*sum of 2. x 4.*)
7. Compare (6.) with priori evaluations and modify weightings (2.) or ratings (4.) and **complete again.**

A useful method for micro-based application.

(Wokutch & Fahey 1986)

Another micro-based measurement system methodology that does recognise prioritisation approaches is the method recommended by Wokutch and Fahey (1986) for corporate social performance measurement systems. In addition to identifying the social policy and focus for CSP efforts, it incorporates the identification and weighting of areas of performance, examines available data on these measures and ranks each dimension of performance. There is a feedback loop to then compare the findings from this process with those originally identified from the CSP policy focus and apply an iterative adjustment, prioritisation and weightings process until there is congruence.

Although this model does provide insight as to prioritisation and strategic alignment methods, it does not explicitly engender stakeholder consultation and dialogue. Thus, if the corporate policies and strategies are under-developed then CSP can be misaligned from societal and stakeholder perceptions. There is also no mention of external perceptual and other mechanisms for establishing performance from outside the boundaries of the organisation or business unit.

Veleva et al (2001) have developed an overview process for developing sustainability metrics and performance in relation to manufacturing production and operations. It is another example of a micro-based process. The approach is for the company to initially define their sustainability production goals, and with respect to external standards and guidelines, to identify a pool of core and

8 steps for Sustainability Performance:

- 1. define sustainable production goals,**
- 2. identify potential core and supplemental indicators.**
- 3. select indicators for implementation.**
- 4. select targets.**
- 5. implement the indicators.**
- 6. monitor and communicate the results.**
- 7. act on results.**
- 8. review and revise indicators, policies and goals.**

(Veleva, Bailey & Jurczyk 2001)

supplementary indicators, from which the final indicators are selected with set targets. This is followed by the monitoring and communication of results, and a feedback loop to act on results, as well as a secondary feedback loop to review policies and goals and to review the indicators; for continuous improvement.

The positive aspects of this model include the company-centric identification of sustainable production, the development of a pool of indicators and the selection and targeting of indicators and a review of the results.

Criticisms relate to the absence of stakeholders in assisting the company in prioritising sustainability production issues as a useful resource. The use of institutional external standards as a primary source of measures may miss the firm-specific opportunities from developing a unique firm-centric understanding of sustainable production.

Lohmen et al (2004) in their Nike European division action research work, identified a number of generic process considerations. These include developing a cross-functional forum of managers and users, initiating an audit and review for the appropriateness of existing metrics, developing a shared understanding of metric definitions and derivations. It recommends accepting variations of measures across different business units and involving IT staff in relation to the data and the system's reliability. They also propose the creation of a respected performance measurement manager or champion at senior management team level to represent performance interests and maintain the leadership and commitment.

Lessons learnt from developing and introducing a PMS in Operations:

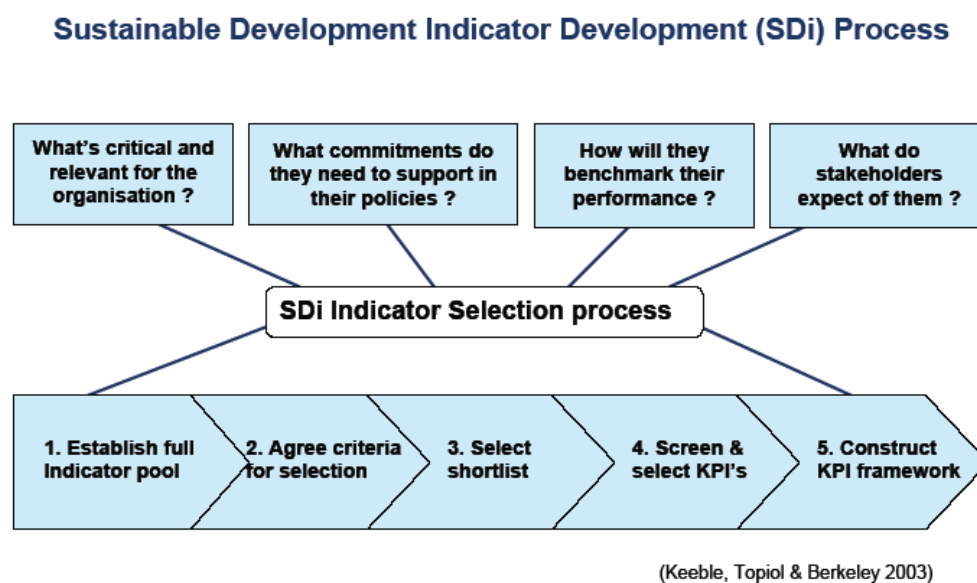
- **Cross-functional alignment forum of managers and users is essential.**
- **Audit and confront existing metrics with a metric definition template.**
- **Create a *metric dictionary* as developmental tool and reference source.**
- **Use clustering for development of performance and for communication.**
- **the number and criteria of clusters varies from different situations.**
- **Feedback development using real data (not dummy data) for engagement and motivated decision-making.**
- **ITC staff and others are provided sufficient time to spend developing the reliability issues of the data and the process.**
- **Postpone selection of dedicated software system until the basis (metric dictionary) is mature.**
- **The adoption and further development of PMS requires a PM manager responsible for the whole process and is an accepted member of management team.**

(Lohman et al 2004).

The development of a metric dictionary as communication and standards tool proved to be a highly effective, as well as the explicit involvement of

management information system staff. Criticisms arise from the lack of external stakeholders engagement, or the consideration and explanation on issues surrounding target setting.

The work of Keeble et al (2003) adopts external standards, peer group and CR leader's performance measurement as a methodology of quickly identifying a selection pool of indicators. The process involves screening measures and ranking these measures against different criteria to identify a valid performance measurement set, as illustrated below.



The two key aspects for this process are the *screening* of the pool of indicators identified and the *ranking* approach for measures before selecting the key performance indicators. The screening criteria assesses measures in terms of their relevance and ability to provide a measurement of progress over time, their relevance to stakeholders both internally and externally, and whether they are meaningful measures at the group level.

Following the screening, the remaining indicators are ranked in terms of measure characteristic preferences, preferring leading rather than lagging indicators, particularly ones that are motivational and within the control of the person

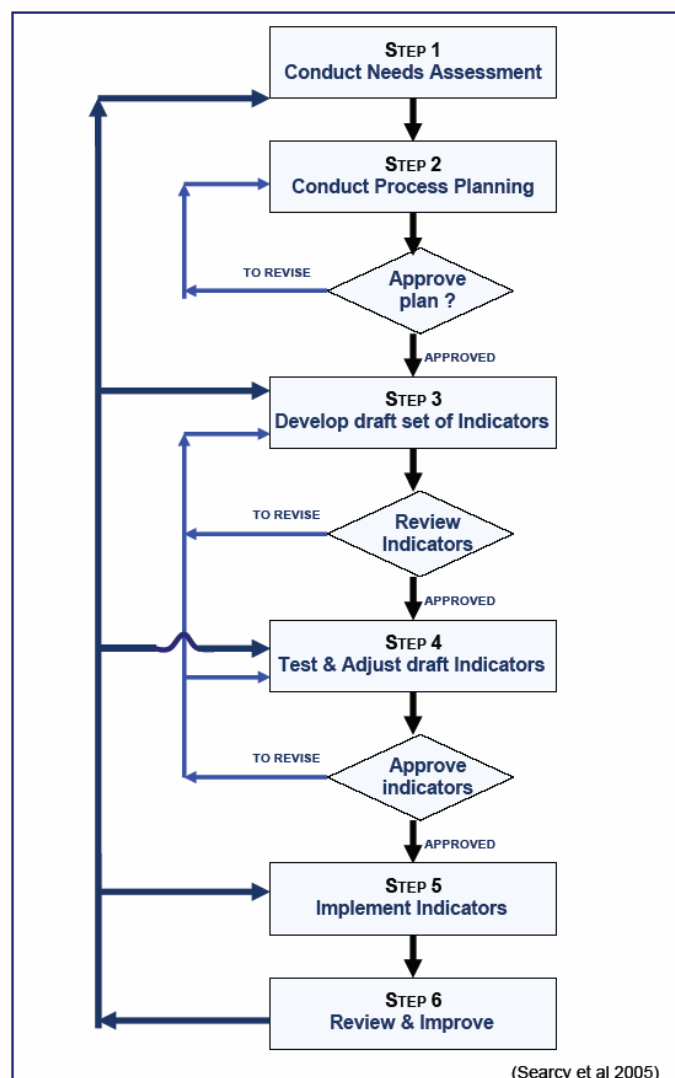
responsible for the measure. Preference is also given to measures that provide new and useful information for decision-making.

Criticisms include the fact that there is no explicit stakeholder engagement to identify and validate that the issues and priorities set in relation to perceived interest of stakeholders are correct, or that the CR issues are the most relevant in terms of the company and the sector. There is no mention of compatibility with existing systems or reward structures, or reference to feedback loops for measurement review and strategic re-assessments. Although there is mention to group level meaning of the measure, there is little reference to the operationalisation requirements of being simple and easy to derive as operationalisation

considerations.

Most recently, there is the work of Searcy et al (2005), which concluded that the creation and implementation of sustainable development remains an emerging discipline. They developed and trialled a six-step process for designing sustainable development indicators. It incorporates a three-stage design concept of identifying key issues, developing indicator selection criteria and developing a draft set of indicators. *Step 1* involves a needs assessment that

Sustainable Development Indicator (SDi) Design process



examines existing measures, systems and processes, including its usefulness for both internal and external stakeholders. *Step 2* conducted with internal and external experts is to demonstrate how indicators fit the overall management cycle. *Step 3*, utilising the economy-social-environmental model and a series of internal (company-wide) and external experts (e.g. human rights, sustainable development, environmental impact assessment) aims to produce an agreed set of draft indicators. *Step 4* involves engaging with a wide range of stakeholders to broadly review and adjust the indicators. *Step 5* and *Step 6* involve the implementation, review and improvement stages.

For successful implementation it is recommended to consider methods for integration of the new system with existing management systems and the role of indicators in the overall management system. There is also the practical need to reduce systematic weakness of information not feeding into decision-making and allocating significant time to develop indicators that are appropriate to the unique organisational context. Also, there are considerations for making difficult yet essential trade-offs and for ensuring there are appropriate stakeholder levels for different stages of the process.

Developing SDI's: Lessons learned within the electricity utility sector:

- **existing management systems** integration for implementation.
- Consider the **ROLE of indicators in the OVERALL system** from the start.
- Indicators **compliment NOT replace existing systems**.
- **Practicality** is an over-riding objective.
- A **systemic weakness** is linking information to **decision-making**.
- **Significant time to develop** organisationally appropriate indicators.
- Difficult **trade-offs required**, cannot measure everything.
- The number and type of **stakeholders varies throughout** the process.

(Searcy et al 2005)

10.10 CR-expanded business performance frameworks

This section highlights the emergence of CR-related Balanced Scorecard performance measurement frameworks. The literature provides examples of conceptual models (van der Woerd & ven den Brink 2004,) and empirical-based

activities in the field (Epstein & Wisner 2001, Lohman et al 2004, Crawford & Scaletta 2005). Approaches to the incorporation of CR-related issues vary from re-designing the balanced scorecard (van der Woerd & van den Brink 2004) or augmenting the CR-related performance measures to fit within the existing framework, as identified with Nike Europe, Telenor, Bristol-Myers Squib and Dow Chemicals (Epstein & Wisner 2001, Lohman et al 2004, Crawford & Scaletta 2005).

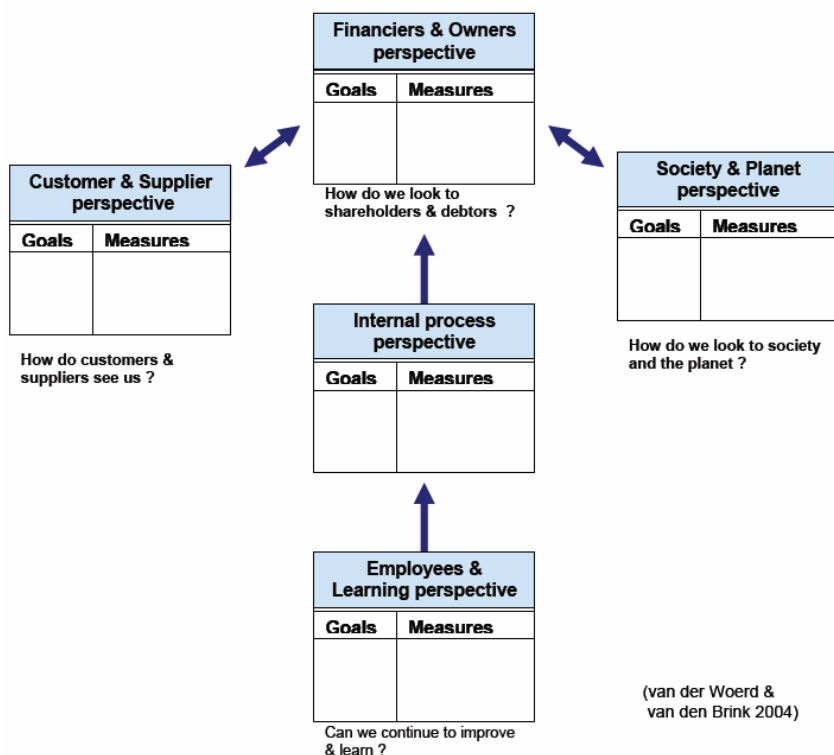
The development of sustainability-related balanced scorecards is however recognised as emerging and very much in its infancy (van der Woerd & van den Brink 2004, Lohman et al 2004).

10.10.1 The Responsive Balanced Scorecard

The Balanced Responsive Scorecard retains about 70% of the original Balanced Scorecard (BS) features. Fundamentally it elevates the people and profits component to equal status of the profit-related components (van der Woerd and van den Brink 2004).

The Balanced Responsive Scorecard

conceptual model linking Corporate Sustainability



In taking a sustainability perspective, this model augments the original balanced scorecard around different key stakeholder interests or perspectives. The finance perspective includes the owners perspectives (e.g. governance), and augments the customer perspective to include the suppliers. Innovation and learning adapts to employee perspectives, and the internal business perspective to the internal process perspectives. The additional component of the society and planet perspective accommodates environmental impact and social externalities (e.g. local community concerns and environmental impacts).

To provide traceability, it is recommended to keep updated versions of business strategy and cause-and-effect relations in parallel to the evolution of the Scorecard. It is also proposed that hygiene factors, i.e. factors that are a requisite for continued operations, should not be included in the responsive balanced scorecard, as they would not lead to any competitive advantage.

It is unclear however, why the mutual interaction is adjusted in this model to make it any better to use, as compared to the original Balanced Scorecard illustrated earlier (Kaplan & Norton 1992).

10.10.2. The “Evolved’ Balanced Scorecard

This was an approach of adding the ‘sustainability’ component to an existing framework, as piloted within Nike’s European Operations (Lohman et al 2004). The challenge was to co-ordinate the adaptation of the existing PMS and integrate the data flow and systems into an upgraded Balanced Scorecard. A number of challenges were identified in relation to the organisational structure and the array of reporting structures, as well as for the IT systems and data management, with the range of decentralised activities. Issues included the difficulty in identifying the relationships between metrics and their cause and effect interdependencies was highlighted, as well as the poor communication that existed between the creators of the systems and the reporters to the system.

The approach was to take the existing balanced scorecard system that the company was already familiar with and incorporate two additional aspects, the *sustainability* dimension and the *people* dimension, re-organised as below.

The 'Evolved' Balanced Scorecard

Framework developed for Nike supply-chain operations
including Sustainability

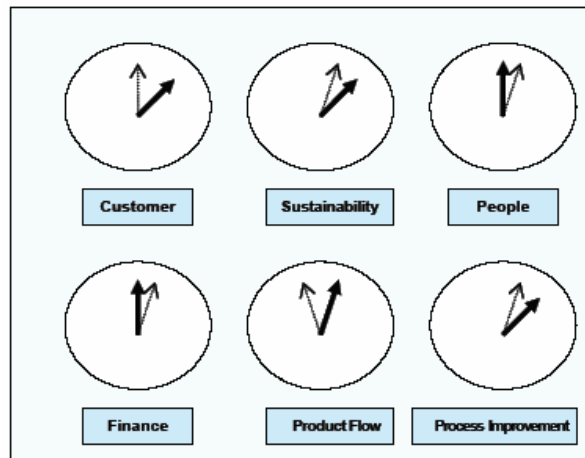


Customer, relates to customer satisfaction, shipment queries and order fill rates. *Sustainability* contains metrics that relate to interaction between company and its environment. *Financial* clusters relate to operation's contribution to shareholder value, including cost and revenue, and cost per unit. *Process Improvement* relates to long-term trajectories and strategic issues, project completion and operations complexity. *Product Flow* relates to metrics that examine the effectiveness in the supply chain, accuracy and throughput of flow of goods are the focus. *People* relates to organisational health aspects including employee satisfaction, professional development and diversity.

The scorecards were carefully designed to have high visual affect and the PMS system was developed to include a definitions and metrics dictionary, which in itself was a useful feature for the process in defining over one hundred metrics. The dictionary required clarification of the measures and performance indicator's uses, including strategic aspects, as well as the method for collecting data and deriving the metric.

Three performance levels were developed. At the senior management level, a broad top level overview containing dials representing current and past performance across the six cluster group score scorecard categories.

Top Level: Executive Level : Dials (Clusters)

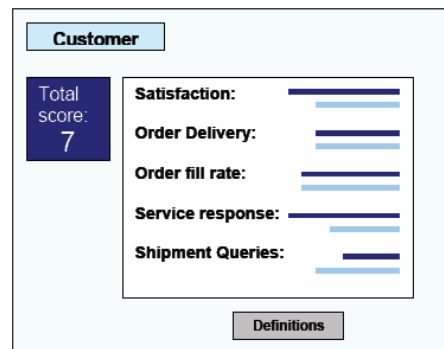


(Lohman, Fortuin & Wouters 2004)

The mid-level performance platform allows for a closer look at the cluster group, containing the key performance indicators. This provides a more informed understanding of the performance cluster score and the changes in performance of the KPI's, with additional access to the definitions and origins of the calculation and details of influencing factors. The performance measurement system also acts as a learning tool, as well as allowing for an increased decision-making capability for managing and balancing performance.

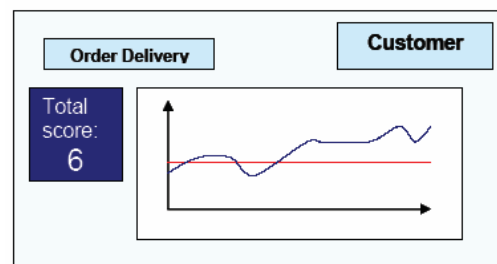
The operation performance-level provides detailed control charts containing twelve

Mid Level: Management: Graphs (Key Performance Indicators)



(Lohman, Fortuin & Wouters 2004)

Low Level: Operational level: Charts (Performance Measures)



Adapted by author - (Lohman, Fortuin & Wouters 2004)

monthly actual and moving average plots. At a local level, this allows for tracking and monitoring the actions and effects on performance.

