Sustainable Business Model Innovation: A Means to Societal and Economic Good for Canadian Businesses

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[Abstract] Canadian companies want to understand the potential revenue opportunity of investing in a strategic corporate social responsibility (CSR) business model innovation. This exploratory, quantitative longitudinal correlational design sought to understand the relationship between CSR and nondomestic sales revenue using secondary data sources. Sustainalytics' environmental, social, and corporate governance (ESG) rankings measured CSR business model innovation, and nondomestic sales revenue measured financial performance. Simple linear regression analyzed 61 observations from fiscal years 2009-2017, and the findings revealed a significant statistical relationship between strategic CSR adoption and nondomestic sales revenue. The paper includes a discussion of the contribution of this research and possible future research areas.

[Keywords] CSR, financial performance, growth, business model innovation

Introduction

The European Union (EU) demands all companies that trade within its trading region implement Corporate Social Responsibility (CSR) (Dunlap et al., 2017). Company leadership is facing increased pricing pressure because globalization has opened many sectors to new competition. Many firms are dealing with this pricing pressure by cutting prices and service levels to survive rather than choosing to operate with a focus on ethics (Kim & Mauborgne, 2015). Businesses operating in certain geographical trading areas are responding to the increasing regulatory pressure by international communities to adopt a CSR strategy integrated into the business model as a mandatory requirement to do business within the trading region (Vigneau, Humphreys, & Moon, 2015). In an era of climate change, companies have an increased responsibility to create value and profit and to ensure the stewardship of society and the earth (Laszlo, Laszlo, & Dunsky, 2010). Canadian business leaders are looking to grow internationally. The Canada-EU free trade agreement is an emerging opportunity. Canadian firms which are evaluating the adoption of a CSR strategic business model innovation need to understand the potential impact on financial performance (Wang, Li, & Gao, 2014).

The literature outlined that there was a link between CSR and financial performance (Maqbool, 2019; Mishra, 2017; Schreck, 2011; Tang et al., 2012). CSR is a business model innovation that can lead to positive financial performance (Bocquet, Le Bas, Mothe, & Poussing, 2017). The research in the field of CSR as a business model innovation was nascent. CSR, as a business model innovation, requires a systemic change to support implementation. The values of management are also a critical success factor (Pedersen, Gwozdz, & Hvass, 2018). In other words, companies that have innovated with CSR can enter the market by serving an underserved customer segment and then grow to market dominance. CSR, as a strategic advantage, is an opportunity for Canadian firms to grow (Dunlap et al., 2017).

The reality of the business environment is that many companies are adopting a strategy of CSR to differentiate themselves from their peers. CSR business model innovation was considered a blue ocean strategy that allowed a firm to innovate its policies and process to disrupt the industry (Kim & Mauborgne, 2004). Canadian companies of all sizes need to know the links (if any) to a CSR commitment and nondomestic revenues that drive growth. This research aimed to contribute to gaps in current research to better understand the links between the adoption of a CSR strategic business model innovation and the accounting measure nondomestic sales revenues (Maqbool, 2019; Mishra, 2017; Schreck, 2011; Tang et al., 2012).

Literature Review

The framework for this study was CSR. A CSR strategy was a commitment to environmental stewardship, social justice, ethical governance, and financial transparency (Sheehy, 2015). Society was evolving. Climate change was a macro-environmental risk that affected the survival of businesses and people (Laszlo et al., 2010). Climate change has become a driving force that impacts how customers value products. The responsible businesses were adopting methodologies and tools that create value (Szczanowicz & Saniuk, 2016).

Business model innovation created value across the value chain. It often focused on business processes. CSR activities were not always innovative. CSR can be innovative when it creates value for the customer, which translated to improved financial performance. Canadian companies re-engineered and innovated their existing processes to meet the EU compliance requirements. Limited research existed in this area. Business model innovation to meet increasing sustainability standards requires demanded more than new technology; it demanded re-architecting the business model (Pedersen et al., 2018). Buisson and Silberzahn (2010) stated that innovation goes beyond technology. The relationship between shareholder value and CSR strategy was unproven across all sectors (Arevalo & Aravind, 2017). The relationship between CSR business model innovation and accounting-based measures was proven in certain geographies (Maqbool, 2019; Orlitzky, 2013; Wang et al., 2016).

