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Impact of Corporate Sustainability Behavior on Financial Performance in Aerospace Companies

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Blake, P., & El Mansour, B. (2012). Exploring corporate social responsibility leadership. *Proceedings of* the *13th International Conference on Human Resource Development Research and Practice Across Europe, Porto, Portugal*.

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ABSTRACT

Sustainability is increasingly becoming an integral part of how organizations communicate their business operation to stakeholders. As it is common knowledge that organizations are more inclined to invest in programs that contribute to their bottom-line, this study presents an analysis of the relationship between corporate sustainability behaviors and their impact on financial performance. The sample size was 40 United States (U.S.) aerospace companies, selected from the "Top 100 Aerospace Companies" world-wide in a report produced by Candesic consulting firm in 2012. Of the 40 U.S. companies, 21 were found to provide some form of sustainability report. Quantitative and qualitative instruments were constructed to identify and measure the following sustainability behaviors: 1) Report versus Non-Reporting Status, 2) sustainability initiative integration (SII), 3) sustainability strategic integration (SSI), 4) trends in sustainability reporting, and 5) Global Reporting Initiative (GRI) versus Non-GRI status. Archival data such as sustainability reports and financial reports were used to compare the relationship between the five independent variables and the 5-year profit-margin ratio mean of the companies in the study. All financial information was obtained from Reuters, a financial and business news source. After retrieving and analyzing all the reports, it was found that there is no significant relationship between the sustainability behaviors identified and financial performance. Although, the sustainability reporting trends indicate a slight relationship between reporting start date and the 5-year average profit margin mean, this researcher understands that there may be other factors involved. Further, there appears to be some relationship among the independent variables Sustainability Initiative Integration (SII), Sustainability Strategic

Integration (SSI) and GRI status. For instance, organizations that use the GRI metrics tend to provide a strong message indicating that sustainability is aligned with the business goals, which influence how they market and innovate products and services. The strength of this study is the qualitative components that will contribute to further understanding and development of corporate sustainability within a multidisciplinary context. The study created instruments primarily for the purpose of determining the impact corporate sustainability behavior has on financial performance while simultaneously providing new insight on new and changing organizational values and leadership communication. A corporate sustainability report is a comprehensive document that gives external and internal stakeholders' information on how organizations are responding to social, economic, and environmental issues. This study illustrates how a sustainability report reflects an organization's level of involvement in environmental, social, and economic issues which are relevant to any academic environment that seek to gain more understanding of how businesses pay attention to societal demands while striving to have competitive advantage in the global market.

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CHAPTER 1

INTRODUCTION

The discourse on corporate sustainability as an environmental and social matter has become ubiquitous within organizational literature. In recent years, the aggressive competition that exists among multinational corporations has brought moral and ethical issues to the forefront (Tamm, Eamets, & Motsmees, 2010). The depletion of natural resources and the exploitation of local economies, leading to impoverished conditions, and unethical financial transactions have given rise to consumers' and shareholders' concerns about organizational behavior. Persistent unsavory transactions have prompted stakeholders to demand change to which corporations are responding (Jackson & Apostolakou, 2009). Baumgartner (2009) and Roome (1998), who studied the relationship between corporate strategy and sustainability, defined corporate sustainability as the implementation of business strategies, management, and activities to meet the diverse needs of its constituents; thus, decisions are made with the understanding that the three elements are interdependent, and imperative to enhance the quality of life of human beings. Organizations are expected to holistically consider the Planet, People, and Profit (3Ps), also referred to as the triple bottom-line to address sustainability.

In 1987, the United Nations World Commission on Environment Development (UNWCED) introduced the term sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

As a response, corporate sustainability has been gaining importance within the executive sphere, and organizational leaders are beginning to align sustainability to organizational performance. In her earlier work, Bansal (2002) expressed that few U.S. firms were embracing sustainability. And one of the largest obstacles identified was the failure to institutionalize sustainability within the organizations. Although there seems to be a demand for environmental stewardship, Bansal's (2002) interview of environmental managers found that initially, managers had reservations about investing in sustainable development. There was a lack of knowledge of how to respond to this societal issue. The study also found that the managers believed that the costs outweigh the benefits. These managers held the view that sustainability is a hindrance to product innovation as they would be directing more resources to stay up to par with the standards instead. There was the assumption by managers that environmental management was in conflict with the economic principle of value creation. Bansal (2002) stated that this was in part due to disassociation between sustainable development and the value-creation system that depends on what companies perceived as return on investment. Her work revealed the struggle with incorporating sustainability agenda into a business model. With this understanding, leaders continued to be pressured by diverse stakeholders to make a commitment to sustainability.

Bansal (2005) expressed that organizations should take into account that the environmental domain of sustainable development should, as a principle, ensure that human activities do not erode our natural resources, while the social domain transcends basic need, and includes quality of life, healthcare, education, and political freedom. The economic domain ensures a reasonable quality of life through productive capacity of organizations and individuals in society. Bansal (2005) constructed two categories for explaining why an organization adopts or fails to adopt sustainable development: 1) resource-based explanations and 2) institutional

explanations. The former, consisting of both financial and human resources, may yield high financial performance if used to invest in sustainable development. The latter, which addresses the norms, culture, values, and belief system, may also impact how organizations respond to sustainable development. However, these attitudes can be impacted when fines and penalties can be imposed, by the need to mimic a competitor, and the negative threat of media publicity. Although firms may understand the ramification of not adapting sustainable development addressing corporate sustainability, attitudes toward sustainability still remains an uncertainty (Bansal, 2005) as investments are required to re-invent the system for sustainable development.

In a study conducted by Haanaes et al. (2012), it is clear that sustainability acceptance is improving; however, resistance to adapting sustainability within the management system remains a challenge. The scholars identified two types of sustainability performers: Harvesters and Non-Harvesters. The former is reported as organizations in which managers are actively implementing successful sustainability agenda for organizational change. They are altering their organizational structures, business models, and operations to facilitate and foster a more holistic approach to corporate sustainability. The report revealed that those who are considered Harvesters have 1) higher CEO commitment to sustainability, 2) a "separate sustainability report," 3) clear communication of responsibility of sustainability, and 4) company/operational key performance indicators related to sustainability. Similar to the Non-Harvesters, the Harvesters may be challenged with providing sustainability reports that capture comprehensive metrics that measures intangible effects. They often fail to assign cost to carbon emission and other social and environmentally unsustainable activities. Both groups are shown to be challenged in assigning a responsible person for sustainability per business unit, seeing the need to create positions for Chief Sustainability Officers (CSO), and successfully making the link

between sustainability performance and financial incentives. This shows that there is a need to champion sustainability as a relevant matter within the strategic sphere, as the lack thereof may contribute to managers' reluctance to make it an integral part of their day-to-day operation.

Business development with a value for sustainability is increasingly associating sustainability with improved product innovation and process innovation (Haanaes et al, 2012). The study showed that 25% of managers believed that sustainability contributed to "improved innovation in product and service"; this is a 9% increase from their response in 2010. The report showed that 22% of the managers perceived business model and process innovations as advantages in their organization. Within the context of innovation management, Gomes, Kruglianskas, and Sherer (2011) identified types of technological practices that demonstrate commitment to sustainability practices. After conducting a survey among industrial enterprises with innovative characteristics, Gomes et al. (2011) constructed a conceptual research model illustrating that corporate management geared toward sustainable development will incorporate technological innovation and socio-environmental management. Gomes et al. (2011) asserted that sustainable development placed within the business model forces the creation of new processes and products that are consistent with being environmentally friendly. They concluded that investments in sustainability-based innovation will ultimately overcome barriers to compete within the international market. With the use of literature to guide the construct of their Sustainability Innovation Cube (SIC), Hansen, Grosse-Dunker, and Reichwald (2009) discussed sustainability innovation management as an important factor from a business and a moral perspective. Their Sustainability Innovation Cube, which illustrates three dimensions (target dimension, life cycle dimension, and innovation type dimension), explains the complexity of adopting sustainability-based innovation and change in technical environments. They argued that

sustainability is dependent upon innovation within the system, structure and practices for sustainable development. They noted the importance of leadership involvement, pointing out that in order for sustainability innovation to exist, sustainability has to be embraced and understood within the business model. Bossink (2007), who provided some insight on the importance of leadership competencies for sustainable innovation, expressed that charisma, involvement, strategy, or engagement can positively impact sustainable processes.

According to Haanaes et al. (2012), who conducted a study for MIT Sloan Management Review, the majority of the managers studied agreed that sustainability has become a vital component of business model to have a competitive advantage. Haanaes et al, (2012) reported that attitude and business response to sustainability has improved, but challenges to sustainable development remain. The integration of sustainability is still marginal within the management domain. The majority of business leaders acknowledged the impact of sustainability on organizational performance, and as a result are pursuing sustainability-related strategies, increased organizational/management commitment, adopting a sustainability-focused business model, and increasing CEO commitment to sustainability (Haanaes et al., 2012). There is concern, however, that all the sustainability dimensions are not equally addressed by organizations. Hubbard (2009) admitted that measuring organizational performance is difficult, primarily when the elements being measured constantly change. He constructed a single-measure Organization Sustainability Performance Index, and argued that the practice of business sustainability has taken a backward step from the integrative framework of sustainability measurement. Gao and Bansal (2013) advocated for researchers to develop a deeper understanding of sustainability as a holistic practice. They argued against the instrumental approach and suggested that the integrative approach is more relevant in the decision-making

process. The latter approach seeks the merging of the three sustainability domains, viewing them as interdependent forces that create a synergy to address the values and interests of stakeholders.

As stakeholder perception may impact organizational performance, corporate sustainability reporting has become an important part of a corporate reporting agenda. There is a proliferation of corporate sustainability reporting, and it is gradually becoming the most influential non-financial reporting for public viewing (Matthews & Rusinko, 2010). Many companies are now using the sustainability reports to convey their commitment to the planet and to people. These reports are used by stakeholders to measure organizational performance within the realm of sustainability. The extents to which organizations report their behavior toward sustainability issues have been controversial because leadership performance is still viewed as a challenge within this realm. Global Reporting Initiatives (GRI) came into existence, as a result, to help organizations improve reporting quality. GRI has become a leading force in helping organizations to improve the articulation and quantification of their sustainability performance, yet many companies still have not adopted the GRI reporting format. There is still uncertainty about the extent to which such reporting impacts financial performance of business operations.

The following section links the theoretical discourses within the literature on organizational change, behavior, and innovation to make the case for addressing sustainability as a relevant matter in discussing performance in modern organizations.

Theoretical Framework

An organization's ability to adapt to change and be innovative requires leadership. Within literature presented in this study, there is a general understanding that change is constant and adoption is imperative if organization leaders intend to remain in the market. This study

included leadership, sustainability, and organizational performance literature to clarify roles and responsibilities within the business environment.

Burke's and Litwin's (1992) model identified the dimensions that affect, and are affected by change. With a focus on organizational structure, they discussed that upper level leaders set the stage for organization change by establishing the mission, vision, values, policies, and strategies. Rummler, Ramias, and Rummler (2010), within the management discipline, articulated that the central goal of the organization is to create value for all stakeholders. They further pointed out that value is created when products and services are developed, marketed, sold, and delivered to customers. Mid-level managers, in response to the need for creating value, work to achieve the organizational goals by improving the day-to-day operation. Part of the inherent characteristic of any competitive organization is the ability to embrace, and diffuse innovation. Rogers (2003), whose extensive investigation on the diffusion of new innovation is prominent, not only within sociological discipline, discovered that change is viewed typically as an incremental process no matter the nature of the innovation or the source of the initiative. In spite of its importance to organizational performance, innovations are rejected initially. Rejection may take the forms of faking acceptance, ignoring, leaving the social unit, etc. Signaling the importance of continued research in organizational innovation, Rogers (2003) articulated that managers face a great deal of challenge in their respective businesses. The rejection of innovation is evident and is understandable in that managers compare the real and immediate costs with the proffered and long-term benefits. And based on this cost-benefit analysis, the innovation often comes out on the short end if there is limited perception of relative advantage over existing conditions (Foster, 1989). Such has been the case for sustainability-based innovation in competitive organizations, which makes this issue important to the discourse of

organizational innovation. Rogers (2003) theorized that the innovation itself, communication, time, and the social system influence the extent to which innovation will become part of the intended environment. With this knowledge, Rogers (2003) posited that champions, change-agents, and opinion leaders are held accountable for promoting change initiatives. In response to the need for organizations to be innovative to have a competitive advantage, Rogers (2003) recognized that it is essential for leaders to respond to change for their financial growth in a globally charged market. By highlighting this challenge as an important factor for change, Rogers (2003) noted the need for more understanding of innovation within organizations.

As there is a high demand for sustainable development, scholarly discussions on sustainability-based innovation are becoming more prevalent within the literature. Bansal (2002) determined that the two activities for diffusing sustainability within the organization are: 1) decision-making process at all levels about sustainability, and 2) the re-engineering of dated operations and processes. This argument gives credibility to the discourse of sustainability-based innovation, a new phenomenon whereby managers incorporate environmentally friendly process in their business operations and create eco-friendly products. Albino, Balice, Dangelico, and Iacobone (2012) affirmed that sustainability can be a venue for innovation, and an opportunity to create value while lowering costs of production. They identified five environmental strategies on green product development, and debate the influence of the adoption of these strategies.

Table 1

Operationalizing Sustainable Development Model

Principle	***Societal Perspective***	***Organizational Implications***
• Environmental	• Renewability of natural resources	• Environmental protection • Eco-efficiency • Product stewardship
• Social-Equity	• Equity among all people	• Stakeholder management
• Economic	• Acceptable standard of living	• Acceptable profit • Sustainable competitive advantage

Table 1 is shown to comprise of societal perspective and organizational implications based upon the three commonly known principles of sustainability, which are environmental, social-equity, and economic. Important to this study are the organizational implications in which 'environmental protection,' 'eco-efficiency,' 'product stewardship,' 'stakeholder management/engagement,' 'acceptable profit,' and 'sustainable competitive advantage' are identified. Gao and Bansal (2013) contended that sustainable development must be practiced in organizations as it may positively impact performance when addressed strategically.

The discourse on organizational behavior and change articulates the influential role of upper leadership in establishing the mission, vision, goals, and policies (Burke & Litwin, 1992) through multilateral communication channels within the organization for adding value to the management systems. Although mid-managers are capable of utilizing their power to make decisions, they tend to respond to the tone of corporate leaders on whom they rely to champion change initiatives. As the reporting of sustainability performance is increasing, disclosure of sustainability agenda is being regarded as an important issue for organizational performance.

Statement of the Problem

Even though it is becoming more evident that sustainability is an important issue faced by modern organizations, it is encountering resistance by leaders. Any policies or procedure that interrupts the status quo tend to be viewed unfavorably by those who have to adapt (Rogers, 2003). Those leading competitive organizations will resist change that is not deemed profitable (Rummler et al., 2010). Although there is extensive study on organizational behavior, there is limited understanding of corporate response to sustainability and its impact on financial performance within industry, and in the aerospace industry, in this case. It has been argued that adopting a sustainability agenda can enhance profitability (Bansal 2002; Crews 2010; Gao & Bansal, 2013). However, this is an assumption that has yet to be fully tested.

Statement of the Purpose

This study explores organizational leadership with regard to sustainability within the aerospace industry. This study develops further theoretical understanding through organizational literature on leadership, management, and innovation, which provide insight on corporate attitude towards change initiatives for sustainable development. This research seeks to continue to define organizational behavior and performance regarding sustainability. Therefore, the purpose of the study is to determine if there is a relationship between corporate sustainability efforts and financial performance within aerospace companies.

This study will be guided by the following research questions whereby the first portion will be a qualitative, in-depth analysis of corporate sustainability reports. This will be followed by a quantitative study to determine the relationship between the five variables and operating growth (loss):

1. What are the initiatives, issues, or themes being addressed in the corporate sustainability reports of aerospace companies?
2. Is there a relationship between the operating profit (loss) over the past 5 years of companies with highly integrative and less integrative sustainability agenda?
3. What is the relationship between the operating profit (loss) of the aerospace companies over the past 5 years and how sustainability activities have been reported?

Statement of the Need

Rogers (2003) declared that diffusion of innovation moves at a faster rate when the individual or entity believes that there is a relative advantage. Understanding organizations' priorities and values relative to financial success will provide insight on how organization leaders respond to change. Sustainability requires leadership involvement at all levels and a change initiative can be stagnant if it is not fully supported within the executive suite. Without a champion for sustainability, and if it is not placed within the business model, managers will continue to perceive it as disruptive to the 'normal' operational process. As sustainability can be regarded as a 'soft' innovation that is still being resisted by upper level leadership in many competitive organizations, a need exists to continue examining companies' sustainability reporting behavior and measure its impact on the financial performance within operations.

Statement of Assumptions

The following assumptions are made for the study:

1. As this study is conducted with a pro-innovation bias, only companies with sustainability reports were analyzed. It is the researcher's assumption that there is logic behind the belief that sustainability reporting is valuable to organizational performance. This study

was an effort to begin the process of noting the real effect of sustainability reporting and financial performance.

2. Sustainability reports are a credible source for determining leadership and managerial behavior in competitive organizations.
3. Operating profit is a critical financial metric for measuring organizational performance and is standardized. Shareholders who intend to invest in a company will learn about management ability to grow its profitability simply by looking at the bottom line within the operation. Essentially, if the company's revenues exceed its operating and goods expenses, this speaks well of the way in which the organization is being led, and the management of the operation.

Statement of the Limitations

This study is limited to only aerospace companies in the U.S. Companies were selected from "The World's Top 100 Aerospace and Defense Companies 2012" recognized by Candesic, a management and strategic firm. Another limitation of this study was determining the relationship between sustainability behavior and profitability as there are many other variables that contribute to organization performance.

Statement of the Delimitations

The delimitation of this study was that only a selected number of companies within the aerospace industry were considered for the study. Another delimiter was regarding all disclosure of sustainability activities as reports that could either be 'formal' or 'informal.'

Significance of the Study

Sustainability efforts are considered to be voluntary activities that address social, economic, and environmental issues. Those responsible for developing corporate sustainability

initiatives understand the extent to which sustainability disclosure may impact stakeholders' views, and in turn, the success of the company. The findings of the research will add to the body of knowledge in the areas of corporate social responsibility, corporate reporting, sustainability reporting, organizational innovation, organizational change, organizational behavior, and performance within globally competitive organizations.

Operational Definitions

Corporate Sustainability. Application of the principles of environmental integrity, economic prosperity, and social equality to management systems for sustainable development (Bansal, 2005).

Diffusion of Innovation. Process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 2001).

Operating Profit (Loss). Operating profit is also commonly referred to as operating margin or earnings before interest and taxes (EBIT). Operating profit is calculated as operating profit equals total sales (or total revenue), minus cost of goods sold (COGS), and minus operating expenses and depreciation. The operating profit is the difference between a company's revenues and any related costs and expenses; this does not include income or expenses from any sources other than its normal methods of providing a good or a service (Bloomsbury Business Library, 2007). The operating (profit) margin is important because it measures a company's profitability and how well its management is growing the business unit without including other firms and start-ups costs, etc. An operating loss is an indication that a company's core operations are not profitable and that changes need to be made either to increase revenues or to decrease costs.

Relative Advantage. The degree to which an innovation is perceived as better than the idea it supersedes (Rogers, 2001).

Sustainable Development. Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (UNWCED, 1987).

CHAPTER 2

REVIEW OF THE LITERATURE

The review of literature commences with a discourse on performance to explain how value is created in organizations. The work delves into a general discussion about leadership performance in competitive organizations, highlighting the strategic sphere, managerial practices, innovation, and change as driving forces. Sustainability within the literature raises the question about the role of leadership toward social and environmental initiatives. There exists the pressing need to discuss sustainability within business models of corporations. This study includes the human resource discipline as a relevant entity for addressing sustainable development. The study also employs literature in which scholars debate about corporate sustainability reporting techniques. In addition, this research discusses the Global Reporting Initiative (GRI) which has become a prominent organization for guiding the quality of sustainability reporting by companies worldwide.

Organization Performance

The intensity of global markets requires continuous discourse on the subject of organization performance. Rummler et al. (2010) focused their discussion on how organizations create and sustain value in market-driven environments. The overarching theme of their model is that work gets accomplished through a value stream within the organization. Individuals performing at the business level will design and manage the operation based on their

understanding and interpretation of how value is created. Rummler et al. (2010) stated that managerial practices take place within the parameters of what is visible to those in charge of the operations. Figure 1 illustrates that capital, human resources, material, equipment, and technology are vital to the business, which is regarded as an 'adaptive' system. Business as a system has to adapt in order to create valuable products and services for the market.

