

TWO ESSAYS ON ENVIRONMENTAL ORIENTATION

by

COLIN BAUER GABLER

R. GLENN RICHEY JR, COMMITTEE CO-CHAIR

ADAM RAPP, COMMITTEE CO-CHAIR

KRISTY E. REYNOLDS

CRAIG E. ARMSTRONG

K. CLARK MIDKIFF

JOHN PELOZA

A DISSERTATION

Submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Department of Marketing  
in the Graduate School of  
The University of Alabama

TUSCALOOSA, AL

2013

UMI Number: 3562416

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI 3562416

Published by ProQuest LLC (2013). Copyright in the Dissertation held by the Author.

Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against unauthorized copying under Title 17, United States Code



ProQuest LLC.  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106 - 1346



## **ABSTRACT**

Green marketing has become ubiquitous. Generating profits through green marketing, however, has not. While firms continue to adopt environmental practices, they struggle to gain a competitive advantage through these endeavors. While scholars search for underlying theories and motivational factors to explain and change this behavior, managers simply want tangible solutions that improve performance and provide a return on their green investments. Environmental orientation may shed light onto this discrepancy by assessing a firm's ability to provide an authentic, unified image of environmental commitment. This research investigates the construct from both the manager and salesperson perspective.

In the first essay, I use the resource-based view and dynamic capabilities literature to construct an eco-capability that leverages the firm's human, business, and technology resources. Using a panel of 246 managers from 14 industries, I estimate a Latent Moderated Structural (LMS) model that provides support for the eco-capability components. I find a positive interaction effect between a firm's environmental orientation and organizational innovativeness on the formation of the eco-capability. This new construct is significantly related to both market and financial performance as well as the perceptions of quality associated with the firm's offering.

In the second essay, I measure environmental orientation from the salesperson's point of view. I again implement LMS on a panel of 224 salespeople across nine industries to examine the effects that this firm-level orientation has on individual-level behaviors. Using an Input-Process-Output framework and social identity theory, I demonstrate the importance of a strategic

alignment of values in optimizing performance and satisfaction. Specifically, I find that salespeople who work for environmentally-oriented firms put forth more effort and provide more feedback to managers when they identify with the organization. This increased effort and participation has a positive influence on sales performance. Further, salespeople with strong personal environmental identities are also more likely to provide feedback via participation, which ultimately contributes to their job satisfaction.

Taken together, the dissertation demonstrates the importance of environmental orientation and its role in sustainable business from both a managerial and salesperson perspective while offering suggestions for future research and applications.

## **DEDICATION**

This dissertation is dedicated to my best friend and brother-in-law, Dan Lyons. Your courage over these past four years has been an inspiration to me and everyone around you.

Keep the faith. Find the love. Dare to live.

## LIST OF ABBREVIATIONS AND SYMBOLS

<i>AIC</i>	Akaike Information Criterion: relative goodness of fit statistic to compare models
<i>AVE</i>	Average Variance Extracted
<i>CEO</i>	Chief Executive Officer
<i>CFA</i>	Confirmatory factor analysis
<i>CFI</i>	Comparative fit index
<i>CMV</i>	Common Method Variance
<i>CSR</i>	Corporate Social Responsibility
<i>EFA</i>	Exploratory Factor Analysis
<i>e.g.</i>	Exempli gratia: for example
<i>et al.</i>	Et alia: and others
<i>etc.</i>	Et cetera: and so on
<i>H</i>	Hypothesis
<i>i.e.</i>	Id est: that is
<i>IMOI</i>	Input-Mediator-Output-Input
<i>IPO</i>	Input-Process-Output
<i>IT</i>	Information Technology
<i>LL</i>	Log likelihood value: goodness of fit statistic to compare models
<i>LMS</i>	Latent Moderated Structural
<i>nt</i>	Not tested
<i>RBV</i>	Resource-Based View

<i>SEM</i>	Structural Equation Modeling
<i>RMSEA</i>	Root Mean Square Error of Approximation
<i>SRMR</i>	Standard Root Mean Square Residual
<i>Std Dev</i>	Standard Deviation
<i>WCED</i>	World Commission on Economic Development
<i>df</i>	Degrees of freedom: number of values free to vary after certain restrictions have been placed on the data
$\Delta df$	Change in degrees of freedom
$\Lambda$	Lambda: log likelihood ratio test statistic used to determine best-fitting model
$\chi^2$	Chi-square Value: A measure of the significance difference between statistical values
<i>p</i>	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
$\beta$	Beta: the standardized path loading relationship of one endogenous variable with another endogenous variable in a structural equation model
<i>N, n</i>	Sample size
<i>r</i>	Pearson product-moment correlation
<	Less than
=	Equal to
%	Percent
→	Is positively related to
±	Plus or minus



## ACKNOWLEDGEMENTS

Upon entering the PhD program, I was warned that getting married during the first semester would be too much. Nothing could have been further from the truth. A wedding is just a day; a marriage is a lifetime, and I certainly could not have completed this program without my wife. Listing all the ways Kathleen made this possible would require an additional chapter and trivialize the love and commitment she has shown me. Most importantly, she provided daily affirmation that I was exactly where I should be and doing exactly what I should be doing. It truly was a team effort.

