2017

Impact of corporate social responsibility on financial performance in the pharmaceutical industry

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IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON FINANCIAL PERFORMANCE IN THE PHARMACEUTICAL INDUSTRY

A Dissertation Submitted in Partial Satisfaction

of the Requirements for the Degree of

Doctor of Education in Organizational Leadership

by

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December, 2017

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DEDICATION

I dedicate this study to the two special women in my life: my mother, Aushetu Adamu, and my wife, Elsalyne Adamu. It was my mother who inspired my academic pursuit. I owe her much gratitude for her incredible support, trust in my ability, and unconditional love. I certainly know that she would have been the happiest mother in the world if she had lived to see the completion of my doctoral program. This dissertation would not have been possible without the immense support and love of my wife, Elsalyne. She gave me space when I needed it, and for her selflessness, I am extremely grateful. Her deep interest in my dissertation topic encouraged and challenged me to accomplish this study. I love you Elsalyne. Thank you for all the love and support you have so generously given me.

VITA

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ABSTRACT

Many studies have examined the association between corporate social responsibility (CSR) and corporate financial performance, but scholars argue that the exact relationship between CSR and corporate financial performance remains unclear. This quantitative study examines the impact of CSR on corporate financial performance in the pharmaceutical industry. The study addresses the research question: What is the financial performance in the pharmaceutical industry among companies that have embraced CSR? The alternative hypothesis predicted positive correlations between financial performance and CSR. The related null hypotheses predicted that there would be no correlations between any of 8 dimensions of CSR and corporate financial performance. Archival data from 18 leading global pharmaceutical companies ranked by Access to Medicine Index were used to answer the research question.

In 4 of the 8 hypotheses tested, the results show partial support for a positive effect of CSR on corporate financial performance in the pharmaceutical industry based on significant correlations in 2014. Specifically, significant 2014 relationships with corporate financial performance were observed for CSR general access to medicine management, CSR capacity advancement in product development and distribution, CSR product donations and philanthropic activities, and overall CSR. However, no significant 2014 relationships with corporate financial performance were observed for CSR public policy and market influence, CSR research and development, CSR pricing, manufacturing, and distribution, and CSR patents and licensing. In the 8 hypotheses tested, the findings in 2012 did not show any effect of CSR on corporate financial performance in the pharmaceutical industry. The results of this study suggest at the minimum, that CSR does not negatively impact corporate financial performance in the pharmaceutical industry. This study does not support arguments against product donations and

philanthropic activities. The partial support for a positive effect of CSR on corporate financial performance and no negative impact of CSR on financial performance in the pharmaceutical industry, could encourage corporate leaders to pay attention to, not only their corporate financial profits, but also ethical, environmental, and social issues such as improving the access to medicines; and contributing to improving society.

Chapter 1: The Problem

Our world is threatened by serious global climate changes and socioeconomic concerns. Most climate scientists agree that the major cause of the current global warming is the heat entrapped by the atmosphere, which is radiating from the earth into space; a phenomenon called the greenhouse effect (D. Lee & Brenner, 2015). Researchers have warned that carbon dioxide and other greenhouse gas emissions (water vapor, methane, and nitrous oxide) are at their highest level worldwide ever (Burney, Kennel, & Victor, 2013). The burning of fossil fuels such as coal and oil throughout the past century has increased the atmospheric concentration of carbon dioxide. The amount of these gases released into the atmosphere in 2010 was 31% higher than the 1990. The increase in global temperatures as a result of climate change has far-reaching consequences for human beings and the earth's ecosystems. Many scientists believe that there is a relationship between man-made carbon dioxide emissions and rising global temperatures. Extreme atmospheric temperatures can cause health issues for the sick and elderly. Unusually high temperatures and socioeconomic factors were reported to have caused the death of more than 14,947 individuals in France, between August 4 and 18, 2003 (Poumadère, Mays, Le Mer, & Blong, 2005). Extreme weather conditions such as the severe drought in California can reduce available water resources, reduce agricultural yields, and affect human health and well-being.

In addition to the extreme climatic changes, the world population has more than doubled from 3 billion in 1960 to about 6.7 billion in 2009 (Leisinger, 2009, 2012). The number of people living in Africa quadrupled during the same period to about 944 million, while the population of Asia increased to more than 4 billion people. Some estimate that about 20% of people in the developing countries (more than a billion human beings) still live on less than $1.25 per day (Arnold & Valentin, 2013). Another 1.5 billion people are projected to live on $2

or less a day (Arnold & Valentin, 2013; Leisinger, 2009). Together they constitute more than 2.6 billion people who are struggling daily to meet their basic needs. Poverty in these underprivileged countries prevents patients from accessing the medical care and medicines they need. About 14 million people die every year from infectious diseases, and more than 2 billion people lack access to medicines for treatable health conditions (M. Lee & Kohler, 2010). Researchers have reported that in 2003, more than 35 million people were infected with the HIV virus globally, and 95% of these people lived in Africa (Margolis & Walsh, 2003). Some people have suggested that pharmaceutical companies owe a moral obligation to society to make their drugs more affordable to people, especially the poor (Nussbaum, 2009), because access to medicine is recognized by some in the international community as a fundamental human right (Ravi Shankar, 2013). Thus, when the pharmaceutical corporations neglect their corporate social responsibility (CSR), they can become targets for criticism from different advocacy groups that insist that pharmaceutical products should be more available, affordable, and accessible, especially to the poor (Nussbaum, 2009).

Critics of the pharmaceutical industry have even gone as far as accusing the industry of many crimes, including "high prices, immoral marketing, presents to medical doctors, abandoning the poor, no money-no cure attitude,…and industry-government alliances" (Nussbaum, 2009, p. 68). Pharmaceutical companies have also been blamed for recruiting volunteers in the third world and enrolling them in clinical trials without informed consent. These test subjects are used as inexpensive guinea pigs to test drugs that have not yet been approved for testing in the U.S. These clinical trial subjects are poorly paid for their services, and they are unable to afford the drugs under trial because the drugs are developed for Western markets. Many researchers believe that the CSR of the pharmaceutical industry is providing

affordable drugs for everyone (Esteban, 2008; K. M. Leisinger, 2009; Nussbaum, 2009). There is a mounting surge of demands being placed upon the pharmaceutical industry to contribute to improved access to medicines for poor patients in developing countries (K. M. Leisinger, 2009, 2012). One criteria used to define CSR of the pharmaceutical industry in this study is the philanthropic initiative of pharmaceutical companies to increase global access to medicines.

Background of the Study

CSR, also called corporate conscience, corporate citizenship, or sustainable responsible business (Wood, 1991), is a form of corporate self-regulation assimilated into a business model. CSR involves responsibility for corporate actions whereby a business continuously monitors and ensures that its actions encourage a positive impact on the environment and stakeholders, including consumers, employees, investors, and communities. CSR and corporate sustainability management include the evaluation of the impact of the company's economic, social, and environmental policies, and taking necessary actions to improve the impact according to the stakeholders' requirements (T. Katsoulakos & Y. Katsoulakos, 2007).

Some have argued that discovering and developing new drugs and vaccines is the primary CSR of pharmaceutical companies, while others argue that recognizing the need for new products for neglected diseases is a clear example of CSR in pharmaceutical companies (Leisinger, 2005, 2009). The pharmaceutical industry is considered one of the most appreciated industries because it develops therapeutic products that cure people's ailments (Nussbaum, 2009). Researchers have argued that the same industry is one of the most criticized because it does not provide everyone access to its therapeutic products. Leisinger (2009) contends that pharmaceutical companies should contribute to improving access to medicine for poor people.

Numerous studies have investigated the impact of CSR on corporate financial performance. Nevertheless, many researchers have reached different conclusions about the relationship between CSR and corporate financial performance (Robins, 2011). Some studies found that greater participation in CSR was associated with better corporate financial performance in consumer industries, while the opposite was true for industrial businesses. While results of these studies were mixed, overall, the findings showed a positive but weak correlation between CSR and corporate financial performance.

Debates have continued to rage about the relationship between CSR and corporate financial performance since Milton Friedman proposed that making a profit is the social responsibility of a corporation (Griffin & Mahon, 1997). On one hand, economic arguments suggest that managers should make decisions that maximize the wealth of their firm's equity holders. On the other hand, some scholars have argued that firms have a duty to society that goes well beyond simply maximizing the wealth of corporations (Mackey, Mackey, & Barney, 2007). Mackey et al. argue that such a narrow focus on the company's bottom line can compel the management to ignore other important stakeholders, including employees, suppliers, customers, and the society at large. Some believe that corporations would embrace CSR if they perceive that at least some forms of CSR initiatives may improve the present value of a firm's future cash flows; thus, integrating CSR may be consistent with maximizing the wealth of the firm's shareholders (McWilliams & Siegel, 2000). CSR proponents posit that socially responsible behavior can enable a firm to differentiate its products in the market. Advocates argue that corporations increase long-term profits by operating with a CSR perspective, while critics argue that CSR distracts from business's economic role (Nussbaum, 2009). CSR critics argue that there is no business case for CSR, and that CSR conscious companies underperform financially, or at

least do not perform better than CSR-unconscious companies. CSR advocates contend that corporate leaders may increase their CSR efforts and help address some global socioeconomic challenges such as reducing poverty and improving the access to medicine if the leaders are convinced that CSR is positively linked to financial performance (McWilliams & Siegel, 2000). The myriad views about the impact of CSR on financial performance calls for more research because most executives are only now warming up to the notion that CSR can improve profits (Edmans, 2012; Robins, 2011).

These corporate executives understand that CSR can promote respect for their company in the marketplace, which can result in higher sales, enhance employee loyalty, and attract better personnel to the firm (Edmans, 2012; Robins, 2011). Public corporations realize that aggressive CSR activities may help them gain a possible listing in the Dow Jones Sustainability Indexes, Access to Medicine Index, or other similar CSR rating indexes (Robins, 2011). These corporations realize that listing in the indexes may enhance the company's stock price, making executives' stock and stock options more profitable and shareholders happier. A study by the Economist Intelligence Unit found that "corporate citizenship is becoming increasingly important for the long-term health of companies even though most struggle to show a return on their investment from socially responsible activities" (as cited by Robins, 2011, p. 1). Many researchers and industries differ in their views on the impact of CSR on financial performance. This study differs from previous studies because it examines the impact of CSR on financial performance in one industry: the pharmaceutical industry. Each industry is unique because each industry has different competencies and internal and external pressures. Therefore, the internal and external pressures in an industry, such as governmental regulations and consumer issues, are likely to be similar within each industry (Griffin & Mahon, 1997). Researchers have argued that

a study should focus on a single industry to allow the scholar to determine if similar issues within the industry are treated in a like manner (Griffin & Mahon, 1997). In view of the public perception that the high cost of pharmaceutical drugs denies the poor access to medicines (Leisinger, 2009, 2012), and the complex regulations placed on the industry by the government (Griffin & Mahon, 1997), the pharmaceutical company is an ideal model for studying the impact of CSR on corporate financial performance.

The public is calling on the pharmaceutical industry to care for not only corporate profits, but also to provide willingly affordable medicines to everyone. The public outcry is supported by the stakeholder theory that argues that a company should be operated not only to maximize shareholder value, but also for the benefits of its stakeholders (Freeman, Wicks, & Parmar, 2004). A company is perceived as being sustainable when its business strategy balances the well-being of all its stakeholders with profit maximization (Cheng, Ioannou, & Serafeim, 2014). Cheng et al. argue that by aligning their business strategies with the global social needs, companies can generate benefits for all their stakeholders.

Berete's (2011) research has identified CSR factors that impact financial performance in the pharmaceutical industry. This study builds on Berete's study by testing the strength of the correlations between CSR and corporate financial performance as predictors of value creation for stakeholders. Many studies have examined the relationship between the financial performance and CSR, but no consensus has been reached about CSR demonstrating either value creation or value erosion for stakeholders. For this study, corporate financial performance is the dependent variable while CSR is the independent variable. The study examined the correlation of the same seven independent variables used in Berete's study: general access to medicine management, public policy and market influence, research and development conducted on neglected diseases,

the company's pricing, manufacturing and distribution practices, patents and licensing policies, capacity advancement in product development and distribution, drug donations, and philanthropic activities against the dependent variable: financial performance.

Public financial data from the 20 pharmaceutical companies the CSR activities of which are rated by the Access to Medicine Index were used to assess the impact of CSR on the pharmaceutical industry's financial performance. The Access to Medicine Foundation publishes its ranking of 20 of the largest global pharmaceutical companies in seven major categories every two years. The 2012 and 2014 Access to Medicine Index data were extracted for this study. The Access to Medicine Index was first published and used to measure CSR in the pharmaceutical industry in 2008 (Iyer, 2014). The Access to Medicine Index assesses and ranks 20 of the largest global pharmaceutical companies' performance on seven CSR categories. The seven categories are: (a) general access to medicine management; (b) public policy and market influence; (c) research and development conducted on neglected diseases; (d) pricing, manufacturing, and distribution practices; (e) patent and licensing policies; (f) capacity advancement in product development and distribution; and (g) drug donations and philanthropic activities.

The study measured the financial performance of the pharmaceutical companies using the Economic Value Added (EVA). EVA also described as economic profit, is an internal management performance measure that compares net operating profit to total cost of capital. Stern Stewart & Co. is credited with devising this trademarked concept (Poornima, Narayan, & Reddy, 2015; Venanzi, 2012). EVA is computed by deducting the cost of capital from the net operating profit after tax. EVA = Net Operating Profit After Tax - (Capital Invested x the weighted average cost of capital). As presented in the formula, there are three elements necessary to calculate EVA: net operating profit after tax, invested capital, and the weighted average cost

of capital. Net operating profit after tax can be calculated but can also be found on the corporation's income statement. The capital invested is the amount of money that was used to fund a project. The weighted-average cost of capital can be calculated if the information is not provided on the corporation's income statement (Berete, 2011; Venanzi, 2012). The reason for multiplying the weighted-average cost of capital and capital investment is to evaluate the charge for using the invested capital (Venanzi, 2012). This charge is the amount that investors need to make their investment worthwhile. EVA is important because it is used as an indicator of how profitable company projects are and it serves as a reflection of management performance.

Problem Statement

CSR has been studied for decades, with interest greatly increasing in the last decade in both scholarship and practice (Glavas & Kelley, 2014). In their content analysis of the CSR literature, Glavas and Kelley found that 181 CSR articles have been published in top-tier management journals, with about half being published since 2005. Moreover, at least 20 peer-reviewed journals are specifically focused on CSR. Although numerous studies have investigated the relationship between CSR and corporate financial performance there remain mixed results about the relationship between CSR and corporate financial performance (Cheng et al., 2014). This study contributes to the body of literature on CSR by advancing the comprehension of the impact of CSR on financial performance in the pharmaceutical industry. This study builds on earlier studies and differs from prior studies by analyzing the association between eight dimensions of CSR and corporate financial performance in one industry.

Statement of Purpose

The purpose of this quantitative study is to analyze the impact of CSR on financial performance in the pharmaceutical industry. The aim of the study is to ascertain if CSR leads to

better financial performance in the pharmaceutical industry. Therefore, correlations were computed to examine the relationship between CSR (independent variables), and the 2011–2014 financial performance (dependent variable). The strength of association between the dependent variable and independent variables was assessed through linear correlation (using the Spearman correlation coefficient) to determine whether a significant correlation exists. This study intended to analyze the CSR performance of the 20 global pharmaceutical companies that are rated by the Access to Medicine Index. However, the researcher studied 18 of the 20 pharmaceutical companies that participated in the 2012 and 2014 Access to Medicine CSR rating because: (a) Only 19 of the 20 pharmaceutical companies participated in both the 2012 and 2014 Access to Medicine CSR ranking. The 20th company rated by the Access to Medicine in 2012 was different from the 20th company rated in 2014; (b) One of the 19 companies that was rated by the Access to Medicine in both 2012 and 2014 is a private and not a publicly traded company. The financial data of this company are not publicly available unlike the financial data of the publicly traded pharmaceutical companies. This study is designed to evaluate the world's largest, publicly traded pharmaceutical companies so that the findings of the study could be generalized to other publicly traded pharmaceutical companies. The study is expected to influence change in pharmaceutical companies' contribution to society's welfare by inspiring global pharmaceutical industry leaders to invest in CSR to generate positive collective benefits for society.

Importance of Study

About 93% of the world's largest 250 companies publish annual corporate responsibility reports, almost 60% of which are independently audited (Nelson, 2014). That means companies from sectors as diverse as financial services, information technology, consumer goods, gas, and mining are making billions of dollars of public commitments to help solve societal challenges.

Furthermore, the recent global financial crisis, concerns about corporate tax practices, and challenges such as youth unemployment and climate change have forced corporations to lift their sights above their economic bottom line and judge their performance against wider social goals. Economic growth must be more inclusive and more sustainable. The burden is on corporations to produce more jobs, products, services, and infrastructure for more people, while putting more emphasis on decent work and fairness, and less strain on natural resources.

Although the study of CSR and its impact on corporate financial performance is growing, it is still unknown whether high profits enable greater spending on CSR, or if CSR creates higher profits (Robins, 2011). Berete's (2011) study found positive correlation between CSR and financial performance in the pharmaceutical industry. Because of the inconsistency that still exists about the economic impact of CSR on financial performance, this study contributes to the body of literature on CSR by advancing the comprehension of the impact of CSR on financial performance in the pharmaceutical industry. This study is one of a small number of studies that examined the relationship between CSR and financial performance in one industry. This study's findings could inspire pharmaceutical companies to invest in CSR, which would be beneficial to society. If doing good, in terms of transparency in business practices and addressing social ills, could be associated with doing well in corporate financial performance, then companies might be persuaded to integrate CSR into their businesses (Margolis, Elfenbein, & Walsh, 2009; Porter & Kramer, 2006). Businesses would be encouraged to do good even if it means sustaining additional costs, so that they can improve their bottom lines and society's well-being.

Definition of Terms

CSR is a business's commitment to improve community well-being through discretionary business practices and contributions of corporate resources (M. Lee & Kohler, 2010).

CSR: The business policy that focuses on the pressures from stakeholders that were negatively affected by the firm's business processes, or the action taken voluntarily by a firm to alleviate the stakeholder pressures and improve its profit and reputation (Jackson & Apostolakou, 2010).

CSR is defined by the World Business Council for Sustainable Development (1998) as, "the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large" (p. 3).

> *Corporate citizenship* (Googins, Mirvis, & Rochlin, 2007) is defined as being a,…good company…taking serious steps to minimize the harms of business activity and maximize the benefits not only to shareholders but also to a broader set of stakeholders… being responsive to the needs of society and being accountable to stakeholders and the public about corporate conduct. (p. 21)

CSR is defined as "The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time" (Carroll, 1979, p. 500).

For the purpose of this study, CSR is defined as the voluntary commitment of business to contribute not only to its economic development, but also to the advancement of the health and well-being of the society.

Stakeholders: Stakeholders are groups that can affect or be affected by the actions of a corporation such as customers, employees, government, shareholders, suppliers, and the communities from which the corporation performs its business (Freeman, 1984).

Pharmaceutical industry: The pharmaceutical industry is the business sector that develops therapeutic products to cure life-threatening ailments (Nussbaum, 2009).

In studies on the economic impact of CSR, the terms CSR and corporate social performance are usually used synonymously (von Arx & Ziegler, 2014). Corporate social performance is a set of corporate activities and their impact and outcomes for the corporation, society, and other stakeholders (Wood, 1991). This study consistently uses CSR instead of corporate social performance. The definition of CSR most frequently cited by scholars is Carroll's (1979) definition, which states, "The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time" (p. 500). Wood's (1991) definition of CSR, which has gained popularity, is, CSR is "a business organization's configuration of principles of social responsibility, processes of social responsiveness and polices, programs, and observable outcomes as they relate to the firm's societal relationships" (p. 693).

Theoretical Framework

This study uses the Global Leadership Network Framework to assess the impact of corporate responsibility on the financial performance in the pharmaceutical industry. The Global Leadership Network comprises 10 leading global companies, prominent U.S. and U.K. CSR research centers, The Center for Corporate Citizenship at Boston College, and AccountAbility, a U.K.–based research institute (Googins et al., 2007). Berger (2013) recently used the Global Leadership Network Framework in a qualitative study of the development of CSR among U.S. *Fortune* 500 global companies. The Global Leadership Network Framework comprises four areas shown in Figure 1. In the first domain, called business strategy, companies evaluate their business priorities and their CSR and consider alignment of their business strategy with CSR.

Theoretical Framework

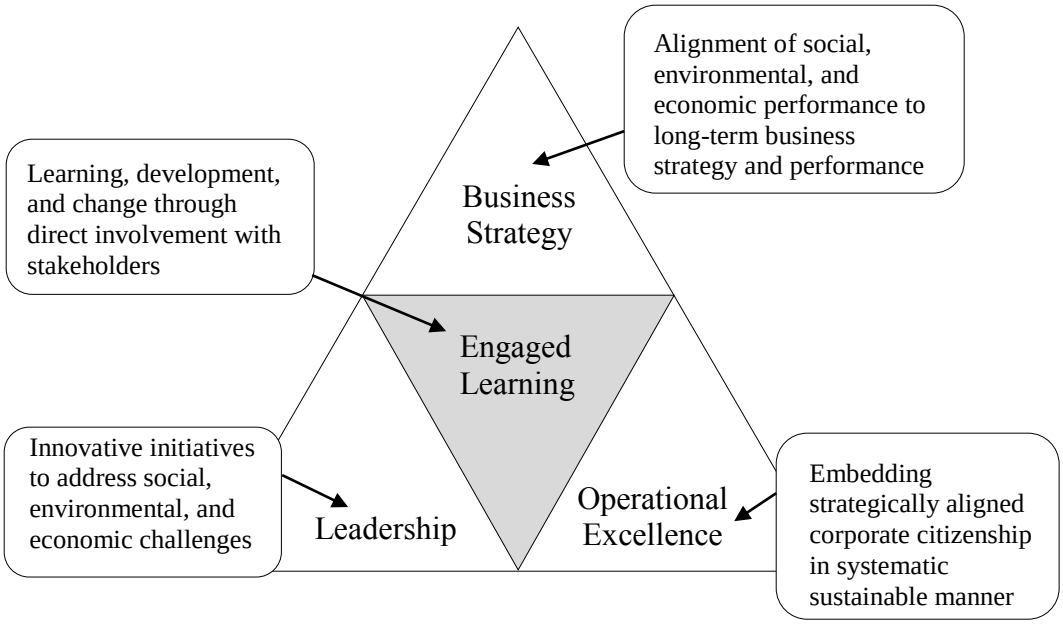

Figure 1. Global Leadership Network Framework. Reprinted from *Beyond Good Company: Next Generation of Corporate Citizenship* (p. 125), by B. K. Googins, P. H. Mirvis, & S. A. Rochlin, 2007, New York, N Y: Palgrave Macmillan. Copyright 2007 by Palgrave Macmillan. Reprinted with permission.

The second domain, named engaged learning, deals with how companies interact with their stakeholders to define their policy on CSR through a process of consultation with their stakeholders. The third domain, termed leadership, is the commitment of the corporation to take leadership on social and environmental issues that are important to the business. The fourth domain, termed operational excellence, deals with how companies embed corporate citizenship through coordination of processes, practices, policies, and relationships among the companies and their multiple stakeholders to ensure alignment between the business strategy and the path that will lead to the achievement of the desired corporate goal (Googins et al., 2007).

Research Questions

For more than three decades, many researchers have been trying to figure out if companies that have integrated CSR in their business policy perform better financially than

companies that have not integrated CSR (Cheng et al., 2014; Robins, 2011). This study examines the impact of CSR on financial performance in the pharmaceutical industry. CSR is measured by ratings form the Access to Medicine Index, and corporate financial performance is measured by EVA. The research question that this study answers is: What is the financial performance in the pharmaceutical industry among companies that have embraced CSR?

Hypothesis

This study uses EVA as measure of financial performance and Access to Medicine Index scores as a measure of CSR. The study tests the following hypotheses:

Null Hypothesis (Ho):

1. There is no correlation between incorporation of general access to medicine management (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
2. There is no correlation between incorporation of public policy and market influence (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
3. There is no correlation between incorporation of research and development conducted on neglected diseases (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
4. There is no correlation between incorporation of pricing, manufacturing, and distribution practices (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

5. There is no correlation between incorporation of patent and licensing policies (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
6. There is no correlation between incorporation of capacity advancement in product development and distribution (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
7. There is no correlation between incorporation of product donations and philanthropic activities (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
8. There is no correlation between incorporation of CSR (overall independent variables) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

Alternative Hypothesis (H_1):

1. There is a positive correlation between incorporation of general access to medicine management (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
2. There is a positive correlation between incorporation of public policy and market influence (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
3. There is a positive correlation between incorporation of research and development conducted on neglected diseases (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

4. There is a positive correlation between incorporation of pricing, manufacturing, and distribution practices (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
5. There is a positive correlation between incorporation of patent and licensing policies (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
6. There is a positive correlation between incorporation of capacity advancement in product development and distribution (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
7. There is a positive correlation between incorporation of product donations and philanthropic activities (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.
8. There is a positive correlation between incorporation of CSR (overall independent variables) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

In a quantitative research, the alternative hypothesis is a statement that speculates about the relationships between two or more relationships. The alternative hypothesis indicates the changes in the dependent variable that can be ascribed to the independent variable (Martin & Bridgmon, 2012). The null hypothesis is the hypothesis that presumes that there is no difference between two sets of data in respect to some factor. The null hypothesis is usually tested statistically and its nullification is considered as evidence in support of the alternative hypothesis. When the null hypothesis is rejected, it indicates that there is a significant difference

between the means of the samples in the study. The researcher has an inconclusive decision if the sample means are not different, and he or she cannot reject the null hypothesis.

Assumptions

There are three assumptions in this study:

1. The CSR ranking by the Access to Medicine Index is an accurate evaluation of the CSR of the pharmaceutical companies.
2. The annual financial reports provided by the pharmaceutical companies are accurate public data.
3. The findings from the study of the 20 global pharmaceutical companies rated by the Access to Medicine Index can be generalized to the whole pharmaceutical industry.

Limitations

The study measures CSR using scores provided by the Access to Medicine Index, but there are only 20 participating pharmaceutical companies on the Access to Medicine Index. CSR data for companies not on the Access to Medicine Index are not available for measurement. However, the companies in this study represent 20 of the world's largest pharmaceutical companies and more than 50% of the global pharmaceutical market (Iyer, 2014).

Organization of the Study

Chapter 1 introduces the subject, the problem, purpose of the study, significance of the study, theoretical framework, research questions, limitations, delimitations, and assumptions of the study. Chapter 2 presents, first, a review of the literature on the pharmaceutical industry; second, a literature review of CSR in the pharmaceutical industry; and third, a literature review of studies that examined the relationship between CSR and corporate financial performance. Chapter 3 explains the methodology and rational of this study, the research design, population,

sample and sampling procedures, instruments, validity and reliability, study limitations, human subject consideration, data collection, data management, and analysis.

Summary

The purpose of this quantitative study is to determine the degree to which CSR influences changes in financial performance in the pharmaceutical industry. Many researchers have investigated the association between CSR and corporate financial performance, but they have differed in their findings about this relationship (Robins, 2011). The divergent views about the impact of CSR on financial performance call for more research especially because most executives are only now warming up to the notion that CSR can improve profits (Edmans, 2012; Robins, 2011). The study expects to influence a change in the contribution of pharmaceutical companies to the welfare of society at large by inspiring global pharmaceutical industry leaders to invest in CSR to generate positive collective benefits for society.

Chapter 2: Literature Review

The Pharmaceutical Industry

The pharmaceutical industry had its origin in the mid-19th century when the therapeutic effects of synthetic dyes were first exploited in Germany and Switzerland. The dye-drug connection precipitously initiated the way to discover drugs. The pioneering firms were Swiss and German chemical companies such as Ciba, Sandoz, Bayer, and Hoechst. In the U.S., the pharmaceutical industry had its beginning toward the end of the 19th century with the entrance of firms such as Wyeth (American Home Products), Eli Lilly, Pfizer, and Warner-Lambert (Grabowski, 2011; Malerba & Orsenigo, 2001, 2015). The German companies produced up to 80% of the world's drug output and dominated the pharmaceutical industry until World War II. The pharmaceutical industry did not engage in intensive research and development (R & D) until the need for antibiotics and large-scale development of penicillin during World War II led to the increasingly research-intensive pharmaceutical industry.

Major therapeutic advances were made by the industry a few decades after World War II such as the discovery and manufacture of several antibiotics, including synthetic penicillin, streptomycin, tetracycline, and many new vaccines for children's diseases. This era was called the golden age of the pharmaceutical industry (Grabowski, 2011; Malerba & Orsenigo, 2001, 2015). Because of the technical experience gained while developing penicillin during the war, as well as the recognition that enormous profits could be made from drug development, pharmaceutical companies started to invest heavily in R & D (Malerba & Orsenigo, 2001). The development of the pharmaceutical industry in the U.S. and Europe was driven by increased demand for drugs, growth in population, increased standards of living, and unmet medical needs. The development of the industry was further augmented by the growth of the U.S. health care

insurance and the welfare state in some European countries, which gave rise to organized profitable market for drugs (Malerba, & Orsenigo, 2015). Consequently, the pharmaceutical industry has been one of the most profitable manufacturing sectors since the late 19th century (Liebenau, 1988).

As the pharmaceutical industry grew, so did the regulation of the industry. Government testing and certification of pharmaceutical products was initiated between 1896 and 1926. Drug regulation started in Germany, then the United States initiated similar testing and certification requirements, and Britain followed at a much later time (Liebenau, 1988). Regulation of drugs was a way to control the safety of drugs sold to the public to assure safety and ethical business transactions of the manufacturers. The Food, Drug, and Cosmetic Act of 1938 was the first legislation that required pharmaceutical companies to prove the safety of their drugs or products before the Food and Drug Administration (FDA) would approve them for sale to the public. This legislation was passed after 107 people died from taking a Sulfanilamide drug (Valverde, 2013). An important regulation called the Orphan Drug Act was enacted in 1983 to compensate for the loss of earnings of companies involved in developing drugs for rare diseases such as Malaria and African Trypanosomiasis (sleeping sickness). Under the Orphan Drug Act, companies that developed drugs for neglected diseases get tax breaks and sponsorships.

