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Thesis title:

Measuring the Effects of Sustainability Oriented Service Innovation on Firm Performance.

Muhammad Sayem
Student Number: u3061808
Faculty of Business, Government and Law
University of Canberra

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Abstract

Due to the sustained growth of the service sector in the world's major economies, service innovation is now one of the most visible subjects of research on business. It has garnered growing attention from researchers and practitioners. Many research documents link service innovation to successful firm performance. Historically, research on service innovation has focused predominantly on profit maximisation with comparatively less attention paid to values-based service innovation. Studies document the link between service innovation and firm performance; however, not much is known about the relationship between sustainability orientation through service innovation with firm performance. Previous studies have conceptualised sustainability orientation, yet they lack precise theorisation that has an integrative framework. For this reason the study seeks to mitigate this research gap and to conceptualise sustainability orientation through service innovation.

Using a triangulation methodology this study analysed and conceptualised sustainability orientation in the service sector and measured its relationship with firm performance. The specific methods applied were meta-analysis and an inductive content analysis approach. The meta-analysis was designed to determine the Pearson's Correlation coefficient (r =) between sustainability oriented service innovation and firm performance. The content analysis was useful in conceptualising and constructing the conceptual framework following some research propositions. The correlation coefficient denotes a significant and positive link between sustainability orientated service innovation and business performance. A number of insightful and pertinent theories and concepts – such as service-dominant logic, triple-bottom line concept and the stakeholder perspective are discussed and these theories underpin the theoretical basis of this study.

The study contributes to the body of knowledge through outlining clear research directions and by integrating relatively unexplored area of service innovation and the emerging notion of sustainability orientation. One of the unique contributions of this study is that by analysing previous analyses and relevant outcomes, it has developed and proposed a conceptual framework followed by some research propositions. It also outlined some academic and practical implications for researchers and business managers. The study had some obvious limitations as well. Due to the paucity of empirical work in sustainability oriented service innovation, studies were selected from two bodies of literature and linked together to make inferences. Furthermore it is based on a limited number of studies from selected databases. However, as an early step in the specific research paradigm, the contributions of this study could be considered novel and indicative for future research in this field.

Acknowledgement

There are a number of persons to whom I am indebted for this research work. At the very beginning, I would like to sincerely thank and acknowledge to my principal supervisor Dr. Abu Saleh, Assistant Professor, Faculty of Business, Government and Law, for whom I have been able to come in this university to undertake a research degree. I was lucky enough to get his able supervision and mentoring support which immensely contributed towards the successful completion of this thesis. His encouragement, regular guidance, suggestions, constructive criticism, and perceptive advice were all invaluable throughout the completion of this thesis. It was not limited only within academic mentoring but covered all of my life experiences. I would like to respectfully thank my co-supervisor Professor Ali Quazi. He with his vast knowledge and compassionate mentoring has guided and motivated me all along. Moreover he has been a guardian for me and who has advised in every step that I walked.

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To conclude, I would like to remember and thank one individual who has profound effect on me and my research. He is Dr. Muhammad Yunus, Noble Laureate 2006 for peace, Founder and Managing Director of Grameen-Bank Limited, Bangladesh. He is one of the pioneers to address sustainability through financial service which exists as the most successful instance of business based on ethical paradigm. His contribution has encouraged millions and I am one of them. I aspire to follow his foot print through my research, like he quotes '*Human beings are much better than just making money'*.

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List of Abbreviations

S-D logic	Service Dominant logic
G-D logic	Goods dominant logic
TBL	Triple-bottom line
GABV	Global Alliance of Banking on Values
TSR	Transformative Service Research
CSR	Corporate Social Responsibility
FP	Fundamental Premise
IV	Independent variable
DV	Dependent variable
GRI	Global Reporting Initiative
DJFSI	Dow Jones Financial Sustainability Index
ESCP	Environmental Supply Chain practice
CSP	Corporate Social Performance
CFP	Corporate Financial Performance
CSR	Corporate Social Responsibility

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CHAPTER-1

1.0 Introduction:

The business paradigm is shifting towards service domination. This transformation has been driven by the growing and dynamic service sector in the economy. The growing 'servitisation' has been championed by a number of factors such as- globalization, technological developments, changing economic structure (O' Cass, Song, & Yuan, 2012, p. 21) and ever shifting consumer preferences. Indeed the product sector has witnessed a plethora of innovation initiatives. Because of sustained growth in the service sector, service innovation remains in the centre of service research in recent times (Ettlie & Rosenthal, 2012; McKee, 2008; Ostrom et al., 2010; Ramsey & Bond, 2007).

Noticeably, research undertaken in service innovation has predominantly focused on economic value orientation where the main goal is to maximise profit. This is more likely to be a 'Shareholder perspective' (Smith,2003) viewpoint which asserts that firms must act solely to increase profits or creating value for the shareholder. The shareholder concept has been criticised as a rather narrow conceptualisation considering the vast scope of business. The emergence of the concept of 'sustainability' has brought a seminal change in global thinking, and forced businesses to re-evaluate their approach to measuring organisational performance.

Today the stakeholder perspective dictates business. Stakeholder theory assesses firm performance against the expectations of a variety of stakeholders who have particular interests in an organisation's activities and their outcomes (Hubbard, 2009). A more recent school of thought contends that the service sector has a broader responsibility towards the

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stakeholder and society as a whole, not just the economy. Services should be innovative and aiming to improve customer and societal welfare (Ostrom et al., 2010). Smith et al. (1987, p. 437) believe that:

> *The challenge for innovation no longer rests solely in economic potential, but also in the societal changes induced by innovative activity and the consequences of this for environmental and social sustainability.*

However, the integration of business with customer and societal welfare is not a novel concept, but a conundrum over which researchers have argued for a long period of time (Schaltegger & Lüdeke-Freund, 2012). In the service sector the concept is still largely anecdotal. Various conceptualisations of it have employed different terms, for example 'Transformative service', 'Values-based service', 'Sustainable service', etc. All of these phrases denote almost similar meanings albeit they lack a solid framework. To address this knowledge gap this research examines the effects of sustainable innovation in the service sector that creates a shared value customer, society, and the environment. Through a methodological triangulation this research aims to explore the relatively unexplored arena of sustainable innovation in the service sector.

The study extracts knowledge and insights from different theories concerning service and sustainability, for example- Service Dominant logic (Vargo & Lusch, 2004b), Triple-bottom-line (Elkington, 1998), Stakeholder theory (Freeman, 1984). These theories create a solid theoretical base of this study from which a conceptual framework is developed to explain the relationship between relevant independent and dependent variables. The specific research methodology applied in this research is a methodological triangulation

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where data and evidence have been gathered through meta-analysis and content analysis approach. Findings of the meta-analytic review reveal that services developed with the notion of sustainability have a positive impact on business performance. The content analysis has helped to draw conclusions and posit research propositions.

1.1 The research problem:

All the major economies of the world have turned into service economies. This is apparent in the national GDP of major countries like the USA (79%), UK (78%) and Australia (71%)[1] . Despite the importance of the service sector, it is to date the most misunderstood part of the economy (Metters & Marucheck, 2007). Evidence from the innovation literature also points to a tug of war, where the manufacturing sector dominates while the service sector demands a proper direction for research. Yet, there is a concensus that service innovation is under-researched (Bitner & Brown, 2008; Camacho & Rodriguez, 2008; Castro, Montoro-Sanchez, & Ortiz-De-Urbina-Criado, 2010; Ettlie & Rosenthal, 2012; R. Lusch, Vargo, & Obrien, 2007). It is accepted that service is ubiquitous and has a significant effect on people's quality of life (Anderson et al., 2012). Therefore a rather nascent stream of research has posited that service innovation should improve human, society and the environment (Ostrom et al., 2010). This viewpoint has also been supported by the contemporary perception of firms as 'globally integrated enterprises', a view that considers the integration of economic, environmental and societal factors as the basis for doing business (Palmisano, 2006).

A growing body of researchers has indicated that considerable research is required in incorporating human welfare with service development. Ostrom et al. (2010) speculate

[1] See http://www.economywatch.com/

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that ‘Transformative Service Research’ (TSR) is one of the key areas of future service research. Proponents of TSR suggest that service innovation should be directed towards improving consumer and societal welfare. It is also contended that services should lead to a number of outcomes, such as access to equity, social justice, human capabilities and development, ecological stability, social ecology, consumer resource development, literacy, consumer freedom, social networks and support, happiness and overcoming consumer vulnerability (Ostrom et al., 2010).

A pioneering study by Edvardsson and Enquist (2008) shed light on ‘Values-based service’ as the foundation of service development. Values-based service generates a shared value creation for the customer and stakeholders based on social and environmental goals. The focus of creating only ‘Value’ for customers is posited as ‘control-based’ which signifies a short-term focus on financial results (Enquist, Edvardsson, & Sebhatu, 2007). Edvardsson and Enquist (2011, p.537) argue that creating value should not be the only goal of service business; it should also concentrate on creating ‘Values’. The concept of ‘customer value’ is further extended and represents a mix of *core values* and *foundational values* (Edvardsson & Enquist, 2008). These core values include the ethical paradigm that guides the firm while foundational values are those that are associated with social and environmental responsibilities. (Elkington, 1998) states the notion of sustainability is a ‘Triple-bottom line’ approach in business. A Triple-bottom line (TBL) concept contends that business should be based on three pillars of social welfare, these being the community, environmental safeguards and economic prosperity. A number of researchers have realised the potential of service to transform social welfare coupled with economic prosperity, and urged the necessity to further explore the paradigm. **Table-1** summarises some of these studies.

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Table-1: Studies emphasising the need for service research to align with societal welfare

Author/Year	Focus/ Framing	Objective	Findings
(Anderson et al., 2012)	Transformative service research	To underpin the necessity of service sector's contribution towards the welfare of society.	the integration of consumer and service research that centers on creating, uplifting changes and improvements in the well-being of consumer entities: individuals (consumers and employees), communities and the ecosystem
(Rosenbaum et al., 2011)	Transformative service research	Identifying new measures of transformative service.	Transformative service research calls for the development of new measures of the effects of service on individuals and societies
(Ostrom et al., 2010)	Transformative service research	Improving the consumer wellbeing through transformative service research.	Further research directions are suggested
(Mick, Pettigrew, Pechmann, & Ozanne, 2012)	Transformative consumer research	Theorizing the transformative consumer research	New directions that aims to research more for the consumer welfare
(Edvardsson & Enquist, 2008)	From value creation to values orientation	Values orientation through services to develop sustainable business	Values orientation service are more successful and helps to achieve sustainable competitive advantage
(Sebhatu, 2010)	Sustainable CSR	To provide a research direction sustainable CSR	The link among, value creation, values orientation, CSR for sustainable business is identified with a framework.
(Grove, Fisk, Pickett, & Kangun, 1996)	Service industries- green marketing imperative	To conceptualise the adoption of green marketing and business performance	Service firms working with green marketing imperative are more successful.

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The emergence of sustainability as a concept in business has generated considerable interest amongst practitioners, researchers and policy makers. This was particularly the case after publication of the Brundtland Commission's report 'Our Common Future' (Brundtland, 1987). It defined sustainability as:

> …*sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

Sustainable development or sustainability has many meanings. Due to the apparent difficulties in defining sustainability in specific terms, Robinson (2004) posited that sustainability is delusional, mis-representational, and hypocritical. The versatile and pervasive role of sustainability has been analysed from various viewpoints (Sheth, Sethia, & Srinivas, 2011). Business researchers have focused on the economic dimension of sustainability as the most desirable because it provides fiscal strength and avoids conditions leading to an early demise of the business, for example financial collapse (Bansal & Roth, 2000; Székely & Knirsch, 2005). Chabowski et al. (2011) emphasised that a firm can perform better when its activities take account of all three dimensions of sustainability. The marketing literature sees sustainability as creating opportunities and driving business performance by taking up social initiatives understood to be forms of corporate social responsibility (Chabowski et al., 2011).

The role of operations in making a business perform in terms of sustainability has been discussed as a determinant of a firm's ability to produce or deliver efficiently (Dao, Langella, & Carbo, 2011). Firms try to create a balance between these three dimensions of sustainability to secure a business opportunities in the future (Cronin, Smith, Gleim,

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Ramirez, & Martinez, 2011). Academic researchers mostly considered the dimensions of sustainability based on practices internal to the organisation, i.e. planning, production, business ethics or environmental management; however, these need to be integrated (Amit & Zott, 2001; Charter, Gray, Clark, & Woolman, 2008). Using this multi-dimensional perspective, it is therefore realised the necessity to build an integrative management framework linking environmental and social management with business, competitive strategy and profitability (Ameer & Othman, 2012; Schaltegger & Wagner, 2006).

Enlightened by the above mentioned research paradigm, this research seeks to explain sustainability oriented service innovation, which encompasses economic prosperity, environmental safeguards and social welfare for stakeholders.

1.2 Research Question:

The empirical research is guided by research questions that the researcher must answer (Perry, 2000). The central research question addressed here is:

- Whether sustainability orientation through service innovation has any impact on firm performance?

To address the above mentioned research question this research strives to address the following research objectives:

- To conceptualise sustainability orientation in the service sector.
- To collect empirical evidences so that sustainability-oriented service innovation paradigm and its effect on overall firm performance can be outlined.

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- To construct a conceptual framework and develop propositions linking the sustainable service innovation and firm performance.

To address these research objectives this study undertakes a methodological triangulation approach where data are collected through meta-analysis and content analysis.

1.3 Significance of the study:

Drawing from the relevant theoretical discussions and the empirical evidence collected from the extant literature, this study expects to contribute in a number of ways. The significant contributions of this research are as follows:

First, 'Sustainability' in recent times has remained the key topic in international forums, the print media, and academic literature. Sustainability is about ensuring environmental balance, social equity and economic development for all societies. Academic literature emphasises the integration of sustainability with business performance (Ameer & Othman, 2012; Wagner & Llerena, 2008). This study strives to contribute to this relatively unexplored area by offering a broader and integrative framework.

Second, the growing importance of the services sector in major countries' economies is well documented. With this growing 'servitisation' trend globally, the need to conceptualise service innovation is accentuated by a number of scholars (Berry, Shankar, Parish, Cadwallader, & Dotzel, 2006; Edvardsson, Gustafsson, Sandén, & Johnson, 2000; Ordanini & Parasuraman, 2011). A number of service researchers have posited that service innovation triggered by ethical orientation is more successful than those that are guided by profit orientated goals (Anderson et al., 2012; Edvardsson & Enquist, 2008; Ostrom et al.,

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2010). This study aims to contribute to this topic by constructing an integrative framework using empirical evidence.

Third, implications of a sustainable approach in the service sector have been made in a number of studies (Anderson et al., 2012; Jeucken, 2004; Peeters, 2005). However, more research is required to suggest a concrete framework that incorporates sustainable development. Such a framework will contribute to filling in the knowledge gap.

1.4 Structure of the Thesis:

This thesis consists of five chapters based on the recommendation of Perry (2000).

Chapter 1 - Introduction

The introductory chapter provides the background for the research and frames the study. In describing the research problem the chapter presents the research questions and underpins the research objectives.

Chapter 2 – Literature Review

Chapter 2 reviews previous studies on service innovation and the sustainable business approach. This chapter sheds light on various relevant theories of service innovation and sustainability. It also explores the specific gap that this study seeks to fill.

Chapter 3 – Methodology

This chapter details the methodology and paradigms implemented in this thesis. It justifies the chosen research approach with a detailed discussion of the method used to examine

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sustainable service innovation and firm performance. Furthermore, this chapter presents the results of the meta-analysis and findings of the inductive content analysis.

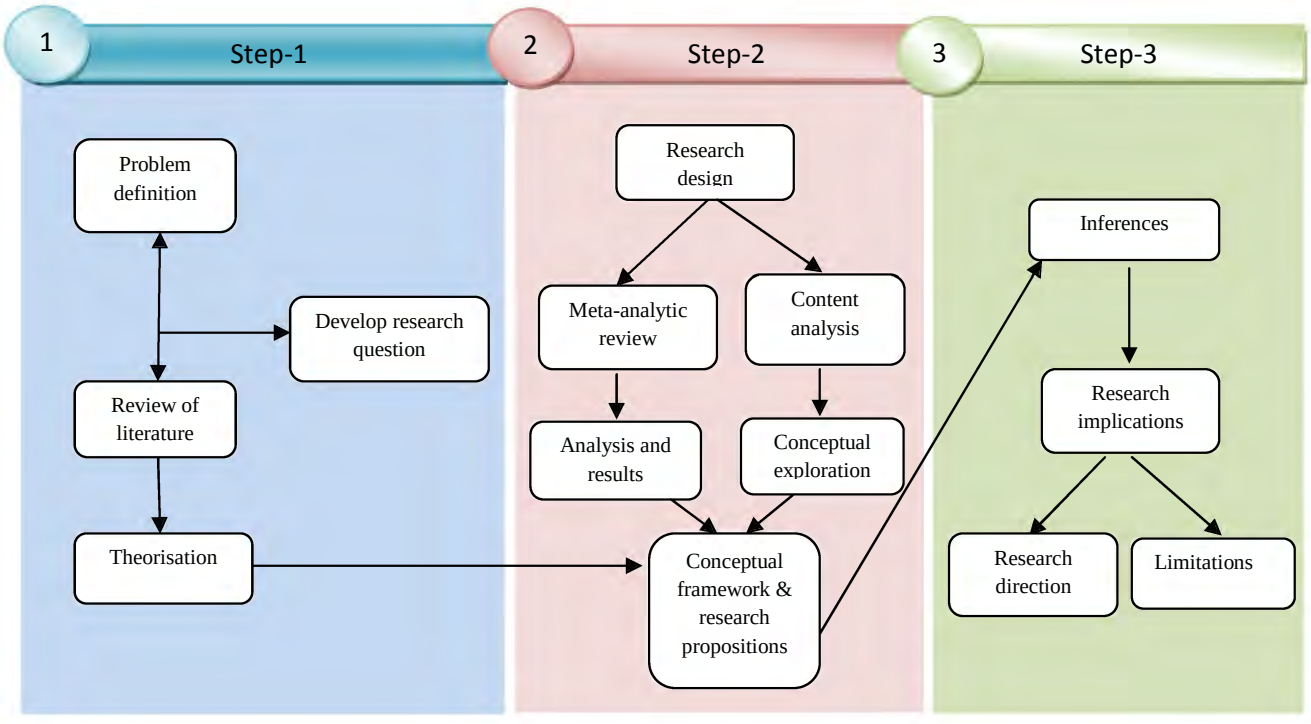
Chapter 4 – Conceptual framework and research proposition

Based on the empirical findings of meta-analysis and exploration from content analysis, this chapter conceptualises the chosen research area and presents the conceptual framework with reference to research propositions.

Chapter 6 – Research implications and directions for future research

This chapter concludes the study by discussing the possible implications of this research. It also offers possibilities for future studies on the subject of sustainable service innovation. The limitations are also acknowledged here. **Figure -1** show the phases adopted in this study:

Figure-1: Different steps in this research



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CHAPTER-2

2.0 Literature review:

The previous chapter introduced the research problem, the research question and provided justifications for the research. This chapter reviews the relevant literature on the specific research problem addressed in this study. The integration of key studies related to the relevant theory should be the major focus of a research project. The review process enables the researcher to identify how pertinent research issues have been developed and addressed in other contexts (Cavana, Delahaye, & Sekaran, 2001). It also helps to identify how the previous study underpinned relevant theories by delineating factors and frameworks. Based on Perry's (2000) and Neuman's (2006) recommendation this research aims to address the following issues:

- To identify the key research issues and emergent themes.
- To show what prior research did and to demonstrate its relevance to the existing body of knowledge.
- To identify any research gaps for developing the research questions.

Furthermore the literature review is organised into various sections or themes. **Figure-2** shows how the research problem will be tackled in this thesis.