The important elements of innovation are to design disruption, create a culture, and to implement strategies and processes that facilitate value creation by leveraging gaps in the consumer market. Hall and Lundberg (2010), as well as Ofek and Wathieu (2007), identified an organization's current knowledge of its competitor as a method for assessing trends. The knowledge and insights gained from an organization's competitors helped to develop innovations and disruptions and assessed their trajectory. Buisson and Silberzahn (2010) identified how a company could create a sub-market to deliver innovation; one submarket was CSR. Raynor (2011) discussed how CSR would meet a need that was not met by larger competitors. Semadeni and Anderson (2010) discussed the ease of following innovations when there was alignment with business processes within the sector.

Innovation was about doing something that was known but with a twist to deliver customer value. Canadian companies tended to have higher CSR scores and commit to CSR strategic alliances (Thorne, Mahoney, Gregory, & Convery, 2017). CSR strategic adoption provided new opportunities in green product development, process, and technology innovation. Operations, energy management, water management, carbon neutrality, and waste management implemented products, processes, and technology innovations. These investments, when grounded with a solid business case, decreased the cost of goods sold (COGS) and improved profitability. The improvement in expense reduction delivered on the business case expectation that CSR generated improved financial performance.

Businesses adopted the CSR strategy and had to differentiate with innovation. An investment in CSR can lead to both innovation and improved financial performance (Bocquet et al., 2017). Chesbrough (2017) introduced the concept that a business model was an ecosystem. An ecosystem was a living entity requiring active nurturing and balance to ensure viability. A CSR business model innovation was an ecosystem that integrated stakeholders' perspectives into financial, environmental, societal, and governance objectives. The critical success factors of innovation and improved financial performance were the combination of strategic management theory and profitability to fund growth. Innovation influenced these relationships when CSR was a strategic choice. The CSR engagement strategy influenced the potential benefits that the business received concerning innovation and financial performance (Tang, Hull & Rothenberg, 2012). CSR improved financial performance when adopted with best-in-class strategic transformation practices.

An investment in CSR could result in both innovation and improved financial performance (Bocquet et al., 2017). The critical success factors of innovation and improved financial performance demonstrated the combination of strategic management theory and profitability to fund growth. Innovation influenced these relationships when CSR was a strategic choice. The adoption of CSR was a risk mitigation strategy (Cheng, Ioannou, & Serafeim, 2014). Companies that committed to a higher standard of ethics had a lower chance of litigation. CSR companies committed to fair wages, responsible waste management, and transparency in reporting (Elms, Brammer, Harris & Phillips, 2010). CSR improved financial performance when adopted with best-in-class strategic transformation practices.

In the new era of climate change, the strategy must also respect this trend and the requirement for societal, financial, and environmental good (Thorne et al., 2017). The strategy required innovation across the ecosystem to ensure the alignment of all aspects of strategy and operations with financial, environmental, societal, and good governance objectives. The business case for CSR was inconsistent across all sectors (Tang et al., 2012). Successful strategic adoption of CSR as a business model innovation contributed to the mitigation of reputational risk, specifically concerning trust and transparency.

Stakeholder engagement has driven the discussion on CSR (Herremans et al., 2016). CSR was an innovation that transformed a company's value from solely financial performance to one that included its environmental, societal, and governance performance. Arouri and Pijourlet (2017) identified that shareholders assigned a higher value to a firm's cash holdings when the firm also had a high CSR rating. The researchers linked the efficient use of financial resources to superior governance. Innovative CSR laid the foundation to innovate a business model to deliver CSR (Nidumolu, Prahalad, & Rangaswami, 2009). Businesses should be transparent and work against all forms of corruption (UN Global Compact, 2018). Dunlap et al. (2017) positioned the UN Global Compact's Ten Principles as the guiding principles of the EU's commitment to nonfinancial reporting and the foundation for CSR. The theoretical framework includes intersections between the three elements: CSR, innovation (processes and business model), and financial performance as measured by nondomestic sales revenue.

Methodology

The study was an exploratory quantitative correlational design using data gathered from secondary sources. The sources included companies that trade publicly on the Toronto Stock Exchange (TSX). The companies would also have a Sustainalytics Environmental, Social, and Corporate Governance (ESG) ranking and provide publicly accessible corporate financial reports. The use of respected ESG indices was consistent with previous research (Mishra, 2017; Schreck, 2011; Tang et al., 2012). Cooper and Schindler (2014) confirmed that the nonexperimental research method aligned with a study design that assembled information from secondary sources to assess and analyze relationships.