The development of a metric definition table (as an expansion on Neely et al 1997) was highlighted as an essential component in developing the robustness of the adapted system.

The initiative identified 'political' issues that influenced the effectiveness of the PMS, namely the need for reward systems to be linked to performance, a distinct information asymmetry between management and operational levels, and the counter-effects of 'slack-

'Political issues, such as

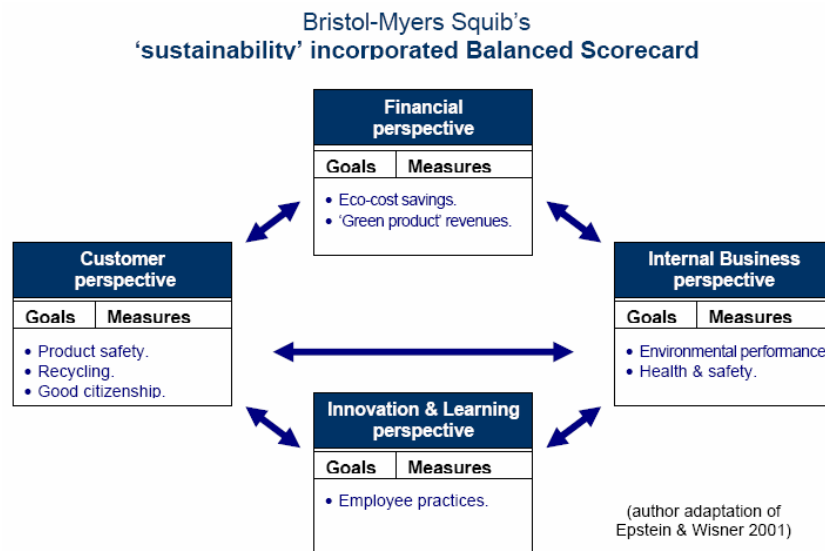
- reward structure tied to PMS
 - information asymmetry between management levels and organisational functions
 - slack building in the setting of targets
- are all relevant to consider.**

(Lohman et al 2004).

building' within the target setting stages (Lohman et al 2004).

10.10.3. The 'integrated' CR Balanced Scorecard approach

Although CR requires more holistic strategic thinking and involves a wider stakeholder perspective, the Balanced Scorecard can incorporate CR dimensions into its original four category framework (Epstein & Wisner 2001, Crawford & Scaletta 2005). Describing the development of Dow Chemical's CR-related Scorecard, Epstein and Wisner (2001) review examples of cascading measures that identifies variances in core aspects. This includes geographical unit measures, specific business unit measures, manufacturing level measures and department level indicators. There is reference to Telenor (Norwegian telecoms), who employ causal mapping for sustainability elements within BS frameworks to develop their understanding of the cause and effects. They also explore the Bristol-Myers Squib BS (multinational pharmaceuticals) that incorporated employee practices, environmental performance, health and safety, product safety, post-production recycling, good citizenship, eco-savings and 'green' product revenues within their existing traditional Balanced Scorecard framework, as illustrated.



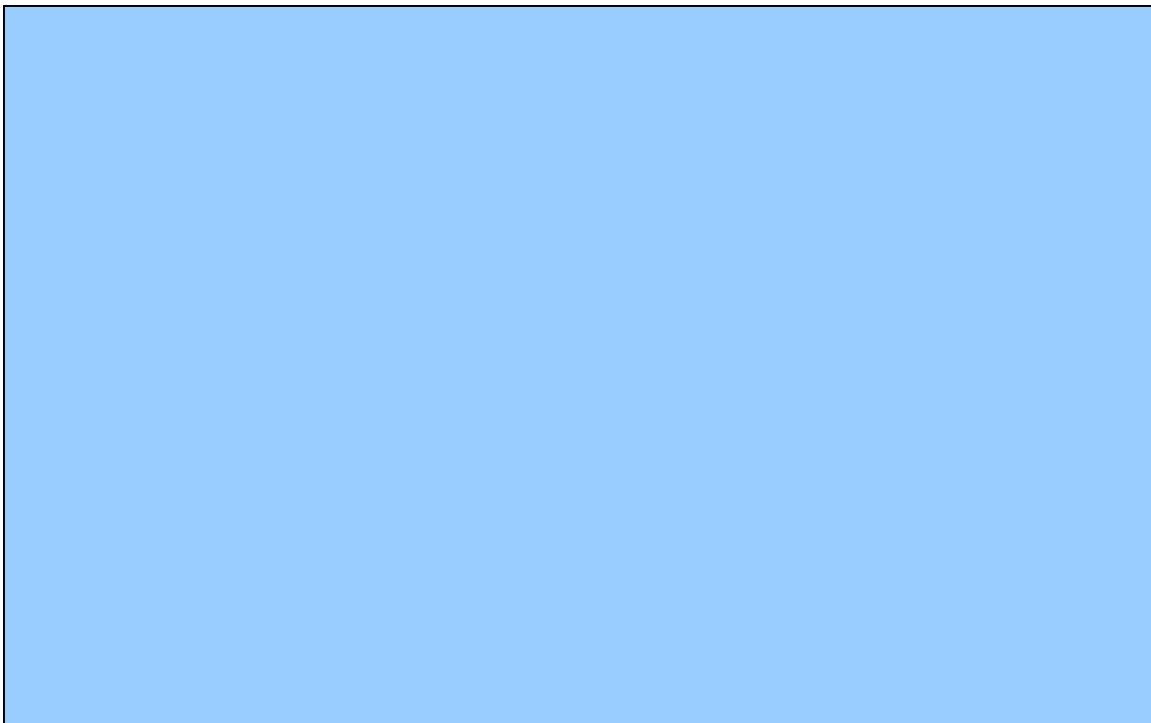
Similarly, Severn Trent (ST), a water & waste utility company, integrated a range of CR-related issues within their traditional Balanced Scorecard framework. This includes economic growth, social investment and employment, the health of regional serviced population, employee training days, housing quality, climate change, air pollution, transport, water quality, wildlife, land use, water leakage from ST's water mains, and the total waste disposed from each of ST's business units.

As this section highlights, CR-related performance measurement systems are being developed and discussed in the literature. A small number of papers have identified a number of characteristics for measures and measurement systems that are consistent with the performance measurement field. This includes their simple and easy use, a compatibility with existing PMS and reward systems, and a responsiveness so as to remain current and relevant. The literature highlighted the complexity of prioritising and selecting CR-related issues and the challenges of engaging stakeholders. In addition it requires measures that can extend to include the entire process supply chain and for hierarchical incorporation in external reporting mechanisms.

Realising the CSP performance measurement approach is in its infancy for both the academic and practitioner perspective, the next sections seeks to synthesise the findings and consider the proposed research questions in more detail.

11 Discussions and recommendations from the research question

The discussions and recommendations, resulting from the extraction and synthesis of relevant papers in relation to the main question are underpinned by the following four areas and questions that evolved from the context of the research question and preliminary scoping findings. The four questions proposed to be answered by this research are as follows:



These are discussed and synthesised in the following sections.

11.1 Factors that influence the design of a CSP performance measurement system.

The performance measurement field has a wealth of experience and literature in relation to non-financial performance measurement, measure characteristics and measurement systems characteristics. The fact that these are principles and considerations for compatibility with all company performance issues indicates

their transferability into discussions on corporate social performance and corporate responsibility performance measurement systems.

Examples of the key transferable generic elements for a corporate responsibility performance measurement system, in relation to the measure characteristics and the performance measurement system characteristics are tabulated below.

<p>Comparable <u>performance metric</u> issues:</p>	<p>Comparable <u>performance measurement systems</u> issues:</p>
<ul style="list-style-type: none"> • Link to strategy and objectives (though focussing on CSR-related). • Provides ability to make decisions and prioritise resources. • Provides motivation and encourages continuous improvement. • Allow for business units variation (of value and derivation of compatible measure). • Measurable and cost efficient. • Understandable with simple standardised formula. • Addresses business scope: input, process and outputs. • Consistent and comparable. • Is stackable with horizontal (process) or vertical (cascading) properties. • From existing data wherever possible. 	<ul style="list-style-type: none"> • Is dynamic and responsive to changes. • Link to reward and performance evaluation. • Can track trends in performance. • Has lagging and leading measures. • Compatible and integratable into existing systems. • Provides useful feedback loops to strategy and operational management. • Communcatable and supported by committed leadership.

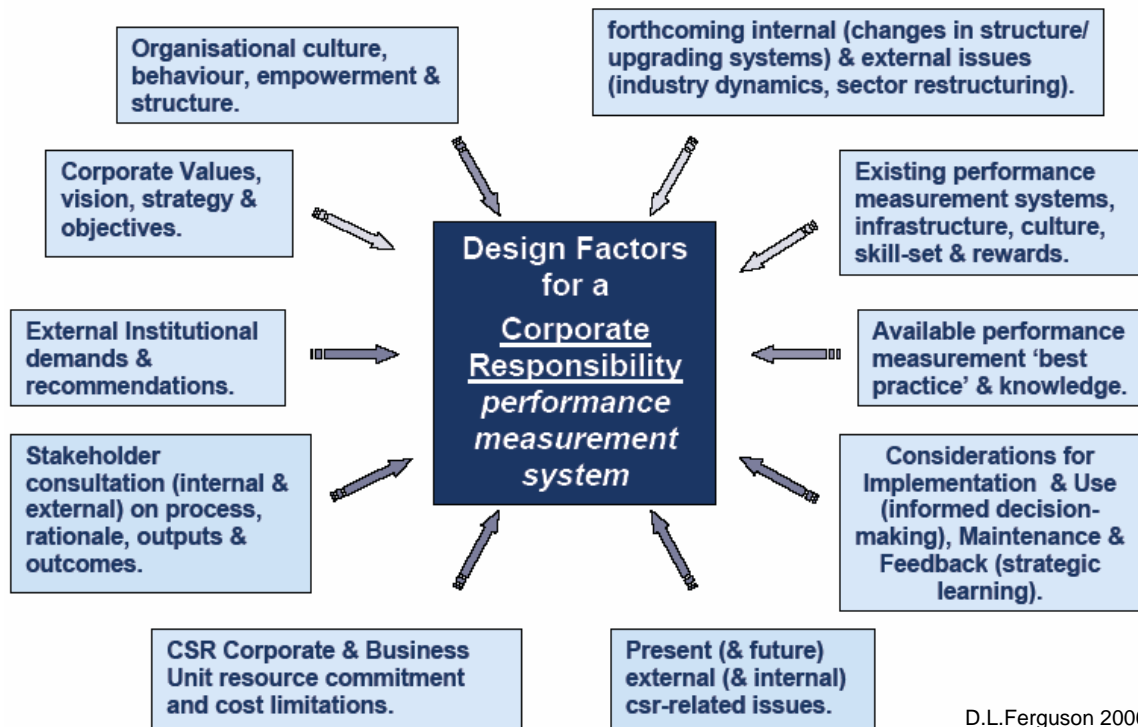
Papers identified and selected from the systematic review in relation to sustainable development (chapter 10) provides sufficient correlation and concurrence with the above recommendations from the PMS field (chapter 7). There are however some context effects and (predominantly) external stakeholder issues that add variations that are distinguishing and therefore essential considerations within the CR-PMS design process, as illustrated .

CSP-orientated Measure & System Variations include:

- **Validating the measure in broader CSP terms** of processes, principles and outcomes to be a comprehensive cspms measure.
- **Calculating the measure for compatibility to being used beyond the boundaries of the organisation** – scalable upstream and downstream.
- **Deriving the measure – for the right stakeholder – in an understandable way for them.**
- **Specific encouragement for societal outcomes orientation.**
- **Specific encouragement for external & internal perceptual measures** and qualitative external (independent) evaluations of 'goodwill' from stakeholders.
- **Auditable for societal accountability** – the ability to verify data materiality, comprehensiveness and reliability as well as stakeholder engagement effectiveness.

The following model represents ten key factors and considerations for a CSP performance measurement system as a synthesised hybrid of the scoped performance measurement systems field and the findings from the systematic review.

**10 factors affecting the design of a
CORPORATE RESPONSIBILITY
performance measurement system**



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It is essential that the system being designed is compatible with organisational culture, e.g. paternalistic vs. authoritarian cultures, and organisational structures e.g. centralised to decentralised, as well as an understanding of behaviour in terms of written and unwritten rules and expectations of behaviour. The system needs to be designed with direct links to corporate vision and objectives and, in fact, should be able to inform, clarify or even challenge the assumptions for corporate or business unit values and objectives. External institutional demands and requirements are a fundamental concept within CSP and this orientation should be built into the system, particularly in relation to regulatory requirements and the ability to provide external reports. Stakeholder consultation both internally and externally are also a fundamental concept of CSP, essential in defining key issues whereby improvements in performance can be identified and understood by a variety of stakeholders. The issue of clarifying the level of resources available from both the corporate and business unit level in terms of staff, systems and finances, are fundamental for defining the scope, detail and capability of the system. The clear and salient understanding of the CR issues in their own right (as opposed to relying on stakeholder's perceptions of key issues) includes the present situation and the context of future issues and changing socio-economic and political priorities of the issues. From the design context, elements that ease and those that inhibit the implementation and use of performance measures, especially in terms of the capability to inform decision making, resistance from power structures and in terms of organisational system compatibility are also important aspects for the design phase. It is also recommended that best practice be incorporated wherever relevant, e.g. stakeholder engagement methods, measurement normalisation techniques, the application of balanced measurement portfolios and known industry standards of measurement. With regards newly designed performance measurement systems, they are to be as compatible as possible with existing approaches to performance measurement. Design approaches are to accommodate the fundamental behaviour and maturity of the company's approach towards performance measures and measurement systems, coupled where possible to

adaptations of reward systems that encourage management to focus on this area of performance.

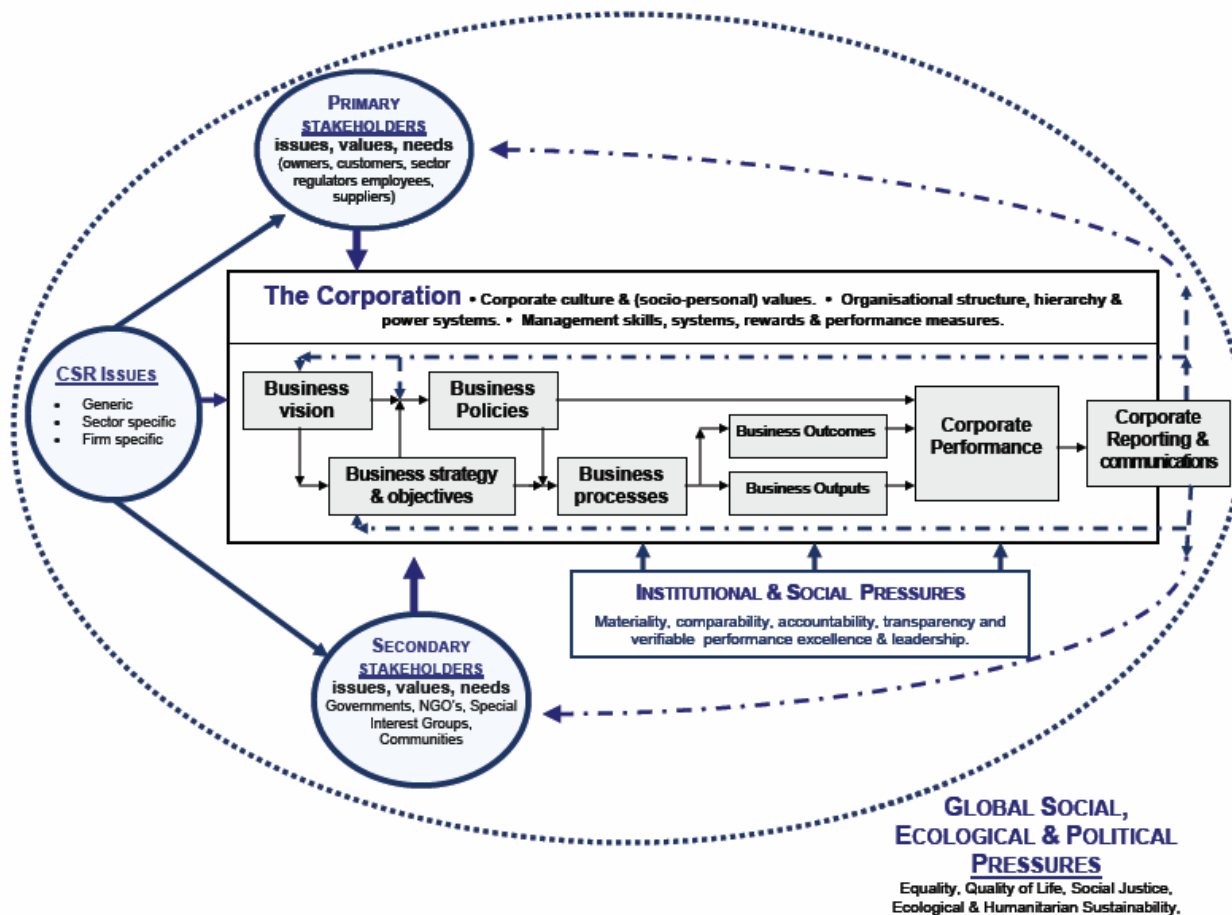
Finally, there is also the need to understand the whole performance measurement system even when designing a micro-system, being aware of any parallel initiatives and structural change issues, e.g. changing business models, the introduction of a new appraisal methodology, upgrading of IT systems and management information systems (MIS). These need to be accommodated within a robust design approach.

The next section takes the variations identified from this section in terms of the CSP 'additionality' and to contextualise how these factors interplay with the firm.

11.2 CSP systems orientation compared to generic PMS

The key distinction between a CSP system and a generic balanced PMS is in terms of context. Many of the CR drivers do not emanate from inside the company itself. Most are driven by different external stakeholders, both primary (of significant concern to the direct trade of the company) and secondary stakeholders (indirect trade link, but with legitimate claim), as well as other effects from the CR issue directly on the company (generic, sector-specific, firm-specific), as illustrated overleaf.