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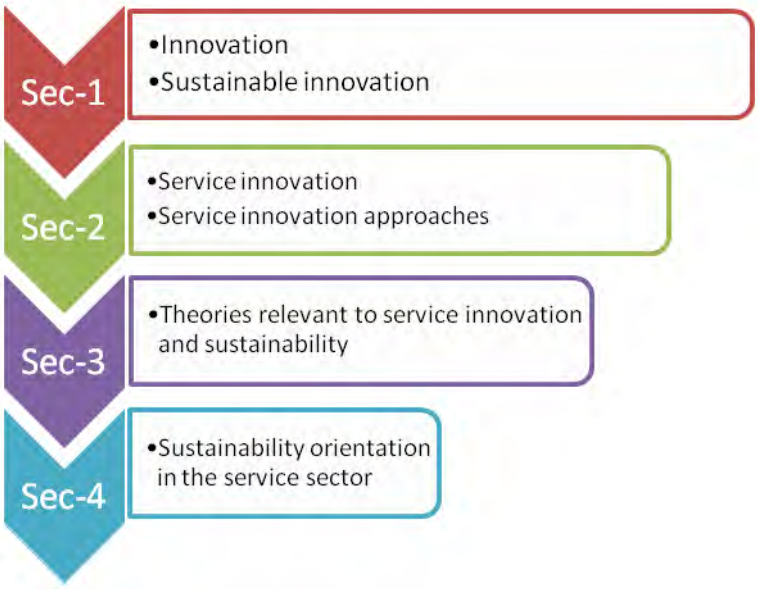
Figure-2: Themes covered in the literature review



Source: Developed for this research

SECTION-1:

2.1 Innovation

The world today is experiencing rapid social, political and technological change. Globalisation, innovation, technological revolution, and the Internet, etc. are driving how individuals, societies and nations live, work and communicate today. History reminds us that the human race has experienced two great waves of change: the agricultural revolution and the industrial revolution. Numerous commentators suggest this era is experiencing the 'third wave' – the innovation era (Neely, Filippini, Forza, Vinelli, & Hii, 2001).

A growing body of researchers acknowledges that innovation is a catalyst of growth in business and economy (Ordanini & Rubera, 2010). Innovation has been cited as one of the key factors that affects competitiveness and business performance (Oke, 2007). Despite

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widespread agreement about its benefits, innovation is still poorly understood (Ordanini & Rubera, 2010). The OECD (1997) defines innovation as:

> *Innovation consists of all those scientific, technical, commercial and financial steps necessary for the successful development and marketing of new or improved manufactured products, the commercial use of new or improved processes or equipment or the introduction of a new approach to a social service. R&D is only one of these steps.*

The EU Green Paper on Innovation identifies the key features of innovation as:

- The renewal and enlargement of the range of products and services and their associated markets.
- The establishment of new methods of production, supply and distribution.
- The introduction of changes in management, work organisation and the working conditions and skills of the workforce.

Luecke and Katz (2003, p.2) refer to innovation as 'the introduction of a new thing or method. Innovativeness refers to 'firm's capacity to engage in new enterprise that is, introduction of new processes, products, or ideas in the organisation' (Hult, Hurley, & Knight, 2004, p.429). This capacity to innovate is one of the most important factors that influence performance (Porter, 1990) and as such, innovativeness is embedded in the tangible and intangible resources that help a firm perform successfully. Therefore, innovation is considered as the key to competitive advantage in a highly turbulent business environment. It is a major driving force for the economic growth of nations. The values created by innovations are often manifested in new ways of doing things or new products and processes that contribute to wealth.

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Innovation can be classified in different ways, namely *product innovation*, *process innovation* and more recent, *organisational innovation*. Product innovation refers to the new or improved product, equipment or service that is successful in the marketplace. Process innovation involves the adoption of a new or improved manufacturing or distribution process, or a new method of social service. Organisational innovation refers to the effective use of human and physical resources.

2.2 Sustainable innovation: *the newest form of innovation*

This research sheds light on sustainable innovation which is considered to be the newest form of innovation and a more dynamic way of looking at innovation that changes the organisation (Wagner & Llerena, 2008). Smith et al. (1987, p. 436) state that: "Innovation studies has much to offer those interested in ensuring new products, processes and services improve human wellbeing without detriment to environmental life support systems". Furthermore the concept of sustainable innovation is grounded in wider normative concepts such as environmental sustainability or sustainable development (Rennings, 2000). In spite of the heightening discussions on innovation being more sustainable and welfare focused, the literature is seemingly scarce. Boons and Lüdeke-Freund (2000) propose a model for business firms that guides sustainable innovation practice. They believe that this model meets the requirements to market the idea of sustainable innovation. There are four elements in this model and these are value proposition, supply chain, customer interface, and financial model. According to Boons and Lüdeke-Freund (2012):

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> *..The **value proposition** provides measurable ecological and/or social value in concert with economic value. The value proposition reflects a business-society dialog concerning the balance of economic, ecological and social needs as such values are temporally and spatially determined.*
>
> *The **supply chain** involves suppliers who take responsibility towards their own as well as the focal company's stakeholders. The focal company does not shift its own socio-ecological burdens to its suppliers.*
>
> *The **customer interface** motivates customers to take responsibility for their consumption as well as for the focal company's stakeholders. The focal company does not shift its own socio-ecological burdens to its customers.*
>
> *The **financial model** reflects an appropriate distribution of economic costs and benefits among actors involved in the business model and accounts for the company's ecological and social impacts.*

However, this research specifically looks at the service sector where innovative services aim to attain sustainable goals and generate profits. Moreover it is evident that non-financial gains multiply the financial ones through long term competitive advantage (Chen, Hung Tai Tsou, & Huang, 2009).

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SECTION-2:

2.3 Service innovation:

The substantial contributions of service industry to many economies necessitate understanding and examining service innovation. While a number of studies (Castro et al., 2010; Ettlie & Rosenthal, 2012; Ordanini & Parasuraman, 2011) have examined service innovation from different aspects, there is a consensus that further research is required (McDermott & Prajogo, 2012; Rubalcaba, Michel, Sundbo, Brown, & Reynoso, 2012). Traditionally, innovation in business organisation was more focused on the Schumpeterian view of 'creative destruction' (Diamond Jr, 2006) which mainly focused on innovation as the critical dimension of economic change. Most present service innovation studies explicitly focus on technological innovation in the manufacturing industry (Drejer, 2004; Evangelista & Sirilli, 1998; Salavou, 2002). One reason for this bias is due to the structural peculiarities of the service industry, these being intangibility, heterogeneity, inseparability (Ordanini & Parasuraman, 2011).

Menor et al. (2011 p. 138) characterized service innovation as "an offering not previously available to a firm's customers resulting from the addition of a service offering or changes in the service concept that allow for the service offering to be made available". Van der Aa and Elfring (2009 p.157) posited that service innovation is about "encompassing ideas, practices or objects which are new to the organisation and to the relevant environment, that is to say to the reference groups of that innovator". Hertog (2000) has identified four dimensions of service innovation that further illustrate this conceptualisation: (1) new service concept, (2) new client interface, (3) new service delivery system, and (4) new technological options. It is therefore apparent that service innovation involves the complex

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adaptive combinations of people, technology, processes, and information along with a well-thought-out service concept (Ostrom et al., 2010).

2.3.1 Service Innovation approaches:

How service innovation takes place within an organisation has been studied from various perspectives. The following discussion will detail the different perceptions that highlight the emergence of innovation in a service organisation.

2.3.2 Incremental VS radical innovation:

Service innovation has been studied from the degree of innovation and 'radicalness'. Radical service innovation creates brand new values through innovative concepts, whereas incremental service innovation describes a new value creation through the incremental addition of existing values (Cheng & Krumwiede, 2012; Garcia & Calantone, 2002; Paswan, D'Souza, & Zolfagharian, 2009). Radical innovation is also termed as discontinuous innovation (O'Reilly III & Tushman, 2008) or explorative innovation (March, 1991), terms which are synonymous and widely used in the service literature. It is argued that there are some innovations which can bring fundamental changes in new services that represent revolutionary changes in service benefits (Berry et al., 2006; Nijssen, Hillebrand, & Vermeulen, 2005).

This form of innovation in service is associated with developing new services, creating new markets, and corresponds to the needs of emerging customers and markets. The other type of innovation depending on the degree is incremental service innovation which is also termed exploitative innovation (March, 1991). This form of innovation involves extensions

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of existing products and service lines. The existing skills, knowledge and technological expertise are utilized to further improve and transform what is currently being offered in an incremental manner to satisfy customers in known markets. Incremental innovation is regarded as the most common form of innovation (Baba, 2012; Slater & Narver, 1995).

2.3.3 Assimilation and demarcation:

The service literature also entails the nature, type and causes of innovation (Mansury & Love, 2008) which are well documented in a number of studies. Coomb and Miles (2000) propose three different approaches: Assimilation, Demarcation and Synthesis. Proponents of the Assimilation approach argue that innovation in the service sector is similar to that used in the manufacturing industry which is fundamentally driven by technology. Most of the service innovation literature focuses on the assimilation approach (Hughes & Wood, 2000). However, this approach has been strongly criticisecriticisedcriticised due to it over-emphasizing technology-based innovations (R. Lusch et al., 2007; Ordanini & Parasuraman, 2011) and not considering core service characteristics like intangibility and co-production (Gronroos, 2000; R. Lusch et al., 2007). Drejer (2004) in line with Coombs and Miles (Coombs & Miles, 2000) condemns this approach for limiting innovation research to a narrow perspective and consequently not really understanding dynamics of services and manufacturing.

Acknowledging the structural differences between product and service, some experts have advocated the ‘Demarcation’ approach (Djellal & Gallouj, 2001; Tether, 2005). The primary focus of this demarcation approach is not to compare innovation in services directly with innovation in manufacturing, but rather to study the distinctive features of

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service innovation (Sundbo & Gallouj, 2000). However, this approach is not free from criticism either due to an over-emphasis on services' distinctive features, thus restricting the generalising of their findings (Drejer, 2004).

2.3.4 A 'synthesis' approach:

A synthesis approach has emerged and attained considerable attention in the service innovation literature. In spite of its growing importance it is still fairly new compared to other service innovation literature trends (Castro et al., 2010). A Synthesis approach states that services and manufacturing innovation need not use completely different perspectives. The synthesis approach is grounded on the S-D logic which sees service as the fundamental basis of exchange between two parties (Gallouj & Savona, 2009; Ordanini & Parasuraman, 2011). The study by Gallouj and Weinstein (1997) provides a comprehensive framework for the synthesis approach. Their study entails a broader framework of innovation aspects and less focus on either the manufacturing industry or service industry. Their approach considers elements of technological and non-technological innovation.

Gallouj and Weinstein (1997) developed a model that represents a product or a service as a system of competences, technical characteristics and final characteristics. Innovations thus consist of changes in one or more of these elements. It is noticeable that both the assimilation and demarcation is based upon Goods-Dominant logic (G-D logic) which conceptualises service as a supplementary aspect of physical products (Vargo & Lusch, 2004b). This viewpoint clearly undermines the real importance and contribution of the service sector. Therefore the synthesis approach has been considered to be more scientific and appropriate (Ordanini & Parasuraman, 2011).

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Till date little evidence has been found for measuring the effects of service innovation with firm performance (Yen, Wang, Wei, Hsu, & Chiu, 2012). Similarly, Nysveen and Pedersen (2006) found no evidence that identified or categorised the effects of service innovation as being linked to firm performance. Hence, this research analyses service innovation and firm performance through a meta-analytic review of prior studies to aggregate the results and create a sustainable hypothesis.

2.3.5 Firm Performance:

Research on firm performance has explored different perspectives, for example - financial performance, business unit performance, or organisational performance. For the purpose of this research the main focus will remain on innovation performance. To measure innovation performance, it is worthwhile to consider the financial and non-financial performance of a firm (Avlonitis, Papastathopoulou, & Gounaris, 2001). *Financial performance* refers to a measure of how well a firm uses assets from its primary mode of business to generate revenues. *Non-financial performance* on the other hand is the long-term operational objective that emphasises the importance of increasing customer loyalty, attracting new customers, and enhancing the image and reputation of a firm (Chen et al., 2009). This research will measure the service innovation from both the financial and non-financial dimension.

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SECTION-3:

2.4 Theoretical foundation of the study:

The theoretical perspective plays a vital part in scientific study. It makes falsifiable or testable predictions about things which can be observed. The theoretical foundation of this research is based on several overarching concepts. Service innovation has been viewed through 'Service-Dominant logic' (Vargo & Lusch, 2004b). Sustainability orientation has been conceptualised based on the 'triple bottom-line' (Elkington, 1998) and 'stakeholder theory' (Grawe, Chen, & Daugherty, 2009). The following section describes these different theories in detail in the process of developing the conceptual framework for this research.

2.4.1 Service-dominant logic:

The Service-dominant (S-D) logic in recent times has been recognized as a potential theoretical foundation on which a science of service can be developed (Vargo, Lusch, & Akaka, 2010). It introduces a new paradigm opposing the traditional goods-dominant (G-D) logic paradigm (Vargo & Lusch, 2004b). S-D logic proposes that market exchange is the process of parties using their specialized knowledge and skills for the benefit of other parties. In other words, exchange is driven by reciprocal and mutually beneficial service provision. Vargo and Lusch (2004b) emphasise two types of resources that make this service provision - the operant resources (knowledge, skill and all the intangible resources) and the operand resources (tangible resources). The link between these two resources helps the firm to develop the service provision which they have termed as "value-in-use". S-D logic is rooted in ten foundational premises (FP) that establish a dynamic, service-centered framework for exploring exchange-related phenomena (Vargo & Lusch, 2004b).

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Noticeably the concept introduced in S-D logic, as a process in which one applies resources to benefit another, is not a new or novel concept (R. F. Lusch & Vargo, 2006). Other scholars have already shed light on service being central to value creation and exchange (Gronroos, 2000). What makes this concept unique is that it does not consider service as a substitute for goods; instead it views service as superordinate to goods dominant logic (Vargo & Lusch, 2004b).

The goods dominant logic is premised on the work of Smith (Vargo & Lusch, 2004b). Guided by the normative goal of increasing national wealth, Smith focused more on measurable – what he called "nominal" – sources of value, particularly tangible, exportable resources and the price paid for them in the market – "value-in-exchange." This concept was further intensified by the Industrial Revolution when economists desired to make economics a Newtonian science (Vargo & Morgan, 2005). Within G-D logic, value is considered to be determined by the economic exchange between a producer and consumer. The basis of all economic exchanges concentrates on manufacturing and distribution activities and considers value to be created by the firm and destroyed (consumed) by customers (Vargo & Lusch, 2004b). Service has been considered just as an intangible (inferior to goods) unit of output of goods that are manufactured by the firm. Thus service contributes significantly to the economy but this has largely remained diluted in the goods dominant logic (Vargo et al., 2010).

With the recent shift in economic activities the G-D logic perspective was enhanced by the concept of goods to service. Partly of the reason is that an increasing number of market offerings cannot be categorized as goods due to their intangibility and heterogeneity. However, in S-D logic, service has been conceptualised as a process of applying resources

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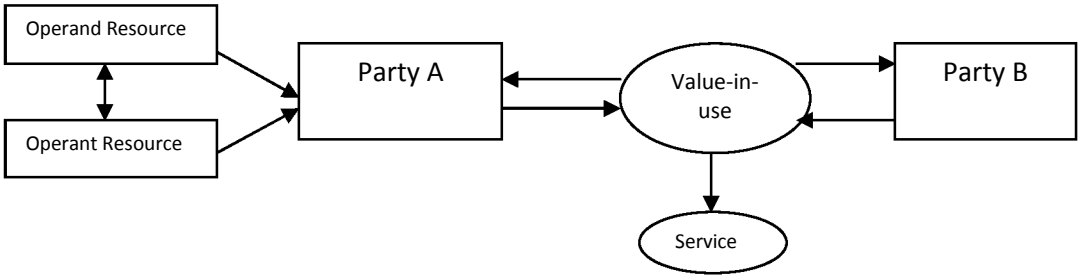
for the benefit of one party to another and the core basis of exchange. This transcendence of service establishes a relationship with G-D logic which lies within S-D logic and is termed a 'Nested relationship' (Vargo & Lusch, 2004b). This nested relationship underpins and broadens the scope of S-D logic over G-D logic in service research.

Figure-3: The value creation process as per the S-D logic



Source: Developed for this research

The S-D logic perspective has been widely embraced by researchers in service science for studying service innovations (Ordanini & Parasuraman, 2011). The core reason for this is that it combines both services and tangible goods into an integrated, overarching service view (Vargo & Lusch, 2008). Besides, it also represents a shift from static to dynamic resources with a stakeholder rather than a customer-centric perspective (such as those of employees, value creation partners, and customers) (Edvardsson & Enquist, 2008). Michel et al. (2008, p.54) state that the S-D logic moves away from perspectives traditionally "rooted in technological product inventions" Therefore our research will be based on the fundamental premises of S-D logic. The 10 FPs are depicted in **Appendix-4.**

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2.4.2 Triple-bottom line (TBL):

Since the 1992 ‘‘Earth Summit’’ in Rio de Janeiro, there has been a global consensus that sustainable development should encompass at least economic growth, social progress, and protection of the environment (Tanzil & Beloff, 2006). Premised on the *Rio Declaration* and *Agenda 21* (1992) Elkington (1998) coined the term ‘triple bottom line’. TBL is a method which is used to evaluate company performance by accounting for financial gains and losses, the communities in which it operates, and impacts on natural resources. More specifically TBL incorporates the notion of sustainability in business which is based on three pillars - economic, social, and environmental considerations (Elkington, 1998; Morrison-Saunders & Therivel, 2006). In a broader sense TBL comprises a whole set of values, issues and processes that companies use to create economic, social and environmental value while minimizing any harm resulting from their activities (GoA, 2003). **Figure-1** depicts the different dimensions of the triple-bottom line:

Figure –4: The triple-bottom line concept

Source: Adapted from (Fernando, 2012)

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There is debate on how to conceptualise and measure TBL performance in the business organisation. Researchers argue whether TBL is truly relevant to assessing corporate responsibility and enforcing accountability, particularly social sustainability (Love, Roper, & Hewitt-Dundas, 2010). Consequently, a number of TBL reporting frameworks have been developed to incorporate this concept of accountability. Some popular TBL reporting frameworks include GRI[2], DJSI[3], etc.

TBL incorporates the following features (GoA, 2003):

- Embedding sound corporate governance, ethics and a values-driven culture at all levels.
- Improving risk management through better performance monitoring and management systems, leading to better resource-allocation and business planning.
- Formalizing and enhance communication with key stakeholders such as the finance sector, suppliers, community and customers, creating a more proactive approach to address future needs and concerns.
- Attracting and retaining staff by demonstrating a focus on values and long-term goals.
- Benchmarking performance within and across industries, leading to competitive advantage with customers and suppliers, as well as better access to capital from

[2] The Global Reporting Initiative (GRI) is a non-profit organisation that promotes economic, environmental and social sustainability. GRI provides all companies and organisations with a comprehensive sustainability reporting framework that is widely used around globally (See https://www.globalreporting.org/Pages/default.aspx).

[3] The Dow Jones Sustainability Index is the longest-running global sustainability benchmark and now the key reference point in sustainability investing. (See http://www.sustainability-indices.com) .

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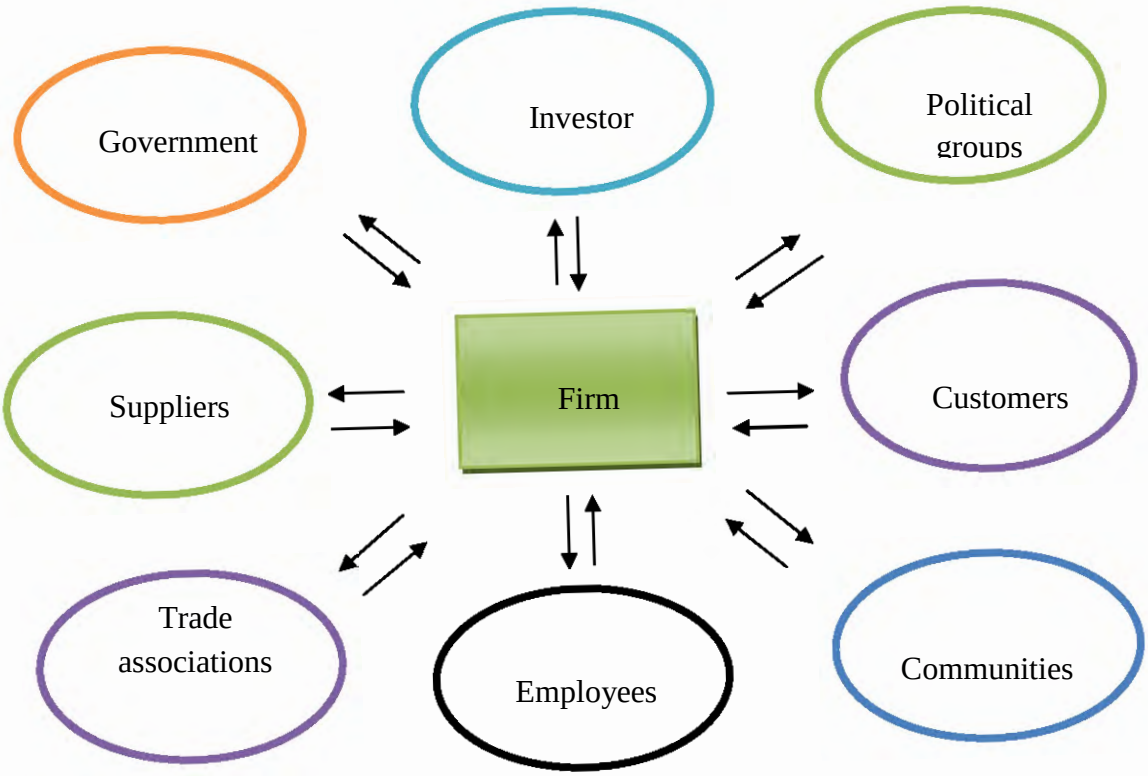
a finance sector increasingly concerned with non-financial corporate performance.