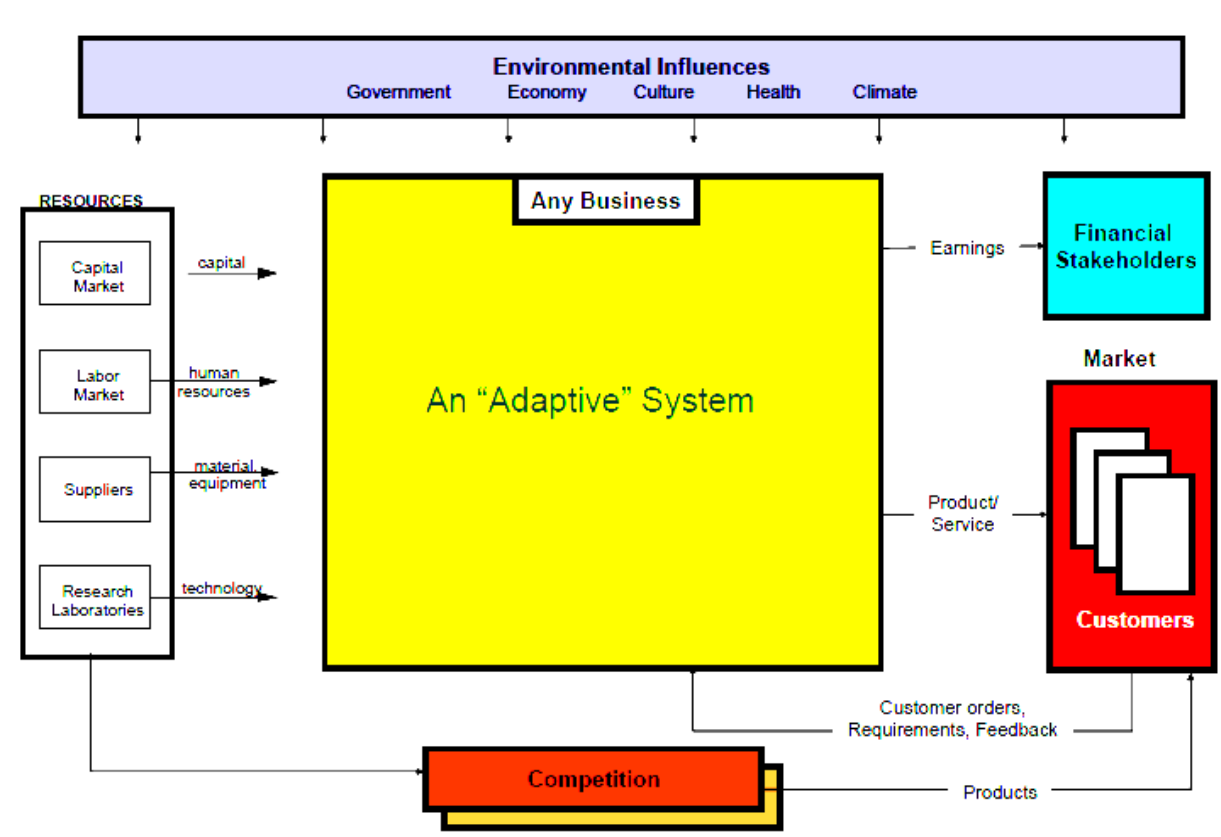

Figure 1. Business Systems Model for Value-Creation.

As leaders of business units strive to maintain financial longevity, they are required to fulfill the demands of stakeholders and shareholders. Rummler et al. (2010) expressed that when work gets implemented and performed within a framework that is consistent with the organization's vision, the outcome will yield positive results. Such can be manifested in the form of financial growth and favorable market response to products and services.

Figure 2. Three Performance Needs Model.

Prior to their most recent work, Rummler and Brache (1995) scrutinized the complex microstructure of organizations, which establish forms of social systems that are vital to improve performance. They found that goals, design, and management are critical elements at the Organizational level, Process level, and Job/Task level. Goals are understood as standards constructed to achieve business objectives, reflecting quality, quantity, timeliness, and cost, based on customers' expectations. Rummler and Brache (1995) also expressed that design is the configured structure to efficiently facilitate the goals. Management ensures the attainment of current goals. Elements for effective management at all three levels are goals, performance, resource, and interface (Rummler and Brache, 1995).

Goals

Goals at the organization level are viewed as strategies, created within the executive suite. They are a direct response to the needs of diverse stakeholders. Groups at the decision-making level are focused on how external forces influence the organization. Goals are a response to the "formidable global competition, increasingly demanding customers, quantum leaps in technology," and " the theme that unites these pressures is change—relentless, multifaceted, unforgiving, blindingly rapid change" (Rummler & Brache, 1995, p. 1). They advocated

for a more outward look to improve organization performance. Before goals can be met, it is imperative not only to comprehend the process by which the work gets executed, but also to identify the decision-makers, and the extent to which they positively impact the process. Goals at the process level help with the identification and standardization of the work to be performed. Even with the employment of a talented and motivated workforce, there may be difficulty to perform efficiently when there is no logical business process. A process should be linked to organizational goals and to customer requirements. The execution of the goals takes place at the performance level where supervisors interface directly with the individual workers; hence, goal clarity is imperative in order for the successful execution of a task.

Design

Competitive organizations operate in complex environments as they strive to create a workable structure for the satisfaction of all stakeholders, according to Rummler and Brache, (1995). Individuals within the executive suite are responsible for designing strategy to impact all business units. At the process level, "Structure includes the more important dimensions of how the work gets done," (Rummler & Brache, 1995, p. 20); hence, there is a need to address reporting structure, planning, controlling, and coordinating systems, as well as informal relations among groups within a firm, and its relationship with the environment (Pertusa-Ortega, Molina-Azorín, & Claver-Cortés, 2010). In essence, resources should exist to support various functions for the new agenda. These resources include finance, material, technology, and people. In designing the process, Rummler and Brache (1995) asserted that information pertaining to the systems framework and logistics is a criterion for measuring performance. They further stated that, at the performance level, job design is a function of how responsibilities are shared among units, the sequence by which the job is performed, the types of policies and procedures in place,

and the compatibility of the job with the worker. A job requires the kind of structure that simultaneously achieves the goals of the organization while fulfilling the needs of the workforce.

Management

Management practices at the organizational level are predominantly influenced by external changes occurring in the market, making team selection crucial in determining how strategies are developed and executed. Executive team management can impact the decision-making process; wherein, executive teams are responsible for establishing the vision, goals, and guidelines crucial to the direction of the company (Whiteoak, 2007). He established that goal commitment, group cohesion, group potency, and perceived loafing are factors that can impact group effectiveness. The constant change in the market environment requires highly knowledgeable and informed groups that are self-managed, motivated, and have strong cohesiveness. In the discussion on performance within the management sphere, Martin (2008) advocated for the use of performance metrics to measure customer satisfaction, internal process, financial outcome, and employees' performance. Inspired by the argument to include process improvement in the International Society for Improvement Performance, Martin (2008) stated that the first task when managing the process is to define what it should entail. This includes: 1) identifying performance measures, 2) defining the scope of the process, and 3) creating process map and process flowchart.

There is a general argument in the change management literature about the impact on performance due to people's reluctance to adapt to change. Management at the job/performance level requires the directing of the input, process, output, the consequences, and feedback in relation to people (Rummler & Brache, 1995). Limsila and Ogunlana (2008) articulated that managers are expected to lead by strategizing, motivating, and directing groups and individuals

toward the goal. People are enablers and barriers of performance (Thomas and Bendoly, 2009). After finding a positive correlation between employee satisfaction and employee performance, Martin (2008) expressed that it is vital for leaders to fulfill the needs of the employees. He defines employee satisfaction as "the company's ability to fulfill the physical, emotional, and psychological needs of its employees" (p. 33).

Metrics for Leadership Performance

This work illustrates that the works of Litwin and Burke (1992) and Rumler et al. (2010) shared the belief that upper level focuses on the external and organizational elements; whereas mid-level leadership gives priority to internal issues to add value to the organization outcomes. Although both upper-level leadership and mid-level leadership have different priorities in impacting change, they are both are critical components in its diffusion. This portion of the literature review sets out to explore various perspectives of leadership within the context of innovation and change.

As many organizations are encountering challenge of adapting to change, there is a need to establish crisis management, control and empower, provide resources to compete and collaborate, and move from uniformity to diversity (Sahoo & Mohanty, 2010). Leadership is increasingly significant as the demand for growth and expansion becomes central to how organizational performance is measured. Now, there is a search for a new paradigm of leaders who possess the skills to anticipate and prepare the workforce for economic, environmental, and social changes (Rummler & Brache, 1995). Though diverse in how it is defined, the term leadership is generally discussed and measured in relation to productivity and performance.

The concept of leadership is certainly not new and possibly has its origin since the beginning of civilization; however, with the intensity at which global market and technology are

accelerating, there is now the desire to have a deeper understanding of leadership within the context of organizational development (Neera, Anjanee, & Shoma, 2010). They believed that due to the exponential change that is taking place in the marketplace, leadership cannot be clearly defined; however, those placed in leadership positions, must be several steps ahead when making decisions about the future and performance of their organizations.

As leadership is paramount to the establishment and health of any competitive and complex organization, scholars attempt to provide a definition of the term 'leadership.' Amagoh (2009) defined leadership as "the act of motivating people to act by non-coercive means" (p. 989). He advocated for the form of leadership that places a focus on influencing and motivating the workforce. Leadership is the ability to coach, communicate, reward, motivate, engage, and support the employees, and promote teamwork (Gilley, Dixon, & Gilley, 2008). Limsila and Ogunlana (2008) defined leadership as the ability to direct and influence individuals, and activities. It is their assertion that leadership is significantly based on relationship building. They identified three measurable factors for leadership performance: 1) effectiveness, or efficacy in achieving organizational outcomes, objective, goals, and subordinates' needs in their jobs; 2) satisfaction, or the degrees to which subordinates are satisfied with their leaders' behavior and how the leader works with others; and, 3) the extent to which the leader has the ability to increase subordinates desire to succeed and go beyond the scope of their work. Song (2009) identified Leader-Member Exchange as a category in which leadership performance is primarily based upon the relationship between a manager and the workers.

The perception of subordinates about leaders is recognized as valid metrics for measuring leadership performance. Song (2009) conducted a study in which subordinates were responsible for evaluating their leaders. He found that the subordinates judge their leaders based on the ability to 1)

understand a subordinate's problems and needs, 2) advocate for or defending the subordinate, 3) effectively create a working relationship with subordinate, 4) believe in the potential of the subordinate, 5) feel obligated to help the subordinate solve a problem, 6) establish a compatible leader-subordinate relationship, and 7) considerate of the subordinate's suggestions for change. Whiteoak (2007) found that leadership performance is also determined by the ability of managers to create a high level of group potency, group cohesion, and goal commitment.

One of the dominant metrics for measuring performance is the ability to position the firm to have a competitive advantage in the market. Erez and Kanfer (1983) established that cognitive factor-knowledge, affective factor-reduction of anxiety, and behavior factor commitment are metrics by which leadership performance should be measured. The cognitive factor measures executives' and managers' overall understanding of the environment and the requirements necessary to adjust to the changes. The affective factor-reduction is the ability of leaders to understand workers' anxiety to motivate them to adapt to a new initiative. The behavior factor is leaders' level of participation and involvement during goal-setting and implementation process, which demonstrates the extent to which they are committed to the organization and their subordinates. In support of previous study, Usman's (2010) work identified three metrics for leadership performance; this includes performance management, good governance, internal satisfaction, and external satisfaction. He also found that both emotional and cognitive intelligence are variables that are essential to leadership performance, which leads to a willingness to make difficult decisions. Emotional intelligence is a leaders' ability to connect with employees who seek equity, corporate loyalty, and a high level of social consciousness from their leaders, according to Cappelli, Singh, Singh, and Useem (2010).

The Strategic Domain

Leaders are expected to understand the importance of constructing the vision and values of the organization as a way of materializing organization goals; hence, the strategic sphere is core for measuring organizational performance. There is evidence within the literature to suggest that decisions made within the strategic domain govern activities at various levels in the organization. Through extensive use of the literature, along with his experience within the private and public sectors, Fairholm (2009) expressed that leaders are responsible for positioning themselves for market visibility, and is the "pre-work to strategic planning which ultimately leads to specific managerial tasks" (p. 11). In his work on leadership and organizational strategies, Fairholm (2009) made a distinction between strategic planning and strategic thinking. Strategic thinking creates the values, vision, and mission of the organization.

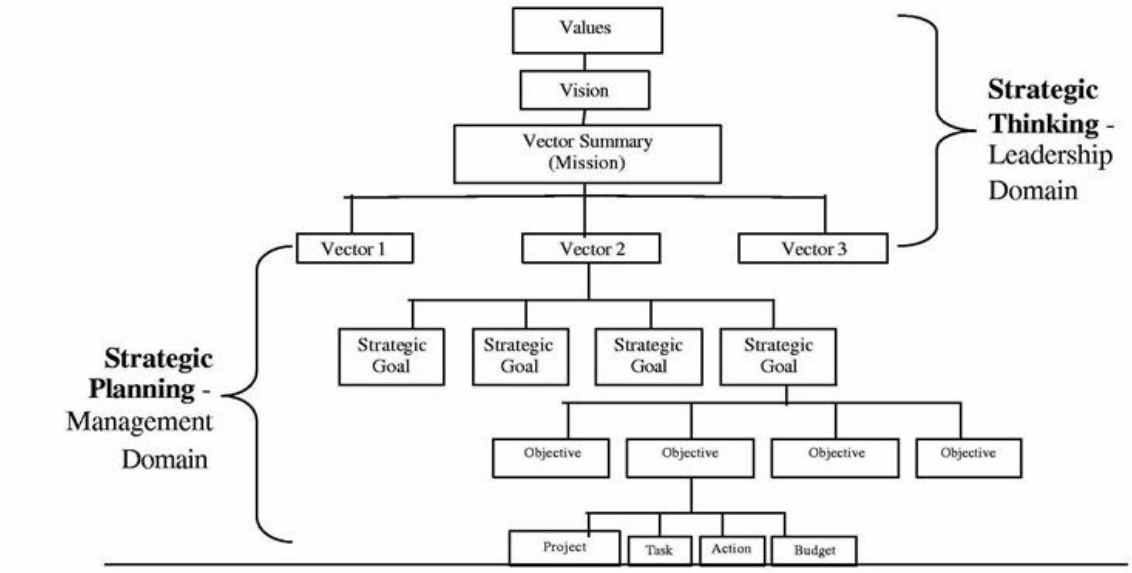

Figure 3. Thinking and Planning Model.

Shown in Figure 3, he conceptualized a model to explain values, vision, and vectors. Values, he expressed, trigger behavior and reflect meaning, purpose, and commitment of the

leader. Visions operationalize the values set; making sense for others what the values really mean or what they can do for us now and in the future. Vectors are responsible for the operationalization of the magnitude and direction of vision-driven action and are akin to the idea of group missions. Fairholm (2009) underscored the significance of an executive's role in articulating the vision to demonstrate support for programs being implemented. A well-articulated vision encourages the involvement of those who will develop and promote goals.

Individuals working within the strategic thinking paradigm are expected to make predictions, and direct their organizations toward the desired change. The ability to foresee, and anticipate change, requires visionary thinking. According to Cartwright and Baldwin (2006), vision is the ability to place the organization in a future state, as a means of guiding the strategy process. Berry (2007), who defined vision as an articulation of the future state of the organization, asserted that it guides the mission and values, core strategies, and realistic expectations. Vision, he further expressed, is the shift from a current position of the organization to a realistic, credible future that would reflect some form of organizational improvement. With a more external view, Cravens, Piercy, and Baldauf (2009) posited that vision enables leaders to identify and evaluate changes in the market. They ascertained that 'vision' determines the scope of impact on profit and performance expectation. As shown in Figure 4, the Three Point Model of Hull and Lio (2006), in support of this argument, places vision at the peak of the decision-making process when evaluating strategic position of the company and its financial performance.

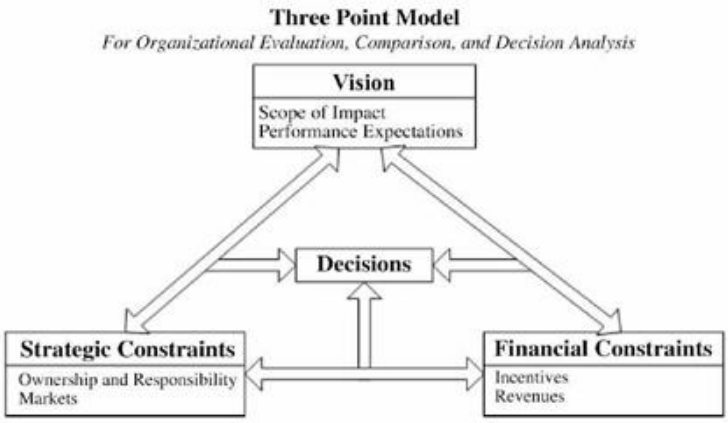

Figure 4. Three-point Model for Evaluation of Organizational Structure and Policy.

Within the construct of strategic management, Westley and Mintzberg (1989) identified five styles of visionary leadership as Creator, Proselytizer, Idealist, Bricoleur, and Diviner. Westley and Mintzberg (1989) identified three criteria for visionary leadership: 1) the envisioning of a desire or future state, 2) communicating the vision to followers or subordinates, and 3) empowering followers for the realization of the vision. They argued that vision is to be translated from ideas into words and actions. Gaining momentum in the 1990s, visionary leadership continues to be paramount to organizational performance (Dwivedi, 2006). He argued that the characteristics of visionary leadership are a: 1) determinant of corporate success and failure; 2) powerful strategic device; 3) way of providing meaning, direction and coherence; 4) means of full actualization of people's potential; 5) way to stimulate innovation; 6) essential to facilitate technological change; 7) approach to reduce resistance to change; 8) requirement for passionate thinking, and ability to challenge convention; and 9) means of reducing burnout.

In the discourse on strategic planning, Fairholm (2009) highlighted that goals and objectives help to define and measure activities to be performed. Having its roots in the history of the military, strategic planning is adopted by organizations as a tool for directing their long-term agenda (Cravens, 2009). Strategic planning has become significant to management practice

(Jennings & Disney, 2006) given the critical nature of making and implementing effective decisions for business growth. Promoting an internal view of strategic planning, Radford (1979) defined it as a management planning and controlling activity that provides a framework for specific operations within the organization. In recent years, strategic planning is understood as an aggressive outward view of the organization for responding to change in the competitive market. Falshaw, Glaister, and Tatoglu (2006) defined strategic planning as the process of creating the mission, objective, goals, and policies that govern resources and acquisitions for attaining organizational goals. Batra, Kaushik, and Kalia (2010) defined strategic planning as an activity through the articulation of a direction by which decision-making on resource allocation seeks to address issues that will arise in the future. Rummler and Brache (1995) declared that strategic planning enables leaders to respond to protect core technologies. This entails identifying uncertainties and equipping core operations with the necessary resources to prepare for change.

Impact on the Managerial Sphere

In discussing the dynamics of organization change and performance, Burke (2010) established that managerial practices are vital. Burke and Litwin (1992) revealed that work climate is the most critical dimension. Being central to both mid-management and individual performance, the climate contributes to the firm's outcome. Burke (2010) assigned managers to transactional outcome because their role involves displaying a set of specific behaviors when attempting to accomplish goals. According to Burke (2010), managers, through their transactional influence, have an impact on the working climate based on their behavior around the issues of 1) sense of direction and mission clarity, 2) roles and responsibility, 3) standards and commitment, and 4) fairness and rewards. The causal model of Burke and Litwin (1992) illustrated that management practices influence the structure and policies, and more directly, the

work climate in the pursuit of the organizational goals. The work climate shapes the perception of members based on the following conditions: 1) how well they are managed, 2) how clear they are about work expectation, 3) feeling about their performance recognition, 4) level of involvement in decision-making, 5) extent to which they believe management abides by the standards that are challenging and fair, 6) degree of support from peers, and 7) effectiveness of their work relationship with other units in the organization.

Even though managerial behavior impacts individual performance, Burke and Litwin (1992) demonstrated that the executive level is the most influential sphere for shaping the organizational culture. Vaccaro, Jansen, Van Den Bosh, and Volberda (2012) found a positive relationship between transformational leadership and management innovation when there is a demand to generate and implement change in large organizations. Furthermore, they determined that transformational leadership is more influential in large organizations when the innovation is ambiguous to the goals and outcome. In making a distinction between transactional and transformational leadership, Burke (2010) postulated that transformational change can be realized as a result of interactions with stakeholders outside of the organization. This will consequently require new behavior from members within the organization.