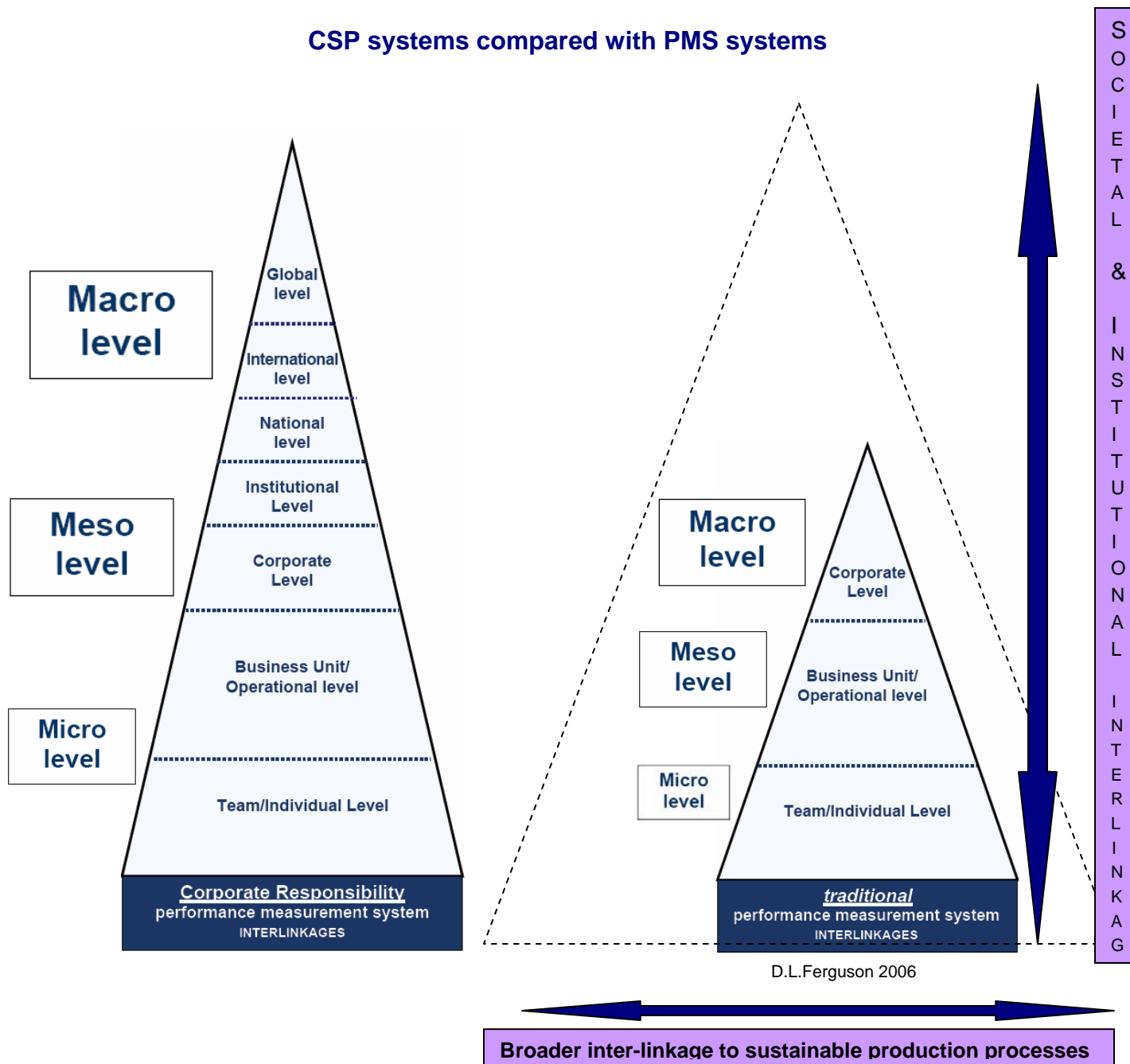
Factors affecting corporate social performance measurement systems



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From this model, it can be seen that the scale of the influence is very much beyond the 'fence-line' of the company, as the issues are at times emanating from national and global societal requirements. Also, in relation to institutional requirements, there is need to understand not just the company perspective but the entire process flow perspective. There is a need for compatibility, not just with reporting hierarchically to institution and society requirements, but also along the supply-chain. There is therefore a distinct difference in the scope and understanding of the terms micro, meso and macro levels on the hierarchical scale and the need to consider a 'supra' scale along the process flow, as illustrated in the following model.

CSP systems compared with PMS systems



This model illustrates the constructs that differentiate CR-PMS from traditional PMS systems. It is specifically the external contextual factors, the institutional and stakeholder pressures and priorities of CR issues that are expected to influence the design choice of CSP measures and performance measurement systems.

11.3 CSP contextual influences for a utility company

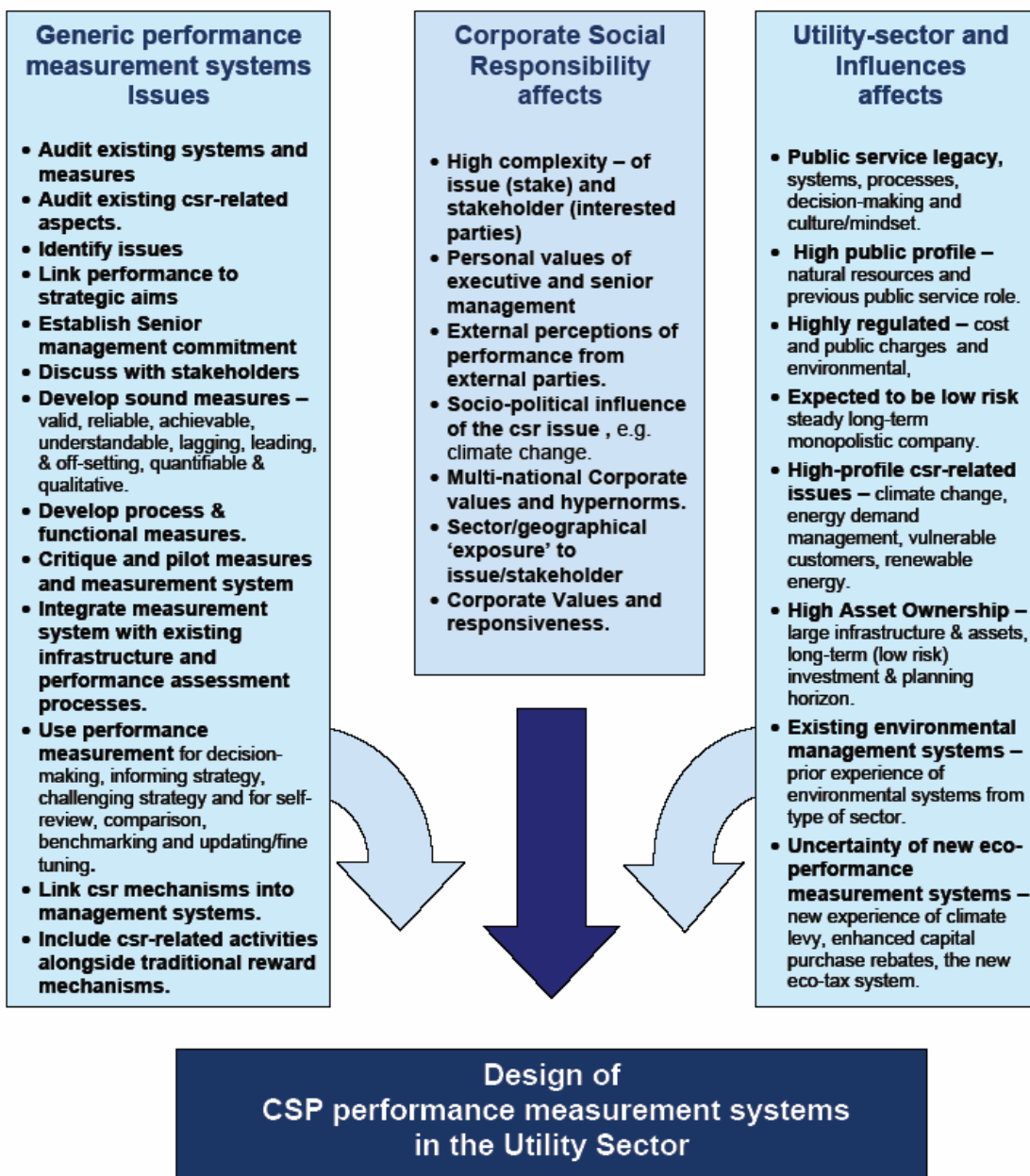
Utility companies have a particular set of challenges that need to be accommodated within the design of a CR performance measurement system. These occur not only in terms of the sector structure and key ecological and socio-political issues, e.g. climate change, energy reliability and energy efficiency, but also in terms of emission trading systems, technology and R&D developments and the long-range planning required for a company that has such a large 'static' asset base.

Based on reviews of the performance measurement field (chapter 7), corporate social responsibility fields (chapters 4 & 5) and the systematic review field of utility factors (chapter 9) and CSP design (chapter 10), three clustered groupings can be developed, namely PMS (generic aspects), CR effects (generic), and utility-sector factors (specific), as illustrated overleaf.

This includes issues of 'designer markets' with high regulations imposed for managing such monopolistic companies. There are also the performance legacies of the company in terms of prior public service mind-sets and the particular asset portfolio of generation stations and their fuel mixes that the company must manage as strategic assets. Alongside key generic issues and knowledge of performance measurement systems, there is an increased prominence of particular CR effects with high societal and economic relevance and therefore involve relevant perceptions of societal actors in relation to providing the appropriate economic, social and environmental balance.

Measurement Systems Design influences for CSR in Utility Sector

• Generic pms influences • generic CSR influences & •Sector-specific influences



CR has been identified as a complex area with a number of different macro and micro factors that can affect performance. A formula has been identified that categorises three key levers that affect the level and changes in corporate social performance, namely the external environment, organisational characteristics, and management function and system capabilities. Along with the formula, examples of particular themes that affect each factor are provided for illustration.

Functions & Factors affecting Improvements & Changes in Corporate Responsibility Performance

Δ CSP - corporate social performance –

- **Outputs** – measures of figures, numbers and symbols reflecting performance priorities regarding strategic decisions and operational inputs/process/outputs.
- **Outcomes** – measures that validate the desired effects and impacts from output performance measurement and policies in terms of ecological, socio-economic and socio-political areas both internally and externally.
- **Policies & processes** – measures of the breadth, scope, specificity, communication, embedding and effectiveness of policies and processes.
- **Perceptions** – internal & external ratings, rankings and audits – measures of the primary, secondary and distant stakeholder's perceptions and extensions of 'goodwill' and reputational regard in terms of corporate responsibility commitments and capabilities.

$$\Delta \text{CSP} \propto f\{E_{NV}, O_{RG}, M_{AN}\}$$

E_{NV} External environment influence

Sector structure, competitor behaviour, stakeholder power/influences:

- **Sector**, e.g. existing standards of behaviour and reputation, accepted guidelines and codes of practice, level of general CSR interest, product and service type specifics, market maturity, proximity to public scrutiny.
- **Competition**, e.g. level and type of competition differentiation, national & international CSR sector 'leaders/performers', non-sector CSR leader's corporate social performance activities and best practices.
- **Stakeholder aspects**, e.g. level and distribution of regulatory and legal power, stock market status, demands, expectations, effective stakeholder engagement and transparency, pro-active stakeholder alliances.
- **CSR issue**, e.g. impact level and type, company's appropriate scope of responsibility and awareness e.g. criticality and expectations with regards natural resource capital, human resource and social capital with geographical & demographic relevance.

O_{RG} Organisational characteristics & capabilities

structure, culture, vision, attitude:

- **Structure**, e.g. hierarchical structure; types/levels of bureaucracy; centralised/ authoritative command & control vs. 'paternal' decentralised performance management; silo department vs. cross-functional teams; co-ordinated CSP systems and cross-functional incentivisation initiatives/pilots.
- **Culture**, e.g. organisational social values; adaptive and dynamic culture; public affairs and communications; written and unwritten rules; symbols and power structures.
- **Vision**, e.g. codes of practice, corporate vision, global 'citizen' image, clearly communicated strategies and objectives in CSR; integrations of CSR and core business functions; clear communication of company in the future.
- **Behaviour**, e.g. senior management values, middle management perception & values and explicit and implicit response to issues. Employees congruence and responses to senior management values, communications, motivations and rewards.

M_{AN} Management function & systems capabilities

decision-making resource capabilities:

- **Systems**, e.g. performance measurement, strategic management, information management, continuous improvement, reward & recognition.
- **Decision-making**, e.g. institutional vs. discretionary decision-making; analysis and evaluation processes; strategic and performance inter-linkage of cause-and-effects of operations and strategies in relation to CSR.
- **Resource Capability**, e.g. CSR training and awareness; cost-effective financial administrative and systems resources to support CSP systems evolution and improvement, internal and external assessment and audits, stakeholder engagement mechanisms, social issues management and environmental scanning.
- **Communication**, e.g. internal stakeholder dialogue on pms, communication channel management on visions, values and commitment, credibility of providing materially useful information and knowledge to society and internal and institutional stakeholders.

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11.4 Stakeholder influence and salience in the design of a CSP

The stakeholder component is an important and distinctive aspect of CR and CSP. Mitchell et al (1997) identified the need for understanding management's salience of the stakeholder and developed a construct that identified stakeholder categories in terms of power, legitimacy and urgency. Having completed the salience approach with different stakeholder groups, Harvey & Schaefer (2001) identified the difficulty in operationalising this model within the water utility sector, though they were able to highlight the strong dominant influence of the regulator, with little reference to the customer and employees. Alongside the legacy of the public service mind-set, this dominance may create a more compliant legislative behaviour and a CSP performance measurement system that becomes dysfunctional as it is orientated only towards a few key stakeholders.

Even within the same stakeholder group types, there are expected to be some tensions as they are not in themselves homogenous clusters, e.g. in relation to shareholders (mutual investment banks require different CR emphasis compared to pension funds) and in relation to regulators (utility regulator requires price competitiveness compared to environment agency requirements for pollution abatement investment). These tensions are associated with tensions and levels of dysfunction in relation to corporate responsibility programmes and priorities. There are also expectations that utility companies will attempt to game the emission trading system as opposed to utilising it to encourage innovative solutions for climate change, which in turn may change the EU's hands-off approach towards a more dominant regulatory approach.

There are a number of references in terms of recommended approaches of CSP to incorporate stakeholder engagement and dialogue, as well as the generic identification of stakeholders and issues and their prioritisation, but there is little reference to describe how this is actually conducted. Pedersen (2006) has developed a conceptual model for viewing the rationalisation of stakeholder dialogues and issues into decision-making, but again there is little reference to

the actual prioritisation and rationalisation approaches, nor any discussion on factors that affect or influence it.

The literature appears void of describing the reasoning behind selecting stakeholders, e.g. the balance of institutional, stakeholder, and strategic and personal values (or not) within the process. There is little elaboration of the dilemmas in selecting the appropriate measure or what criteria and critiques are applied to ensure the measure is useful for the right stakeholder or issue. There are no references within the literature on specific interactions with stakeholders in this process, nor how the stakeholder issues relate to strategic elements within the business.

The question remains as to whether stakeholder engagement and CR issue prioritisation are developed in a systematic manner, or in a coerced socio-political manner or even a less systematic and more chaotic-like iterative evolution ?

The issue of how stakeholder engagement is considered and managed for effective CSP remains a distinctly unanswered question.

11.5 Further research considerations

There are two approaches adopted in exploring and highlighting considerations for further research aspects.

The first approach adopted was to highlight areas from experienced researchers in the field, in relation to what they believe are useful research questions or aspects in relation to the proposed research question. Following a review of academic literature, these can be categorised and explored within three distinct areas, stakeholder management and engagement, CSP performance measurement, and at the macro-level the business and society methodological aspects, as illustrated within the following tables.

Fundamentally, stakeholder management and engagement indicates the need for exploring stakeholder identification elements and corporate stakeholder orientated strategic decision-making. The consistent research aspect is to understand more about the effects and tensions of instrumental and normative responses and the effects from these sometimes disharmonious approaches.

Academic research *requests from the literature*

STAKEHOLDER MANAGEMENT & ENGAGEMENT:

- 'very little research has been done to help identify **which stakeholders really count to managers**' (Harrison & Freeman 1999).
- 'future work could include capturing **management motivations and intentions** pertaining to **strategy decisions** and **stakeholder orientation**, categorising firm commitment to stakeholders and comparing the observed behaviour against intentions' (Berman et al 1999).
- 'Although quality scholarship on the normative facets of stakeholder theory is indeed needed, **instrumental and descriptive/empirical aspects need attention** as well' (Jones 1995).
- 'Scholars wishing to do empirical work on **stakeholder management** have had little to go on except broadly defined models of stakeholder related behaviour ...relatively little theory has been advanced in the **instrumental realm**...., or in the descriptive/empirical realm (Berman et al1999).
- 'a **better understanding of the pragmatic forces in the corporate world as they would apply to particular organisations/stakeholders** could verify claims that the normative dominates the instrumental behaviour' (Friedman & Miles 2002) .

The CSP research contributions centre on the need to explore the derivation, selection and effects of CR-related performance measures, in an effort to understand more about developing robust, informative performance measures and where possible to reconcile this with theory.

Another area highlighted for consideration is the request to establish empirical building-blocks and cases, which provide a granularity level for identifying generalisable components and for clarifying variations of the specificity of empirical relationships with generalisable theories.

The other approach was to review the synthesised findings, and using the proposed questions as prompts, to capture the author's impressions in relations to gaps and incomplete issues as identified within the literature.

Academic research *requests from the literature*

CSP PERFORMANCE MEASUREMENT CONTRIBUTIONS:

- 'the biggest research gap plaguing the implementation of sustainable development as a whole, namely the **lack of robust measures of corporate sustainability performance**' (Searcy et al 2005).
- 'we need to **do research on CSP measures better**' (Carroll 2000).
- 'the **conditions** under which a certain company will choose a variety of **responsive modes** deserves further study (Wood 1991).
- 'efforts need to be **directed at measurement initiatives, with practice reconciled with theory**' (Carroll 1999).
- 'unanswered performance measures relate to understanding what are the suitable criteria for forming a cluster of measures, what are the effects of this on decision-making?' (Lohman et al 2004).

Academic research *requests from the literature*

BUSINESS & SOCIETY - METHODOLOGICAL CONTRIBUTIONS:

- 'want **fine grained understandings of stakeholder relationships, creating rich and rigorous cases**' - more case studies and event studies' (Swanson 1999).
- 'more **theoretical grounded research....within narrowly defined organisational contexts**' (Rowley & Berman 2000).

As the researcher assessed and synthesised the research, questions and loose ideas were recorded. Following the synthesis, these were revisited and assessed as to their continued relevance. Below are some of the questions still identified as relevant to the field, whether as a distinct gap or as being identified an insufficiently answered.

Examples of raised research-relevant questions from the study ?

- How are a utility company's approaches to csr-related issues affected by the context of the stake and the 'societal' performance environment of the stake?
- To what extent does a regulator as a powerful and representative stakeholder(s) have in influencing the actual design of a utility company's corporate social performance measurement system and measures of performance?
- In what way does the utility sector and a company's organisational factors influence the design of a new performance measurement system ?
- What are the key influences on why a utility company identifies particular csr-related outcome measures, and how are the measures evaluated for their effectiveness.
- Do stakeholder influences vary and evolve during performance measurement system design (both internal salience and actual engagement)? How does it evolve or change during the design and development process?
- What are the factors that can affect the choice and use of different csr performance measures?
- What are the organisational resource and infrastructure considerations for designing appropriate performance measures ?
- To what extent does a CsR-related performance measurement system contribute to, facilitate and enable corporate and business unit decision-making ? What key factors affect this ?