Apart from Kathleen, two people are most responsible for my success in the program. Glenn Richey took me under his wing from the start. He was the professor I had in mind when I decided to pursue a PhD, and he was the professor I tried to emulate throughout my four years. Not only did he shape my research and teaching, he introduced me to the study abroad program in Istanbul and the study domestic program at Office B. Adam Rapp arrived in Tuscaloosa exactly halfway through my time in Tuscaloosa, but he quickly became an indispensable mentor. He prepared me for the job market and the dissertation, and showed me that you could accomplish a lot while still having a *nice* time. Both Adam and Glenn have become friends, for which I feel blessed. Most doctoral students have one ally, one advocate, one true role model; I can proudly say that I have two.

I also want to acknowledge my dissertation committee. Kristy Reynolds was my introduction into the PhD program and has been a part of every step of the way. While she has informed my research and teaching, I most value her example of how to strike the work-life

balance. From the moment I asked him to be on my committee, Craig Armstrong warned that he would ‘push back’ on my research. He has lived up to his word and for that I am grateful. It also helps to know someone who could beat Google Scholar in a draw. Clark Midkiff brought much-needed perspective to my research and always asked the question that sparked a discussion. I asked John Peloza to join my committee because I loved his research, and he proved that there is a strong correlation between good research and good people. While not on my committee, I have to acknowledge Sharon Beatty. From the first emoticon-filled email four years ago, she has offered encouragement and positive feedback.

I am especially grateful to the marketing doctoral cohort at UA. From happy hours and Beer Olympics to marathon homework sessions and “Can I use your class for data?” the students – past and present – have made this whole thing not just manageable but [at times] enjoyable. A handful deserves special attention. Myles Landers helped me run models in Bidgood and trails at Sokol Park. William Northington kept me young, Stephanie Gillison kept me in line, and Tyler Morgan kept me laughing; each provided real friendship at different times in the program. Frank Adams wore many hats, including friend, colleague, mentor, and counselor. The best way to thank him is to be for someone else what he was for me.

Lastly, I want to thank my family and friends for their support along the way. Leaving Pennsylvania for Alabama raised some eyebrows, but several visits (and national championships) later, our loved ones have come to see that this was the right decision.

## TABLE OF CONTENTS

ABSTRACT .....	ii
DEDICATION.....	iv
LIST OF ABBREVIATIONS AND SYMBOLS .....	v
ACKNOWLEDGEMENTS .....	vii
LIST OF TABLES .....	xiv
LIST OF FIGURES .....	xvi
LIST OF ILLUSTRATIONS.....	xvii
CHAPTER ONE: INTRODUCTION .....	1
1.0 Prologue .....	1
1.1 Introduction to the Dissertation.....	2
1.2 Research Objectives and Questions.....	4
1.3 Organization of the Dissertation.....	6
1.4 Sustainability and Sustainable Development.....	7
1.5 Stakeholder Theory.....	9
1.6 Qualitative Interviews.....	16
1.7 Conceptual Definition of Environmental Orientation.....	19
References.....	23
CHAPTER TWO – ESSAY ONE: BUILDING AN ECO-CAPABILITY THROUGH STRATEGY, ORIENTATION, AND INNOVATION.....	29
2.1 Introduction.....	29

2.2 Theoretical Background.....	32
2.2.1. Resource-Based View of the Firm.....	32
2.2.2 Interconnected Operant Resources & Dynamic Capabilities.....	34
2.3 Building an Eco-capability.....	37
2.3.1 Environmental Orientation as an Antecedent of an Eco-Capability.....	39
2.3.2 Environmental Strategy Focus as an Antecedent of an Eco-Capability.....	39
2.3.3 Organizational Innovativeness as a Moderator .....	42
2.3.4 Eco-Capability and Firm Performance.....	46
2.4 Methods .....	50
2.4.1 Research Design.....	50
2.4.2 Measures.....	51
2.4.3 Sampling Frame and Data Collection.....	52
2.4.4 Attention Measurement.....	53
2.4.5 Sample Characteristics.....	54
2.4.6 Exploratory Factor Analysis.....	55
2.4.7 Confirmatory Factor Analysis and Construct Validity.....	58
2.4.8 Nonresponse Bias.....	66
2.4.9 Common Method Variance.....	66
2.4.10 Structural Model Estimation.....	68