Developing a new drug is very time consuming, complex, and a highly risky venture that does not guarantee that a new product might succeed and bring in revenues even after massive investment of time and money. Pharmaceutical R & D requires a substantial amount or investment of time and money, and a high proportion of drug development projects fail. The drugs that eventually succeed take many years and billions of dollars in cost before they generate sales revenues (Chit, Papadimitropoulos, Krahn, Parker, & Grootendorst, 2015; Harris, 2004). It

takes many years to bring a drug candidate from discovery to preclinical development, through three clinical trial phases, and to the market. There is a 1:1,000 probability of a product making it to the market (Basavaraj & Betageri, 2014; Chit et al., 2015; Liu, Constantinides, & Li, 2014). The cost of making a new drug has increased from $100 million in 1979 to $ 2.6 billion in 2014, making outsourcing a cheaper and more attractive option for several key activities (Basavaraj & Betageri, 2014).

A new product or compound (potential drug) must first be studied in laboratory animals to determine toxicity and efficacy before it can be tested on human beings. In clinical trials, or clinical studies, the new product is tested in human volunteers to see if the new product is safe and potent enough to be approved for use in the general population. However, until the clinical trials are complete, it is not known if the new product or compound is beneficial to patients. The FDA's Center for Drug Evaluation and Research evaluates new drugs for safety and effectiveness before they can be sold to the American people. In clinical trials phase 1, a new drug or product is tested on a small population to evaluate the safety and safe dosage range of the drug, and to identify any potential side effects. In phase 2, the drug or product is tested on a larger number of people to determine its efficacy and safety. In phase 3, the drug or product is administered to several groups of people to confirm the efficacy of the drug and to monitor any side effects. The drug is compared to other commonly used drugs, and information is gathered to aid in the safe usage of the drug or product. Phase 4 starts after the drug has been marketed. Data are collected on the effects of the drug in various populations to determine if there are any side effects as a result of long-term drug use. Clinical trials are required by the FDA and they play a key role in the discovery and development of a drug (U.S. FDA, 2012; Yang, 2012). Pharmaceutical products or drugs are the main drivers for industry growth. Pharmaceutical

companies compete intensely on the characteristics of their products to gain a competitive edge, and they invest heavily in marketing their products to patients as well as to doctors (Valverde, 2013).

There are two major categories for pharmaceutical drug sales: branded and generic drugs (similar in composition and function to brand, but not advertised as brand). Brand-name drugs accounted for 92% of the sales volume but accounted for only half of the dispensed prescription volume in the United States in 2001, according to IMS Health, a technology and information services company (Grabowski, Long, & Mortimer, 2013). Branded pharmaceutical drug sales have decreased because of the release of generics. The percentage of generic products in the total prescriptions in the United States has increased from 36% in 1994 to 84% in 2012. Hence, the introduction of these generics has caused pressure on pharmaceutical firms to develop more blockbuster drugs with high profit margins. The increase in generic sales is largely a result of the expiration of patents on branded drugs. When a branded-drug patents expire, it only takes six to eight weeks for a generic to take a 50% share of the branded drug's market compared with six months historically.

The introduction of the Abbreviated New Drug Application process, which was the result of the Hatch-Waxman Act, has been the most significant regulatory development for generics (Grabowski et al., 2013; Malerba, & Orsenigo, 2015; Valverde, 2013). The Hatch-Waxman Act provisions facilitated the approval of generic drugs by the FDA, thus encouraging the entry of generic drugs into the market (Grabowski et al., 2013). One of the primary provisions of the act decreased the cost of completing an FDA application for the approval of a generic drug. A new mitigation strategy by biopharmaceutical companies includes the use of a less intensive R & D method, outsourcing, and leveraging existing products by concurrently developing generics of

branded drugs still covered by patents; more aggressive protection of intellectual property; and developing product-line extensions with longer patent life.

The pharmaceutical industry is highly regulated (Adobor, 2012; Valverde, 2013). Before bringing a product to market, companies must show that the drug is safe and offers measurable benefits to patients. After the drug is approved, the FDA requires companies to investigate and monitor side effects. The FDA also investigates patient complaints, and continues to monitor companies for compliance with manufacturing standards. Failure to comply with legal commitments leads to fines by the FDA. The FDA can withdraw drugs from the market for safety reasons related to the drug or its manufacturing process. Any drug withdrawal by the FDA can impact a company's image and economic status. The industry is also dependent on the government for revenue because it participates in U.S. Federal government–funded health programs. For example, most drugs sales come from government-funded programs such as Medicare, so that changes in government policies could dramatically impact revenue. The U.S. government historically increases regulations on pharmaceutical companies, including enforcing strict safety and compensation requirements (Langer, 2013). Legislators in the U.S. have recently adopted many laws aimed at curtailing the undue influence of the gifts pharmaceutical companies use to entice physicians to prescribe their drugs. For example, a new federal government law called the Physician's Financial Transparency Reports (the Sunshine Act), mandates drug and medical device makers to report payments or gifts to teaching hospitals and physicians (American Medical Association, 2013; Kessel, 2014; Valverde, 2013). Legislators passed the Sunshine Act to counter the corrupt practices that have been attributed to pharmaceutical companies. For example, Kessel's (2014) study reported many dubious marketing practices by pharmaceutical companies.

Kessel (2014) found that the pharmaceutical industry spent $27 billion on drug promotion in 2012 and $24 billion of the total expenditure was used for marketing to physicians. Out of the $24 billion, approximately $15 billion was spent on promotional sales and activities geared toward doctors and for entertaining doctors. Free drug samples given to physicians to induce doctors to prescribe the drug being promoted amounted to $5.7 billion. The industry also spent $2.1 billion on doctors' educational and promotional meetings. The reporting system mandated by the Sunshine Act leaves no room for pharmaceutical companies to use gifts as rewards to motivate health care providers to buy their products. The Sunshine Act allows companies to compete fairly on the merit of their products instead of how many gifts they can afford. Most countries have national codes that guide the pharmaceutical industries, for example, codes established by the Association of the British Pharmaceutical Industry and the Pharmaceutical Research and Manufacturers of America. Organizations such as Pharmaceutical Research and Manufacturers of America and Association of the British Pharmaceutical Industry monitor the marketing activities of pharmaceutical companies and disallow companies from using gifts or money to persuade doctors to prescribe their products or medical equipment (Valverde, 2013).

The pharmaceutical industry is admired because it provides medicines that cure life-threatening diseases, but the industry is also much criticized because it does not provide everyone a cure at affordable prices (Nussbaum, 2009). The pharmaceutical industry is criticized for high drug prices, dubious marketing practices, and offering gifts to physicians and clinical trials coordinators (Valverde, 2013). The pharmaceutical industry was once considered one of the most respected and admired industries in the United States, but consumer attitudes have since changed and consumers equate the industry's reputation to that of the tobacco companies. The pharmaceutical industry is different from other industries because it is in a business designed to

improve the health of people while concurrently increasing shareholders' profits. It can be argued that pharmaceutical companies are primarily loyal to shareholders and not to their products' consumers (Kessel, 2014). The decline in reputation can be attributed to strategic business issues to which pharmaceutical companies need to adjust their business model. The issues include increasing R & D costs, patent expirations on blockbuster drugs, competition from generic drugs, and pressure to meet Wall Street earnings expectations. These issues have caused pharmaceutical companies to place greater importance on a return on investment and increasing shareholder value, and less emphasis on patients' needs (Kessel, 2014; Valverde, 2013).

The pharmaceutical industry cannot afford to deemphasize patients' needs. Whereas access to medications in the early 20th century was considered a luxury that only the affluent could afford, today access to medicine is regarded as a human right (Kessel, 2014). High drug prices, which have made needed drugs unaffordable to low-income groups and people in underdeveloped countries, have fostered the view that the pharmaceutical industry has turned away from caring for human beings and is only concerned with maximizing its profits. The public perceives the pharmaceutical industry differently from other sectors, because the industry provides medications. Sick patients do not compare buying a drug to buying an iPhone. A sick patient could die from lack of access to medicine. A sick patient can live happily without an iPhone but with access to drug treatment.

With the advancement of technology, the Internet, and Twitter, any consumer complaints or information about a pharmaceutical firm's regulatory violations, lack of ethical business practices, or product failures can travel around the world in a few minutes. Lawyers have increasingly turned their attention to pharmaceutical companies and are soliciting clients over drug-safety issues. Consequently, the pharmaceutical industry has become susceptible to

frivolous lawsuits from people claiming to have been injured using their drugs. Class-action tort lawyers buy primetime television advertising spots inviting calls and promising rewards for anyone apparently harmed by prescription drugs (Kessel, 2014). These advertisements often list the millions of dollars they have won for clients in previous lawsuits against pharmaceutical companies.

To rebuild trust, it behooves the pharmaceutical firms to include CSR activities in their business strategies because businesses are not measured on their profitability alone (Kessel, 2014). CSR is a firm's voluntary performance that goes above and beyond the requirements of the law to improve not only shareholders' value but also the well-being of society. Since the beginning of the 20th century, there has been a growing awareness of the imbalance between the medical needs of the large mass of poor people in the world and the pharmaceutical industry's economic priorities (Lezaun & Montgomery, 2015). The imbalance has motivated a proliferation of programs that solicit public and private R & D organizations to accelerate the discovery of new medicines to treat neglected diseases. For example, in 2012, the U.K. and U.S. governments, the Bill Gates Foundation, the World Bank, 13 pharmaceutical companies, and representatives from countries with neglected diseases signed an agreement on neglected tropical diseases. The agreement, called the London Declaration, pledged to coordinate innovative actions to develop drugs that will eliminate or control 10 neglected tropical diseases by the end of the decade. Many scholars have called for participants with the relevant academic expertise, academic institutions, governments, philanthropic organizations, and the pharmaceutical industry to collaborate and form product development partnerships to develop drugs for neglected diseases of the poor (Lezaun & Montgomery, 2015).

CSR in the pharmaceutical industry. CSR has become a strategic business practice for many firms in the pharmaceutical industry. Many scholars advocate pharmaceutical companies investing in CSR to remain profitable while satisfying the needs of its various stakeholders (West & Dobson, 2011). Others argue that it is important for pharmaceutical companies to be engaged in CSR performance because the pharmaceutical industry is different from other sectors since its business decisions have direct impact on human lives (Droppert & Bennett, 2015). The pharmaceutical industry is different from other industries because its business is drugs that can save human lives. Therefore, the pharmaceutical industry is perceived as having a distinct ethical responsibility to the public such as providing access to drugs to all patients.

CSR is still a new business domain, and yet the pharmaceutical industry has come to realize that CSR is an important concept that must be considered in its business practices (Esteban, 2008). In a study that asked managers about the impact of CSR on their companies, the unanimous answer was that a company's business is at risk if CSR is not embedded in the firm's business processes. Hank McKinnell, former CEO of Pfizer, articulated the responsibility of the industry succinctly when he said, "Because we have the ability to help in so many ways, we have a moral imperative to do so" (as cited in Nussbaum, 2009, p. 67). The danger and risks to the pharmaceutical industry for neglecting CSR include outrage from the public, loss of reputation, government sanctions, and litigation from class-action tort lawyers.

The pharmaceutical industry was once among the most respected sectors in the U.S. For example, the headline on *Fortune* magazine's 1990 reputational survey ran with "America's most admired corporations: Merck leads the pack for the fifth year running" (as cited in Juliano, 2013, p. 393). The pharmaceutical companies were proud of their reputations as depicted by a slogan from Squibb pharmaceuticals stating, "The priceless ingredient in every product is the

honor and integrity of its maker" (Juliano, 2013, p. 393). Many people distrust the pharmaceutical industry and the glowing public image of the industry has been tarnished by various reports in the media of unethical and illegal behavior such as not disclosing negative results in clinical trials, high drug prices, and companies enticing doctors with gifts to use their drugs (Nussbaum, 2009).

Pharmaceutical companies are often blamed for the lack of access to medications in developing countries and many scholars agree that pharmaceutical firms need to adopt CSR practices to address such issues as public trust and access to medications (Esteban, 2008; Sobrio & Keller, 2007). For example, in 2006, the Stanford University Medical Center announced a new policy that banned pharmaceutical sales representatives from entering into the medical school facilities and patient care areas. The university allowed pharmaceutical sales representatives into those areas only on very specific occasions under extremely controlled conditions. In addition, Stanford University Medical Center medical doctors were banned from accepting gifts from pharmaceutical companies (Esteban, 2008). This shows how the decline in trust can negatively impact the economics and relationships of the pharmaceutical industry. The pharmaceutical industry has a highly complex set of stakeholders to balance, including patients; government regulators; the health and scientific community; patient advocates; the media; activists, including antivivisectionists; politicians; and the public at large. The development of CSR strategies that focus on transparent policies and procedures for drug development and clinical trials, drug pricing, and marketing will go a long way toward helping the industry balance its responsibilities to its stakeholders. Some authors have also called for the industry to engage in more efficient environmental, waste, and water management, especially because pharmaceutical processes as with all manufacturing require large amounts of water (Esteban, 2008).

To regain a good public image, the industry must balance shareholder profit maximization with CSR objectives. The traditional reasons that companies had for CSR activities included paying for a firm's negative deeds and philanthropic contribution to the community because of some social benefits obtained by the company (Pérez-Bustamante, 2013). Companies no longer perceive CSR as contrition for misdeeds but as a corporate strategic activity that should be incorporated into their business practices. Incorporating CSR into business practices must create shared value for both the firm and the society; hence, CSR should be treated as an investment and not a cost because CSR can be incorporated in business practices such as drug development, innovation, clinical trials, advertising, sales, and marketing (Pérez-Bustamante, 2013; Porter & Kramer, 2006).

Providing affordable drugs to patients in need is a fundamental component of CSR for pharmaceutical companies (Peukert & Fuggenthaler, 2009). Pharmaceutical companies should invest in researching and developing drugs for neglected diseases as a CSR. An example of a successful drug-development program for neglected diseases is Novartis's effort to develop antimalaria drugs. Although malaria is not common in Novartis' core markets, Novartis initiated a malaria research program to provide low-priced drugs for patients. The goal behind this initiative is clearly corporate responsibility, because Novartis is aware of the fatalities of malaria in the third world. The Novartis's malaria program is a CSR investment with high potential for positive financial returns. The low drug prices could easily be compensated for by the large market for antimalaria drugs in the third world. Developing drugs for neglected diseases is a shared value for all shareholders because it improves the health of people in malaria-infested countries, and the investment could be profitable for the companies. Developing research programs for neglected diseases can potentially enhance the reputation of pharmaceutical firms,

and the cost of investing in the CSR could be offset by sales revenue from the large market for neglected diseases. Advocates of CSR argue that although the cost-benefit ratio of different CSR activities may differ, a high level of CSR improves a firm's reputation, image, and financial performance (Longest & Lin, 2004; Waddock & Graves, 1997).

The impact of CSR on corporate financial performance has been widely studied and debated for many decades (Griffin & Mahon, 1997; Longest & Lin, 2004). One of the most comprehensive studies that showed a positive relationship between CSR and corporate financial performance evaluated 67 firms throughout a period of 11 years. The study's authors concluded that having employed "the largest longitudinal database used to date in this type of research, we find overwhelming evidence of a positive relationship between social and financial performance indicators in a sample of large and important U.S. corporations" (Preston & O'Bannon, 1997, p. 428). Many pharmaceutical companies are developing and restructuring their CSR strategies as a result of increasing public pressure demanding that they engage in socially responsible business activities in a changing globalized world (Droppert & Bennett, 2015). A recent study of CSR in six highest earning multinational pharmaceutical firms by Droppert and Bennett, found that CSR meant different things for each firm. Each firm defined CSR differently, managed CSR differently, was involved in different CSR activities, and had different motivations for engaging in CSR. In spite of the different interpretations or understanding of CSR by these firms, the common factors that motivated engagement in CSR activities included reputation, rankings in sustainability indices, entry into new markets, financial performance, employee recruitment and satisfaction, and improvement of the health of the public. Studies have found that firms engage in CSR activities for various reasons. Some researchers have proposed the following four reasons that motivate companies to implement CSR initiatives: (a) CSR improves corporate image; (b)

CSR helps in employee recruitment, motivation, and retention; (c) CSR increases corporate financial performance; and (d) CSR positively influences the opinions of investors and analysts (Fort, 2014; Nussbaum, 2009). Companies do not necessarily incorporate CSR for all four reasons, but each company may engage CSR for one or more of these four benefits (Nussbaum, 2009).

A critical domain of CSR that the pharmaceutical industry is required to incorporate in its business practices is the human rights obligation of the industry (Gruskin & Raad, 2010; Hunt & Khosla, 2010; Ritter, 2010). There are different and often contradictory opinions about the debate on the human rights obligations of pharmaceutical companies. Some global pharmaceutical companies claim that they support human rights because of their drug donation programs or CSR agendas that promote nondiscrimination in the workplace. Conversely, activists argue that pharmaceutical companies violate health-related human rights by focusing more on their drug patents and shareholder profits over access to medicines for patients in need (Gruskin & Raad, 2010). The following are a few of the human rights guidelines for pharmaceutical companies regarding access to medicines that were outlined in the 2008 United Nations report: governments have a key responsibility to increase access to medicines, the pharmaceutical industry saves lives, pharmaceutical companies have a responsibility to enhance shareholder value, and pharmaceutical companies have human rights responsibilities (Hunt & Khosla, 2010). These guidelines should help pharmaceutical companies to formulate CSR policies that would both value human rights to health and improve shareholder value.

The 2008 United Nations report stresses that a pharmaceutical company is granted a drug patent as a reward for developing a life-saving drug, an important medical and public health function. However, a patent is granted to a company under explicit and implicit conditions.

Under these conditions, society has legitimate expectations of a company granted a patent for a life-saving drug. The understanding between the holders of a drug patent and society grants monopoly privileges to the patent holder, but also places social responsibilities on the patent holder (Hunt & Khosla, 2010). The United Nations report acknowledges government's responsibility to ensure human rights protection but encourages pharmaceutical firms to engage in businesses activities that are consistent with enjoyment of human rights (Gruskin & Raad, 2010; Hunt & Khosla, 2010; Ritter, 2010).

Although many pharmaceutical companies contribute to improving access to medicines, those companies are not fulfilling their human rights responsibilities as numerous studies suggest (Hunt & Khosla, 2010). In 2008 and 2010, the Access to Medicine Index ranked 20 pharmaceutical companies on their performance on access to medications. The companies were scored and ranked by the Access to Medicine Index on measures such as public policy influence and advocacy, pricing, patents and licensing, and drug donation. The study found Glaxo Smith Kline ranked highest in 2008, followed by NovoNordisk, Merck & Co., and Novartis. The lowest ranked companies were Pfizer, Wyeth, Teva Pharmaceutical, and Schering-Plough (Hunt & Khosla, 2010). The authors concluded that although the Access to Medicine Index "does not explicitly adopt a human rights framework, the Index reflects aspects of the Guidelines and the right to the highest attainable standard of health, highlighting where companies are doing well in addition to some of their shortcomings" (Hunt & Khosla, 2010, p. 2).

The major role played by the pharmaceutical industry in helping human beings to realize their rights to health is through utilizing its core competencies in research, development of drugs and vaccines for unmet medical needs, and in facilitating the distribution of its products (Hunt & Khosla, 2010). The industry has saved or improved the quality of life of many people for more

than a century. For example, the pharmaceutical industry developed and distributed the vaccine that has brought measles disease close to elimination in many parts of the world (Ritter, 2010). Ritter urges the pharmaceutical industry to leverage its competencies and coordinate with governments to remove barriers to the health care that patients need and deserve. Such efforts by the pharmaceutical industry amount not only to doing good for society, but can also enhance the long-term profitability of pharmaceutical companies.

CSR

The body of literature on CSR contains myriad definitions of the CSR concept (Swaen & Chumpitaz, 2008), and as such, some have termed CSR a tortured concept (Godfrey, Hatch, & Hansen, 2010). Carroll (1999) discussed more than 25 different ways that CSR has been defined in the academic literature. The search for a common definition of CSR is still elusive. Meijer and Schuyt (2005) indicated that scholars most frequently cite Carroll's (1979) CSR definition, which states, "The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time" (p. 500). CSR is sometimes defined as a voluntary approach undertaken by a company as presented in the following examples:

1. CSR is a company's commitment to implement discretionary initiatives and increase access to medicine resulting in improving its community's welfare (Kotler & Lee, 2005).
2. CSR represents corporate actions that improve society's welfare above and beyond the company's own interests or legal obligations (McWilliams & Siegel, 2001).

Other times, CSR is viewed as an obligation that signifies the social contract between a corporation and the society, as seen in the following examples:

1. CSR is the economic, legal, ethical, and discretionary expectations that society has of a company (Carroll, 1979).
2. CSR is a process in which companies assume the economic, legal, ethical, and discretionary responsibilities that stakeholders have imposed on its corporate actions (Maignan, Ferrell, & Hult, 1999).

Last, CSR is considered in terms of the groups to which companies are considered to be responsible. For example, CSR is described as a mechanism of using resources and implementing activities directed exclusively to maximize profits for a firm, as long as the firm obeys the government's rules and regulations (Friedman, 1962).

Most CSR definitions emphasize the voluntary actions of business designed to improve society's social or environmental conditions (Mackey et al., 2007; Margolis & Walsh, 2001). Many CSR definitions are based on the concept that firms engage in responsible actions that go well beyond profit making or simply obeying the law, and corporate responsibility that applies not only to its shareholders but also to all its stakeholders (Swaen & Chumpitaz, 2008). Therefore, some authors consider a firm socially responsible as long as the firm's actions are voluntary and designed to improve society's social or environmental conditions (Mackey et al., 2007).

According to stakeholder theory, in economic decisions or in its social life, a company has a responsibility to all those who contribute directly or indirectly to its existence, development, and survival, including suppliers, customers, employees, investors, and the local community (Freeman et al., 2004). The different components of stakeholder theory are highlighted in the definition of CSR proposed by the Commission of the European Communities, which regards CSR as a company's voluntary integration of social and environmental policies

into its business strategies and relationships with its stakeholders, including shareholders, nongovernmental organizations, suppliers, customers, and the community at large (Swaen & Chumpitaz, 2008).

The concept of CSR has been evolving since the early 1930s (Carroll, 1979), and throughout the past decades, CSR has grown from a marginalized concept into a complex one that is increasingly becoming central in business decision making (Cochran, 2007). Many authors have asserted that the modern era of social responsibility was marked by Bowen's (1953) publication *Social Responsibilities of the Businessman*, which many consider to be the first book on CSR (Carroll, 1979; Ghobadian, Money, & Hillenbrand, 2015; Schwartz & Carroll, 2008; Swaen, & Chumpitaz, 2008). Bowen is credited as being the first to offer a definition of the social responsibilities of businessmen (Carroll, 1999; Pérez-Bustamante, 2013). Carroll (1999) called Bowen the "Father of Corporate Social Responsibility" (p. 270). In his book, Bowen posited that CSR "refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society" (Bowen, 1953, p. 6). Bowen argued that although social responsibility is no magic bullet, it must guide the business strategies of every corporation. However, the lack of consensus on what CSR means has been one of the factors that has for a long time, contributed to the concept's ambiguity. CSR has been conceptualized in myriad ways: profit making only; going beyond profit making; going beyond economic and legal responsibilities; performing voluntary activities; incorporating economic, legal, and voluntary activities in business; concern of a business for the broader social system; and responsibility of a business in a number of social problem areas (Carroll, 1979).

For many years, academics, practitioners, and corporate executives have debated the responsibility of a corporation to its society. Some have argued that the corporation's sole responsibility is to provide maximum financial return to its stockholders. Others advocate that corporations have social responsibilities to their stakeholders, including the firm's employees, customers, suppliers, and the communities in which the corporations operate (Alexander, 2015; Carroll, 1991). Columbia University professor Adolf A. Berle and Harvard professor E. Merrick Dodd are credited as being among the first to debate the topic of CSR in several articles featured in the *Harvard Law Review* in the 1930s (Cochran, 2007).

In his review of the evolution of CSR, Cochran (2007) wrote a detailed account of Adolf Berle's argument that a business is responsible only to its shareholders, while Merrick Dodd contended that in addition to economic responsibilities to shareholders, a business also has social responsibilities to society. Dodd posited that a business has responsibility to the society because a corporation is approved to operate by the law because of the service the firm provides to the community, and not necessarily because the firm is a cash cow to its shareholders. Businesses as such, were created as economic enterprises intended to provide goods and services to society. The debate about what CSR means was intensified by Milton Friedman's argument that the doctrine of social responsibility is subversive. Friedman insisted, "Few trends could so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their stockholders as possible" (Friedman, 1962, p. 133).

Richard Eells, Clarence Walton, Keith Davis, and Archie Carroll were among the notable academics in the 1970s whose views of CSR countered that of Milton Friedman (Carroll, 1999). In denouncing the notion that a corporation owes an obligation only to its stockholders, Eells and

Walton argued that a firm must pay attention to the needs and goals of the society that surpass merely economic needs (as cited in Carroll, 1999). Keith Davis agreed with Paul Samuelson, another distinguished economist, who proposed that corporations must integrate social responsibility into their business. Davis defined CSR as a firm's decision to undertake issues that go beyond economic, technical, and legal requirements of the business (as cited in Carroll, 1999).

Sethi (1975) authored one of the early studies that specifically addressed CSR. He developed a three-layer model to classify three states of corporate behavior that are based on social obligation (including compliance to legal regulations), social responsibility (related to the norms, values, and expectations of the society), and social responsiveness, which includes anticipating and adapting to the prevailing social needs. In his publication, Carroll (1979) presented a conceptual model of CSR that categorized the social obligations of a business into four groups: economic, legal, ethical, and discretionary responsibilities. Subsequently, Carroll (1991) framed the components of CSR in a pyramid that he called the "pyramid of corporate social responsibility" (p. 39). Gupta (2012) argued that Carroll's (1979) study built on Sethi's (1975) model of CSR. Carroll's (1991) pyramid of CSR is a hierarchical model of CSR in decreasing order of importance: economic (be profitable), legal (obey the law), ethical (do what is right and fair and avoid harm), and discretional-philanthropic (be a good corporate citizen). The pyramid of CSR Carroll proposed provides a framework for understanding how a firm can reconcile its role of maximizing shareholders' profits with its social responsibilities to stakeholders.

In his pyramid of CSR in Figure 2, Carroll (1991) suggested that CSR consists of four components or categories of CSR in order of decreasing importance: economic, legal, ethical,

and philanthropic. The pyramid of CSR proposed that in addition to economic and legal obligations, a corporation also has ethical and philanthropic responsibilities. The first level in the CSR pyramid is Economic Responsibilities. Businesses were designed as economic enterprises that provide goods and services to society. Maximizing profits became the primary motive and incentive for entrepreneurs to start any business. Economic responsibility is highest on the hierarchy of the CSR framework, and thus, the pyramid of CSR acknowledges that a firm must be committed to being consistently profitable, competitive, and highly efficient in its operations.

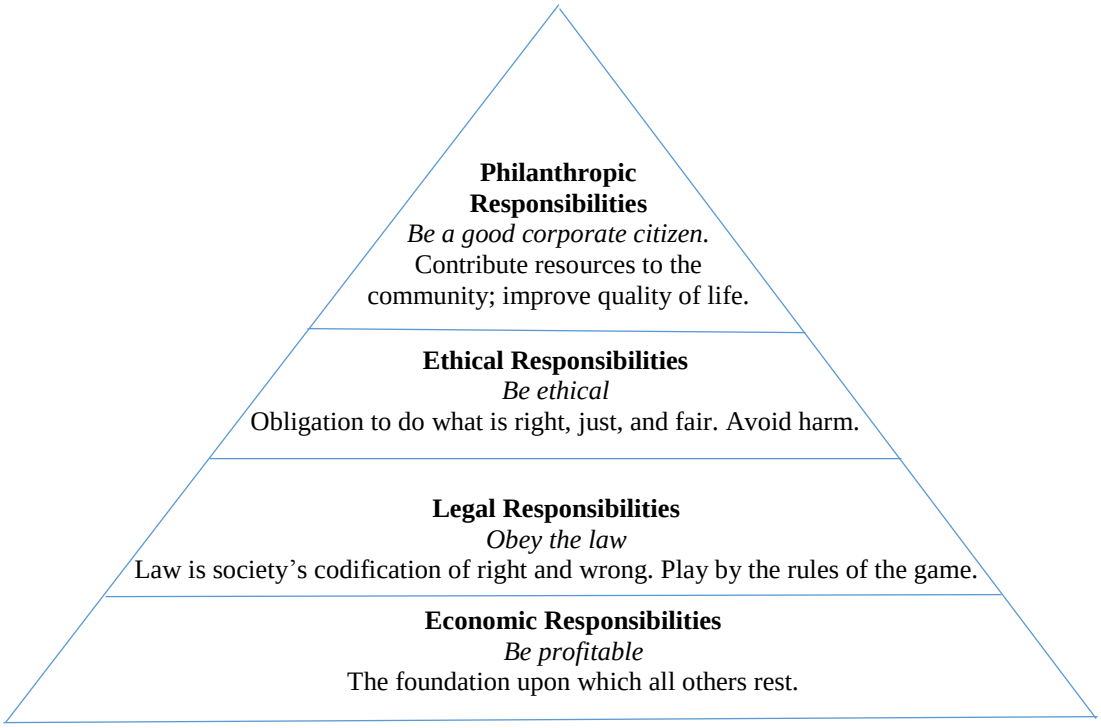

Figure 2. Pyramid of CSR. Adapted from "The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders" by A. B. Carroll, July/August 1991, *Business Horizons*, p. 42. Copyright 1991 by Elsevier.

According to the pyramid of CSR, economic responsibility is the foundation on which all other business responsibilities rest, because without efficient financial performance, a company cannot perform all of the other social responsibilities (Carroll, 1991). Legal Responsibilities, the next hierarchy on the pyramid, states that in addition to pursuing its economic goals, a business

must comply with federal, state, and local laws and regulations because it was the society or government that certified the business to operate. The next layer of the pyramid is the Ethical Responsibilities. The ethical responsibility component advocates that corporations must integrate into their business strategies, good corporate citizenship, integrity, and ethical behavior that go beyond mere compliance with the laws and regulations. Corporate ethical responsibilities must minimize harm to stakeholders and embrace standards, strategies, or norms that indicate what the stakeholders would consider as fair and just.