As discussed, the field is sparse and effectively still wide-open from a researcher's perspective. To this end, the questions above can form the context for appropriate research to focus for a forthcoming PhD.

11.6 Learning points

The learning points below relate to a new researcher, applying a new process in an unfamiliar field.

In relation to dealing with two emerging fields, CR and PMS, the systematic review only identified a small number of papers. Some of these papers were emerging practitioner papers and would have been rejected by the systematic review process for a densely populated area of research. Later, however it was identified that they were in fact highly relevant, if only because there were no other academic quality papers in the field that explored the areas in question. The challenge changed to include scaling back the literature research expectations and to make adjustments regarding the quality assessment criteria to include relevant 'fitness for purpose' papers and articles.

It was also interesting to find different papers identified through the various databases using identical search phrases. This is due to different algorithm search approaches and cataloguing structures of the particular databases, emphasising the need to conduct a consistent approach to the databases to ensure sufficient data capture. There were inconsistencies with keyword terminology and certain literature titles, but specifically the term 'sustainable development' appears to be a more contemporary term for measurement than corporate social performance or CR; highlighting the need to think broadly and critically at the search string criteria and research bias in terms of preferred or recommended terminology. The scoping study was a useful process in this context.

The application of a scoping and systematic process proved useful in terms of learning some key areas of discipline, namely:

- To derive some initial questions from the scoping function that then acts as a reference point to retain and evolve the focus within the systematic review.

- To document and critique keywords and apply a consistent approach to database interrogations, so as to be able to retrace and establish status and scope of searches to date, and be able to pick up and expand the criteria at a later date.
- The selection criteria was very useful in trying to elicit the research context, and this evolved through a greater understanding of the scale of issues identified in the initial scoping study was surprisingly useful for clarifying the context and as a focus for the thinking and reasoning for the research.
- The use of an extraction template, coupled with a database to assist with keyword categorisation and referencing, was a highly useful and informative process, including the documentation of the reasons and strengths of a paper in terms of being accepted or rejected. This in itself (as described in relation to the challenges of the quality assessment) can be revisited and re-evaluated.

Other than the extremely challenging nature of a rigorous quality assessment criterion in relation to what is presently an emerging, sparse field of work, it is a usable generic process that has provided immense experience for conducting research, analysing the relevance of literature and extracting key contributions.

Although extremely challenging and at some point vexing in terms of the desire to discover the next area of knowledge, it was not really until the thesis writing stage that I realised just how powerful and supportive this process really was to improving the rigour of assessment and improving the strength of specific areas of reference and knowledge capture.

I will certainly carry forward this approach and learning into in my future PhD work.

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197. Woerd (van der) F. & Brink (van den) T. (2004) ; Feasibility of a responsive business scorecard - a pilot study; Journal of Business Ethics; 55.
198. Wokutch,R.E. & Fahey,L. (1986); A value explicitly approach for evaluating Corporate Social performance; Journal of Accounting & Public Policy; 5.
199. Wood,D.J. (1991a); Corporate social performance revisited; Academy of Management Review; 16,4.
200. Wood,D.J. (1991b); Toward improving corporate social performance; Business Horizons; 34,4.
201. Wood,D.J. & Jones,R.E. (1995); Stakeholder mismatching; International Journal of Organisational Analysis; 3.
202. WCED (World Commission on Environment and Development) (1987); WCED 1987: Our Common Future ; (Oxford University Press).
203. WRI (2004); Hot Climate, Cool Commerce: A service sector guide to greenhouse gas management; World Resource Institute.

204. Zafar,M. (2004); Computer Applications in Environmental Data Analysis; Environmental Quality Management; 13,4.
205. Zink,K.J. (2005); Stakeholder Orientation and Corporate Social Responsibility as a pre-condition for sustainability; Total Quality Management; 16,8.
206. Zwetsloot,G.I.J.M. (2003); From management systems to corporate social responsibility; Journal of Business Ethics; 44.

APPENDICES

Appendix 1 – Database search string details

This table represents the summary figures from the search string combination searches.

Search string number	Total (180)	ABI ProQuest	EBSCO Business Premier	Sustainability Science
1 pm & csp	53 selected 1,640 reviewed titles & abstracts	22 chosen 237 identified	8 chosen* 13 selection** 130 identified	23 chosen 44 selection 1,273 identified
2 csp & u-s	24 selected 273 reviewed titles & abstracts	16 chosen 142 identified	2 chosen 3 selection 9 identified	6 chosen 12 selection 122 identified
3 Pm & u-s	14 selected 770 reviewed titles & abstracts	5 chosen 66 identified	2 chosen 3 selection 35 identified	7 chosen 16 selection 669 identified
4 csp & st	56 selected 1,081 reviewed titles & abstracts	22 chosen 316 identified	32 chosen 43 selection 230 identified	2 chosen 34 selection 535 identified
5 Pm & st	33 selected 1,251 reviewed titles & abstracts	21 chosen 127 identified	11 chosen 16 selection 78 identified	1 chosen 27 selection 1,046 identified

This section provides additional details from each research data-base and the associated search string findings

Appendix 1 – Database search string details

1 ABI ProQuest Search String 1 of 3

	Search String	Basis for Use or Inclusion
1.0	<p><u>PERFORMANCE MEASUREMENT & CORPORATE SOCIAL PERFORMANCE</u> (perform* measure* OR perform* metric* OR perform* system* OR measure* OR metric*) AND (corporate OR MNE OR Firm) AND (ethic* OR social OR public affairs* OR social respons* OR respons* OR sustain* develop* OR social perform* OR sustainab*)</p>	<p>This search string seeks to identify areas of overlap between performance measurement (<u>title</u>) AND corporate social performance (<u>abstract</u>)</p> <p>Outcome: 237</p> <p>ABI/INFORM Global, ABI/INFORM Trade & Industry, ProQuest Science Journal (title & abstract)</p> <p>Relevant: 22</p>
2.0	<p><u>CORPORATE SOCIAL PERFORMANCE & UTILITY-SECTOR CONTEXT</u> (corporate OR business OR MNE OR Firm) AND (ethic* OR social OR public affairs* OR social respons* OR respons* OR sustain* develop* OR social perform* OR sustainab*) AND (utilit* sector OR mining industry OR aggregate industry OR petrochemical industry OR greenhouse gas OR climate change)</p>	<p>This search string seeks to identify areas of overlap between corporate social performance (<u>title</u>) AND Utility/CSR theme context (<u>abstract</u>)</p> <p>Outcome: 142</p> <p>ABI/INFORM Global, ABI/INFORM Trade & Industry, ProQuest Science Journal (title & abstract)</p> <p>Relevant: 16</p>
3.0	<p><u>PERFORMANCE MEASUREMENT & UTILITY-SECTOR CONTEXT</u> (perform* measure* OR perform* metric* OR perform* system* OR measure* OR metric*) AND (utilit* sector OR mining industry OR aggregate industry OR petrochemical industry OR greenhouse gas OR climate change)</p>	<p>This search string seeks to identify areas of overlap between performance measurement (<u>title</u>) AND Utility/CSR theme context (<u>abstract</u>)</p> <p>Outcome: 66</p> <p>ABI/INFORM Global, ABI/INFORM Trade & Industry, ProQuest Science Journal (title & abstract)</p> <p>Relevant 5</p>
4.0	<p><u>CORPORATE SOCIAL PERFORMANCE & STAKEHOLDER THEORY</u> (corporate OR business OR MNE OR Firm) AND (ethic* OR social OR public affairs* OR social respons* OR respons* OR sustain* develop* OR social perform* OR sustainab*) AND (stakehold*)</p>	<p>This search string seeks to identify areas of overlap between corporate social performance (<u>title</u>) AND stakeholder theory (<u>abstract</u>)</p> <p>Outcome: 316</p> <p>ABI/INFORM Global, ABI/INFORM Trade & Industry, ProQuest Science Journal (title & abstract)</p> <p>Relevant: 22</p>
5.0	<p><u>PERFORMANCE MEASUREMENT & STAKEHOLDER THEORY</u> (perform* measure* OR perform* metric* OR perform* system* OR measure* OR metric*) AND (stakehold*)</p>	<p>This search string seeks to identify areas of overlap between corporate social performance AND stakeholder theory</p> <p>Outcome: 127</p> <p>ABI/INFORM Global, ABI/INFORM Trade & Industry, ProQuest Science Journal (title & abstract)</p> <p>Relevant 21</p>

Appendix 1 – Database search string details

② EBSCO Business Premier Search String 2 of 3

	Search String	Basis for Use or Inclusion
1.0	<p><u>PERFORMANCE MEASUREMENT & CORPORATE SOCIAL PERFORMANCE</u></p> <p>(perform* measure* OR perform* metric* OR perform* system* OR measure* OR metric*) AND (corporate OR MNE OR Firm) AND (ethic* OR social OR public affairs* OR social respons* OR respons* OR sustain* develop* OR social perform* OR sustainab*)</p>	<p>This search string seeks to identify areas of overlap between performance measurement (<u>title</u>) AND corporate social performance (<u>abstract</u>)</p> <p>Outcome: 130</p> <p>EBSCO/Business Premier</p> <p>Relevant: 8 (not counting 5 identified from ABI/ProQuest search)</p>
2.0	<p><u>CORPORATE SOCIAL PERFORMANCE & UTILITY-SECTOR CONTEXT</u></p> <p>(corporate OR business OR MNE OR Firm) AND (ethic* OR social OR public affairs* OR social respons* OR respons* OR sustain* develop* OR social perform* OR sustainab*) AND (utilit* sector OR mining industry OR aggregate industry OR petrochemical industry OR greenhouse gas OR climate change)</p>	<p>This search string seeks to identify areas of overlap between corporate social performance (<u>title</u>) AND Utility/CSR theme context (<u>abstract</u>)</p> <p>Outcome: 9</p> <p>EBSCO/Business Premier</p> <p>Relevant: 2 (not counting 1 identified from ABI/ProQuest search)</p>
3.0	<p><u>PERFORMANCE MEASUREMENT & UTILITY-SECTOR CONTEXT</u> (perform* measure* OR perform* metric* OR perform* system* OR measure* OR metric*) AND (utilit* sector OR mining industry OR aggregate industry OR petrochemical industry OR greenhouse gas OR climate change)</p>	<p>This search string seeks to identify areas of overlap between performance measurement (<u>title</u>) AND Utility/CSR theme context (<u>abstract</u>)</p> <p>Outcome: 35</p> <p>EBSCO/Business Premier</p> <p>Relevant: 2 (not counting 1 identified from ABI/ProQuest search)</p>
4.0	<p><u>CORPORATE SOCIAL PERFORMANCE & STAKEHOLDER THEORY</u></p> <p>(corporate OR business OR MNE OR Firm) AND (ethic* OR social OR public affairs* OR social respons* OR respons* OR sustain* develop* OR social perform* OR sustainab*) AND (stakehold*)</p>	<p>This search string seeks to identify areas of overlap between corporate social performance (<u>title</u>) AND stakeholder theory (<u>abstract</u>)</p> <p>Outcome: 230 EBSCO/Business Premier</p> <p>Relevant: 32 (not counting 11 identified from ABI/ProQuest search)</p>
5.0	<p><u>PERFORMANCE MEASUREMENT & STAKEHOLDER THEORY</u></p> <p>(perform* measure* OR perform* metric* OR perform* system* OR measure* OR metric*) AND (stakehold*)</p>	<p>This search string seeks to identify areas of overlap between corporate social performance AND stakeholder theory</p> <p>Outcome: 78 EBSCO/Business Premier</p> <p>Relevant: 11 (not counting 4 identified from ABI/ProQuest search)</p>

Appendix 1 – Database search string details

③ Web of Science Search 3 of 3

	Search String	Basis for Use or Inclusion
1.0	<p><u>PERFORMANCE MEASUREMENT & CORPORATE SOCIAL PERFORMANCE</u> (perform* measure* OR perform* metric* OR perform* system* OR measure* OR metric*) AND (corporate OR MNE OR Firm) AND (ethic* OR social OR public affairs* OR social respons* OR respons* OR sustain* develop* OR social perform* OR sustainab*)</p>	<p>This search string seeks to identify areas of overlap between performance AND corporate social performance ('anywhere' searches) Outcome: 1,273 Web of Science Relevant: 23 (not counting 21 identified from previous ABI/ProQuest & EBSCO/Business Premier search)</p>
2.0	<p><u>CORPORATE SOCIAL PERFORMANCE & UTILITY-SECTOR CONTEXT</u> (corporate OR business OR MNE OR Firm) AND (ethic* OR social OR public affairs* OR social respons* OR respons* OR sustain* develop* OR social perform* OR sustainab*) AND (utilit* sector OR mining industry OR aggregate industry OR Petrochemical industry OR greenhouse gas OR climate change)</p>	<p>This search string seeks to identify areas of overlap between corporate social performance AND Utility/CSR theme context ('anywhere' searches) Outcome: 122 Web of Science Relevant: 6 (not counting 6 identified from previous ABI/ProQuest & EBSCO/Business Premier search)</p>
3.0	<p><u>PERFORMANCE MEASUREMENT & UTILITY-SECTOR CONTEXT</u> (perform* measure* OR perform* metric* OR perform* system* OR measure* OR metric*) AND (utilit* sector OR mining industry OR aggregate industry OR Petrochemical industry OR greenhouse gas OR climate change)</p>	<p>This search string seeks to identify areas of overlap between performance measurement AND Utility/CSR theme context ('anywhere' searches) Outcome: 669 Web of Science Relevant: 7 (not counting 9 identified from previous ABI/ProQuest & EBSCO/Business Premier search)</p>
4.0	<p><u>CORPORATE SOCIAL PERFORMANCE & STAKEHOLDER THEORY</u> (corporate OR business OR MNE OR Firm) AND (ethic* OR social OR public affairs* OR social respons* OR respons* OR sustain* develop* OR social perform* OR sustainab*) AND (stakehold*)</p>	<p>This search string seeks to identify areas of overlap between corporate social performance (title) AND stakeholder theory ('anywhere' searches) Outcome: 535 Web of Science Relevant: 2 (not counting 32 identified from previous ABI/ProQuest & EBSCO/Business Premier search)</p>
5.0	<p><u>PERFORMANCE MEASUREMENT & STAKEHOLDER THEORY</u> (perform* measure* OR perform* metric* OR perform* system* OR measure* OR metric*) AND (stakehold*)</p>	<p>This search string seeks to identify areas of overlap between corporate social performance AND stakeholder theory Outcome: (anywhere searches) Outcome: 1,046 Web of Science Relevant: 1 (not counting 26 identified from previous ABI/ProQuest & EBSCO/Business Premier search)</p>

Appendix 2 – Journal source details

Key Journals: corporate social responsibility, stakeholder theory & performance Measurement	
Administrative Science Quarterly Academy of Management Journal Accounting, Auditing and Accountability Journal Business & Society Business & Society Review Journal of Business Ethics International Journal of Operations and Production Management	The Academy of Management Review Energy Policy Corporate Responsibility Management Corporate Social Responsibility & Environmental Management Corporate Environmental Strategy Measuring Business Excellence Performance Improvement
Other relevant journals:	
California Management Review Advanced Management Journal Academy of Management Executive Business Ethics Quarterly Journal of Business Strategy Journal of Education for Business Journal of the American Society for Information Journal of American Academy of Business Journal of Management Enquiry Journal of Behavioural Economics Journal of Environmental Economics & Management International Journal of Value-based Management	International Journal of Corporate Sustainability Journal of Management Studies Strategic Management Journal Management Science The Accounting Review European Journal of Operational Research Australian Journal of Management The British Accounting review European Management Journal Organisation & Environment Journal of Management Journal of General Management International Journal of Organisational Analysis Journal of Accounting and Public Policy
Other publications	
Environmental Modelling & Assessment Impact Assessment & Project Appraisal Business Horizons Organization Science Personal Psychology Management Decision Accounting Horizons	Harvard Business review Organisational Studies International Journal of Organisational Analysis Management Quarterly PR News Organization

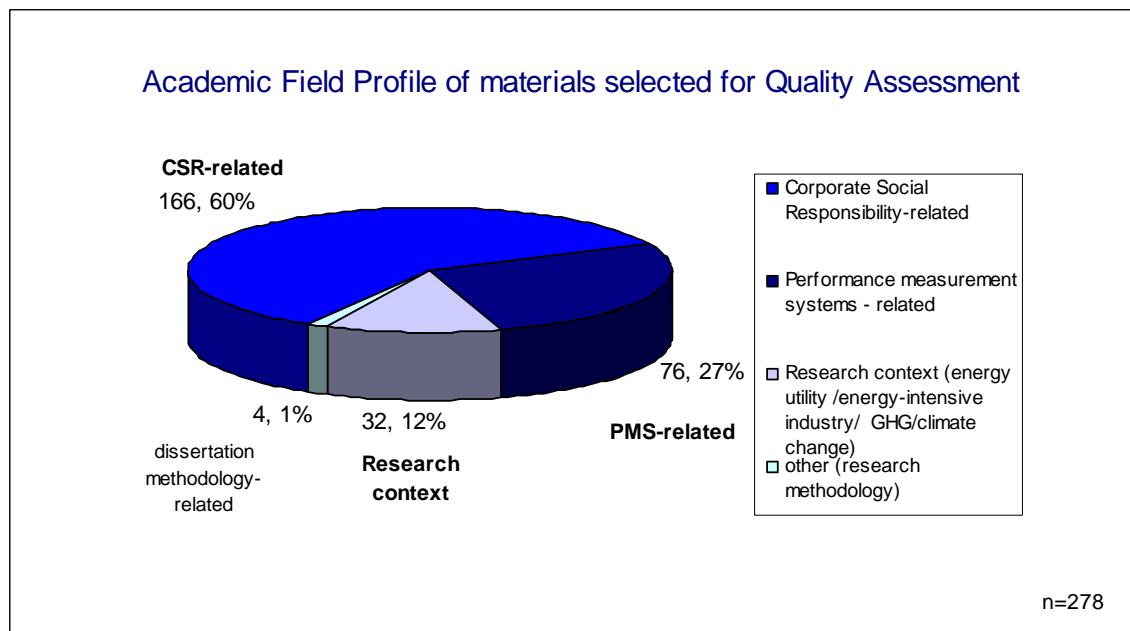
Appendix 3 - Typology of selected research literature

Profiles of selected papers, referenced papers and key papers from scoping and systematic review process.

The following section represents a range of analysis applied to papers at different stages in the process, from selection to key core papers. Using Excel, profiles were generated to explore the academic field, i.e. corporate social responsibility-related, performance measurement systems-related and the research context; the type of papers, e.g. action research, case-studies, conceptual & theoretical, review papers, books, newspaper articles; the audience/role of papers, e.g. academic research-orientated or practitioner-orientated; as well as profiles of the longitudinal time series of the papers selected as they progress from being selected for appraisal, being utilised as reference for dissertation, and being identified as core papers that describe the main aspects and elements of the research question.