The population for the study was made of Canadian companies, and the framed sample was Canadian Toronto Stock Exchange (TSX) publicly traded companies that are headquartered in Canada and operate in many economic sectors. The TSX includes 11 categories or sectors: financial, energy, materials, industrials, consumer discretionary, telecommunications, healthcare, consumer staples, utilities, real estate, and technology. The transparency of the sample frame limits the generalization of findings to the established and higher market capitalization sectors (Cooper & Schindler, 2014).

Sustainalytics is an industry-leading ESG research firm that researches and ranks the TSX composite listed companies based on their ESG performance and sustainable development goal achievement. Paneled datasets of financial and CSR performance analyzed ESG performance of publicly traded firms within the TSX trading platform. The paneled datasets include corporate governance, environment, and social justice ratings (Cheng et al., 2014).

Vogt (2007) explained how the sampling procedure involved the selection of a small group from a larger population. Samples were an accurate representation of the entire population. Cooper and Schindler (2014) recommended random sampling as the ideal for minimizing bias in quantitative research. The numerous risks that are associated with selection bias within sampling are mitigated or reduced by a random sampling technique, but sample bias risk is great with a small sample size (Patten, 2012).

The cluster was the optimal sampling strategy because ESG companies are a single population. The one-stage cluster sampling process naturally created a cluster within one geographical area that crossed many sectors and industries. ESG-ranked companies in Canada were a small sample group. A small sample size introduced bias risk into the study (Patten, 2012). A minimum number of cases in cluster sampling were required for accuracy, mitigating sample size risk (Cooper & Schindler, 2014). The group was homogenous because the companies shared a business model level commitment to CSR, as was evident by their externally audited Sustainalytics' ranking. The use of externally audited secondary source data eliminated self-identification bias. The findings of the study will only be applied to the same population, mitigating the risk of cluster group definition bias (Cooper & Schindler, 2014). There was an assumption that there is a fixed number of observations because the timeline for observations was 2009-2018.

The independent variable for this study was Sustainalytics' ESG ranking. Sustainalytics was one of three industry-leading research firms, which also included Bloomberg and RodecoSAM. All three ratings research firms consistently measured the key elements of environmental stewardship, social justice, and corporate governance (Romero, Jeffers, Lin, Aquilino, & DeGaetano, 2018). A sustainable business model innovation leveraged technology advancements facilitating market dominance (Zott & Amit, 2017). Sustainable business model innovation was an ecosystem of living and nonliving organisms that work together for mutual sustainability (Chesbrough, 2017). The people, process, and policies are the living and nonliving organisms, which included the environment and society as stakeholders.

The dependent variable for this study was nondomestic sales. Financial ratios that measure profitability are common equity, net income, profit margin, return on assets (ROA), return on equity (ROE), and total assets. Many CSR studies used either a trailing 12-month return on assets (ROA) or a current Tobin's Q

(Tang et al., 2012). Mishra (2017) demonstrated a positive link between CSR and financial performance. Maqbool (2019) showed that CSR had a positive influence on future profitability ratios and accounting. Orlitzky (2013) and Wang et al. (2016) found that accounting-based measures have a stronger correlation to CSR. For this study, the accounting measure of nondomestic sales is the dependent variable.

Data Collection

Data for this study came from secondary sources. The financial data came from SEDAR, the repository for financial reports in Canada. ESG rankings came from Sustainalytics, a leading ESG ranking research firm. Simple linear regression explored the relationship between CSR business model innovation as measured by ESG rankings and financial performance as measured by nondomestic sales revenues. Table 1 gives the descriptive statistics of all Canadian sectors with ESG rankings and nondomestic sales revenue between 2009-2018. Descriptive statistics include mean, kurstoswas, skewness, confidence level at 95%, and the subsequent margin of error.

Table 1
Descriptive Statistics of All Canadian Sectors with ESG Rankings and Nondomestic sales revenue between 2009-2018.

ESG Rankings for Canadian Companies with Nondomestic Sales Revenue	
Mean	74.85754098
Standard Error	0.685803532
Median	76
Mode	78
Standard Deviation	5.35629681
Sample Variance	28.68991552
Kurtoswas	-0.528074497
Skewness	-0.724654002
Range	17.88
Minimum	64.67
Maximum	82.55
Sum	4566.31
Count	61
Largest(1)	82.55
Confidence Level(95.0%)	1.371811298

Note. Count represented the number of Observations

An exploratory study with a cluster sampling strategy requires an understanding of the data. The confidence level of 95% in the data has a margin of error 1.37. Both kurtoswas (-0.53) and skewness (-0.72) are within the acceptable ranges, indicating that there are few outliers. Figure 2 illustrates the normal probability plot.