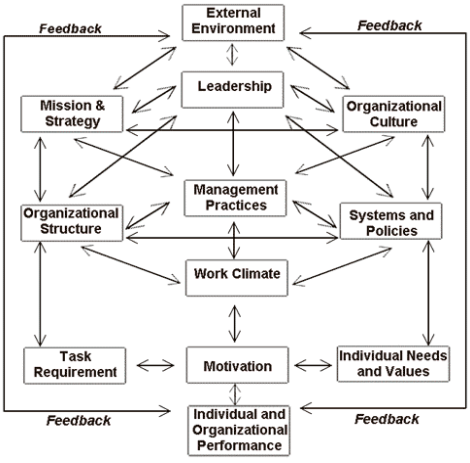

Figure 5. Burke and Litwin Model of Organizational Performance and Change.

Project Leadership in Technology-Based Industries

The goal of any competitive organization is to bring to market the latest, most efficient and effective products. Technology-based organizations are in the business of creating a demand for the innovation. As the global market matures into a hyper-energized environment in which competition is fierce, the collaboration of resources and talents becomes essential. Projects have become an essential part of how technology-based industries conduct business. According to Delarue, Hootegem, Procter, and Burridge (2007) and Thamhain (2004), in recent years, projects completed by teams have emerged as one of the important ways in which work gets performed. Organizations that are dependent upon technological advancements employ project teams to address design issues, innovation, research and development, and product development (Rickards & Moger, 2000). Within any technology-oriented industry, knowledge is evidence of competition, allowing the project teams to react quickly and effectively (Sipos, 2009). Focusing on innovation projects' effectiveness, Sipos (2009) found that the success of a project requires the ability of the team to introduce quality products and services (the capacity to which customers are satisfied and expectations are met) at a low price, and before competitors. The same metrics used for measuring project team dynamics, project leadership characteristics, and the project team environment should be used to determine leaders' level of interpersonal and analytical skills for project effectiveness and efficiency.

The need for a project-oriented business culture has become increasingly important in the global marketplace, requiring competitive organizations to work faster, more effectively, and efficiently (Thamhain, 2004). Creative thinking on product-based projects, he iterated, requires continuous experiential learning. The design of the project to promote learning is not an option for any effective leadership, but a necessity if the organization intends to remain competitive.

Driven by innovation and change more than ever before, project teams are an integral part of development and improvement of products and services; thus, making project leadership an obligatory component for determining the extent to which an organization has a competitive advantage. As project leadership becomes vital to the organization itself, people-related issues take a central position with respect to project performance. Thamhain (2004), who described project leadership as a "daunting task in today's turbulent environment" (p. 35), defined it as the art of creating a supportive work environment. After conducting a field study of 80 technology-intensive project teams in 27 companies using a three stage study which entailed interviewing and observing project managers and project team personnel, formulating questionnaires based on information obtained to conduct survey using a 5-point Likert-type scale and follow-up and in-depth interviews, Thamhain (2004) posited that managerial leadership requires interpersonal skills, as the human 'side' is the most challenging issue in any organization. Thamhain (2004) addressed staff and the coordination of the project team as essential to project success, and further explained that, in the technology-oriented environments, effective project planning and early team involvement are critical for the project team performance. Focusing on technology-based teams, he asserted that predictability and openness exist as a result of clear definition of processes and roles, which result in transparency and trust on the project. Thamhain (2004) found that "schedule-based measures," "cost-resource based measures," "stakeholder satisfaction measures," "risk and contingency measures," and "preparing for future projects" are metrics for measuring project leadership. The first two metrics address project efficiency, and the third is responsible for project effectiveness. His findings also reveal that the attributes of project leadership such as "interesting, stimulating work," "trust, respect, credibility," "cross-functional cooperation and support," "effective communication," "accomplishment and recognition,"

"direction and leadership," and "job skills" directly impact result. According to Thamhain (2004), the success of a project depends on the ability of leaders to build a commitment from team members regarding the plan, objectives, and results.

In today's market, a high level of creativity is considered to be valuable on innovative projects. Anantatmula (2010) constructed a project performance model containing six metrics by which leadership can be measured: Create clarity in communication, define roles and responsibilities, communicate expectations, employ consistent processes, facilitate support, and establish trust. He viewed project leadership crucial to project success as product delivery is a race to the market. Project leaders, he expressed, should communicate expectations for project outcomes and the role of stakeholders, such as supply chain managers. According to Rickards and Moger (2000), technological projects require coordinated actions of teams that are directed toward non-routine goals when designing, creating innovation, conducting research and development, and developing the product. They conducted their research in an industrial setting, focusing on creative project leadership. The assessment was conducted with project teams of business graduates and multiple teams entering an innovation contest within a multinational industrial organization. All participants rated the team after 1 year. The study revealed the level of influence that project leadership characteristics have on both the project team dynamics and project team environment. Based on the results from the study, seven factors were identified: "platform for understanding," "shared vision," climate," "resilience," "idea owners," "network activators," and "learning from experience." Project leaders are responsible for promoting knowledge sharing and creating an environment that facilitates participation with diverse perspectives. Rickards and Moger (2000) found that the creative performance of a team is enhanced by leadership, which, in turn, influences creative output. Through these activities,

project leaders are not expected to be technically savvy. They, however, are required to understand people, which include project teams, internal customers, and clients. As they are also held accountable for the project outcome, these leaders are responsible for creating a climate conducive to learning. Rickards and Moger (2000) argued for leaders on innovation projects to encourage experiential learning as a means of promoting change, create a positive atmosphere among team members and external groups, and gain commitment of team members by giving them ownership of the project that, even in turbulent times, they will transform challenges into opportunities that are based on principles they have established. Garg and Jain (2007) also agreed that project leaders will inevitably come across the issues of structure change and culture change in the pursuit of on-going support from different units within the organization. In identifying the process of change management as the most important aspect of representation of processes, tools, and techniques, they argued that 'resistance to change' will be an issue that has to be dealt with when managing the people-side of business.

In advocating for change-based leadership, Song (2009) hypothesized that project performance should be measured by team members using the following metrics: monitoring external environments, addressing the importance of organizational change, proposing innovative strategies and new vision, encouraging learning and development of employees, and taking necessary actions for improving organizational effectiveness. With the use of the five-point Likert-type scale, made the case for changes-oriented leadership, and placed project leadership into two categories. His findings determined that a leader should possess the ability to "Scan the external environment," "Envision beneficial change," "Encourage innovation," and "Risk-taking to promote change." In his work, Song (2009) argued that the leadership behavior

that facilitates technical, political, and cultural changes are important, primarily for organizations that are part of a dynamic and highly technical environment.

Innovation and Performance

Over the years, many scholars have been expressing their understanding of the term "innovation." Abernathy and Clark (1985) viewed innovation as the initial introduction to the market of a new product. Cummings (1998) referred to innovation as the first well succeeded application of a product or process. He also described innovation as an individual attitude, an organizational process, or a social movement. Rogers (2003), who has popularized the discourse on innovation, defined it as an idea, practice, or objective that is viewed as new by those who are expected to adopt it. He discovered that, similar to society, organizations have to adapt to innovation as it is an integral part to how organizations conduct business to provide quality service and products. Within the internal systems of the organization, the adoption of innovation is how individuals value the innovation. Organizational functions are shaped by its values, and the culture that exists requires the full integration of diffusion of new concepts to improve organizational competitiveness. Rogers (2003) posited that individual leader characteristics, specifically their attitude toward the change, contribute to the extent to which innovation becomes diffused in organizations.

In the discussion of the rate of innovation adoption, Rogers (2003) prescribed five variables associated with the rate of adoption: 1) attribute of innovation to the current situation, 2 types of decision-making process, 3) communication channels used to promote the innovation, 4) the extent to which social system is prepared to facilitate the innovation, and 5) the extent of change agents' involvement in promoting the innovation.

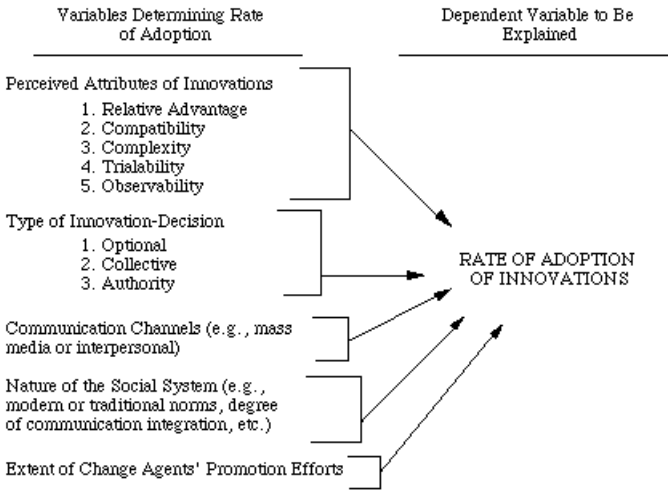

Figure 6. Variables Determining the Rate of Adoption of Innovations.

The illustration in Figure 7 presents the normal frequency distribution in which Rogers (2003) showed the rate of adoption over a period of time by individuals; hence forming five categories of adopters. Adopters are classified as 1) Innovators, 2) Early Adopters, 3) Early Majority, 4) Late Majority, and 5) Laggards.

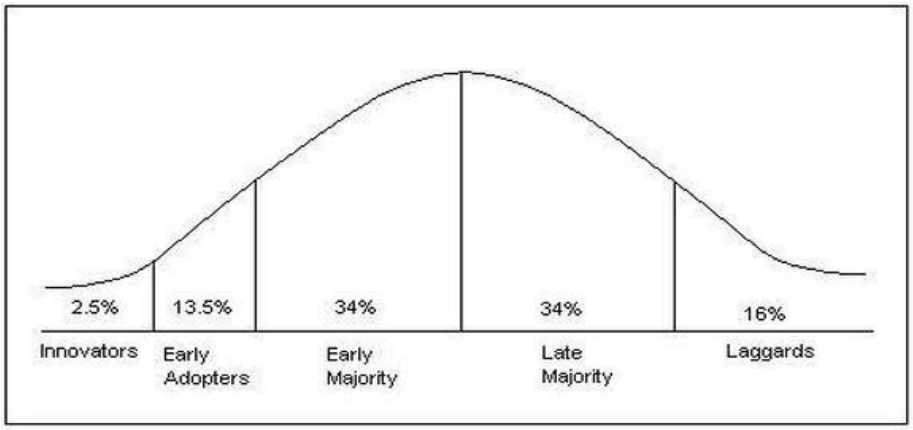

Figure 7. Adopter Categorization on the Basics of Innovativeness.

Although Rogers (2003) referred to individual, this can be applied to organization. Placed within the organizational framework, the term ‘individuals’ also infers managers. Individuals work within the organization to achieve common goals that rely on innovation within its process; however, barriers and resistance to change exist. Rogers (2003) identitied the term ‘individual-

blame bias,' which holds an individual accountable as opposed to the system in which they work. Managers and leaders are individuals who make decisions within the immediate environment of a larger system. With focus on individuals, Innovators are those fascinated with an innovation, and then explore it. This group is part of the launching process who are highly technical about how the innovation. Early Adopters are specialists qualified to serve as role models given their ability to apply the innovation within the context of their respective environments. This is a vital group in that their views as to whether or not the innovation fits within the scope of their function will determine the extent to which it is communicated. The Early Majority includes individuals who are introduced to the new idea before the average person. They are deliberate in how they employ the innovation. At this point, the innovation is a part of how things get done so adopting is viewed as a necessary action. There is an expectation for the introduced innovation to function normally within the scope of their duties, and when it does not, the individual revert to 'old' habits periodically as they gradually adjust to the innovation. Individuals within the Late Majority category are skeptics about the introduced innovation, and are reluctant to change their habits. Decision to use an innovation occurs when there is pressure to change. Laggards are individuals who are resistant to change; hence, isolating themselves from the innovation. Individuals within this category are aware of the existence of the innovation but are pessimistic about its impact. Rogers (2003) expressed that Laggards, in some cases, are rational, primarily when resources may not be available as a result of the innovation. Change agents with a professional setting, may attribute individual-blame thinking when clients do not adopt an innovation. This may apply to managers as they are internal customer/clients who control resources that can determine the extent to which an innovation is adopted and diffused.

Discourse on management innovation in the literature has recently begun to surface. Vaccaro et al. (2012) defined managerial innovation as the generation and implementation of a management practice, process, structure, or technique to further organization goals—within the dimensions in which managers interface. In addressing the paucity in the study of managerial innovation and social networks, Rodan and Galunic (2004) sought to find out how knowledge heterogeneity influences managerial performance and innovation. Interviews were conducted with managers of a medium-sized Scandinavian telecommunication company that provided domestic land-line and mobile phone services. Information was gathered through the use of a computer-based survey that targeted managers who had managerial responsibility of people, products, and markets. The study found that successful innovation depends on 1) managers' access to diverse sources for new ideas, and 2) mangers' access to network structure to help sustain their pursuit for knowledge long enough to legitimize the change initiative. They also found that social capital is a critical resource, and identified several micro-social processes in determining how to account for differences in managerial performance and innovation. They regard social capital as a source of potential value due to an on-going exchange relationship that individuals accumulate over a period of time. Access to diverse knowledge is a catalyst for new ideas. Rodan and Galunic (2004) supported Rogers' (2003) work that established social network as a channel for innovation. The organization, however, must facilitate a structure that helps to sustain their pursuit long enough to experience tangible success (Rodan and Galunic, 2004).

Communication, an essential process in which individuals create and share information, is vital to diffusion of innovation. Communication implies the convergence of useful information with the use of a social system, which in turn impacts the diffusion of innovation. Rogers (2003) identified five organizational structure variables related to innovation: 1) centralization, the

extent to which power and control are held by relatively few individuals; 2) complexity, the degree to which an organization possesses a relatively high level of knowledge and expertise to facilitate the innovation; 3) formalization, the degree to which an organization emphasizes its members to follow the rules and procedures; 4) interconnectedness, the extent to which units in a social system are linked by interpersonal networks; and 5) organizational slack, the degree to which uncommitted resources are available to an organization. With the use of previous work, Rogers (2003) reiterated that perceived attitude of the innovation, environmental issues, organizational factors and leadership are responsible for the degree to which an innovation is processed within an organization.

Rogers (2003) qualified champions, change agents, and opinion leaders as influential individuals within the organization. Therefore, the ability of managers to communicate within the context of their practices is imperative to the change agenda. Opinion leaders are those who are knowledgeable about the innovation. This type of leadership is given to individuals who are technically competent. Knowledge of the system's structure makes them values to the function; hence, allowing him or her access to varying levels within the organization as viable contributor which will determine the extent to when an innovation will be embraced. As the center of the communication network, the opinion leader is connected with individuals at all levels in the organization. At the organization level their role is to educate the executive about the challenges that may surface with the change. The opinion leaders may be technical team leaders at the process level, but are also employed by change agents to assist managers at the task level to make concepts more functional. Change agents are individuals who interface with employees at the task or performance level. As their contacts are direct, they have the capability to influence how workers respond to an innovation. Change agents are highly knowledgeable about the

infrastructure and the extent to which the innovation can be accommodated. Change agents contribute to providing insight to upper level leadership given their ability to navigate the organization. In response to adopting an innovation, management's agenda according to Rogers (2003) does not always reflect the messaging, behavior, and attitude of the executive sphere. However, they rely upon opinion leaders to be involved to get buy-ins. With the support of previous studies of leaders in different types of organizations, Rogers (2003) summarized that champions are charismatic individuals who are responsible for initiating change through the application of strong interpersonal skills and the ability use the media effectively. He reported that people skills may be more important than the position held, with varying degree of formal power, and different types of abilities. Champion leaders are higher risk takers, more innovative, and more influential with individuals.

Perspectives on Corporate Sustainability Leadership

Leadership performance within the context of sustainability is understood as the degree of environmental and social awareness by those who direct the firm. Executive heads of competitive organizations are responding to stakeholders who demand accountability for business impact on the environment and society. Organizations are challenged with addressing these demands while ensuring that they maintain a competitive advantage. Pressures from individuals, groups, and government entities are forcing organizations to communicate their sustainability efforts. As a result, there will be an increase in the discourse around the issue of sustainable leadership (Quinn & Dalton, 2009). Leadership, defined within the framework of sustainability, is a phenomenon and reflects emerging consciousness among stakeholders who are opting to support organizations that are making efforts to change the way managers conduct business (Ferdig, 2007). Scholarly discourse on sustainability leadership has only recently begun to emerge within the literature.

This is in part due to the fact that organization leaders are dealing with the pressure to address this matter as part of their business model (Middlebrooks, Miltenberger, Tweedy, Newman, & Follman, 2009). With the heightened awareness of sustainability, there is a demand for leaders to promote, practice, and manage their operations responsibly (Siebenhuner & Arnold, 2007).

In response to stakeholders' demands, organizational leaders are communicating ways in which they practice sustainability within their respective organization. They articulate the need to balance issues of people, the planet, and their profit for organizational performance as a competitive advantage within the market (Hansen et al., 2009; Kiewiet & Vos, 2007). Corporate sustainability assumes a holistic approach to addressing economic prosperity, environmental integrity, and social equity as part of the business operation. Although stakeholders are unrelentingly pressing corporations to address social responsibility, it is still not fully embraced within the strategic sphere (Robinson, Kleffner, & Bertels, 2011).

Baumgartner (2009), in a study on corporate sustainability strategies, posited that although corporations are investing in sustainability management and publishing sustainability and social responsibility reports, they fail to provide clear sustainability strategies. His work created specific aspect profiles for sustainability strategies and identified four types: 1) introverted, 2) extroverted, 3) conservative, and 4) visionary. Introverted sustainability strategies are those that focus on complying with regulations concerning society and the environment as a way to avoid financial risk for the company. Those with extroverted strategies have a tendency to focus on creating and maintain external relationships; hence legitimizing its sustainability strategy to obtain license to operate. Organizations with conservative strategies are focused on eco-efficiency and cleaner production. Lastly, vision strategies seek to address sustainability issues within all business activities. Organizations that create this form of sustainability

strategies incorporate sustainability as part of their competitive advantage from differentiation and innovation as a means of offering customers and stakeholders unique opportunities.

In contributing to the body of knowledge on organizational behavior, Devinney (2010) introduced the concept of narrow views and expansive views with regard to how people respond to corporate social responsibility. He explicated that those with narrow views believe that organizations have little or no obligation to improve society as part of their business agenda. Investment in corporate social responsibility initiatives is viewed as a cost without guaranteeing a return on investment. Kanji and Chopra (2010) found that many leaders are still claiming a lack of resources, which is limiting their ability to be fully engaged in corporate social responsibility initiatives. Although those with narrow views may understand the importance of distributing corporate funds across corporate social responsibility activities, they lose interest because these types of initiatives are not perceived as beneficial to the business process and bottom-line (Gautam & Singh, 2010). Even though corporations are increasing their public statement of a commitment to societal and environmental causes, stakeholders remain dissatisfied. Many hold the belief that corporations are mostly interested in erasing their tarnished reputation (Jackson & Apostolakou, 2010). Devinney (2010) remarked that organizations that embrace narrow views of corporate social responsibility lack high levels of creativity and innovativeness in developing programs to support sustainability initiatives. He also stated that those holding this view tend to create a culture in which leaders play a small role in addressing the demands for sustainability.

In contrast to the narrow views, those with expansive views accept that corporations are responsible for environmental, social, and economic improvements and must be advocates of sustainability-oriented activity. Benn, Todd, and Pendleton (2010) assigned transformational

leaders as messengers to diffuse sustainability. They are capable of formulating and delivering the company corporate social responsibility strategies using their influential status to give speeches, write letters, and send out releases and other written and verbal communication to convey a message of awareness and dedication to corporate social responsibility. Through the review of the literature, Moon (2002) observed three different types of corporate social responsibility awareness by businesses that have taken place in distinct 'waves.' The first 'wave' is the awareness of the importance of community involvement, the second 'wave' is a response to the need to address the importance of social-responsible production processes (environmental), and the third 'wave' is the consciousness of maintaining social-responsible employee relations. Although much of the knowledge regarding corporate social responsibility is in response to societal pressure, leaders with expansive views on corporate social responsibility are innovative. They create strategies that would integrate corporate social responsibility initiatives with the operations. This guarantees some degree of visibility and measurability once the social contract is placed within the management mechanism.

Financial Performance and the Social Responsibility Agenda

The maximization of financial growth is core to the performance of any competitive firm. It has been argued whether or not socially responsibility practices can add to the value of an organization. The debate of corporate social responsibility agenda within the framework of financial performance brought about contention and generated intense discussion in the 1980s. The argument continues to be discussed and presented from diverse perspectives.

Nilipour and Nilipour (2012) presented a case study on cement companies in Iran in which they compared the financial performance of conventional firms with sustainability firms.

They used a model that was developed by the Iranian Society of Green Management Awards to measure corporate sustainability performance.

Table 2

The Green Management Model (Iran).