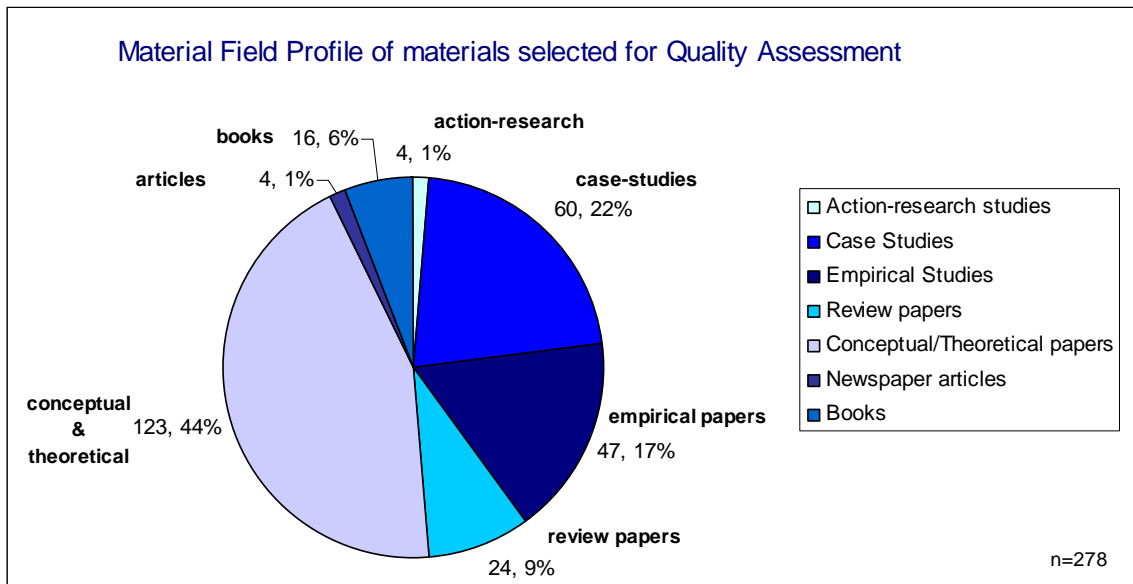
A: Selected Papers:

Illustration A1:



Comment: The ratio of the 278 selected papers are 60% CR, 27% PMS and 12% research context. This is consistent with the ratio of papers used as references in the dissertation (illustration B1).

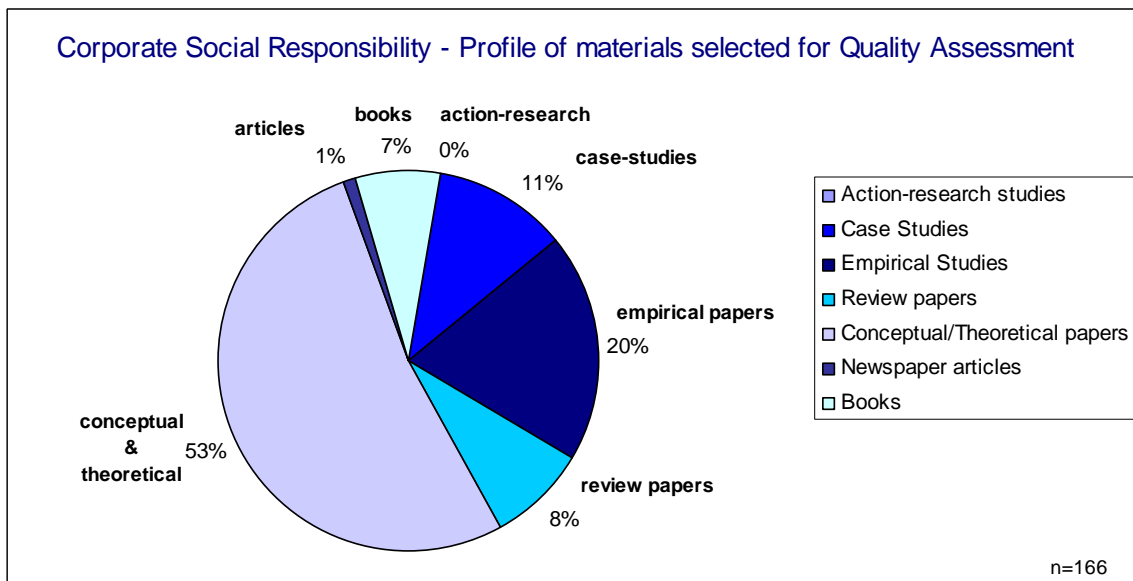
Illustration A2:



Comment:

The majority of papers are conceptual and theoretical (44%), followed by case-studies (22%) and empirical papers (17%). This again is comparable with the dissertation ratios (illustration B2).

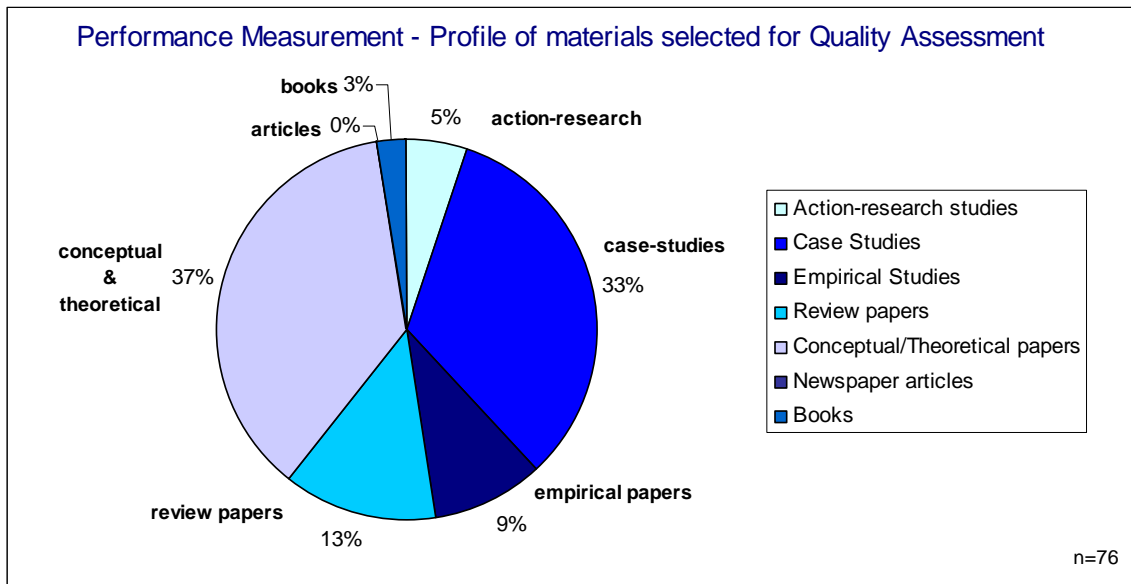
Illustration A3:



Comment:

The CR-selected papers are mainly conceptual (53%), with some empirical (20%) and case-studies (11%). This is comparable with the dissertation papers selected (illustration B3).

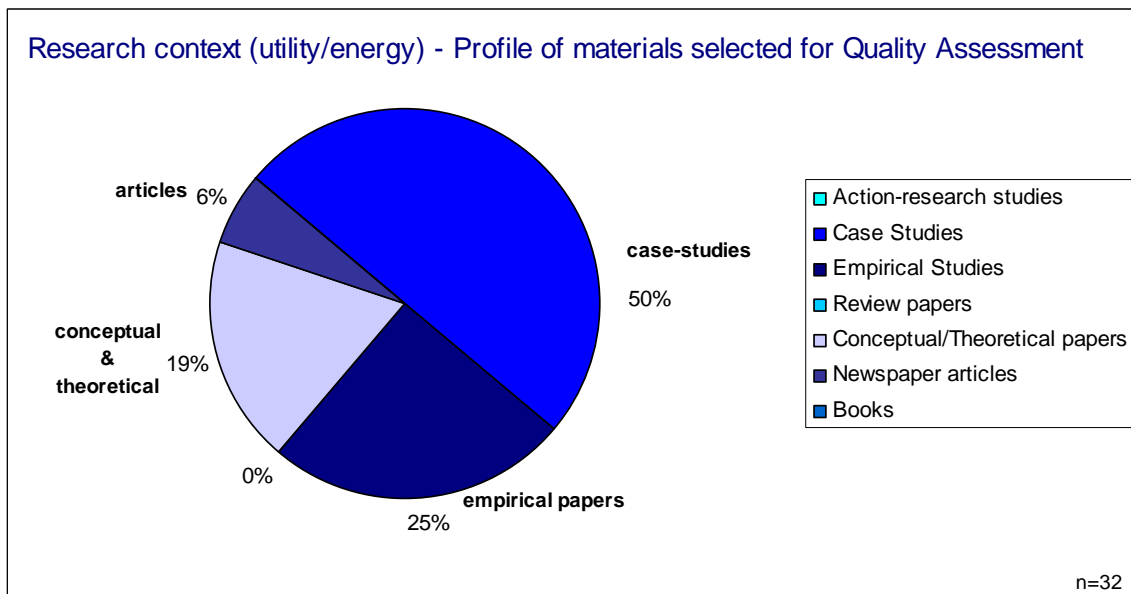
Illustration A4:



Comment:

The PMS-related papers are more balanced in terms of conceptual (37%) and case-studies (33%) and have included action-research papers (5%). Again, this is comparable with the paper ratios in relation to dissertation references (Illustration B4).

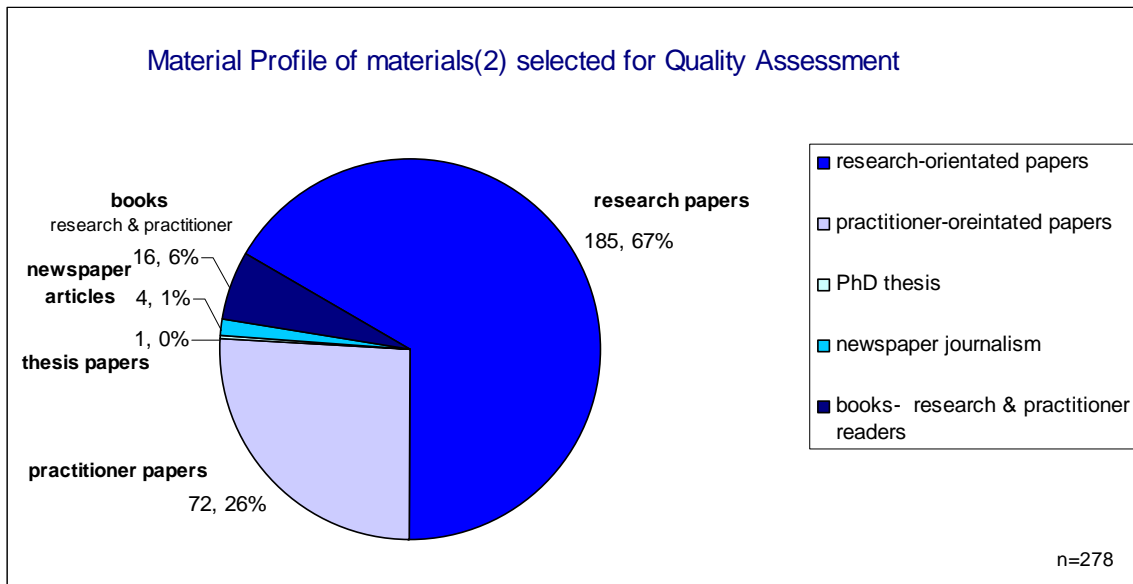
Illustration A5:



Comment:

The research context relies heavily on case-studies (50%) and empirical papers (25%) with a reliance also on recent practitioner articles (6%). As can be seen, in illustration B5, the reliance on case-studies increases to 74% for the dissertation references.

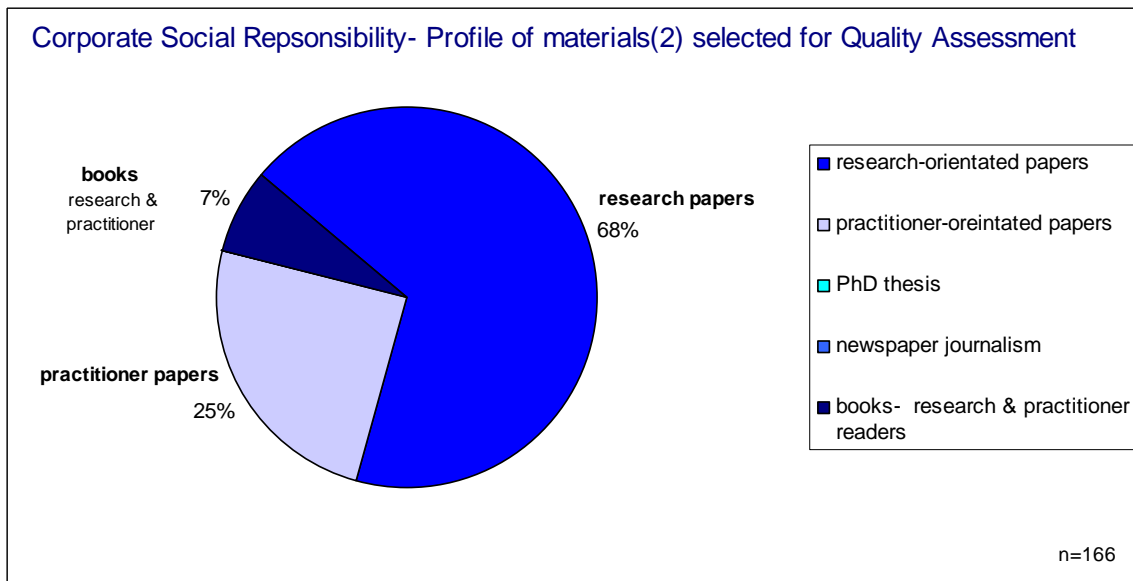
Illustration A6:



Comment:

Just over a third (67%) of the papers are described as research-orientated, and over a quarter relate to practitioner-orientated papers. This is comparable with the dissertation reference papers from this field (illustration B6).

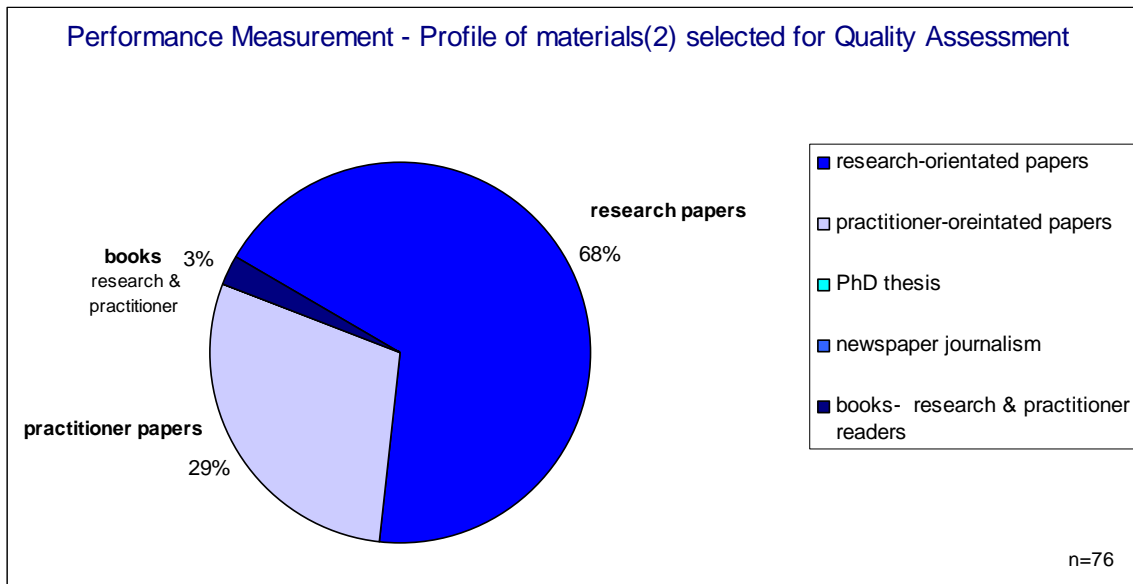
Illustration A7:



Comment:

The CR papers are comparable with material profile. This is also mirrored in the materials selected for referencing in the dissertation (illustration B7).

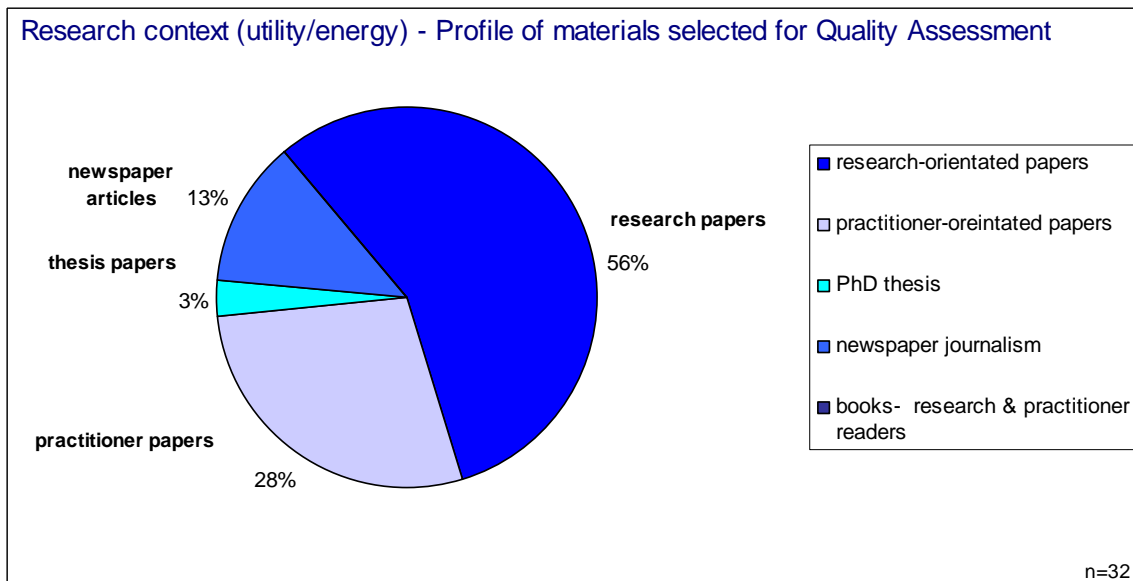
Illustration A8:



Comment:

These figures are also comparable with the above figures.