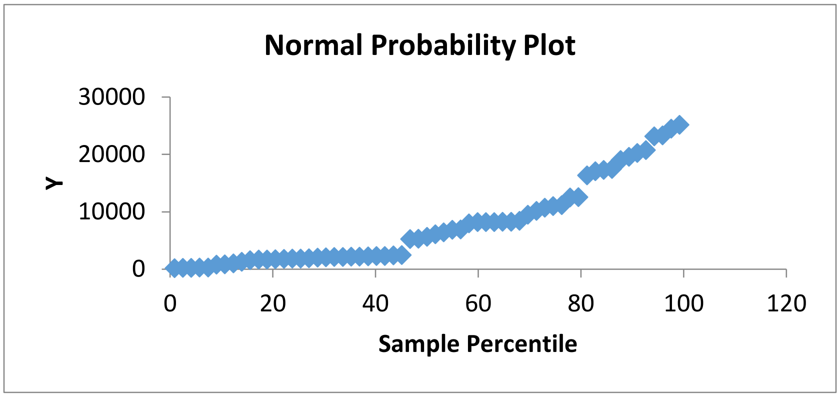

Figure 2. Normal Probability Plot of all Canadian Sectors with 61 observations of ESG Ranking and Nondomestic sales revenue between 2009-2018.

The normal probability plot showed that the data was linear, indicating that the data is within a normal distribution. Normal data will follow the trend line. There is a strong likelihood that the results of the statistical analysis will reflect the reality of the relationship between CSR strategic business model innovation as measured by ESG rankings and nondomestic sales revenues.

Hypothesis Testing

This study addressed the following central research question: To what extent did a commitment to CSR relate to sales revenue in nondomestic markets? The hypothesis and the null hypothesis for the research question were as follows:

H_a*-1.* There is a significant relationship between the adoption of a CSR strategy and nondomestic sales revenue for Canadian companies.

H_0*-1.* There is no significant relationship between the adoption of a CSR strategy and nondomestic sales revenue for Canadian companies.

Analyses of Hypotheses

This study sought to explore the relationship (if any) between CSR strategic adoption as measured by Sustainalytics ESG ranking and nondomestic sales revenue. The Pearson correlation analysis tested the relationship. A simple linear regression illustrated that there was a linear relationship between ESG ranking and nondomestic sales revenue. The data included all sectors. The lower ESG scores included companies in the financial and automotive sectors that generate revenues only in North America. An analysis of the average ESG ranking for U.S.-based companies was 56.94. Canadian companies that generate nondomestic sales revenue only from North America had a comparable ESG ranking, which leads to a negative relationship. Figure 1 illustrates the scatter diagram and the slope of the linear relationship.