The final layer of the pyramid is the Philanthropic Responsibilities. The concept of philanthropic responsibility proposes that corporations must consistently be involved in voluntary activities, programs, or projects that promote the welfare of human beings and improve the quality of life for society (Carroll, 1991). In summary, the overall CSR of a business depicted in the pyramid involves execution of corporate strategies so that the business is economically profitable, law abiding, ethical, and philanthropic.

The array of corporate responsibilities proposed in the pyramid is remarkably a rebuttal to the classical economic argument that the only social responsibility of a firm is to maximize the profits of its owners or shareholders. Friedman (1962), an economist and the most famous proponent of this classical economic argument, posited:

> There is one and only one social responsibility of business to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition, without deception or fraud. (p. 133)

Carroll (1991) suggested that an evaluation of the separate components can help a business leader understand the constant tension involved in fulfilling the different categories of CSR, although the four components of CSR depicted in the pyramid are not mutually exclusive.

Carroll argued that a business is obligated to perform these responsibilities not only to improve society, but also for the economic and intangible benefits of the corporation.

Carroll's (1991) pyramid of CSR has been tested over time and proved to be a valid concept (Bruyaka, Zeitzmann, Chalamon, Wokutch, & Thakur, 2013). The pyramid of CSR has been used in several studies, including those by Wartick and Cochran (1985), Wood (1991), and Bruyaka et al. (2013), as a framework to explain the concept of CSR. The CSR pyramid is an accepted concept that has been used in many textbooks to evaluate social and ethical issues in business and management (Bruyaka et al., 2013).

Aupperle, Carroll, and Hatfield (1985) were the first to test the CSR model of Carroll in a survey of 241 chief executive officers (CEOs), in *Forbes*'s 500 list of CEOs. Its study supported Carroll's weighting of the four components of CSR in the pyramid, and affirmed that the CSR components are interconnected but independent conceptually (Gupta, 2012). Another survey of top managers in 591 multinational chemical companies (located in England, France, Germany, Japan, Sweden, Switzerland, and the U.S.) also confirmed that as proposed by Carroll, there are four interrelated but independent components of CSR (Gupta, 2012). The results of these surveys supported the relative weightings assigned by Carroll to each of the four components, except in Germany and Sweden, where legal responsibilities were ranked the highest followed by economic, ethical, and philanthropic components respectively. Carroll's (1991) four-part CSR pyramid complements the current trend in corporate management where there is a growing acceptance of the relationship between the economic role of the firm and its obligations to society (Gupta, 2012). Decades of debates on CSR have resulted in a substantial amount of information, and despite the different perceptions of firms about the components of the CSR

pyramid, there is a common understanding that corporations have an obligation to work for social improvement (Geva, 2008).

While the debate about CSR was still going on, the Vietnam War of the 1960s and early 1970s ushered in an era of activist groups and nongovernmental organizations engaged in social movements concerning businesses and business practices. In advocating a broader notion of CSR, activists and the media have become more aggressive and effective at putting public pressure on corporations to run their businesses in socially responsible ways (Cochran, 2007; Porter & Kramer, 2006). These social groups are becoming more empowered, creating a relatively complex environment. At the same time, they pressure companies to behave responsibly and to create a corporate social climate in which they can enhance the welfare of the communities where they do business and the society at large (Andonov, Mihajloski, Davitkovska, & Majovski, 2015). Social activist movements often focus media attention on business practices that they consider to be irresponsible or unethical. Consequently, in the current business environment, many firms embrace CSR to avoid unwanted media attention that can damage their corporate image or result in legal action against the firm (Cochran, 2007).

Increased pressure by different social groups is one of the most important reasons that companies are paying attention to social needs and how their corporate operations affect society (Andonov et al., 2015). Corporations did not voluntarily pay attention to CSR, but they were surprised by public responses to issues they had not considered their corporate responsibilities. For example, there was a public outcry and call to boycott Nike products after the *New York Times* and other media outlets reported the horrible labor practices at Nike's Indonesia warehouses (Porter & Kramer, 2006). Nike had to acknowledge its mistakes and take necessary steps to rectify its business practices.

Corporations cannot be held responsible for all the problems in the world and, indeed, they do not have the resources to solve all of the world's problems. Many have called on each corporation to identify the societal problems it is best suited to solve and from which it can benefit (Porter & Kramer, 2006). By putting its resources and expertise in solving a societal problem in which the firm has a benefit, the firm understands it can create a major social benefit. Perceiving CSR as a shared value between society and corporations requires businesses to think differently about the consequences of their activities on society.

In recent years, there is increasing pressure on organizations worldwide to practice and demonstrate their commitment to CSR. In spite of the confusion about the myriad definitions of CSR and the varying findings about the link between CSR and corporate financial performance, CSR continues to gain importance in corporate strategy and management (Godfrey et al., 2010). Many nongovernmental organizations, including the World Resources Institute, AccountAbility, Global Reporting Initiative, International Standards Organization, and the United Nations, emphasize measuring and improving the CSR and performance of businesses worldwide.

CSR is becoming an increasingly popular element in corporate marketing strategies. In recent years, successful corporations have integrated CSR into their business strategies as a key aspect of their corporate management policies (Gupta, 2012; Swaen & Chumpitaz, 2008). The major driving forces for the change in the business strategies of these corporations can be partially explained by government and public pressure, demands from investors and consumers, the need for greater transparency, and media coverage of financial scandals, social problems, and environmental disasters.

Companies are increasingly being pressured to embrace social responsibility, partly because of the scandals associated with major companies. In the beginning of the 21st Century,

the world economic system witnessed the largest level of financial fraud, accounting manipulations, and unethical behavior in corporate history. The ethical crises spread across industries and countries and are considered the greatest economic scandals and failures since the 1920s (Guerra, 2004; Rockness & Rockness, 2005). Large corporations such as Enron, WorldCom, HealthSouth, Adelphia, Parmalat, Elan, and Andersen were involved in these scandals. In response to the crisis, the U.S. Congress enacted the Sarbanes-Oxley (SOX) Act in July, 2002. The SOX Act mandated ethical behavior for both publicly traded companies and their auditing firms. Furthermore, the SOX Act demanded full transparency, reliability, and accuracy standards in financial reporting. The act emphasized that conflicts of interest that were pervasive in securities market transactions would no longer be tolerated.

In addition to the SOX Act's effect, there is an increasing level of corporate scrutiny by shareholders, the public, and governmental agencies; consequently, CSR fast becoming a slogan in corporate meetings (Castka, Bamber, & Sharp, 2005). Companies are pressured to embrace social responsibility because of the increasing number of independent evaluating and ranking corporations such as *Fortune*'s Most Admired Companies, KDL Socrates, and Access to Medicine Index. These agencies' guidelines encourage firms to engage in transparent practices because CSR initiatives can benefit a firm's bottom line (Pirsch, Gupta, & Landreth-Grau, 2007).

An online survey of 179 firms showed that, especially for marketing companies, employing a strategic corporate business policy that goes beyond making profits can help a firm to make important connections with its consumers, and fulfill the firm's moral and social obligations to society (Pirsch et al., 2007). The survey also found that the CSR initiatives of a business can help to differentiate a firm from other firms in the marketplace, and consequently, lead to increased purchase of the products sold by the firm (Pirsch et al., 2007).

Apart from public outcry over high-profile corporate scandals, the prevalence of reporting organizations such as the Organization for Economic Cooperation and Development initiatives, the Global Reporting Initiative, and the increased regulatory oversight by the SOX Act have increased the expectation for transparent financial and CSR disclosure from firms (Dawkins & Fraas, 2013). Disclosure is defined as providing relevant information that enables a transparent and accurate picture of the financial performance, governance, and operations of the corporation. For example, the Securities Exchange Commission mandates disclosure of financial information that is likely to be considered significant by an intelligent investor (Dawkins & Fraas, 2013).

The United Nations initiatives, including the Global Reporting Initiative, support CSR performance (Gupta, 2012). The United Nations initiatives defined the goal and principles for corporate social responsibility performance in the areas of human rights, labor standards, environment, health, anticorruption, and economic responsibility (Gupta, 2012). The Global Reporting Initiative founded in 1997, is an international standards organization that provides guidelines to businesses, governments, and other organizations to help them appreciate their impacts on social issues such as human rights and environmental and climate changes. Global Reporting Initiative guidelines are used by organizations worldwide, businesses, and nongovernmental organizations for reporting sustainability. Sustainability reporting is used to standardize and quantify social issues such as carbon dioxide emissions, financial transparency, and employee rights. The focus of the Global Reporting Initiative on sustainability practices has put CSR in the forefront of corporate business policies.

Although many agencies are working hard to help businesses, organizations, and nongovernmental organizations integrate CSR into their practices, debate continues to persist

about whether corporations should include socially responsible initiatives in their business strategies (Mackey et al., 2007). Traditional economic arguments posit that managers should only make decisions that maximize the wealth of their firm's shareholders (Friedman, 1962). Friedman emphasized:

> Few trends would so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their stockholders as they possibly can. This is a fundamentally subversive doctrine. (p. 133)

However, the discussion of CSR has greatly progressed since Milton Friedman, a Nobel laureate economist, outright rejected CSR in a *New York Times* article (Friedman, 1970). In the publication, Friedman stressed his argument that the only social responsibility of a business is to maximize the profits of the shareholders, and managers were not justified spending shareholders' money for other purposes than increasing shareholder profits (Friedman, 1970). Other scholars have argued that companies have a duty to society that goes beyond simply maximizing the wealth of shareholders. These scholars argue that a narrow focus on maximizing the wealth of the firm's shareholders can lead the management to ignore other stakeholders, including employees, suppliers, customers, and the society (Mackey et al., 2007). For example, some studies showed that socially responsible initiatives can allow a firm to differentiate its products in the market (McWilliams & Siegel, 2001; Waddock & Graves, 1997). These socially responsible initiatives can potentially increase the value of a firm's future cash flows and are, therefore, consistent with the notion of maximizing the wealth of the firm's shareholders. Therefore, engaging in CSR practices could be a valuable strategic business decision for a firm.

Businesses are no longer considered only as economic entities, but they are also recognized as inseparable part of society (Mittal, 2007). CSR is fast becoming a strategic business item on corporate agendas. Some firms use CSR as a valuable public relationship tool,

others as a means to manage risk, including reputation, ensure financial sustainability, and improve relationship with stakeholders (Peukert & Fuggenthaler, 2009). Some have argued that CSR has become a brand for organizational success in the new global economy (Mittal, 2007). The proponents of CSR argue that a company can't be healthy and be linked in an unhealthy way with the society in which it is working. In like manner, a society can't be healthy if the economy is unhealthy. In a 2002 study of global CEOs by Pricewaterhouse Coopers (an auditing firm), 70% of the CEOs agreed that CSR is vital for the profitability of a company (as cited in Mittal, 2007).

Another study of CEOs in 50 countries by Environics International in 2002 showed that 80% of the CEOs agree that CSR enhances product innovation and profitability (as cited in Mittal, 2007). It is no longer enough for businesses to look only after shareholders, but they should also be concerned with all the stakeholders who can be affected by the corporation's operations or activities (Isaksson, Kiessling, & Harvey, 2014). A research study of 34 industries in Sweden, found that corporations engage in CSR to increase their reputation, reduce their market risk, or gain competitive advantages in attracting and retaining customers (as cited in Isaksson et al., 2014). The study showed that the companies, including ABB (industrial equipment), Ericsson (telecom), Swedbank, and Electrolux, that demonstrated high CSR (ranked high on CSR index) also had high corporate performance (as cited in Isaksson et al., 2014).

As companies begin to integrate CSR into their businesses, they are confronted with a host of similar constructs related to doing good for stakeholders. The concepts of CSR, corporate citizenship, and sustainability have become commonplace not only in business, but they have also gained importance with corporate leaders, and CSR concepts are driving developments of new business strategies (Ghobadian et al., 2015). For example, Ban Ki-moon, the Secretary-

General of the United Nations, argued that sustainable development is the key to the future we want for all because it provides a framework to generate economic growth, achieve social justice, and implement environmental protection (as cited in Ghobadian et al., 2015). CSR has been a prominent issue in political and business debates since the 1990s, partly in response to corporate scandals (Enron and WorldCom), but also because of the realization that companies need to partake in the development processes aimed at balancing the economic growth of the communities in which they are located (Castka et al., 2005; Gupta, 2012). CSR and corporate sustainability have become ways companies address the concerns and expectations of their stakeholders (Gupta, 2012).

The compelling argument of Porter and Kramer (2002) in favor of corporate philanthropy also encourages businesses to incorporate strategies that will help develop projects with both social and financial returns. Porter and Kramer argued that CSR and economic responsibility are not in conflict but are mutually connected because there are some economic investments that have social returns, and similarly, there are some social investments with economic returns. They surmised that organizations should align their corporate expertise with relevant social needs (Porter & Kramer, 2002). For example, pharmaceutical companies should align drug manufacturing and sales with drug donations and access to medicines.

Margolis and Walsh (2001) examined more than 90 studies in an attempt to determine the relationship between CSR and improved firm financial performance, but they concluded that the evidence of a relationship is inconclusive. Another study by Cheng et al. (2014) evaluated how superior CSR performance can facilitate easy financing for a company's operations and new investments. They hypothesized that excellent CSR performance improves transparency, and therefore, reduces borrowing costs (Cheng et al., 2014). These authors found that firms with

strong CSR performance have lower borrowing costs and easy financing of capital (Cheng et al., 2014). Many studies suggest that firms that incorporate CSR initiatives in their business strategies are rewarded with higher financial performance (Seong, Cheol, & Park, 2012).

Using future stock returns as measure of firm value in his study, Edmans (2012) showed that job satisfaction is positively related to firm value. Furthermore, he found that from 1984 through 2011, companies listed under the category of the 100 Best Companies to Work For in America had 2.3% to 3.8% higher stock returns each year than their peers not listed the 100 Best Companies to Work For in America (Edmans, 2012). These best companies consistently beat earnings reports, and the investigation indicates that CSR can improve stock returns.

Many have argued that a high level of CSR performance can be a strategic investment that could ultimately increase a firm's profits and thus lead to an increase in shareholder returns (Nollet, Filis, & Mitrokostas, 2016). Jensen (2001) argued that telling employees in an organization that the sole purpose of the organization is to maximize the firm's profits, might not achieve maximization of the organization's value. However, if employees are given a vision or strategy that they can buy into, such as building the safest, most cost-efficient drugs or making a fun movie that will delight people of all ages for centuries, the corporation stands a better chance of achieving its purpose of maximizing value. This strategy is what Jensen calls "enlightened value maximization" (p. 308) because it is consistent with value maximization. The multitude of arguments in favor of incorporating CSR into a firm's business strategy has led to a public outcry for corporations to provide innovative solutions to human problems, even though economists such as Friedman advocate that managers should focus on maximizing their shareholders' value (Pava & Krausz, 1996).

Companies are increasingly using philanthropy to enhance their public relations and promote the image of their corporations. For example, the U.S. corporate charitable expenditures increased from $125 million in 1990 to $828 million in 2002 (Porter & Kramer, 2002). Some have questioned if corporations should be involved in philanthropy especially after the economic arguments by Milton Friedman in a 1970 *New York Times* article and in his 1962 book *Capitalism and Freedom*. Friedman (1962) wrote in his book that the corporation is owned by its stockholders. The corporation should not make any charitable contributions. If the corporation makes a charitable contribution, it denies the individual stockholders the right to decide how to use his or her funds. Any charitable contributions should, therefore, be made not by the firm but by the stockholders if the stockholders desire to make a donation. Many have questioned the rationale of Friedman's statement because of the underlying assumptions. One major assumption by Friedman is that goals directed to helping society and economic goals are quite different, so that when a corporation spends on social issues, the corporation is depriving itself of its economic goals (Friedman, 1962, 1970).

Many scholars have challenged Friedman's assumption and have argued that charitable contributions can be a competitive advantage when a corporation supports a right cause in the correct manner (Porter & Kramer, 2002). For example, Cisco Systems Corporation started to use focused charitable contributions to realize social as well as economic gains. Cisco Systems invested in an education program called Cisco Networking Academy. The networking academy is a global information technology program that trains network administrators and provides career opportunities for trainees. Cisco Systems Corporation provides high paying jobs to high school graduates who complete the Cisco Networking program. In this way, Cisco Systems Corporation gives young people a bright future and provides well-trained employees for the

company and its customers and ultimately promotes the growth of the company. The Cisco Networking Academy has helped to increase customer demand for services because customers have access to properly trained network administrators. As a result, Cisco Systems increased the size of its market while advancing the knowledge and interest of Cisco Systems users. Cisco Systems has validated the potential value of corporate philanthropy of a firm that is focused on a social need and uses its unique competencies to meet societal needs. Cisco Systems has a high level of CSR (providing training and career opportunity and advancing the knowledge of the customers) while expanding the size of Cisco System's market.

Entrepreneurs as well as large corporations are increasingly embracing CSR as a business strategy. Peterson and Jun (2009) examined entrepreneurial commitment to CSR as a business philosophy and showed that the respondents had strong affiliation to CSR initiatives. Many of the entrepreneurs studied, most of whom ran small businesses, understood that failure to include CSR initiatives in their business strategies could result in negative effects on their businesses, including penalties from government regulatory agencies, adverse publicity, and activism by the public and nongovernmental organizations. Other studies have shown that entrepreneurs are an influential component of business in society because entrepreneurial organizations contribute to the creation of wealth in any society (Peterson & Jun, 2009). Far more than 10 million entrepreneurs are actively engaged in starting new businesses in the United States each year.

A study by Aguinis and Glavas (2012) reported the following reasons firms engage in CSR: First, firms engage in CSR primarily for expected financial outcomes. Second, firms engage in CSR as a result of the firm's ethical values about doing the right thing. Third, there is a small but positive relationship between CSR initiatives and financial outcomes. Fourth, there are many nonfinancial outcomes from implementing CSR such as improved management practices,

product quality, operational efficiencies, attractiveness to investors, and enhanced diversity of employees.

As companies begin to embrace CSR, various constructs have been developed about how businesses should relate to society to be considered socially responsible. CSR, stakeholder management, sustainability, and corporate citizenship are concepts that have grown in prominence to the point where they are pervasive in business and society (Schwartz & Carroll, 2008). Although these concepts have gained popularity, understanding what each construct really means, or how each might relate to the others, remains difficult.

Stakeholder theory has shed much light on the social responsibility of corporations to society by proposing the importance of the relationship of a corporation to the many groups that affect and or are affected by the decisions of the corporation (Freeman, 1984). The fundamental framework for stakeholder theory is attributed to the work of Edward Freeman from his 1984 book *Strategic Management: A Stakeholder Approach* (Gama Boaventura, Santos da Silva, & Bandeira-de-Mello, 2012). The most commonly used definition for the term stakeholder was the definition proposed by Freeman (1984), which states that the stakeholder is any person or community that may be affected by the organization's decisions or that can affect the realization of the organization's goals. By integrating stakeholder concepts into a coherent management construct, Freeman is credited with moving stakeholder theory to the forefront of academia, and it has become a dominant construct in management circles for more than 20 years (Schwartz & Carroll, 2008).

The concept of sustainable development has captured unprecedented attention of researchers and business leaders (Chabowski, Mena, & Gonzalez-Padron, 2011). Firms are increasingly adopting sustainability approaches to manage their businesses, thus the

sustainability construct has changed established standards and business policies worldwide. The 1987 landmark report titled *Our Common Future,* also known as The Brundtland Report issued by the United Nation World Commission on Environment and Development (1987) is said to be the incentive for the rapid growth of the body of literature on sustainability (Kassel, 2012; Rogers & Hudson, 2011; Schwartz & Carroll, 2008). More than ever, companies are emphasizing not only attaining economic benefits, but they also strive to promote environmental and social benefits (Chabowski et al., 2011). The term sustainable development was an outcome of the United Nations Conference on the Human Environment, which led to the Brundtland Report that was later published as a book: *Our Common Future* (World Commission on Environment and Development, 1987). The World Commission on Environment and Development's definition of sustainable development, which is widely used, is "development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (p. 42). The main attributes of the construct are: (a) sustainability is a global problem with global responsibilities; (b) growth must be managed to prevent environmental damage; (c) social equity should be given priority, specifically to enable economic and social advancement for the underdeveloped countries; and (d) major significance should be assigned to long-term thinking about leaving a viable future for the next generations. Others have defined corporate sustainability as a company's voluntary activities that incorporate social and environmental interests in operating its business and in corporate interactions with stakeholders (Schwartz & Carroll, 2008).

The concept of sustainability development has gained such significance in business that there is a proliferation of companies that evaluate and rank firms on sustainability. For example, *Business Ethics* magazine's 100 Best Corporate Citizens ranks firms on corporate social

responsibility, *Newsweek*'s America's Greenest Companies ranks firms on environmental performance, and *Fortune*'s World's Most Admired Companies ranks firms on corporate reputation (Chabowski et al., 2011).

The concept of the triple bottom line (TBL) was later introduced to management practices and linked to the notion of sustainability by John Elkington in 1999 (Schwartz & Carroll, 2008). Elkington included the social, environmental, and economic elements of sustainable practices into the concept of TBL (Rogers & Hudson, 2011; Slaper & Hall, 2011). The TBL is an accounting framework that incorporates social, environmental, and financial aspects of corporate performance. The TBL concept proposes that firms should pay attention not only to maximizing their wealth or financial bottom line, but also to the welfare of all their stakeholders (Meijer & Schuyt, 2005; Rogers & Hudson, 2011; Slaper & Hall, 2011). The components of the TBL are often called the three Ps: people, planet, and profits (Meijer & Schuyt, 2005; Slaper & Hall, 2011). In addition to measuring profits, return on investment, and shareholder value, the TBL concept added environmental and social dimensions to management practices (Rogers & Hudson, 2011; Slaper & Hall, 2011).

According to Elkington, sustainable development is the simultaneous pursuit of economic prosperity, environmental quality, and social equity (Rogers & Hudson, 2011; Slaper & Hall, 2011). Elkington argued that to be sustainable, companies must perform not against a single financial bottom line but against a TBL (economic, environmental, and social). The TBL measures the impact of an organization's activities (including the corporation's economic pursuit, shareholder values, and social and environmental resources) on the world. The TBL and sustainability have become compelling business tools worldwide because of mounting evidence of long-term profitability. For example, many firms, including General Electric, Unilever,

Proctor and Gamble, 3M, and Cascade Engineering, have found that reducing waste from packaging can also cut costs (Slaper & Hall, 2011). The TBL concept has changed the way businesses evaluate the ramifications of their strategic business policies and performance.

A recent study was performed on Ben & Jerry's ice cream company, from its founding through its acquisition and integration into Unilever, to evaluate how successive CEOs perceived and implemented the TBL concept instituted by the founders (Bayle-Cordier, Mirvis, & Moingeon, 2015). The study examined the perceptions of the CEOs and employees throughout a 30-year period (Bayle-Cordier et al., 2015). The authors reported that the three CEOs that came after the founders had different perceptions about what would make the business successful even though the founders of Ben & Jerry's ice cream company had emphasized strong linkages among the economic, product, and social components of the company's TBL (Bayle-Cordier et al., 2015). The varying perceptions of the three subsequent CEOs caused the firm to go through successive periods of diminished profitability. Ben & Jerry's ice cream did not gain the superior financial performance it enjoyed under the founding fathers until a fifth CEO took charge, embraced the TBL concept, and reintegrated the firm's TBL.

Corporate citizenship is the newest construct in the business and society literature, but it is quickly becoming very popular (Schwartz & Carroll, 2008). Corporate citizenship was categorized as "one of the latest frameworks to talk about the relationship between business and society" (Waddell, 2000, p. 107). Corporate citizenship is defined as the voluntary corporate actions and business strategies deployed in identifying, analyzing, and responding to the company's social, political, and economic responsibilities (Schwartz & Carroll, 2008).

An analysis by Schwartz and Carroll (2008) of each of the four frameworks—CSR, stakeholder management, sustainability, and corporate citizenship—showed that despite their

differences, each of the constructs consistently held three basic concepts. The three core concepts include value, balance, and accountability. The notion of value implies that firms have an obligation to improve the welfare of society. The constructs are concerned with corporate initiative creating value or benefit to society. The concept of balance suggests that businesses must take appropriate steps to achieve a balanced strategy or decision when addressing and responding to potentially conflicting stakeholder interests. The concept of balance is incorporated in all four frameworks. For example, CSR requires corporations to balance economic gains against the cost of achieving those gains (Carroll, 1979). In addition, the World Business Council for Sustainable Development posits that sustainable development demands the integration of social, environmental, and economic issues to develop balanced decisions for long-term thinking and future viability (World Business Council for Sustainable Development, 1998).

In fulfilling its economic, legal, and ethical responsibilities, an accountable business must be responsible for its actions and decisions and should develop processes for correcting its failures to avert similar future mistakes (Kassel 2012; Schwartz & Carroll, 2008; WECD, 1987). The regulatory initiatives that require greater corporate accountability in disclosure of financial information (for example, U.S. Sarbanes-Oxley Act), as well as the disclosure of social performance information (for example, U.K. Pensions Act), highlight the importance of accountability (Schwartz & Carroll, 2008). The value, balance, and accountability framework proposed by Schwartz and Carroll argues, “All organizations and individuals operating within a business context have a responsibility as good citizens to (a) contribute to sustainable societal value and (b) appropriately balance stakeholder interests, including shareholders or owners and/or moral standards, while (c) demonstrating sufficient accountability” (p. 173).

Some have argued that a corporation must determine what the obligations or expectations of the stakeholders are to communicate effectively with the stakeholders and society, whether the firm views CSR as an obligation or as a voluntary process (Athanasopoulou & Selsky, 2015). In their study, Athanasopoulou and Selsky proposed that CSR studies should include how an organization can efficiently manage its CSR initiatives to align them with the expectations of the stakeholders and society. The authors argue that such consideration of CSR initiatives management is important so that CSR research can realistically reflect the ongoing call for organizational strategies to be more deliberate in creating shared values between the firm and society (Athanasopoulou & Selsky, 2015). For example, the 2010 British Petroleum oil spill in the Gulf of Mexico and how the cleanup was managed could be considered a failed CSR because the public perceived British Petroleum as not acting in a timely manner to minimize the extent of ecological damage. The company did not appropriately engage with stakeholders, both during and after the oil spill. The accident demonstrated that British Petroleum had no focus on its relationships with the stakeholders, because the company failed to respond effectively to the expectations of the stakeholders and society at large.

Evaluating CSR performance. A growing number of companies are using the Global Reporting Guidelines for sustainability reporting because of the recent financial crises and the increasing public pressure on corporations to provide information that goes beyond standard financial reports (Seong et al., 2012). The nonfinancial issues in sustainability reports include environmental and community relations. The Global Reporting Initiative is an independent global standards network that assists organizations and governments in understanding and sharing their efforts on issues such as climate change, human rights, and corruption. Rating agencies evaluate these reports and quantify the CSR performance of the firm.

These nonfinancial reports are qualitative, which makes it is difficult to compare companies based on CSR performance. To develop a more comprehensive comparison between companies, several rating agencies such as Calvert Investments, Dow Jones Sustainability Index, FTSE4Good, Kinder, Lydenberg, and Domini Research & Analytics Inc. Environmental Social Governance have developed their individual rating systems for measuring a company's CSR performance (Seong et al., 2012). Studies have shown that CSR performance or CSR disclosure is being used by creditors or investors to assess a company's credibility and firms can reduce their capital costs when they earn high CSR performance rankings because companies with high CSR performance are attractive to investors. The increase in the number of companies that are participating in CSR reporting indicates that companies are starting to incorporate CSR initiatives and reporting into their business strategies.

Despite the growth in number of companies that are participating in CSR reporting, and the numerous methods that have been proposed for measuring CSR initiatives, the measurement of CSR remains a problem because almost all of the methods (for CSR measurement) have limitations (Turker, 2009). Many authors suggest that measuring CSR is important to business and society because measurement is one way to deal seriously with the important issue of CSR performance (Turker, 2009). However, the challenge is that investigators tend to rely on stakeholders' opinions when measuring CSR activities because developing comprehensive measures of corporate social initiatives that measure socially responsible performance is difficult (Dawkins & Fraas, 2013; Turker, 2009). There is agreement among researchers that measuring CSR is difficult and some have suggested various methods, reputation indices, behavioral and perceptional measures, and case study (Turker, 2009). For example, the Kinder, Lydenberg, and Domini Database, and the *Fortune* Index use reputation indices for evaluating CSR activities, but

no single best way to measure corporate social activities has been established (Dawkins & Fraas, 2013; Turker, 2009). Kinder, Lydenberg, and Domini uses a variety of sources, including government, company, nongovernmental organization, and the media to collect information on a company in its database. Kinder, Lydenberg, and Domini rates companies on components of CSR performance such as: (a) community relations, (b) workplace diversity, (c) employee relations, (d) environment, and (e) product quality and safety.

Similarly, the Access to Medicine Index ranks the top 20 world's largest pharmaceutical corporations on seven CSR initiatives: (a) general access to medicine management; (b) public policy and market influence; (c) research and development conducted on neglected diseases; (d) the company's pricing, manufacturing, and distribution practices; (e) patents and licensing policies; (f) capacity advancement in product development and distribution; and (g) drug donations, and philanthropic activities (Iyer, 2014; Ravi Shankar, 2013; World Health Organization [WHO] publications and events, 2014). This study examines the impact of CSR on financial performance in the pharmaceutical industry using the CSR performance ranking by the Access to Medicine Index.

Implementing CSR. To implement effectively and embed CSR into its day-to-day business, Castka et al. (2005) proposed that a company should develop a management system that: (a) creates, delivers, and measures corporate objectives in alignment with the TBL; and (b) reviews the effectiveness and efficiency of the business processes. In addition, the company should be able to demonstrate through corporate reporting, that their measurement and review processes led to improvement in its TBL. These authors propose that a company must create appropriate strategies that incorporate the organizational objectives needed to meet their CSR obligations (Castka et al., 2005). The company should focus on delivering these objectives by

implementing, measuring, and continuously improving actions and business processes necessary to achieve planned results. In other words, leaders of organizations should run their businesses profitably and should also take responsibility for the impact of the actions of their organizations on the stakeholders and society. Therefore, the challenge for organizations is to develop balanced solutions that support their TBL (economic, environmental, and social aspects of the company's business performance) based on the communication with the stakeholders.