2.5 Results of Structural Model.....	69
2.6 Conclusion.....	74
2.6.1 Theoretical Implications.....	74
2.6.2 Managerial Implications.....	76
2.6.3 Limitations and Future Research.....	77
References.....	80
CHAPTER THREE – ESSAY TWO: BUILDING A “GREEN” SALES FORCE THROUGH A STRATEGIC ALIGNMENT OF SHARED VALUES.....	90
3.1 Introduction.....	90
3.2 Theoretical Background.....	92
3.2.1. Strategic Alignment Theory and Social Identity Theory.....	93
3.3 Conceptual Development.....	96
3.3.1 Process Variable: Effort.....	96
3.3.2 Process Variable: Participation.....	97
3.3.3 Input to Process: Environmental Orientation Influence on Effort & Participation	99
3.3.4 Moderating Effect: Organizational Identity.....	102
3.3.5 Moderating Effect: Environmental Identity.....	104
3.3.6 Process to Performance: Influence of Effort on Performance & Satisfaction	107
3.3.7 Process to Performance: Influence of Participation on Performance & Satisfaction	108
3.4 Methods .....	111

3.4.1 Research Design.....	112
3.4.2 Measures.....	112
3.4.3 Sampling Frame and Data Collection.....	114
3.4.4 Attention Measurement.....	114
3.4.5 Sample Characteristics.....	115
3.4.6 Confirmatory Factor Analysis and Construct Validity.....	116
3.4.7 Nonresponse Bias.....	121
3.4.8 Common Method Variance.....	121
3.4.9 Structural Model Estimation.....	122
3.5 Results.....	124
3.6 Conclusion.....	131
3.6.1 Theoretical Implications.....	131
3.6.2 Managerial Implications.....	133
3.6.3 Limitations and Future Research.....	135
References.....	137
CHAPTER FOUR: CONCLUSION.....	145
4.1 Introduction.....	145
4.2 Chapter One Implications.....	145
4.2 Chapter Two Implications.....	147

4.3 Chapter Three Implications.....	157
4.2 Future Research Directions.....	149
References.....	151
APPENDIX A: IRB CERTIFICATION.....	153

## LIST OF TABLES

1. Qualitative Interview Emergent Themes and Examples (1-1).....	17
2. Special Issues on Sustainability in Business Journals (2-1).....	31
3. Calls for Research in Marketing Journals linking Sustainability & Resources (2-2) .....	32
4. Construct Definitions (2-3) .....	49
5. Hypotheses (2-4) .....	50
6. Example of Embedded Attention Measure (2-5) .....	54
7. Industry Analysis (2-6).....	55
8. Full EFA on Eco-Capability Construct (2-7) .....	57
9. Reduced EFA on Eco-Capability Construct (2-8) .....	58
10. Scale Items with Factor Loadings and Reliabilities (2-9) .....	61
11. Scale Means, Standard Deviations, Correlations and AVEs (2-10).....	63
12. New Scale Means, Standard Deviations, Correlations and AVEs (2-11).....	65
13. Results of Model Comparison (2-12) .....	72
14. Results of Hypotheses Testing (2-13) .....	72
15. Construct Definitions (3-1) .....	110
16. Hypotheses (3-2) .....	111
17. Example of Embedded Attention Measure (3-3) .....	115
18. Industry Analysis (3-4).....	116
19. Scale Items with Factor Loadings and Reliabilities (3-5) .....	118



20. Scale Means, Standard Deviations, Correlations and AVEs (3-6).....	120
21. Results of Model Comparison (3-7) .....	125
22. Results of Hypotheses Testing (3-8) .....	127

## LIST OF FIGURES

1. Conceptual Model for Essay 1 (1-1).....	5
2. Conceptual Model for Essay 2 (1-2).....	6
3. Traditional View of Sustainability (1-3).....	12
4. Traditional View of Sustainable Development (1-4).....	13
5. Sustainable Development under the Stakeholder View (1-5).....	15
6. Conceptual Model with Hypotheses (2-1).....	48
7. New Hypothesized Model (2-2).....	64
8. Alternative Model (2-3).....	71
9. Organizational Innovativeness Moderation Effect (2-4).....	73
10. Conceptual Model with Hypotheses (3-1).....	109
11. Alternative Model (3-2).....	126
12. Three-Way Interaction Model (3-3).....	126
13. Organizational Identity Moderation on Effort (3-4).....	128
14. Organizational Identity Moderation on Participation (3-5).....	129
14. Environmental Identity Moderation on Participation (3-6).....	130

## **LIST OF ILLUSTRATIONS**

1. New York Times Patagonia Advertisement (2-1).....	41
2. Patagonia Footprint Chronicles Traceable Supply Chain (2-2).....	45

## **TWO ESSAYS ON ENVIRONMENTAL ORIENTATION**

### **CHAPTER ONE**

#### **INTRODUCTION**

Conservation cannot promise a return to pristine, prehuman landscapes. Humankind has already profoundly transformed the planet and will continue to do so. What conservation could promise instead is a new vision of a planet in which nature – forests, wetlands, diverse species, and other ancient ecosystems – exists amid a wide variety of modern, human landscapes. For this to happen, conservationists will have to jettison their idealized notions of nature, parks, and wilderness – ideas that have never been supported by good conservation science – and forge a more optimistic, human-friendly vision.