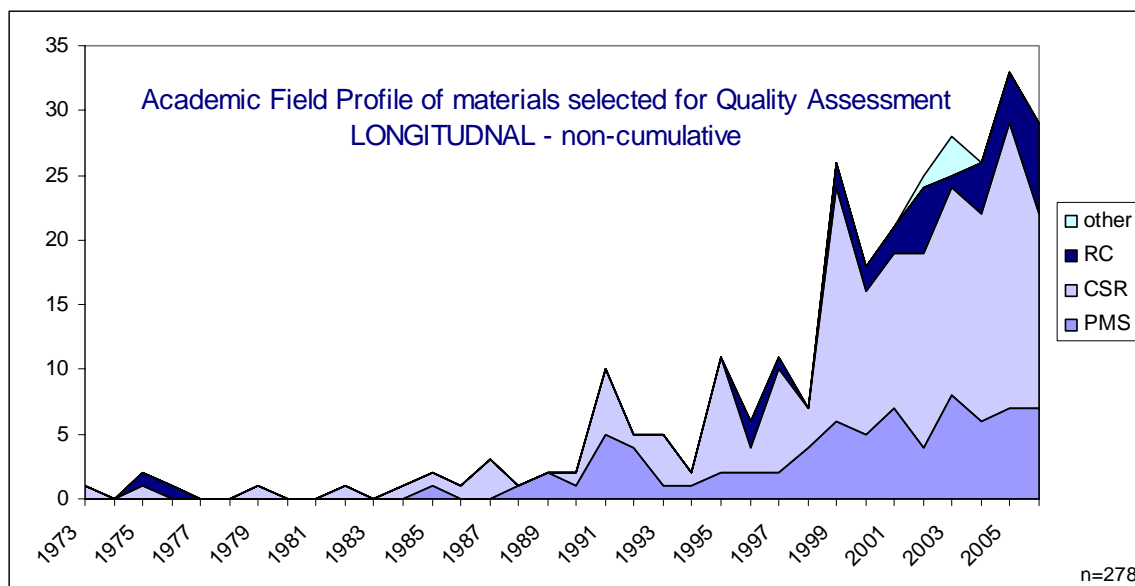
Illustration A9:



Comment:

As opposed to PMS and CR fields, a higher proportion of papers for the research context are sourced from newspaper articles (13%) than research papers (56%), though the practitioner-orientated papers remains similar to the other fields (28%). For the dissertation, less of the newspaper articles were selected (illustration B9).

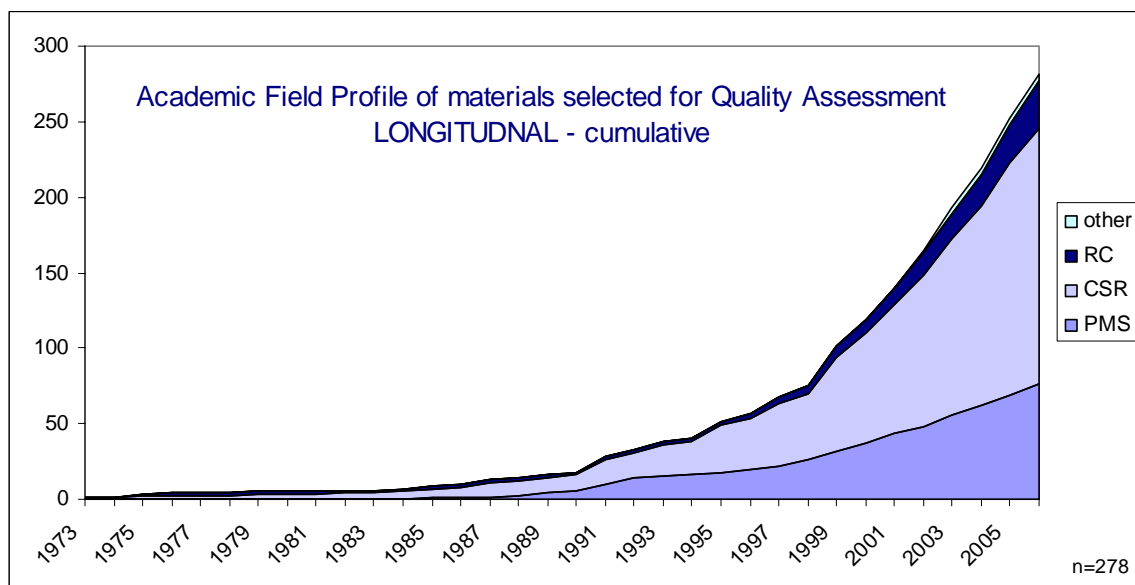
Illustration A10:



Comment:

As illustrated, the CR field makes early contributions and by the early 1990's the performance measurement field makes significant steady contributions. From 1999, the CR field makes up a proportionally larger number of contributions than the research context.

Illustration A11:

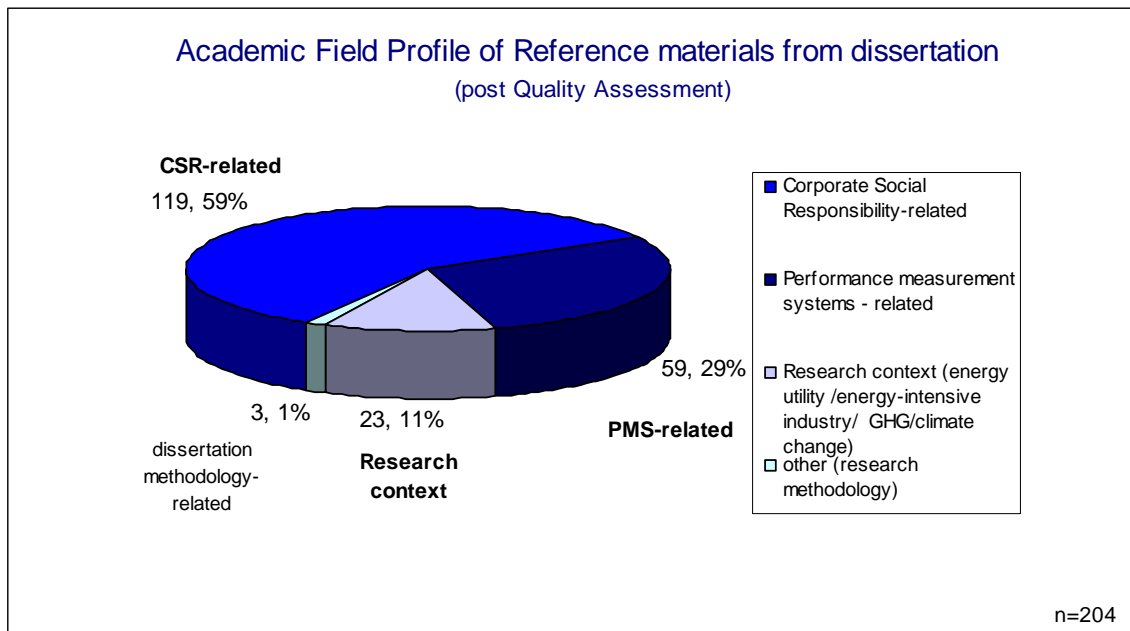


Comment:

It is expected, from the contemporary nature of the question and the emerging fields of PMS and CR that papers will increase up to present day. Also it is understood that as the field around this question evolves, some of these papers may not be as key. Note the pattern is similar for dissertation references (illustration B11) and for the key paper references (illustration C11).

B: Dissertation Reference materials:

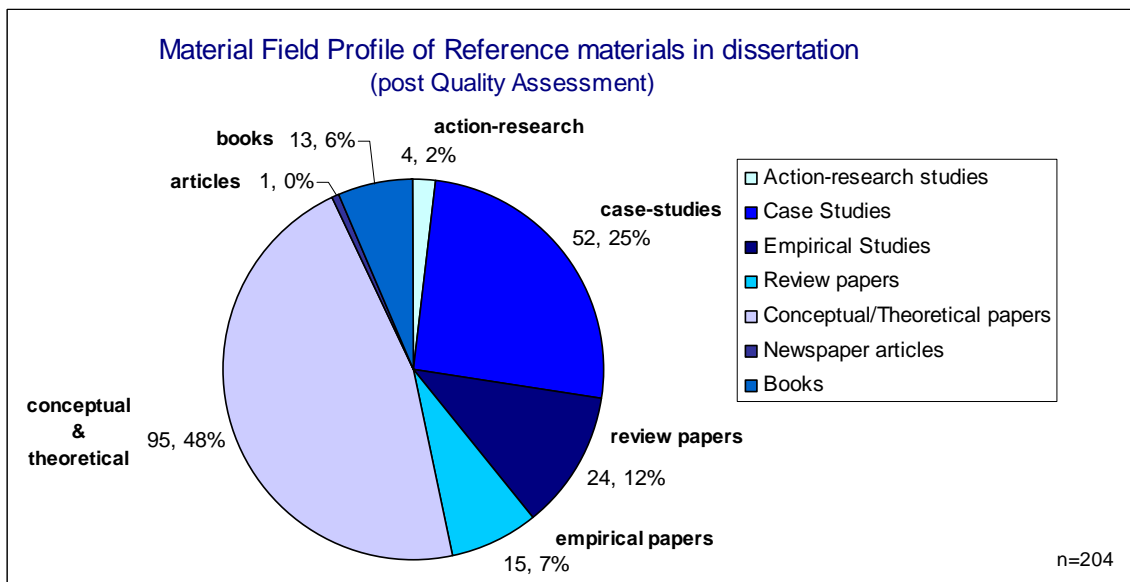
Illustration B1:



Comment:

As discussed this is a similar pattern to illustration A1, which is a comparable pattern observed for the key papers identified from the quality assessment approach (illustration C1).

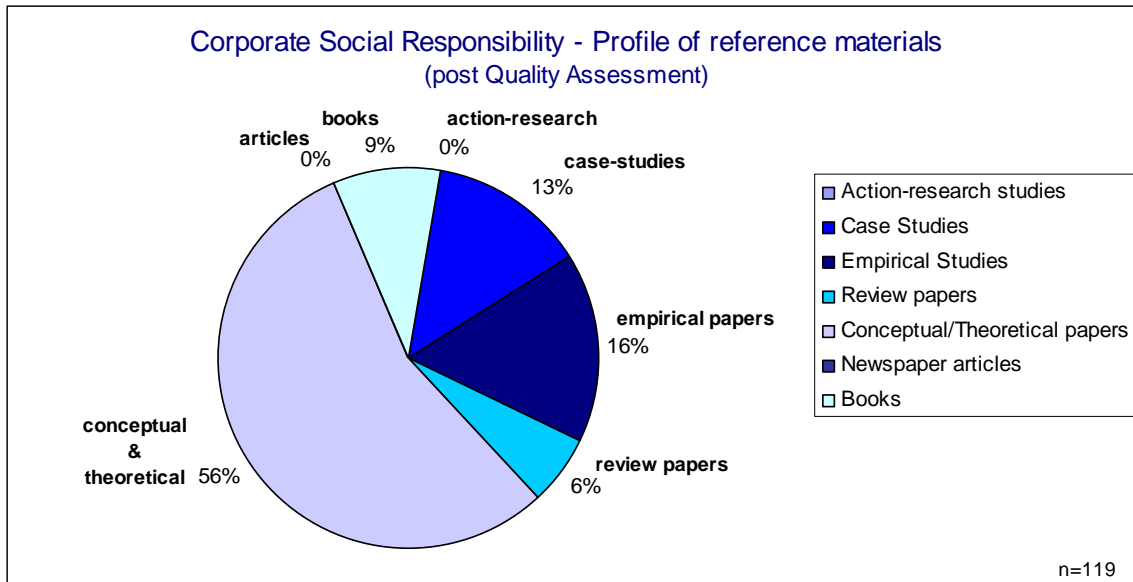
Illustration B2:



Comment:

This is similar to the selected paper profile (illustration A2), though there is an increasing emphasis on conceptual and case-study papers at the expense of articles and some book sources.

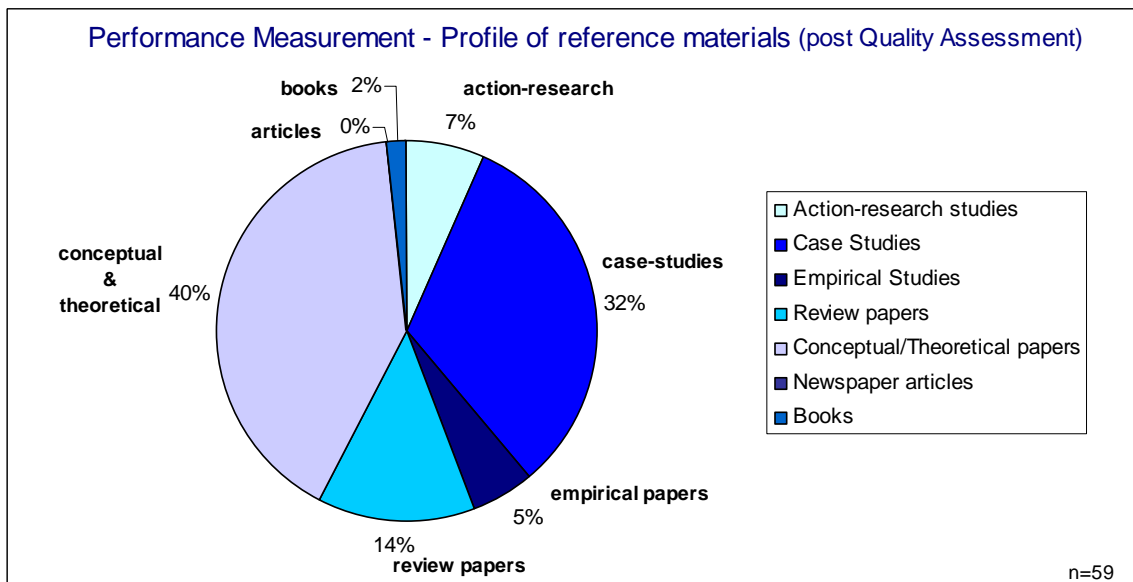
Illustration B3:



Comment:

The majority of the papers selected for the dissertation are conceptual and theoretical (56%) the remainder composed of empirical papers (16%), case-studies (13%), books (9%) and review papers (6%). As seen in the illustration of core papers from the quality assessment, conceptual papers at 61% are still a key source of reference from the CR-related field (illustration C3).

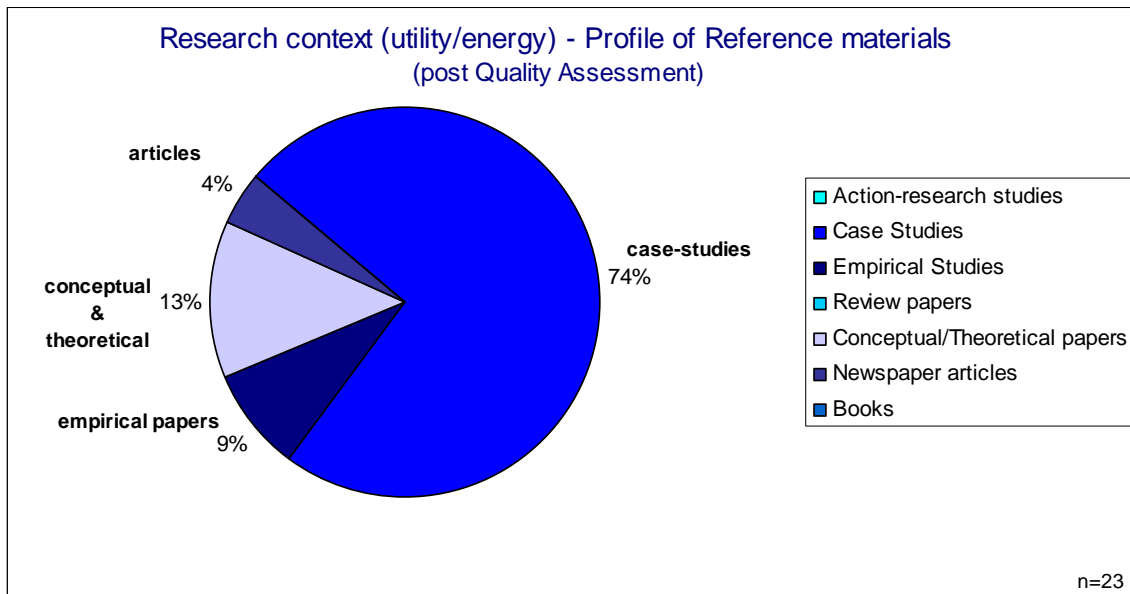
Illustration B4:



Comment:

Performance measurement displays still a balance between conceptual and case studies (40% and 32% respectively). As illustrated in C4, the core papers are more orientated towards case-studies and action-research (52% and 18%).

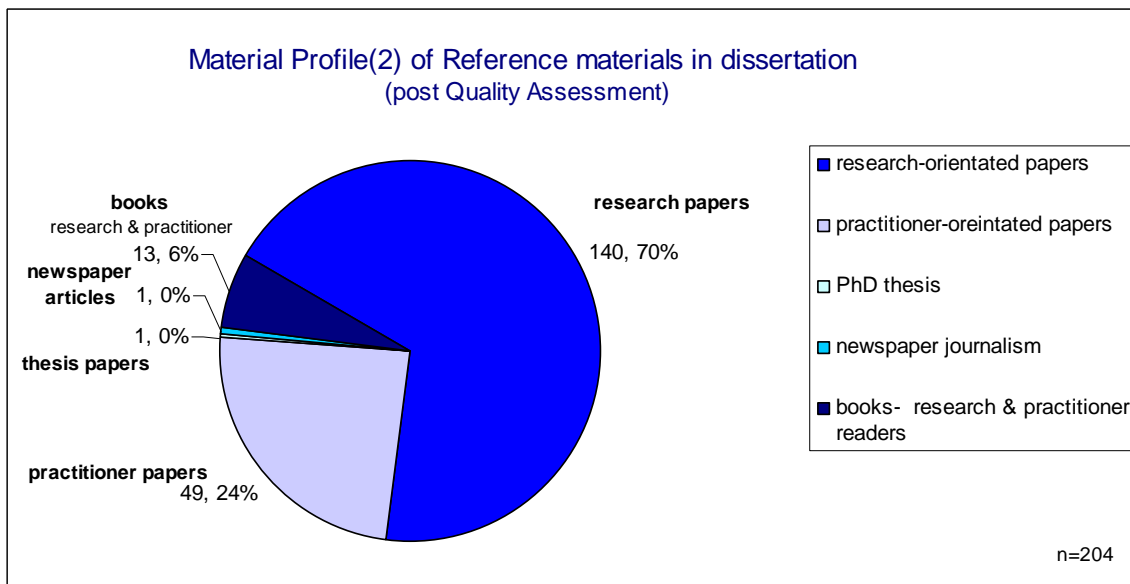
Illustration B5:



Comment:

The research context is more orientated towards emerging case-studies (74%), with some conceptual papers (13%), empirical papers (9%) and articles (4%). As illustrated, for the core papers, case-studies still make up the majority of core papers selected (73%).