Maon, Lindgreen, and Swaen (2009) proposed a framework, based on Lewin's (1951) planned change model to help guide corporate leaders in identifying success factors necessary for developing and implementation of CSR initiatives. Lewin's model consists of three stages: unfreezing, moving, and refreezing, but the model proposed by Maon et al. (2009) contains a fourth stage: sensitizing. The authors identified a four-stage framework for successfully developing and implementing CSR in an organization and proposed that these stages incorporate nine steps with different roles and importance (Maon et al., 2009). In the first stage, the leaders must unfreeze (review and reorient) past unchallenged practices and cultural assumptions about the right way for the company to run the business. Unfreezing involves assessing corporate purpose and current CSR status, identifying the stakeholders, establishing a vision, developing a CSR strategic plan, and implementing the CSR in the organization. In the moving stage, the organization incorporates a new set of cultural norms. In this stage the company implements CSR strategic plans, evaluates the integrated strategies, and reports on the progress of the change process. In the third stage, leaders refreeze the new cultural assumptions to consolidate the new business paradigm. The organization develops a learning process and strategic approaches that will ensure that the new CSR cultural values are institutionalized and anchored into the organization's systems. In the fourth stage, sensitizing, the corporate leaders are well aware of

the importance of sustainability issues to corporate success. The leaders raise awareness of CSR in the company to neutralize any attempts of employees seeking to resist the change process. The nine steps in the four-stage framework are raising CSR awareness in the organization, evaluating corporate purpose, developing a working definition and vision for CSR, evaluating current CSR status, developing a strategic CSR plan, implementing the strategic CSR plan, maintaining continuous internal and external communication, assessing CSR strategies and communications, and institutionalizing CSR policy.

Tools and Metrics for Measuring the Impact of CSR on Corporate Financial Performance

It is becoming increasingly common for firms to publish evidence of their CSR activities as part of their report to stockholders because investors, creditors, and financial analysts stress the importance of CSR (Rodgers, Choy, & Guiral, 2013). Myriad reviews and meta-analyses have suggested that CSR improves corporate financial performance (Griffin & Mahon, 1997; Margolis & Walsh, 2001, 2003; Orlitzky, Schmidt, & Rynes, 2003; Pava & Krausz, 1996; Rodgers et al., 2013). However, the importance of measuring CSR and the impact of CSR on corporate financial performance is still unclear (McWilliams & Siegel 2000, 2001).

Despite the lack of agreement on the metrics or quantifiable business measures of CSR, many agree that CSR is a critical business strategy (Santoso & Feliana, 2014). In a review of 159 published studies, Peloza (2009) evaluated the business case for CSR. The review found that the 59 studies used 39 different measures or attributes of CSR to assess the relationship between CSR and corporate financial performance. Among the studies, 82% used a single measure (pollution control), and 18% used environmental protection and investment in health and safety. The CSR performance metrics used in the studies were highly diverse: some measured a firm’s

family-friendly policies, some industry codes of ethics, while others measured corporate environmental protection activities.

Similarly, after three decades of research on the relationship between CSR and corporate financial performance, there exist no consistent factors for measuring CSR, and corporate leaders use different metrics to evaluate the economic impact of CSR on corporate financial performance (Peloza, 2009). Apart from the variation in the metrics used, it has been reported that most of the published studies on the link between CSR and corporate financial performance relied heavily on CSR data obtained from Kinder, Lydenberg, and Domini (McWilliams & Siegel, 2000). It has been established that measuring CSR is quite complex because CSR has many areas or factors such as environmental concern, business transparency, philanthropy, and employee affairs (Margolis et al., 2009; Nollet et al., 2016). In view of the complexity of CSR, Margolis et al. (2009) urged researchers to consider using measures different from Kinder, Lydenberg, and Domini third-party auditors' data to determine if the current published results are similar or different from results obtained from the data set of other CSR reporting indexes.

There is disagreement regarding the best way to measure corporate financial performance when evaluating the link between CSR and corporate financial performance: whether to use accounting or market measures remains unresolved (Gama Boaventura et al., 2012; D. D. Lee & Faff, 2009; Orlitzky et al., 2003; van Beurden & Gössling, 2008). According to a literature review by Orlitzky et al. (2003), three measures of corporate financial performance—market, accounting, and survey—have commonly been used in the studies of the economic impact of CSR on corporate financial performance. Accounting measures evaluate past financial performance and they reflect the internal efficiency of the company since accounting measures assess the impact of corporate management policies on earnings (D. D. Lee & Faff, 2009;

Orlitzky et al., 2003). In addition, accounting measures are indicators of the degree to which CSR was able to affect productivity asset utilization, return on debt, and return on equity (Orlitzky et al., 2003). Some of the accounting measures used in many studies are return on assets, asset utilization, return on equity, sales growth, return on sales, and operating margin (Gama Boaventura et al., 2012; Preston & O'Bannon, 1997; van Beurden & Gössling, 2008; Waddock & Graves, 1997). Market-based measures include stock performance, market return, market value to book value, and price per share (Orlitzky et al., 2003; van Beurden & Gössling, 2008).

Market measure is an estimate of what the market believes the firm is worth based on the extent to which future earnings and risk are projected to impact firm value. Research has shown that the two measures, accounting measures and market measures, if used to assess the economic impact of CSR on financial performance, would give different findings using the same data (van Beurden & Gössling, 2008). Some researchers have reported that market measurements provide less significant relationship between CSR and corporate financial performance than accounting measurements, and as such accounting measures are better than market measures for analyzing the economic impact of CSR on corporate financial performance (van Beurden & Gössling, 2008).

CSR and Financial Performance

Scholars have been searching for the association between CSR and corporate financial performance for more than three decades (Andonov et al., 2015; Moore, 2001; Shahzad & Sharfman, 2015; H. Wang & Choi, 2013). The relationship between the CSR and corporate financial performance has garnered much interest and controversy for more than five decades (Preston & O'Bannon, 1997). In spite of this long history of research, analysis, and debate, no

consensus on the impact of CSR on corporate financial performance has been fully established (Griffin & Mahon, 1997; Preston & O'Bannon, 1997; Saeidi, Sofian, Saeidi, & Saeidi, 2015). The results have not been consistent but have often been contradictory and rather misleading (Margolis & Walsh, 2003). Although a positive relationship between CSR and corporate financial performance has been the dominant finding in many studies (Moore, 2001; Orlitzky et al., 2003; van Beurden & Gössling, 2008), others have reported a negative relationship (Aupperle et al., 1985), and no relationship or inclusive relationship (Griffin & Mahon, 1997). Many scholars have reported contradictory results on the relationship between the CSR and corporate financial performance even within a study. In some cases, a study might suggest a positive and no effect or a positive and negative relationship between the CSR and corporate financial performance (Griffin & Mahon (1997). A number of researchers, including Griffin and Mahon (1997) and Margolis and Walsh (2003) have questioned the methods used by many of the studies, which have assessed the relationship between CSR and corporate financial performance. These researchers argue that the contradictory results seen in these studies could be because the relationship between the CSR and corporate financial performance may be affected by some factors that these studies might have overlooked (Griffin & Mahon, 1997; Margolis &Walsh, 2003; Saeidi et al., 2015).

There is a considerable amount of inconsistency in the literature on the relationship between CSR and corporate financial performance in terms of whether an association exists, and the direction of the relationship between the CSR and corporate financial performance (Margolis & Walsh 2003; Orlitzky et al., 2003; Salzmann, Ionescu-Somers, & Steger, 2005). Margolis and Walsh (2003) analyzed 127 research studies that investigated the relationship between CSR and corporate financial performance between 1972 and 2002. Their results indicated mostly positive,

few negative, and no relationship between CSR and corporate financial performance. Some scholars have concluded that the relationship between CSR and corporate financial performance is complex and it is not possible to make a theoretical generalization about the effects of corporate socially responsible practices on corporate financial performance (Margolis &Walsh, 2003; Perrini, Russo, Tencati, & Vurro, 2011; Saeidi et al., 2015). Other researchers have argued that the exact association between CSR and corporate financial performance is simply still unclear (Aupperle et al., 1985; Griffin & Mahon, 1997; Peloza, 2009). Therefore, the debate over the impact of CSR and corporate financial performance remains unsettled. Although there still exists unsettled debate about the existence of a relationship between these two concepts (Friedman, 1970; Waddock & Graves, 1997), and in spite of the controversy about the validity of some results (Margolis & Walsh, 2003), most studies have reported a positive association between CSR and corporate financial performance (Orlitzky et al., 2003; H. Wang & Choi, 2013). As shown in the following studies presented, no consensus has been achieved in the numerous studies that have evaluated the relationship between CSR and corporate financial performance.

Studies with positive relationships between CSR and corporate financial performance. Pava and Krausz (1996) reviewed 21 studies that examined the financial performance of firms that are rated by the Council on Economic Priorities as being socially responsible. They compared the financial performance of the socially responsible firms to a control sample by size and industry (Pava & Krausz 1996). The study found that in 12 of the 21 studies there was a positive association between CSR and corporate financial performance (Pava & Krausz 1996). One firm had a negative association, and eight had no relationship between CSR and corporate financial performance. The researchers found that firms rated as socially

responsible either outperformed or performed as well as other firms that did not include CSR initiatives in their business practices (Pava & Krausz 1996).

Preston and O'Bannon (1997) conducted a study on 67 large U.S. corporations from 1982 to1992, to examine the relationship between CSR and financial performance. The study measured CSR using three social performance ratings, including community and environment responsibility, ability to select and retain good employees, and quality of products and services (Preston & O'Bannon, 1997). Corporate financial performance was measured using return on assets, return on equity, and return on investment. The study reported a strong positive association between CSR and corporate financial performance (Preston & O'Bannon, 1997). Waddock and Graves (1997) examined the relationship between CSR and corporate financial performance in a study of 469 Standard and Poor's 500 corporations. The study used the eight CSR elements rated by Kinder, Lydenberg, Domini and Co. to measure CSR. Corporate financial performance was measured based on return on assets, return on equity, and return on sales (Waddock & Graves 1997). The researchers found a positive relationship between CSR and corporate financial performance (Waddock & Graves 1997). Some have argued that the findings of Waddock and Graves support the premise that a high level of corporate financial performance can be achieved when there is high quality of management that relates effectively to stakeholders, including shareholders, employees, customers, and the communities (Verschoor, 1998).

Ruf, Muralidhar, and Brown (2001) examined the impact of CSR on corporate financial performance in a study of 496 Standard and Poor's 500 firms. The study used the eight CSR elements rated by Kinder, Lydenberg, Domini and Co. to measure CSR (Ruf et al., 2001). Corporate financial performance was measured based on return on equity, return on sales, and

growth in equity. The study showed that improving a firm's CSR performance can generate increased corporate financial performance (Ruf et al. 2001). In a study of 85 U.S. banks, Simpson and Kohers (2002) categorized the banks as outstanding, satisfactory, needs to improve, and substantial noncompliance based on 12 attributes used to measure CSR. Corporate financial performance was measured as return on assets and ratio of loan losses to total loans. The researchers found that the return on assets of banks rated high on CSR was almost double the return on assets of banks rated low on CSR. Banks rated high on CSR had one half of the loan losses when compared to banks rated low on CSR (Ruf et al., 2001).

Orlitzky et al. (2003) examined the relationship between CSR and corporate financial performance in a meta-analysis (a study conducted on previous research) of 52 studies conducted throughout a period of 30 years. The meta-analysis showed that there is a positive relationship between CSR and corporate financial performance across the industries in the studies. The researchers concluded that if CSR activities enhance corporate financial performance, then the firm is using its resources to improve the welfare of shareholders by integrating CSR policies into its business (Orlitzky et al., 2003). The firm is, therefore, fulfilling the economic model that argues that a firm's purpose is to maximize the wealth of the shareholders.

A literature review of the association between a company's CSR and its corporate financial performance by Margolis and Walsh (2003) found that there were 127 publications on the relationship between CSR and financial performance between 1972 and 2002. Of these studies, 17 were published in the 1970s, 30 in the 1980s, and 80 of the studies were published between1990 and 2002. In 109 of the 127 studies, 54 showed a positive relationship between CSR and corporate financial performance. Seven studies reported a negative relationship, 28 studies found nonsignificant relationships, and 20 had mixed findings. The findings from these

127 studies suggest that there is a positive relationship between CSR and corporate financial performance. In another study, Margolis et al. (2009) conducted a meta-analysis (performing research on previous studies) of 251 studies on the relationship between CSR and corporate financial performance on studies from 1972 through 2007. The results of the study indicate a moderate positive relationship between CSR and corporate financial performance. In their meta-analysis, 59% of the firms in the studies showed a nonsignificant relationship between CSR and corporate financial performance, 28% a positive relationship, and 2% a negative relationship (Margolis et al., 2009).

A recent Rodriguez-Fernandez (2016) study assessed the relationship between CSR and corporate financial performance on companies registered on the Madrid Stock Exchange in 2009. The study found a bidirectional relationship between CSR and corporate financial performance (Rodriguez-Fernandez, 2016). This means that engaging in socially responsible corporate policies produce higher profits, and higher profits enhanced engagement in socially responsible corporate policies. The author argued that increasing CSR activities improved corporate financial performance, and when firms enjoy improved financial performance they earn improved CSR rating, thus creating a positive feedback loop that encourages firms to incorporate CSR policies in their business (Rodriguez-Fernandez, 2016). Kapoor and Sandhu (2010) analyzed the impact of CSR on corporate financial performance in a study based on 93 companies operating in India from 2005 to 2006. The study used secondary data to measure CSR and corporate financial performance. The authors found that CSR had significant positive impact on corporate financial performance (Kapoor & Sandhu, 2010).

Santoso and Feliana (2014) investigated the relationship between CSR and corporate financial performance in a study of 800 companies listed on Indonesian Stock Exchange from

2010 to2012. The financial performance was measured based on return on assets and stock-market returns while they measured CSR practices by corporate social disclosure index. The study found that CSR has a positive impact on the financial performance, and, there is a significant positive relationship between the size of a firm and CSR (Santoso & Feliana, 2014).

Von Arx and Ziegler (2014) analyzed the effect of CSR on corporate financial performance between 2003 and 2006 by examining the effect of CSR on U.S. stock markets and European stock markets. CSR was evaluated by comparing the environmental and social performance of a firm compared to those of other firms within the same industry. Corporate financial performance was measured using the average monthly stock returns. The study showed that CSR has a positive impact on corporate financial performance (von Arx & Ziegler 2014). Furthermore, the average monthly stock returns between 2003 and 2006 were higher in the U.S. than in Europe. The authors argued that stock performance in the U.S. was higher because the U.S. has a longer tradition of incorporating ethical components of CSR into its businesses than Europe (von Arx & Ziegler 2014). For example, socially responsible investing started in the U.S. during the 18th Century.

Studies with negative relationships between CSR and corporate financial performance. Moore (2001) investigated the relationship between CSR and corporate financial performance in eight of 11 firms in the U.K. supermarket industry. The CSR attributes measured were employees, customers, shareholders, suppliers, community, and environment. Corporate financial performance was measured using growth in turnover, profitability, return on capital, and earnings per share. The researcher found negative relationships between CSR and corporate financial performance, with corporate financial performance declining as CSR initiatives increased (Moore, 2001).

Studies with no effect or inconclusive relationships between CSR and corporate financial performance. Aupperle et al. (1985) studied 180 firms to assess the relationship between CSR and corporate financial performance. The study measured CSR using a survey of the CEOs of 180 firms. Corporate financial performance was measured by return on assets (Aupperle et al., 1985). The researchers found no association between CSR and corporate financial performance because their study showed that engaging in CSR practices was neither helpful nor harmful to a firm (Aupperle et al., 1985). McGuire, Sundgren, and Schneeweis (1988) used accounting as well as stock market–based measures of firms' financial performance to assess the relationship between CSR and corporate financial performance. CSR data were obtained from *Fortune* magazine's annual survey of corporate reputation. Accounting-based performance measures used were return on assets, total assets, sales growth, asset growth, and operating income growth. The researchers found mixed results (McGuire et al., 1988). The study showed a positive relationship between CSR and return on asset (a measure of corporate financial performance; McGuire et al., 1988). However, CSR had a negative relationship with operating income growth. In addition, CSR had a significant negative relationship with the ratio of debt to assets, an accounting-based risk measure.

Sandhu and Kapoor (2005) studied 20 top companies operating in India from 2000 to 2003, to evaluate the relationship between CSR and corporate financial performance. CSR was measured using CSR ratings from Kinder, Lydenberg, and Domini and *Fortune* Magazine. The CSR attributes in the ratings include education, health care, environment, infrastructure development, rural development, sponsorships, job opportunity, facilities available to the victims of natural calamities, donations, employee training programs, and diversity. The study showed that there was no relationship between CSR and corporate financial performance (Sandhu &

Kapoor, 2005). It is interesting to note that Sandhu and Kapoor found no relationship between CSR and corporate financial performance and yet Kapoor and Sandhu (2010) found a significant relationship between CSR and corporate financial performance. Both studies were performed by same authors on companies in India.

Seifert, Morris, and Bartkus (2004) investigated the relationship between the availability of slack resources and corporate philanthropy and investigated the relationship between corporate philanthropy and the profitability of the firm. The study measured CSR using the philanthropy data of 157 firms chosen from the 1997 or 1998 *Fortune* 1,000 (Seifert et al., 2004). Corporate financial performance was measured based on the total stock-market returns defined as "percentage change in stock price during the year of a donation plus dividends per share as a percentage of the beginning stock price" (p. 145). The study found that cash flow had a significant impact on a firm's cash donations to charitable causes, but cash donations had no impact on corporate financial performance (Seifert et al., 2004). The findings suggest that philanthropy, specifically cash donations, has no significant effect on corporate financial performance (Seifert et al., 2004).

Peloza (2009) examined 128 studies concerning the relationship between CSR and financial outcomes and found that 59% had a positive relationship, 27% had a mixed or neutral relationship, and 14% had a negative relationship. Lu, Chau, Wang, and Pan (2014) conducted a review of 84 studies published between 2002 and 2011, on the relationship between CSR and corporate financial performance. The CSR practices measured included CSR disclosures, CSR reputation ratings, social audits, CSR processes, and observable outcomes. The financial performance attributes measured included return on assets, return on equity, return on sales, and

earnings per share. The study found inconclusive or mixed results on the relationship between CSR and corporate financial performance (Lu et al., 2014).

A recent Nollet et al. (2016) study examined the relationship between CSR and corporate financial performance. The study used both return on assets and return on capital (accounting based) as well as excess stock returns and (market-based) financial performance gauges (Nollet et al., 2016). CSR was measured on Standard & Poor's 500 firms for the period 2007 to 2011 using Bloomberg's Environmental Social Governance Disclosure scores. The results showed a U-shaped relationship between CSR and corporate financial performance, suggesting that in the long run, CSR effects are positive. The researchers argued that their findings imply that CSR business initiatives do not lead to financial improvement at the onset, but only after crossing a critical point of continuous investment in CSR policies (Nollet et al., 2016). While engaging in CSR practices impacts financial profitability negatively in the beginning, the negative effect is reversed after crossing a critical point of CSR investment, and CSR finally helps to improve the firm's financial profitability. According to their findings, firms should dedicate long-term planning and resources to CSR practices in order for CSR to maximize the wealth for the shareholders (Nollet et al., 2016).

As discussed, there is lack of consensus on whether, and to what extent, CSR impacts a corporation's financial performance (Margolis et al., 2009; Margolis & Walsh, 2003; Orlitzky et al., 2003; Shahzad & Sharfman, 2015; van Beurden & Gössling, 2008). The current literature about the impact of CSR on corporate financial performance remains ambiguous (von Arx & Ziegler, 2014; Waddock & Graves, 1997). There are various arguments about the relationship between CSR and corporate financial performance. Scholars who found a positive relationship between CSR and corporate financial performance in their studies argue that firms rated high in

CSR have few labor problems, and customers may be attracted the firm's products. A company's reputation with its stakeholders such as bankers, investors, and government may be improved if the corporation is socially responsible. CSR can, therefore, improve a firm's access to financial resources, which potentially leads to a company's financial success (Kapoor & Sandhu, 2010).

On the other hand, scholars whose studies showed negative relationships between CSR and corporate financial performance argue that CSR puts additional financial burden on firms, which places these companies at an economic disadvantage compared to corporations that are less socially responsible (Sandhu & Kapoor, 2005). Arguments that propose a negative influence of CSR on corporate financial performance emphasize that the operating costs of corporate social activities outweigh their corporate financial benefits because CSR investments reduce corporate financial resources. Consequently, investment in CSR can potentially reduce profits, lower returns to shareholders, and decrease a firm's competitive advantage (von Arx & Ziegler, 2014; Waddock & Graves, 1997).

Many reasons have been proposed for the inconclusive evidence on whether and to what extent CSR influences corporate financial performance. Some of the differences in the various studies on the association between CSR and corporate financial performance arise from the context of the studies. For example, the country, industry, size of the firm, and the differences in the number and types of CSR elements measured can account for the inconsistencies in the studies on the economic impact of CSR on corporate financial performance (Gregory, Tharyan, & Whittaker, 2014; Orlitzky et al., 2003). In addition, variations in the studies have been attributed to the different financial measures used. Some studies have used accounting measures, including return on assets, return on equity, or return on sales, while others have used stock returns (Margolis et al., 2009; Orlitzky et al., 2003). The value of both the accounting measures

and the stock market measures has been disputed. Some have called accounting measures backward looking and questioned the value of the data obtained from using these measures (Gregory et al., 2014). Stock market measures, forward-looking measures that provide an outlook of future cash flows, are most commonly used in assessing the impact of CSR on corporate financial (Margolis et al., 2009).

However, others have argued that using stock market measures can produce misleading results because it is not an efficient market in which everyone has similar information. Only changes in corporate financial performance can truly reflect the level of CSR in the firm (Gregory et al., 2014). A firm's level of CSR could remain unchanged and yet the market value (or stock value) of the firm could abruptly drop. For example, as seen in the dotcom bubble and subsequent bust between 1997 and 2000, a market can overreact to economic changes, which can lead to stocks becoming either overpriced or underpriced. During the dotcom bubble, many technology companies saw unreasonably high growth in their stock prices in a bullish market where people even invested in risky companies. The bubble burst between 1999 and 2002 when several companies such as WorldCom that had fraudulent accounting practices filed for bankruptcy. The market values of both the companies that had transparent accounting practices and the fraudulent technology companies fell when the stock market crashed between 2000 and 2002. The market values of the transparent companies were not saved by high level of CSR. Therefore, focusing on stock returns alone in determining the impact of CSR on financial performance could be misleading.

Evolution of the Search for a Link Between CSR and Corporate Financial Performance

The search for an association between CSR and corporate financial performance has grown immensely since the 1980s (Ameer & Othman, 2012). Two opposing views have been

proposed. One view posits that CSR is a trade-off for corporate financial performance. The alternative view suggests that the costs a firm incurs from CSR activities are small and that a firm may in fact benefit from socially responsible activities (McGuire et al., 1988). There is a growing acceptance of the latter argument for the economic benefit of CSR (Ameer & Othman, 2012). Companies in various industries are increasingly becoming engaged in socially responsible activities that improve the welfare of society (Y. Wang & Berens, 2015).

Scholars have argued that incurring costs from CSR commitments seems to be contrary to maximizing shareholders' wealth because such costs may decrease a corporation's short-term financial performance (McWilliams & Siegel, 1997). However, the predominant argument in the literature on CSR is that a high level of CSR is an effective strategy for establishing a good corporate brand and reputation, which can ultimately boost a firm's financial performance (Orlitzky et al., 2003; Y. Wang & Berens, 2015). Corporate leaders have started to invest time and funds into socially responsible strategies such as integrating environmental interests in their business processes (Cheng et al., 2014). CSR became an important business practice for firms during the last decade (Servaes & Tamayo, 2013; Y. Wang & Berens, 2015). Many firms are posting their CSR activities on their corporate Web sites in addition to disclosing their CSR performance in annual reports (Servaes & Tamayo, 2013). In a 2010 study of 766 CEOs from companies worldwide by United Nations Global Compact-Accenture, it was reported that 93% of the CEOs stated that implementing CSR is a key factor for the future success of their corporation (Cheng et al., 2014).

Corporations did not voluntarily integrate CSR into their business practices, but they were surprised by public responses to issues they had not considered their corporate responsibilities. For example, there was a public outcry and call to boycott Nike products after

the *New York Times* and other media outlets reported the horrible labor practices at Nike's Indonesia warehouses (Porter & Kramer, 2006). Nike had to acknowledge its mistakes and take necessary steps to rectify its business practices. Activists and the media have become more aggressive and effective at putting public pressure on corporations to run their businesses in socially responsible ways. Increased pressure by different activist groups is one of the most important reasons that companies are considering the consequences of their business operations on society (Andonov et al., 2015).

Social activist groups are becoming more empowered, making it impossible for companies not to respond to public outcry. These activists have put such enormous pressure on companies to behave responsibly that a social climate has been created in which firms are expected to demonstrate high-level CSR (Andonov et al., 2015). However, corporations cannot be held responsible for all the problems in the world and, indeed, they do not have the resources to solve all of the world's problems. Many have called on each corporation to identify the societal problems it is best suited to solve and from which the corporation can benefit. By putting its resources and expertise in solving a societal problem a firm understands, and in which the firm can benefit, the firm can produce a major social benefit, and increase shareholder value (Porter & Kramer, 2006). Perceiving CSR as a shared value between society and corporations requires businesses to think differently about the consequences of their activities on society.

Although CSR has gained the attention of corporate leaders and scholars (Cheng et al., 2014), the research on the association between CSR and corporate financial performance has not yet conclusively defined the economic influence of CSR on corporate financial performance (Margolis & Walsh, 2003). However, just as CSR is increasingly becoming integrated into the business strategies of firms, so is CSR reporting becoming accepted as a reporting agenda on

firms' annual reports. In the early 1970s, CSR reporting was at its infancy (Tschopp & Huefner, 2015). The information reported was neither consistent nor reliable, and was of little use. The social activism of the 1990s and the subsequent demand for socially responsible investing led to the demand and growth of the current CSR reporting.

France was the first country that made it mandatory for publicly traded companies to include CSR data in annual reports in 2003 (Tschopp, & Huefner, 2015). Many European countries, including Belgium and the United Kingdom, require CSR reporting. Currently, government agencies and nongovernmental organizations are actively engaged in promoting CSR reporting. Firms publish CSR reports to provide stakeholders information about their socially aligned business practices. Stakeholders include employees, customers, suppliers, shareholders, management, governments, nongovernmental organizations, media, and the public that affect or are affected by the practices of a firm (Freeman, 1984). Governments use CSR reports to verify that firms abide by the government regulations. The level of a firm's CSR can influence an investor's decisions about investing in a company. A firm can use CSR reports to evaluate its operations' cost savings, for employee motivation, or to strengthen its corporate reputation and brand (Tschopp, & Huefner, 2015). There are currently many CSR reporting agencies, but the three most recognized are the Global Reporting Initiative's G3 standards, AccountAbility's AA1000 Series, and the United Nations Global Compact's Communication on Progress.

The Business Case for CSR

In recent years, a growing number of corporate leaders have increasingly allocating resources to their firms' socially responsible strategies. For example, firms are voluntarily integrating environmental and social practices, improved communications with stakeholders, and

CSR reporting in their business operations (Cheng et al., 2014; Servaes & Tamayo, 2013). In the aftermath of the recent economic downturn, the public perceives companies as prospering at the expense of the communities in which they do businesses, and companies are blamed for being the cause of social and economic problems (Nollet et al., 2016). Therefore, the government, nongovernmental organizations, activists, and the public have called on businesses to operate in a more socially responsible manner. Many scholars have observed that businesses are not only committed to making profit, but are also getting involved in ethical and socially responsible issues; CSR is being recognized as a relevant business strategy (Santoso & Feliana, 2014).

Despite the attention that corporations are giving to CSR, many still question whether CSR creates value for a firm since the existing research has not provided a conclusive answer (Cheng et al., 2014; Margolis, & Walsh, 2003; Servaes & Tamayo, 2013). Different approaches have been proposed to support shared value creation between the firm and society to benefit the firm and all stakeholders, but the impact of the CSR strategies on corporate financial performance remains questionable (Perrini et al., 2011). For more than four decades, research has focused on the social responsibilities of business, the economic argument for CSR, and the link between CSR and corporate financial performance (Carroll, 1999; Perrini et al., 2011; Wartick & Cochran, 1985; Wood 1991). The debate on the economic impact of CSR on corporate financial performance has been ongoing for many decades. Yet, the business case or rational for CSR and the association between CSR and corporate financial performance remains controversial (D. D. Lee & Faff, 2009; Margolis & Walsh, 2003; Perrini et al., 2011).

CSR was traditionally considered a waste of a firm's resources that conflicts with responsibility a business owes to its shareholders (Friedman, 1970). Some scholars argue that CSR takes resources away from the firm's primary business, and thus conflicts with maximizing

shareholder value (Aupperle et al., 1985; Friedman 1970; Jensen, 2001; McWilliams & Siegel, 1997). Critics of CSR have argued that the negative relationship between CSR and corporate financial performance is a result of the additional costs incurred when a firm invests in CSR. They argue that investing in CSR instead of other potentially profitable business strategies decreases economic performance (Aupperle et al., 1985; D. D. Lee & Faff, 2009). Ullmann (1985) argued that because of the large number of variable factors that impact a firm's CSR and corporate financial performance, it is unreasonable to claim that there is a relationship between CSR and the corporate financial performance.

However, CSR advocates suggest that CSR (doing good) can influence stakeholders to be more accommodating to the business practices of a firm since a firm's CSR helps to build the brand and reputation (Waddock & Graves, 1997). Wood (2010) argued that CSR investments do not only improve corporate financial performance and stakeholder value, but also enhance the well-being of society. Proponents of CSR have tried to promote the concept of CSR by emphasizing the "so-called business case for CSR" (Schreck, 2011, p. 167). Advocates of the business case argue that CSR can produce many benefits that might offset its costs, and it is, therefore, an inevitable strategy for a business (Bowen, 1953; Freeman, 1984; M. Lee & Kotler, 2010; Porter & Kramer, 2002). The business case for CSR is defined as, "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on voluntary basis" (Nollet et al., 2016, p. 400). Many scholars support that the business case for CSR is the justification and rationale or the economic and financial benefits a business gains from embedding CSR activities and initiatives in their business strategy (Carroll & Shabana, 2010).