2.4.3 Stakeholder theory:

The stakeholder theory was a major shift from the traditional viewpoint of doing business with its emphasis on maximizing profits. Edward Freeman (2009) coined the idea of stakeholder theory which posits that firms should pay attention to all their constituencies. This theory suggests that the purpose of business should be to create as much value as possible for all its stakeholders. In order to be successful and remain sustainable over time, firms must keep the interests of their customers, suppliers, employees, communities and shareholders aligned. This theory assumes that businesses exist to satisfy the needs of stakeholders who are both business and social entities. All stakeholders will play an increasingly prominent role if sustainable development is to achieve the desired outcomes. Other than operating as stand-alone entities, corporations have to work with different partners in the private and public spheres to achieve their goals. This in turn calls for a shift in business models and strategies to take advantage of the benefits resulting from this enhanced cooperation. However, stakeholder theory has been also criticised for not explaining well enough a firm's behavior in its own environment (Eisingerich, Rubera, & Seifert, 2009).

Figure 5 in the next page portrays the multi directional relationship of the firm with the different stakeholders. Moreover the arrows signifies a give and take relationship between the firm and all of its constituencies**.**

Figure-5: The stakeholder model



Source: (Donaldson & Preston, 1995)

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SECTION- 4:

2.5 Sustainability orientation in business:

Over the past few decades the term 'Sustainability' has attained prominence in the business sector. Sustainability enumerates a holistic view that includes a multitude of human activities related to economic, environmental, and social concerns (United Nations, 2002). It is also a way to view corporations for what they are, what they do and how they relate to social environmental and political concerns in a manner that was previously impossible (Demirag, Barry, & Khadaroo, 2005 p.356). This trend is predominantly found in the manufacturing sector since what it creates directly affects human and society (Sarkis, 2001). Consequently, the service sector has responded to the concept of global sustainability issues more slowly than any other sector. This is due to the services industries having features such as intangibility and being experiential in nature (Jeucken, 2004).

The majority of previous studies on service have looked at increasing business profitability (Rust & Miu, 2006). This has been posited as a micro perspective. Numerous issues are driving greater concerns for quality of life on the planet - global financial crises, global warming threats, terrorism, natural resource shortages, increased urbanization leading to traffic congestion, pandemic threats, poverty, etc. This is due to the ubiquitous role of service and the fact that service is humanistic and interactional which makes it part of the human and social world. Therefore the need to innovate and deliver service in a sustainable way is paramount. The link between sustainability and innovation is an overarching array of human and technological efforts that brings about long term objectives of firms (Svensson, Wood, & Callaghan, 2012).

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When it comes to sustainable service, it refers to all those services that embed sustainability orientation and not just the goal of making profits. Due to the versatility of service and its structural peculiarities it is often challenging to define what sustainable service is. Belz and Peattie (2009) have identified 6 fundamental characteristics **(Figure-6)**. These are:

Figure-6: Characteristcs of sustainable services

Source: Developed for this research

- ***Customer Satisfaction***

Sustainable services should satisfy consumers' needs or otherwise they will become redundant and economically irrelevant.

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- ***Dual Focus***

For labeling a service as sustainable it is required to address and fulfill both ecological and social issues.

- ***Life-Cycle Orientation***

Services function as customer solutions. Therefore they must constitute holistic offerings, providing suitable and sustainable solutions to the consumer at all stages of the lifecycle (including extraction of raw materials that might be need to make the service possible in the first place, transportation, manufacturing, distribution, use and post-use). This closed-loop approach contains the principle of reusing and recycling products in order to manufacture new products while skipping a new extraction of (limited) raw materials and the need for transportation.

- ***Significant Improvement***

Sustainable services need to make a significant long-term contribution on a broad social and ecological scope. This means the benefits created should preferably be measurable and take place on a global rather than on a local level.

- ***Continuous Improvement***

Sustainable services are interdependently located within the flow social and institutional norms, state-of-the art technology and the amount of knowledge humankind owns at acertain point in time. This means that sustainable services can never be assessed in absolute ways due to their changing environment. Only if these services continuously

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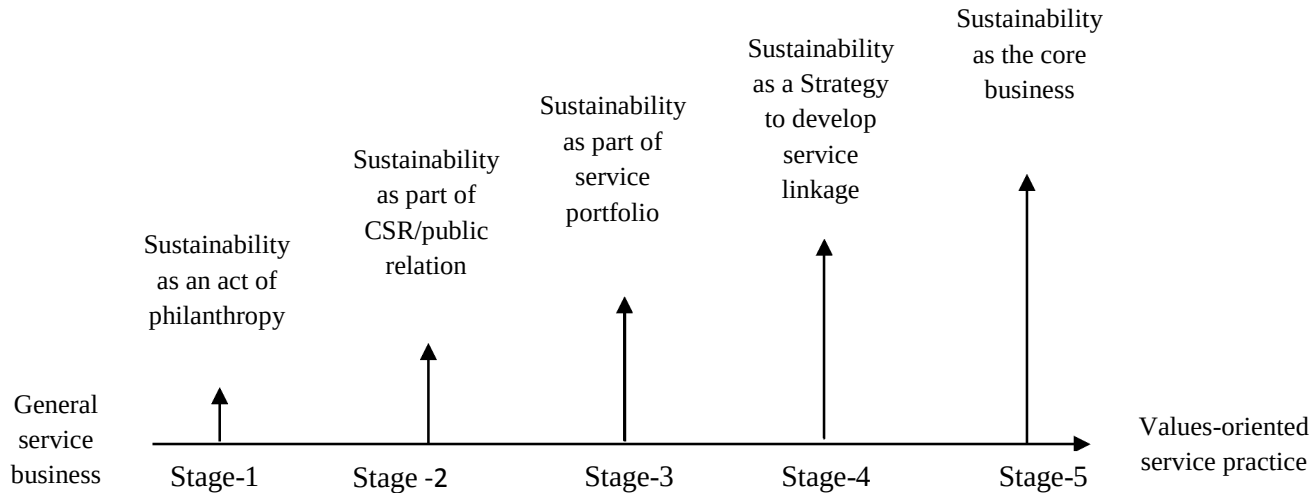
improve as over time technologies improve, knowledge expands and normative influence changes, they can be considered sustainable services.

- ***Competing Offer***

Even if all the previous mentioned points are successfully implemented there is no guarantee that the sustainable service of interest will be positively valued regarding other competing offers. It must see and define itself always using similar offers as a benchmark and try to keep up to these offers in order to keep customers attention and satisfaction secured.

Kaeufer (2010), while describing the differences between socially responsible 'green' banks and conventional banks, mentioned different levels of values-based service practice. This study explores the ethical relationship of business from a step-by-step approach. The finding of this study is posited in the following discussion and in **Figure-7**.

Figure-7: Levels of sustainable banking practice



Source: Adapted from (Kaeufer, 2010)

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a) Sustainability as an act of philanthropy:

The first step of values-based service starts with sustainability as being merely an act of philanthropic behavior and 'giving'.

b) Sustainability as part of CSR/public relations:

During this phase of values-based service businesses become actively involved in sustainability movements as part of their Corporate Social Responsibilities. Moreover, the focus here is on public relations.

c) Sustainability as part of the service portfolio:

Here the values-based service of the firm will engage in values-driven services. Grounded on the triple-bottom line approach the firm develops services in its services portfolio.

d) Sustainability as a strategy to develop service linkages:

Service as a means of value co-creation involves coordinating exchange partners (Vargo & Lusch, 2004b). The greater the involvement of exchange partners the greater the opportunity to develop new services. Therefore, at this level firm tries to invoke sustainability as a means of developing alliances with stakeholders and business partners to establish linkages.

e) Sustainability as the core business value:

This is the stage when sustainability is engrained into the fundamental corporate mission statements of the service firm. This is driven by values which are grounded on the core dimensions of ethical business practices and a vision to respect people, the planet and profits.

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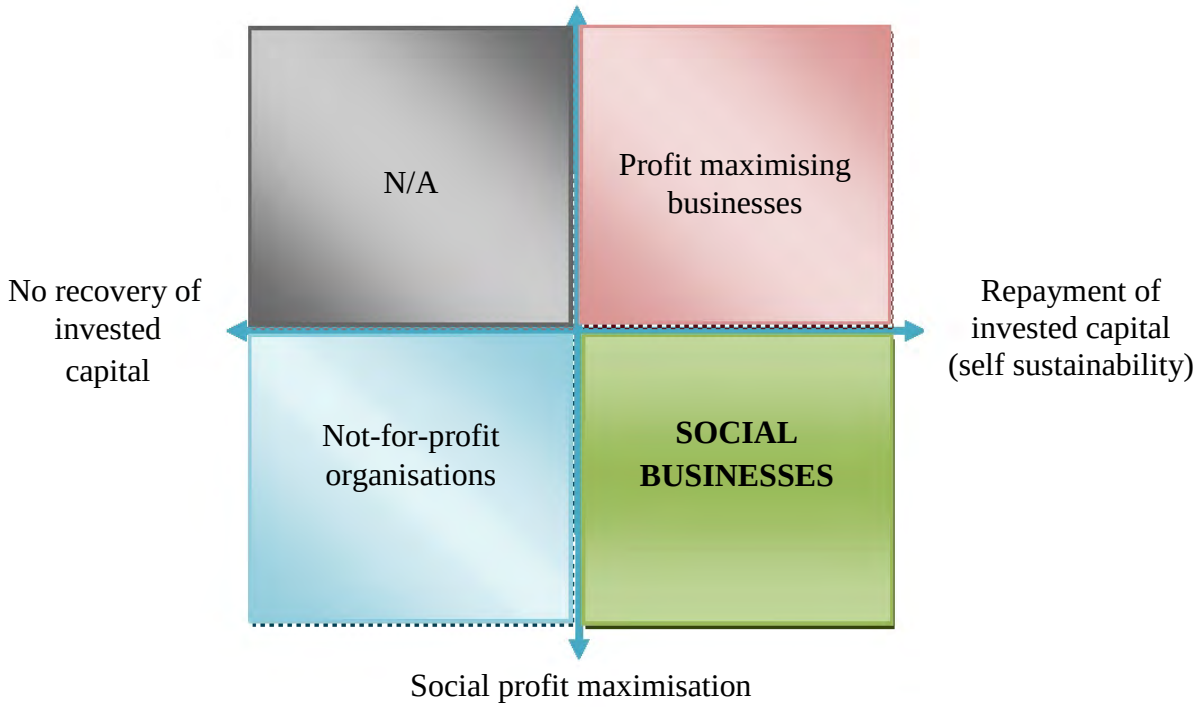
Researchers have debated over the concept of different types of business. There has been g A study by the Nobel laureate Dr. Muhammad Yunus and authors (Yunus, Moingeon, & Lehmann-Ortega, 2010) conceptualises the differences between profit oriented business, non-profit business and a business that is based on achieving social goals. This study regards the latter as 'Social business' which "has both the potential to act as a change agent for the world, and sufficient business-like characteristics"(Yunus et al., 2010). It is a form of business that can be located somewhere between a profit-maximizing and a non-profit organisation.

Figure-8: Social business vs. Profit maximizing business and not-for-profit organisations



Source: Adapted from (Yunus et al., 2010)

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Based on the above discussion it could be summarised that the notion of sustainability orientation through business activities is not a novel concept, and in fact has been debated widely. However, the mixed conceptualisations and various approach makes it even more ambiguous to understand (Robinson, 2004). It is therefore difficult to embed sustainability in the corporate vision of business organisations without having a structured framework and guideline. Hence it is necessary to analyze sustainability orientation from a broader perspective.

2.6 Theoretical underpinning of sustainability and service:

It is evident that S-D logic invokes a revolutionary shift in management's perception of value offerings (goods or services) through value co-creation. This certainly establishes the dominance of the service sector which is often outdistanced by a product orientated paradigm. This paradigm shift has literally changed the view regarding how innovation is seen and interpreted in business organisations (Ordanini & Parasuraman, 2011). However, the S-D logic – while it elucidates the concept of 'value-in-use' or 'value co-creation' — does not consider any ethical content (Abela & Murphy, 2008). Growing interest in sustainable thinking in business has not been considered in S-D logic and this is a major problem in this concept (Sebhatu, 2010). Integrating sustainability will allow S-D logic to have a much broader view and make implicit assumptions regarding business ethics. It is argued in this research that, when the value-in-use is benchmarked by ethical values these are invariably more stable and enduring compared to those with transitory market offerings and a profit-only motive. **Figure-9** illustrates the implicit assumptions of this study and theoretical underpinning used to develop a solid conceptual framework.

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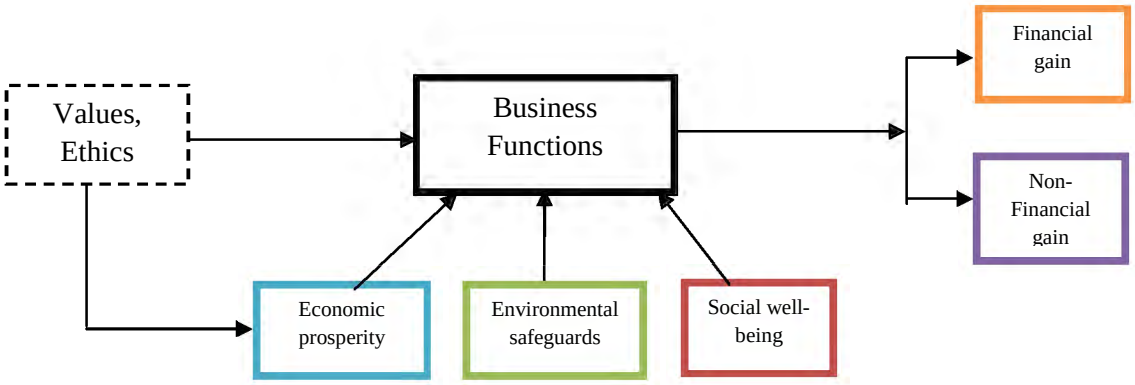
Figure-9: A 'values-driven' business system



Source: Developed for this research

2.7 Evidence of Sustainability orientation:

Sustainability orientation has been demonstrated by a number of approaches used in different economic sectors and firms. Some of these are documented below.

Micro-finance[4]:

Services like micro-finance are a great example of fostering sustainable livelihoods and generating substantial non-financial benefits through innovative services. A landmark of micro-finance is the 'Grameen Bank' in Bangladesh. This bank introduced the 'Micro Credit' concept for rural, poverty-stricken women so that they could start their own business and learn to make and manage money. The Grameen Bank has provided loans totaling $6 billion to 7 million families in rural Bangladesh. Women with this credit facility found employment and changed their lives. This success o was celebrated with the "2006 Nobel Peace Prize awarded to the Managing Director of Grameen-Bank, Dr. Muhammad Yunus who started the idea. Today, more than 250 institutions in nearly 100

[4] See http://www.grameen-info.org/

countries including the USA operate micro-credit programs based on the Grameen Bank's methodology.

Global Alliance for Banking on Values (GABV)[5]:

The most comprehensive instance of sustainability orientation is the 'Global Alliance for Banking on Values' (GABV). Founded in 2009, the GABV is an alliance of global banks from different countries serving a common principle and shared goal of achieving sustainability. Keeping the triple-bottom line at the core of all the activities these banks primarily focus on the people, planet and prosperity. While the banks perform general banking activities the products and services they offer are designed to meet the needs of communities, reduce environmental risks and improve economic prosperity. Profit making is not the only goal which reflects the values that these banks maintain. To date there are 20 leading banks serving s members of this alliance and facilitating sustainable banking services to the respective countries in which they are located. These banks initially aimed to raise $250 million as equity capital after three years. Just within one year it raised $400 million which shows the sustainable banking is capable of achieving. Furthermore this alliance envisions helping 1 billion people by 2020.

Dutch flower industry[6]:

The Dutch flower industry is an example of sustainable innovation. The Netherlands is the world's biggest flower exporter providing 52% of all flora products sold in the world in 2006, followed by a very distant second Colombia (11%), Kenya, and Ecuador.

[5] See http://www.gabv.org/

[6] See http://www.hollandtrade.com/sector-information/horticulture/?bstnum=4928

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Unfortunately, the intense flower cultivation and the extensive use of pesticides and fertilizers resulted in the soils in the Netherlands becoming heavily polluted. Environmentalist organisations become more conscious of this problem and the government imposed strict regulations against the flower industry. To cope with these strict environmental regulations, the Dutch flower industry had to innovate and search for solutions to adjust to new requirements. Most growers are members of The Dutch Flower Council and the Association of Dutch Flower Growers' Research Groups, which have taken on other functions such as applied research and marketing.

In the 1990s flower growers introduced a closed-loop system for flower cultivation. Under this system flowers grow in water and rock wool, reducing the need for fertilizers and pesticides. The solution improved not only the environmental situation in the Netherlands but also reduced production costs and improved product quality. To keep its competitive position in the flower industry, the Netherlands established norms that were adopted worldwide. The Dutch introduced specific dimensions for bucket size, standards for environmental certification, and many other innovations.

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CHAPTER -3

3.0 Research methodology and research design:

The previous chapter reviewed the relevant literature. This chapter illustrates the chosen research design, methodology and justification of the chosen approach. The first section describes the epistemological standpoint of this research. Then it underscores and justifies the research methodology. Finally it describes the data collection instruments, the data analysis procedure and the results of the analysis.

3.1 The research paradigm:

To understand and interpret certain phenomena there are different paradigms that researchers used to justify their analytical perspectives (Flick, 2004). These different paradigms are based on different philosophical bases and knowledge that interprets realities from various viewpoints. These diverse knowledge claims refer to the 'epistemology' which provides a philosophical background for deciding which kinds of knowledge are legitimate. More specifically epistemology is the theory of knowledge which justifies knowledge (Carter & Little, 2007). Some believe in a realist viewpoint and some see the world from an interpretivist perspective. The realist approach interprets the world with evidence, facts and figures. Realism views the world from a scientific point of view which asserts that science is capable of viewing reality (Denzin & Lincoln, 1998). On the other hand the interpretivist approach describes and interprets the world from observed truth. Black (1999) asserts that everyday observations are random and not systematic, whereas those carried out by scientists endeavor to be specific, objective, well focused and systematic.

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However, researchers have argued over the applicability of a uniform philosophy in social science research. This is because philosophy can never provide a definitive answer to this question, rather, it shows some guidelines and justifications (Easton, 2002), and scopes and benefits of using a particular philosophy in a research method. In marketing research, there is neither any dominating paradigm nor any dominating philosophical 'ism' (Hunt, 1991). Therefore, one study concludes that "debates in the philosophy of social science may not seem very relevant to most marketing academics" (Easton, 2002, p. 108). Despite this, a number of studies underscored the importance of selecting an appropriate research approach (Hunt, 1991; Zikmund, 2000). This thesis is based on the scientific realist approach to view the real world and specific phenomena. Through the lens of scientific realist approach some research propositions have been posited and supported based on the observational consequences of fact or reality (Grimes, 1990).