<table>
<tr><td colspan="3">Empowerment</td><td>Sustainable Success</td></tr>
<tr><td rowspan="3">Leadership</td><td>Enterprise Resources</td><td rowspan="3">Process</td><td>Social Effects</td></tr>
<tr><td>Policy and Strategy</td><td>Environmental Effects</td></tr>
<tr><td>Corporate partners</td><td>Economic Effects</td></tr>
<tr><td colspan="3">Creativity and Innovation</td><td>Learning</td></tr>
</table>

The Iranian Green Management model presented in Nilipour's and Nilipour's (2012) work illustrated that "leadership" is responsible for 1) enterprise resources, 2) policy and strategy, and 3) corporate partners. Guided by a "process," these elements will impact the sustainability dimensions. "Empowerment" is shown to be a driver of all the variables, which will bring about "creativity and innovation." "Sustainable Success" determines the extent to which sustainability dimensions are impacted and extent to which "Learning" occurs. The study used the following indices: size, leverage, free cash flow, profitability, and growth of the firm to measure financial performance. Their hypothesis stated a positive relationship between corporation sustainability performance and all variables except for 'leverage.' In their findings, there was no association between sustainability performance and financial performance. They established that there was managerial resistance to the integration of sustainability. One reason was due to the economic and political sanctions imposed on Iran. Further, unstable financial climate and the newly established sustainability concept may have contributed to the resistance to integrate sustainability within the operation.

Those with a negative view of the relationship between social responsibility and financial performance imply that the inclusion of initiatives that address employee conditions, environmentally practices, charitable donations, community development, and economically depressed areas will cause companies to incur additional costs. Essentially, it does not pay to simply do good deeds. They claim that these are financially unsound behaviors that leave business entities at a competitive disadvantage. Individuals holding these views tend to focus on the scarcity of financial resources, and less on the views and values held by stakeholders who are the ultimate decision-makers in business activities.

Having a more neutral view, there are those who assert that, due to the complexity of the issue, it is difficult to determine if there is a direct relationship between the two domains. As a means of supporting the sustainability initiative with organizations, The Sustainability Investment Research Analysts Network (SIRAN) was established. As a response to the negative view, SIRAN sets out to 1) educate, 2) address short-termism in financial decision-making, and 3) bring to light the socio-psychological issues that cause individuals to disregard the importance of sustainability within the financial sphere. SIRAN acts as a strategy entity to create harmony between the Corporate Financial Performance and Corporate Social Responsibility Practice. SIRAN's existence has impacted responses in business schools, which, as a result, created a demand for curriculum to address corporate sustainability.

Ameer and Othman (2012), who conducted a study of 100 sustainable companies, hypothesized that companies with superior sustainable practices have a higher financial performance compared to those that do not engage in these practices. When examining the sustainability reports, they used these four indices to measure performance: community,

diversity, environmental, and ethical. Ameer and Othman (2012) found that global sustainable companies place more emphasis on ‘eco-centric’ than ‘ethnic-centric’ issues.

Positivists believe that social responsibility agenda will eventually positively impact financial outcome. They place value on relationship-building with stakeholders, and hold the belief that, through socially responsible investments, a firm has the potential to maintain and enhance its reputation. Those with an opportunistic view of social responsibility and financial performance argue that investments for social responsibility activities generate financial benefits (Nilipour & Nilipour, 2012). Matthews and Rusinko (2010) viewed sustainability as a technological change with respect to management of modern corporations. They presented six necessary conditions for linking sustainability to financial valuation: 1) development of widely accepted disclosure standards for sustainability, 2) development of metrics for sustainability performance, 3) development of sustainability auditing/assurance standards, 4) increasing of sustainability reporting by corporation, 5) increasing of socially responsible investing, and 6) participation by financial analysts in integrating sustainability into their valuation framework. With the use of management innovation literature, they argued that adding sustainability disclosure to the set of information used to value corporate financial performance leads to a more complete analysis of financial performance. Those arguing from the resource perspectives believe that, ultimately, firms with superior resources have the capacity to invest in social responsibility activities. Businesses with greater underlying resources are more likely to yield financial gains than their counterparts with fewer resources.

Managerial Response to the Social Responsibility Agenda

There is no conclusive finding clearly identifying the relationship between corporate social responsibility activities and financial performance. In addition, there still is an

overwhelming demand within diverse disciplines for the inclusion of social responsibility practices in corporate strategic sphere. Ferdig (2007) identified corporate social responsibility as a new paradigm in which there is a shift to create profit governed by conscious and responsible actions. With a focus on ethical climate in organizations as part of corporate social responsibility, Parboteeah et al. (2010) established communication and empowerment as valuable managerial practices. In contending that personal values create the premise for the manner in which managers address social responsibility agenda, Duarte's (2010) study emphasized that executive response influences managers' commitment to social and environmental sustainability by executive tone; that is, the degree to which they champion the change. The work further hinted on the challenges that leaders confront in the attempt to embrace diverse forms of communication for learning, knowledge-sharing, and creating policies for guiding the behavior associated with social responsibility.

The new emphasis on corporate sustainability requires a broader vision for assessing opportunities and risks in programs development (Oncica-Sanislav & Candea, 2008). With no formal CSR management system in place to monitor performance, an organization's aggressive marketing of CSR agenda can prolong stakeholders skepticism and perception that CSR initiatives are only addressed to ensure that companies receive recognition for their involvement in the community as "good organization citizens" (Frankental, 2002). Devinney (2010), who argued for scholars to create a more operable term for corporate social responsibility, pointed out that consumers tend to expect managers to behave benevolently when making decisions about social investments. Kanji and Chopra (2010) cautioned that many corporations have not fully integrated social responsible activities within the management system, but employ this concept only as a strategy for gaining public support to have a competitive advantage.

To ameliorate the process of integrating sustainability within the business model, Epstein, Buhavo, and Yuthas (2010) found that managers have to learn how to deal with tradeoffs to simultaneous address sustainability and financial goals. Epstein et al. (2010) explored the challenges of implementing sustainability in companies such as Home Depot and Nike, and found that managers are encountering challenges to adapt to change. They suggested the adoption of formal and informal systems for sustainability integration within the organizational culture and practices. In their study, the companies employed formal sustainability strategy, structure, and system to demonstrate commitment. Within the formal system, performance measurement and rewarding performance encourage employees to include sustainability in their work. Although the formal system is deemed vital, they discovered that internal context was more effective in impacting behavior. Epstein et al. (2010) posited that organizational culture and leadership influence the mind-set for creating a system that aligns the brand with sustainability performance. Epstein et al. (2010) made the recommendation for managers to be placed into the role that interfaces with employees in order to promote involvement. They encouraged the creation of an open communication system in the workplace. They suggested the establishment of a corporate social responsibility division/department as a source for educating other departments was instrumental for influencing the organizational culture and values and developing tools for incorporating sustainability.

Human Resource Discipline and Sustainability Leadership

There is a call for HR practitioners and scholars to contribute to sustainability development, and the need to exercise leadership through strategic partnership with business leaders in learning organizations. The study of corporate sustainable development is relevant within the human resource discipline, given the importance of influencing change and culture

through organizational learning. In 2011, The Society of Human Resource Management (SHRM), in an extensive research, identified barriers to developing a sustainable workplace, and requested that HR professionals demonstrate leadership by first creating a working definition of sustainability within their respective organizations. HR managers are faced with the challenge of addressing this agenda. The following reasons have been identified by the SHRM (2011): 1) lack of internal capacity or knowledge, 2) lack of support from organization's leaders for sustainability, 3) cost of launching the sustainability initiatives, 4) difficulty in measuring the return on investment, and 5) costs of maintaining the initiative. Through interviews with HR leaders, the SHRM (2011) report conveyed that HR practitioners should take a more strategic approach in delivery value to the sustainability and social responsibility agenda. Applying sustainability to HRD agenda is a matter of urgency. The report urged human resources professionals to create a working definition of sustainability within their respective organizations. SHRM (2011) reported that Human Resource and the Organization Development disciplines have been on the fringes of the sustainability movement and demanded that they play an integral role in advancing the sustainable development agenda.

A report by the Society of Human Resource Management Foundation in 2012 continued to support the case that human resources management, as an instrumental function of a firm's operation, has the potential to become a viable strategic business partner for devising concepts, creating roadmaps, and planning for the diffusion of sustainability practice at all levels. The study (2012) introduced several HRM-related indicators established by the Global Reporting Index (GRI). These indicators make it evident that HR leadership is essential in Corporate Social and Environmental Sustainability. In reiterating the findings of previous studies, SHRM Foundation (2012) assigned HR managers to the following responsibilities: 1) look at how

sustainability addresses the business before looking at how it affects HR, 2) make the business case of social responsibility, 3) ensure that social responsibility agenda is woven into the fabric of the organization, 4) make sustainability an HR issue, 5) address the new values of employees who are socially conscious in the recruiting process, and when branding the products and services, and 6) train and develop leaders to address sustainability. This is an affirmation that the study of corporate sustainability and issues regarding this issue is appropriate to the HR department within any progressive institution.

Corporate social responsibility affects the tone that companies use in recruiting, engaging, and retaining employees, and impacts customer interaction, according to the HR reports, and further articulated that an absence of leadership around the social responsibility issue is causing a void for the progress of the discipline. They appeal to those within the discipline to seize the opportunity to play a strong leadership role at the strategic table. With the understanding that organizational learning is imperative to a firm's performance, The Society of Human Resource Management (SHRM) Foundation (2012) brought to the forefront the critical nature of advancing corporate sustainability and social responsibility as a core unit within organizations. These studies, conducted by the Human Resources organizations, present a definitive stance for practitioners to develop sustainability leaders. In the development of talents within the strategic thinking domain, Human Resource practitioners play a more proactive role in shaping the organization. Based on the review of literature, Pruetipibultham (2010) iterated that HRD is to be a proactive entity in the area of sustainability. It is essential that they act as a transformational element for change in aiding organizational leaders to communicate the vision at all levels and externally among diverse stakeholders. Pruetipibultham (2010) advised that HR

practitioners should position themselves to become more involved within political and social spheres for delivering strategic significance to sustainability.

Organization Learning

As HRD practitioners accept ownership of the learning agenda within organizations, Crews (2010) articulated the importance of aligning HRM and HRD traditional values with the development of sustainability program. He emphasized that the inability to do so will continue to negatively impact leadership performance for the advancement of this new paradigm. In the below-mentioned model, Crews (2010) proposed that organizational learning should be actualized through talent management, training and development, and leadership development that are directed towards sustainability. Several scholars provided some insights on organizational learning. In learning organizations, people are empowered through collaboration and teamwork, according to Joo (2010). Organizational learning is essential to develop and maintain competitiveness (Kontoghiorghes, Awbre, & Feurig, 2005) as it improves the capacity for transformation of innovative process and technological competence (Bolívar-Ramos, García-Morales, & Mihi-Ramírez, 2011). It serves as a core element responsible for technological advancement, sustainability, and performance, requiring a culture that leaders are responsible for creating (Andreadis, 2009). Organizational learning occurs when there is an interactive, iterative process of assessing, believing in, choosing, and owning change initiatives to perform one's job. Organizational learning has also been defined as the ability to manage, utilize, and transfer knowledge for solving problems (Siebenhüner & Arnold, 2007).

In Table 3, Crews (2010) identified six organizational learning interventions that may determine the extent to which leaders integrate sustainability. Through the operationalization of

sustainability within HR practice, this will gradually improve the organizational culture in which sustainability will be embraced and become accepted as the norm.

Table 3

Organization Learning Implications for Human Resource Managers.

Category	***Interventions***
Talent Management	-Integrate sustainability objectives into recruitment and selection process to seek better fit with new hires. -Acquire talent with knowledge and skills to support a sustainability initiative.
Training and Development	-Support sustainability objectives through training initiatives at all levels of the organization. -Integrate sustainability intent throughout mentoring, coaching, and career development processes.
Leadership Development	-Identify the role of leaders in aligning business objectives and processes with sustainability. -Provide development opportunities and drive dialogue among all levels of leadership to build conceptual consensus on sustainability.

Organization Culture

Scholars, who advocate for the adoption of the sustainability agenda within the human resource practice, envision the discipline as a force for cultural transformation and change. After a study on Indian tourism section, Jithendran and Baum (2000) posited that HRD is responsible for improving organizational culture. Practitioners within the discipline are capable of promoting sustainability through education as a means of creating clarity about the issues. They view HR practitioners' role as helping to create a realistic image of the business, and to participate in the development of sustainability-driven ethical behavior and 'sub-culture.' The need to create awareness, promote a culture of acceptance, and develop resources to facilitate sustainability initiatives is essential for those within the HR field. As the owners of organization values and culture, HR may help business gain a competitive advantage by practicing and managing social responsibility agenda (SHRM, 2011).

After observing response sustainability initiatives, Baumgartner (2009) identified four organization cultural categories in which an organization can be placed: 1) market-driven, 2) compliant-oriented, 3) environmentally-focused, and 4) stewardship. A market-oriented company embraces sustainability ideas based on pure opportunism, linking their activities only to its marketing activities. Market-focused entities are reactive in nature, and may have extrinsic values (Jackson & Apostolakou, 2010) in which they try to generate excitement from stakeholders about the sustainability agenda before proceeding with the development. The Compliance-driven culture takes a standardized approach to all aspects of social and environmental sustainability to address enforced regulations. This method may inhibit the exploration of innovative sustainable development. Within the Environment-focused culture, sustainability is strictly addressed around the issues of the environment. Baumgartner (2009) further expressed that the conservative strategies of this culture limit a broader understanding of sustainability and its practice at all levels within the organization. The Stewardship culture creates visionary strategies focus on sustainability issues within all business activities (Baumgartner, 2009). Organizations that establish themselves as stewards of sustainability attempt to create a highly systemic agenda around their programs, and provide transparency in their reporting, according to Fowler and Hope (2007). Companies that incorporate sustainability within their business strategy solicit stakeholder and shareholder engagement (Fowler & Hope, 2007) and seek feedback for improvement. Fenwick and Bierema (2008) conducted a study within eight large North American firms that claimed CSR to be a key part of their operation. The purpose of the study was to determine the degree to which HRD managers addressed employee learning and promotion, employee safety, and employee ownership of development as part of the CSR programs. Upon examining the perception of HRD practitioners' roles,

and the challenges in implementing CSR projects, Fenwick and Bierema (2008) determined that CSR principles and rationale are sometimes misunderstood and go unappreciated below senior management level. These scholars concluded that there is a failure to integrate sustainability-based change even as leaders express their commitment to the initiatives. Their work (2008) made it more evident that CSR ideals are not transformed into everyday practices, resulting in a lack of genuine support from senior management who play a key role in fashioning the culture. Corporate heads are consciously sending strong messages about integrating sustainability initiatives within their business operations. As organizational leaders are influential in determining the manner in which priorities are understood, they impact how individuals at various levels implement sustainability. Executives are communicating to some degree how their operations are impacting the present and future generations. The manner in which sustainability is communicating determines the extent to which it becomes part of the innovative process to gain a competitive advantage in the market.

Corporate Sustainability Reporting

Over the past decade, there has been an increase in corporate environmental and social reporting (Antoni & Hurt 2006; MacLean & Rebernak, 2007). These reports are titled "Corporate Sustainability," "Corporate Social Responsibility," "Global Citizenship," "Stewardship," or "Social Responsibility." This study uses the term "corporate sustainability report" or "sustainability reports" when referring to all of these reports. Corporate sustainability reporting is an effort to meet the needs and expectations of key stakeholders (Andrews, 2002). With increasing stakeholder engagement in the sustainability agenda, Dingwerth and Eichinger (2010) analyzed the level of transparency in sustainability reports as it can impact the internal business process. Several explanations have been presented to explain reasons behind the

demand of corporate sustainability reporting. Peer pressure continues to force businesses to report their social responsibility activities (MacLean & Rebernak, 2007) in the hope that it would improve the stakeholders' perception of the company.

Corporate sustainability reporting has become an important communication strategy for promoting greater transparency and accountability (Morhardt, Baird, & Freeman, 2002). Sustainability reports can be regarded as a corporate communication document that has the potential to reveal the values, tone, and attitude toward social responsibility. Although these kinds of reports may vary from one entity to another, it is understood as a voluntarily disclosure of social, environmental, and economic performance. The report is usually published on the websites of the corporation and may be accessible to anyone with an Internet connection. Stakeholders have the opportunity to evaluate the social and environmental values of organizations to compare them with peer companies (Morhardt, Baird, & Freeman, 2002).

Lungu, Caraian, Dascalu, and Guse (2011), upon examining information in CS Reports disclosed by European companies, theorized that an individual has the ability to determine the level of awareness that exists within organizations by monitoring and analyzing corporate social reports. Even though there has been an increase in the quality of reporting since 2008, the discourse on the failure to provide quality corporate sustainability reporting continues to be discussed within diverse organizational literature. As there are still no rules on how organizations choose to present their sustainability reports, the literature are vociferously exploring and assessing the quality of these reports (Romero, Ruiz, & Fernández-Feijóo, 2008). Willis (2003), postulated that information reported using Global Reporting Initiatives (GRI) standard enables organizations to have a model by which they are able to develop their sustainability reports. Although some studies question the extent to which GRI Guidelines provide value for managers

seeking to improve a firms' performance, Schadewitz and Niskala (2010) iterated that corporate sustainability reporting is one component of a firm's communication tools to decrease information irregularity between managers. They found that GRI reporting is a method for producing an accurate estimate of organizational performance. In addressing all aspects of corporate economic, social, and environmental performance, the GRI Reporting Framework provides metrics for six categories: environmental, human rights, labor, product responsibility, society, and economic (Matthews & Rusinko, 2010). The guidelines include quantitative metrics and specific goals that would encourage organizations to provide more evidence of process and performance in their practice of sustainability.

With the need to address corporate sustainability reporting challenges, GRI has become the dominant standard for disclosing a holistic reporting of environmental, social, and economic reporting of organizational activities. GRI is a multi-stakeholder process and independent institution with the most prominent current reporting system for corporate sustainability performance (Morhardt et al., 2002; www.globalreporting.org, 2011). GRI's mission is to develop and disseminate globally applicable sustainability reporting guidelines for voluntary use by corporations reporting on the economic, environmental and social dimensions of their activities, products, and services (Grafe-Buckens & Jankowska, 2001).

GRI provides all companies and organizations with a comprehensive sustainability reporting framework that is widely used around the world. Support for GRI has been growing within larger organizations because of its position as a multi-stakeholder process and independent institution, according to MacLean and Rebernak (2007). GRI continues to gain acceptance by organizations due to its extensive dialogue and feedback with the multinational business community, NGOs, academicians, and the participation of various entities to build

consensus regarding the components of the Guidelines. A debate during the 1999 GRI Conference brought to the surface the challenge of lessening the resistance standard sustainability reporting primarily by mainstream financial institutions and their executives. The leaders of the GRI understand that financial value cannot be assigned to non-financial information; however, they worked to form a consensus that organizations can use such information to generate value. The standardized triple bottom-line information, which includes environmental, social, and financial dimension, is the core component for the development of the GRI organization (Grafe-Buckens & Jankowska, 2001).

There are flaws, however, identified with the GRI reporting practice. Firstly, auditing is not conducted by GRI for determining the accuracy of the reporting. Further, companies are responsible for grading their own reporting performance. A report conducted by the Global Report Initiatives (2011) claims that thousands of worldwide companies are producing sustainability reports. Furthermore, there has been an increase in reporting by 50% since the year 2005. Eighty percent of the largest 250 companies worldwide issued sustainability reports in the year 2008. Eighty-four percent of the reports came from large companies, of which over half of them are publicly held. Even with this increase, many organizations continue disclosing social responsibility activities partially, and are reluctant to integrate and measure sustainability activities within their operations. As sustainability reporting is increasing becoming a powerful source of corporate communication strategy for influencing internal and external stakeholders, the need exists to conduct more research on how corporate sustainability behavior impacts firms' performance by analyzing reports.

CHAPTER 3

METHODOLOGY

The purpose of this study is to investigate the impact of sustainability behavior on financial performance in aerospace companies using official websites of companies and Reuters. All communication materials such as the sustainability reports and annual reports were obtained directly from the official website of each company selected for the study. As the issue of sustainability continues to be a sensitive matter, companies are wary about welcoming outside individuals to conduct research in their company. The researcher used the Internet to gather data in order to make judgments about companies' behavior. One of the reasons for using this method is due to the fact that stakeholders and shareholders are demanding social responsibility information from corporations. In response, corporate leaders are making use of the Internet to inform their constituents. With the understanding that the Internet is a significant channel for corporate communication, the researcher views this method as a credible means of gathering data for studying organizational behavior.