The central theme of the arguments about the business case is that a high level of CSR helps a firm develop good relationships with its stakeholders such as customers, community, and society, which consequently improve the firm's financial performance (Carroll & Shabana, 2010; Ruf Muralidhar, & Brown, 2001; H. Wang & Choi, 2013). Some customers become loyal to a corporation that takes care of its social and environmental responsibilities, and are even willing to pay premium prices for the services or products of the firm (McWilliams & Siegel, 2001). The CSR activities of a firm give a glimpse to people outside the company what working for such a firm would be like, and job seekers are often attracted to such firms. Thus, corporations that are socially responsible have an edge in selecting the best quality employees from the workforce. In addition, the local community may be more willing to provide favorable terms when socially responsible corporations seek to lease or buy local real estate (H. Wang & Choi, 2013). Another advantage of high-level CSR for public companies is that CSR activities may enhance gaining a listing on the FTSE4Good US Select Index or Dow Jones Sustainability Indexes, or other similar indexes. These indexes rate companies on CSR criteria such as transparency, environmental and social issues, and governance. A high rating on these indexes can increase a company's stock price, making shareholders wealthier and happier (Robins, 2011).

If doing good, in terms of transparency in business practices and addressing social ills, could be associated with doing well in corporate financial performance, then companies might be persuaded to integrate CSR in their businesses (Margolis et al., 2009; Porter & Kramer, 2006). Businesses would be encouraged to do good even if it means sustaining additional costs, so that they can improve their bottom lines and the well-being of society (Margolis et al., 2009). If scholars can prove the business case for CSR, meaning that CSR and shareholder value

maximizing could be shown to be synergistic, business leaders could justify investment in CSR as a legitimate business expense.

Freeman's (1984) stakeholder theory has made a valuable contribution to the importance of a firm's commitment to social responsibility activities (Rodgers et al., 2013; Ruf et al., 2001). The stakeholder theory proposes that firms should not focus exclusively on the needs of shareholders but should also be mindful of the demands of other stakeholders (Freeman, 1984). Nevertheless, researchers disagree on whether firms pledge to do good (be socially responsible) so that they can do well (be well off financially) or whether firms that do well are empowered to do good. The implication of the argument that doing well facilitates doing good is that profitable companies have abundant resources from which they can afford to devote a quota to social responsibility activities (Preston & O'Bannon, 1997; Waddock & Graves, 1997). Scholars argue that doing good propagates doing well, implying that a high level of CSR improves corporate financial profitability (Ullmann, 1985; Waddock & Graves, 1997).

More studies have reported positive relationships between CSR and corporate financial performance than negative relationships (Margolis et al., 2009). Although it might not be clear if doing good to the stakeholders engenders doing well financially, many results inherently support the concept. For example, Verschoor (1998) performed one of the first large-scale studies the results of which indicate that companies that do good to the stakeholders are more well off than those that do not do good to the stakeholders. Verschoor examined the relationship between CSR and corporate financial performance of the 500 largest U.S. public corporations and found that 26.8% of the 500 corporations integrate CSR into their businesses. The CSR activities reported in the annual reports of the corporations consisted mostly of the corporations' ethical conduct to stakeholders. The financial performance of those corporations that disclose their CSR activities

was found to be significantly higher than those of corporations that do not. Another study similar to that of Verschoor (1998) was conducted by van Beurden and Gössling (2008), where they reviewed 34 studies on the relationship between CSR and financial performance. Van Beurden and Gössling reported that the majority of the studies found a positive relationship between CSR and corporate financial performance. Out of the 34 studies reviewed, 68% reported a positive relationship, 26% reported no relationship, while 6% (two studies) reported a negative relationship between CSR and corporate financial performance (van Beurden & Gössling, 2008).

In a recent study of the relationship between CSR and corporate financial performance, Kang, Germann, and Grewal (2016) examined 4,500 firms throughout a period of 19 years. The study reported that firms that participate in CSR do well financially because of their investment in CSR activities (Kang et al., 2016). Similar to other studies, their findings suggested that firms engage in CSR for various reasons. Some firms adopt socially responsible initiatives because they are doing well financially and because they believe that being socially responsible is the right corporate strategy. Other firms participate in CSR as a kind of penance to compensate for their past corporate social irresponsibility (Kang et al., 2016; Orlitzky et al., 2003). Kang et al. (2016) found that the firms that engaged in CSR for philanthropic reasons gained significant financial performance from investing in CSR. On the other hand, firms that engaged in CSR merely as repentance for their past corporate irresponsibility obtained little or no positive financial performance from investing in CSR. These studies seem to support the notion that firms that do good (invest in CSR) also do well financially. These findings that substantiate the business case for CSR could motivate corporations to be more socially responsible.

Factors That Influence the Relationship Between CSR and Corporate Financial

Performance

Industry effects. The relationship between CSR and corporate financial performance is affected by many factors, such as firm size, industry, economic conditions, and regulatory environment (Peloza, 2009). Although a large number of studies that have shown a positive relationship give hope to the business case of CSR, scholars are concerned about the inconsistency in these results. Griffin and Mahon (1997) posited that industries operate under very different situations and are faced with different stakeholder interests, social and environmental issues, and levels of activism. Research has shown that studies that fail to account for the differences between industries and use multiindustry data may mask specific industry effects and the real CSR impact on corporate financial performance. In order words, results obtained from analyzing data from a cross section of industries may be masked by the different CSR or corporate financial performance elements ranked and/or the different methods used for measuring CSR and corporate financial performance. Each industry is unique because each industry has different competencies and internal and external pressures. Therefore, the internal and external pressures in an industry, such as governmental regulations and consumer issues, are likely to be similar within each industry (Griffin & Mahon, 1997). Researchers have argued that a study should focus on a single industry to allow the scholar to determine if similar issues within the industry are treated in like manner (Griffin & Mahon, 1997) because "the issues change and they differ for different industries" (Carroll, 1979, p. 501). Griffin and Mahon (1997) strongly advocate that scholars should concentrate on studying the link between CSR and corporate financial performance within a specific industry because of the "uniqueness of internal competencies or external pressures inherent in an industry, the degree of public visibility, the different configurations of stakeholders and their differing degrees of activism on particular

issues" (p. 10). The type of social responsibility activities a firm chooses to engage in is uniquely related to the nature of the demands by its stakeholder, its corporate competencies, and industry environment (Baird, Geylani, & Roberts, 2012; Griffin & Mahon 1997; Simpson & Kohers, 2002).

Firm size. Another significant factor that researchers have found to influence the relationship between CSR and corporate financial performance is firm size (Moore, 2001). Many studies that have either tested or controlled for firm size found firm size to be significantly associated with CSR disclosure. Moore's (2001) findings suggest that the larger the firm, the more visible it is to the public, and, hence, larger firms are more likely to be exposed to greater public scrutiny. Therefore, if larger firms are not socially responsible, their reputation is more likely to suffer than the reputation of the less visible smaller firms. To prevent loss of reputation, the larger firms are often more likely to engage in socially responsible initiatives. Pava and Krausz (1996) also found that larger firms were significantly more socially responsible than smaller firms.

Firm risk. Scholars have argued that firm risk influences the relationship between CSR and corporate financial performance (Moore, 2001; R. W. Roberts, 1992). R. W. Roberts (1992) reported that firms with a low level of risk (stocks that consistently perform well) are more prone to devote their resources to social responsibility activities. The study also found that financial performance is associated with the level of corporate social disclosure (R. W. Roberts, 1992). Trotman and Bradley (1981) also examined the effects of firm risk on corporate disclosure of social responsibility performance and they found that firms with a good reputation of investing in CSR activities had lower firm risk. The Trotman and Bradley (1981) study is in agreement with

R. W. Roberts' (1992) argument that firms with low risk are more prone to provide their corporate responsibility information, and low risk yields higher financial performance.

Summary

Chapter 2 provides a brief discussion of the evolution of the pharmaceutical industry and CSR. The growing understanding that corporations have an obligation to work for social improvement was shown to be one of the causes of the increasing pressure on companies to practice and demonstrate their commitment to CSR. The lack of consensus on the impact of CSR on corporate financial performance after a long history of research, analysis, and debate, was discussed. Different theories were proposed in the literature review about the lack of consistent metrics for evaluating the economic impact of CSR on corporate financial performance. The challenge and complexity of measuring CSR and financial performance despite the growth in the number of companies that participate in CSR reporting was underscored. As discussed in Chapter 2, most studies to date have reported a positive association between CSR and corporate financial performance, even though the debate about the relationship between CSR and corporate financial performance remains unsettled.

Chapter 3: Methodology

Overview of Chapter Content and Organization

This chapter explains the methodology used to conduct this research study. The subsections discuss the methodology and rational, the research design, population, sample and sampling procedures, instruments, validity and reliability, study limitations, human subject consideration, data collection, data management, and analysis.

There is hardly any pharmaceutical company that can operate without an annual sustainability or CSR report (Nussbaum, 2009). The "idea that firms need to take account of the interests and concerns of multiple stakeholders, not just shareholders" (Googins et al., 2007, p. 126), is one of the many pressures driving business practices and decision making in organizations. Many firms have integrated CSR as a prominent business strategy in an attempt to go above and beyond increasing shareholder value and also contribute to the well-being of society (Turker, 2009). In spite of the increasing amount of literature on CSR, corporate leaders continue to disagree about how to balance CSR and their shareholders' wealth (Leisinger, 2009).

This study uses the Global Leadership Network framework to assess the impact of CSR on the financial performance in the pharmaceutical industry. Definitions and terminology of CSR are still unclear, and corporations' social responsibility performance metrics are still being developed (Googins et al., 2007). The Global Leadership Network Framework assessment presents concepts and criteria to help corporations account for their social responsibility performance. The Global Leadership Network framework is a benchmarking tool designed to assist companies in defining their CSR strategies and in measuring corporate performance by focusing on issues that meet the needs of the business.

If a significantly positive relationship between CSR and financial performance is shown, businesses may be influenced to pay attention to, not only their corporate financial profits, but also their social, ethical, and environmental activities such as improving the access to medicine, reducing poverty, and contributing to the improvement of their communities. The Global Leadership Network framework provides corporations beneficial and socially responsible strategies "to conceptualize and to monitor their triple bottom line performance" (Googins et al., 2007, p. 126).

Restatement of Study Purpose

The purpose of this quantitative study is to analyze the impact of CSR on financial performance in the pharmaceutical industry. The aim of the study is to ascertain if CSR leads to better financial performance in the pharmaceutical industry. Therefore, correlations were computed to examine the relationship between CSR (independent variables), and the 2011–2014 financial performance (dependent variable). The strength of association between the dependent variable and independent variables was assessed through linear correlation (using the Spearman correlation coefficient) to determine whether a significant correlation exists. This study intended to analyze the impact of CSR on financial performance of the 20 global pharmaceutical companies that are rated by the Access to Medicine Index. However, the researcher studied 18 of the 20 pharmaceutical companies that participated in the 2012 and 2014 Access to Medicine CSR rating because: (a) Only 19 of the 20 pharmaceutical companies participated in both the 2012 and 2014 Access to Medicine CSR ranking. The 20th company rated by the Access to Medicine in 2012 was different from the 20th company rated in 2014; (b) One of the 19 companies that was ranked by the Access to Medicine in both 2012 and 2014 is a private company and was eliminated from this study because it is not a publicly traded company. The

financial data of the private company that were eliminated from this study are not publicly available unlike the financial data of the 18 publicly traded pharmaceutical companies. This study aimed to evaluate the world's largest, publicly traded pharmaceutical companies so that the findings of the study could be generalized to other publicly traded pharmaceutical companies. The study is expected to influence a change in the contribution of pharmaceutical companies to the welfare of society at large by inspiring global pharmaceutical industry leaders to invest in CSR to generate positive collective benefits for society.

Restatement of Research Questions

For more than three decades, many researchers have been trying to figure out if companies that have integrated CSR in their business policy perform better financially than companies that have not integrated CSR (Cheng et al., 2014; Robins, 2011). This study examines the impact of CSR on financial performance in the pharmaceutical industry. CSR is measured by ratings from the Access to Medicine Index, and corporate financial performance is measured by EVA. The research question that this study proposes to answer is: What is the financial performance in the pharmaceutical companies that have embraced CSR?

Population: Industry Studied

The population that was used in the study is composed of companies within the same industry: the pharmaceutical industry. Pharmaceutical companies face similar issues, problems, government regulatory restraints, enforcement procedures, and stakeholder activism. Research has shown that in a multiindustry study, the differences between industries can mask specific industry effects and the real CSR impact on corporate financial performance (Griffin & Mahon, 1997). Using a single industry allows the researcher to determine the impact of CSR on financial performance in the pharmaceutical industry. The population of this study consists of 20 of the

world's largest pharmaceutical companies. The pharmaceutical manufacturing sector in the study consists of companies primarily engaged in the manufacturing and processing of biological and medical pharmaceutical products for internal and external consumption.

The 20 pharmaceutical companies listed in this study (APPENDIX A) were selected because they are the only pharmaceutical companies currently participating in the Access to Medicine Index's CSR assessment. The 20 pharmaceutical companies selected for the study account for more than 50% of the global pharmaceutical market capitalization (Iyer, 2014). The study focuses on the pharmaceutical industry because of the investigator's experience working the industry. The pharmaceutical corporations evaluated in this study are industry leaders and they have global scope of operations. These companies are ideal candidates for studying economic impact of CSR on corporate financial performance because multinational CSR activities are represented in the study. The financial and CSR data of these companies are available publicly. Limited by the number of pharmaceutical companies participating in the Access to Medicine Index ranking, the study evaluated the CSR and financial performance of top 18 global pharmaceutical companies. The study examined the impact of CSR on the financial performance in the pharmaceutical industry from 2011 to 2014.

Research Design

A quantitative method is used to show a quantifiable result related to the numerical changes that arise from the study groups or population being studied (Holton & Burnett, 2005). A quantitative research method examines the relationship between variables, in this case, CSR and financial performance (Creswell, 2014). This study uses a quantitative correlational nonexperimental research method to test whether, and to what degree, a relationship exists between CSR (independent variables) and financial performance (dependent variable). A

quantitative nonexperimental research uses existing data (data obtained from a secondary source) to study a phenomenon (Holton & Burnett, 2005). A quantitative research method includes experimental, quasiexperimental (less rigorous experiments), correlational, and descriptive methods (Creswell, 2014). In experimental research, the researcher wants to find out if a specific treatment would produce an outcome. The researcher specifically treats one group while withholding the same treatment from another, and then evaluates how the two groups scored on the measured outcome. The interest of the researcher in a correlational research study is assessing the degree of association or relationship between two or more variables. An independent variable is construed to be the cause of the resulting outcome in a study. Changes in the independent variable cause changes in the dependent variable (Martin & Bridgmon, 2012). The dependent variable is the ensuing behavior or outcome that is measured in response to an independent variable.

In evaluating the relationship between CSR and financial performance, this study employed a quantitative correlational study design using publicly available records to collect financial data and CSR data. Quantitative research method was the method of choice for this study because it is difficult to compare companies' CSR performance based on qualitative CSR data (Seong et al., 2012). Consequently, CSR rating organizations, including Calvert Investments, Dow Jones Sustainability Index, FTSE4Good, and Kinder, Lydenberg, and Domini Research & Analytics Inc., have generated their own systems for rating a company's CSR performance. Similarly, the Access to Medicine Index developed its seven categories for evaluating the CSR performance of pharmaceutical industries (Iyer, 2014). Because there is a wide variation in the level of CSR in pharmaceutical companies, this quantitative study

examined changes in financial performance (dependent variable) that were caused by CSR (independent variables) in the pharmaceutical industry.

Instrument Validity-Reliability

Validity indicates the extent to which a measure or tool precisely represents the concept in the study that it alleges to measure (P. Roberts, Priest, & Traynor, 2006). Measures in a study are deemed valid if they measure what they are supposed to measure (Holton & Burnett, 2005). Reliability refers to the extent to which a protocol or tool consistently produces similar results in different circumstances such as if the tool is used by different researchers or if used at different times (P. Roberts et al., 2006). A measure is considered reliable if it yields consistent results over time (Creswell, 2014). A measure could be very reliable (consistent) but not valid. For example, an employee's self-assessment of job performance can be very reliable but may not be valid.

Three common types of validity are content validity, criterion validity, and construct validity (Creswell, 2014). Content validity indicates that the items measured in the study are the items that the researcher intended to measure (Creswell, 2014; Holton & Burnett, 2005). Criterion validity tests whether the measure can predict the dependent variable it is supposed to predict (Holton & Burnett, 2005; Twycross & Shields, 2004). Construct validity denotes the ability of a measurement tool to measure the underlying theory or concept. Reliability and validity demonstrate the rigor of the research study and the trustworthiness of the research findings (P. Roberts et al., 2006).

The researcher chose to demonstrate the content validity of the study by examining the same measures (the one dependent and seven independent variables) that were evaluated in Berete's (2011) study and shown to have an effect on the research question in this study. Berete analyzed 18 pharmaceutical companies to assess the relationship between CSR and financial

performance of pharmaceutical industry throughout a two-year period before, and one year after the first publication of the Access to Medicine Index. The CSR of pharmaceutical companies was scored by the Access to Medicine Index for the first time in 2008. The study evaluated the financial performance by the EVA and used the average sum of 2006 and 2007 as the financial performance of the company before the publication of Access to Medicine Index and the financial performance of 2009 as the financial performance after the publication of the Access to Medicine Index (Berete, 2011). In Berete's study, the Pearson correlation was performed on the 2008 CSR scores of the firms and the corporate financial performances before and after the publication of the Access to Medicine Index.

Of the 18 pharmaceutical companies that participated in this study, 13 are the same companies in Berete's (2011) study. This study's methodology is similar to Berete's to the extent that it used the same Access to Medicine Index for scoring CSR and EVA to measure financial performance. The 18 pharmaceutical companies examined in this study integrated CSR, but there is a wide variation of the level of CSR in these companies. Therefore, this quantitative study examines the economic impact of CSR (independent variables) on financial performance (dependent variable) in the pharmaceutical industry. This study differs from Berete's (2011) study because it evaluated the correlation between eight dimensions of CSR and financial performance while Berete's study only correlated overall CSR with financial performance. The study correlated the CSR scores of 2012 and 2014 with corporate financial performances of 2011, 2012, 2013, and 2014 because the Access to Medicine Index is published every two years.

Reliability

The reliability of this study is assessed by employing validated quantitative research methods similar to Berete's (2011) study and public third-party data. The seven CSR categories

used in this study were previously used in Berete's study. The CSR categories are general access to medicine management, public policy and market influence, research and development conducted on neglected diseases, the company's pricing, manufacturing and distribution practices, patents and licensing policies, capacity advancement in product development and distribution, drug donations, and philanthropic activities (Iyer, 2014). Similar to Berete's (2011) study, this study uses publicly available data to measure the financial performance of the pharmaceutical companies using the EVA.

Berete (2011) found a significantly positive relationship between CSR and financial performance and proposed that a case could be made that a high level of CSR could result in a high level of corporate financial performance. By evaluating the 2012 and 2014 CSR scores of companies with varying levels of CSR and the corporate financial performances throughout a four-year period (2011–2014), this study determined if indeed doing good (a high level of CSR) could engender doing well (a high level of corporate financial performance).

Study Limitations

One limitation related to the research on the relationship between CSR and corporate financial responsibility to date is that there are no established or consistent indicators for the measurements of CSR or corporate financial performance (Moore, 2001). For example, in the 51 different studies that Griffin and Mahon (1997) reviewed, they reported that 80 indicators had been used for measuring corporate financial performance. The 80 criteria used for corporate financial performance measurement included profitability, asset utilization, growth, liquidity, and risk, and market measures. Griffin and Mahon found that return on assets, return on equity, and return on sales were the most commonly used for measuring corporate financial performance. The researchers posited that accounting-based measures were better for assessing

corporate financial performance than market-based measures because market-based measures may be evaluating more than just the financial performance (Griffin & Mahon, 1997). Many studies have used market-based measures of performance, including stock market returns, but McGuire et al. (1988) argued that accounting-based measures, such as return on assets, were better gauges of CSR than market-based measures.

Griffin and Mahon (1997) found that many of the 51 studies they reviewed used a single indicator or attribute to measure CSR, despite "the need for multiple sources of corporate social performance" (p. 14). It is important to use many indicators to measure CSR, because CSR is a complex concept that refers to the extent to which a corporation meets the needs, demands, and expectations of not only its shareholders, but also of society at large. Therefore, Ullmann (1985) argued that to study the complex issue of CSR, researchers would need to use a variety of criteria to measures CSR. Ullmann further argued that measuring CSR implies creating a list of the firm's stakeholders, measuring their rate of satisfaction using different criteria, and developing "an overall index that encompasses these different criteria so that organizations can be ranked in terms of their overall social performance" (p. 544).

This study examines the influence that the CSR initiatives of pharmaceutical corporations have on the firms' financial performance. CSR corporate rankings are obtained from the Access to Medicine Index. The Access to Medicine Index ranks the top 20 world's largest pharmaceutical corporations on seven CSR initiatives: (a) management of general access to medicine programs; (b) public policy and market influence; (c) research and development on neglected diseases; (d) pricing, manufacturing, and distribution practices; (e) patent and licensing policies; (f) capacity advancement in product development and distribution; and (g) product donations and philanthropic activities (Iyer, 2014; Ravi Shankar, 2013; WHO publications and

events, 2014). This study is limited to the world's 20 largest pharmaceutical companies and the stated CSR initiatives because only these pharmaceutical companies have so far agreed to participate in the Access to Medicine Foundation's rating (Ravi Shankar, 2013; WHO publications and events, 2014). Furthermore, the Access to Medicine Foundation, a not-for-profit organization, is the one and only international company dedicated to finding ways to improve access to medicines worldwide by encouraging pharmaceutical companies to promote drug donations and access to medicine. The Access to Medicine Index is transparent in its business practices, and starting in 2012, it adopted a more refined methodology that incorporates stakeholder feedback in ranking the social responsibility activities of pharmaceutical companies (Ravi Shankar, 2013).

Other researchers have used indexes such as Dow Jones Sustainability Index or the FTSE4Good Index to identify and select U.S. corporations committed to CSR development (Berger, 2013), but this study has found no literature on any rating agency apart from the Access to Medicine Index that participates in ranking pharmaceutical companies on all the CSR performance activities that will be examined in this study. Droppert and Bennett (2015) argued that even though the "Dow Jones Sustainability Index is the best established of the various CSR-related indices discussed but its focus is more on corporate sustainability than public health concerns. The Access to Medicines Index provides a much stronger focus on public health" (p. 7). Hunt and Khosla (2010) suggested that the Access to Medicine Index offers "a firm information base for monitoring the conduct of pharmaceutical companies" (p. 3). For example, Kinder, Lydenberg, and Domini Research & Analytics Inc., a firm based in Boston, ranks companies' CSR performance on categories including community, corporate governance, environment, employee relations, and diversity (Seong et al., 2012). These categories do not

fulfill the requirements of this study because they do not include the major CSR categories that are crucial to this study. The management of the access to medicine, drug donations, R & D on neglected drugs, and the other four CSR categories evaluated by the Access to Medicine Index are central to this study. The researcher has not found any other organization that ranks CSR performance categories similar to those of the Access to Medicine Index. This study is limited to examining the financial performance and CSR initiatives of the world's 20 largest pharmaceutical corporations to improve global access to drugs. The sample was chosen because the CSR scores of all the 20 pharmaceutical companies are available on one rating index company. The same metrics are used by the company to score and rank the CSR performance of all the companies.

Human Subject Consideration

The study does not use human subjects. Therefore, it is not necessary to provide documents that protect the rights of the participants, for example, confidentiality agreements and consent forms. The financial data sources selected are from publicly available database information collected from company annual reports to governmental agencies. Written permission to use the Access to Medicine Index data of the participating pharmaceutical companies was requested because Access to Medicine Index is copyrighted.

Instrumentation

When choosing an instrument in a quantitative research study, the researcher seeks the instrument that best allows him or her to quantify ideally the theoretical and conceptual framework (Hagan, 2014). Publicly available financial and CSR data of 20 pharmaceutical companies are used in this study. EVA is used to evaluate the financial data gathered from the annual reports of pharmaceutical companies. The CSR data is obtained from Access to Medicine

Foundation, a nonprofit international corporation. The Access to Medicine Index evaluates the CSR of the 20 world's largest pharmaceutical corporations and assigns each corporation scores on a relative scale of 0 to 5. The corporations are assessed and scored on the seven categories of socially responsible corporate performance, consisting of: management of general access to medicine programs; public policy and market influence; research and development on neglected diseases; pricing, manufacturing and distribution practices; patent and licensing policies; capacity advancement in product development and distribution; and product donations and philanthropic activities (Iyer, 2014; Ravi Shankar, 2013; WHO publications and events, 2014).

Validity

There are two measures of validity in a study design: internal and external validity. Internal validity is the degree to which the results are attributable to the independent variable and not some other rival explanation; the confidence that we can place in the cause and effect relationship in a study (P. Roberts et al., 2006; Twycross & Shields, 2004). To establish the validity of a construct, the new measure must be related to other established or previously verified measures (Gunter & Jensen, 2002).

The results of a study could be invalidated if the measurements failed to portray the concepts relevant to the research question (Hagan, 2014). To establish internal validity of the study, the researcher examined the measures (the dependent variable and seven independent variables) that have been evaluated in Berete's (2011) study and found to have an effect on the research question in this study.

Berete (2011) analyzed 18 pharmaceutical companies to assess the relationship between CSR and financial performance of pharmaceutical industry throughout a two-year period before, and one year after the first publication of the Access to Medicine Index. The CSR of

pharmaceutical companies was scored by the Access to Medicine Index for the first time in 2008. The study evaluated the financial performance by the EVA, and used the average sum of 2006 and 2007 as the financial performance of the company before the publication of Access to Medicine Index and the financial performance of 2009 as the financial performance after the publication of the Access to Medicine Index (Berete, 2011). In Berete's study, the Pearson correlation was performed on the 2008 CSR scores of the firms and the corporate financial performances before and after the publication of the Access to Medicine Index. Berete's study showed that CSR has a positive impact on financial performance in the pharmaceutical industry.

Of the 20 pharmaceutical companies participating in this study, 13 are the same companies in Berete's (2011) study. The methodology of this study is similar to that of Berete's to the extent that it will use the same Access to Medicine Index for scoring CSR and EVA for measuring financial performance. The 20 pharmaceutical companies examined in this study have integrated CSR, but there is a wide variation of the level of CSR in these companies. Therefore, this quantitative study examines the economic impact of CSR (independent variables) on financial performance (dependent variable) in the pharmaceutical industry. This study is different from Berete's (2011) study because it aims to determine if there is a correlation between the level of CSR and financial performance. Because the Access to Medicine Index is published every two years, the study correlates the CSR scores of 2012 and 2014 with corporate financial performances of 2011, 2012, 2013, and 2014.

External validity is the extent to which the results of a study can be generalized from a small sample group to make predictions about the entire population (P. Roberts et al., 2006; Twycross & Shields, 2004). The participants in this study are from the same industry and they face similar social, political, economic, legal, intercultural, and technical driving forces such as

strict government regulations and increased cost of developing a new drug. Thus, the results of this study, which evaluates the top world's largest, publicly traded pharmaceutical companies, could be generalized to other publicly traded pharmaceutical companies. However, the results may not be generalizable beyond publicly traded pharmaceutical companies in the industry.

Reliability

Reliability refers to the consistency of a measure and the probability that if the measure were retested or duplicated, the same results would be obtained. The measurement is said to be reliable if the same result can be achieved on repeated occasions or at different time points (Ameer & Othman, 2012). If reliable, the researcher can assume the results of the measurements for the sample are consistent and could be generalized to a larger population (Hagan, 2014). Although there is a growing body of literature on CSR, the measurement of CSR is still challenging. Many methods for measuring socially responsible activities are offered in the literature, but these methods all have some limitations (Turker, 2009).

This quantitative study uses public, third-party numerical data and validated quantitative research methods similar to Berete's (2011) study to assess reliability. The financial data used in the study are publicly available. The CSR data are evaluated and scored by a third party (Access to Medicine Index), thus eliminating the possibility of the researcher's bias and the potential for corporate favoritism or coercion. The Access to Medicine Index has become an internationally known nonprofit organization dedicated to helping to promote access to medicine worldwide by examining the CSR activities of 20 of the world's largest pharmaceutical companies (Ravi Shankar, 2013; WHO publications and events, 2014). The study evaluates over an extended period representative of the timeframes necessary to test the independent variables on the dependent variable.

Data Collection Procedures

The study uses publicly available records to collect financial data and CSR data for the period 2011 through 2014. Financial data (annual revenues) were collected from the annual reports of the pharmaceutical companies. The annual report is the most characteristic instrument of corporate disclosure because it is the principal source of information for investors, it is an important communication between a company and its stakeholders, and it is considered highly credible because it is similar to audited financial statements (Dawkins & Fraas, 2013). The Securities and Exchange Commission, as mandated by the Sarbanes-Oxley Act, requires companies to provide transparent financial and internal controls, verified by independent auditors, in their annual reports, and to disclose quarterly, any substantial changes in these controls (Guerra, 2004; Rockness & Rockness, 2005). The Sarbanes-Oxley Act, enacted in 2002, is a United States federal law also known as the corporate auditing and accountability, and responsibility act, but it is commonly called SOX. The act is designed to enforce transparent financial governance and internal controls in corporations (Rockness & Rockness, 2005). The internal controls are the controls related to the preparation of financial statements for external purposes that conform to the generally accepted accounting principles. The Sarbanes-Oxley Act was enacted in response to major corporate and accounting scandals, including those that involved Enron, Tyco International, Adelphia, Peregrine, and WorldCom.