3.2 Research methodology:

The research methodology determines how the researcher goes about investigating that which is to be known and the techniques used to acquire the data required for the research (OECD, 1997; Zikmund, 2000). There are two different methodologies followed by researchers – Quantitative and Qualitative methodology. Firstly, the quantitative approach is deductive and theory driven which manifests the hypothesised relationships between certain variables. It observes specific phenomena on the basis of specific theories of reference. In the quantitative approach, hypotheses are deductively derived from the theory and then have to be falsified through empirical investigation (Gelo, Braakmann, & Benetka, 2008). Quantitative techniques can measure specific characteristics through structured data collection procedures from a large representative sample, so that the results

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can be projected to the entire population (Davis, 2000). One advantage of this research approach is to provide a concise answer to the research question through the acquisition and analysis of information that can be aggregated from the survey data. The quantitative/empirical result also can be generalised, where a certain context only is relevant to the topic of study. However, the quantitative approach has often beencriticised for not considering the subjective aspect of a phenomenon. Proponents of qualitative methodology argue that rich insights into our complex world are lost if realities are described entirely according to a series of law-like generalisations (Schwandt, 2000).

It has been argued that qualitative research methodology is more comprehensive because it involves systematic collection, organisation and interpretation of textual materials derived from talks, interviews or observation. Qualitative research is considered a good strategy for studying social phenomena (Marshall & Rossman, 1999). It allows the researcher to uncover and conceptualise those phenomena about which little are known or to expand on that which is known. Qualitative research builds on the limitations of quantitative research which produces scientific results based on structured calculative examination and statistical data. Flick (2004) asserts that science no longer produces absolute truths which can be uncritically adopted or accepted. The strength of qualitative research is that it is more naturalistic and interpretative. This approach provides intricate details of phenomena which are difficult to explore with quantitative methods. **Table-2** represents the two different methodologies and the relevant dimensions of the paradigms.

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Table-2: Two principal research paradigms

	Quantitative paradigm	**Qualitative paradigm**
Epistemology	Reality can be studied, captured and understood	Researcher is part of the research process
Nature	Deductive	Inductive
Purpose	Generalisability	Contextualisation
Researcher role	Objective and remote	Researcher and the researched interact
Methodology	Hypothetico-deductive	Inductive/interpretive
Data collection	Generates numerical data to represent the social environment	Verbal data and observations to represent the social environment.
Data analysis	Statistical and summarisation	Subjective and interpretive

Source: Adapted from Guba and Lincoln (2010); Perry, Riege and Brown (2012); Denzin and Lincoln(2012).

Based on the above mentioned discussion and insights from the two research paradigm, the following section highlights the methodological approach taken by this study.

3.3 A triangulation approach:

There is an ongoing debate among researchers whether the quantitative or qualitative research paradigm is appropriate for conducting social research. Due to this ongoing debate (Deshpande, 1983) suggests that instead of taking one of these polarised paradigmatic sides, a marketing researcher should triangulate these procedures. The use of these two paradigms in a single study can overcome the potential bias and sterility of a

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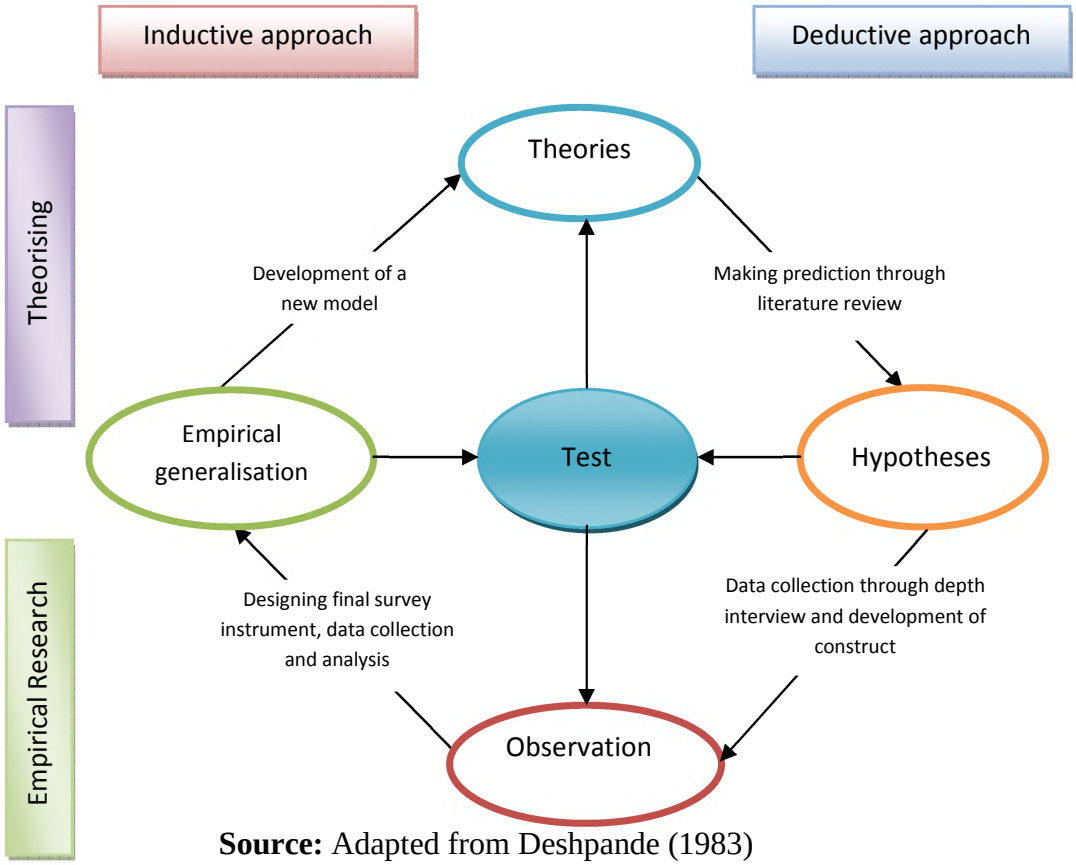
single approach (Mangan, Lalwani, & Gardner, 2004). Consequently, interest in methodological triangulation has grown in marketing research for its contribution to develop knowledge (Creswell & Clark, 2007; Freling & Forbes, 2005; Stavros & Westberg, 2009). The major benefit of using both approaches in one research method is that they are complementary (Deshpande, 1983; Duffy, 1987; Mathison, 1988). Combining these two methods will also provide a synergistic insight into certain phenomena (Eisenhardt, 1989) and it is appropriate to explore research findings in a holistic way.

Moreover, it is argued that the use of more than one method should be used in the validation process to ensure that the variance could be reflected to reduce the potential bias (Jick, 1979). **Figure-10** shows the relevant dimensions and paths used in the triangulation approach.

Figure- 10: The triangulation approach used in this research



Source: Adapted from Deshpande (1983)

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Through the deductive approach this study summarises the statistical results documented in previous studies. Furthermore the inductive approach helps to explore and specify the constructs which were later used to develop the conceptual framework and research propositions in this thesis.

3.4 Methods of data collection:

The next step was to determine the specific research method by which data was collected. For this research the data was collected through meta-analysis technique. The meta-analysis is a quantitative technique summarizing the results of prior studies (Stikker, 1992). It refers to a specific set of quantitative methods that are designed to compare and synthesize the result of multiple studies. Content analysis on the other hand is a qualitative tool that presents new knowledge and insights (Cavanagh, 1997). Studies collected for meta-analysis was later examined through the content analysis approach which is a qualitative tool that presents new knowledge and insights (Cavanagh, 1997). The meta-analysis has been used for statistical inferences to generalize the results. Conversely the content analysis helps to conceptualise the relevant research phenomena by analyzing textual data to develop research propositions.

3.5 Meta-analysis approach:

A meta-analysis is a quantitative method of synthesizing empirical evidence across a collection of related studies (Orlitzky, Schmidt, & Rynes, 2003). During the last three decades the use of meta-analysis has increased significantly (Field, 2003). Specially in the

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social sciences the meta-analysis has been widely used in recent studies to synthesise the results of prior studies (Glass, McGaw, & Smith, 1981). It is an advanced technique used to combine the results of a number of studies in order to gain a better overall picture of the underlying relationships between variables in relation to a particular topic. Generally, a meta-analysis combines effect sizes from different studies to ascertain the true effect size in the wider population (Field, 2003). To estimate the effect size several techniques are applied: Pearson product moment correlation coefficient *(r=)*, Cohen's effect size index (*d*=), odds ratio, risk rates, risk differences, etc. (Stikker, 1992). These different techniques have the same fundamental goal, which is to ascertain the observed outcomes from selected studies.

Meta-analysis technique is widely used in clinical research (Rosenthal & DiMatteo, 2001). It is especially useful when results from several studies disagree with regard to magnitude or direction of effect (Stikker, 1992). Meta-analysis also sheds light on empirical generalizability of previous findings and can determine whether different moderators affect the associations found (Orlitzky & Benjamin, 2001). It offers advantages over conventional synthesis analyses because it includes statistical analyses that detect outcomes or relationships that are obscured in other approaches. In comparison to narrative reviews, meta-analysis is less biased because it systematically quantifies the relationship between certain variables (Hunter & Schmidt, 2004). Additionally it compares outcomes across different contextual characteristics (Boons & Lüdeke-Freund, 2012). The strength of meta-analysis lies in combining numerical results from a few or many studies (Rosenthal & DiMatteo, 2001). Therefore this research has taken a meta-analysis approach to build on the strengths of previous studies.

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3.5.1 Measuring Effect size:

The strength of meta-analysis is that it ascertains the effect size or the observed difference of variables in a unique and consistent format which is summarised later. The summarising of effect size is known as standardization (Neely et al., 2001). The standardisation of effect size is the key to a meta-analysis review which permits meaningful numerical comparison and analyses across studies. There are many different types of effect size measurement depending on the different research situations. Each effect size type may also have multiple methods of computation. Some very popular effect size measurement techniques are described below.

3.5.2 Vote counting:

Vote counting is the simplest form of effect size calculation for combining statistical results. It generally encompasses two different methods – measuring the statistical significance of the selected studies or simply the direction of the findings from the selected studies. The first type of vote counting measures the statistical significance into one of the three categories- statistically significant findings, statistically non-significant findings and statistically negative findings of the relationship of the observed variables. The second type of vote counting is simply tallying the number of positive and negative findings regardless of their statistical significance. Counting votes is a useful and widely utilized technique, however, it has been criticised as conservative and providing erroneous conclusions (Baregheh, Rowley, & Sambrook, 2009; Stikker, 1992). Nonetheless it is still widely used by many researchers due its statistical simplicity in summarizing outcomes across studies (Avlonitis et al., 2001; Svensson et al., 2012).

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3.5.3 The Standardized Mean Difference:

The standardized mean difference of the *d*-index represents a standardized group contrasted on an *inherently continuous* measure. The *d*-index is typically employed in association with *t*-tests or *F*-tests based on a comparison of two groups (Stikker, 1992). This technique often uses the pooled standard deviation (some situations use control group standard deviation). The formula to calculate *d*-index between two groups is as follows:

$$\overline{ES} = \frac{\overline{X}_{G1} - \overline{X}_{G2}}{SD_{within}}$$

Where,

ES = Effect size

$\overline{X}_{G1}$ = mean of group 1

$\overline{X}_{G2}$ = mean of group2

SD_{within} = the estimated common standard deviation of the two groups.

To calculate the SD_{within} the formula is:

$$SD_{within} = \sqrt{\frac{s_1^2(n_1 - 1) + s_2^2(n_2 - 1)}{n_1 + n_2 - 2}}$$

Where,

S_1 and S_2 is the standard deviation of group 1 and 2.

n_1 and n_2 is the sample sizes of group 1 and 2.

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3.5.4 The odds ratio:

The odds ratio technique is applied when both variables are dichotomous (Stikker, 1992). This technique is mostly used in medical and healthcare/nursing research. The odds-ratio is based on a 2 by 2 contingency table, such as the one below **(Table-3)**:

Table-3: Odds-ratio, contingency table

	Frequencies	
	Success	Failure
Treatment Group	*a*	*b*
Control Group	*c*	*d*

Source: Developed for this research

To calculate the effect size from the above table the formula that is used is:

$$\overline{ES} = \frac{ad}{bc}$$

From the above example the Odds-Ratio is the odds of success in the treatment group relative to the odds of success in the control group.

3.5.5 The Correlation coefficient:

The most popular and widely used technique is to calculate the correlation coefficient of observed variables to measure the effect size. It represents the strength of association between two *inherently continuous* measures. The correlation coefficient is generally reported directly as “r” (the Pearson product moment coefficient).

$$ES = r$$

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Different formulas are used for obtaining the effect size from various types of statistical measurement. The relevant formulas for converting the results of different statistical results to *r* = are given below:

Formula to calculate *r* = from *t*-tests:

$$r = \sqrt{\frac{t^2}{t^2 + df}}$$

Formula to calculate *r* = from *f*-tests:

$$r = \sqrt{\frac{F}{F + df_{error}}}$$

Formula to calculate *r* = from chi square:

$$r = \sqrt{\frac{X^2(1)}{N}}$$

Formula to calculate *r* = from standard normal deviation Z:

$$r = \frac{Z}{\sqrt{N}}$$

The effect size *r* has several advantages over other techniques (Rosenthal, 1991; Stikker, 1992). For example, converting *d*'s to *r*'s makes sense because *r* in its point biserial form represents the relationship between two levels of the independent variable and scores on the dependent variable. However, converting the continuous Pearson *r* to the dichotomous *d* loses information. Besides, the *r* index requires no computational adjustment in going from cases of *t*-tests of two or more samples, to *t*-tests of only a single sample. Furthermore, the results of *r* are simply interpreted in terms of practical importance and

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not just *d* or *g* (Glass et al., 1981). Therefore, this research has adopted the correlation coefficient technique for calculating the effect size between service innovation and firm performance.

3.5.6 Method:

Meta-analysis generally is conducted through different steps to reach an expected conclusion where results are summarised and explained. This enhances the precision and accuracy of the findings. Rosenthal (1981) suggested the following steps to conduct the meta-analysis approach:

1. Define the independent and dependent variables of interest.
2. Search the studies in a systematic way, to find all the studies that have to be analysed.
3. Document each article's methodology and results very carefully, assessing how independent and dependent variables were operationalized and measured.
4. Examine the variability among the obtained effect sizes informally with graphs and charts.
5. Combine the effects using several measures of their central tendency
6. Examine the significance level of the indices of central tendency
7. Summarise the results of the analysis.

This research used the above mentioned steps to conduct the meta-analysis approach. The following section describes in more detail the methods adopted here.

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The independent variable in this study is sustainable service innovation and the dependent variable is firm performance. To find the relevant studies it was found that the link between service innovation and firm performance is well established in the literature. A considerable number of empirical studies were found that posited a relationship between these two variables. However, research on sustainable service innovation and its impact on firm performance remained extremely sparse except some pioneering studies by Edvardsson and Enquist, (2008), Ostrom, et al. (2010), Djellal and Gallouj (2012), Sayem (2012). These studies conceptualise sustainability orientation in the service business where positive firm performance is evident. However, none of these studies provide empirical evidence of sustainability orientation in the service sector through an analysis of a firm's performance.

This indeed created a problem for the meta-analysis; as such coming to a consensus was indeed difficult when trying to summarise the search criteria for the required relevant studies. To avoid this problem this research took a different approach. While sustainability orientation in the service domain is scarce, the empirical evidence for sustainability and financial performance in business exists in a number of studies (Ameer & Othman, 2012; Kuckertz & Wagner, 2010; Wagner, 2010). As such a number of authors have conducted reviews and meta-analyses when measuring firm performance. To obtain an aggregated view a meta-analytic review of the results of existing meta-analysis on sustainability and firm performance has been conducted. This is also based on the assumption that the meta-analysis helps to identify areas in which there have been relatively few studies conducted, and which warrant more research (Orlitzky & Benjamin, 2001).

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In the next step a meta-analysis on the weighted correlation of service innovation and firm performance has been done to determine the true score correlation (Pearson's correlation coefficient) of service innovation and firm performance. Then the findings of the two different types of review were evaluated based on the standardized formula. Following this the inferences were summarised in the form of results. Consequently, this research argues that an aggregated view of the sustainability and service innovation's impact on firm performance will generate substantial and empirical data.

Service innovation has become increasingly popular in the last few decades. In particular the last decade has witnessed service economies growing in the world's major economic powers (Rubalcaba et al., 2012). The last decade has been the most revolutionary period in service research. Accordingly the meta-analysis of this research incorporated the most important studies from 2003 till 2013, in order to analyze the data collected on sustainability and firm performance. Next, the relevant studies were obtained by searching four major databases: Ebscohost, Science Direct, Sage, and Wiley Online. These databases are the most important for this type of research in that they cited relevant journals *Journal of Business Research, Journal of Business Studies,* and *Journal of Marketing,* etc. The search terms, keywords and/or phrases chosen for the search strategy were as follows: - 'sustainability', 'sustainable', 'corporate social performance', 'financial performance' and 'meta-analysis'.

The other objective of the meta-analysis was to find studies showing the relationship between service innovation and firm performance. This was not easy given that there are many empirical and conceptual papers published on this topic. First, a wide review of previous analyses on specific fields of study was done. The search terms fell into two

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groups. The first is the independent variable and confined within these following terms: ‘Service innovation’, and ‘new service development’. The second group involved the dependent variable and the relevant key words or terms used were: ‘Service performance’, ‘Firm performance’, ‘Business performance’, and ‘Financial performance’. To discover the relationship between the independent and dependent variables the following key words or terms were used: ‘Impact’, ‘effect’, ‘consequences’, and ‘benefits’. These different search terms further generated a list of combinations summarised and selected based on their relevance to the research objective. A list of the key words and the synchronised meaning is summarised in **Table-4.**

Table-4: List of keywords used to search for articles

Search terms used to identify Independent variables	**Search terms used to identify dependent variables**	**Search terms used to identify relationship**
‘Service innovation’, ‘New service development’	‘Performance’, ‘Financial performance’, ‘Business Performance’, ‘Organisational performance’, ‘Firm performance’	‘Effect’, ‘Impact’, ‘Relation’, ‘Result’, ‘Consequence’

The search process involved both manual and computerized processes. The manual search process checked the tables of contents of seven of the major journals in the management field (i.e. *Academy of Management Journal*, *Administrative Science Quarterly*, *Journal of Management*, *Journal of Organisational Behavior*, *Organisation Science*, *Organisational Studies*, and *Strategic Management Journal*). This followed the method applied by Margolis et al. (2006). The computerized search process involved rigorous searching on the selected databases and using the specific key words and terms in productive combinations.

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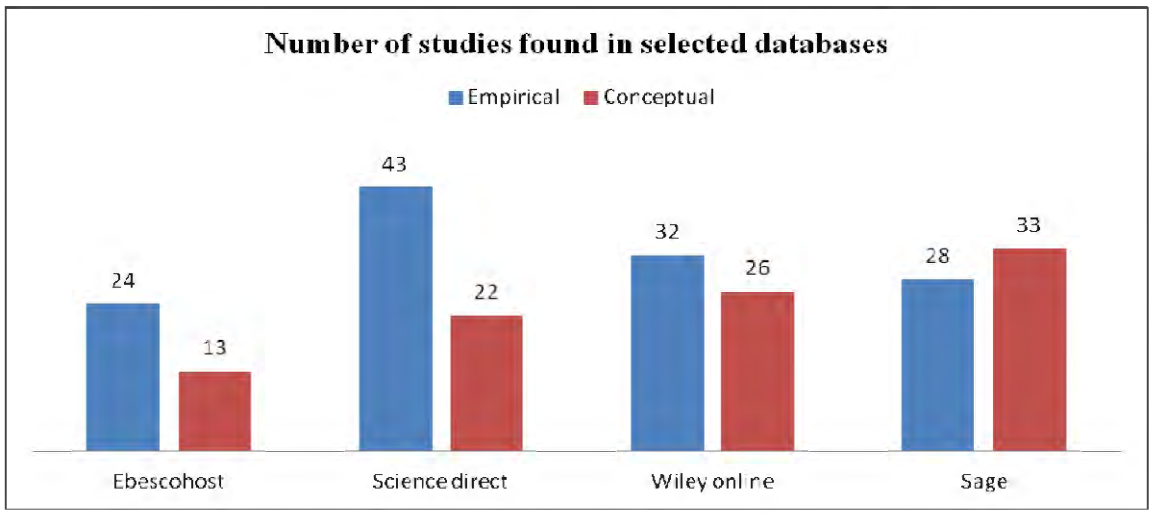
The manual and computerised search process conducted on the four major databases generated a considerable amount of articles showing the impact of service innovation and business performance. The rigorous search process yielded a total of 221 results comprising service innovation and performance effects in the firm level. However, only 5 meta-analytic reviews were found on sustainability and financial performance. For service innovation and firm performance both empirical and conceptual paper were considered. Empirical papers were used for statistical aggregation to cumulate the correlations (Pearson's correlation coefficient) between service innovation and firm performance. Conceptual papers proved useful in depicting the broader dimensions and evolutionary aspects of business and ethical orientation. They also helped to build the conceptual framework in this thesis **(Chapter-5).** The graph (**Graph–1)** below highlights the number of articles found in different databases on service innovation and firm performance.