Population and Sample

After searching on Google by typing the words, "list of top aerospace companies in the world," an article by Candesic surfaced titled, "The World's Top 100 Aersopace and Defense Companies 2012." Candesic is a management and strategic firm that specializes in the aerospace industry and reports on performance. This firm's report provided a transparent structure of the

aerospace industry. It created categories which include: each company and subsidiaries, if any; the company's ranking; ownership type (publicly traded, private, or state-owned); and the main shareholders. To qualify for this study, a company must be listed in the Top 100 Aerospace and Defense companies identified by the report. Based on the report, the United States accounts for 44 of the top aerospace companies in the world; however, three were not included as they were privately held. Of the remaining 41 U.S. aerospace companies, one was eliminated from the study as it was not in existence as a company after being acquired by United Technologies Corporation. As a result, the 40 companies selected for the study were as follows: AAR, Allegheny Technologies, Alcoa, Alliant Techsystems, BE Aerospace, Boeing, Booz Allen Hamilton, CACI International, Curtiss Wright, Huntington, L-3 Communications, Loral Space and Communications, Lockheed, Mantech International, Moog, Navistar, Eaton, Esterline Technologies, Exelis, Gencorp, Gen Dynamics, General Electric, Harris, Honeywell International, Hexcel, Northrop Grumman, OshKosh, Orbital Sciences, Parker Hannifin, Precision Castpart, Rockwell, Raytheon, SAIC, Spirit Aerosystems, TransDigm, Triumph Group, Textron, Teledyne Technologies, United Technologies Corporation, and URS. The aerospace industry was studied because 1) it constitutes some of the largest companies in the world, 2) it possesses a complicated supply chain for work to be performed, 3) it reflects the highest level of standard in the industry because detail is critical to performance in order to remain competitive, and 4) it integrates the practice of science, business, and engineering, and is classified as a high-technology industry.

Data Collection

This study used both qualitative and quantitative archival sources to obtain information, which were sustainability reports and financial reports. As this study was focused on publicly

traded U.S. companies, two were eliminated for having “private” status. Goodrich was also eliminated, as it was recently acquired by UTC. The remaining sample for study included 40 aerospace companies that were established in the U.S.

The sustainability reports obtained were retrieved directly from each company’s website. For analysis, data collection was strictly obtained from documents or pages with the titles “Corporate Sustainability,” “Corporate Social Responsibility,” “Social Responsibility,” “Sustainability,” “Citizenship,” or “Global Citizenship.” Sustainability reports were used to collect quantitative and qualitative data in order to establish the number of companies with sustainability reports, sustainability reporting trends, and the extent to which sustainability was integrated within the business model. GRI guidelines are employed to assist organizations in disclosing their sustainability performance. This reporting framework is used by organizations of all sizes and sectors to formalize sustainability reports (http://www.globalreporting.org, 2011). Both GRI and Non-GRI reporting companies were studied.

To analyze the financial performance of the sample, the study used the operation margin ratio of the company, taking into consideration that gains or losses are based only on the normal methods of providing a good or a service (Bloomsbury Business Library, 2007). Financial data was obtained from the Reuters’ website. Reuters is an international news agency that provides financial market data. Since 2008, the Reuters news agency has been a part of Thomson Reuters, forming part of its financial and risk division. Reuters is used as a secondary source that provides financial information obtained from the New York Stock Exchange. It reports on all publicly traded national and international companies. Once the full name of the company was typed into the keyword slot on Reuter’s website, nine folders with different topics such as ‘key developments,’ ‘news,’ ‘people,’ ‘charts,’ and ‘financials’ were presented on each company.

Within the ‘financials’ folder, financial information was placed into nine categories, which included ‘dividends,’ ‘growth rates,’ ‘financial strength,’ ‘efficiency,’ and ‘management effectiveness.’ For this study, information was obtained from the ‘profit ratios’ category in which the “operating margin 5 year average ratio” was reported.

Design and Data Analysis

This study was guided by research questions wherein the first portion employed both qualitative and quantitative analyses of corporate sustainability reports to explore the themes, initiatives, and issues being addressed by organizations. The sustainability reporting and behavior are independent variables that include whether or not companies publish sustainability reports, the initiatives, the strategic components, number of years the companies have been publishing sustainability reports, and the GRI versus Non-GRI status of the sustainability report. Important to the study was the extent to which companies integrated sustainability within their business agenda. With regard to “Sustainability Initiative Integration” the research would only regard companies scoring above 35 to 38 as highly integrative. It was established by the research that companies with scores 24 and below were regarded as low. In the case of the “Integration of Strategic Indicators,” companies scoring from zero to three were identified as “less integrative” and those scoring from 6-8 were determined as “highly integrative” as they employ more strategic elements, such as mission, goals, and targets in their sustainability reports. For the analyses of the independent variables, only the two extreme scores were used. The independent variables were formed by the researcher after conducting several qualitative studies on corporate social responsibility reporting, and presenting the findings at conferences. The “Operating Profit Margin 5 Year Average Ratio” is the dependent variable that will require interval data. Each company’s “Operating Profit Margin 5 Year Average Ratio was measured against its Industry’s

"Operating Profit Margin 5 Year Average Ratio" to measure the financial performance of each group. A T-test was used to also compare the independent variables to the dependent variables.

Research Question 1: What are the initiatives, issues, and themes being addressed in the corporate sustainability reports of aerospace companies?

Research Question 1 required both qualitative and quantitative analyses. The first task was to view the official website of a company to determine if they were reporters or non-reporters of sustainability. Companies that disclose information, that use the term 'sustainability,' 'corporate responsibility,' 'corporate social responsibility,' 'citizenship,' or 'social responsibility' are considered sustainability reporters. For the quantitative analysis to be conducted, category data was required. Two groups were constructed: A score of '1' was earned by those with sustainability reports, and '0' was assigned to companies without sustainability reports. A t-test was used to compare the operating profit (loss) ratio of the two groups.

The second portion of Research Question 1 required qualitative analysis. A table was constructed for each of the following subjects: Initiatives, Issues, and Themes. The purpose was to provide a general understanding of what was valued by the company. The study listed the types of initiatives, which includes sustainability activities or interests mentioned in the leadership statements. It was assumed that activities or interests mentioned by leaders may convey the types of initiatives that are deemed highly valued, or ones of which the leaders are most proud. Initiatives relating to temporary situations like natural disasters were not included. Key issues or key impacts are risks and opportunities that may affect the company's future growth. For analysis, these issues were found by typing in keywords such as 'issues,' 'challenges,' 'difficulties,' 'risks,' 'impacts,' and 'opportunities.' The issues identified in sustainability reports were listed in a table for qualitative analysis. For this study, themes were

also identified. It was established as the title given to the sustainability report. If there was no subtitle, then slogan from the leadership statement was used.

Research Question 2: Is there a relationship between the operating profit (loss) over the past 5 years of companies with a highly integrative and less integrative sustainability agenda?

The first portion of Research Question 2 identified companies that practice sustainability initiatives in the categories based on Hubbard's (2009) study. Thirteen initiative categories were identified as any statement regarding interests or activities that impact emission, material-use, water-use, energy-use, employee relations, community relations, supplier management, philanthropy, financial performance, internal process (health and safety), learning and development (training), customer/market, and economic development. Interval data was obtained, and scores were used to determine the extent to which sustainability was integrated within the company's business agenda. A Sustainability Integration (SI) scorecard was constructed on a scale of 0-3: '0' was assigned when no initiative was mentioned; a company earned '1' when an interest in a particular initiative was mentioned, but without evidence of the sustainability activity being performed; '2' was earned when the sustainability report identified specific activities/projects being performed to address an initiative; and '3' was assigned when the company communicated its sustainability program as an innovation. The total SII score ranged from 0-39. Companies were categorized into 'highly integrative companies' or 'less integrative companies' based on the SI scores. The scores of companies with highly integrated sustainability agenda were determined by the researcher to be from 38-39 and those with less integrated agenda were established as scores from 16-23. T-test was used to compare the sustainability integration (SI) scores to the profitability of the company. Higher scores reflect

higher level of sustainability integration with the business agenda. Below are the criteria constructed for companies to be classified as having highly integrated sustainability agenda:

a) When use of the word ‘innovation’ was associated with the sustainability interest and explained to the reader.
b) When a sustainability interest area or initiative was related to innovation (e.g., STEM program).
c) When a sustainability interest area or an initiative within it was shown to be quantitatively measured (e.g., Use of numerical info, GRI Content Index).
d) When a sustainability interest area or an initiative within it was strongly associated with the shareholders/market values.

The second portion of Research Question 2 required comparing companies with high and low strategic indicators with financial performance. As stated in the Literature Review section, the strategic sphere requires leadership commitment, vision, mission, goals, objectives, and targets. The study added ‘sustainability personnel’ as an additional strategic indicator to determine the extent to which sustainability is valued within the companies. The score ‘1’ in the table indicates organizations that address particular elements that may show further evidence of sustainability with the business model. An organization with higher scores indicates a stronger strategic approach in managing their CSR activities than those with lower scores.

To efficiently identify the strategic indicators, the researcher copied and pasted the entire sustainability report of each company into a separate Word Document, then typed the keyword into the Navigation bar. For instance, if the word ‘mission’ was not recognized, the company would be assigned a score of ‘0’ instead of ‘1.’ After keywords were located, the researcher read the report to further determine if the word corresponded with the strategic indicators. For

instance, even if the word ‘mission’ was used, it may not necessarily pertain to the mission of the sustainability agenda; hence, ‘0’ would be assigned.

Table 4

Strategic Indicators Clarified to Measure Reporting Performance.

Strategic Indicators	**Descriptions**	**Questions to Identify Strategic Indicators**
Senior Statement (SS)	Statement from the senior decision-makers in the sustainability report followed by his or her signature.	Is there a written statement of the most senior decision maker in the organization?
Vision	Definition of vision: Some achievement or some future state that the organization will accomplish or realize (Cartwright & Baldwin, 2006).	Does the senior decision-maker make any futuristic comments regarding the continuation of CSR?
Mission	Definition of Mission: A brief statement that explains why the organization is in business.	Does the CS Report have a statement that clearly stated the purpose of the organization in relation to sustainability agenda?
Key Issues	Description of key impacts, risk, and opportunities: Significant impacts the organization has on sustainability and associated challenges and opportunities.	Does the CS Report address the challenges and opportunities pertaining to the CSR activities?
Goals	Targets for the next reporting period and midterm goals, or whatever the company identifies as its ‘goals.’	Does the sustainability report mention goals with reference to sustainability efforts?
Objectives	Targets for the next reporting period objectives related to the key issues, or what is identified as its ‘objectives.’	Does the sustainability report mention objectives with reference to sustainability efforts?
Target	GRI requirement: Measure performance against target (prior goals & objectives).	Is there any measurement of CSR performance against prior goals?
Personnel	Contact point for questions regarding the report or its content, or any one the report mentions with relation to sustainability.	Does the sustainability report mention a person who is responsible for the sustainability agenda?

Research Question 3: What is the relationship between the operating profit (loss) of the aerospace companies over the past 5 years and how sustainability activities have been reported?

Part one of Research Question 3, which consists of two phases, required comparing reporting trends and financial performance; whereas part two required comparing the financial performance of GRI and Non-GRI reporting companies.

In the first phase of part one of Research Question 3, interval data was obtained after viewing online archives. In order to establish the year in which the company began its sustainability reports publication, the date was found in the report itself. Companies that have been reporting their sustainability activities for years tend to have a list of direct links to the reports. However, to ensure that all sustainability reports are accounted for, keywords 'sustainability,' 'corporate responsibility,' and 'social responsibility' were typed into the keyword slot provided for users to obtain additional information from the companies' databases. If some of the databases did not contain previous sustainability reports, the second step would have been to make a call to the company to inquire as to whether or not there were more sustainability reports. The researcher was prepared to introduce herself as a student who would like to ensure that all the sustainability reports are accounted for in her research. She would have stated the amount of sustainability reports found on the website and requested confirmation that the number of sustainability reports identified was accurate. If the amount of sustainability reports was inaccurate, the researcher would have requested to be directed to an area on the website where the previous sustainability reports could be obtained. If there was no evidence of additional sustainability reports, the original count would have been deemed accurate.

The second phase of Research Question 3 entailed placing the companies into five groups, Groups A, B, C, D, and E, emulating Rogers' Adopter Categorization on the Basis of

Innovativeness: Innovators, Early-adopters, Early Majority, Late Majority and Laggards. For this study, the first aerospace company started reporting in 2004; hence, it is classified in "Group A" or as an Innovator. All the groups are evenly distributed on the timeline from the year 2004 to 2013. Basically, 'Group A' included companies that published their sustainability reports in 2004 and 2005, 'Group B' are those who began reporting in 2006 and 2007, 'Group C' companies started in 2008 and 2009, 'Group D' began reporting in 2010 and 2011, and 'Group E' are those who are late comers to sustainability reporting as they began in 2012 and 2013. ANOVA was used to analyze the mean operating profit (loss) ratio of the sustainability reporting groups.

Part two of Research Question 3 required finding the relationship in the operating profit (loss) over the past 5 years between Global Reporting Initiatives and Non-Global Reporting Initiatives compliant aerospace companies. Research Question 3, part two required categorical data to create two distinct groups: 'GRI' or 'Non-GRI' compliant companies. A company that reported using the PDF format was regarded as 'formal' reporters; otherwise, they were 'informal' reporters. The sample for this study consisted of companies with both formal and informal sustainability reports. To be considered GRI compliant, the company must clearly state that it follows the GRI guidelines anywhere in the sustainability report. Each sustainability report was also viewed using the keyword 'GRI.' If the word 'GRI' was not present in the document, it was assumed that the report did not follow the GRI guidelines. Two columns were constructed with a list of GRI compliant and Non-GRI companies. A t-test was used in this study to compare the two groups' profitability ratio.

Although a quantitative study was conducted to determine the relationship between the independent variables and financial performance, it was not assumed that there was a causal relationship between the independent variables and the dependent variable. The study simply

attempted to predict that strong sustainability integration may help companies to achieve profitability. This study did not use dollar figures to compare the operation performance of one company to another as companies vary by size, structure, and the products and services offered.

Descriptive statistics such as percentage, variance, and centrality of the operating margin ratio was used for this study. The purpose of descriptive statistics was to present collected data in an organized manner to facilitate quick and easy description of the data (Webster, 2000). All research questions regarding sustainability reporting and behavior required a statistical approach that used quantitative methods such as means, minimum, maximum and standard deviation, and mean comparison methods such as one way analysis of variance.

CHAPTER 4

RESULTS

As mentioned in Chapter 1, it is important to understand the impact of sustainability efforts on organization performance in companies with aerospace divisions. Using the procedures indicated in Chapter 3, all the sustainability reports were obtained from the websites of top aerospace companies published by Candesic consulting firm. As this study is focused on publicly traded U.S. companies, two were eliminated for having "private" status. Goodrich was also eliminated, as it was recently acquired by UTC. The remaining sample for study included 40 aerospace companies that were established in the U.S. Data findings were obtained directly from corporate sustainability reports that were found on the official website of the respective company. Most of the sustainability reports were located in the "About Us" page; others had a direct link from the "Home Page." For analysis, data collection was strictly obtained from documents or pages with the title "Corporate Sustainability," "Corporate Social Responsibility," "Social Responsibility," "Sustainability," "Citizenship," and "Global Citizenship." By using this method as described, 21 were found to have some form of sustainability disclosure or communication on their respective website.

It was found that the aerospace companies are diverse in nature; wherein, some were entirely committed to serving the aerospace industry, others provided diverse products and

services to different market segments. Some of these companies have diversified products or markets of aerospace makes up a fraction of its sales.

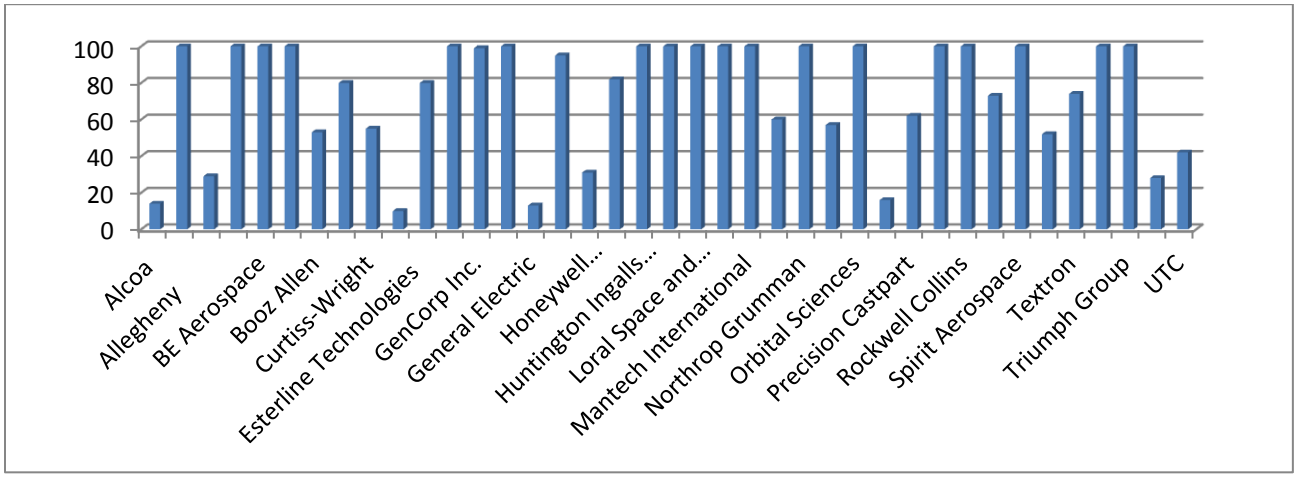

Figure 8. Percentage of Sales from the Aerospace Industry.

Shown in Figure 8, is the percentage of sales that each company obtained from the aerospace industry, which may range from 10% to 100%. Twenty of the companies in the sample obtained 90-100% of their sales exclusively from the aerospace industry.

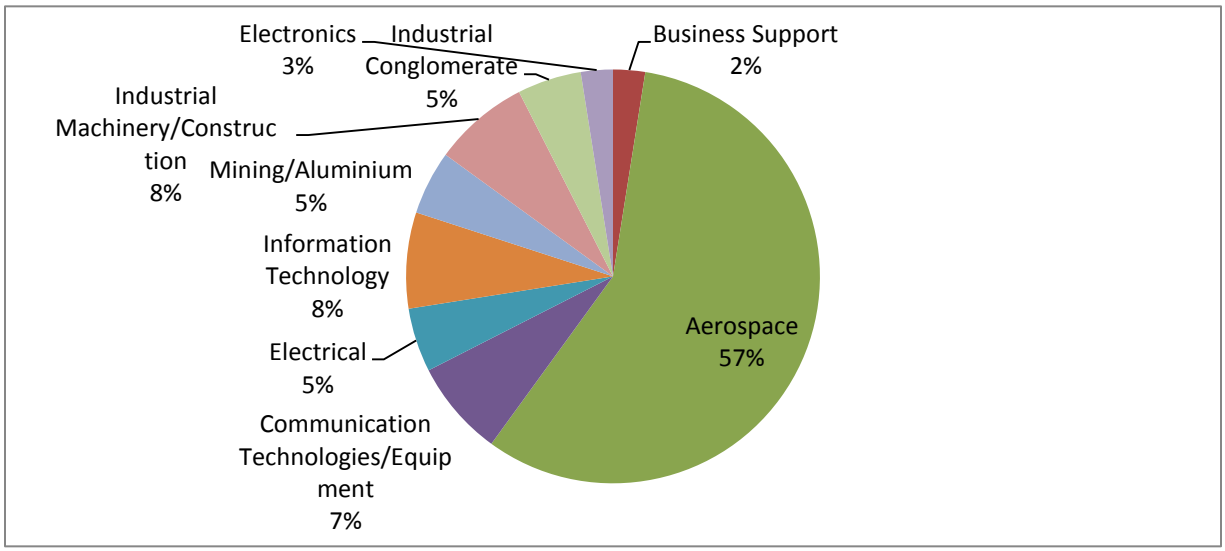

Figure 9. Reuters' Classification of the Companies in the Study.

Even though Candesic report regards all the companies as 'aerospace,' Reuters, the company from which the financial reports were obtained, placed them in different industries

based on the products and services. Based on Reuters' classification, Figure 9 illustrates that the sample for the study are a part of nine industries, of which 'aerospace' makes up the majority. The first major business core is aerospace, which comprises of 57% of all companies in the sample; second largest business core in the group of samples includes information technology, communication technologies/equipment, and industrial machinery/construction, making up an average of 8% of the sample for the studies. Although this study regards all the companies as part of the aerospace industries, Figure 9 illustration reveals the diversity of the supply chain and stakeholders that contribute to the development of the aerospace industry.