-Peter Kareiva  
Chief Scientist, The Nature Conservancy

#### **1.0 Prologue**

This chapter serves as the introduction to the dissertation. It contains the general domain and background for the research as well as the fundamental questions that I hope to answer.

Besides setting the stage for both essays with an overview of sustainable development, I briefly outline the justification for the work using stakeholder theory. I also discuss how the dissertation is organized and the qualitative interviews conducted that informed the conceptual development. Finally, I define the construct of environmental orientation, which serves as a bridge between both essays.

#### **1.1 Introduction of the Dissertation**

As the above quote illustrates, sustainability has changed from a buzzword to a strategic issue. The conversation has shifted from a ‘what we did wrong’ mentality to a ‘how can we make

this work' attitude with realistic and achievable goals. Stakeholders are calling for businesses to grow with the environment, which means it is now more critical than ever to implement sustainable practices. Firms have responded to the consumer desire for green offerings (Sharma et al. 2010), and these environmental strategies have been shown to positively impact everything from public relations, brand reputation, and employee motivation (Zhu and Sarkis 2004) to consumer attitudes and intentions (Ginsberg and Bloom 2004).

Still, while significant benefits are emerging for firms implementing environmentally-friendly strategies (e.g., Sharma et al. 2010; Luo and Bhattacharya 2006), it does not always translate to financial gain (e.g., Chan et al. 2012; Mohr, Webb and Harris 2001). For instance, even though 2012 saw an increase in the number of companies that reported profits from their sustainability initiatives, that number is only 37% of the total (Makower 2013). Consumers remain hesitant to pay more for green products (e.g., Sharma and Iyer 2012), and practitioners remain fixated on targeting these consumers at the expense of other stakeholders (Greenley, Hooley and Rudd 2005). Compounding the issue, it continues to be more expensive for firms to engage in these endeavors as environmental financial costs rose 8% between 2007 and 2011 to \$352 million (Makower 2013). Thus, firms remain reluctant to risk environmental strategies. Indeed, the simple goal of improving the life of consumers while making a positive impact on the environment has been elusive to scholars and managers alike (Polonsky 2011).

This represents a frustrating paradox for firms and an urgent call for scholarly research, particularly in the discipline that some feel is partly responsible for the state of natural environment (Fisk 1974). It is clear that everything from strategy and orientation to the marketing mix itself has to be reconsidered in this new paradigm (Kotler 2011), but mainstream marketing has yet to play as big of a role as economists and psychologists in the shaping of our

understanding of sustainability (Harper and Peattie 2011). For the marketing discipline, then, this constitutes not just a call for research; it constitutes a calling.

This dissertation addresses this calling in two related essays. The goal of the first essay is to uncover the value of environmental initiatives as perceived by the managers who implement them. Examining the focal constructs of environmental orientation and environmental strategy focus, I also answer Banerjee's (2002) request to reassess the orientation-strategy relationship. Using the resource-based view (RBV) (Barney 1991, 1986; Peteraf 1993) of the firm and dynamic capabilities (Eisenhardt and Martin 2000; Teece, Pisano and Shuen 1997), I posit that these constructs form the basis of an eco-capability which optimizes performance when deployed by a firm that also embraces innovation. This eco-capability exists not as a stand-alone capability, but one that magnifies and transforms the first-order routines that comprise the way a firm "earns a living" (Winter 2003). Using the work of Powell and Dent-Micallef (1997), an eco-capability is presented as a second order construct consisting of human, business, and technology resources. It is dynamic because it helps coalesce the firm's existing environmental resources and enhances their value in the process. According to RBV, an eco-capability would allow firms to gain a sustainable competitive advantage because it is valuable (it would reduce the needed inputs and waste outputs), rare (most firms would not have it), costly to imitate (other firms would have difficulty benchmarking this capability), and even non-substitutable (it would display authenticity of firm values) (Barney 1991). This capability would possess these attributes because it would be firm-specific, causally ambiguous, and path-dependent (Reed and DeFillippi 1990) and based on managerial judgments about the value of different resources committed to such a capability (Amit and Shoemaker 1993). As a dynamic capability, it would allow firms to

change their routines in ways which improve their position in the market, the quality of their offerings, and their financial performance. See Figure 1-1 for a conceptual model.