This study's financial data are derived from the following sources: Hoover's full business database, Securities Data Corporation, and Standard and Poors 500 Index, and Factiva online database for news articles. The concept of Economic Value-Added developed by Stern Stewert and Co. in the early 1990s, is used to evaluate financial performance (Kyriazis & Anastassis, 2007; Madhavi & Prasad, 2015a; Poornima et al., 2015). When evaluating a company's

performance, the Economic Value-Added model considers a company as creating value for its shareholders only if the company generates returns that are in excess of the cost of capital. The introduction of the Economic Value-Added concept has equipped companies with the ability to gauge better their performance on a global standard because Economic Value-Added measures the profit generated by an organization over its cost of capital (Kyriazis & Anastassis 2007; Madhavi & Prasad, 2015a). Economic Value-Added is computed by deducting the cost of capital from the net operating profit after tax. Many researchers consider Economic Value-Added one of the best performance measurements that captures the economic profit of a corporation (Madhavi & Prasad, 2015a). Many companies, including Coca Cola, AT&T, Briggs & Stratton, and Quaker Oats, have adopted Economic Value-Added as a financial management system to monitor performance (Kyriazis & Anastassis, 2007). The Economic Value-Added method makes it possible to assess how efficiently capital is being used in a firm compared to traditional approach, which is based on the concept of accounting profits and the relevant ratios, such as the return on equity and the return on assets (Kvach & Il'ina, 2013). The traditional performance measurements do not consider the cost of invested capital in order to determine the profits a company has made, whereas Economic Value-Added does (Kyriazis & Anastassis, 2007). For example, under the traditional approach, if two companies have the same return on equity, they would be considered equally successful, whereas under the Economic Value-Added approach, a different conclusion would be reached if the economic profit (Economic Value-Added) or residual income of these two companies were different.

The data for CRS activities are garnered from the Web site of Access to Medicine Index. The Access to Medicine Foundation is a Netherlands-based not-for-profit company that is dedicated to promoting access to medicine worldwide (WHO publications and events, 2014).

The Access to Medicine Foundation has been gathering CSR data on the pharmaceutical companies since 2008. The Access to Medicine Index, published every two years, scores pharmaceutical companies on seven areas, and provides information about what these companies are doing to improve their social responsibilities (Ravi Shankar, 2013; WHO publications and events, 2014). The Access to Medicine Foundation is funded by the Bill and Melinda Gates Foundation, the Dutch Foreign Affairs Ministry, and the United Kingdom Department for International Development (WHO publications and events, 2014). The goal of the Access to Medicine Foundation is to encourage pharmaceutical companies to make their products more available, affordable, and accessible to people worldwide.

The eight categories of CSR for which corporations are evaluated and scored by Access to Medicine Index include management of general access to medicine programs; public policy and market influence; research and development on neglected diseases; pricing, manufacturing and distribution practices; patent and licensing policies; capacity advancement in product development and distribution; product donations, and philanthropic activities; and overall CSR (Iyer, 2014; Ravi Shankar, 2013; WHO publications and events, 2014). The metrics used by the Access to Medicine Index to evaluate social responsibility fall within the Googins's et al. (2007) four areas of the Global Leadership Network framework: (a) business strategy, (b) leadership, (c) operational excellence, and (d) engaged learning. The metrics are not necessarily legal definitions of CSR, but instead they are the strategic decisions, corporate moral ethics, and values that help to shape the culture of a responsible organization. Researchers, pharmaceutical companies, investors, governments, and nongovernmental organizations consider the Access to Medicine Index as a useful tool with impartial information for benchmarking the CSR of pharmaceutical companies (Ravi Shankar, 2013; "Sanofi's initiatives," 2012).

Methodological Assumptions

This study assumes that the secondary data that are gathered from publicly available records provide beneficial understanding about the impact of CSR on financial performance in the pharmaceutical industry (Holton & Burnett, 2005). It is also assumed that CSR data collected by the Access to Medicine Index from the participating pharmaceutical companies engaged in socially responsible practices are reliable. The researcher argues that the CSR data are reliable because of the SOX-like laws that govern Netherlands, the country in which the Access to Medicine Foundation is based. When other countries, including the Netherlands, France, and Germany, realized the need for stricter financial governance in corporations after the SOX was enacted in the United States, they enacted similar laws (Rockness & Rockness, 2005). The SOX-like laws in these countries function to regulate and mandate accurate corporate reporting.

Data Management

The study uses publicly available records to collect financial data and CSR data for the period from 2011 to 2014. The data collected from each company were organized in a Microsoft Office Excel spreadsheet in columns representing the name of the company, the year, financial data (dependent variable), and each of the eight categories of CSR scores for the company (independent variables). The data entry into the spreadsheet was performed with great focus on accuracy to ensure that accurate data were transferred to the SPSS analysis software. Both the financial data and the CSR scores used in the study were saved in an electronic folder that is protected by a password known only by the study's author. Five years after the study is completed, the stored data will be erased with CyberShredder (a software that permanently deletes confidential files and directories from the computer).

Calculation of EVA

The concept of EVA developed by Stern Stewart and Co. in the early 1990s, is used to evaluate financial performance (Kyriazis & Anastassis, 2007; Madhavi & Prasad, 2015a; Poornima et al., 2015). EVA is computed by deducting the cost of capital from the net operating profit after tax. EVA = Net Operating Profit After Tax – (Capital Invested x the Weighted Average Cost of Capital). As presented in the formula, there are three elements necessary to calculate EVA: Net Operating Profit After Tax, Invested Capital, and Weighted Average Cost of Capital. Net Operating Profit After Tax is defined as "the profits derived from company's operations after taxes but before financing costs and non-cash bookkeeping entries" (Madhavi & Prasad, 2015b, p. 53). The capital invested is the amount of money that was used to fund a project. The weighted-average cost of capital was calculated because the information is not provided on the income statements of the 18 pharmaceutical companies. EVA was calculated as shown below because it was not found in any of the balance sheets of the corporations in the study:

EVA = Net Operating Profit after Tax- (Invested Capital*WACC)

NOPAT = Net operation Profit After Tax

NOPAT = Operating income – Income tax expense + Interest

Invested Capital = Total Assets – Noninterest bearing current liabilities + leases

Noninterest bearing current liabilities = Accounts payable + Taxes payable + Accrued liabilities + other current liabilities

WACC = Weighted Average Cost of Capital

WACC = Weighted Cost of Debt + Weighted Cost of Equity

WACC = Rd (1-Tc) x (Dt/V) + Re x (E/V)

Where:

Dt = Total debt

E = Total equity

V = E + Dt = Firm value

Tc = corporate tax rate

Rm = Historical market return (1966-2015 stocks and government bond yield)

Rf = Expected Risk free rate of return in market (1966–2015 stocks and government bond yield)

β (Beta) = A measure of the risk of a stock compared to the market

Rd = Cost of Debt (an after-tax rate of interest a company pays for its debt)

Re = Cost of Equity (market rate of return that equity investors, such as shareholders, expect to be paid as compensation for the risk they took for investing their capital in the company).

$Rd = I/(Dt) \times (1 - tc)$

$Re = Rf + \beta (Rm - Rf)$

EVA is a more comprehensive financial performance metric than other financial performance metrics such as earnings per share, return on asset, and return on investment because it measures the entire cost of running a business including operating and financing cost (Ehrbar, 1998). In his 1995 *Harvard Business Review* article, Peter Drucker (as cited in Ehrbar, 1998) stated:

> EVA is based on something we have known for a long time: What we call profits, the money left over to service equity, is usually not profit at all. Until a business returns a profit that is greater than its cost of capital, it operates at a loss. Never mind that it pays taxes as if it had a genuine profit. The enterprise still returns less to the economy than it devours in resources.…Until then it does not create wealth; it destroys it. (p. 2)

Data Analysis

The data analysis was done using SPSS statistics analysis software based on its standardized, comprehensive statistical features for data manipulation, graphics, regression models, and summary statistics. Descriptive statistics (means, standard deviations, coefficients of variation, and medians) were calculated for each of the study variables to describe the impact of CSR on enhancement or erosion of shareholder value. The link between CSR and financial performance were evaluated in this study with the Spearman correlation coefficient, which is used to analyze the relationship between two variables (Martin & Bridgmon, 2012). A correlation coefficient that denotes a relationship between two or more variables is called a multiple correlation. The values for the Spearman correlation coefficients range from -1.0 to +1.0. Multiple correlations have positive values while the negative values reflect negative relationship. The two variables in the study were the dependent (corporate financial performance) and the independent variables (eight categories of CSR activities).

Multiple regression analysis is used to analyze the extent to which two or more independent variables are related to a dependent variable (Martin & Bridgmon, 2012). The study performed multiple regression analyses to evaluate the relationship between the dependent variable (corporate financial performance) and each of the eight independent variables (eight categories of CSR), and to determine whether stakeholder value is enhanced or eroded. Regression analysis was also used to estimate the statistical value of the dependent variable for a given value of the independent variable to confirm that the independent variables individually or collectively explain a change in the dependent variable.

Institutional Review Board Approval

This study does not involve human subjects, but it uses publicly available existing data. Before collecting and analyzing their research data, doctoral students at the Pepperdine University are obliged to obtain approval from the university's institutional review board (IRB) after successfully passing the preliminary oral dissertation examination. At Pepperdine University, students must get approval from the university IRB regardless of whether their dissertation research involves or doesn't involve human subjects. The IRB is designed to protect the rights and welfare of the participants in the research. The IRB ensures that the research is ethical and conducted in a manner that complies with federal, state, or local laws and regulations. Researchers are expected to address any ethical issues that may be involved in their research. Because this study does not involve human subjects, the researcher submitted an application of exempt review status to the IRB, stating purpose, research questions, the study procedure, study population, the design, data analysis, the risks, and the benefits of this study to the subjects and society. In addition, the researcher submitted a Human Subject Training Certificate and a copy of the dissertation proposal to the IRB.

Summary

The research study methodology discussed the study purpose, research questions, the population studied, the research design, instrument validity and reliability, instrumentation, study limitations, human subject considerations, data collection procedures, methodological assumptions, data management, and data analysis. The aim of this quantitative study is to examine the relationship between CSR and corporate financial performance in the pharmaceutical industry.

Chapter 4: Results

Overview of Chapter Content and Organization

Chapter 4 summarizes the results of the statistical analyses performed on the publicly available data collected from the 18 pharmaceutical companies that participated in this research study. The subsections discuss the analysis of results, answering the research questions, and contain additional findings and the conclusion. The purpose of this study is to determine the financial performance in the pharmaceutical industry among pharmaceutical companies that have embraced CSR. The aim of this quantitative, nonexperimental, correlative research study is to ascertain if CSR leads to better financial performance in the pharmaceutical industry.

The research question in this study was fully addressed using descriptive and inferential statistical analyses. Financial performance was measured as EVA. Correlations were performed on the eight hypotheses in the study. Wilcoxon matched pairs test was used to compare changes in CSR and EVA scores from 2012 to 2014. Correlations were computed to examine the relationship between CSR (independent variables), and the 2011 to 2014 financial performance (dependent variable). The study correlated the CSR scores of 2012 and 2014 with corporate financial performances of 2011, 2012, 2013, and 2014. Because the Access to Medicine Index is published every two years, the CSR scores of 2012 were correlated with the average of the sum of 2011 and 2012 financial performances while the CSR scores of 2014 were correlated with the average of the sum of 2013 and 2014 financial performances. The study is expected to influence a change in the contribution of pharmaceutical companies to the welfare of society by inspiring global pharmaceutical industry leaders to invest in CSR to generate positive collective benefits for society. A significantly positive relationship between CSR and financial performance should influence businesses to pay attention to not only their

corporate financial profits, but also their social, ethical, and environmental activities such as improving the access to medicine, reducing poverty, and contributing to the improvement of their communities. The study evaluated the financial performance and CSR engagement of 18 leading worldwide pharmaceutical companies with headquarters in seven countries depicted in Table 1.

Six of the pharmaceutical companies in this study have their headquarters in the United States, four in Japan, two in Great Britain, two in Germany, two in Switzerland, one in Denmark, and one in France. The study intended to evaluate the pharmaceutical companies listed in Table1 because they are the only pharmaceutical companies currently participating in the Access to Medicine Index's CSR assessment and ranking. Although the study aimed to analyze the impact of CSR on financial performance of 20 global pharmaceutical companies that are rated by the Access to Medicine Index, the researcher studied 18 of the 20 pharmaceutical companies because: (a) Only 19 of the 20 pharmaceutical companies participated in both the 2012 and 2014 Access to Medicine CSR ranking. The 20th company rated by the Access to Medicine in 2012 was Abbott Laboratories Inc., while the 20th company rated in 2014 was AbbVie Inc.; (b) Boehringer Ingelheim GmbH, a private company, was one of the 19 companies ranked by the Access to Medicine in both 2012 and 2014, but it was eliminated from this study because it is not a publicly traded company. The financial data of Boehringer Ingelheim GmbH are not publicly available, unlike the financial data of the 18 publicly traded pharmaceutical companies.

Table 1

Companies on the Access to Medicine Index CSR Ranking

Company	Year	Country
Abbott Laboratories Inc.	2012	USA
AbbVie Inc.	2014	USA
Astellas Pharma Inc.	2012 and 2014	Japan
AstraZeneca plc	2012 and 2014	Great Britain
Bayer AG	2012 and 2014	Germany
Bristol-Myers Squibb Co.	2012 and 2014	USA
Daiichi Sankyo Co. Ltd.	2012 and 2014	Japan
Eisai Co. Ltd.	2012 and 2014	Japan
Eli Lilly & Co.	2012 and 2014	USA
Gilead Sciences Inc.	2012 and 2014	USA
GlaxoSmithKline plc	2012 and 2014	Great Britain
Johnson & Johnson	2012 and 2014	USA
Merck & Co. Inc.	2012 and 2014	USA
Merck KGaA	2012 and 2014	Germany
Novartis AG	2012 and 2014	Switzerland
Novo Nordisk A/S	2012 and 2014	Denmark
Pizer Inc.	2012 and 2014	USA
Roche Holding AG	2012 and 2014	Switzerland
Sanofi	2012 and 2014	France
Takeda Pharmaceutical Co. Ltd.	2012 and 2014	Japan

This study aimed to evaluate the world's largest, publicly traded pharmaceutical companies so that the findings of the study could be generalized to other publicly traded pharmaceutical companies. The quantitative study used archival data from annual reports of 18 pharmaceutical companies to answer the research question. The annual reports of the 18

companies were collected for the years of 2011 through 2014. The financial data were gathered from the income statements and balance sheets of each of the 18 pharmaceutical companies for the period 2011 through 2014. Griffin and Mahon (1997) and Pava and Krausz (1996) established that publicly disclosed financial information that satisfies the mandate of the U.S. Securities Exchange Commission, including 10k filings, is adequate for analyzing the impact of CSR on financial performance. EVA or economic profit was calculated from the information obtained from the annual reports. EVA is a more comprehensive performance metric than other performance metrics such as earnings per share, return on asset, and return on investment because it measures the entire cost of running a business including operating and financing cost (Ehrbar, 1998). In his 1995 *Harvard Business Review* article, Peter Drucker (as cited in Ehrbar, 1998) stated:

> EVA is based on something we have known for a long time: What we call profits, the money left over to service equity, is usually not profit at all. Until a business returns a profit that is greater than its cost of capital, it operates at a loss. Never mind that it pays taxes as if it had a genuine profit. The enterprise still returns less to the economy than it devours in resources.…Until then it does not create wealth; it destroys it. (p. 2)

The CSR data were gleaned from the 2012 and 2014 reports of the Access to Medicine Index. The analysis of the data to determine the impact of CSR on financial performance in the pharmaceutical industry was performed using SPSS. Table 2 displays the descriptive statistics (Mean [*M*], standard deviation [*SD*], minimum value [Low], and maximum value [High]) for the companies' CSR scores and EVA for 2012 and 2014.

Analysis of Results

Table 2 provides the descriptive statistics (Mean [*M*], standard deviation [*SD*], minimum value [Low], and maximum value [High]) for the 2012 and 2014 CSR scores and EVA score.

Table 2

Descriptive Statistics for 2012 and 2014 CSR Scores and EVA

Score	*M*	*SD*	Low	High
2012 Overall CSR Score	2.36	0.87	0.90	3.80
2012 General Access to Medicine Management	2.90	1.26	0.50	4.90
2012 Public Policy & Market Influence	2.99	0.68	1.80	3.90
2012 Research & Development	2.63	0.99	1.20	4.70
2012 Pricing, Manufacturing, & Distribution	1.79	0.98	0.20	3.20
2012 Patents & Licensing	1.68	0.91	0.70	4.10
2012 Capability Advancement in Product Development & Distribution	2.28	1.04	0.60	4.20
2012 Product Donations & Philanthropic Activities	3.18	1.05	1.30	4.60
2014 Overall CSR Score	2.36	0.56	1.45	3.29
2014 General Access to Medicine Management	2.94	1.36	0.70	4.90
2014 Public Policy & Market Influence	1.57	0.63	0.40	2.80
2014 Research & Development	2.44	0.53	1.60	3.70
2014 Pricing, Manufacturing, & Distribution	2.57	0.77	1.10	3.80
2014 Patents & Licensing	1.68	0.62	0.60	2.80
2014 Capability Advancement in Product Development & Distribution	2.73	0.83	1.20	3.90
2014 Product Donations & Philanthropic Activities	2.57	0.74	1.30	3.60
2012 EVA	-3,052.40	28,332.54	-113,153.74	15,552.43
2014 EVA	-15,620.15	66,407.70	-275,675.42	20,664.70

n = 18

As shown in Table 2, the Overall CSR scores increased slightly from 2012 (*M* = 2.36, *SD* = 0.87) to 2014 (*M* = 2.36, *SD* = 0.56), while EVA decreased from 2012 (*M* = -3,052.40, *SD* = 28,332.54) to 2014 (*M* = -15,620.15, *SD* = 66,407.70). The highest CSR score for 2012 was product donations and philanthropic activities (*M* = 3.18, *SD* = 1.05), while the lowest score for 2012 was patents and licensing (*M* = 1.68, *SD* = 0.91). The highest CSR score for 2014 was

general access to medicine management (M = 2.94, SD = 1.36), while the lowest score for 2014 was public policy and market influence (M = 1.57, SD = 0.63).

Answering the Research Question

The research question asked: What is the financial performance in the pharmaceutical industry among companies that have embraced CSR? The related null hypotheses predicted that there would be no correlations between any of the eight CSR scores and financial performance. Specifically, the Alternative Hypothesis predicted positive correlations between financial performance (EVA) and CSR as follows:

Alternative Hypothesis 1. There is a positive correlation between incorporation of general access to medicine management (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

Alternative Hypothesis 2. There is a positive correlation between incorporation of public policy and market influence (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

Alternative Hypothesis 3. There is a positive correlation between incorporation of research and development conducted on neglected diseases (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

Alternative Hypothesis 4. There is a positive correlation between incorporation of pricing, manufacturing, and distribution practices (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

Alternative Hypothesis 5. There is a positive correlation between incorporation of patent and licensing policies (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

Alternative Hypothesis 6. There is a positive correlation between incorporation of capacity advancement in product development and distribution (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

Alternative Hypothesis 7. There is a positive correlation between incorporation of product donations and philanthropic activities (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

Alternative Hypothesis 8. There is a positive correlation between incorporation of CSR (overall independent variables) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry.

Table 3

Spearman Correlations for CSR Scores with EVA in 2012 and 2014

Correlations for 2012 Data		Correlations for 2014 Data		
CSR Scores	EVA	CSR Scores	EVA	
General Access to Medicine Management	.26	General Access to Medicine Management	.59	**
Public Policy & Market Influence	.29	Public Policy & Market Influence	.28	
Research & Development	.33	Research & Development	.08	
Pricing, Manufacturing, & Distribution	.28	Pricing, Manufacturing, & Distribution	.37	
Patents & Licensing	.33	Patents & Licensing	.38	
Capability Advancement in Product Development & Distribution	.17	Capability Advancement in Product Development & Distribution	.52	*
Product Donations & Philanthropic Activities	.15	Product Donations & Philanthropic Activities	.50	*
Overall CSR Score	.16	Overall CSR Score	.63	***

$n = 18$

* $p < .05$. ** $p < .01$. *** $p < .005$. **** $p < .001$.

To answer the research question posed in this study, Table 3 displays the Spearman correlations for the 2012 and 2014 CSR scores with the 2012 and 2014 EVA. Spearman

correlations were used instead of Pearson correlations because of sample size (n = 18). Below are the results of the hypothesis testing.

Test of Hypothesis 1

Null Hypothesis 1 was: There is no correlation between incorporation of general access to medicine management (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry. This hypothesis was addressed using Spearman's correlations. As shown in Table 3, General access to medicine management was not significantly correlated with EVA in 2012 (r_s = .26, p = .28), but was significantly correlated in 2014 (r_s = .59, p = .008), providing partial support to reject this null hypothesis. The results showed a positive and significant relationship between general access to medicine management and financial performance in 2014, but general access to medicine management was not significantly correlated with financial performance in 2012. This finding partially supports alternative hypothesis 1, which postulates that there is a positive correlation between incorporation of general access to medicine management in the business strategy, and financial performance in the pharmaceutical industry.

Test of Hypothesis 2

Null Hypothesis 2 was: There is no correlation between incorporation of public policy and market influence (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry. This hypothesis was addressed using Spearman's correlations. Table 3 displays the Spearman correlations for the 2012 and 2014 CSR scores with that year's EVA score to answer the research question. As shown in Table 3, Public policy and market influence was not significantly correlated with EVA in 2012 (r_s = .29, p = .22) nor in 2014 (r_s = .28, p = .25), providing no support to reject this null hypothesis. This finding

supports the null hypothesis 2 that there is no correlation between incorporation of public policy and market influence in the business strategy and financial performance in the pharmaceutical industry.

Test of Hypothesis 3

Null Hypothesis 3 was: There is no correlation between incorporation of research and development conducted on neglected diseases (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry. This hypothesis was addressed using Spearman's correlations. As shown in Table 3, Research and development conducted on neglected diseases was not significantly correlated with EVA in 2012 (r_s = .33, p = .16) nor in 2014 (r_s = .08, p = .75), providing no support to reject this null hypothesis. This finding supports the null hypothesis 3 that there is no correlation between incorporation of research and development conducted on neglected diseases in the business strategy, and financial performance in the pharmaceutical industry.

Test of Hypothesis 4

Null Hypothesis 4 was: There is no correlation between incorporation of pricing, manufacturing, and distribution practices (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry. This hypothesis was addressed using Spearman's correlations. As shown in Table 3, Pricing, manufacturing, and distribution practices was not significantly correlated with EVA in 2012 (r_s = .28, p = .24) nor in 2014 (r_s = .37, p = .12), providing no support to reject this null hypothesis. This finding supports the null hypothesis 4 that there is no correlation between incorporation of pricing, manufacturing, and distribution practices in the business strategy, and financial performance in the pharmaceutical industry.

Test of Hypothesis 5

Null Hypothesis 5 was: There is no correlation between incorporation of patent and licensing policies (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry. This hypothesis was addressed using Spearman's correlations. As shown in Table 3, patents and licensing policies was not significantly correlated with EVA in 2012 (r_s = .33, p = .17) nor in 2014 (r_s = .38, p = .11), providing no support to reject this null hypothesis. This finding supports the null hypothesis 5 that there is no correlation between incorporation of patent and licensing policies in the business strategy, and financial performance in the pharmaceutical industry.

Test of Hypothesis 6

Null Hypothesis 6 was: There is no correlation between incorporation of capacity advancement in product development and distribution (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry. This hypothesis was addressed using Spearman's correlations. As shown in Table 3, Capability advancement in product development and distribution was not significantly correlated with EVA in 2012 (r_s = .17, p = .50), but was significantly correlated in 2014 (r_s = .52, p = .02), providing partial support to reject this null hypothesis. The results showed a positive and significant relationship between capability advancement in product development and distribution and financial performance in 2014, but capability advancement in product development and distribution was not significantly correlated with financial performance in 2012. This finding partially supports alternative hypothesis 6, which postulates that there is a positive correlation between incorporation of capacity advancement in product development and distribution in the business strategy, and financial performance in the pharmaceutical industry.

Test of Hypothesis 7

Null Hypothesis 7 was: There is no correlation between incorporation of product donations and philanthropic activities (independent variable) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry. This hypothesis was addressed using Spearman's correlations. As shown in Table 3, product donations and philanthropic activities was not significantly correlated with EVA in 2012 (r_s = .15, p = .54), but was significantly correlated in 2014 (r_s = .50, p = .03), providing partial support to reject this null hypothesis. The results showed a positive and significant relationship between product donations and philanthropic activities and financial performance in 2014, but product donations and philanthropic activities was not significantly correlated with financial performance in 2012. This finding partially supports alternative hypothesis 7, which postulates that there is a positive correlation between incorporation of product donations and philanthropic activities in the business strategy, and financial performance in the pharmaceutical industry.

Test of Hypothesis 8

Null Hypothesis 8 was: There is no correlation between incorporation of overall CSR (overall independent variables) in the business strategy, and financial performance (dependent variable) in the pharmaceutical industry. This hypothesis was addressed using Spearman's correlations. As shown in Table 3, overall CSR score was not significantly correlated with EVA in 2012 (r_s = .16, p = .53) but was significantly correlated in 2014 (r_s = .63, p = .003), providing partial support to reject this null hypothesis. The results showed a positive and significant relationship between overall CSR (overall independent variables) and financial performance in 2014, but overall CSR (overall independent variables) was not significantly correlated with financial performance in 2012. This finding partially supports alternative hypothesis 8, which

postulates that there is a positive correlation between incorporation of overall CSR in the business strategy, and financial performance in the pharmaceutical industry.

Additional Findings

Table 4 provides the results of the Wilcoxon matched pairs tests comparing CSR and EVA scores in 2012 with 2014. Wilcoxon matched pairs tests were used instead of paired samples *t* tests because of the sample size ($n = 18$). Inspection of the table found that significant changes occurred in four out of the nine pairs. Specifically, CSR public policy and market influence scores significantly declined ($z = 3.73$, $p = .001$), and CSR pricing, manufacturing, and distribution scores significantly gained ($z = 3.60$, $p = .001$). CSR capability advancement in product development and distribution scores significantly gained ($z = 2.75$, $p = .006$), and CSR product donations and philanthropic activities scores significantly declined ($z = 3.13$, $p = .002$).

Table 4

Comparison of 2012 and 2014 Selected Variables Wilcoxon Matched Pairs

Variable	Year	*n*	*M*	*SD*	*z*	*p*
Overall CSR Score					0.02	.98
	2012	18	2.36	0.87		
	2014	18	2.36	0.56		
General Access to Medicine Management					0.29	.78
	2012	18	2.90	1.26		
	2014	18	2.94	1.36		
Public Policy & Market Influence					3.73	.001
	2012	18	2.99	0.68		
	2014	18	1.57	0.63		
Research & Development					1.40	.16
	2012	18	2.63	0.99		
	2014	18	2.44	0.53		
Pricing, Manufacturing, & Distribution					3.60	.001
	2012	18	1.79	0.98		
	2014	18	2.57	0.77		

continued

Variable	Year	*n*	*M*	*SD*	*z*	*p*
Patents & Licensing					0.39	.70
	2012	18	1.68	0.91		
	2014	18	1.68	0.62		
Capability Advancement in Product Development & Distribution					2.75	.006
	2012	18	2.28	1.04		
	2014	18	2.73	0.83		
Product Donations & Philanthropic Activities					3.13	.002
	2012	18	3.18	1.05		
	2014	18	2.57	0.74		
EVA					1.50	.13
	2012	18	-3052.40	28332.54		
	2014	18	-15620.15	66407.70		

n = 18

As shown in Table 4 using Wilcoxon test statistic (*z*-score) to compare changes in CSR and EVA scores from 2012 to 2014, no significant changes were found in five out of the nine pairs. Specifically, overall CSR scores were not significantly different from 2012 to 2014 ($z = 0.02$, $p = .98$). As shown in Table 4, CSR general access to medicine management scores were not significantly different from 2012 to 2014 ($z = 0.29$, $p = .78$). CSR research and development of neglected diseases scores were not significantly different from 2012 to 2014 ($z = 1.40$, $p = .16$). CSR patent and licensing scores were not significantly different from 2012 to 2014 ($z = 0.39$, $p = .70$). Corporate financial performance (EVA) was not significantly different from 2012 to 2014 ($z = 1.50$, $p = .13$).

The 2012 and 2014 CSR scores of eight CSR categories and the 2012 and 2014 financial performance data of the 18 pharmaceutical companies are shown as:
Overall CSR scores and EVA (see Appendix E1); CSR general access to medicine management scores and EVA (see Appendix E2); CSR public policy & market influence scores and EVA (see Appendix E3); CSR research & development scores and EVA (see

Appendix E4); CSR pricing, manufacturing & distribution scores and EVA (see Appendix E5); CSR patents & licensing scores and EVA (see Appendix E6); CSR capability advancement in product development & distribution scores and EVA (see Appendix E7); and CRS product donations & philanthropic activities scores and EVA (see Appendix E8).

Summary

In Chapter 4, archival data from 18 pharmaceutical companies for the period 2011 through 2014, were used to evaluate the impact of CSR on financial performance in the pharmaceutical industry among companies that have embraced CSR. The purpose of the quantitative analysis is to ascertain if CSR leads to better financial performance in the pharmaceutical industry.

The descriptive statistical analysis showed that the mean overall CSR scores increased slightly from 2012 to 2014, while the mean EVA decreased from 2012 to 2014. Product donations and philanthropic activities was the highest CSR score for 2012, while patents and licensing was the lowest score for 2012. The highest mean CSR score for 2014 was general access to medicine management, while the lowest mean CSR score for 2014 was public policy and market influence.

Spearman's correlations of the 2012 and 2014 CSR scores with the 2012 and 2014 EVA were used to answer the research question, which asked: What is the financial performance in the pharmaceutical industry among companies that have embraced CSR? They were also used to answer the related null hypotheses, which predicted that there would be no correlations among any of the eight CSR scores and financial performance. Four of the eight hypotheses received partial support based on significant correlations between 2014 CSR and 2014 financial performance.

This study found no correlation among the eight dimensions of CSR and corporate financial performance in 2012. The results showed a positive and significant relationship between general access to medicine management and financial performance in 2014, but general access to medicine management was not significantly correlated with financial performance in 2012. This finding partially supports alternative hypothesis 1, which postulates that there is a positive correlation between incorporation of CSR general access to medicine management in the business strategy, and financial performance in the pharmaceutical industry.