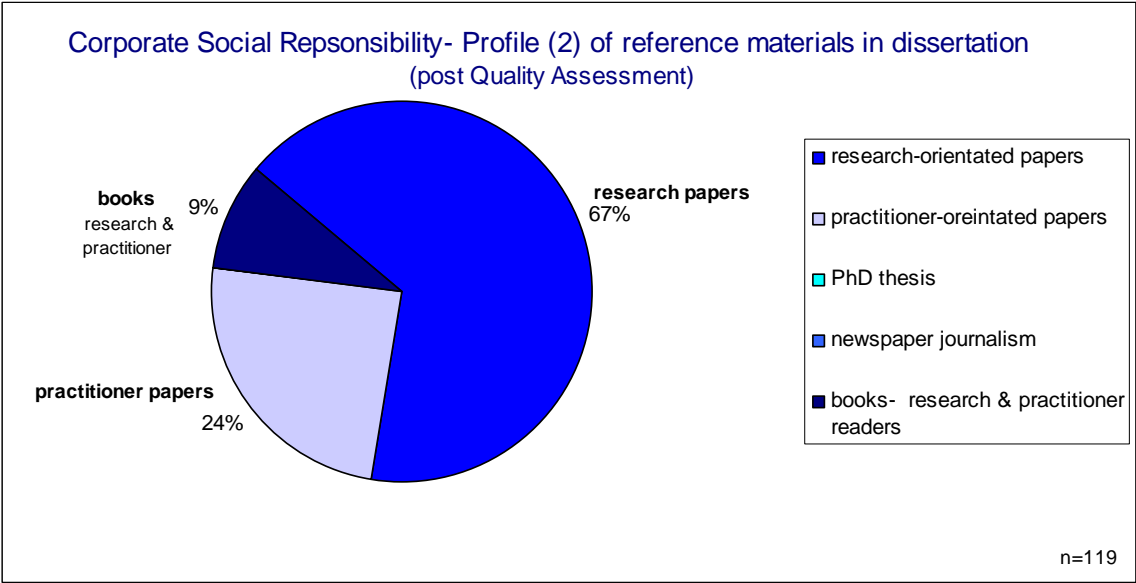
Illustration B6:



Comment:

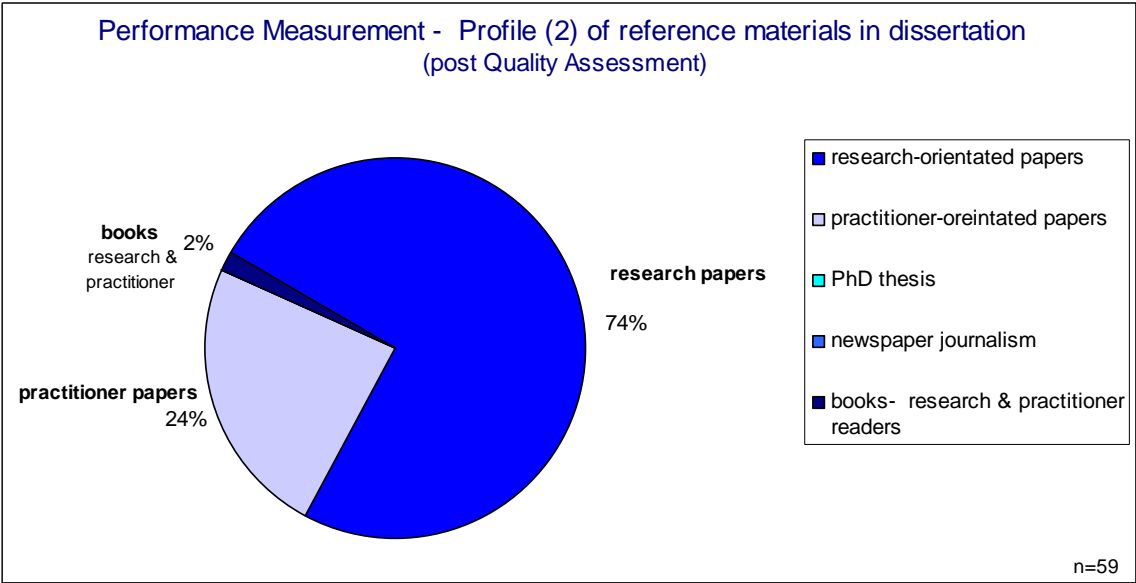
The majority of the papers in the dissertation are, unsurprisingly, research-orientated, with aspects of practitioner-orientated papers utilised for the emerging context of the question. As illustrated, the three-quarter research-orientation and one quarter practitioner-orientated sources is consistent (illustration C6 & C7).

Illustration B7:



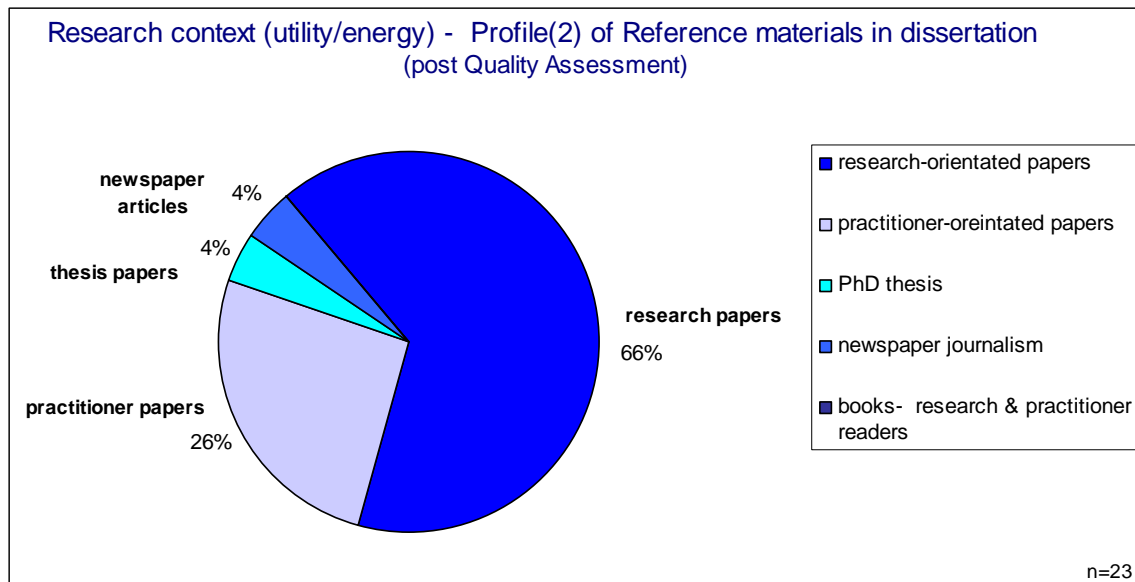
Comment:
A similar patter in relation to a twenty-five percent utilisation of practitioner-based papers.

Illustration B8:



Comment:
A similar pattern to B6 and B7, and as highlighted is consistent with the core papers selected from the quality assessment stage of the systematic review.

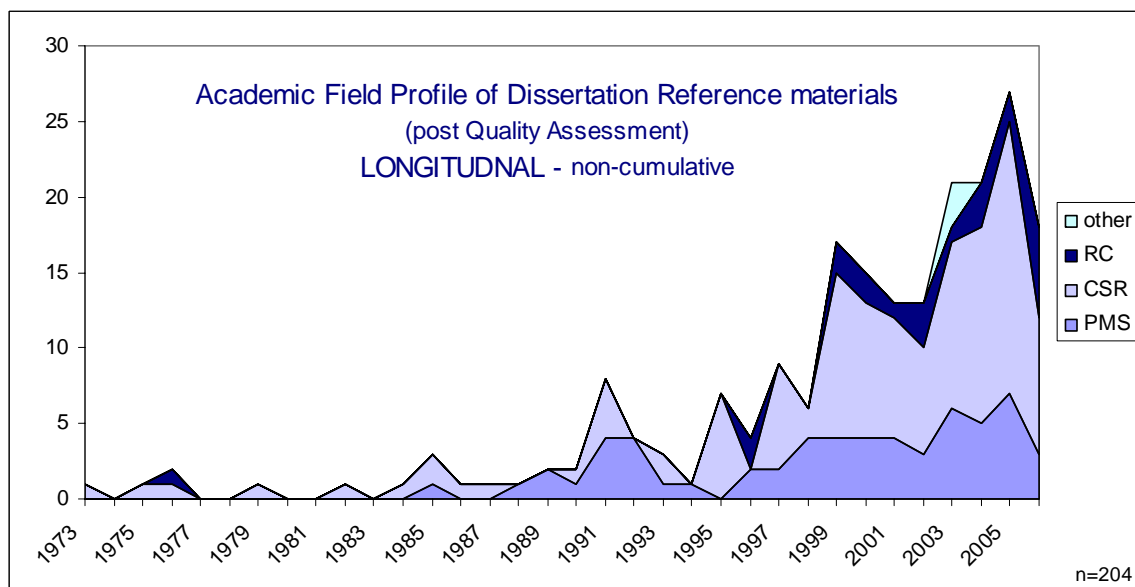
Illustration B9:



Comment:

A similar pattern to B6 and B7, though the research-orientated papers are supplemented by newspaper articles and a thesis paper. As illustrated in C9, the level of practitioner to researcher alters significantly to 55% and 45% respectively.

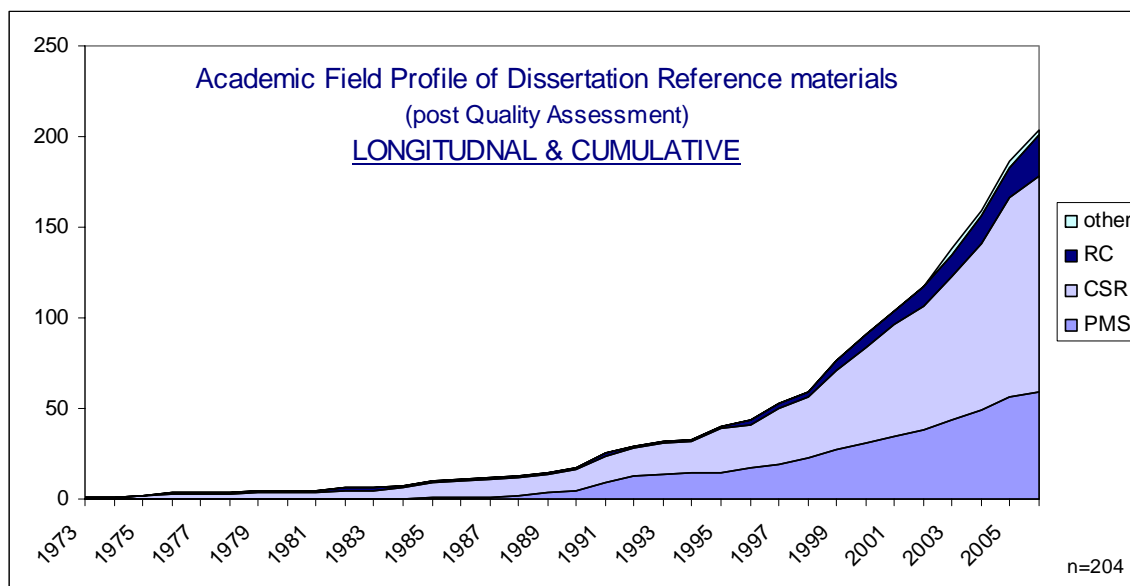
Illustration B10:



Comment:

This follows a similar pattern to the selected papers (illustration A10)

Illustration B11:

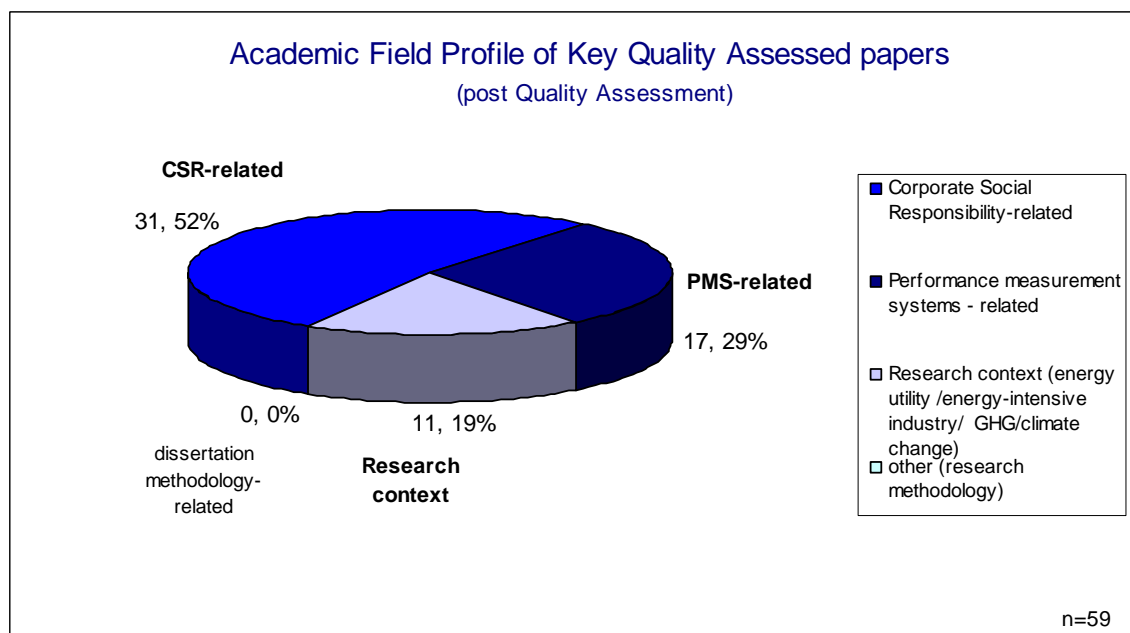


Comment:

As can be seen there is a steady increase in papers chronologically to explore the more contemporary nature of the question. Comparable to the main paper selection stage (illustration A11)

C: Key reference papers from Quality Assessment:

Illustration C1:

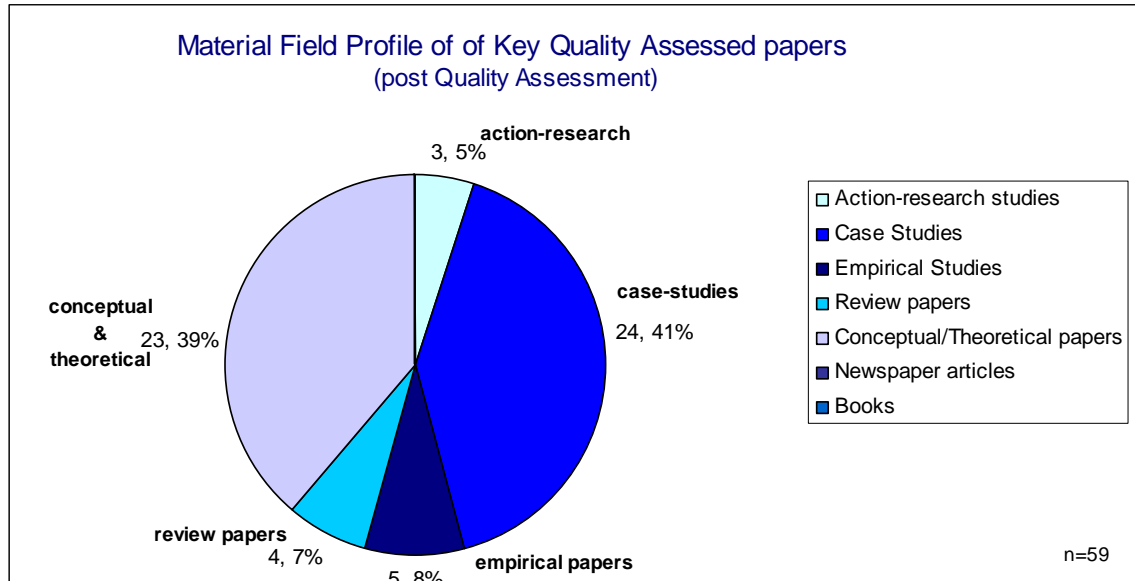


Comment:

The quality assessed papers have a similar profile to the selected papers (illustration A1) and the papers referenced within the dissertation (illustration B1).

Noticeably the level of the research context has remained the same with the CR-field decreasing in relation to an increasing relevance of PMS papers.

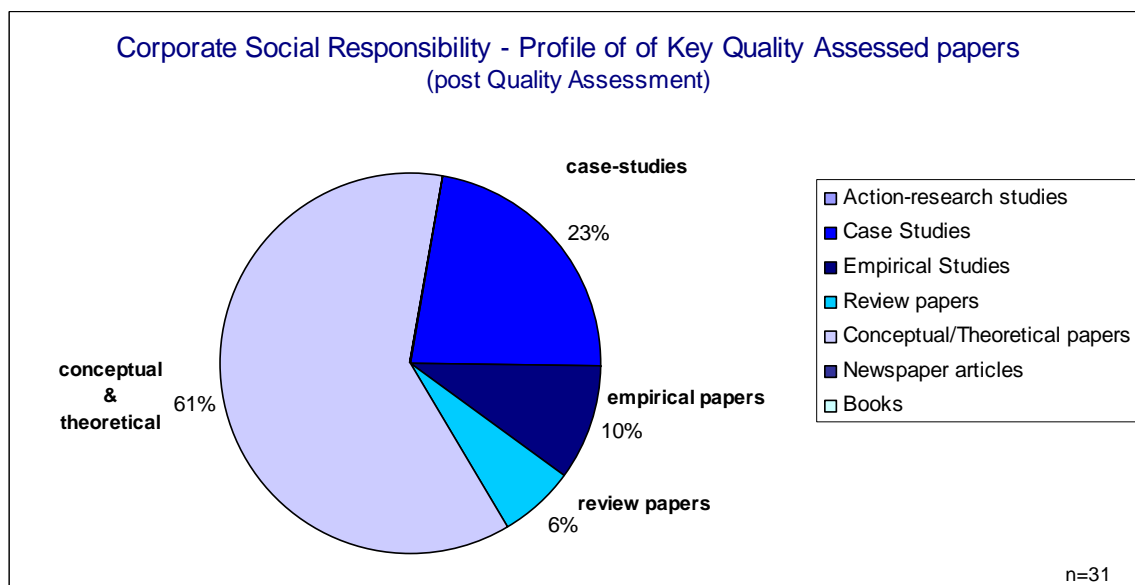
Illustration C2:



Comment:

There is more of a balance between the theoretical and conceptual papers, dominated by the CR field (39%) and a more case-study and action-research orientation from the PMS field (41% and 5% respectively).