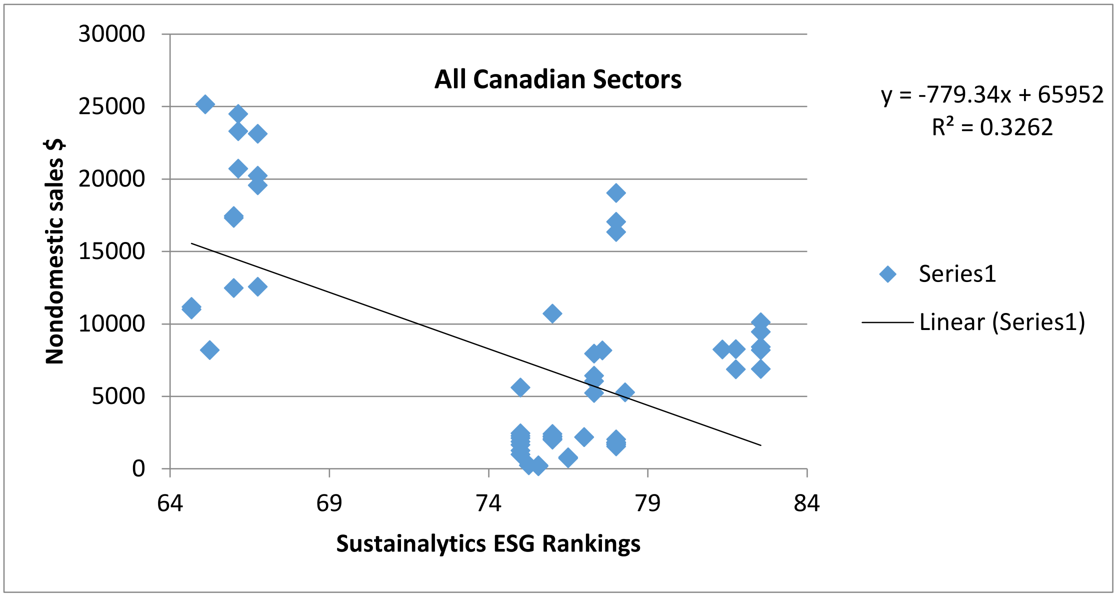

Figure 1. All Canadian Sectors with 61 observations of ESG Ranking and Nondomestic sales revenue between 2009-2018.

The scatter diagram showed that there is a linear relationship, and 32.6% of the observations were on the line. The slope of the line was y=-779.34x + 65952. The scatter diagram shows that there is a relationship that can be predicted between the independent variable ESG rankings and the dependent variable nondomestic sales revenue. The regression statistics are in Table 2. Table 2 explains the linear aggression.

Table 2

Linear Regression Analysis of All Canadian Sectors with ESG Rankings and Nondomestic sales revenue between 2009-2018.

	Multiple R	*t- Stat*	*P-Value*	*Observations*
Scenario 1	0.57118	6.027	1.16E-07	61

The Pearson correlation analysis method revealed that the *multiple R* statistic was .57118. The results indicated a moderate linear relationship between variables. The *t-Stat* was 6, and the *P-value* was 1.16E-07. There were 61 observations. A linear regression tested the hypotheses. The scenario included all Canadian companies and segments. The *P-value* indicated a highly significant relationship, and the results rejected the null hypothesis. There was a significant relationship between CSR business model innovation and nondomestic sales revenue for Canadian companies.

Conclusions

The study sought to answer the research question: To what extent did a commitment to CSR relate to sales revenue in nondomestic markets? Simple linear regression analyzed the scenario, which included all Canadian companies with both a CSRstrategic business model innovation as measured by Sustainalytics ESG rankings and nondomestic sales revenues as measured by GAAP. There were 61 observations of data, which was a large (>30 observations) cluster sample (Cooper & Schindler, 2014). In the scatter diagram, R^2 showed that 33% of the points were on the line. *Multiple R* indicated a low linear relationship between variables of .57118 (57%). The *t-Stat* was 6, which was >2, indicates a positive difference between variables. The *P-value* was 1.16E-.07, which indicated a highly significant relationship. The results in the scenario rejected the null first hypothesis. There was a significant relationship between CSR strategic business model innovation and nondomestic sales revenue. This result aligned with previous research that CSR strategic business model innovation relates to corporate financial performance as indicated by accounting-based measures (Maqbool, 2019; Mishra, 2017; Orlitzky, 2013; Schreck, 2011; Tang et al., 2012; Wang et al., 2016).

Contribution

Canadian businesses were looking at the EU as a potential new market. The EU legislated all companies to commit to ESG performance (Dunlap et al., 2017). The Canada-EU trade agreement had a clause that required Canadian companies to respect the EU's commitment to sustainability. The requirement included companies that trade in the EU and those that integrated into EU headquartered companies' supply chains (Global Affairs, 2017). The links between CSR and financial performance resulted in positive financial performance for larger firms (Maqbool, 2019; Mishra, 2017; Tang et al., 2012). The exploratory study showed that companies with a CSR investment in business model innovation, as measured by Sustainalytics ESG rankings, were significantly related to revenues in nondomestic sales globally. The study aligned with previous research that demonstrated a relationship between CSR and financial performance (Maqbool, 2019; Mishra, 2017; Schreck, 2011; Tang et al., 2012). The study also aligned with research that demonstrated a relationship between CSR strategic adoption and accounting-based measures (Orlitzky, 2013; Wang et al., 2016)

Future Research

The study was limited to Canadian companies. Future research could include global or multinational companies. The expansion would give more detail on many segments and opportunities for Canadian companies competing in a globalized economy. The research studied the relationship between the variables in an exploratory quantitative design. An area of future research would be a causal study to understand if the investment in CSR, as measured by Sustainalytics ESG ranking, leads to increased nondomestic sales revenue.

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