The findings showed a positive and significant relationship between CSR capability advancement in product development and distribution and financial performance in 2014, but CSR capability advancement in product development and distribution was not significantly correlated with financial performance in 2012. This finding partially supports alternative hypothesis 6, which postulates that there is a positive correlation between incorporation of capacity advancement in product development and distribution in the business strategy, and financial performance in the pharmaceutical industry.

A positive and significant relationship was found between CSR product donations and philanthropic activities and financial performance in 2014, but CSR product donations and philanthropic activities was not significantly correlated with financial performance in 2012. This finding partially supports alternative hypothesis 7, which postulates that there is a positive correlation between incorporation of product donations and philanthropic activities in the business strategy, and financial performance in the pharmaceutical industry.

A positive and significant relationship was found between overall CSR (overall independent variables) and financial performance in 2014, but overall CSR (overall independent variables) was not significantly correlated with financial performance in 2012. This finding

partially supports alternative hypothesis 8, which postulates that there is a positive correlation between incorporation of CSR in the business strategy, and financial performance in the pharmaceutical industry.

The Wilcoxon matched pairs tests were used to compare the changes in CSR and EVA scores from 2012 to 2014. The results showed that significant changes occurred in four out of the nine pairs that were compared. CSR public policy and market influence scores significantly declined from 2012 to 2014. CSR pricing, manufacturing, and distribution scores significantly gained from 2012 to 2014. CSR capability advancement in product development and distribution scores significantly gained from 2012 to 2014, and CSR product donations and philanthropic activities scores significantly declined from 2012 to 2014. In the final chapter, these findings are compared to the literature, conclusions and implications are drawn, and recommendations are suggested.

Chapter 5: Discussion

Introduction and Summary of Key Findings

Chapter 5 provides an overview of this study, compares the findings to the literature, draws conclusions and implications, and makes some recommendations. More than 2 billion people still do not have access to medicines for treatable health conditions (Arnold & Valentin, 2013; M. Lee & Kohler, 2010). Gaining access to medicine depends on a variety of stakeholders, including governments and the pharmaceutical industry. Pharmaceutical companies play a crucial role in society because they have the expertise to develop and manufacture life-saving therapeutic products. Pharmaceutical companies would be motivated to embed CSR in their governance structures and develop strategies to manage access to medicine and address the needs of the poor if provided a justifiable business case for CSR. Although the study of CSR and its impact on corporate financial performance has grown immensely throughout the past 40 years, it is still uncertain if CSR creates value for a firm since the existing research has not provided a conclusive answer (Cheng et al., 2014; Margolis, & Walsh, 2003; Servaes & Tamayo, 2013).

The purpose of this quantitative study is to analyze the impact of CSR on corporate financial performance in the pharmaceutical industry. The aim of the study is to ascertain if CSR leads to better financial performance in the pharmaceutical industry. Therefore, correlations were computed to examine the relationship between CSR (independent variables), and the 2011–2014 financial performance (dependent variable). The strength and direction of association between the dependent variable and independent variables was assessed through correlation (using the Spearman correlation coefficient) to determine whether a significant correlation exists. This study intended to analyze the CSR performance of the leading 20 global pharmaceutical companies that are ranked by the Access to Medicine Index but because of unavailability of CSR

data for the contiguous years, the researcher studied 18 of the 20 pharmaceutical companies that participated in the 2012 and 2014 Access to Medicine CSR rating. The study assesses the world's largest, publicly traded pharmaceutical companies and the findings could be generalized to other publicly traded pharmaceutical companies. This study is expected to influence a change in the contribution of pharmaceutical companies to the welfare of society by inspiring global pharmaceutical industry leaders to invest in CSR to generate positive collective benefits for society.

This study uses the Global Leadership Network Framework to evaluate the financial performance in the pharmaceutical industry among companies that have embraced CSR. The Global Leadership Network Framework shown in Figure 1, focuses on four areas: business strategy (evaluating business priorities and alignment of CSR with business policies and processes), engaged learning (defining corporate CSR policy through interaction and consultation with stakeholders), leadership (commitment of the corporation to take leadership on social and environmental issues that are important to the business), and operational excellence (embedding CSR through coordination of processes, practices, policies, and relationships with the stakeholders to ensure alignment between the business strategy and the corporate goal).

The research question that this study answers is: What is the financial performance in the pharmaceutical industry among companies that have embraced CSR? The related null hypotheses predicted that there would be no correlations between any of the eight CSR scores and financial performance. Specifically, the alternative hypotheses predicted positive correlations between the dependent variable, financial performance and the eight independent variables: incorporation of general access to medicine management in the business strategy (*Alternative hypothesis 1*), incorporation of public policy and market influence in the business

strategy (*Alternative hypothesis 2*), incorporation of research and development conducted on neglected diseases in the business strategy (*Alternative hypothesis 3*), incorporation of pricing, manufacturing, and distribution practices in the business strategy (*Alternative hypothesis 4*), incorporation of patent and licensing policies in the business strategy (*Alternative hypothesis 5*), incorporation of capacity advancement in product development and distribution in the business strategy (*Alternative hypothesis 6*), incorporation of product donations and philanthropic activities in the business strategy (*Alternative hypothesis 7*), and incorporation of overall CSR in the business strategy (*Alternative hypothesis 8*).

The Null Hypotheses predicted no correlations between the dependent variable, financial performance and the eight independent variables: incorporation of general access to medicine management in the business strategy (*Null Hypothesis 1*), incorporation of public policy and market influence in the business strategy (*Null hypothesis 2*), incorporation of research and development conducted on neglected diseases in the business strategy (*Null hypothesis 3*), incorporation of pricing, manufacturing, and distribution practices in the business strategy (*Null hypothesis 4*), incorporation of patent and licensing policies in the business strategy (*Null hypothesis 5*), incorporation of capacity advancement in product development and distribution in the business strategy (*Null hypothesis 6*), incorporation of product donations and philanthropic activities in the business strategy (*Null hypothesis 7*), and incorporation of overall CSR in the business strategy (*Null hypothesis 8*).

Archival data from 18 global pharmaceutical companies were used to determine the financial performance in the pharmaceutical industry among companies that have embraced CSR. Four of the eight hypotheses received partial support based on significant correlations in 2014. Specifically, significant 2014 relationships with financial performance (EVA) were

observed for general access to medicine management (*Alternative hypothesis 1*), capacity advancement in product development and distribution (*Alternative hypothesis 6*), product donations and philanthropic activities (*Alternative hypothesis 7*) as well as the overall CSR (*Alternative hypothesis 8*).

Descriptive statistics was used to evaluate the 2012 and 2014 CSR and financial performance (measured as EVA) of 18 pharmaceutical companies. The mean overall CSR scores increased slightly from 2012 to 2014 while the mean financial performance (EVA) decreased from 2012 to 2014. The highest mean CSR score for 2012 was product donations and philanthropic activities, while patents and licensing was the lowest CSR score for 2012. The highest mean CSR score for 2014 was general access to medicine management, while the lowest CSR score for 2014 was public policy and market influence.

The changes in CSR scores and EVA from 2012 to 2014 were compared using Wilcoxon matched pairs test, and significant changes were found in four out of the nine matched pairs. Specifically, CSR public policy and market influence scores significantly declined; CSR pricing, manufacturing, and distribution scores significantly gained; CSR capability advancement in product development and distribution scores significantly gained; and CSR product donations and philanthropic activities scores significantly declined.

Comparison of Results to Earlier Studies

The relationship between the CSR and corporate financial performance has garnered much interest and controversy for more than five decades (Preston & O'Bannon, 1997). Despite this long history of research, analysis, and debate, no consensus on the impact of CSR on corporate financial performance has been fully established (Griffin & Mahon, 1997; Preston & O'Bannon, 1997; Saeidi et al., 2015). The results have not been consistent but have often been

contradictory and rather misleading (Margolis & Walsh, 2003). Although the study of CSR and its impact on corporate financial performance is growing, it is still unknown whether high profits enable greater spending on CSR, or if it is that CSR creates higher profits (Robins, 2011).

This study builds on Berete's (2011) study by testing the strength of the correlations between CSR and corporate financial performance as predictors of value creation for stakeholders. Berete's study evaluated the relationship between overall CSR and financial performance but did not examine the effects of each of the eight dimensions of CSR on financial performance. In addition to correlating corporate financial performance with overall CSR, this study examines the relationship between corporate financial performance and each of the seven CSR categories: (a) general access to medicine management; (b) public policy and market influence; (c) research and development conducted on neglected diseases; (d) pricing, manufacturing, and distribution practices; (e) patent and licensing policies; (f) capacity advancement in product development and distribution; and (g) drug donations and philanthropic activities, and (h) overall CSR. Berete's (2011) study found positive correlation between overall CSR and financial performance in the pharmaceutical industry. This study found no correlation between the eight dimensions of CSR and corporate financial performance in 2012. However, this study found positive and significant relationship between four of eight categories of CSR and corporate financial performance in 2014. Specifically, significant 2014 relationships with financial performance (EVA) were observed for general access to medicine management (*Alternative hypothesis 1*), capacity advancement in product development and distribution (*Alternative hypothesis 6*), product donations and philanthropic activities (*Alternative hypothesis 7*), and overall CSR (*Alternative hypothesis 8*). The findings in this study of significant 2014 overall CSR positive relationship with 2014 corporate financial performance support Berete's

(2011) findings. Unlike Berete's findings, the results of this study did not show any effect of 2012 overall CSR on 2012 corporate financial performance in the pharmaceutical industry.

A majority of studies on the relationship between CSR and corporate financial performance have reported a positive association between CSR and corporate financial performance (Orlitzky et al., 2003; H. Wang & Choi, 2013), but some have reported negative relationships. Moore (2001) investigated the relationship between CSR and corporate financial performance in 8 of 11 firms in the U.K. supermarket industry. The CSR dimensions measured were employees, customers, shareholders, suppliers, community, and environment while financial performance metrics were growth in turnover, profitability, return on capital, and earnings per share. The researcher found negative relationships between CSR and corporate financial performance, with corporate financial performance declining as CSR initiatives increased (Moore, 2001).

Some studies in the literature on the link between CSR and financial performance showed no effect, inconclusive, or mixed relationships between CSR and corporate financial performance. Aupperle et al. (1985) studied 180 firms to assess the relationship between CSR and corporate financial performance. The study measured CSR using a survey of the CEOs of 180 firms. The researchers found no association between CSR and corporate financial performance because their study showed that engaging in CSR practices was neither helpful nor harmful to a firm (Aupperle et al., 1985). McGuire et al. (1988) assessed the relationship between CSR and corporate financial performance and they reported mixed results. Their study showed a positive relationship between CSR and return on asset, a negative relationship between CSR and operating income growth, and a significant negative relationship between CSR and ratio of debt to assets (McGuire et al., 1988). Peloza (2009) examined 128 studies concerning the

relationship between CSR and financial outcomes and reported mixed results. Peloza found that 59% of the studies reviewed reported a positive relationship between CSR and financial performance, 27% had a mixed or neutral relationship, and 14% had a negative relationship between CSR and financial performance.

There are inconsistencies in the findings on the relationship between CSR and corporate financial performance. Sandhu and Kapoor (2005) studied 20 top companies operating in India from 2000 to 2003, to evaluate the relationship between CSR and corporate financial performance. The study showed that there was no relationship between CSR and corporate financial performance (Sandhu & Kapoor, 2005). However, when these same authors replicated the study on the same companies using same CSR measures and financial performance measures, they found a significant relationship between CSR and corporate financial performance (Kapoor & Sandhu, 2010).

Several researchers, including Griffin and Mahon (1997) and Margolis and Walsh (2003) questioned the methods used by many of the studies that have assessed the relationship between CSR and corporate financial performance. These researchers argue that the contradictory results seen in these studies could be because the relationship between the CSR and corporate financial performance may be affected by some factors that these studies might have overlooked (Griffin & Mahon, 1997; Margolis &Walsh, 2003; Saeidi et al., 2015). This study builds on Berete's (2011) study by evaluating the impact of CSR on corporate financial performance, but the methodology of this study is quite different from Berete's study. Because the Access to Medicine Foundation publishes its CSR ranking of the largest 20 global pharmaceutical companies every two years, this study correlated the mean value of each two-year financial performance to the corresponding CSR score. Berete's study correlated 2008 overall CSR scores with the mean

financial performance of 2006 and 2007, and the financial performance of 2009 in the pharmaceutical industry. This study correlated the 2012 scores of each of eight CSR dimensions with 2012 financial performance (mean financial performance of 2011 and 2012) in the pharmaceutical industry, and correlated the 2014 scores of each of the eight CSR dimensions with 2014 financial performance (mean financial performance of 2013 and 2014) in the pharmaceutical industry.

After decades of research on the relationship between CSR and corporate financial performance, there exist no consistent factors for measuring CSR, and corporate leaders use different metrics to evaluate the economic impact of CSR on corporate financial performance (Peloza, 2009). There is lack of agreement on the metrics or quantifiable measures of CSR (Santoso & Feliana, 2014). In a review of 159 published studies, Peloza (2009) found that 59 studies used 39 different dimensions or attributes of CSR to assess the relationship between CSR and corporate financial performance. The CSR performance metrics used in the studies were highly diverse; some measured a firm's family-friendly policies, some industry codes of ethics, while others measured corporate environmental protection activities.

There is disagreement regarding the best way to measure corporate financial performance when evaluating the link between CSR and corporate financial performance; whether to use accounting or market-based measures remains unresolved (Gama Boaventura et al., 2012; D. D. Lee & Faff, 2009; Orlitzky et al., 2003; van Beurden & Gössling, 2008). Researchers have shown that the two measures (accounting measures and market measures), if used to assess the economic impact of CSR on financial performance on the same data, would give different findings (van Beurden & Gössling, 2008). Some researchers have argued that accounting measures are better than market measures for analyzing the economic impact of CSR on

corporate financial performance because market-based measurements provide less significant relationship between CSR and corporate financial performance (van Beurden & Gössling, 2008).

There is controversy about the inconclusive or mixed evidence on whether and to what extent CSR influences corporate financial performance. Some have argued that the inconsistencies in the studies' findings on the economic impact of CSR on corporate financial performance arise from the context of the studies, such as the country, industry, size of the firm, and the differences in the number and types of CSR elements measured (Gregory et al., 2014; Orlitzky et al., 2003). In addition, variations in the studies have been attributed to the different financial measures used. Some studies have used accounting measures including return on assets, return on equity, or return on sales while others have used stock returns (Margolis et al., 2009; Orlitzky et al., 2003). The value of both the accounting measures and the stock market measures has been disputed. Some have called accounting measures backward looking and questioned the value of the data obtained from using these measures (Gregory et al., 2014). Others argue that stock market measures are forward-looking measures that provide an outlook of future cash flows (Margolis et al., 2009), but some researchers contend that using stock market measures can produce misleading results on the relationship between CSR and corporate financial performance (Gregory et al., 2014).

The debate over the impact of CSR and corporate financial performance remains unsettled because no consensus has been achieved in the numerous studies that have evaluated the relationship between CSR and corporate financial performance. Margolis and Walsh (2003) analyzed 127 research studies that investigated the relationship between CSR and corporate financial performance between 1972 and 2002. Their results showed mostly positive, few negative, and no relationship between CSR and corporate financial performance. Some scholars

have concluded that the relationship between CSR and corporate financial performance is a complex puzzle and it is not possible to make a theoretical generalization about the effects of corporate socially responsible practices on corporate financial performance (Margolis &Walsh, 2003; Perrini et al., 2011; Saeidi et al., 2015).

Critics of CSR have argued that investing in CSR instead of other potentially profitable business strategies decreases economic performance (Aupperle et al., 1985; D. D. Lee & Faff, 2009). Ullmann (1985) argued that because of the large number of variable factors that impact a firm's CSR and corporate financial performance, it is unreasonable to claim that there is a relationship between CSR and the corporate financial performance. The findings of this quantitative study on the impact of CSR on financial performance in the pharmaceutical company do not support the assertion that the costs incurred when a firm invests in CSR decrease corporate financial performance. At the minimum, this study found that investment in CSR does not decrease corporate financial performance, but instead CSR investment has moderate positive relationship with corporate financial performance based on the 2014 significant relationship between four of eight CSR dimensions with corporate financial performance, and no 2012 relationship between eight CSR dimensions with corporate financial performance.

This study makes new contributions to the understanding of the economic impact of CSR on corporate financial performance by broadening an earlier study. Berete's (2011) study only evaluated the relationship between a single dimension of CSR (overall CSR) and financial performance in the pharmaceutical industry. This study assessed the relationship between overall CSR and corporate financial performance in the pharmaceutical industry. In addition, this study examined the relationship between corporate financial performance and each of the seven CSR categories: (a) general access to medicine management; (b) public policy and market influence; (c) research and development conducted on neglected diseases; (d) pricing, manufacturing, and distribution practices; (e) patent and licensing policies; (f) capacity advancement in product development and distribution; (g) drug donations and philanthropic activities, and (h) overall CSR. This study found partial correlation between four of the eight dimensions of CSR and corporate financial performance based on significant positive correlations found between the four categories of CSR and corporate financial performance in 2014 but not in 2012. Significant 2014 positive relationships with financial performance were observed for general access to medicine management, capacity advancement in product development and distribution, product donations and philanthropic activities, and overall CSR. The significant 2014 overall CSR positive relationship with 2014 corporate financial performance partially supports Berete's (2011) findings. The findings in this study of no negative relationship between any of the eight categories of CSR and corporate financial performance in the pharmaceutical industry is an important contribution to the understanding of the relationship between CSR and financial performance in the pharmaceutical sector.

Alignment with Theoretical Framework

This study uses the Global Leadership Network Framework to assess how focused companies that have embrace CSR are on the four corporate domains: business strategy, engaged learning, leadership, and operational excellence. The CSR data in this study were collected from the public data of Access to Medicine Index, a rating company whose ranking criteria align with the four domains of the Global Leadership Network Framework. The Access to Medicine Index scores and ranks the CSR performance of 20 global pharmaceutical corporations on: (a) general access to medicine management CSR scores; (b) public policy and market influence CSR scores; (c) research and development conducted on neglected diseases CSR scores; (d) pricing, manufacturing, and distribution practices CSR scores; (e) patent and licensing policies CSR scores; (f) capacity advancement in product development and distribution CSR scores; (g) drug donations and philanthropic activities; and (h) overall CSR scores. This study evaluated the impact of CSR on the financial performance in the pharmaceutical industry on 18 pharmaceutical companies that have embraced CSR.

The Access to Medicine Index provides guidance to companies and reports on what all the pharmaceutical companies in the index are already doing well, and where solutions are still lacking (Access to Medicine Index, 2012, 2014). The Access to Medicine Index reports on how companies integrate CSR into their business strategies, and examines how they engage and share knowledge with stakeholders. In addition, the Index addresses access to medicines-related risks, opportunities and challenges, and explores innovative business models that improve access to medicine in a cost-effective way (Access to Medicine Index, 2012, 2014). The Index provides insight for companies, the global health, and investors to facilitate cooperation among all stakeholders working to improve human health globally (Access to Medicine Index, 2012, 2014).

The Global Leadership Network Framework focusses on: (a) business strategy (evaluating business priorities and alignment of CSR with business policies and processes), (b) engaged learning (defining corporate CSR policy through interaction and consultation with stakeholders), (c) leadership (commitment of the corporation to take leadership on social and environmental issues that are important to the business), and (d) operational excellence (embedding CSR through coordination of processes, practices, policies, and relationships with the stakeholders to ensure alignment between the business strategy and the corporate goal). The following analyses of the eight dimensions of CSR reported by Access to Medicine show evidence that the rating of the 20 pharmaceutical companies is consistent with the four domains (business strategy, engaged learning, leadership, and operational excellence) of the theoretical framework of this study. The Access to Medicine Index analyzes different areas of the eight CSR dimensions on which they rate the 20 pharmaceutical companies as shown below.

2012 and 2014 Access to Medicine Index CSR Report

General access to medicine management. The Access to Medicine Index analyzes the business strategies of pharmaceutical firms by evaluating how access to medicine is embedded in corporate governance and the processes for reviewing access to medicine strategies and initiatives. It reports on the transparency of companies' strategies and motives. In addition, the index assesses the operational excellence and engaged learning practices of the companies and reports on the extent and quality of stakeholder engagement, and whether the viewpoints of stakeholders are incorporated in the business strategies. The index encourages innovation and reports on whether companies are developing new business models to meet the needs of poor patients. The index reports on the leadership of the management units responsible for

developing, managing, and implementing access to medicine strategies and initiatives (Access to Medicine Index, 2012, 2014).

Public policy and market influence. The Access to Medicine Index evaluates strategic business activities of the pharmaceutical companies such as lobbying activities, ethical marketing, anticorruption, antibribery, and competitive behavior. The index reports on how companies regulate their behavior, and reports on lobby activities and any breach of laws and standards in all countries in which the companies operate (Access to Medicine Index, 2012, 2014). The index reports on unethical marketing practices such as improper marketing practice, bribery and corruption, and company's initiatives to counter these corporate malpractices. In addition, the index reports any innovative training or enforcement mechanisms to ensure ethical behavior in company operations.

Research and development conducted on neglected diseases. Because of the lack of access to medicine for poor people, especially for people living in developing countries, there is great demand for R & D that targets communicable and non-communicable diseases, neglected diseases, maternal diseases, and neonatal diseases (Access to Medicine Index, 2012, 2014). The Index examines how company pipelines target diseases in these categories. The Index reports on companies' commitment to take leadership on product development programs that target diseases covered by the Index. It reports on ethical clinical trials conduct and transparency of clinical trials. The Access to Medicine Index also reports any innovative strategic business models that focus on current gaps in product development for diseases covered by the Index.

Pricing, manufacturing and distribution practices. There is public outcry that pharmaceutical drugs are too expensive and that the high prices of drugs deny access to medicines for the poor. The Access to Medicine Index measures companies' operational

excellence (embedding CSR through coordination of processes, practices, policies, and relationships with the stakeholders to ensure alignment between the business strategy and the corporate goal) to determine if these firms consider patients' ability to pay when developing their pricing, manufacturing, and distribution strategies (Access to Medicine Index, 2012, 2014). The index reports on how companies certify that their products are priced equitably, especially for the poor patients, and how manufacturing and distribution practices of the companies help to guarantee product quality.

Patent and licensing policies. Patents are the life blood of pharmaceutical companies because it is the company's intellectual property. A patent on a drug reduces competition and gives a company monopoly rights, but monopoly can limit access to affordable medicine. The Access to Medicine Index asks companies a series of questions about the business strategies they use to limit the impact of patent monopolies on low income patients, and the firm's efforts to support the entry of generic medicine manufacturers into the market (Access to Medicine Index, 2012, 2014). The Index also questions the pharmaceutical companies about steps taken to lower drug prices where generic medicine markets are absent.

Capacity advancement in product development and distribution. The Access to Medicine Index analyzes capacity advancement in product development and distribution by examining long-standing corporate engagement with local stakeholders that is aligned with the needs and aims of the local population, and designed to improve the skills of people in the communities in which the pharmaceutical company is operating (Access to Medicine Index, 2012, 2014). Capacity advancement in product development and distribution essentially analyzes the four domains of the Global Leadership Network Framework: leadership, engaged learning, business strategy, and operational excellence. The Access to Medicine Index evaluates how

companies engage with local stakeholders to build capabilities in clinical research. The Index reports on how companies are improving quality management skills and competencies of the people in the community to make sure that drugs produced locally meet international standard of quality. The Index reports on companies' actions on improving pharmacovigilance systems (monitoring the effects drugs sold to the community to identify and evaluate any adverse reactions). In addition, it reports on how companies are building other local capacities, such as training health care workers, encouraging healthy living, and building health infrastructure.

Drug donations and philanthropic activities. The Access to Medicine Index emphasizes that companies take a strategic and structured business approach toward donations and philanthropic activities by focusing corporate business strategies on neglected diseases on a long-term basis rather than a one-time emergency donation of products (Access to Medicine Index, 2012, 2014). The Index reports on companies' product donations that target eradication, or control of a disease, and on philanthropic activities that support national and international health. The Index also reports on novel philanthropic activities that can improve the impact and efficiency of donations and philanthropic activities. As shown above, the process for ranking the CSR of 20 pharmaceutical companies is aligned with the four domains (business strategy, engaged learning, leadership, and operational excellence) of the theoretical framework of this study.

Many companies are in the business of rating the CSR performance of firms but to the best of the researcher's knowledge, no other rating index ranks companies on the same CSR dimensions as those of Access to Medicine Index. Researchers agree that measuring CSR is difficult and some have suggested various methods, including reputation indices, behavioral and perceptional measures, and case study (Turker, 2009). Despite the growth in number of

companies that are participating in CSR reporting, and the numerous methods that have been proposed for measuring CSR initiatives, the measurement of CSR remains a problem because almost all the methods for measuring CSR have limitations (Turker, 2009). Droppert and Bennett (2015) conducted an exploratory qualitative study of CSR on six large multinational pharmaceutical firms to understand why global pharmaceutical companies incorporate CSR in their business strategies and promote ways to leverage CSR to improve human health worldwide. The seven multinational pharmaceutical companies evaluated in Droppert and Bennett's (2015) study—GlaxoSmithKline, Johnson and Johnson, Merck & Co., Novartis, Pfizer, Roche, and Sanofi—are also among the 18 pharmaceutical companies in this quantitative study of the impact of CSR on financial performance in the pharmaceutical industry. Droppert and Bennett reported that out of all the current indices that score CSR, track the development, implementation, and effects of CSR strategies in the pharmaceutical industry, "Access to Medicines Index is best aligned with public health interests, but needs more work in terms of garnering attention, promoting transparency and ensuring that the indicators truly reflect existing priorities and concerns" (p. 7). This study supports the findings of Droppert and Bennett because to the best of the researcher's knowledge, there are no other indices with CSR dimensions that are better aligned to human health than the Access to Medicine's eight CSR dimensions evaluated in this study.

Another framework that could be used for evaluating the relationship between CSR and corporate financial performance is the pyramid of CSR (Figure 2). The pyramid of CSR proposed by Carroll (1991) provides a framework for understanding how a firm can reconcile its role of maximizing shareholders' profits with its social responsibilities to stakeholders. The pyramid of CSR proposed that in addition to economic and legal obligations, a corporation also

has ethical and philanthropic responsibilities (Carroll, 1991). Carroll's four-part CSR pyramid complements the current trend in corporate management where there is a growing acceptance of the relationship between the economic role of the firm and its obligations to the society (Gupta, 2012).

Final Summary of the Literature

Some scholars and corporate leaders have questioned if corporations should be involved in philanthropy especially after the economic arguments by Milton Friedman in a 1970 *New York Times* article and in his 1962 book *Capitalism and Freedom*. Friedman (1962) wrote in his book that the corporation is owned by its stockholders. The corporation should not make any charitable contributions. If the corporation makes a charitable contribution, it denies the individual stockholders the right to decide how to use his or her funds. Friedman's argument assumes that goals directed to helping society and corporations' economic goals are quite different, so that when a corporation spends on social issues, the corporation is depriving itself of its economic goals (Friedman, 1962, 1970). Although this study found no correlation between 2012 product donations and philanthropic activities and 2012 corporate financial performance in the pharmaceutical industry, product donations and philanthropic activities did not negatively impact financial performance in 2012. The findings in this study of significant positive relationship between 2014 product donations and philanthropic activities and 2014 corporate financial performance in the pharmaceutical industry, do not support Friedman's (1962, 1970) argument against corporate philanthropic activities.

Conclusions and Implications

This study evaluated the long debated, unresolved relationship between CSR and corporate financial performance. This study sheds new light on the economic link between CSR

and financial performance in the pharmaceutical industry by evaluating eight dimensions of CSR, seven of which to the best of the researcher's knowledge, have not been explored up to date. The study contributes to the literature on CSR-financial performance in a couple of ways. First the study measured the link between CSR and financial performance in the Pharmaceutical industry to collaborate earlier studies. This study focused on a single industry supporting Griffin and Mahon (1997) who argued that to increase the internal validity of studies on the relationship on the link between CSR and financial performance future research should focus on companies from the same industry rather than multiple companies in various industries.

Second, this study contributes to the literature by exploring the impact of eight different dimensions of CSR on financial performance in a single industry. The study correlated financial performance with: CSR scores of general access to medicine management, CSR scores of public policy and market influence, CSR scores of research and development conducted on neglected diseases, CSR scores of pricing, manufacturing, and distribution practices, CSR scores of patent and licensing, CSR scores for capacity advancement in product development and distribution, CSR scores of product donations and philanthropic activities, and overall CSR scores. Because this study was able to differentiate the economic impact of eight dimensions of CSR on financial performance, the results would benefit future studies on the economic effects of CSR on pharmaceutical companies that have embraced CSR and those that have not.

Third, the results of earlier studies on the impact of CSR on corporate financial performance have not been consistent but have often been contradictory and misleading. This study found a moderate positive relationship (25% positive relationship) between CSR and corporate financial performance in the pharmaceutical industry based on a significant 2014 positive relationship between four dimensions of CSR and 2014 corporate financial performance.

The results of this study suggest at the minimum, that CSR does not negatively impact financial performance in the pharmaceutical industry. That this study did not find evidence of a negative correlation between CSR and corporate financial performance in the pharmaceutical industry, is a significant result in itself.

Recommendations for Future Study

This study uses Googins's et al. (2007) Global Leadership Network framework as the theoretical framework to evaluate the impact of CSR on financial performance in the pharmaceutical industry. The Global Leadership Network framework focuses on business strategy, engaged learning, leadership, and operational excellence. It provides corporations beneficial and socially responsible strategies to assist companies "to conceptualize and to monitor their triple bottom line performance" (Googins et al., 2007, p. 126). The researcher recommends that as many pharmaceutical companies are developing and restructuring their CSR strategies, future studies should define CSR more succinctly to help corporate leaders develop their business strategies as they align their CSR policies. Droppert and Bennett's (2015) qualitative study of CSR in seven of the highest earning multinational pharmaceutical firms, found that CSR meant different things for each firm. Each firm defined CSR differently, managed CSR differently, was involved in different CSR activities, and had different motivations for engaging in CSR. The dimensions of CSR to be measured should be standardized (Droppert & Bennett, 2015).