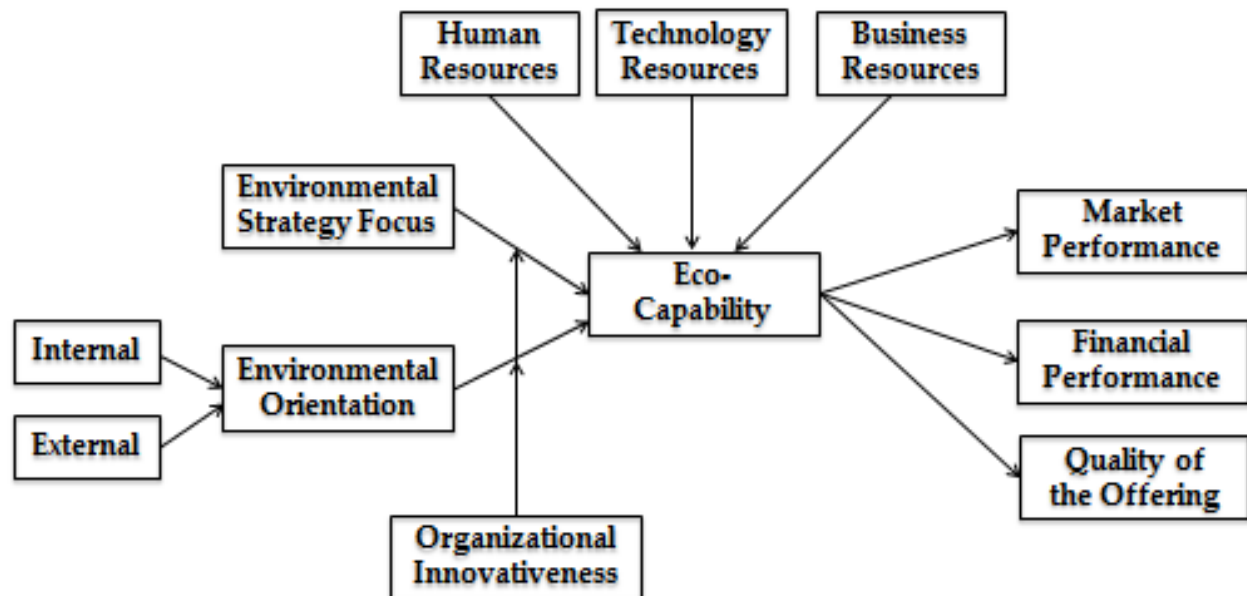
The second essay views environmental orientation from a salesperson perspective. As both resources and stakeholders of the firm, these boundary-spanning employees are integral components of an eco-capability. Implementing strategic alignment theory (Chorn 1991) and social identity theory (Mael and Ashforth 1989), I posit that the performance and satisfaction of these salespeople will be moderated by a shared sense of environmental responsibility and a strong identity with the organization. Using an Input-Process-Output (IPO) framework (Steiner 1972), I investigate the effects of organizational and environmental identity on the processes of effort and participation. These enhanced processes should lead to more satisfied and high-performing salespeople. See Figure 1-2 for a conceptual model.

## **1.2 Research Objectives and Questions**

For illustrative purposes, I frame each essay with a series of research questions. These questions are developed and tested in their corresponding chapters, but are presented within the introduction to guide the reader. The main questions to be discussed in essay 1 are as follows:

1. Do environmental orientation and environmental strategy focus act as antecedents of an eco-capability?
2. What is the role of organizational innovativeness in the creation of an eco-capability?
3. How does an eco-capability impact market performance, financial performance, and perceptions of quality of the firm's offerings?