Graph – 1: Number of studies found in different databases



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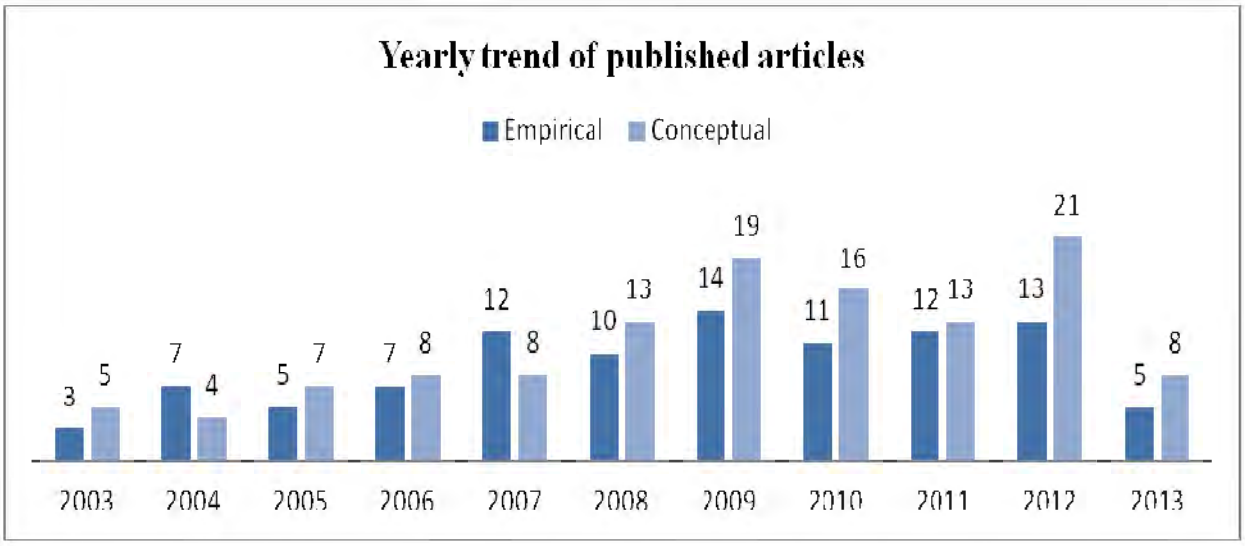
It was also important to understand what was published from year to year on the subject of service innovation and firm performance in the selected databases. The following graph (**Graph–2)** details the yearly publications of both conceptual and empirical papers on service innovation and firm performance.

Graph-2: Yearly trend of published articles



3.5.6.1 Coding schema:

Coding the data from the selected articles required a rigorous process. Each article was coded according to six predetermined classifier variables guided by Aas and Pedersen (1991) to fit the rationale of this paper. The following variables were used: (1) year of publication, (2) type of study (empirical or conceptual), (3) aim of study (exploratory, descriptive, explanatory or normative), (4) type of organisation studied (B2B or B2C), (5) geographic region studied, and (6) industry studied. **Table-5** classifies the identified articles within the context of these variables.

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Table-5: Study characteristics

Classifier variable	**Number of articles**
Year of publication	
2003-2006	46
2007-2010	103
2011-2013	72
Type of study	
Empirical	99
Conceptual	122
Aim of study	
Exploratory	54
Descriptive	61
Explanatory	72
Normative	34
Type of organisation studied	
Industrial (B2B)	181
Consumer (B2C)	40
Geographic region studied	
Asia	34
Europe	65
United States	44
Other	78
Industry studied	
Hospitality industry	22
Telecommunications industry	12
Finance industry	56
Other	131

3.5.6.2 Eligibility criteria:

Before finalizing the exact set of sample studies a number of issues were considered. First, they were divided into different categories following the method developed by Aas and Pedersen (2011). Aas and Pedersen (2011) categorized 5 different observable effects of service innovation and financial performance: (1) business process effects, (2) capability effects, (3) relationship effects, (4) financial performance effects, and (5) competitiveness effects. Each of category contains a number of sub-effect categories **Table-2** summarises

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these effect categories and the sub-effect categories. **Table - 6** lists the findings for all the sample studies based on the effect category.

Table-6: Effect categories and effects found in the literature

Category of the observed effect	Sub-effect category	Number of studies found
Business process effects	Internal business process effects Service delivery capacity effects Internal cost effects Productivity effects Flexibility effects Risk reduction effects	92
Capability effects	Learning effects Culture effects Employee growth effects Employee satisfaction effects	6
Relationship effects	Effects on customer's value Customer satisfaction effects Customer loyalty effects Lock-in effects Image effects Business partner relationship effects Service quality effects	66
Financial performance effects	General financial performance effects Market share effects Sales (of new services) effects Sales (of existing goods/services) effects Effects on the market value of the firm	21
Competitiveness effect	Effects on the competitive position Effects on the ability to survive Creation of new markets effects Strategic performance effects	36

The main objective of this research was to identify financial performance as the outcome or dependent variable, as this is the most pertinent and direct measure of firms' overall business performance. Therefore, all the papers that do not include financial performance effect were excluded. Financial performance effect was further diversified into the

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following sub-categories: (1) general financial performance effects, (2) market share effects, (3) sales (of new services) effects, (4) sales (of existing goods or services) effects, and (5) effects on the market value of the firm.

3.5.6.3 Effect size calculation:

Hall and Rosenthal (2002) have stated that there is no single correct way to perform a meta-analysis. As mentioned before, this study adopted the Pearson's correlation coefficient method to retrieve the effect sizes of the selected studies. Since this research aspires to examine the financial performance resulting from service innovation, only those studies indicating financial performance effects were eligible. A total of 22 empirical studies including 20951 samples were selected for final analysis. The effect size (i.e. correlation) reported in the studies varied from 0.28 to 0.81. Following this the effect sizes on service innovation and firm performance were retrieved in the form of Pearson's correlation coefficient. An important question arises while estimating individual correlations, i.e. how to treat multiple correlation estimates if they result from a single study (Rosenthal & DiMatteo, 2001). To answer this Glass et al. (1991) suggest either to average the correlation estimates or to include all correlation estimates as if they are obtained from different studies.

The studies that used different metrics other than Pearson's correlation coefficient, formulas were applied following the standard procedures suggested by Rosenthal and DiMatteo (2001). The 5 selected studies on sustainability and firm performance used Pearson's correlation coefficient matrix to report the overall effect of the relevant independent and dependent variable. However, of these 5 studies 2 were excluded because

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they did not report the direct effect of sustainable practice and firm performance. Therefore the average correlation coefficient of the remaining 3 studies was extracted. To calculate the effect size from these studies a simple vote counting method was applied to summarise the overall relationship between corporate sustainable practice and financial performance.

3.5.6.4 Combining Estimates of Effect Sizes:

This study computed the weighted average effect size across studies by weighting each effect size by the inverse of its variance *(v)* following Lim et al. (2010). The general method to reach the estimated effect size is to simply average them; however, this does not give a precise result. The more precise procedure is to combine weighted average effect sizes that incorporate variances (v_k) for each effect size (ES_k, where k = number of studies) (Hunter & Schmidt, 2004; Yunus et al., 2010).

To prove that service innovation is positively correlated with firm's financial performance a test was conducted whether the common population effect size (weighted mean Z_r) was equal to zero by comparing the ratio ES^2/v to the Chi-square distribution for one degree of freedom ($X^2 = ES^2/v$ for each group). This gives a more reliable and significant measurement across studies for the weighted average effect size (correlation) between service innovation and a firm's financial performance. This study also intended to perform confidence intervals for the population correlation by first obtaining 95 percent upper and lower confidence limits for population correlation. However, a problem rose due to the limited number of sample studies and the recommendation for the minimum number is 30.

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3.5.6.5 Outlier Analysis:

The presence of high correlation values, considering the high sensitivity of the Chi-square test, can induce systematic variance which is not meaningful (Avlonitis et al., 2001). Therefore as suggested by Lim et al. (2010) two outlier analyses were conducted: (1) based on correlation magnitudes, and (2) based on sample sizes. Schmidt and Hunter (2001) contended that large sample sizes affect weighted averages and may cause the entire meta-analysis to be dominated by one or a few studies. However, the small sample sizes may not be a concern due to the negative bias in the distribution of r being stabilized by being changed to Z_r.

To estimate the relative stability of unbiased effect size magnitudes, Lim et al. (2010) used a schematic plot analysis following Singer and Willett (2007). This study adopted the same procedure to indicate outliers and extreme values for the entire sample. A total of four outliers were found; two based on the sample size and two based on the magnitude of correlations. The customary procedure for dealing with outliers by conducting analyses both with and without the outliers was followed based on the recommendation of Williams and Livingstone (1979).

3.5.6.6 File drawer analysis:

The availability bias is one of the most common criticisms made of the meta-analysis (Orlitzky et al., 2003). In other words, one has to make sure that all empirical studies were considered in this study's meta-analysis. In the event that there are unidentified studies, how many there are would affect the result. In most meta-analysis studies an effect size *file drawer analysis* is generally performed to address the possibility of availability bias (Orlitzky et al., 2003). File drawer analysis addresses this issue by computing the number

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of additional unlocated studies needed to cause the correlation to decrease to a minimal critical level (*rcrit*). This is set at .05 in this study following the recommendation of Orlitzky (2003). A file drawer analysis was conducted by following the formula established by Rosenthal (1991). As shown in the results in **Table-8**, a total of 565 studies would be needed to change the overall substantive conclusions on the relationship between service innovation and firm performance.

Table-7: Sampled studies and the effect sizes

Author	*N*[1]	*I*[2]	Dependent variable	Type of analysis	Relationship	*ES*[3]
(Aas & Pedersen, 2011)	4707	Service firms	Financial performance	Z-test	+	0.65
(Baba, 2012)	1*	Financial	Market share	t-test	+	0.45
(Cainelli et al., 2006)	735	Service firms	Economic performance	t-test	+	0.57
(Cheng & Krumwiede, 2012)	235	Top service firms	Service industry performance	Principal component analysis	+	0.54
(Chen et al., 2009)	226	Top service firms	Firm performance	LISREL	+	0.81*
(Damanpour et al., 2009)	428	Public service	Organisational performance	AIC test	+	0.70
(Ettlie & Rosenthal, 2012)	7	Manufacturing	Service Innovation Success	Case study approach	+	0.51
(Eisingerich et al., 2009)	335	Professional service	Firm performance	PLS	+	0.31
(Grawe et al., 2009)	362	electronics industry	Firm performance	CALIS (T-test)	+	0.66
(Lin & Chen, 2007)	877	SME	Company Sales	t-test	+	0.51

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(Love et al., 2010)	6890*	Service firms	Business performance	t-test	+	0.52
(Melton & Hartline, 2013)	160	Various types of service firms	New service development performance	CFA	+	0.43
(McDermott & Prajogo, 2012)	180	SME	Business (sales, profit, and market share)	Regression	+	0.13
(Oke, 2007)	6	Retail (Insurance, bank, Telecom)	Firm performance	t-test	+	0.28*
(Ordanini & Parasuraman, 2011)	193	Hotel	Firm performance	CFA	+	0.57
(Ordanini & Rubera, 2010)	962	IT	Firm performance	CFA	+	0.54
(Rhee, Park, & Lee, 2010)	333	SME	Service innovation performance	CFA	+	0.43
(Stock & Zacharias, 2011)	87	Software, IT and utility service	Performance outcome of service innovation	t-test	+	0.51
(Therrien, Doloreux, & Chamberlin, 2011)	3710*	Service firms	Commercial performance	Regression	+	0.55
(Tseng, Kuo, & Chou, 2008)	116	Hotel industry	Firm performance	Factor analysis	+	0.49

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(Wang & Wang, 2012)	89	High Technology firm	Firm performance	CFA	+	0.58
(Yen et al., 2012)	312	Service firms	Service innovation performance	CFA	+	0.52

Notes:

1. *N* = Number in sample examined in the study.
2. *I*= Industry analysed
3. *ES* = Effect size calculated into Pearson's correlation coefficient (*r =)*
4. * = Outliers

3.5.6.7 Results of the correlation coefficient analysis:

The results of the meta-analysis are depicted in **Table-8**. The weighted average correlation between service innovation and firms' financial performance is found to be 0.5129 ($Z_{significance}$ = 65.2321). This obviously denotes the significant effect of firm financial performance across the full sample of studies. However, Hunter and Schmidt (2004) have shown that the changes in meta-analytic results due to the removal of extreme sample sizes are not surprising because the weighted average always gives greater weight to studies that have large sample sizes. A separate analysis was done to avoid bias due to sample size and correlation outliers. Consequently the outliers were removed and in this case the weighted average correlation between service innovation and firm performance is 0.4919 ($Z_{significance}$ = 38.4567). Having excluded the outliers the file drawer comes to a total of 527 studies. The formula used to convert the different statistical results into Correlation coefficient is given in **Appendix-3**.

Table-8: Summary of the results on service innovation and firm performance

	N[2] =	**K[3]= (Total sample)**	***W[4]=Integrated Effect Size***	***[5]Z*** $_{significance}$	***File drawer[6]***
Service innovation and firm performance	22	20835	0.5129	65.2321	565
Service innovation and firm performance (Without outlier)	17	13944	0.4919	38.4567	527

Notes:

1. The effect sizes are significant at $p < 0.05$.
2. N= Number of sampled effect sizes equals the number of studies.
3. K= Total sample equals the combined number of observations for all studies
4. W= weighted average correlation of the effect size.
5. $Z_{significance}$ equals the significance of the relationship between service innovation and firm performance.
6. File drawer is considered to be 0.05 in the analysis.

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Table- 9: Summary of the meta-analysis regarding sustainable business practice and firms' financial performance

Author	N[1]	K[2]	S[3]	Relationship examined	Time period covered	% of Positive relations	Correlation[4] *r* =	Overall findings
(Mathison, 1988)	77	77	15,160	ESCP- FP	1990-2011	59.74%	0.294	The link between environmental supply chain practices and firm performance is positive and significant
(Bryman, 2006)	167	192	17,234	CSP- CFP	1972-2007	27%	0.132	Considerably weaker correlation found between CSP-CFP
(Orlitzky et al., 2003)	52	388	33,878	CSP- CFP	1974-2003	90%	0.3648	There exists significant and positive relationship between CSP and CFP

Notes:

1. N = number of studies examined in the meta-analysis.
2. K = number of effect sizes found in the study.
3. S = number of total samples found in the studies examined.
4. Observed correlation coefficient (*r* =) has been taken the true score average correlation reported in the study.
5. ESCP = Environmentally sustainable supply chain practice; FP= Financial practice; CSP = Corporate Social Performance; CFP = Corporate Financial Performance.

3.5.6.8 Results of vote counting on meta-analysis:

As mentioned before, a vote-counting method was applied on the 3 studies concerning the relationship between sustainability and firm performance. Findings for the 3 meta-analysis are summarised in **Table-9**. The first study (Mathison, 1988) is a recent meta-analysis conducted on environmentally sustainable supply chain practice and firm performance. This study analyses 77 articles of which 46 (59.74%) indicate a significant positive relationship. The meta-analysis reports an average correlation of 0.294 which is significant and denotes a positive link. Based on the rigorous findings the author strongly supports that implementing environmentally sustainable supply chain initiatives can help improve many aspects of firm performance.

The second study (Bryman, 2006) reviews a total of 167 articles covering the period 1972-2007. The average correlation found in this shows a positive but low correlation between CSP and CFP. Of the total number of studies analysed, 27% shows a positive relationship between CSP and CFP reporting a mean correlation of 0.132. For the third study conducted by Orlitzky et al. (2003), a total of 52 studies from 1972 to 2003 was analysed. The observed effect shows a mean correlation coefficient 0.3648. Though their analysis is based on a more conservative estimation, the overall results suggest a positive link between CSP and CFP.

In total the 3 meta-analyses covered a total of 296 studies on the subject of corporate sustainability and firm performance; the timeframe covered could also be considered comprehensive as it ranged from 1972 to 2007. The mean correlation of the two studies is quite significant (Mathison, 1988; Orlitzky et al., 2003) while one is weaker

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(Bryman, 2006). Though the estimations are based on a conservative approach the authors admit that removing the bias caused by outlier studies could improve the level of significance which will consequently denote a higher correlation. To embark on to an inference a simple vote counting method was applied by tallying the positive number of studies. From the 3 studies 2 reports higher correlation which implies a positive relationship between sustainability orientation and firm performance. Therefore, based on the above discussion this study deduces that corporate sustainability orientation is positively linked to overall firm performance.

3.5.6.9 Inferences drawn from Correlation coefficient and vote counting:

The weighted average correlation coefficient matrix indicates a significant positive relationship *(r =)* between service innovation and firm performance. The second analysis (vote counting) concludes that sustainability orientation is positively linked to firm performance. It can be inferred from these two analyses that sustainability orientation is positively linked to firm performance. When service firms develop a new service embedded on sustainability principles this will help to attain the societal objectives as mentioned in TBL. This is regarded as a non-financial goal that will positively impact on a firm's financial performance (Chen et al., 2009). Further theoretical support of this discussion can be found in the research proposition section (see **Chapter-4)**. Noticeably, both analyses (correlation and vote counting) could be considered accurate based on standard meta-analytic formula, albeit the inferences drawn by the integration of the two analyses are not based on precise statistical measures. However, considering the research area as new one and the amount of work done on it is scarce, study considers the results to be conclusive.

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3.5.7 Content analysis:

Content analysis is a research method that replicates and establishes valid inferences from contextual data. The objective is to create new knowledge, insights, a representation of facts and a practical guide to action (Glass et al., 1981). Guthrie et al. (2006) suggest that content analysis is especially useful when analysing business performance and different trends. Through content analysis, it is possible to distil words into fewer content-related categories. It is assumed that when words or phrases are classified into the same categories they share the same meaning (Donaldson & Preston, 1995). The strength of qualitative content analysis lies in its approach as an empirical, methodological controlled analysis of texts within their context of communication. It follows content analytical rules and step-by-step models without resorting to rash quantification. Furthermore it brings content to light from what is manifested in the texts.

Content analysis has been widely used as a qualitative method (Rosenthal, 1991), however, it also has quantitative characteristics. For that reason it may be used either in an inductive or deductive way. Deductive content analysis is employed in cases where the researcher wishes to retest existing data in a new context. In contrast inductive content analysis is utlilised where there is not enough knowledge about the phenomenon or if this knowledge is fragmented; then the inductive approach is recommended (Rosenthal, 1991). Based on the recommendation of Elo and Kyngas (1991) this research implements inductive content analysis to explore the subject of sustainability orientation in the service sector.

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3.5.7.1 Findings of content analysis:

The content analysis method was applied to all the 221 articles on service innovation and sustainability. It also examined literature on sustainability orientation in the service sector. A number of studies in the sample discussed service innovation and its positive impact on overall firm performance (Ettlie & Rosenthal, 2012; McDermott & Prajogo, 2012; Ordanini & Parasuraman, 2011; Ostrom et al., 2010). Of the 221 articles, 35 studies discussed service innovation or new service development as an independent variable whereas firm performance was considered to be a dependent variable. 22 studies empirically examined service innovation and firm performance while 46 studies conceptually discussed the issues from various perspectives. Twelve of the 22 empirical studies used an online click only survey, 7 used mail surveys and 2 studies employed an electronic mail survey strategy. The sample size of these empirical studies ranged from 1 to 6,890 with a response rate as low as 17.5% and as high as 61.23%.