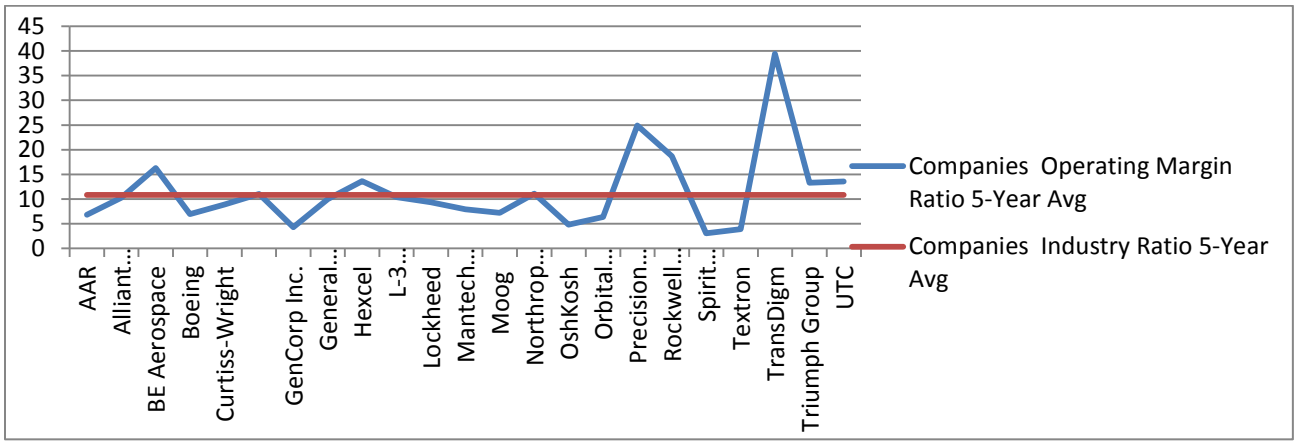

Figure 10. Financial Performance.

From the sample, 23 companies were identified by Reuters as 'Aerospace.' As such, the companies' Operating Margin Ratio for 5-Year Average was measured against that of the industry which was 10.87, which is shown in Figure 8. As shown in Figure 10, almost 50% of these 23 companies' operating Margin Ratio fell below the industry Operating Margin Ratio for 5-Year Average ratio. Although a company may gain operating margin profit from the previous years, it may still underperform when comparing it to that of the industry average.

Reporting and Non-Reporting Companies

In the study, 21 out of 40 companies had some form of sustainability reporting. Fifty-two percent of the aerospace companies reported in some form on the sustainability activities, as 48% did not provide a report. Shown in Appendix A, 52% of the sustainability reporting companies performed below the industry's operating profit margin; whereas companies that did not report fell 3% lower. The mean of the operating profit margin ratios of non-reporting companies are shown to be higher than companies that report their sustainability activities. The data show that comparison of means of the two groups did not demonstrate any relationship. The p-value is $=t_{(36)} =-0.654$, $p> .05$, demonstrating that there is no relationship between profit margin ratio and reporting status of companies. It is evident that sustainability reports are still not popular corporate material and have yet to be fully embraced as a viable communication document as a means of contributing to organization performance.

Research Question 1: What are the initiatives, issues, and themes being addressed in the corporate sustainability reports of aerospace companies?

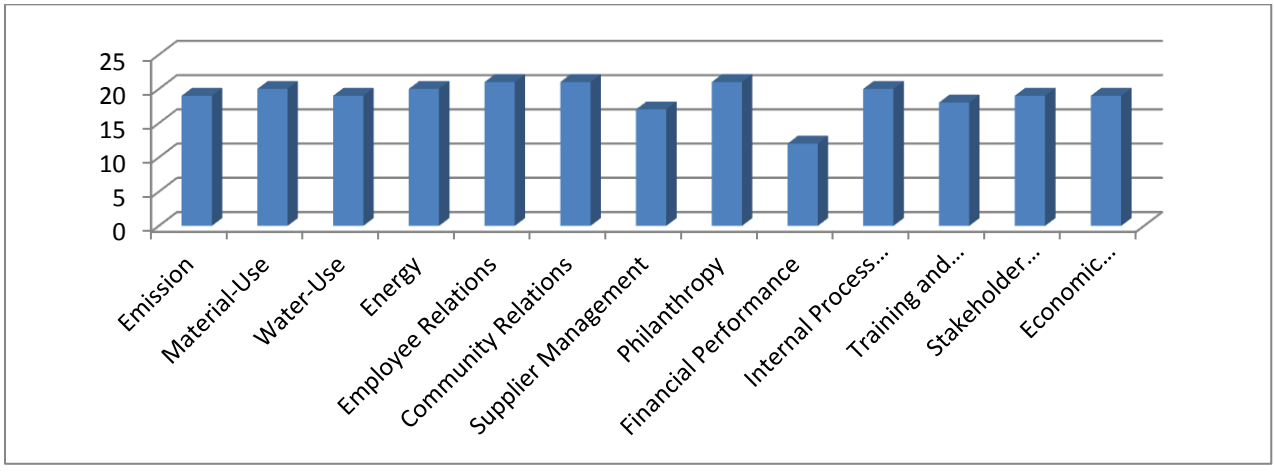

Figure 11. Number of Companies Responding to each Initiative Category.

All 21 companies in the study responded to “Employee Relations,” “Community Relations,” and “Philanthropy.” Employee relations issues constitute activities to improve social aspect of the work environment, work-life balance, and career development. Community Relations were external activities. Philanthropy is basically monetary donations that the companies provided to any cause. Twenty companies mentioned to the use of “Energy” and “Material,” making initiatives in these categories the second most responded to issues. Overall, an average of 19.5 companies responded to the environment dimension. “Financial” was the least mentioned word in the report, which may indicate that many companies are reluctant to associate sustainability with financial outcome. An average of 20.75 companies responded to activities that fall within the social dimension. An average of 18.8 companies responded to issues within the economic dimension to reflect their interests in sustainability.

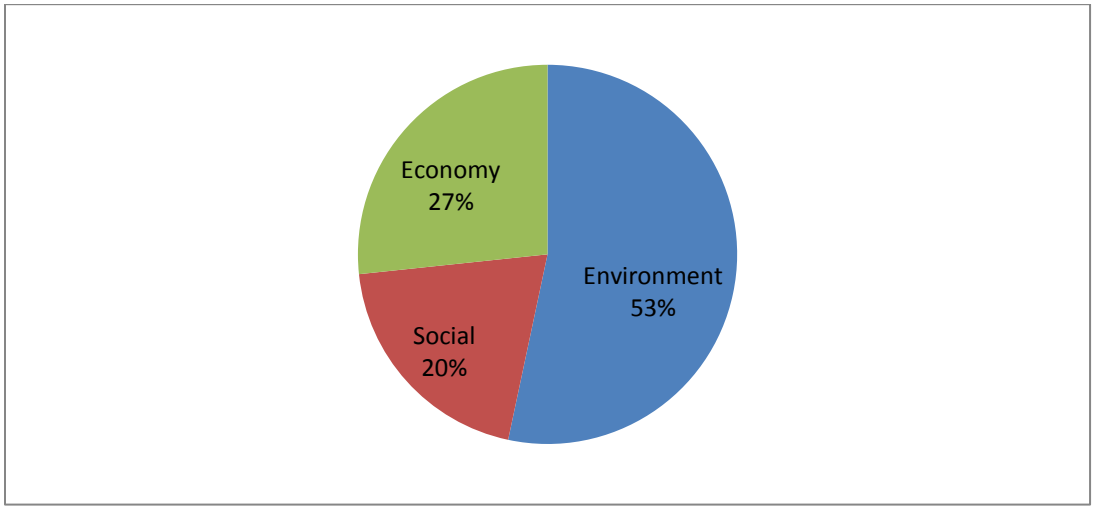

Figure 12. Key Issues Identified in Sustainability Reports.

Key issues were identified as opportunities that needed to be addressed for impacting growth. Majority of the key issues were within the environment dimension; this includes climate change, management and monitoring of environmental issues, waste disposal, energy, emission,

conservation, recycling, and water scarcity. The second most addressed key issues were related to the economic dimension. These issues included community development, talent acquisition within science and technology, hiring of military veterans, and working with clients to address sustainability. It was found that some community development initiatives were related to economic dimension. Social dimension issues included business ethics, diversity, and inclusion, as well as safety and employee wellbeing. Companies place a higher priority on environmental issues; however economic and social issues are of concern for overall performance.

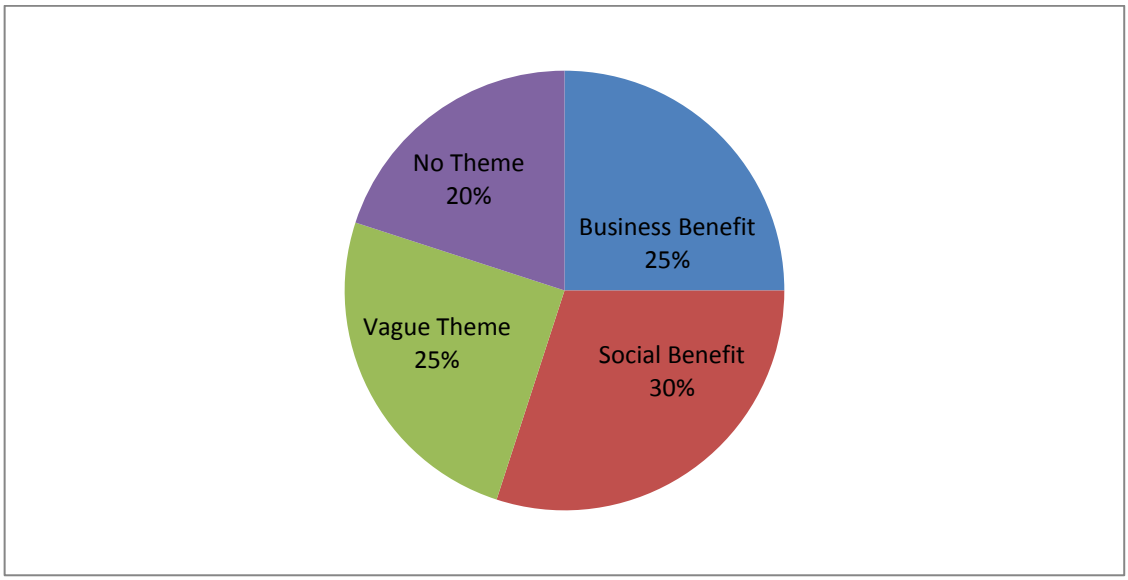

Figure 13. Themes Reflected in Sustainability Reports.

In some cases, the theme was the title of the report, a subtitle, or a snippet made by CEO that revealed the purpose of sustainability. It was found that 17 out of 21 companies had a theme in their sustainability reports. Six companies had themes that indicated that sustainability was done to benefit society, five companies had themes indicating that sustainability is aligned to business growth, five companies had themes that were not clear as to whether it was beneficial to business or society (or both), and four companies did not have a clear theme. GE established

interests around three themes—People, Planet, and Economy. The former theme addresses employee health and professional development; community support through philanthropic and volunteerism; and the continued creation of valuable, sustainable products and partnerships in best practices. Monitoring the company's carbon footprint and developing sustainability-based innovation is a focus in the Planet themes; whereas, the latter theme deals with engagement with regulators, NGOs, industry leaders and stakeholders, ethics and compliance. In 2012, Lockheed Martin's stated that the theme of the sustainability report was "The Science of Citizenship." The majority of the sustainability reports with themes appeared to respond within the context of "doing good for the universal community," and less about their benefit to business. There were five companies with themes indicating that business will benefit from sustainability. This may signal to operations managers to find resources for sustainability initiatives; whereas, themes signaling a more social benefit may attract community relations and public relations managers.

Sustainability Integration

Research Question 2: Is there a relationship between the operating profit (loss) over the past 5 years of companies with a highly integrative and less integrative sustainability agenda?

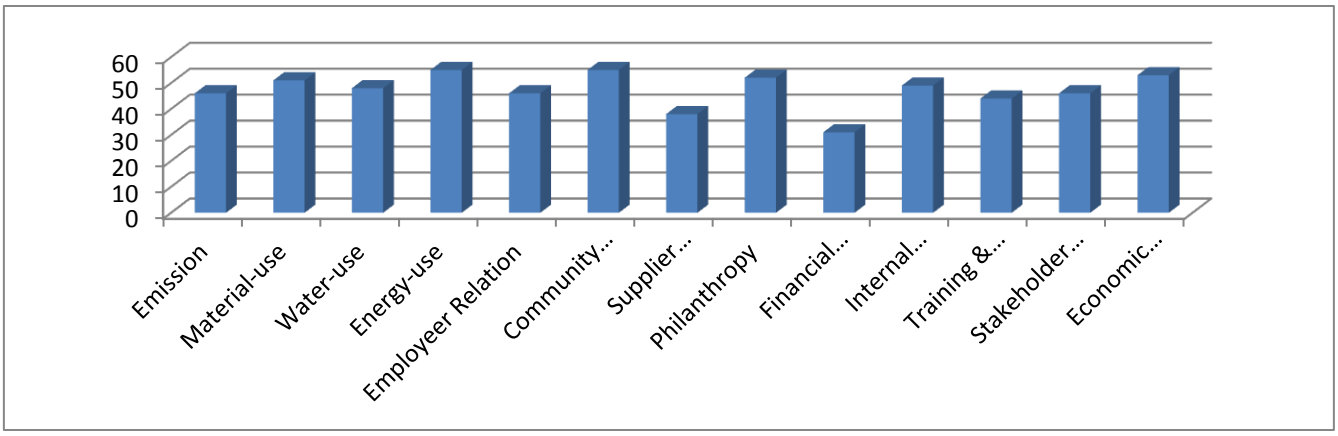

Figure 14. Sustainability Initiative Category Scores.

This section identifies the types of initiatives that are mentioned in the sustainability reports, and measure the extent when they are identified with the organization's business, marketing, and innovation agenda. Figure 14 illustrates the score of each initiative category after adding the scores of all companies in the study. It is assumed that the higher the earned scores, the more closely associated the initiative categories were with the marketability or innovativeness of the company. The graph illustrates that energy-saving initiatives, community relations, philanthropy, and economic development were likely to be associated with marketability and innovation. Both "Energy-use," and "Community Relations," received a score of 55 out of 63. Many companies discussed Energy-use as more cost-effective means of creating products. Companies are also marketing energy-efficient products to business customers, and investing in "Community Relations" initiatives that are aligned with STEM education and employment. The second highest earned scores were "Material-use" with 51 points, "Philanthropy" with 52 points, and "Economic Development" with 53 points. The lowest scoring initiatives were "Financial Performance," and "Supplier Management." Many companies refrain from using the sustainability report as a document for discussing financial performance and its relation to sustainability. Managing Suppliers' sustainability agenda was also rarely discussed in report. This may be an area where sustainability is difficult to manage. Few companies clearly discussed guidelines, training, and assistance for suppliers to address sustainability issues.

This study establishes that companies tend to align themselves with initiatives that closely relate to their business products and services. Although companies are, to varying degrees, adopting initiatives within the three dimensions of sustainability, one of the challenges they face is being able to articulate how they are meeting these goals. Further, companies present what is being done to address the issues of sustainability, but are still cautious about identifying

their challenges. Even though 50% of the companies did not provide sustainability report (formal or informal), a large percentage made some mention of their interests in practicing ethics, diversity, and environment. Out of a score of 39, six companies (29%) earned between 16 and 23 points. Another six companies scored between 26 and 31 points. Nine companies (43%) scored between 38 to 39, comprising of 43% of the total sample studied. Fifty-five percent of companies with the highest SII scores fell below their Industry Operating Margin Average.

The higher the earned scores, the more closely associated the sustainability interests were with the marketability or innovativeness of the company. The companies earning a score of 39 were Alcoa, General Electric, Lockheed, Navistar, Northrop Grumman, Raytheon, and URS. The graph illustrates that energy-saving initiatives, community relations, philanthropy, and economic development were likely to be associated with marketability and innovation. It appeared that managers understood that energy-saving initiatives and energy-saving products were directly related to operations costs. Energy initiatives seemed to be viewed as a win-win situation. Companies sometimes discussed community relations and philanthropy initiatives such as STEM and technology education. Providing direct assistance to STEM programs, or through philanthropic activities, was often reported as beneficial to the future innovation. Economic development initiatives in the form of local job-training and strategic hiring of U.S. military veterans were reported as beneficial to companies' success. After viewing all the sustainability reports, it was observed that financial information with respect to sustainability was rare. In some cases, companies that strictly followed the GRI guidelines addressed financial performance in a more substantive manner as it related to sustainability efforts; however, most of the sustainability reports did not discuss financial performance to determine its impact on sustainability efforts. One company could not be included for the statistical analysis as it did not provide financial

data. It was observed that the profit margin ratio mean of Highly Integrative companies is slightly lower than that of Less Integrative companies. The data shows that comparison of means do not show any relationship between the two groups, resulting in $t_{(11)} = -0.267$, $p > .05$. The p-value indicates that there is no relationship between the two groups.

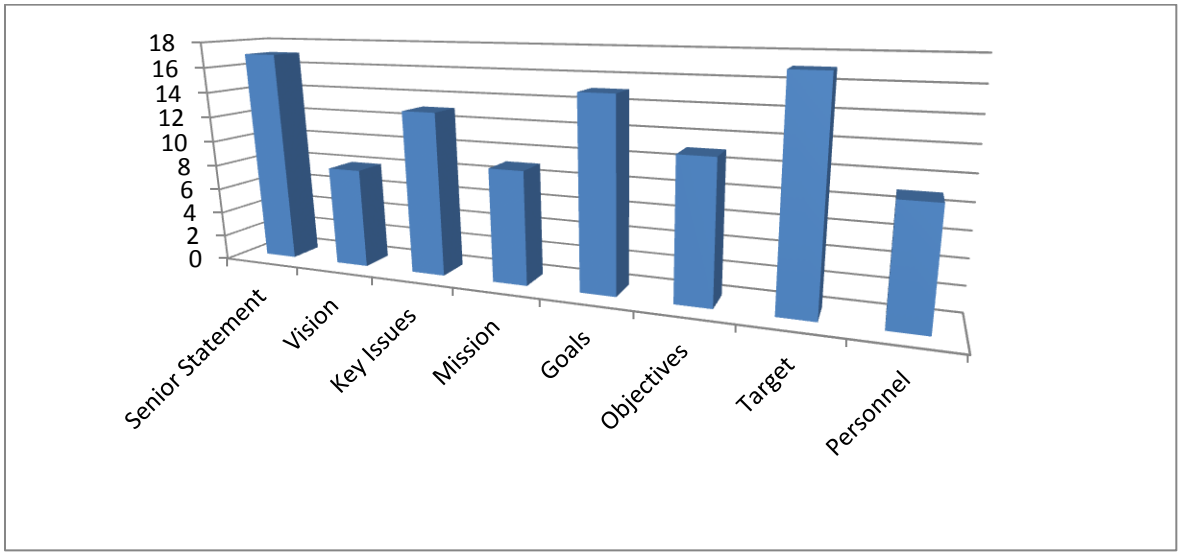

Figure 15. Sustainability Strategic Integration.

Both Alcoa and Northrop Grumman used the word "Strategy," with a clear reference to sustainability efforts. The latter provided an "Outline of the Strategy," listing the internal and external collaboration plans; and a "Strategy" stating that, "To successfully integrate environmental sustainability into our organizational culture, we developed our strategy to drive performance from the inside out." The study of the SII is different in that it focuses on the extent to which sustainability is 'stated' as important to business growth; whereas, the SSI focuses on identifying the 'presence' or 'absence' of strategic elements. It is assumed that companies with savvy communication experts are skilled at constructing reports with verbiage to present the company as one with highly sustainability agenda. The use of 'attractive' words alone does not

provide evidence that the company is measuring its sustainability activities. Performance, however, can be measured when sustainability reports include goals, objectives, and targets. The SSI is a metric for demonstrating the extent to which organizational leaders include sustainability initiatives within the strategic domain. In this study, a company earned one point for each strategic element such as goals, mission, and target, addressed in the sustainability report. The number of points earned may indicate the extent to which a company values sustainability within the strategic agenda. In the sustainability report, 17 out of 21 companies included "Senior Statement," which was more than other Strategic Indicators. 15 out of 21 companies had 'goals,' making it the second most popular Strategic Indicator used in sustainability reports.

For the study, six companies were found to have higher Integration of Strategic Indicators within the sustainability reports. These were the same companies that were part of the group with the highest Sustainability Initiative Integration in their business agenda. Appendix B illustrated that 60% of companies that are regarded to have Highly Integrated sustainability agenda were performing above their industry average; whereas 83% of companies with Less Integrated sustainability initiatives underperformed. In the sustainability reports, a large number of executive leaders reported sustainability as a valuable to their respective organizations.