The researcher supports Griffin and Mahon (1997), who called on researchers to focus their studies of the relationship between CSR and financial performance on a single industry to allow the scholar to determine if similar issues within the industry are treated in like manner. Each industry is unique because each industry has different competencies and internal and

external pressures. Therefore, the internal and external pressures in an industry, such as governmental regulations and consumer issues, are likely to be similar within each industry. Scholars should concentrate on studying the link between CSR and corporate financial performance within a specific industry because of the "uniqueness of internal competencies or external pressures inherent in an industry, the degree of public visibility, the different configurations of stakeholders and their differing degrees of activism on particular issues" (Griffin & Mahon, 1997, p. 10). The type of social responsibility activities a firm chooses to engage in is uniquely related to the nature of the demands by its stakeholder, its corporate competencies, and industry environment (Baird et al., 2012; Griffin & Mahon 1997; Simpson & Kohers, 2002). Researchers should focus their studies of the relationship between CSR and financial performance on a single industry to determine if similar issues within the industry are treated in like manner, and thus, potentially eliminate or reduce the current inconsistencies in the literature on the link between CSR and financial performance.

In support of Castka et al. (2005), a company should develop a management system that: (a) creates, delivers, and measures corporate objectives in alignment with its TBL; and (b) reviews the effectiveness and efficiency of the business processes to implement effectively and embed CSR into its day-to-day business. The concept of the TBL is often called the three Ps: people, planet, and profits. It proposes that firms should pay attention not only to maximizing their wealth or financial bottom line, but also to the welfare of all their stakeholders (Meijer & Schuyt, 2005; Rogers & Hudson, 2011; Slaper & Hall, 2011). In other words, leaders of organizations should run their businesses profitably and should also take responsibility for the impact of the organizations' actions on the stakeholders and society. Pharmaceutical companies should develop balanced solutions that support their TBL (economic, environmental, and social

aspects of the company's business performance) based on communications with the stakeholders.

Rodriguez-Fernandez's (2016) study assessed the relationship between CSR and corporate financial performance on companies registered on the Madrid Stock Exchange in 2009. The study found that engaging in socially responsible corporate policies produced higher profits and higher profits enhanced engagement in socially responsible corporate policies. The author argued that increasing CSR activities improved corporate financial performance, and when firms enjoy improved financial performance they earn improved CSR rating, thus creating a positive feedback loop that encourages firms to incorporate CSR policies in their business (Rodriguez-Fernandez, 2016). The researcher posits that companies might be encouraged to incorporate consistently CSR policies in their business strategies by the moderate positive relationship between CSR and corporate financial performance in the pharmaceutical industry in this study, and Rodriguez-Fernandez's (2016) findings showing that increasing CSR activities improves corporate financial performance and creates a positive feedback loop that perpetuates corporate financial well-being.

The body of literature on CSR contains myriad definitions of the CSR concept (Swaen & Chumpitaz, 2008), and as such, some have termed CSR a tortured concept (Godfrey et al., 2010). Most CSR definitions emphasize the voluntary actions of business designed to improve society's social or environmental conditions (Mackey et al., 2007; Margolis & Walsh, 2001). Because the search for a common definition of CSR is still elusive, the researcher supports that a clear definition of CSR be developed for each industry. There are differences in internal competencies of each industry, demand from stakeholders, and issues that are important to the industry. Therefore, defining CSR relevant to each industry might help to eradicate the inconsistencies in current literature, help cooperate leaders design CSR strategies that meet the needs of their

industry and society, and provide a better understanding about the link between CSR and financial performance.

The 18 pharmaceutical companies that participated in this study have integrated CSR in their business strategies, but there is a wide variation in the level of CSR among these companies. Many have argued that a high level of CSR performance can be a strategic investment that could ultimately increase a firm's profits and thus lead to increase in shareholder returns (Nollet et al., 2016). However, it is still unknown whether high profits enable greater spending on CSR, or if it is that CSR creates higher profits (Robins, 2011). To shed more light on the relationship between CSR and corporate financial performance in the pharmaceutical industry, future quantitative studies could categorize companies as follows: (a) Based on level of CSR scores—high, medium or low CSR scores,—correlate the mean CSR score of each group with the corporate financial performance of that group; (b) Based on level of financial performance—high, medium or low financial performers—correlate the mean CSR score of each group with the corporate financial performance of that group. This could advance the comprehension of the impact of CSR on financial performance in the pharmaceutical industry. Such a study could clarify if high levels of CSR increase financial performance or if high levels of financial performance increase investment in CSR.

Pharmaceutical companies should consistently incorporate CSR in their business strategies because it has been reported that consistent practice of CSR improves financial performance, although this study showed a moderate positive relationship between CSR and financial performance in the pharmaceutical industry. Nollet et al. (2016) examined the relationship between CSR and corporate financial performance. The researchers found that while engaging in CSR practices impacts financial profitability negatively in the beginning, the

negative effect is reversed after crossing a critical point of continuous investment in CSR policies, and CSR ultimately helps to improve the firm's financial performance. Pharmaceutical companies should engage long-term planning about their CSR activities and continuously commit resources to CSR practices, so that CSR can help improve their financial profitability, access to medicines, human health, and society.

Summary

For more than four decades, research has focused on the social responsibilities of a business, the economic argument for CSR, and the link between CSR and corporate financial performance (Carroll, 1999; Perrini et al., 2011; Wartick & Cochran, 1985; Wood, 1991). Although the debate on the economic impact of CSR on corporate financial performance has been ongoing for many decades, the business case or rational for CSR and the association between CSR and corporate financial performance remains controversial (D. D. Lee & Faff, 2009; Margolis & Walsh, 2003; Perrini et al., 2011).

The search for an association between CSR and corporate financial performance has grown immensely since the 1980s (Ameer & Othman, 2012). While CSR has gained the attention of corporate leaders and scholars (Cheng et al., 2014), the research on the association between CSR and corporate financial performance has not yet conclusively defined the economic impact of CSR on corporate financial performance (Margolis & Walsh, 2003). The concept of CSR has been evolving since the early 1930s (Carroll, 1979), and throughout the past decades, CSR has grown from a marginalized concept into a complex one that is increasingly becoming central in business decision making (Cochran, 2007). Companies in various industries are increasingly becoming engaged in socially responsible activities that improve the welfare of society (Y. Wang & Berens, 2015). Despite the attention that corporations are giving to CSR,

many still doubt that CSR creates value for a firm since the existing research has not provided a conclusive answer (Cheng et al., 2014; Margolis, & Walsh, 2003; Servaes & Tamayo, 2013).

The 18 pharmaceutical companies evaluated in this study have all incorporated CSR in their business strategies. The pharmaceutical industry has a highly complex set of stakeholders to balance, including patients; government regulators; the health and scientific community; patient advocates; the media; activists, including antivivisectionists; politicians; and the public. The pharmaceutical industry is admired because it provides medicines that cure life-threatening diseases, but the industry is also much criticized because it does not provide everyone a cure at affordable prices (Nussbaum, 2009). Over time, many people grew to distrust the pharmaceutical industry and the glowing public image of the industry has been tarnished by various reports in the media of unethical and illegal behavior such as not disclosing negative results in clinical trials, high drug prices, and companies enticing doctors with gifts to use their drugs (Nussbaum, 2009).

To rebuild trust, it behooves all pharmaceutical companies to include CSR activities in their business strategies because businesses are not measured on their profitability alone (Kessel, 2014). The pharmaceutical industry is different from other industries because it is in a business designed to improve the health of people while concurrently increasing shareholders' profits. It is important for pharmaceutical companies to engage CSR in their business strategies because the pharmaceutical industry is different from other sectors since its business decisions have direct impact on human lives (Droppert & Bennett, 2015). The public perceives the pharmaceutical industry differently from other sectors because the industry discovers and develops drugs that can save human lives. Therefore, the pharmaceutical industry is perceived as having a distinct ethical responsibility to the public such as providing access to drugs to all patients. It can be

argued that pharmaceutical companies are primarily loyal to shareholders and not to their products' consumers (Kessel, 2014).

The pharmaceutical industry cannot afford to deemphasize patients' needs. Access to medications in the early 20th century was considered a luxury that only the affluent could afford, but today, access to medicine is regarded as a human right (Kessel, 2014). Because the industry has the ability to provide access to medicines, it has a moral obligation to do so. Developing CSR strategies that focus on transparent policies and procedures for drug development and clinical trials, drug pricing, and marketing will go a long way toward helping the industry balance its responsibilities to its stakeholders. This study did not find any negative correlations between CSR and financial performance in the pharmaceutical industry. This study found a partial support for significant positive relationships among four dimensions of CSR and financial performance in the pharmaceutical industry. The finding of partial support for the economic impact of CSR on financial performance, and no negative impact of CSR on financial performance in the pharmaceutical industry, should encourage corporate leaders in this sector to increase their investment in CSR to provide access to medicines and improve society.

To the best of the researcher's knowledge, this study is the first of the small number of studies that have examined the relationship between CSR and financial performance in the pharmaceutical industry and that evaluated the economic effect of each of the eight categories of CSR on financial performance in the pharmaceutical industry. Because of the inconsistency that still exists about the economic impact of CSR on financial performance, evaluation of the eight dimensions of CSR in this study contributes to the body of literature on CSR and advances the comprehension of the impact of CSR on financial performance in the pharmaceutical industry.

More studies have reported positive relationships between CSR and corporate financial performance than negative relationships (Margolis et al., 2009). This study found partial support for the correlation of CSR with corporate financial performance. Although it might not be clear if doing good to the stakeholders engenders doing well financially, many results inherently support the concept that investment in CSR improves financial performance. If scholars can prove that doing good, in terms of transparency in business practices and addressing social ills, could be associated with doing well in corporate financial performance, then companies might be persuaded to incorporate CSR in their business strategies. Pharmaceutical companies would be encouraged to do good even if it means sustaining additional costs, so that they can improve their financial performance, increase access to medicines, and improve the well-being of society. If scholars can prove the business case for CSR, meaning that CSR and shareholder value maximizing could be persuasively shown to be synergistic, business leaders could justify investment in CSR as a legitimate business expense.

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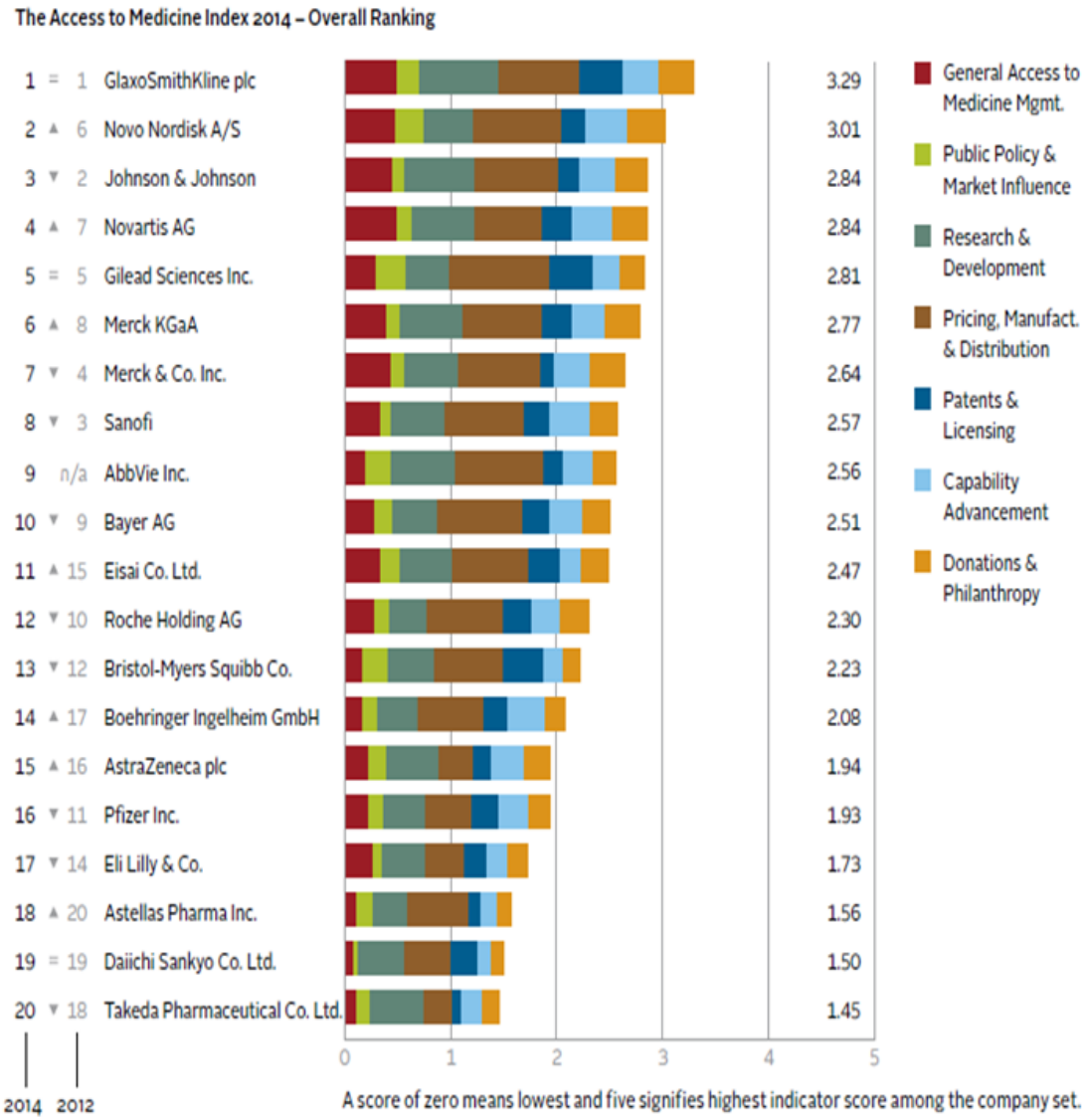
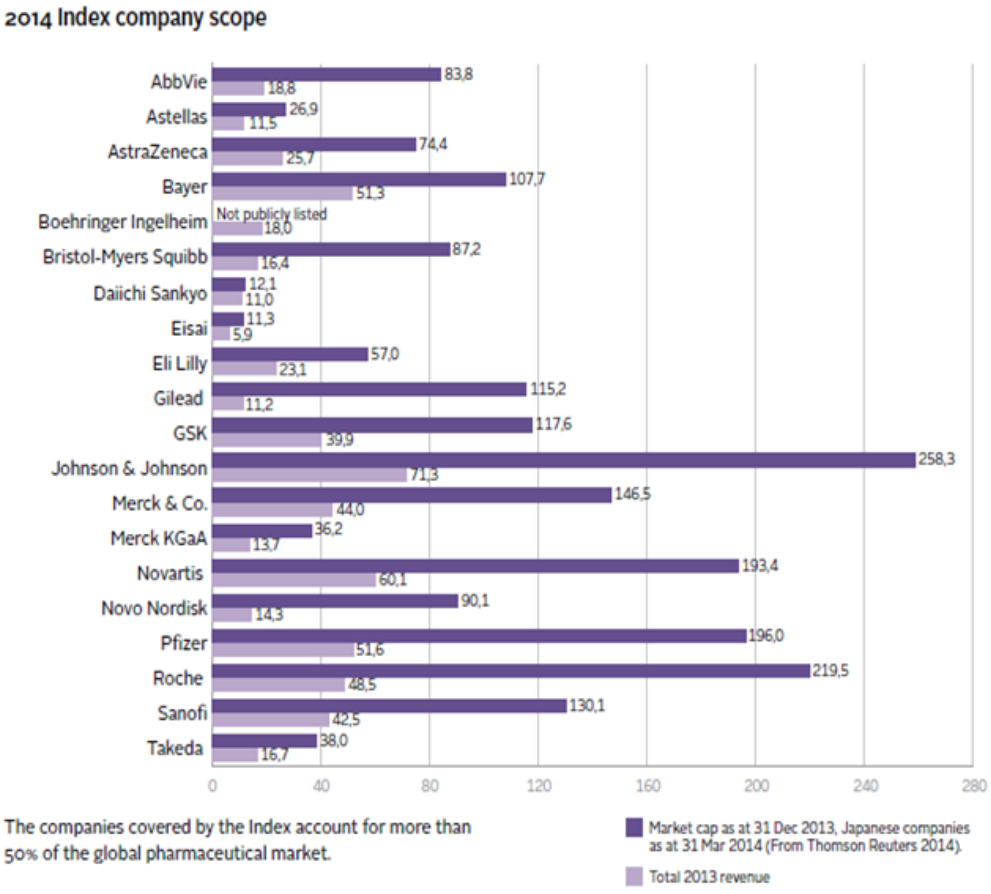
APPENDIX A

Access to Medicine Index 2014 Overall Ranking



APPENDIX B

2013 Market Cap and Total Revenue



APPENDIX C

Permission to use 2012 and 2014 Access to Medicine Index

Wim Leereveld <wleereveld@atmindex.org>
to Namratha, me

Dear Stephen,

We agree, but hope you will send us the final report of your dissertation, ok?

I copy my collegue Namratha Rao as she is in a position to back this decision from our actual organisation.

Success and best wishes,

Wim
Wim Leereveld

Access to Medicine Foundation
The Netherlands

From: Stephen Adamu

Date: Wed, Sep 28, 2016 at 2:24 AM
Subject: Permission to use ATM Index data

To: Wim Leereveld

Founder and Chairman

My name is Stephen Adamu. I am a doctoral student at the Pepperdine University in Los Angeles, California in the U.S.A. I am writing my dissertation on the Impact of Corporate Social Responsibility on Financial Performance in Pharmaceutical Industry.

I am hereby requesting permission to use the 2012 and 2014 Access to Medicine (ATM) Index reports in my dissertation. I will be using the ATM index scores as the measurement of corporate social responsibility in my dissertation.

I highly appreciate your help and the work you are doing in regard to promoting access to medicine. I anxiously await your response.

Thank you,

Sincerely,
Stephen A. Adamu

APPENDIX D

Permission to use Figure—Global Leadership Network Framework

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APPENDIX E1

Overall CSR Scores and EVA

Company	2012 Overall CSR Scores	2012 EVA (million)	2014 Overall CSR Scores	2014 EVA (million)	Corporate Headquarters
Astellas Pharma	0.9	4402	1.56	-2989	Japan
AstraZeneca plc	1.6	5840	1.94	-379	Great Britain
Bayer AG	2.4	-820	2.51	-636	Germany
Bristol-Myers Squibb Co.	2.1	1750	2.23	828	USA
Daiichi Sankyo	0.9	-16452	1.50	-50609	Japan
Eisai Co. Ltd.	1.9	14563	2.47	-8175	Japan
Eli Lilly & Co.	2.0	2808	1.73	1756	USA
Gilead Sciences	3.0	2009	2.81	6235	USA
GlaxoSmithKline	3.8	4867	3.29	3954	Great Britain
Johnson & Johnson	3.6	6439	2.84	9122	USA
Merck & Co.	3.1	762	2.64	-2597	USA
Merck KGaA	2.5	33	2.77	103	Germany
Novartis AG	2.9	9597	2.84	8913	Switzerland
Novo Nordisk	3.0	15552	3.01	20665	Denmark
Pfizer Inc.	2.2	1072	1.93	2169	USA
Roche Holding	2.3	7415	2.30	8008	Switzerland
Sanofi	3.2	-1628	2.57	-1855	France
Takeda Pharmaceutical	1.1	-113154	1.45	-275675	Japan

APPENDIX E2

CSR General Access to Medicine Management Scores and EVA

Company	2012 CSR Scores	2012 EVA (million)	2014 CSR Scores	2014 EVA (million)	Corporate Headquarters
Astellas Pharma	0.5	4402	1.0	-2989	Japan
AstraZeneca plc	2.6	5840	2.1	-379	Great Britain
Bayer AG	3.9	-820	2.7	-636	Germany
Bristol-Myers Squibb Co.	2.4	1750	1.6	828	USA
Daiichi Sankyo	0.9	-16452	0.7	-50609	Japan
Eisai Co. Ltd.	2.6	14563	3.3	-8175	Japan
Eli Lilly & Co.	2.1	2808	2.6	1756	USA
Gilead Sciences	3.4	2009	2.9	6235	USA
GlaxoSmithKline	4.9	4867	4.9	3954	Great Britain
Johnson & Johnson	4.8	6439	4.4	9122	USA
Merck & Co.	3.7	762	4.3	-2597	USA
Merck KGaA	2.8	33	3.8	103	Germany
Novartis AG	3.4	9597	4.8	8913	Switzerland
Novo Nordisk	4.1	15552	4.7	20665	Denmark
Pfizer Inc.	2.4	1072	2.1	2169	USA
Roche Holding	2.5	7415	2.7	8008	Switzerland
Sanofi	4.1	-1628	3.3	-1855	France
Takeda Pharmaceutical	1.1	-113154	1.0	-275675	Japan

APPENDIX E3

CSR Public Policy & Market Influence Scores and EVA

Company	2012 CSR Scores	2012 EVA (million)	2014 CSR Scores	2014 EVA (million)	Corporate Headquarters
Astellas Pharma	2.1	4402	1.6	-2989	Japan
AstraZeneca plc	1.8	5840	1.7	-379	Great Britain
Bayer AG	2.9	-820	1.7	-636	Germany
Bristol-Myers Squibb Co.	3.6	1750	2.4	828	USA
Daiichi Sankyo	1.9	-16452	0.4	-50609	Japan
Eisai Co. Ltd.	3.0	14563	1.8	-8175	Japan
Eli Lilly & Co.	3.5	2808	0.8	1756	USA
Gilead Sciences	3.1	2009	2.8	6235	USA
GlaxoSmithKline	3.8	4867	2.1	3954	Great Britain
Johnson & Johnson	3.5	6439	1.1	9122	USA
Merck & Co.	3.2	762	1.3	-2597	USA
Merck KGaA	2.9	33	1.3	103	Germany
Novartis AG	3.4	9597	1.4	8913	Switzerland
Novo Nordisk	3.6	15552	2.7	20665	Denmark
Pfizer Inc.	2.4	1072	1.4	2169	USA
Roche Holding	3.3	7415	1.4	8008	Switzerland
Sanofi	3.9	-1628	1.0	-1855	France
Takeda Pharmaceutical	2.0	-113154	1.3	-275675	Japan

APPENDIX E4

CSR Research & Development Scores and EVA

Company	2012 CSR Scores	2012 EVA (million)	2014 CSR Scores	2014 EVA (million)	Corporate Headquarters
Astellas Pharma	1.2	4402	1.6	-2989	Japan
AstraZeneca plc	2.3	5840	2.5	-379	Great Britain
Bayer AG	1.8	-820	2.1	-636	Germany
Bristol-Myers Squibb Co.	1.9	1750	2.2	828	USA
Daiichi Sankyo	1.2	-16452	2.2	-50609	Japan
Eisai Co. Ltd.	2.8	14563	2.4	-8175	Japan
Eli Lilly & Co.	2.7	2808	2.0	1756	USA
Gilead Sciences	2.1	2009	2.1	6235	USA
GlaxoSmithKline	4.7	4867	3.7	3954	Great Britain
Johnson & Johnson	3.8	6439	3.3	9122	USA
Merck & Co.	3.7	762	2.5	-2597	USA
Merck KGaA	2.8	33	3.0	103	Germany
Novartis AG	3.6	9597	3.0	8913	Switzerland
Novo Nordisk	2.7	15552	2.4	20665	Denmark
Pfizer Inc.	2.4	1072	2.0	2169	USA
Roche Holding	2.4	7415	1.8	8008	Switzerland
Sanofi	3.8	-1628	2.5	-1855	France
Takeda Pharmaceutical	1.4	-113154	2.6	-275675	Japan

APPENDIX E5

CSR Pricing, Manufacturing & Distribution Scores and EVA

Company	2012 CSR Scores	2012 EVA (million)	2014 CSR Scores	2014 EVA (million)	Corporate Headquarters
Astellas Pharma	0.2	4402	2.3	-2989	Japan
AstraZeneca plc	0.7	5840	1.3	-379	Great Britain
Bayer AG	2.0	-820	3.2	-636	Germany
Bristol-Myers Squibb Co.	2.0	1750	2.6	828	USA
Daiichi Sankyo	0.4	-16452	1.7	-50609	Japan
Eisai Co. Ltd.	0.8	14563	2.9	-8175	Japan
Eli Lilly & Co.	1.1	2808	1.5	1756	USA
Gilead Sciences	3.2	2009	3.8	6235	USA
GlaxoSmithKline	2.9	4867	3.0	3954	Great Britain
Johnson & Johnson	2.7	6439	3.2	9122	USA
Merck & Co.	2.5	762	3.1	-2597	USA
Merck KGaA	1.8	33	2.9	103	Germany
Novartis AG	2.5	9597	2.6	8913	Switzerland
Novo Nordisk	2.7	15552	3.3	20665	Denmark
Pfizer Inc.	2.1	1072	1.8	2169	USA
Roche Holding	2.0	7415	2.9	8008	Switzerland
Sanofi	2.5	-1628	3.0	-1855	France
Takeda Pharmaceutical	0.2	-113154	1.1	-275675	Japan

APPENDIX E6

CSR Patents & Licensing Scores and EVA

Company	2012 CSR Scores	2012 EVA (million)	2014 CSR Scores	2014 EVA (million)	Corporate Headquarters
Astellas Pharma	0.8	4402	0.8	-2989	Japan
AstraZeneca plc	1.4	5840	1.2	-379	Great Britain
Bayer AG	1.5	-820	1.8	-636	Germany
Bristol-Myers Squibb Co.	1.5	1750	2.6	828	USA
Daiichi Sankyo	0.7	-16452	1.7	-50609	Japan
Eisai Co. Ltd.	0.8	14563	1.9	-8175	Japan
Eli Lilly & Co.	1.4	2808	1.4	1756	USA
Gilead Sciences	4.1	2009	2.8	6235	USA
GlaxoSmithKline	2.6	4867	2.8	3954	Great Britain
Johnson & Johnson	3.2	6439	1.3	9122	USA
Merck & Co.	2.6	762	0.9	-2597	USA
Merck KGaA	1.3	33	1.9	103	Germany
Novartis AG	1.7	9597	1.9	8913	Switzerland
Novo Nordisk	1.8	15552	1.5	20665	Denmark
Pfizer Inc.	0.9	1072	1.6	2169	USA
Roche Holding	1.7	7415	1.8	8008	Switzerland
Sanofi	1.5	-1628	1.7	-1855	France
Takeda Pharmaceutical	0.8	-113154	0.6	-275675	Japan

APPENDIX E7

CSR Capability Advancement in Product Development & Distribution Scores and EVA

Company	2012 CSR Scores	2012 EVA (million)	2014 CSR Scores	2014 EVA (million)	Corporate Headquarters
Astellas Pharma	0.8	4402	1.5	-2989	Japan
AstraZeneca plc	1.3	5840	3.1	-379	Great Britain
Bayer AG	2.8	-820	3.0	-636	Germany
Bristol-Myers Squibb Co.	1.2	1750	1.8	828	USA
Daiichi Sankyo	0.6	-16452	1.2	-50609	Japan
Eisai Co. Ltd.	1.6	14563	2.0	-8175	Japan
Eli Lilly & Co.	1.4	2808	2.0	1756	USA
Gilead Sciences	2.2	2009	2.5	6235	USA
GlaxoSmithKline	4.2	4867	3.5	3954	Great Britain
Johnson & Johnson	3.7	6439	3.3	9122	USA
Merck & Co.	2.7	762	3.3	-2597	USA
Merck KGaA	2.9	33	3.0	103	Germany
Novartis AG	2.8	9597	3.8	8913	Switzerland
Novo Nordisk	3.0	15552	3.9	20665	Denmark
Pfizer Inc.	1.9	1072	2.9	2169	USA
Roche Holding	2.7	7415	2.6	8008	Switzerland
Sanofi	3.7	-1628	3.8	-1855	France
Takeda Pharmaceutical	1.6	-113154	2.0	-275675	Japan

APPENDIX E8:

CRS Product Donations & Philanthropic Activities Scores and EVA

Company	2012 CSR Scores	2012 EVA (million)	2014 CSR Scores	2014 EVA (million)	Corporate Headquarters
Astellas Pharma	1.5	4402	1.4	-2989	Japan
AstraZeneca plc	2.3	5840	2.5	-379	Great Britain
Bayer AG	3.4	-820	2.8	-636	Germany
Bristol-Myers Squibb Co.	3.0	1750	1.7	828	USA
Daiichi Sankyo	1.3	-16452	1.3	-50609	Japan
Eisai Co. Ltd.	3.1	14563	2.7	-8175	Japan
Eli Lilly & Co.	2.4	2808	2.0	1756	USA
Gilead Sciences	3.0	2009	2.4	6235	USA
GlaxoSmithKline	4.6	4867	3.4	3954	Great Britain
Johnson & Johnson	4.4	6439	3.1	9122	USA
Merck & Co.	4.1	762	3.5	-2597	USA
Merck KGaA	4.0	33	3.4	103	Germany
Novartis AG	3.7	9597	3.3	8913	Switzerland
Novo Nordisk	4.1	15552	3.6	20665	Denmark
Pfizer Inc.	3.8	1072	2.1	2169	USA
Roche Holding	2.3	7415	2.8	8008	Switzerland
Sanofi	4.5	-1628	2.6	-1855	France
Takeda Pharmaceutical	1.8	-113154	1.7	-275675	Japan

APPENDIX F

IRB Approval Notice

PEPPERDINE

Pepperdine University
24255 Pacific Coast Highway
Malibu, CA 90263
TEL: 310-506-4000

NOTICE OF APPROVAL FOR HUMAN RESEARCH

Date: December 05, 2016

Protocol Investigator Name: Stephen Adamu

Protocol #: 16-11-439

Project Title: IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON FINANCIAL PERFORMANCE IN THE PHARMACEUTICAL INDUSTRY

School: Graduate School of Education and Psychology

Dear Stephen Adamu:

Thank you for submitting your application for exempt review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations 45 CFR 46.101 that govern the protections of human subjects.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Since your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at community.pepperdine.edu/irb.

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chair

PEPPERDINE

Pepperdine University
24255 Pacific Coast Highway
Malibu, CA 90263
TEL: 310-506-4000

cc: Dr. Lee Kats, Vice Provost for Research and Strategic Initiatives

Mr. Brett Leach, Regulatory Affairs Specialist