Service innovation has been studied as a construct developed by multiple independent variables. The relevant independent variables are stakeholder collaboration, dynamic capabilities and knowledge integration mechanisms. A total of 5 studies considered all three of the said IV variable, 12 studies used stakeholder collaboration as IV, 9 studies used knowledge integration and 5 employed dynamic capabilities as the independent variable. **Table-10** describes the frequencies with which these variables emerged in different studies. Service innovation firm performance is mediated by a number of predictor variables. A total of 6 studies examined 12 predictor variables. Content analysis shows the use of a number of items to measure the key independent variables. The list of items used is shown in **Table-10**.

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Table-10: List of studies discussing the IV and DV

Source	Independent Variable	Frequency
(Zhou, Gao, Yang, & Zhou, 2005), (Ordanini & Parasuraman, 2011), (Hertog, 2000) (Cheng & Krumwiede, 2012), (Paladino, 2007),	Stakeholder collaboration Market orientation Innovation orientation	5
(Lawson & Samson, 2001), (Ordanini & Parasuraman, 2011),(Faems, Van Looy, & Debackere, 2005), , (Wang & Ahmed, 2007), (Svensson et al., 2012)	External partner collaboration	5
(Ray, Barney, & Muhanna, 2004), (Sircar, Turnbow, & Bordoloi, 2000),(Bharadwaj, 2000), (Ordanini & Parasuraman, 2011)	Knowledge interfaces	4

Only a few studies conceptualise sustainability orientation as a variable influencing firm performance (Kuckertz & Wagner, 2010). These studies indicated that an orientation towards sustainability is not only positively linked to business performance, but also helps to achieve sustainable and long-term competitive advantage. **Table-11** summarises those studies that considered the link between sustainability orientation and firm performance.

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Table-11: List of studies discussing the link between sustainability orientation and firm Performance

Author/study	Framing	Areas examined	Findings
(Ameer & Othman, 2012), (Wagner & Llerena, 2008)	Sustainability-Financial performance	Global companies	Sustainability orientation is positively linked with financial performance
(Hansen, Grosse-dunker, & Reichwald, 2009), (Wagner & Llerena, 2008)	Sustainability-Innovation performance	Service firm	Sustainability orientation improves the firms' innovation performance
(Dewhurst & Thomas, 2003)	Sustainability – Environmental performance	Tourism	Sustainability orientation enhances environmental performance
(Markley & Davis, 2007),	Sustainability-Competitive advantage	Supply chain	Sustainability orientation increases the firms' competitive advantage
(Iles, 2007)	Accountability-Sustainability-business advantage	Food industry	Accountability induces sustainability which helps to achieve business advantage
(Kuckertz & Wagner, 2010)	Sustainable entrepreneurship	Entrepreneurial orientation	There is a positive relationship between an individual's sustainability orientation and entrepreneurial intention

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CHAPTER-4

4.0 The conceptual framework:

The previous chapter described the chosen research approach and various data collection and analysis techniques used. The results of the meta-analysis demonstrated the correlation coefficient and significance of the independent and dependent variables. Findings of the 'inductive content analysis' reveal the relationship of the relevant independent and dependent variables and provide detailed insights into the various measurement constructs. This chapter focuses on the content analysis technique which is qualitative in character. Based on the content analysis review this chapter conceptualises the relevant variables and their relationship by suggesting a set of research propositions. **Table-12** describes the operational definition of the different independent and dependent variables as documented in the relevant literature.

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Table-12: Operational definition of the IV & DV

	Variable	Operational Definition
(Hult et al., 2004), (Ordanini & Parasuraman, 2011), (Chen et al., 2009)	Dynamic Capabilities • *Market orientation* • *Innovation orientation*	The dynamic capabilities are based on two aspects - Market orientation and innovation orientation. Market orientation refers to the organisationorganisational culture that most effectively and efficiently creates the necessary behavior for the creation of superior value for buyers. The innovation orientation measures the organisationorganisational perception that change and creativity are supported and stimulated through new services, as well as risk-taking in new areas where members have little experience.
(Lawson & Samson, 2001), (Ordanini & Parasuraman, 2011),(Faems et al., 2005), , (Wang & Ahmed, 2007), (Svensson et al., 2012)	Collaborative competence • *External partner Collaboration* • *Customer Collaboration*	Stakeholder collaboration measures the collaborative competence of the firm developed through an exchange relationship. Collaboration is viewed from two dimensions- External partner collaboration and customer collaboration. The external partner collaboration measures the extant relationship with external entities who can integrate diverse ideas and knowledge to develop services that take into account the welfare of the environment, society and consumers. Customer collaboration refers to the firm's ability to collaborate with customers to co-create value.
(Ray et al., 2004), (Sircar et al., 2000),(Bharadwaj, 2000), (Ordanini & Parasuraman, 2011)	Knowledge interfaces • *human IT resources* • *technical and managerial IT skills* • *IT-enabled intangibles*	The knowledge interfaces measure the firm's ability to integrate knowledge from diverse sources in the service innovation process. It includes the tangible and physical resources including computer and communication technologies as well as shareable technical platforms and databases.
(Porter, 1990), (Chen et al., 2009)	Firm performance • *Financial performance* • *Non-financial performance*	Firm performance is measures financial and non-financial indicators listed below: • profitability • market share • competitive advantage • attracting new customers • perceived image • customer loyalty • reputation
(Schaltegger & Lüdeke-Freund, 2012), (Kuckertz &	Sustainability orientation	Sustainability orientation measures the firm's promotion of sustainability goals in three areas – society and community welfare, safeguarding the

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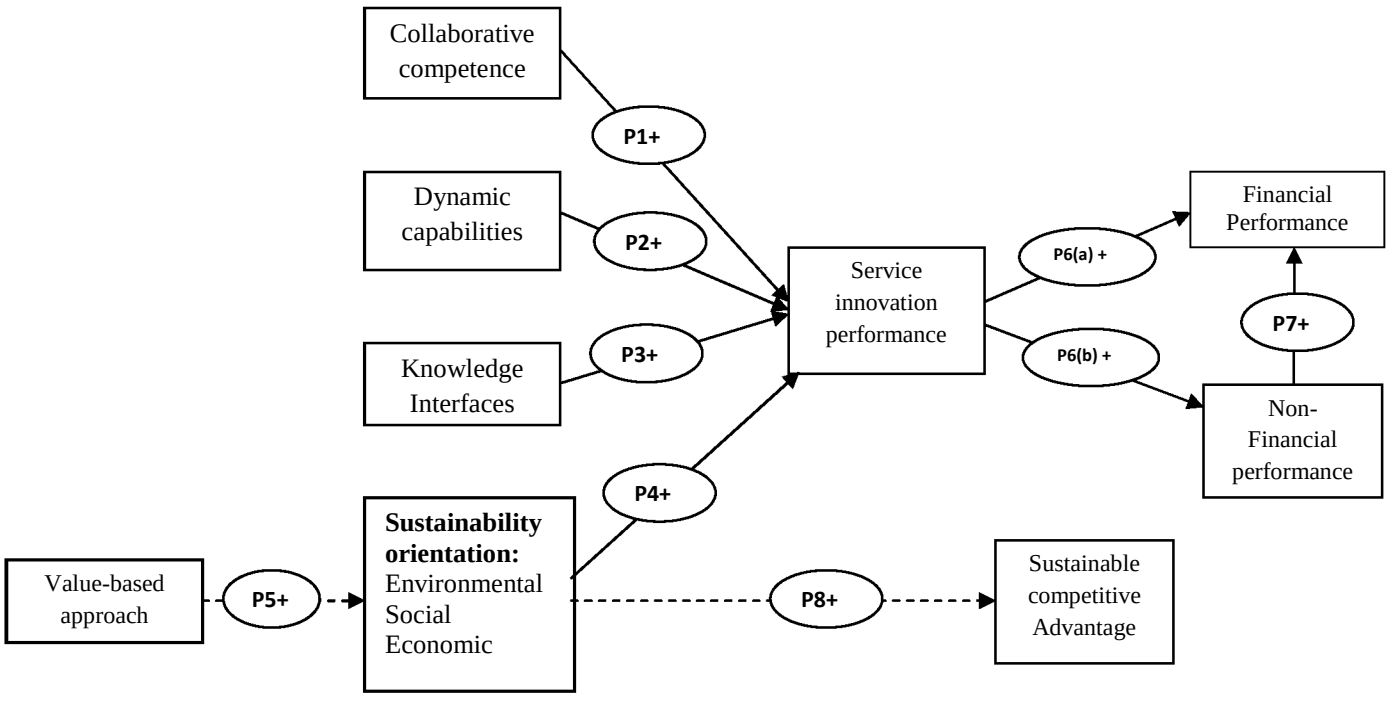
Wagner, 2010),(Elkington, 1998)	• *Environmental safeguard* • *Social welfare* • *Economic prosperity*	environment and economic development.

Based on the above mentioned definitions and relationships revealed in the meta-analysis, this thesis develops a conceptual framework **(Figure-11)**. The framework highlights the relationship between the independent and dependent variables identified in this study. The independent and dependent variables were taken from a number of sources which posited the interrelations among the variables. **Appendix-5** contains the list of these studies that were used to develop the framework.

Figure-11: The conceptual framework



4.1 Research propositions:

The conceptual framework constructed above is assumed to be a comprehensive framework linking the ethical dimension of business with service innovation constructs. These assumptions are further supported by some research propositions that are described below.

4.1.1 Stakeholder collaborations:

Service by nature is a form of value creation and co-creation (Normann & Ramirez, 1993; Ordanini & Parasuraman, 2011; Prahalad & Ramaswamy, 2000). One of the dominant features of service is that the 'value-in-use' (Vargo & Lusch, 2004b) is the result of a co-creation between the business, its service network partners and customers. The co-creation of value by service systems incorporates the integration and application of resources provided by service providers (businesses) and service beneficiaries (customers).

The S-D logic brings together the strands that make up co-creation. One of the foundational premises of S-D logic asserts that "the customer is always a co-creator of value" (Vargo & Lusch, 2004b). The underlying idea is that value-in-use is developed by the interaction between the service firm and its customers. This interaction happens because they have mutually beneficial relationships which help to co-create value through 'shared inventiveness' (Vargo & Lusch, 2008). Customers also take part actively in developing new services or modifying existing ones. Thus co-creation helps to utilize not only the operant resources of the firm but the knowledge and skills of the customers to create an innovative service, i.e. *'value-in-use'*. According to S-D logic the ability to collaborate with customers during service development transforms the customer into an

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operant resource from which the firm can draw innovation and competitiveness (Vargo & Lusch, 2004b). Prahalad and Ramaswamy (2000) consider collaboration to be a source of competence for the firm in an effort to gain competitive advantage. Witell et al. (2011) posited that offerings developed through collaborative efforts are more profitable than traditional market research-based service innovation.

Collaboration between the firm and its network partners is another source of knowledge for service innovation. The FP9 (see **Appendix-4**) of the S-D logic states that: "All economic and social actors are resource integrators." To explain this Vargo and Lusch (2004a) suggested that all the parties involved in the value creation process are resource integrators. Working together it is possible to develop new and better value-in-use. Service innovation driven by this collaborative and networked approach is more likely to be superior to those driven by individual efforts. Such collaborations bring together expertise derived externally and they integrate to stimulate further innovation (Afuah, 2001). Moreover this will increase the radical nature of the service innovation (Ordanini & Parasuraman, 2011).

From the above discourse it is conceptualised:

> ***Proposition 1:*** *The more collaboration there is between exchange partners (stakeholders, customers), the greater the service innovation will be.*

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4.1.2 Dynamic capabilities:

Developing the *dynamic capabilities* has been considered one of the vital constructs that drive a firm's innovative service performance (Kindström, Kowalkowski, & Sandberg, 2012; Ordanini & Parasuraman, 2011; Salunke, Weerawardena, & McColl-Kennedy, 2011). The dynamic capability of the firm implies the capacity to create, extend and modify both the operand and operant resources over time (Helfat & Peteraf, 2009). Teece (2007) expands this idea further in that he disaggregates the dynamic capabilities of the firm into three different dimensions: 1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and when necessary, reconfiguring the business enterprise's intangible and tangible assets. The novelty of this concept is that it decouples innovation from the technological orientation and focuses on tangible and intangible resource use. Ordanini and Parasuraman (2011) based on the work of Menguc and Auh (2006) combines 'dynamic capability' of customer orientation' with 'innovation orientation' that enables to achieve superior dynamic capabilities.

Based on these multi-dimensional viewpoints it can be inferred that dynamic capabilities enable firms to blend all their resources to innovate a 'difficult-to-replicate' (Teece, 2007, p, 1) service portfolio. The diversity of this resource integration will enhance the business's dynamic character both incrementally and substantially. This not only helps to respond to the changing market situation but also help to sustain competitive advantage in the marketplace. Therefore the following proposition can be posited that:

> ***Proposition 2:*** *The more the diverse resources are integrated to form dynamic capabilities, the greater the level of service innovation success.*

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4.1.3 Knowledge integration:

The integration of diverse resources such as IT infrastructure, human skills and IT resources forms one of the major variables of service innovation impacting on firm performance. Cheng et al. (2009) highlight the IT infrastructure and human IT skill as a source of knowledge integration. The S-D logic posits only the intangible assets or the operant resources as knowledge integration helping the firm to attain a competitive advantage. Integration of knowledge from different sources helps the firm to synchronize its knowledge and expertise with what is happening in the marketplace to create new service offerings (De Luca & Atuahene-Gima, 2007). It also helps to reduce inefficiencies during the innovation process (Sheremata, 2000), and exploit the acquired knowledge for competitive advantage (Zahra & Nielsen, 2002). The following proposition is posited:

> ***Proposition 3:*** *The higher the degree of knowledge integration of diverse resources, then the greater the level of service innovation success.*

4.1.4 Sustainability orientation: Novelty of this research

The variables discussed before have been widely researched by many scholars. The empirical evidence is plenty as indicated in the literature. While it has been widely researched and analysed from different viewpoints, the relationship between sustainability and service innovation is still largely unknown. Therefore, ‘sustainability orientation’ is a novel inclusion serving as an independent variable positively linked with business performance.

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The TBL approach posits a strong positive relationship between business performance and sustainability framework. Jamali (2006) suggests that an organisation can initiate sustainable development through a management approach that integrates the triple bottom line and develops learning organisation characteristics. Markley and Davis (2007) provide evidence to support the notion that organisations can improve their competitive advantage by focusing on the triple bottom line. Porter and Linde (1995) considered this to be the basis of a sustainability-driven business. This study contends that properly designed environmental standards can trigger innovations that reduce the total cost and improve value, thus creating a competitive advantage. Wagner and Llerena (2008) indicate sustainability-related innovation is better managed innovation. Hansen et al. (2009) simplify the concept into two dimensions and argue that sustainability has significant innovation potential and creating new business opportunities. These two dimensions are 'regulatory push' (environment-related regulations trigger innovation) and 'vision pull' (sustainability presents a new source of ideas and visions). Based on this discussion the following proposition is proposed:

Proposition 4: *Sustainability orientation drives the service firm's innovative performance.*

Edvardsson and Enquist (2011) detected a link between service innovation and sustainability. Their study claims that service innovation should not simply aim to create 'economic value'. It should also be guided by 'ethical value'. More precisely they advocated a shift from 'value' to 'values'. They further expand the term 'values' positing stating "such values include the principles, standards, ethics, and ideals that guide the

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actions of people and organisations alike" (Edvardsson & Enquist, 2011, p.2). Therefore sustainability orientation evinces from core ethical values which could be postulated as:

Proposition 5: *Sustainability orientation originates from a values-based approach which in turn is derived from the firm's ethical orientation.*

Services developed using this 'values-based' approach are not only good sustainability motives but also serve as benchmark values which are far more enduring and stable (Edvardsson & Enquist, 2011). Edvardsson and Enquist (2011) supported their argument with empirical evidence derived from several successful business firms which use the three pillars of triple-bottom line. Another recent study by Ameer and Radiah (2012) concludes that sustainable business firms perform much better financially compared to non-sustainable business firms. From this it is conceptualised that:

Proposition 6: *Sustainability-oriented service innovations are positively linked to both financial and non-financial business performance.*

The firms that provide sustainable service are rewarded with high customer loyalty and an acceptable public image which is referred to as non-financial performance. Chen et al. (2009) claim that non-financial performance is positively linked with a business's financial performance. Therefore it is posited that:

Proposition 7: *Non-financial performance is positively linked to financial performance.*

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Sustainability orientation demands that innovation must become more environmentally and socially benign (Hansen et al., 2009). This not only creates new innovation opportunities but also helps the service firm to achieve competitive advantage. Therefore it is put forward that:

Proposition 8: *Values-driven service innovation helps to achieve sustainable competitive advantage.*

The research propositions posited here are grounded in the relevant literature and theoretical dimension, which shows a positive link between sustainable service practice and firm performance. These research propositions put forth valuable insights that help to clarify the findings of studies on the relationship between sustainability and firm performance in the service arena. It also indicates clear research direction which could be empirically investigated to infer more reliable conclusion thus validate them.

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CHAPTER- 5

5.0 Summary and implications:

The previous chapter developed a conceptual framework followed by focused research propositions. This was done through the statistical inferences of a meta-analytic review and exploring the relevant constructs through content analysis. Theorising the research propositions was based on the relevant literature and other theoretical concepts. This chapter sheds light on the research implications, contributions and limitations of this study. It will also suggest some avenues for future research on the topic of sustainable business practices in the service sector.

5.1 Research implications:

The changing needs of stakeholders, technological development and economic pressures contribute to the need for organisations to change significantly the ways in which they think and act (Brown & Eisenhardt, 1998). Recent evidence shows that sustainability has grown from being a movement focused on environmental concerns, to a widely accepted framework where individuals, businesses, society and governments make decisions that balance ecological, economic, and social concerns now and for the future. The essence of this form of development is a stable relationship between business activities and the natural world, which does not compromise the prospects of future generations (Mintzer, 1992). The quest for sustainability is to transform the competitive landscape (Nidumolu, Prahalad, & Rangaswami, 2009), which eventually leads companies to change the way they manage products, services, technologies and business models.

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The role of innovation so that the goals of sustainable development through business activities can be achieved has been widely recognised and received increasing scholarly attention. Despite its growing acceptance, the idea of sustainable innovation in the business sector is still hampered by much lack of consensus (Rennings, 2000). According to Smith et al. (2010), …..*Innovation studies has much to offer those interested in ensuring new products, processes and services improve human wellbeing without detriment to environmental life support systems*.

Since the service is the dominant sector of the economy it has far greater responsibility to achieve sustainable goals and not just focus on profitability. Furthermore, service is perceived as a strong mechanism for creating 'customer value' and it is the primary mechanism for meeting consumers' needs. This research envisions contributing to this relatively unexplored topic of sustainable innovation. Examining the service sector has important implications for both academics and practitioners who intend to explore these areas in more detail in the future.

5.2 Expected contributions of this research:

This research by looking at the intersection of two disparate streams of research contributes to the literature in many ways. These can be divided into two themes that are summarised below: – **i) Theoretical contribution** and **ii) Contextual contribution**.

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5.2.1 Theoretical contribution:

This study makes a very important theoretical contribution to the specific body of knowledge. The different theories discussed in this study provide very rich input despite lacking in some. **First,** S-D logic has been widely accepted as the theoretical milestone from which to develop service science. This theory while it clarifies the concept of 'value-in-use' or 'value co-creation' does not consider any ethical content (Abela & Murphy, 2008). The growing interest in sustainable thinking in business has not been considered in S-D logic and this is regarded as a major flaw in the theory (Sebhatu, 2010). This research has integrated S-D logic with the TBL approach to overcome this problem and make it more holistic.

Second, stakeholder theory explicates a shared value creation for different stakeholders and contends that businesses exist to satisfy the needs of stakeholders within the business and in the wider society. However, stakeholder theory has been criticised for not considering that environmental aspects are critical to business operations (Eisingerich et al., 2009). Therefore the conceptual framework posited herein could consider mitigating this problem by integrating the TBL that does include environmental safeguards as one of the three pillars.

5.2.2 The contextual contribution:

This study also makes significant contributions to the actual context being analysed. **First,** the world's innovation landscape is dramatically shifting. Many product-centric organisations are changing their strategy by implementing service innovation. While there still exists a large research gap this research unveils the relationship between sustainability

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and business performance using empirical evidence documented in a large number of studies. Through developing the construct *'sustainability orientation'* in conjunction with empirical investigation this research contributes to our knowledge of how sustainability and business are closely related.