Leadership statements were used to make the case for business as well as establishing vision for the organization. It was found that all formal sustainability reports had a leadership statement. Companies without a leadership statement tend to have informal reports. In making the business case for sustainability, Lockheed's leader stated that, "Our 100th anniversary in 2012 reminded us of why sustainability is so important for our business." In making the business case, Lockheed's CEO also stated that, "Pursuing environmental compliance brings clear business as well as good citizenship benefit." Other examples include Boeing: "The enduring

strength of our business depends on healthy and vibrant communities." The statement of URS declared a commitment to, "ethical behavior, safety, technical excellence, a collaborative and inclusive work environment, and the professional development of our staff." It was further stated that these values are the foundation of the company's success. The CEO of Northrop Grumman stated that environmental sustainability metrics are tied to executive compensation metrics. He stated that, "this commitment is a critical element of our success." Identified as the least used Strategic Indicators, there were only eight companies with a "Vision" (statements or comments), which were found mostly in leadership statements. Close to 50% of companies provided some form of "Vision Statements," which were short, concise statements of an organization's future, answering the question of what the company will look like in 5 or more years. Alcoa was the only aerospace company in the study that used the term "vision statement" to demonstrate commitment for sustainability by stating that, "Sustainability is integrated into our core business strategy and impacts decisions and actions at every level in our organization." Textron created the term "vision 20/15" in the report, a program to support sustainability goals that were primarily focused on environmental, health and safety issues.

Similar to the vision statement, a clear mission may be vital in demonstrating executives' commitment to sustainability practices. The "Mission Statement" of a company is understood as an overarching, timeless expression of the company's purpose and aspiration, addressing both what leaders seek to accomplish and the manner in which the organization intends to address its values. It was found that although companies used the term 'commitment' frequently, a 'mission' was rarely found in the sustainability reports. Alcoa, a new-comer to sustainability reporting, was the only company that used the actual term "Sustainability Mission" which stated that, "At Alcoa, we use our values to build financial success, environmental excellence, and

social responsibility in partnership with all stakeholders in order to deliver net long-term benefits to our shareholders, employees, customers, suppliers, and the communities in which we operate."

It was found that some companies provided clearer goals and objectives with respect to their sustainability agenda than others. "Goals" were the second most common strategic indicator found in sustainability reports. In reporting its performance, Northrop Grumman identified goals in the three major sustainability areas—Our Company, Our Operations in Focus, and Our Community Investments, in which ethics, governance, diversity and inclusion, supplier diversity and responsibility, environmental, health and safety, education, volunteerism, disaster relief, and military and veteran support are addressed. Although, the performance data showed quantitative results, such as percentages, the actual goals had no benchmark to determine whether or not a company met its goals. Unlike vision statement and mission, goals were more commonly seen in the sustainability reports studied. In articulating its goal, the Raytheon sustainability report stated that, "Raytheon has set 15 long-term sustainability goals in a wide range of areas including operations, supply chain, engineering, EHS and IT." Also, Booz Allen described its "sustainability goal" as ambitious, and seeks, "to be "the best of the best." "In the workplace, we have targeted several key areas to build a sustainable organization and significantly reduce our carbon footprint." With such statement, a stakeholder can further investigate to see the extent to which this company is actually fulfilling its promise within each of these business units.

Objectives demonstrate evidence that tasks are processed and executed. Most of the communication in the sustainability reports was focused on what was done, and the types of activities they are engaged in to support the environment, employees, and communities, but there were no objectives for each that would allow stakeholders to measure their performance more rigorously. In GE's sustainability report, a metrics table presents a list of "2012 commitments"

(objectives). It graded its performance by using symbols. This symbol  represents a (new initiatives);  indicates that an initiative is (in progress), whereas,  symbolizes that the initiative is (complete). The report detailed the company's "Progress", and by providing detailed explanation, the success or failure in meeting its target. The table also contains goals identified as "2013 commitments" in which detail objectives of initiatives for following year are stated. There was evidence of stakeholder engage, as it was reported that stakeholders request clearer goals and objectives related to supply chain, human resources, and corporate governance practices. Similar to GE, Lockheed also provided a table with two columns to report "Objectives" and "2012 Performance," which are data that was highly quantitative. The company identified four objectives with specific initiatives that were measured and reported using numerical data such as percentage. In the metrics table, Lockheed included some challenges in fulfilling the objectives. URS was also another company that had objectives and the type of programs in place to address the initiative. Although URS was highly detailed in describing its guiding principles, and exact in identifying the issues that are relevant to the sustainability agenda, it failed to provide target dates and performance metrics. An example of its objective was as follow:

> Objective #1: Enhance Sustainability Training and Employee Satisfaction
>
> We hope to integrate sustainability into our staff training programs with the development of new online training courses and the inclusion of sustainability elements and principles into existing training modules. We also hope to identify links between URS' sustainability program and employee satisfaction and retention through data-driven analysis.

It was observed that URS uses the word ‘hope’ instead of ‘will.’ In addition, it failed to create a gauge to determine the extent to which sustainability training will be enhancing. Further, the percentage or number of staff to be trained and the timeframe in which it will be achieved were not established in the sustainability report.

For this study, “Target” is also used as a sustainability strategic component to measure an organization’s commitment to implementing sustainability related strategies. It is represented by charts, columns, or tables with figures to show a company’s progress from year to year. Although the Target in Figure 15 shows that 17 companies provided some evidence that they were measuring performance from previous years, they were mostly focused on the environmental dimension. In most cases, the charts in the sustainability report addressed one or two initiative categories such as energy-use or recycling. Lockheed was one of the few companies that provided bar, charts, and tables showing a diverse set of activities for the past 3-4 years related to the three dimensions. This includes water, waste, carbon, workplace safety, philanthropy, employee giving, volunteer hours, and ethics management in which it presented the number of cases and training and guidance provided to employees.

It is becoming evident that the creation of sustainability-focused strategies is resulting in the establishment of business units, roles, and responsibilities. It was found that some companies are strategically assigning individuals to address sustainability. Based on the reports, individuals are serving on committees, and at various levels in the organization. Some titles included: the chief sustainability officer (CSO), Global Sustainability Steering Team, Global Sustainability Working Committee, Sustainability Business Line Director, Corporate Sustainability Council, and Sustainability Working Group. Alcoa, in its sustainability report, identified three mayor sustainability functions, which appears to be performed at different levels within the

organization: 1) The chief sustainability officer (CSO) is responsible for developing a comprehensive strategy that integrates all of the company's sustainability efforts; 2) The executive-level Global Sustainability Steering Team is accountable for integrating Alcoa's strategic sustainability initiatives into business strategies; and 3) Global Sustainability Working Committee is an international, sustainability-focused group that implements the strategy and process developed by the CSO and the Global Sustainability Steering Team. URS's report mentioned a Sustainability Business Line Director, responsible for expanding their global sustainability practice and for leading the development of an internal sustainability program. Lockheed has a Vice President of Ethics and Sustainability. They reported the development of a team led by the Office of Corporate Sustainability. Its responsibilities included providing feedback with our stakeholders, identifying goals, implementing business practices, and measuring performance. General Electric has a Vice President, Corporate Citizenship who along with the CEO contributed to the sustainability report. Booz Allen established a Sustainability Steering Committee that works with the Sustainability Program Management Office. The role of the Committee includes providing overall strategy and guidance to the sustainability program.

In the analysis, companies with High Integration of Strategic Indicators are shown to have a higher profit margin ratio mean than companies with Low Integration of Strategic Indicators. The data shows that there is no relationship between the two groups, evidenced by $t_{10}= 0.913$, $p> .05$. It was also observed that companies with both high sustainability initiative and strategic indicator scores possess visionary strategies.

Reporting Trends

Research Question 3: What is the relationship between the operating profit (loss) of the aerospace companies over the past 5 years and how sustainability activities have been reported?

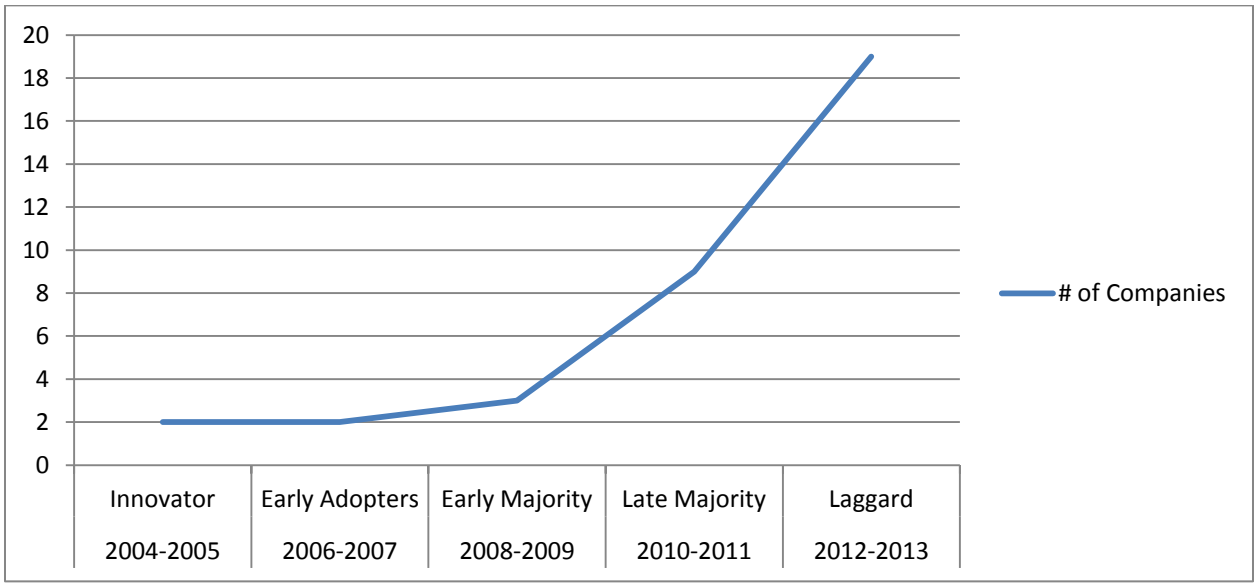

Figure 16. Number of Companies Reporting from 2004 to 2013.

Figure 16 illustrates that there is a total of four Innovators and Early Adopters over a period of the first 4 years of sustainability reporting. The first incline began between 2008 and 2009, showing three additional companies in the study adopting sustainability reports. The highest amount of new-comers to sustainability reporting was the Late Majority between 2010 and 2011, with a total of nine companies; this includes four new-comers to sustainability reporting in 2012 and 2013. Initially, these companies were not classified as Late Majority as it was already determined that those were companies that reported from 2010 to 2011. The four late-comers, could not be considered Laggard due the definition of the term. Laggards are referred to companies still resisting the change; that is, those without a comprehensive

sustainability report. However, to accommodate these four last reporting companies for the studies, they were assigned to Late Majority category in order to be counted. Overall, there were 19 companies without sustainability reports as defined by this study, and 17 companies that clearly indicated when they began reporting. Even though four additional companies provided reports, there was evidence as to when the company began reporting, and as result they were not included in this portion of the study. Demonstrating the trend of sustainability reporting is helpful in understanding how companies respond to the change. Appendix C contains a list of companies that reported and the years of reporting. It was found that some companies that may have begun reporting earlier did not earn a high SII or SSI scores. As the number of the Laggards is still high, this may indicate that sustainability reporting is still in its infancy stage within the industry. With only two companies in the Innovator category, the Profit Margin Ratio Mean revealed a positive performance of 12.67. The Laggard category with 19 companies showed the lowest Profit Martin Ratio Means, which is -23.56.

Appendix E shows that 100% of Innovator and Early Adopter in CS reporting perform above their industry average, while almost 60% of Laggard underperformed by this measurement. The study found that trendsetters of sustainability reporting do not necessarily have a higher integrated sustainability agenda or strategic indicator than organizations who are late in reporting their sustainability agenda. Similarity is found between Companies 1, 2, 15, and 20. They were either SSI or SII; yet, they were part of the Late Majority group. Even though they are late in starting to report their sustainability activities, some were effective in aligning sustainability with the business model and strategic sphere. It was observed that Alcoa, with highly integrated sustainable agenda and strategic indicators began reporting in 2012. Further, this company, which fully complied with the GRI guideline, provided detail performance metrics

in all sustainability dimensions and was the only company to provide an electronic survey for anyone to obtain instance feedback.

GRI and Non-GRI Reporting Status

It was found that a high percentage of reporting companies did not mention following the GRI guidelines and those that follow the GRI guidelines had higher Sustainability Integration scores. Two companies earned lower scores even though they stated following the GRI guidelines. It was determined by the researcher that a company with a score from 36-38 was 'Highly Integrative'; whereas, companies with scores below 23 and below were 'Less Integrative.' Appendix F illustrates that 13 companies did not mention GRI in their reports; whereas, eight mentioned the use of GRI guidelines. These GRI companies were identified as Alcoa, General Electric, Lockheed, Navistar, Eaton, SAIC, Parker, and Exelis. Four of the eight companies earned 39, and one below 30 with regard to SII scoring. It was found that both GRI and Non-GRI compliant companies presented their reports in a PDF document (formal), as well as web-text (informal). The table also shows that 50% of companies that stated compliant to GRI guidelines performed above their industry average, while only 39% of Non-GRI performance performed above the industry average.

It was revealed that some companies may not have used PDF documents to disclose sustainability initiatives; however, the communication was still highly comprehensive, and was in compliance with GRI reporting guidelines. Profit Margin Ratio Mean of Non-GRI reporting companies is higher than GRI reporting companies. In essence, GRI status does not appear to impact the financial performance of companies. The data show that there is no relationship between the two groups, resulting in in $t_{(17)} = -0.843$, $p > .05$. This indicates that there is not a strong relationship between profit margin ratio of GRI and Non- GRI companies.

All eight companies had a GRI content index, which contains performance indicators. Each indicator is assigned a number and a description to guide the reporting process. There are a total of 81 performance indicators which falls in the category of "Environmental," "Human Rights," "Labor Practices and Decent Work," "Society," "Product Responsibility," or "Economic." An indicator was either reported as 'fully' disclosed, 'partially' disclosed, or 'undisclosed.' It was found that the most common 'partially' disclosed indicators were within the categories of Economic and Labor Practices and Decent Work, Environmental, and Society. These issues included: 1) initiatives to reduce indirect energy consumption and reductions achieved; 2) total weight of waste by type and disposal method; 3) total environmental protection expenditures and investment by type; 4) direct economic value of generated and distributed to capital providers and governments; 5) financial implications and other risks and opportunities for the organization's activities due climate change; 6) policy, practice, and proportion of spending on locally-based suppliers at significant location of operation; 7) procedures for local hiring and proportion of senior management hired from the local community at locations of significant operations; 8) rates of injury, occupational diseases, lost days, and absenteeism, and number of work related fatalities by region and by gender; 9) average hours of training per year per employee by gender, and by employee category; 10) percentage of operations with implemented local community engagement, impact assessments, and development programs; and 11) composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity. It is revealed that six of these partially disclosed issues require the participation of the human resource department. Other partially disclosed issues that are of importance to the human resource discipline fall within the Human Rights category: 1) percentage and total number of

significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening; 2) total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained, and 3) total number of incidents of discrimination and corrective actions taken. Aspects of the Society category are directed toward interdisciplinary personnel with legal, cultural, social, and political knowledge of local communities to prevent corruption, and anti-competitive behavior.

It was found that these eight GRI companies scarcely addressed the nine indicators of which the Product Responsibility category is comprised: three companies provided no disclosure, four companies addressed only one of the indicators, and one company addressed four of the indicators. Even in GRI reporting companies, there is evidence to suggest there is some level of resistance to provide information that would disclose incidents of non-compliance, complaints, etc. Regardless of the extent to which companies disclose information, the GRI Content Index provides some advantages to stakeholders' engagement as they are able to use it as a guide to know what issues are being addressed, and to determine if the issues important to them are being addressed satisfactorily.

In summary, the findings illustrated that although there is not a strong relationship between corporate sustainability behavior and financial performance, the qualitative component of the study provided some understanding of how executives are responding to sustainability and how these responses may be interpreted by stakeholders; hence influencing their attitude toward the organization. Another important finding is the possible relationship among the independent variables Sustainability Initiative Integration, Sustainability Strategic Integration, and GRI status, which opens the discussions for further study with regard to these variables.

Additional Findings

Combination of Sustainability and Financial Reporting

The combining of sustainability and financial reports is a new phenomenon, practiced by few companies. It is unclear why some companies are deciding to join the two reports. After observing this approach done by one organization in the study, it was found have little visibility in the document. One of the first observations made is that the CEO's statement did not address sustainability. Although "Financial and Corporate Responsibility Performance" was written on the cover of the report, the table of contents made no mention of social responsibility section in the report. After searching page by page, the subheading "Social Responsibility" was found on page 20 with a chart illustrating the performance indicators of environmental impact. Pages 16 and 17 communicated the organization's community involvement. Page 15 provided a brief environmental, health, and safety information and no communication on the organization's impact. The reporting on governance, which is common in documents, was concise. There were no measurable goals, objectives, or target, or personnel relating to sustainability.

Leadership Values

Although Allegheny (ATI) provided most of its corporate citizenship information using hyperlinks, it included a one-page summary on sustainability in the Annual Report, recognizing sustainable leadership as one that "requires us to achieve excellence in employee safety, environmental stewardship, and social responsibility." The CEO statement mentioned "values-based leadership", which was described as the types of leaders who are "the true difference in companies that move people to new levels of achievement and success." The exemplary characteristics of these leaders were linked to those who are able to make improvements to sustainability and social responsibility agenda. Webber (2009) in a study on 'tone at the top,'

explored the moral reasoning of the chief executive officers at the 11 largest automobile manufacturers in the world by using the CEOs' letter to their stakeholders found in the organizations' annual social responsibility reports. Following the similar approach, this study used CEOs statement/letter to assess how they discussed sustainability in relation to their business values. The review of the literature establishes that sustainability is more likely to be valued by lower level managers and leaders when executives align sustainability with the business success. In a CEO letter 'stewardship of community' was viewed as deeply embedded in the organization values. Another CEO articulated that the organization has a values-based culture that depended upon safe, reliable, efficient, and sustainable power management solutions. Some executive statements use the term 'sustainability leadership' as an important component of the workforce and supply chain. In one case, 'responsible stewardship' was regarded as the most valuable resource. Sustainability, in another report, was also described as part of the operating framework with an emphasis on customer service, operational excellence that reduces costs and environmental impact, and innovation in new product development for a better world. Before sustainability can be embraced within operation, it has to be seen as a mechanism for improving organization financial performance. Hence, the manner in which executives communicate in the leadership statements may impact how internal stakeholders implement change.

Characteristics of Sustainability Reports

This study identified four types of sustainability reports which may contribute to how different disciplines view their roles within the sustainability agenda. The tone of the sustainability report, which is influenced by their characteristics, may be drivien by the culture and values held by leaders. According to Merriam Webster, tone is "a quality, feeling, or attitude expressed by the words that someone uses in speaking or writing." For instance, in the

sustainability reports, there were companies that presented more of a ‘marketing’ tone, in that they viewed the sustainability report from a public relations perspective. These companies embraced ‘extroverted’ strategies (Baumgartner, 2009). They strived to ‘win-over’ the hearts of stakeholders, made mention of different ‘green’ awards and identified organizations of which they are a part. Those with strong marketing-focus agendas may lack detailed evidence of how sustainability is measured. Their reports, however, may be highly engaging with images to show the types of activities with which they are involved. Skeptics may view these types of reports as giving the impression of ‘green-washing.’

Four classifications of sustainability reporting are constructed by the researcher as a result of the study. The lists are important to determine the extent to which sustainability is practiced. The manner in which a company addresses sustainability may reveal the type of organizational culture that exists. An organization that displays a more “stewardship tone” may have a higher level of tolerance for adopting to change than those with “regulatory tone.” The former may be more flexible in providing resources to support and develop new initiatives around the issues, and acts as an organization role-model for embracing sustainability. In some cases, it appeared that communication teams construct the report to respond more specifically to compliance issues; essentially, demonstrating that they are complying with demand from government and corporate clients. The reports that appear to be compulsory, with risk mitigation strategies, may be characteristic of an organizational culture in which leaders have high levels of anxiety in regard to change; in that they desire predictability, they are threatened by new concepts, prefer to have rules and clear procedures, and require specific laws to guide behavior and personal conduct fearing lawsuits. These four types of sustainability practices may be used

as a guide for key practitioners to assess their respective organization's behavior toward the development and advancement of sustainability.

Promoting (Stewardship tone)

- Provide information that gives the reader an in-depth knowledge of the operation process, materials use, and supplier engagement, and the market.
- Incorporate detailed performance data regarding most of their initiatives.
- Detail about how goals are accomplished and actions taken for addressing issues.
- Take pride on being front runners in sustainability innovation.
- Express sustainability as a core business solution for people, planet, and financial growth.
- Provide a theme indicating sustainability as a solution to growth, and it is not an option.
- Assign the term 'leadership,' 'innovation,' and 'values,' to their business agenda.
- Articulate that sustainability is the driving force for financial growth.
- State the use of GRI guidelines and the extent to which they address GRI principles for defining report content and principles for ensuring report quality.
- Encourage and provide contact information for feedback.