**Figure 1-1. Conceptual Model for Essay 1**

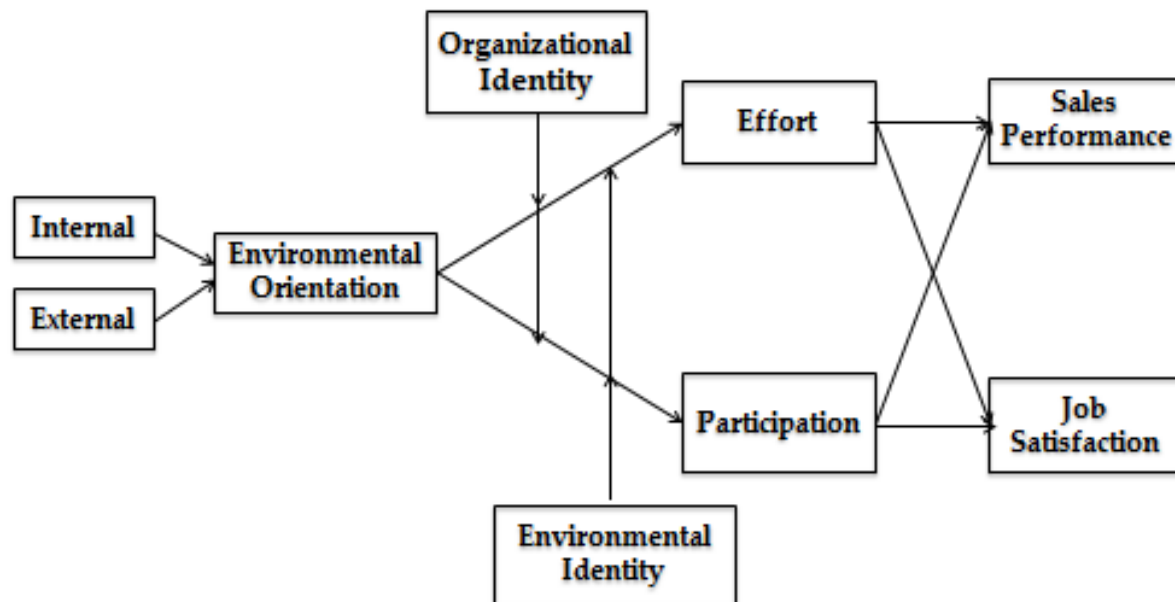


In essay 2, the main questions are as follows:

1. Does an environmental orientation motivate salespeople to put more into their job through effort and participation?
2. Are salespeople more likely to increase their effort and participation when they identify with an environmentally-oriented firm?
3. Are salespeople more likely to increase their effort and participation when they have a strong personal environmental identity?
4. Do increases in effort and participation lead to better sales performance and higher job satisfaction?



**Figure 1-2. Hypothesized Model for Essay 2**



While each essay has specific objectives, the overarching goal is to help answer the question that both practitioners (Engardio et al. 2007) and academics (Polonsky 2011; Friedman 1970) have asked for decades: Does it pay to be green?

### **1.3 Organization of the Dissertation**

The dissertation proceeds with an overview of stakeholder theory and its role in the creation of sustainable development before the conceptual development of environmental orientation. This focal construct serves as the fulcrum of the two essays and will be investigated through both a strategic orientation lens as well as an organizational culture and climate lens. Chapter Two presents essay 1, which views the construct through the eyes of business managers. The goal of this essay is to show that through innovation, strategy, and orientation, firms can create a capability that maximizes these components, allowing them to achieve the desired performance from their environmental initiatives. Chapter Three presents essay 2, which takes a salesperson perspective. As boundary-spanning employees, salespeople are the visible face of an

organization, and accordingly, its environmental programs. Their interpretation is crucial to understanding how a firm's environmental orientation is conveyed to customers. In each essay, I develop a conceptual model and theoretical background before presenting hypotheses, methods, analysis, results, and contributions. Chapter Four integrates both essays with some final conclusions and implications for both theory and practice.

#### **1.4 Sustainability and Sustainable Development**

As research on corporate social responsibility, green marketing, and sustainability intensifies, so does the need to properly define and differentiate the terms. Corporate Social Responsibility (CSR) is "a business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's social relationships" (Wood 1991, p. 693). It "reflects the social imperatives and the social consequences of business success...and empirically consists of clearly articulated and communicated policies and practices of corporations that reflect business responsibility for some of the wider societal good" (Matten and Moon 2008, p. 405). This definition separates CSR from government's role in social programs and from the solely profit-maximizing corporate mentality (Friedman 1970). Fundamentally, it changes the way we view the role of business from one of not harming society to one of actually improving it (Drucker 1986). An example is Toms Shoes, which has a program where it donates one pair of shoes to a child in need for every pair sold to a customer. This is a CSR initiative because it involves a clear policy; it is counter to a completely profit-driven corporate goal; and its scope is the greater societal good.

Early definitions of CSR encompassed economic, legal, philanthropic, and ethical obligations (Carroll 1979) but left out responsibility toward the environment. Later

conceptualizations placed environmental responsibility in either the economic or legal category; however, initially, green marketing emerged to fill the gap. Green marketing consists of all activities designed to generate and facilitate any exchanges intended to fulfill human needs with minimal impact on the natural environment (Stanton and Futrell 1987). Polonsky and Mintu-Wimsatt (1995) define green marketing as “the application of marketing concepts to and tools that facilitate exchanges that satisfy organizational and individual goals in such a way that they preserve, protect, and conserve the physical environment” (p. 20). In April 2008, Lays Sun Chips launched a bag made of a plant-based material that completely breaks down in 14 weeks. This is considered green marketing because it is a product that does not harm the environment, marketing concepts (promotion, needs fulfillment, etc.) were applied to its launch, and it helps facilitate an exchange between firm and consumer.

Because CSR and green marketing overlap, introducing sustainability can either muddle the literature further or help to clarify it. According to the Center for Sustainable Enterprise (2010), sustainability is “a way of doing business that creates profit while avoiding harm to people and the planet.” By putting people and planet in the same, simple definition of ‘doing business,’ it integrates the concepts of CSR and green marketing. Sustainable development means that, as a society, our actions will meet our current needs but not compromise the ability of future generations to meet their own needs (WCED 1987). It is the continual growth of the natural ecosystem system with interrelated human systems (political, business, social and economic) without the loss or destruction of one system for betterment of another.