Second, sustainable service innovation has been highly regarded as a new topic of service research (Ostrom et al., 2010). This study contributes to this research gap by establishing sustainability orientation as a key variable.

Third, the inclusion of the triple-bottom line concept in business has been mostly perceived as an act of CSR or philanthropy (Sebhatu, 2010). This study reveals the positive relationship between sustainability orientation and business performance through empirical evidence collected from the service sector.

Fourth, while previous studies have yielded inconsistent results, the meta-analysis conducted in this study suggests that service innovation does have a positive relationship with firm performance. Furthermore if services are grounded on sustainability principles then they will financially and non-financially perform well both.

5.3 Limitations and directions for future research:

This study concedes that there are some obvious limitations. While these limitations may be considered to have had some impact on the outcomes of the study, these did create significant opportunities for future research. **First,** the study intended to provide a very comprehensive review to date of empirical research on the relationship between sustainable service innovation and firm performance. However, this research did not come across any empirical study on sustainability orientated service innovation except few of the

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conceptual studies by Abela and Murphy (2008), Edvardsson and Enquist (2008), Sayem (2012), and Schaltegger and Wagner (2006), which indicated a relationship between sustainability and positive firm performance. Consequently this study resorted to two different bodies of literature for the analysis and development of inferences. This might be considered to be a major limiting factor of this study. Therefore future researchers should try to avoid this by reliability in their empirical analyses.

Second, the meta-analysis is limited only to those studies found in selected database and the chosen time frame. Though these factors were justified it is obvious that broadening the time frame and themes covered would yield more information. Therefore, this study suggests that future research could endeavor to investigate more databases, other sources and consider a wider time frame to examine the relationship between sustainable service innovation and firm performance.

Third, this study strives to examine sustainability orientation in the service milieu. It may be regarded as a myopic approach since sustainability is a widespread phenomenon concerning both the manufacturing and service sectors. Therefore, an industry-wide approach to sustainable service innovation with empirical evidence is preferred.

Fourth and finally, the research propositions posited in this study are based on the content analysis and theoretical discussion. Though it is based on very solid theoretical underpinnings, it could be criticised as inconclusive which raises questions concerning empirical generalisation. It is therefore suggested that a holistic and empirical examination of sustainability oriented services should be conducted. Doing so will in turn verify the research propositions suggested here.

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5.4 Conclusion:

Based on the theoretical discussion and evidence gathered from the extant literature it can be posited without any doubt, that the implementation and management of sustainability in the business sector is a challenging yet insufficiently researched area. Furthermore, the structural peculiarities of the service industry make it even complex to incorporate sustainability when developing a new and innovative service. The core question remains whether sustainability orientation consists of profit increasing, social and environmental activities, or is in fact a cost increasing measure. While the answer will largely be contextual, the current study is an initial response to this call to address the knowledge gap. Consequently, the framework and propositions discussed in this thesis can be regarded as novel in terms of offering a structural guideline. Therefore it is very likely to raise further criticism. Though the research is grounded on a very sound theoretical basis and arguments, the author encourages future researchers to explore this untapped area with a more holistic approach. As such further comments and research inputs would be welcomed to enrich this comparatively new subject of research. To conclude it is worth quoting from Dr. Muhammad Yunus[7]. He posited that:

There is the expression of selfishness and there is the expression of selflessness - but economists or theoreticians never touched that part. They said: 'Go and become a philanthropist.' I said, 'No, I can do that in the business world, create a different kind of business - a business based on selflessness.'

[7] See http://www.newstatesman.com/economy/2012/01/interview-business-money

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References:

Aas, T. H., & Pedersen, P. E. (2011). The impact of service innovation on firm-level financial performance. *The Service Industries Journal, 31*(13), 2071-2090.

Abela, A. V., & Murphy, P. E. (2008). Marketing with integrity: ethics and the service dominant logic for marketing. *Journal of the Academy of Marketing Science, 36*(1), 39-53.

Afuah, A. (2001). Dynamic boundaries of the firm: are firms better off being vertically integrated in the face of a technological change? *Academy of Management journal, 44*(6), 1211-1228.

Ameer, R., & Othman, R. (2012). Sustainability Practices and Corporate Financial Performance: A Study Based on the Top Global Corporations. *Journal of Business Ethics, 108*, 61-79.

Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic Management Journal, 22*(6-7), 493-520.

Anderson, L., Ostrom, A., Corus, C., Fisk, R., Gallan, A. S., Brown, S., . . . Williams, J. (2012). Transformative service research: An agenda for the future. *Journal of Business Research, In Press*. doi: http://dx.doi.org/10.1016/j.jbusres.2012.08.013

Avlonitis, G. J., Papastathopoulou, P. G., & Gounaris, S. P. (2001). An empirically-based typology of product innovativeness for new financial services: Success and failure scenarios. *Journal of Product Innovation Management, 18*(5), 324-342.

Baba, Y. (2012). Adopting a specific innovation type versus composition of different innovation types: Case study of a Ghanaian bank. *International Journal of Bank Marketing, 30*(3), 218-240.

`

Bansal, P., & Roth, K. (2000). Why companies go green: a model of ecological responsiveness. *Academy of Management journal*, 717-736.

Baregheh, A., Rowley, J., & Sambrook, S. (2009). Towards a multidisciplinary definition of innovation. *Management decision, 47*(8), 1323-1339.

Belz, F., & Peattie, K. (2009). *Sustainability Marketing – A Global Perspective*. Chicester: John Wiley & Sons Ltd.

Berry, L. L., Shankar, V., Parish, J. T., Cadwallader, S., & Dotzel, T. (2006). Creating new markets through service innovation: Cambridge.

Bharadwaj, A. S. (2000). A resource-based perspective on information technology capability and firm performance: an empirical investigation. *MIS quarterly*, 169-196.

Bitner, M., & Brown, S. (2008). The service imperative. *Business Horizons, 51*, 39–46.

Black, T. R. (1999). *Doing quantitative research in the social sciences: An integrated approach to research design, measurement and statistics*: Sage Publications Limited.

Blazevic, V., & Lievens, A. (2004). Learning during the new financial service innovation process: Antecedents and performance effects. *Journal of Business Research, 57*(4), 374-391. doi: http://dx.doi.org/10.1016/S0148-2963(02)00272-2

Boons, F., & Lüdeke-Freund, F. (2012). Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. *Journal of Cleaner Production*.

Brown, S. L., & Eisenhardt, K. M. (1998). *Competing on the edge: Strategy as strategy chaos*. Boston, MA.: Harvard Business School Publication.

Brundtland, H. (1987). *Our Common Future*. Oxford University Press for World Commission on Environment and Development.

`

Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done? *Qualitative research, 6*(1), 97-113.

Cainelli, G., Evangelista, R., & Savona, M. (2006). Innovation and economic performance in services: a firm-level analysis. *Cambridge Journal of Economics, 30*(3), 435-458.

Camacho, J. A., & Rodriguez, M. (2008). Patterns of innovation in the service sector: some insights from the Spanish innovation survey. *Economics of Innovation and New Technology, 17*(5), 459-471.

Carter, S. M., & Little, M. (2007). Justifying knowledge, justifying method, taking action: Epistemologies, methodologies, and methods in qualitative research. *Qualitative Health Research, 17*(10), 1316-1328.

Castro, L. M., Montoro-Sanchez, A., & Ortiz-De-Urbina-Criado, M. (2010). Innovation in services industries: current and future trends. *The Service Industries Journal, 31*(1), 7-20.

Cavana, R. Y., Delahaye, B. L., & Sekaran, U. (2001). Applied business research. *Qualitative and Quantitative Methods*.

Cavanagh, S. (1997). Content analysis: concepts, methods and applications. *Nurse Researcher, 4*(5-16).

Chabowski, B. R., Mena, J. A., & Gonzalez-Padron, T. L. (2011). The structure of sustainability research in marketing, 1958–2008: a basis for future research opportunities. *Journal of the Academy of Marketing Science, 39*(1), 55-70.

Charter, M., Gray, C., Clark, T., & Woolman, T. (2008). Review: the role of business in realising sustainable consumption and production. *System Innovation for Sustainability 1: Perspectives on Radical Changes to Sust, 1*(94), 45-69.

`

Chen, J.-S., Hung Tai Tsou, & Huang, A. Y.-H. (2009). Service Delivery Innovation: Antecedents and Impact on Firm Performance. *Journal of Service Research, 12*(1), 36-55. doi: 10.1177/1094670509338619

Cheng, C. C., & Krumwiede, D. (2012). The role of service innovation in the market orientation—new service performance linkage. *Technovation, 32*(7–8), 487-497. doi: http://dx.doi.org/10.1016/j.technovation.2012.03.006

Coombs, R., & Miles, I. (2000). Innovation, measurement and services: the new problematique *Innovation systems in the service economy* (pp. 85-103): Springer.

Creswell, J. W., & Clark, V. L. P. (2007). *Designing and conducting mixed methods research*: Wiley Online Library.

Cronin, J. J., Smith, S. J., Gleim, M. R., Ramirez, E., & Martinez, J. D. (2011). Green marketing strategies: an examination of stakeholders and the opportunities they present. *Journal of the Academy of Marketing Science, 39*(1), 158-174.

Damanpour, F., Walker, R. M., & Avellaneda, C. N. (2009). Combinative effects of innovation types and organizational performance: A longitudinal study of service organizations. *Journal of Management Studies, 46*(4), 650-675.

Dao, V., Langella, I., & Carbo, J. (2011). From green to sustainability: Information Technology and an integrated sustainability framework. *The Journal of Strategic Information Systems, 20*(1), 63-79.

Davis, D. (2000). *Business Research for Decision Making* (5th ed.). Belmont: Duxbury Press.

De Luca, L. M., & Atuahene-Gima, K. (2007). Market knowledge dimensions and cross-functional collaboration: examining the different routes to product innovation performance. *Journal of Marketing*, 95-112.

`

Demirag, I., Barry, J., & Khadaroo, I. (2005). *Concluding remarks on emerging governance structures and practices: the state, the market and the*

voice of civil society; in Demirag I. (Ed.), Corporate Social Responsibility, Accountability and Governance: Global Perspectives. Sheffield: Greenleaf Publishing.

Denzin, N. K., & Lincoln, Y. S. (1998). *Strategies of qualitative inquiry*. California: Sage Publications.

Deshpande, R. (1983). Paradigms Lost: On Theory and Method in Research in Marketing. *Journal of Marketing, 47*(Fall), 101-110.

Dewhurst, H., & Thomas, R. (2003). Encouraging Sustainable Business Practices in a Non-regulatory Environment: A Case Study of Small Tourism Firms in a UK National Park. *Journal of Sustainable Tourism, 11*(5), 383-403.

Diamond Jr, A. M. (2006). Schumpeter's Creative Destruction: A Review of the Evidence. *Journal of Private Enterprise, 22*(1), 120-146.

Djellal, F., & Gallouj, F. (2001). Patterns of innovation organisation in service firms: postal survey results and theoretical models. *Science and Public Policy, 28*(1), 57-67.

Djellal, F., & Gallouj, F. (2012). Social Innovation and Service Innovation *Challenge Social Innovation* (pp. 119-137): Springer.

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review, 20*(1), 65-91.

Drejer, I. (2004). Identifying innovation in surveys of services: a Schumpeterian perspective. *Research Policy, 33*(3), 551-562.

`

Duffy, M. E. (1987). Methodological triangulation: a vehicle for merging quantitative and qualitative research methods. *Journal of Nursing Scholarship, 19*(3), 130-133.

Easton, G. (2002). Marketing: a critical realist approach. *Journal of Business Research, 55*(2), 103-109.

Edvardsson, B., & Enquist, B. (2008). *Values-based Service for Sustainable Business: Lessons from IKEA* (Vol. 5): Routledge.

Edvardsson, B., & Enquist, B. (2011). The service excellence and innovation model: lessons from IKEA and other service frontiers. *Total Quality Management & Business Excellence, 22*(5), 535-551.

Edvardsson, B., Gustafsson, A., Sandén, B., & Johnson, M. (2000). New service development and innovation in the new economy.

Eisenhardt, K. M. (1989). Building Theories From Case Study Research. *The Academy of Management Review, 14*(4), 532-550.

Eisingerich, A. B., Rubera, G., & Seifert, M. (2009). Managing Service Innovation and Interorganizational Relationships for Firm Performance To Commit or Diversify? *Journal of Service Research, 11*(4), 344-356.

Elkington, J. (1998). Partnerships from cannibals with forks: The triple bottom line of 21st-century business. *Environmental Quality Management, 8*(1), 37-51.

Enquist, B., Edvardsson, B., & Sebhatu, S. P. (2007). Values-based service quality for sustainable business. *Managing Service Quality, 17*(4), 385-403.

Ettlie, J. E., & Rosenthal, S. R. (2012). Service Innovation in Manufacturing. *Journal of Service Management, 23*(3), 440-454.

`

Evangelista, R., & Sirilli, G. (1998). Innovation in the service sector results from the Italian statistical survey. *Technological Forecasting and Social Change, 58*(3), 251-269.

Faems, D., Van Looy, B., & Debackere, K. (2005). Interorganizational collaboration and innovation: toward a portfolio approach*. *Journal of Product Innovation Management, 22*(3), 238-250.

Fernando, R. (2012). Sustainable globalization and implications for strategic corporate and national sustainability. *Corporate Governance, 12*(4), 579-589.

Field, A. P. (2003). The problems in using fixed-effects models of meta-analysis on real-world data. *Understanding Statistics: Statistical Issues in Psychology, Education, and the Social Sciences, 2*(2), 105-124.

Flick, U. (2004). *An introduction to qualitative research* (4th ed.).

Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Boston.

Freling, T. H., & Forbes, L. (2005). An examination of brand personality through methodological triangulation. *Journal of Brand Management, 13*(2), 148-162.

Gallouj, F., & Savona, M. (2009). Innovation in services: a review of the debate and a research agenda. *Journal of evolutionary economics, 19*(2), 149-172.

Gallouj, F., & Weinstein, O. (1997). Innovation in services. *Research Policy, 26*(4), 537-556.

Garcia, R., & Calantone, R. (2002). A critical look at technological innovation typology and innovativeness terminology: a literature review. *Journal of Product Innovation Management, 19*(2), 110-132.

`

Gelo, O., Braakmann, D., & Benetka, G. (2008). Quantitative and Qualitative Research: Beyond the Debate. *Integrative Psychological and Behavioral Science, 42*(3), 266-290. doi: 10.1007/s12124-008-9078-3

Glass, G. V., McGaw, B., & Smith, M. L. (1981). *Meta-analysis in social research* (Vol. 56): Sage Publications Beverly Hills, CA.

GoA. (2003). Triple Bottom Line Reporting in Australia: A Guide to reporting Against Environmental Indicators, Department of Environmental and Heritage, Government of Australia.

Grawe, S. J., Chen, H., & Daugherty, P. J. (2009). The relationship between strategic orientation, service innovation, and performance. *International Journal of Physical Distribution & Logistics Management, 39*(4), 282-300.

Grimes, T. R. (1990). Discussion: Truth, Content and the Hypothetico-Deductive Method. *Philosophy of Science, 57*, 514–522.

Gronroos, C. (2000). *Service Management and Marketing: A Customer Relationship Management Approach*. West Sussex, UK.

Grove, S. J., Fisk, R. P., Pickett, G. M., & Kangun, N. (1996). Going green in the service sector: Social responsibility issues, implications and implementation. *European journal of marketing, 30*(5), 56-66.

Hansen, E. G., Grosse-dunker, F., & Reichwald, R. (2009). Sustainability innovation cube —a framework to evaluate sustainability-oriented innovations. *International Journal of Innovation Management, 13*(4).

Helfat, C., & Peteraf, M. (2009). Understanding dynamic capabilities: progress along a developmental path. *Strategic organization, 7*(1), 91.

`

Hertog, P. d. (2000). Knowledge-intensive business services as co-producers of innovation. *International Journal of Innovation Management, 4*(04), 491-528.

Hubbard, G. (2009). Measuring organizational performance: Beyond the triple bottom line. *Business Strategy and the Environment, 18*(3), 177-191.

Hughes, A., & Wood, E. (2000). *Rethinking innovation comparisons between manufacturing and services: the experience of the CBR SME surveys in the UK*: Springer.

Hult, G., Hurley, R., & Knight, G. (2004). Innovativeness: itsantecedents and impact on business performance. *Industrial Marketing Management, 33*, 429–438.

Hunt, S. D. (1991). Positivism and paradigm dominance in consumer research: toward critical pluralism and rapprochement. *Journal of Consumer Research*, 32-44.

Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings*: SAGE Publications, Incorporated.

Hurley, R. F., & Hult, G. T. M. (1998). Innovation, market orientation, and organizational learning: an integration and empirical examination. *The Journal of Marketing*, 42-54.

Iles, A. (2007). Seeing sustainability in business operations: US and British food retailer experiments with accountability. *Business Strategy and the Environment, 16*(4), 290-301. doi: 10.1002/bse.483

Jamali, D. (2006). Insights into triple bottom line integration from a learning organization perspective. *Business Process Management Journal, 12*(6), 809-821.

Jeucken, M. (2004). *Sustainability in Finance: Banking on the Planet*: Eburon Academic Publishers.

`

Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, *24*(4), 602-611.

Kaeufer, K. (2010). Banking as a Vehicle for Socio-economic Development and Change: Case Studies of Socially Responsible and Green Banks: Cambridge, MA: Presencing Institute.

Kindström, D., Kowalkowski, C., & Sandberg, E. (2012). Enabling service innovation: A dynamic capabilities approach. *Journal of Business Research*.

Kuckertz, A., & Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions — Investigating the role of business experience. *Journal of Business Venturing*, *25*(5), 524-539. doi: http://dx.doi.org/10.1016/j.jbusvent.2009.09.001

Lawson, B., & Samson, D. (2001). Developing innovation capability in organisations: a dynamic capabilities approach. *International Journal of Innovation Management*, *5*(03), 377-400.

Lin, C. Y.-Y., & Chen, M. Y.-C. (2007). Does innovation lead to performance? An empirical study of SMEs in Taiwan. *Management Research News*, *30*(2), 115-132.

Love, J. H., Roper, S., & Hewitt-Dundas, N. (2010). Service innovation, embeddedness and business performance: evidence from Northern Ireland. *Regional studies*, *44*(8), 983-1004.

Luecke, R., & Katz, R. (2003). *Managing Creativity and Innovation*: Harvard Business School Press, MA.

Lusch, R., Vargo, S., & Obrien, M. (2007). Competing through service: Insights from service-dominant logic. *Journal of Retailing*, *83*(1), 5-18.

`

Lusch, R. F., & Vargo, S. L. (2006). Service-dominant logic: reactions, reflections and refinements. *Marketing theory*, *6*(3), 281-288.

Mangan, J., Lalwani, C., & Gardner, B. (2004). Combining quantitative and qualitative methodologies in logistics research. *International Journal of Physical Distribution & Logistics Management*, *34*(7), 565-578.

Mansury, M. A., & Love, J. H. (2008). Innovation, productivity and growth in US business services: A firm-level analysis. *Technovation*, *28*(1), 52-62.

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization science*, *2*(1), 71-87.

Markley, M. J., & Davis, L. (2007). Exploring future competitive advantage through sustainable supply chains. *International Journal of Physical Distribution & Logistics Management*, *37*(9), 763-774.

Marshall, C., & Rossman, B. G. (1999). *Designing Qualitative Research* (3rd ed.): Sage Publication.

Mathison, S. (1988). Why triangulate? *Educational researcher*, *17*(2), 13-17.

McDermott, C. M., & Prajogo, D. I. (2012). Service innovation and performance in SMEs. *International Journal of Operations & Production Management*, *32*(2), 216-237.

McKee, D. L. (2008). Services, growth poles and advanced economies. *Service Business*, *2*(2), 99-107.

Melton, H. L., & Hartline, M. D. (2013). Employee Collaboration, Learning Orientation, and New Service Development Performance. *Journal of Service Research*, *16*(1), 67-81.

`

Menguc, B., & Auh, S. (2006). Creating a firm-level dynamic capability through capitalizing on market orientation and innovativeness. *Journal of the Academy of Marketing Science, 34*(1), 63-73.