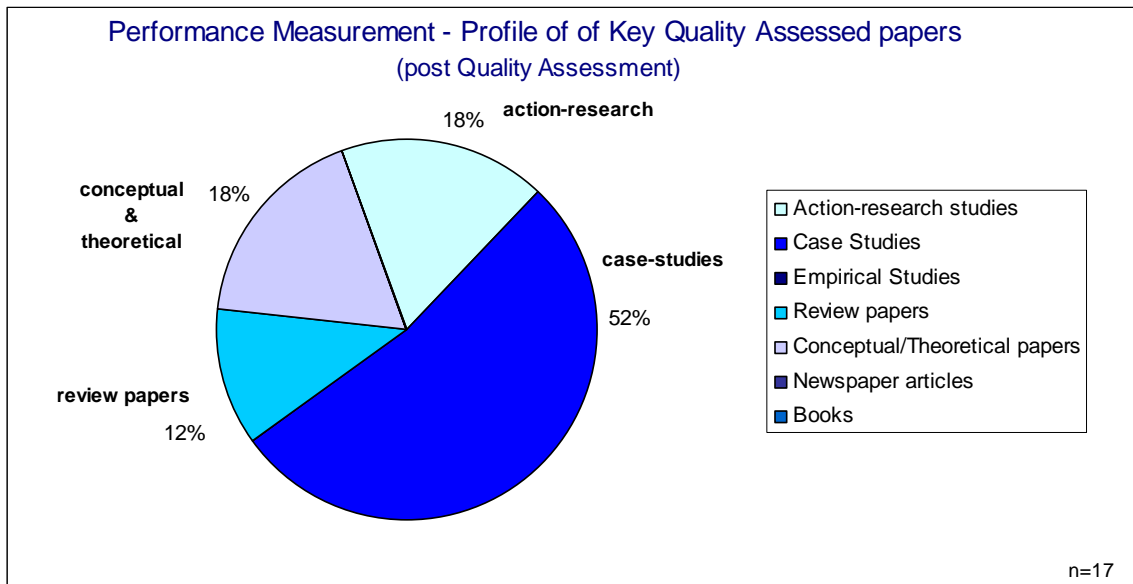
Illustration C3:



Comment:

As illustrated, CR core papers are more conceptual and theoretical (61%), with some reference to case-studies (23%) and empirical papers (10%).

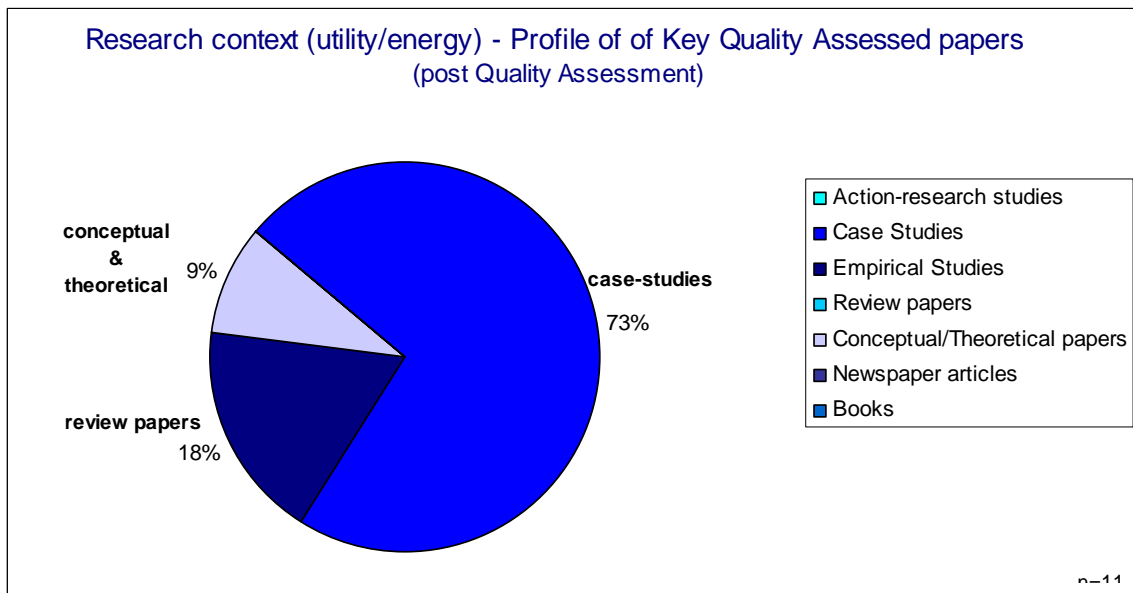
Illustration C4:



Comment:

As illustrated the papers selected as core from the PMS field are mainly case-studies (52%) action-research (18%) and conceptual papers (18%).

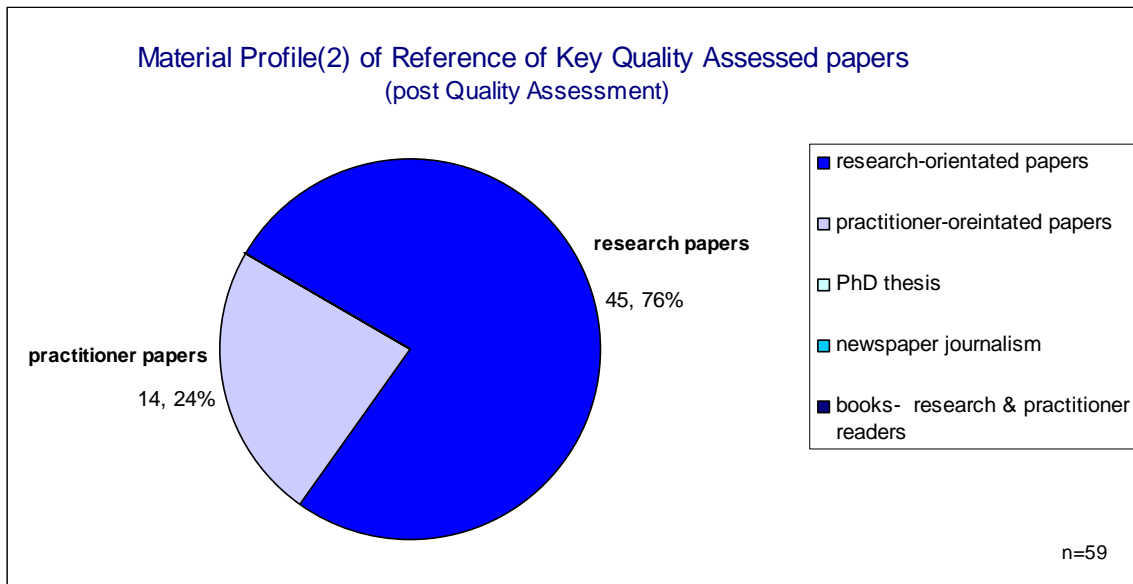
Illustration C5:



Comment:

The research context is mainly supported by case-studies (73%), some review papers (18%) and a few theoretical papers (9%).

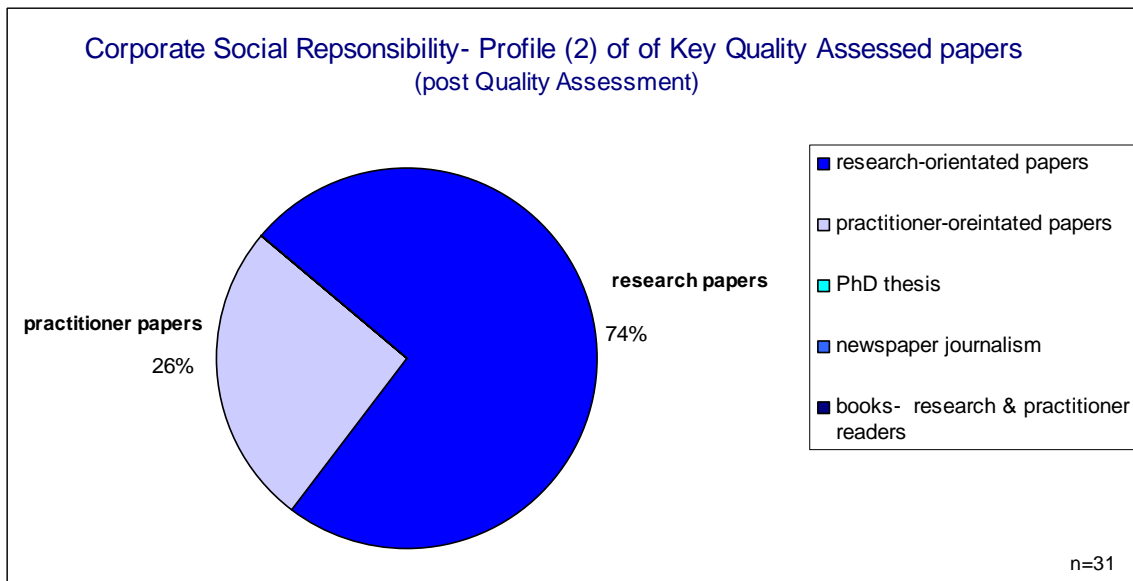
Illustration C6:



Comment:

The pattern of three-quarters of the papers being research-orientated, complemented by a quarter being practitioner-orientated is consistent with previous findings (illustrations other findings B5, B6 , B7 & B8).

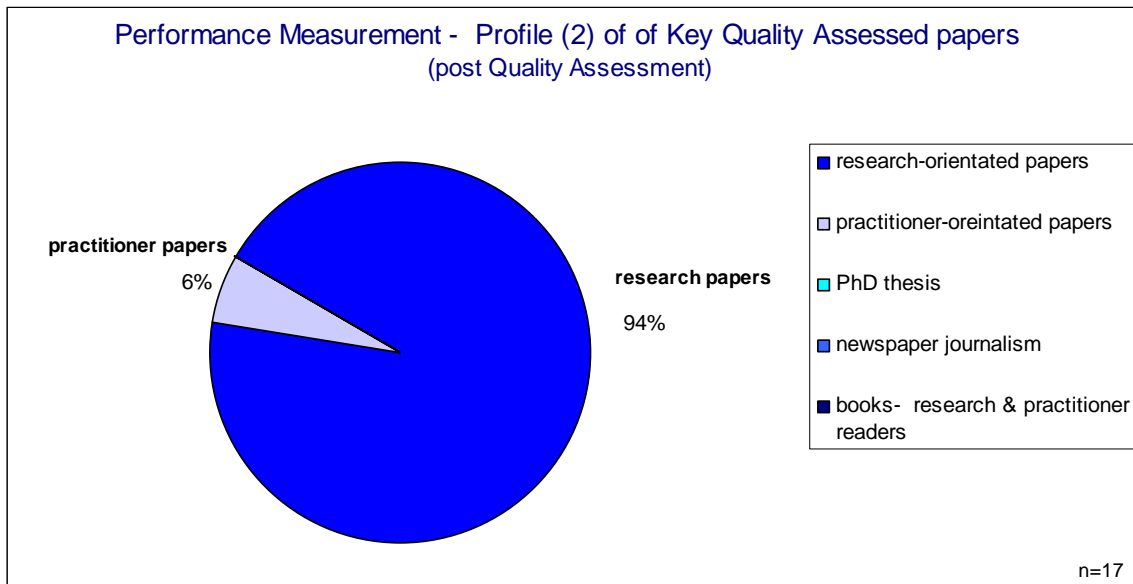
Illustration C7:



Comment:

As discussed, there is a similar pattern to the bulk of the core papers, noting that CR provides the largest volume of contributory papers, which is to be expected. It is the emerging nature of the research in these CR-PMS areas that practitioner papers provide the relevance and significance due to the lack of research-orientated papers.

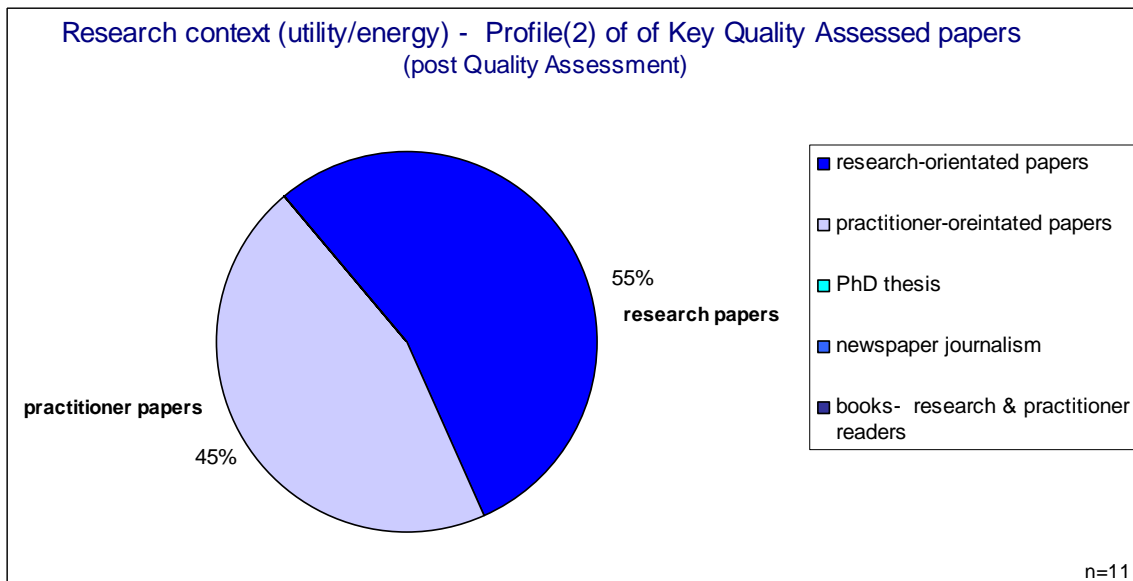
Illustration C8:



Comment:

PMS has clear research-orientated contributions as core papers (94%), indicating a higher level of academic research papers specifically around the nature of the question.

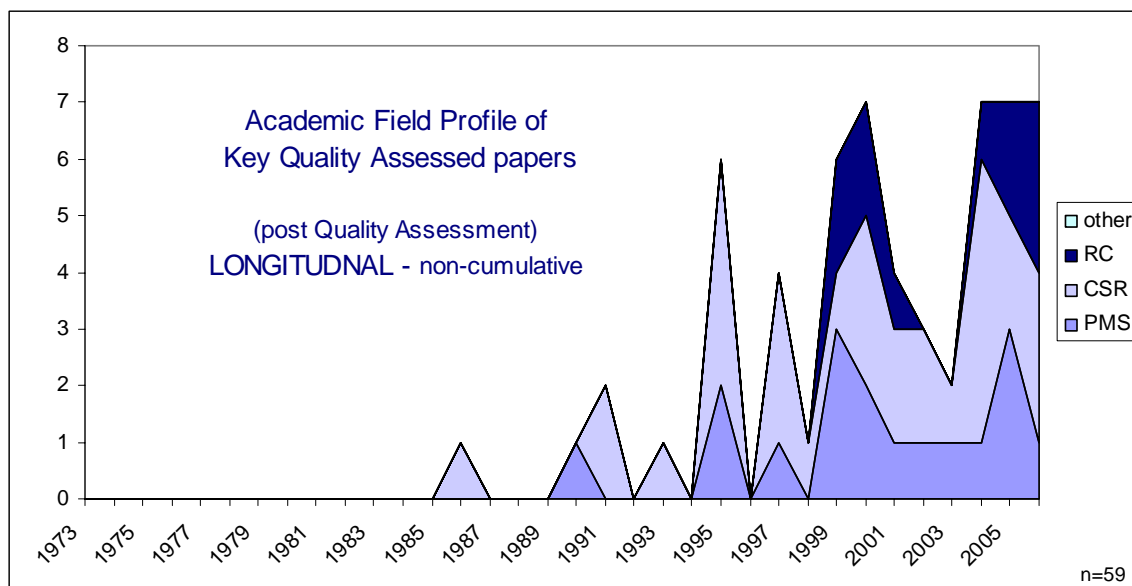
Illustration C9:



Comment:

The emerging nature of the research context, means that many of the core papers have emerged from practitioner-orientated sources, thus the 45% bias on practitioner papers.

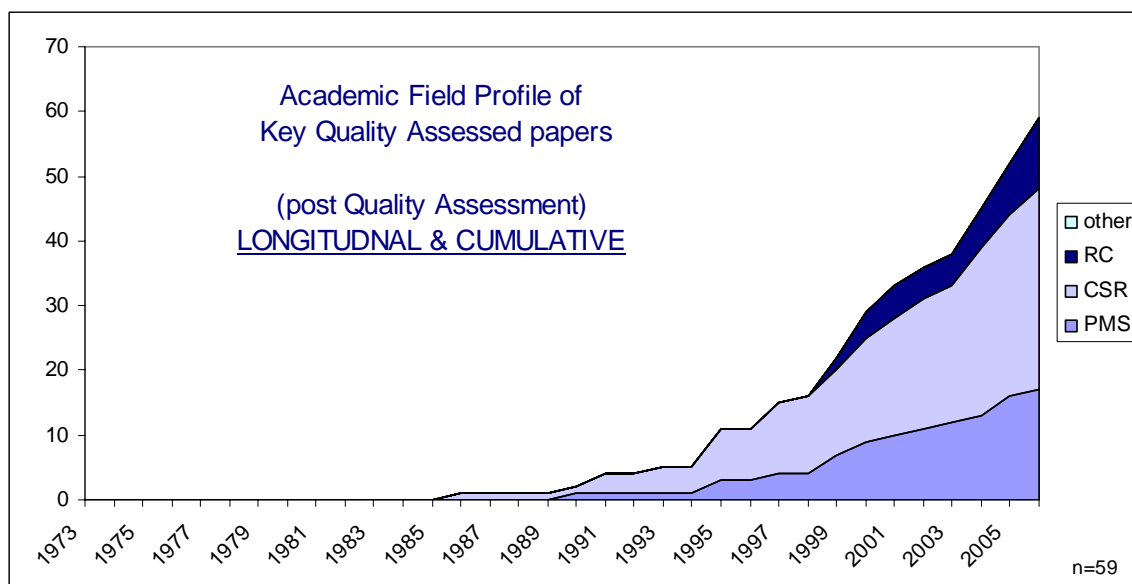
Illustration C10:



Comment:

The pattern here for core papers is different from previous profiles (illustrations A10 & B10). There are key contributions of the CSP performance model in the mid to late 1980's and a more steady contribution from 1995 onwards. Similarly PMS provides the most appropriate papers in relation to the research question from 1995 onwards, and the contemporary nature of the emerging research context is illustrated by contributions from 1999 onwards.

Illustration C11:



Comment:

As illustrated the core papers start from 1985 , progressing more quickly from 1995 and again in 2003, reflecting the increasing activity and interest in the subject.

Appendix 4 : Core Papers: systematic review & quality assessment

1. Agle, B.R. & Kelley, P.C. (1995); Ensuring validity in the measurement of corporate social performance: Lessons from Corporate United Quay & PAC campaigns; *Journal of Business Ethics*; 31,3.
2. Athanassopoulos, A.D., Lambroukos, N., & Seiford, L. (1999); Data Envelope Scenario Analysis - For setting targets to electricity generating plants; *European Journal of Operational research*; 115.
3. Bansal, P. (2005); Evolving sustainability: A longitudinal study of corporate sustainable development; *Strategic Management Journal*; 26.
4. Bhambri, A. & Sonnenfeld, J. (1998); Organization structure and corporate social performance A field study of two contrasting industries; *Academy of Management Journal*; 31,3.
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8. Bowen, S.A. (2004); Organisational Factors Encouraging Ethical Decision-making: An exploration into the case of an exemplar; *Journal of Business Ethics*; 52.
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20. Jones,T.M. (1995); Instrumental stakeholder theory: a synthesis of ethics and economics; Academy of Management Review; 20,12.
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23. Keeble,J.J., Topiol,S. & Berkeley,S. (2003); Using indicators to measure sustainability performance at corporate and project level; Journal of Business Ethics; 44,2/3.
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25. Kolk,A. & Pinkse,J. (2005); Business Responses to Climate Change: identifying emergent strategies; California Management Review; 47,3.

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