An often used metric of sustainability is the Triple Bottom Line, which divides the concept into three main components: social, economic, and environmental (Elkington 1998). Like green marketing, sustainability prioritizes the natural environment; like CSR, it involves a

social and economic component. Sustainable development, then, is the full assessment of the social, economic, and environmental aspects of business. A firm cannot make a decision based on one without impacting the others. CSR frameworks and green marketing strategies often omit one or more key stakeholders, making it difficult to draw direct relationships between an initiative and performance. Because sustainability strategies involve all of an organization's stakeholders, they can be directly linked to competitive advantage and performance (Hult 2011). This dissertation focuses on environmental strategy and orientation. However, it is not green marketing because its scope is broader than environmental conservation; and it is not CSR because it relates to more than social relationships. Therefore, it is positioned under the umbrella of sustainability.

Because sustainability encompasses so much, it is nearly impossible to identify an example that has a positive impact on each overlapping system or one that does not compromise some generation's ability to meet its needs. For instance, cheap, nonrenewable fossil fuels create low prices for current consumers but may jeopardize the environment for the next generation. Alternatively, a shared global focus on renewable energy may have positive impacts on the natural environment and many parts of society. However, it may raise prices for consumers and cause people who work in nonrenewable energy industries to lose their jobs. Using the WCED's (1987) definition, this example is an effort to not compromise the planet for future generations; however, it may not allow current society members to meet their needs. Thus, it highlights the often difficult decisions facing government officials, businesses, and consumers.

## **1.5 Stakeholder Theory**

When taking a sustainability approach to strategic management, firms must acknowledge each stakeholder: investors and shareholders, managers and employees, customers and society at

large; and finally, the environment (Freeman 1984). While seemingly simple, businesses have struggled to apply this macro-level thinking to micro-level decisions (Polonsky 2011). Laczniak and Murphy (2012) argue that a shift must first occur in perspective. The authors posit that society should be positioned at the center of stakeholder theory instead of the focal firm, with everything stemming outward from a social perspective. This approach, specifically the notion that certain stakeholders (i.e., society at large, the environment) should be considered at the expense of profit maximization, is being met with some resistance. For this reason, business scholars have been tasked with making environmental strategies financially viable.

Stakeholder theory traces its roots to the 1960s, but gained public interest two decades later at the same time environmental concern was growing among the public. Stakeholder theory is all at once descriptive, instrumental, normative, and managerial (Donaldson and Preston 1995): it simultaneously describes a firm, outlines connections to performance, recognizes the intrinsic value of each stakeholder, and offers practical implications for managers. Further, it complements the relationship marketing literature. When consumers and organizations share long-term goals, such as environmental protection, they also share responsibilities, and therefore, are better suited to coordinate their objectives (Freeman et al. 2010). From this perspective, the environment is not seen as an outcome but as a stakeholder, which makes the management of relationships between stakeholders even more paramount.

Given this overlap, it is not surprising that ethics and management literature have dominated the business disciplines regarding stakeholder theory. However, it has finally begun to gain traction in marketing, particularly in response to the 2010 special issue of the *Journal of Public Policy & Marketing* (Bhattacharya 2010). In the last decade, multiple stakeholder orientation profile (Greenley, Hooley and Rudd 2005), stakeholder perspective (Bhattacharya

and Korschun 2008), stakeholder orientation (Ferrell et al. 2010), stakeholder marketing (Hult et al. 2011), and stakeholder engagement (Corus and Ozanne 2012) have been advanced to push forward the simple premise that a firm must take more than just its shareholders into consideration when making decisions.

Each of these viewpoints recognizes that firms have a number of different – and often competing – audiences that they must satisfy in the course of doing business (Polonsky 1995). Freeman (1984) notes that one of the main challenges associated with stakeholder theory is that often stakeholders have competing or conflicting objectives. For instance, suppose a firm implements a new process in its factory, and as a result, it produces hazardous waste. Management could hire a full-time employee to monitor and oversee disposal or simply drive it to the dump like their non-hazardous waste. The cost of the new hire would positively impact several stakeholders (e.g., the employee, wildlife, the environment) but the added expense could negatively affect others, such as shareholders. Confounding the issue is the distinction between primary stakeholders, such as customers and employees, who are essential for firm survival, and secondary stakeholders, such as the environment, who are not (Greenley, Hooley and Rudd (2005).