Proving (Managerial tone)

- Use of quantitative/numerical metrics to show commitment of sustainability to innovative projects in all interest areas.
- Use of strong sustainability specific objectives, goals, targets to measure performance; hence, showing commitment of sustainability as a managerial agenda.
- Use of GRI to a large extent to benchmark progress in some cases.

Persuading (Public Relations tone)

- Use of strong qualitative and some minimal quantitative information to show commitment to sustainability practice within all interest areas.
- Use of GRI partially in some instances to benchmark progress.
- Use of verbiage to make sustainability efforts attractive.

Participating (Regulatory tone)

- Report minimal information on their sustainability agenda.
- Provide some information about the materials used in products.
- Address initiatives within all three dimensions, but communicate in a rigid manner without detail.

From the study, it was also evident that many companies are still not providing sustainability reports. It appears that these companies are:

- Unmoved by the trend to inform their stakeholders in a manner that shows their social responsibility behavior. They seem uninspired and unimaginative to change the status quo of the organization; hence the term, this research identified these organizations as having a “Pedestrians tone.”
- Engaged in initiatives, but have not placed them within a comprehensive sustainability report; instead, the communication of these initiatives is highly fragmented with no evidence of accountability.

CHAPTER 5

CONCLUSION AND DISCUSSIONS

The purpose of the study was to explore organizational performance with regard to sustainability behavior. Prior to this study, very little has been documented about sustainability behavior within the aerospace industry and its impact on financial performance. The analyses established that there is no evidence that response to sustainability efforts impacts financial performance; however, the study provided an opportunity to continue analyzing how aerospace companies are disclosing information about their sustainability initiatives.

Of specific interest to the study were reporting status, integration of sustainability initiatives, integration of strategic indicators, reporting trends, and GRI status of companies. Aerospace companies were chosen for the study. These organizations varied by size, percentage of sales obtained from the aerospace industry, and the type of products and services provided. The sustainability reports were used to address the independent variables. The profit margin ratio was the only dependent variable used for the study, and was obtained from Reuters Financial section. A total of 40 companies were selected for the study and approximately 50% of these companies provided some form of sustainability report. This indicates that the reporting of sustainability is gaining popularity. For the study, simply having a page, tab, or section on a company's website that states "environment" was not sufficient to be identified as a sustainability reporting company. It is evident that company leaders feel that addressing

environmental impact to stakeholders is a priority; whereas, addressing the social and economic dimensions does not impact their stakeholder relationship. Another important aspect of sustainability reporting is the issue of ethical business conduct. Although some companies were not selected for the study, it is important for the study to recognize that many provided statements that, in one form or another, declared their business to be ethical. They created a tab or page exclusively addressing "integrity and ethics," "business conduct," or "ethics." As these companies did not place the issue within a comprehensive agenda such as "social responsibility," "corporate sustainability", etc., they were not selected for the study. All companies reported initiatives that can be placed within the sustainability and social responsibility agenda; however, given the fact that a large number of companies have not yet developed a comprehensive approach to reporting may signal that they are encountering the challenges of 1) embracing the idea of comprehensive reporting, 2) creating a culture of openness due to fear of being vulnerable to stakeholder criticism, or 3) developing a network of individuals to address sustainability holistically. Sustainability reporting, as a comprehensive communication material, may make it more convenient for stakeholders to view issues that companies claim to value, and the extent to which they are being addressed and measured.

Research Question 1 brings to light that companies are addressing the similar initiative categories. It is evident that many companies are targeting the environmental dimension. In many cases, activities tend to be closely related to the products and services they provide. However, issues within the social or 'people' dimension are gaining momentum as society becomes more sensitive about employment opportunities of vulnerable demographics, quality of life, and tangible and intangible benefits. The lack of key issues or challenges mentioned in the reports suggests that companies are exercising caution when providing information about

shortcomings of companies in practicing sustainability. Companies with a ‘stewardship tone’ tend to be transparent about challenges in meeting their goals. They also present to stakeholders how they intend to improve performance relating to a specific goal or issue. This level of transparency is rare. Another rare approach was providing an on-line questionnaire after reviewing the sustainability report. This practice may increase as stakeholders demand the opportunity to provide the organization with instant feedback on the sustainability report.

Research Question 2 shows that 21 companies or 43% scored between 36 and 39 on the sustainability initiative integration scale. This demonstrates that a large number of organizations are claiming that they are aligning sustainability with the way in which the business is marketed, or with how product and process are innovated. It is important to note that all six of the companies with the highest Sustainability Strategic Integration scores were also part of the group with the highest Sustainability Initiative Integration scores. This may indicate some relationship between SSI and SII, in that companies that strongly claim the value of sustainability for business growth tend to also have a more defined strategy for their sustainability agenda. The second part of Research Question 2 focused on the strategic components in the sustainability reports. As stated in the Literature Review section, the strategic sphere requires vision, mission, goals and objectives in order for initiatives to be valued within the management system. Part of the qualitative description includes these strategic components to illustrate ways in which companies are communicating and their commitment to stakeholders. In order for managers to take the issue of value sustainability, it is imperative that the report not only state the types of initiatives that the company is involved with, but make an effort to connect them to the bottom-line. Based on the study, leadership statements can be viewed an imperative channel for directly communicating the value of sustainability to an organization. The statement set the tone that may

demonstrate the extent to which sustainability is valued within the management sphere. The tone and message conveyed in the leadership statement is able to have an effect on attitude and behavior at the various levels within the organization. Although companies used the term "commitment" extensively in their sustainability reports, "vision" and "mission statement" were scarcely used terms. There is still a need for a large number of companies to make their commitment more evident by incorporating more strategic elements. In essence, they should strive to employ mission and vision in the reports. There is a need to incorporate more well-defined goals and objectives. Overall, strategic components were not extensively used in sustainability reports. It appears that organizational leaders seem to be hesitant about setting their goals too high as they may fear being held accountable by stakeholders. Sustainability reports that claim the value of the integration of sustainability within their business core tend to make their goals, missions, and vision clear. In so doing, these companies are sending the message that sustainability is supported and driven by top-leaders to become part of how value is created. It was also important to identify companies that mentioned sustainability personnel. There is an increase in personnel assigned to sustainability. The development of sustainability programs demonstrates that organizations are allocating resources to improve their sustainability agenda. Establishing sustainability business units or committees reinforces the importance of sustainability as a viable factor that is related to organization performance.

Based on Research Question 3, it is clear that sustainability reporting is a new form of communication in which companies disclose the response to environmental, social, and economic responsibility. Five of six companies with the highest strategic integration scores followed the GRI guidelines. The GRI provides guidance to organizations by creating standardized performance metrics for quality sustainability reporting. These reports provide

quantitative data, illustrating how initiatives are measured usually on an annual basis. The relationship with GRI and non-GRI companies shed some insight on how companies are conducting sustainability reporting behavior. Although 38% of the companies mentioned that they follow the GRI guidelines, they did not fully disclose information pertaining to the environment, society, human rights, labor practices and decent work, and product responsibility.

The conclusion drawn from the study was that there is no relationship between reporting sustainability status and financial performance; however, sustainability reporting remains scarce within the aerospace industry. Non-reporters of sustainability are still addressing environmental issues on their website. They may not perceive sustainability as a comprehensive program as advantageous to the bottom-line. The conclusion drawn from the study was that there is no relationship between sustainability initiative scores and financial performance; but it can be implied that a company with lower scores reflects the type of leadership whose values and vision may have been geared toward addressing environmental issues more as a legal/regulatory requirement wherein sustainability is dealt with by legal agents at the corporate level. Each organization had its own unique ways of reporting sustainability; however, based on the finding, it can be implied that companies have in common the types of initiatives being addressed. Regarding sustainability integration, the conclusion drawn was that there is no relationship between sustainability initiative scores and financial performance. There is, however, still a lack of understanding of sustainability as a value-creation mechanism within the managerial sphere. With regard to reporting trend, Innovators were found to have the highest profit margin ratio mean, as Laggards were found to have the lowest. The conclusion drawn from the study was that there is no relationship between when the company began reporting and its financial performance. As some of the reporting trendsetters were found to have low sustainability

initiative scores and strategic indicator scores, they cannot automatically be regarded as role-models. The last conclusion drawn from the study was that there is no relationship between GRI status and financial performance. Those that reported following the GRI guidelines were inclined to align sustainability initiatives to business model and tended to use performance metrics more frequently. Companies that followed the GRI guidelines tended to address strategic planning and thinking components (Fairholm, 2010) more rigorously.

Theoretical Implications

As sustainability is still a sensitive issue, gaining direct access to these companies is challenging. It is for this reason that reports were used as a means to analyze the impact of sustainability behavior on financial performance. Through this method, it is evident that leaders are increasingly valuing sustainability reporting as a communication and marketing strategy in which performance metrics are a significant disclosure to determine how companies are addressing sustainability. These sustainability reports contain a wealth of information that can shed light on leadership, organizational culture, strategy, and behavior. It allows individuals to determine the extent to which companies are making use of the communication channel (Internet) and the medium (website) to disclose valuable information to key stakeholders. Directly or indirectly, sustainability reports, like any other communication material, send a message and set the tone for how managers plan, implement, and motivate change. Rogers (2003), in the discussion on change and innovation, stressed the importance of the communication. As organizations still face the challenge of trust from stakeholders, simply communicating using a public relations strategy may not be sufficient to assess their performance. The articulation of a strategic plan for corporate sustainability, presenting

quantitative performance metrics of sustainability initiatives, and having clear commitments from leaders may promote managerial response and change.

This researcher believes that the instruments used in the study were valuable to determine the types of sustainability initiatives valued by the organization and the extent to which the organization is committed to sustainability. Most of the aerospace companies whose sustainability are identified as highly integrated reflect 'systemic visionary' a term used by Baumgartner and Ebner (2010) when distinguishing the difference between conventional and systemic visionary strategies. Those with conventional visionary strategies address the issue of sustainability to correspond with market opportunities in an opportunistic manner. They state that the only differences with systemic vision strategies are the motivation and orientation of their sustainability agenda. Organizations with systemic strategies combine outside-in and inside-out perspectives to achieve competitive position that are based on internalization and continuous improvement of sustainability issues inside the company. They tend to have more systemic strategies in that they develop sustainability-based innovations within all dimensions to benefit how it is related to creating value. Reports that convey vision strategies had a stewardship tone.

Practical Implications

It is important that those responsible for communicating sustainability be mindful of not underestimating stakeholders' ability to determine if corporate sustainability is addressed within a public relations versus a performance-driven program. Stakeholders may have a negative view of an organization if sustainability is placed primarily within the marketing agenda as opposed to the operations sphere. Quantitive measurements of initiatives are evidence that there is opportunity for sustainable development. The document must also serve as a source for identifying gaps and areas for improving organizational behavior and performance. With

performance metrics in place, internal stakeholders will work to create a roadmap for change and innovation. Conversely, sustainability reports that simply ‘brag’about their initiatives without informing stakeholders about the level of progress and future goals, may convey a message suggesting that sustainability is not part of the organization culture.

Sustainability reporting makes for a relevant discourse within the communication, marketing, community relations, and human resource departments. Although communication and marketing departments maybe assigned to develop the reports, this study recommends that interdisciplinary taskforces be engaged in the development of the strategy and execution of all sustainability dimensions. Principally, it is the responsibility of leaders within each discipline to make the argument for asserting sustainability as a beneficial mechanism within the organizational system to creating value. Practitioners of these disciplines should seek to align themselves with financial managers to continue making the case for sustainability practice as an integral part of the infrastructure toward organizational performance. In sum, this body of work is valuable to all internal stakeholders who understand the impact of sustainability reporting on the perception of external and internal stakeholders. Although individual citizens are not yet utilizing sustainability reports to fully assert their buying power, there are watchdog organizations that may employ this research for gaining insights on understanding and measuring corporate sustainability as a form of modern organizational behavior.

This study is done as part of the human resource discipline and should as a result provide some recommendations for the role of practitioners within this field. As sustainability reports may demonstrate the extent to which leadership, training, and development are practiced, the human resource discipline is encouraged to incorporate these materials to address the gaps. The findings in Research Question 1 reveal a need for human resource personnel to be active

participants in the sustainability agenda: 1) train leaders in developing a culture that embraces sustainability, 2) consult with sustainability educators to keep leaders current, 3) serve on the strategic planning team, 4) align sustainability initiative with organizational benefits, 5) identify resources needed to support initiatives, and 6) lead in the creation of a sustainability program. Human resource practitioners can begin to assume roles that require partnering with leaders in the sustainability and social responsibility agenda. This may present an opportunity for human resource practitioners to gain access to the strategic sphere in the near future. In order for the human resource discipline to be considered a viable partner within its respective organization, managers must work towards having an external view of the organization. It is imperative that the human resource department has a presence in all aspects of sustainability agenda, identifying, training, and developing resources to ensure a transformation in the organizational culture and practice of sustainability.

Corporate sustainability reporting, as a new form of organizational communication, is pertinent to any organizational behavior discipline. Valuable to the environmental, communication, human resource, manufacturing, and community relations business units, the activities, strategic messages, and tones reflected in the document are vital to increase understanding of how competitive organizations adapting to change. This report is instrumental in determining the types of responses that are taking place within organizations; however, there is still the need to make this document a more credible source in order to gain the trust of stakeholders.

Limitations of Research

This research was limited to U.S. aerospace companies that were reported as part of "The World's Top 100 Aerospace and Defense Companies 2012" by Candesic, a consulting firm in

the United Kingdom. Determining the relationship between sustainability behavior and profitability was also another limitation as there are many variables that may contribute to financial performance in any company. Conducting interviews with managers regarding sustainability is still viewed as a sensitive matter. Hence, only archival analysis was conducted due to the difficulty in gaining access into companies.

Usefulness of Research

The usefulness of the research is to provide an understanding of sustainability reporting behavior and organizational performance. This study found that there is some relationship between the sustainability integration, strategic integration, and GRI status although this argument requires additional investigation. This study provides new knowledge of reporting as a form of communication, organization response to change, strategic integration, leadership practice, performance measurement, and managerial behavior, all with respect to corporate sustainability.

Suggestions for Further Research

Similar research could be attempted; however, a data model is needed to standardize financial performance. In the future, a longitudinal design would assist in allowing researchers to closely determine what impact these activities have on performance. External perspective is also important, and perhaps it would be beneficial to extend the scope of the study to other transnational areas for wider generalizability of the results obtained in this study.

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APPENDIX A: REPORTING AND NON-REPORTING COMPANIES

Sustainability Reporting: Company Identification Code	Sustainability Reporting: Company Operating Margin Ratio 5 yr Average	Company against Industry Operating Margin Ratio 5 yr Average		Sustainability Non- Reporting Company Identification Code	Company Operating Margin Ratio 5 yr Average	Industry Operating Profit Margin 5 yr Ratio
1	0.41	-10.07		1n	6.85	-2.58
2	10.24	-10.67		2n	16.26	6.83
3	4.35	-21.01		3n	7.10	-17.88
4	6.98	-2.45		4n	8.92	-0.51
5	8.61	-7.34		5n	11.06	1.63
6	8.64	1.62		6n	4.29	-18.46
7	10.53	1.10		7n	10.39	0.96
8	4.27	-5.16		8n	-5.50	-17.47
9	11.81	6.52		9n	9.99	0.56
10	16.24	4.27		10n	13.64	4.21
11	9.26	3.97		11n	6.58	-18.4
12	9.38	-0.05		12n	7.19	-2.24
13	0.63	-13.11		13n	4.85	-4.58
14	11.08	1.65		14n	6.36	-3.07
15	9.76	-10.81		15n	25.97	16.54
16	11.72	2.29		16n	12.71	3.28
17	18.67	9.24		17n	10.93	3.91
18	-	-		18n	3.04	-6.39
19	3.90	-5.53		19n	39.44	9.35
20	5.01	-3.92				
21	13.54	4.11				

APPENDIX B: SII HIGHLY AND LESS INTEGRATED COMPANIES

	Number of Samples	Company Identification Code	Company against Industry Operating Margin Ratios 5 yr Average	SII Scores
Highly Integrated	1	1	-10.07	39
	2	9	6.52	39
	3	12	-0.05	39
	4	13	-13.11	39
	5	14	1.65	39
	6	20	-3.92	39
	7	16	2.29	39
	8	6	1.62	38
	9	18	-	39
Less Integrated	1	5	-7.34	23
	2	2	-10.67	22
	3	11	3.97	19
	4	3	-21.01	16
	5	10	4.27	16

APPENDIX C: SSI HIGHLY AND LESS INTEGRATED COMPANIES

	Number of Samples	Company Identification Code	Company against Industry Operating Margin Ratios 5 yr Average	SII Scores
Highly Integrated	1	1	-10.07	8
	2	9	6.52	7
	3	12	-0.05	8
	4	14	1.65	8
	5	6	1.62	7
	6	18	-	7
	7	15	-10.81	6
Less Integrated	1	5	-7.34	2
	2	2	-10.67	1
	3	11	3.97	2
	4	3	-21.01	0
	5	8	-5.16	0
	6	13	-13.11	3

APPENDIX D: SUSTAINABILITY REPORTING ACTIVITIES

Companies	**Years of Reporting** (Sustainability Reports in PDF Format)
UTC	2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012
General Electric	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012
Eaton	2007, 2008, 2009, 2010, 2011, 2012
Northrop Grumman	2008, 2009, 2010, 2011, 2012
Raytheon	2008, 2009, 2010, 2011, 2012
Boeing	2009, 2010, 2011, 2012
SAIC	2009, 2010, 2011, 2012
Textron	2010, 2011, 2012
Rockwell Collins	2010, 2012
Lockheed	2011, 2012
Navistar	2011, 2012
Exelis	2011, 2012
Parker Hannifin	2012
URS	2012

APPENDIX E: INNOVATIVE CATEGORIES

No. of Samples	**Company Identification Code**	**Company - Industry Operating Margin Ratios 5 yr Average**	**Innovative Categories**
1	9	6.52	Innovator
2	21	4.11	Innovator
1	14	1.65	Early Adopter
2	6	1.62	Early Adopter
1	16	2.29	Early majority
2	4	-2.45	Early majority
3	18	-	Early Majority
1	17	9.24	Late Majority
2	19	-5.53	Late Majority
3	7	1.1	Late Majority
4	12	-0.05	Late Majority
5	13	-13.11	Late Majority
6	1	-10.07	Late Majority
7	15	-10.81	Late Majority
8	2	-10.67	Late Majority
9	20	-3.92	Late Majority

APPENDIX F: GRI AND NON-GRI COMPANIES

No. of Samples	GRI Companies Identification Code	Financial Performance: Company against Industry Operating Margin Ratios 5 yr Average	No. of Samples	Non-GRI Companies Identification Code	Financial Performance: Company against Industry Operating Margin Ratios 5 yr Average
1	1	-10.07	1	2	-21.01
2	6	1.62	2	3	-10.67
3	9	6.52	3	4	-2.45
4	12	-0.05	4	5	-7.34
5	13	-13.11	5	8	-5.16
6	14	1.65	6	10	4.27
			7	12	3.97
			8	15	-10.81
			9	16	2.29
			10	17	9.24
			11	19	-5.53
			12	20	-3.92
			13	21	4.11

APPENDIX G: REUTERS' CLASSIFICATION OF COMPANIES

Companies		**Industry Classification** (Reuters)	**Companies**		**Industry Classification** (Reuters)
Alcoa		Aluminum	Mantech International		IT Services/Consulting
AAR		Aerospace/Defense	Moog		Aerospace/Defense
Allegheny		Mining/Metal	Northrop Grumman		Aerospace/Defense
Alliant Techsystems		Aerospace/Defense	OshKosh		Aerospace/Defense
BE Aerospace		Aerospace/Defense	Orbital Sciences		Aerospace/Defense
Boeing		Aerospace/Defense	Parker Hannifin		Industrial Machinery/Equipment
Booz Allen		Business Support	Precision Castpart		Aerospace/Defense
CACI		IT Services/Consulting	Raytheon		Communication Technology
Curtiss-Wright		Aerospace/Defense	Rockwell Collins		Aerospace/Defense
Eaton		Electronic Component/Equipment	SAIC		IT Services/Consulting
Esterline Technologies		Aerospace/Defense	Spirit Aerospace		Aerospace/Defense
Exelis		Aerospace/Defense	Teledyne		Electrical Component/Equipment
GenCorp Inc.		Aerospace/Defense	Textron		Aerospace/Defense
General Dynamics		Aerospace/Defense	TransDigm		Aerospace/Defense
General Electric		Industrial Conglomerate	Triumph Group		Aerospace/Defense
Harris			URS		Construction/Engineering
Honeywell International		Industrial Conglomerate	UTC		Aerospace/Defense
Hexcel		Aerospace/Defense			
Huntington Ingalls Industries		Heavy Electrical Equipment			
L-3 Communications		Aerospace/Defense			
Loral Space and Communications		Communication Equipment			