Metters, R., & Marucheck, A. (2007). Academic Issues and Scholarly Reflections from Operations Management Researchers. *Decesions Sciences, 38*(2), 195-214.

Michel, S., Brown, S. W., & Gallan, A. S. (2008). An expanded and strategic view of discontinuous innovations: deploying a service-dominant logic. *Journal of the Academy of Marketing Science, 36*(1), 54-66.

Mick, D. G., Pettigrew, S., Pechmann, C., & Ozanne, J. L. (2012). Origins, qualities, and envisionments of transformative consumer research. *Transformative consumer research for personal and collective well-being*, 3-24.

Mintzer, I. M. (1992). *Insurance against the heat trap: Estimating the costs of reducing the risks, in Pearman, G.I. (ed.), Limiting the greenhouse effect: Options for controlling atmospheric CO2 accumulation*. New York.: John Wiley.

Morrison-Saunders, A., & Therivel, R. (2006). Sustainability integration and assessment. *Journal of Environmental Assessment Policy and Management, 8*(03), 281-298.

Neely, A., Filippini, R., Forza, C., Vinelli, A., & Hii, J. (2001). A framework for analysing business performance, firm innovation and related contextual factors: perceptions of managers and policy makers in two European regions. *Integrated Manufacturing Systems, 12*(2), 114-124.

Neuman, W. (2006). Social research methods: Qualitative and quantitative approaches . US: Pearson Education: Inc.

Nidumolu, R., Prahalad, C. K., & Rangaswami, M. R. (2009). Whysustainabilityis now the key driver of innovation. *Harvard Business Review*, (September).

`

Nijssen, E., Hillebrand, B., & Vermeulen, P. (2005). Unraveling willingness to cannibalize: a closer look at the barrier to radical innovation. *Technovation, 25*(12), 1400–1409.

Normann, R., & Ramirez, R. (1993). From value chain to value constellation: designing interactive strategy. *Harvard Business Review, 71*, 65-65.

O' Cass, A., Song, M., & Yuan, L. (2012). Anatomy of service innovation: Introduction to the special issue. *Journal of Business Research, In press*. doi: http://dx.doi.org/10.1016/j.jbusres.2012.03.002

O'Reilly III, C. A., & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in organizational behavior*, *28*, 185-206.

OECD. (1997). OECD Proposed Guidelines for Collecting an Interpreting Technological Innovation Data. In Oslo-Manual (Ed.): OECD:Eurostat, Paris.

Oke, A. (2007). Innovation types and innovation management practices in service companies. *International Journal of Operations & Production Management, 27*(6), 564-587.

Ordanini, A., & Parasuraman, A. (2011). Service Innovation Viewed Through a Service-Dominant Logic Lens: A Conceptual Framework and Empirical Analysis. *Journal of Service Research, 14*(3).

Ordanini, A., & Rubera, G. (2010). How does the application of an IT service innovation affect firm performance? A theoretical framework and empirical analysis on e-commerce. *Information & Management, 47*(1), 60-67.

Orlitzky, M., & Benjamin, J. D. (2001). Corporate social performance and firm risk: A meta-analytic review. *Business & Society*, *40*(4), 369-396.

`

Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization studies, 24*(3), 403-441.

Ostrom, A. L., Bitner, M. J., Brown, S. W., Burkhard, K. A., Goul, M., Daniels, V. S., & Demirkan, H. (2010). Moving Forward and Making a Difference: Research Priorities for the Science of Service. *Journal of Service Research, 13*(1), 4-36.

Paladino, A. (2007). Investigating the Drivers of Innovation and New Product Success: A Comparison of Strategic Orientations*. *Journal of Product Innovation Management, 24*(6), 534-553. doi: 10.1111/j.1540-5885.2007.00270.x

Palmisano, S. J. (2006). The globally integrated enterprise. *Foreign Affairs, 85*(3), 127–136.

Paswan, A., D'Souza, D., & Zolfagharian, M. A. (2009). Toward a contextually anchored service innovation typology. *Decision Sciences, 40*(3), 513-540.

Peeters, H. (2005). Sustainable Development and the Role of the Financial World. In L. Hens & B. Nath (Eds.), *The World Summit on Sustainable Development* (pp. 241-274): Springer Netherlands.

Perry, C. (2000). Case research in marketing. *The Marketing Review, 1*(3), 303-323.

Porter, M. E. (1990). The competitive advantage of nations. *Harvard Business Review, 68*, 73–93.

Porter, M. E., & Van der Linde, C. (1995). Toward a new conception of the environment-competitiveness relationship. *The journal of economic perspectives, 9*(4), 97-118.

Prahalad, C. K., & Ramaswamy, V. (2000). Co-opting customer competence. *Harvard Business Review, 78*(1), 79-90.

`

Ramsey, E., & Bond, D. (2007). Evaluating public policy formation and support mechanisms for technological innovation. *International Review of Applied Economics, 21*(3), 403-418.

Ray, G., Barney, J. B., & Muhanna, W. A. (2004). Capabilities, business processes, and competitive advantage: choosing the dependent variable in empirical tests of the resource-based view. *Strategic Management Journal, 25*(1), 23-37.

Rennings, K. (2000). Redefining innovationâ€"eco-innovation research and the contribution from ecological economics. *Ecological economics, 32*(2), 319-332.

Rhee, J., Park, T., & Lee, D. H. (2010). Drivers of innovativeness and performance for innovative SMEs in South Korea: Mediation of learning orientation. *Technovation, 30*(1), 65-75.

Robinson, J. (2004). Squaring the circle? Some thoughts on the idea of sustainable development. *Ecological economics, 48*(4), 369-384.

Rosenbaum, M. S., Corus, C., Ostrom, A. L., Anderson, L., Fisk, R. P., Gallan, A. S., . . . Rayburn, S. W. (2011). Conceptualisation and Aspirations of Transformative Service Research. *Journal of Research for Consumers, 19*, 1-6.

Rosenthal, R. (1991). *Meta-analytic procedures for social research* (Vol. 6): Sage.

Rosenthal, R., & DiMatteo, M. R. (2001). Meta-analysis: Recent developments in quantitative methods for literature reviews. *Annual review of psychology, 52*(1), 59-82.

Rubalcaba, L., Michel, S., Sundbo, J., Brown, S. W., & Reynoso, J. (2012). Shaping, organizing, and rethinking service innovation: a multidimensional framework. *Journal of Service Management, 23*(5), 696-715.

`

Rust, R. T., & Miu, C. (2006). What academic research tells us about service. *Communications of the ACM, 49*(7), 49-54.

Salavou, H. (2002). Profitability in market-oriented SMEs: does product innovation matter? *European Journal of Innovation Management, 5*(3), 164-171.

Salunke, S., Weerawardena, J., & McColl-Kennedy, J. R. (2011). Towards a model of dynamic capabilities in innovation-based competitive strategy: Insights from project-oriented service firms. *Industrial Marketing Management, 40*(8), 1251-1263.

Sarkis, J. (2001). Manufacturing's role in corporate environmental sustainability-Concerns for the new millennium. *International Journal of Operations & Production Management, 21*(5/6), 666-686.

Sayem, M. (2012). Values Orientation in Business Through Service Innovation: A Conceptual Framework. *International Journal of Managing Value and Supply Chains (IJMVSC) Vol, 3*.

Schaltegger, S., LÁ? deke–Freund, F., & Hansen, E. G. (2012). Business cases for sustainability: the role of business model innovation for corporate sustainability. *International Journal of Innovation and Sustainable Development, 6*(2), 95-119.

Schaltegger, S., & Lüdeke-Freund, F. (2012). The'Business Case for Sustainability'Concept: A Short Introduction. *Centre for Sustainability Management (CSM), Leuphana Universität Lüneburg, ISBN*, 978-973.

Schaltegger, S., & Wagner, M. (2006). Managing and measuring the business case for sustainability. *Managing the Business Case for Sustainability: The Integration of Social, Envir, 1*(62), 1-28.

`

Schwandt, T. (2000). Three epistemological stances for qualitative inquiry. I NK Denzin & YS Lincoln (red): Handbook of qualitative research: Thousand Oaks, CA: Sage.

Sebhatu, S. (2010). *Corporate social responsibility for sustainable service dominant logic.* (Doctoral dissertation), Karlstad University.

Sheremata, W. A. (2000). Centrifugal and centripetal forces in radical new product development under time pressure. *Academy of Management Review, 25*(2), 389-408.

Sheth, J. N., Sethia, N. K., & Srinivas, S. (2011). Mindful consumption: a customer-centric approach to sustainability. *Journal of the Academy of Marketing Science, 39*(1), 21-39.

Sircar, S., Turnbow, J. L., & Bordoloi, B. (2000). A framework for assessing the relationship between information technology investments and firm performance. *Journal of Management Information Systems, 16*(4), 69-97.

Slater, S. F., & Narver, J. C. (1995). Market orientation and the learning organization. *Journal of Marketing, 59*, 63–74.

Smith, H. J. (2003). The shareholders vs. stakeholders debate. *MIT Sloan Management Review, 44*(4), 85-90.

Stavros, C., & Westberg, K. (2009). Using triangulation and multiple case studies to advance relationship marketing theory. *Qualitative market research: an international journal, 12*(3), 307-320.

Stikker, A. (1992). Foreword: sustainability and business management. *Business Strategy and the Environment, 1*(3), 1-8.

Stock, R. M., & Zacharias, N. A. (2011). Patterns and performance outcomes of innovation orientation. *Journal of the Academy of Marketing Science, 39*(6), 870-888.

`

Sundbo, J., & Gallouj, F. (2000). Innovation as a loosely coupled system in services. *International Journal of Services Technology and Management, 1*(1), 15-36.

Svensson, G., Wood, G., & Callaghan, M. (2012). *Ethical perspective on sustainable business practices.* Paper presented at the AMS 2009: Developments in marketing science: annual conference of the Academy of Marketing Science.

Székely, F., & Knirsch, M. (2005). Responsible leadership and corporate social responsibility:: Metrics for sustainable performance. *European management journal, 23*(6), 628-647.

Tanzil, D., & Beloff, B. R. (2006). Assessing impacts: Overview on sustainability indicators and metrics. *Environmental Quality Management, 15*(4), 41-56.

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350.

Tether, B. S. (2005). Do services innovate (differently)? Insights from the European Innobarometer Survey. *Industry & Innovation, 12*(2), 153-184.

Therrien, P., Doloreux, D., & Chamberlin, T. (2011). Innovation novelty and (commercial) performance in the service sector: a Canadian firm-level analysis. *Technovation, 31*(12), 655-665.

Tseng, C.-Y., Kuo, H.-Y., & Chou, S.-S. (2008). Configuration of innovation and performance in the service industry: evidence from the Taiwanese hotel industry. *The Service Industries Journal, 28*(7), 1015-1028.

United Nations. (2002). *Report of the World Summit on Sustainable Development*. Paper presented at the Conference Publication 199/20.

`

Vargo, S. L., & Lusch, R. F. (2004a). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 1-17.

Vargo, S. L., & Lusch, R. F. (2004b). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing, 68*(1), 1-17.

Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science, 36*(1), 1-10.

Vargo, S. L., Lusch, R. F., & Akaka, M. A. (2010). Advancing Service Scienceservice science with Service-Dominant Logicservice-dominant logic *Handbook of service science* (pp. 133-156): Springer.

Vargo, S. L., & Morgan, F. W. (2005). Services in society and academic thought: an historical analysis. *Journal of Macromarketing, 25*(1), 42-53.

Wagner, M. (2010). The role of corporate sustainability performance for economic performance: A firm-level analysis of moderation effects. *Ecological economics, 69*(7), 1553-1560.

Wagner, M., & Llerena, P. (2008). Drivers for sustainability-related innovation: A Qualitative analysis of renewable resources, industrial products and travel services: Bureau d'Economie Théorique et Appliquée, UDS, Strasbourg.

Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews, 9*(1), 31-51.

Witell, L., Kristensson, P., Gustafsson, A., & Löfgren, M. (2011). Idea generation: customer co-creation versus traditional market research techniques. *Journal of Service Management, 22*(2), 140-159.

`

Yen, H. R., Wang, W., Wei, C.-P., Hsu, S. H.-Y., & Chiu, H.-C. (2012). Service innovation readiness: Dimensions and performance outcome. *Decision Support Systems, 53*(4), 813-824.

Yunus, M., Moingeon, B., & Lehmann-Ortega, L. (2010). Building social business models: lessons from the Grameen experience. *Long Range Planning, 43*(2), 308-325.

Zahra, S. A., & Nielsen, A. P. (2002). Sources of capabilities, integration and technology commercialization. *Strategic Management Journal, 23*(5), 377-398.

Zhou, K. Z., Gao, G. Y., Yang, Z., & Zhou, N. (2005). Developing strategic orientation in China: antecedents and consequences of market and innovation orientations. *Journal of Business Research, 58*(8), 1049-1058.

Zikmund, W. G. (2000). *Business Research Methods*. Orlando: The Dryden Press.

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Appendices:

Appendix-1

List of empirical studies on service innovation and firm performance.

Author	**Year**	***Journal***	***Volume & issue***	***Title***
Aas & Pedersen	2011	*The Service Industries Journal*	*31*(13), 2071-2090	The impact of service innovation on firm-level financial performance.
Baba	2012	*International Journal of Bank Marketing*	*30*(3), 218-240	Adopting a specific innovation type versus composition of different innovation types: Case study of a Ghanaian bank.
Cainelli et al.	2006	*Cambridge Journal of Economics*	*30*(3), 435-458	Innovation and economic performance in services: A firm-level analysis.
Cheng & Krumwiede	2012	*Operations Management Research*	*3*(3-4), 161-171	The effects of market orientation and service innovation on service industry performance: An empirical study
Chen et al.	2009	*Journal of Service Research*	*12*(1), 36-45	Service delivery innovation: Antecedents and impact on firm performance.
Damanpour et al.	2009	*Journal of Management Studies*	*46*(4), 650-675	Combinative effects of innovation types and organisationorganisational performance: A longitudinal study of service organisations
Ettlie & Rosenthal	2012	*Journal of Service Management*	*23*(3), 440-454	Service innovation in manufacturing.
Eisingerich et al.	2009	*Journal of Service Research*	*11*(4), 344-356	Managing service innovation and inter-organisationorganisational relationships for firm performance: to commit or diversify?
Grawe et al.	2009	*International Journal of Physical Distribution & Logistics Management,*	*39*(4), 282-300	The relationship between strategic orientation, service innovation, and performance.

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Lin & Chen	2007	*Management Research News*	*30*(2), 115-132	Does innovation lead to performance? An empirical study of SMEs in Taiwan.
Love et al.	2010	*Regional studies,*	*44*(8), 983-1004	Service innovation, embeddedness and business performance: evidence from Northern Ireland.
Melton & Hartline	2013	*Journal of Service Research,*	*16*(1), 67-81	Employee Collaboration, Learning Orientation, and New Service Development Performance.
McDermott & Prajogo	2012	*International Journal of Operations & Production Management*	*32*(2), 216-237	Service innovation and performance in SMEs.
Ordanini & Parasuraman, 2011	2011	*Journal of Service Research,*	*14*(3), 82-91	Service Innovation Viewed Through a Service-Dominant Logic Lens: A Conceptual Framework and Empirical Analysis.
Ordanini & Rubera	2010	*Information & Management*	*47*(1), 60-67	How does the application of an IT service innovation affect firm performance? A theoretical framework and empirical analysis on e-commerce.
Rhee, Park, & Lee	2010	*Technovation*	*30*(1), 65-75	Drivers of innovativeness and performance for innovative SMEs in South Korea: Mediation of learning orientation.
Stock & Zacharias	2011	*Journal of the Academy of Marketing Science*	*39*(6), 870-888	Patterns and performance outcomes of innovation orientation.
Therrien, Doloreux, & Chamberlin	2011	*Technovation*	*31*(12), 655-665	Innovation novelty and (commercial) performance in the service sector: a Canadian firm-level analysis.

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Tseng, Kuo, & Chou	2008	*The Service Industries Journal*	*28*(7), 1015-1028	Configuration of innovation and performance in the service industry: evidence from the Taiwanese hotel industry.
Wang & Wang	2012	*Decision Support Systems*	*53*(4), 813-824	Service innovation readiness: Dimensions and performance outcome.
Yen et al.	2012	*International Journal of OrganisationOrganisational Innovation*	*4*(3), 98-112	A study of the relationship among service innovation, customer value and customer satisfaction: an empirical study of the hotel industry in Taiwan.

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Appendix-2

List of meta-analysis studies on sustainability and firm performance

Author	**Year**	***Journal***	***Volume & issue***	***Title***
Orlitzky, M., Schmidt, F. L., & Rynes, S. L.	2003	*Organisation studies*	*24*(3), 403-441	Corporate social and financial performance: A meta-analysis.
Golicic, S. L., & Smith, C. D	2013	*Journal of Supply Chain Management*	*49*(2), 78-95	A Meta-Analysis of Environmentally Sustainable Supply Chain Management Practices and Firm Performance
Margolis, J. D., Elfenbein, H. A., & Walsh, J. P.	2009	*Working Paper, Harvard Business School*		Does it pay to be good. and does it matter? A meta-analysis of the relationship between corporate social and financial performance.

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Appendix-3

Formula used to calculate the Correlation coefficient:

- Formula to calculate r = from *t*-tests:

$$r = \sqrt{\frac{t^2}{t^2 + df}}$$

- Formula to calculate r = from *f*-tests:

$$r = \sqrt{\frac{F}{F + df_{error}}}$$

- Formula to calculate r = from chi square:

$$r = \sqrt{\frac{X^2(1)}{N}}$$

- Formula to calculate r = from standard normal deviation Z:

$$r = \frac{Z}{\sqrt{N}}$$

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Appendix-4

Fundamental premises of S-D logic

FPs	Foundational premise	Comment/ explanation
FP1	Service is the fundamental basis of exchange.	The application of operant resources (knowledge and skills), "service", as defined in S-D logic, is the basis for all exchange. Service is exchanged for service.
FP2	Indirect exchange masks the fundamental basis of exchange.	Because service is provided through complex combinations of goods, money, and institutions, the service basis of exchange is not always apparent.
FP3	Goods are distribution mechanism for service provision.	Goods (both durable and non-durable) derive their value through use – the service they provide.
FP4	Operant resources are the fundamental source of competitive advantage.	The comparative ability to cause desired change drives competition.
FP5	All economies are service economies.	Service (singular) is only now becoming more apparent with increased specialization and outsourcing.
FP6	The customer is always a co-creator of value.	Implies value creation is interactional.
FP7	The enterprise cannot deliver value, but only offer value propositions.	Enterprises can offer their applied resources for value creation and collaboratively (interactively) create value following acceptance of value propositions, but cannot create and/or deliver value independently.
FP8	A service-centered view is inherently customer oriented and relational.	Because service is defined in terms of customer-determined benefit and co-created it is inherently customer oriented and relational.
FP9	All social and economic actors are resource integrators.	Implies the context of value creation is networks of networks (resource integrators).
FP10	Value is always uniquely and phenomenological determined by the beneficiary.	Value is idiosyncratic, experiential, contextual, and meaning laden.

Source: Vargo & Lusch, 2004

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Appendix -5

Studies used to develop the independent variables.

Independent variables	Sources
Stakeholder collaboration	(Hurley & Hult, 1998), (Jick, 1979) (Blazevic & Lievens, 2004), (Mathison, 1988),(Bryman, 2006), (Creswell & Clark, 2007), (Ordanini & Parasuraman, 2011),
Dynamic capabilities	(Hertog, 2000) (Hurley & Hult, 1998), (Yunus et al., 2010), (Teece, 2007),(Duffy, 1987), (Hult et al., 2004), (Ordanini & Parasuraman, 2011), (Lawson & Samson, 2001), (Wang & Ahmed, 2007), (Stikker, 1992), (Svensson et al., 2012)
Knowledge integration	(De Luca & Atuahene-Gima, 2007), (Ordanini & Parasuraman, 2011), (Chen et al., 2009)
Sustainability orientation	(Schaltegger & Lüdeke-Freund, 2012), (Kuckertz & Wagner, 2010),(Elkington, 1998), (Porter, 1990)

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Muhammad Sayem
Contact details:
E-mail: muhammad.sayem@canberra.edu.au
Mobile: +61 401761595
Web: au.linkedin.com/pub/muhammad-sayem/41/308/185 Edit