Polonsky (1995) offers a four-step guide to integrating stakeholder theory into all firm activities, but the task is almost overwhelming in its scope and magnitude. It all but requires management to make choices about which “stakes” are more important than others. Some scholars claim that the ranking of stakes is a simple matter. The best way to achieve the goal of not compromising future generations may be to protect the resources that these future generations will require to meet those needs. Leopold’s (1949) land ethic posits that everything deserves ethical consideration, including the atmosphere, lithosphere, hydrosphere biosphere,

and the land itself. He insists that we need to view the planet as more than property with economic value, but as *the* fundamental stakeholder. This shifts the model away from a firm perspective, perhaps matching what Laczniaak and Murphy (2012) prescribe 53 years later.

I propose that the key problem of a firm-centric perspective of sustainability is that it suggests that humans can operate outside of the natural environment. See the traditional view of sustainability found in Figure 1-3. One component represents society, one represents business or economy, and one represents environment; the intersection of all three represents sustainability.

**Figure 1-3. Traditional View of Sustainability**

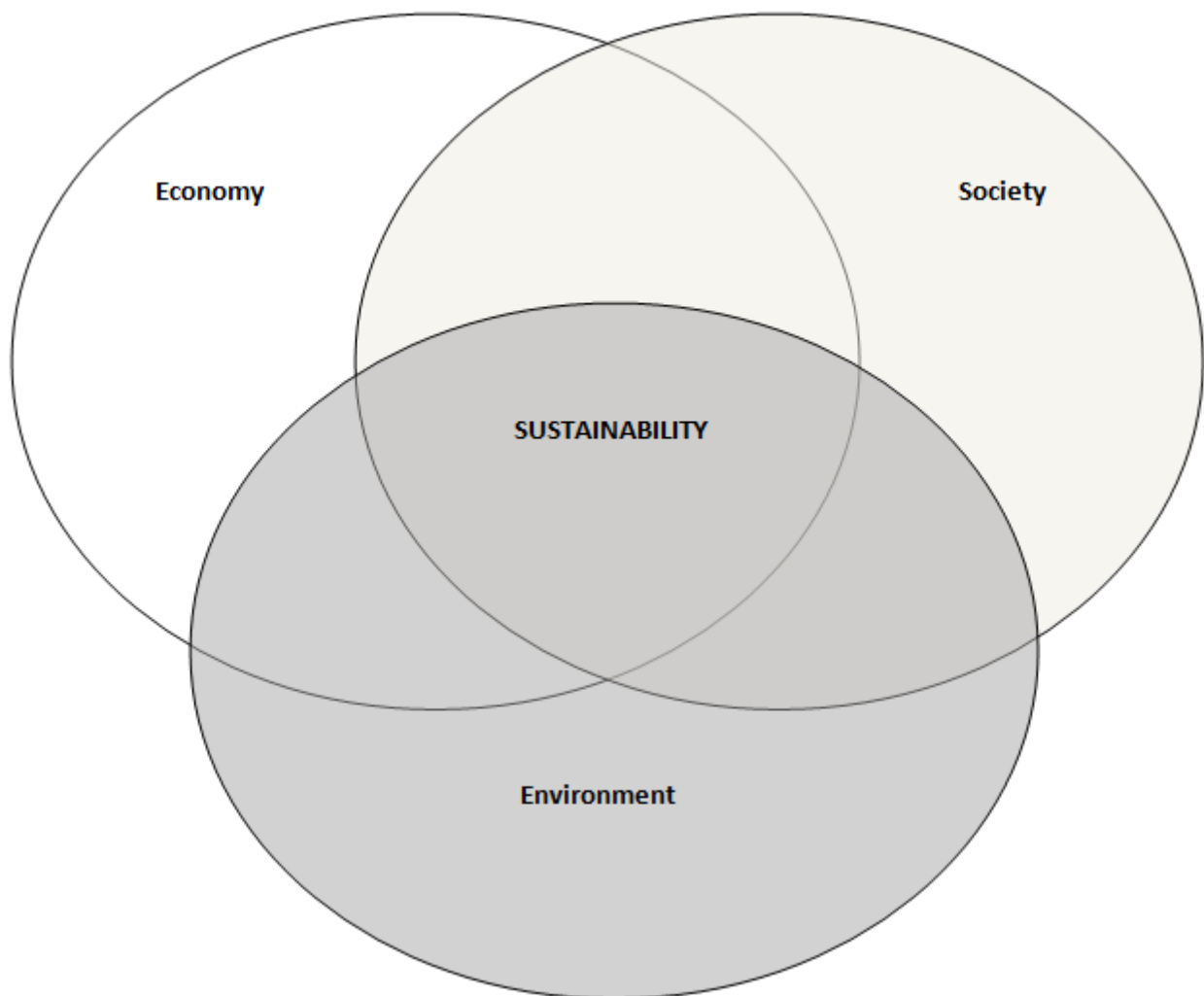


Figure 1-3 indicates that society can progress, the economy can grow, and that the two can interact, outside of the natural environment. This is patently false. More recent illustrations depict environmental responsibility overlapping social progress and economic development. See figure 1-4.

**Figure 1-4. Traditional View of Sustainable Development**

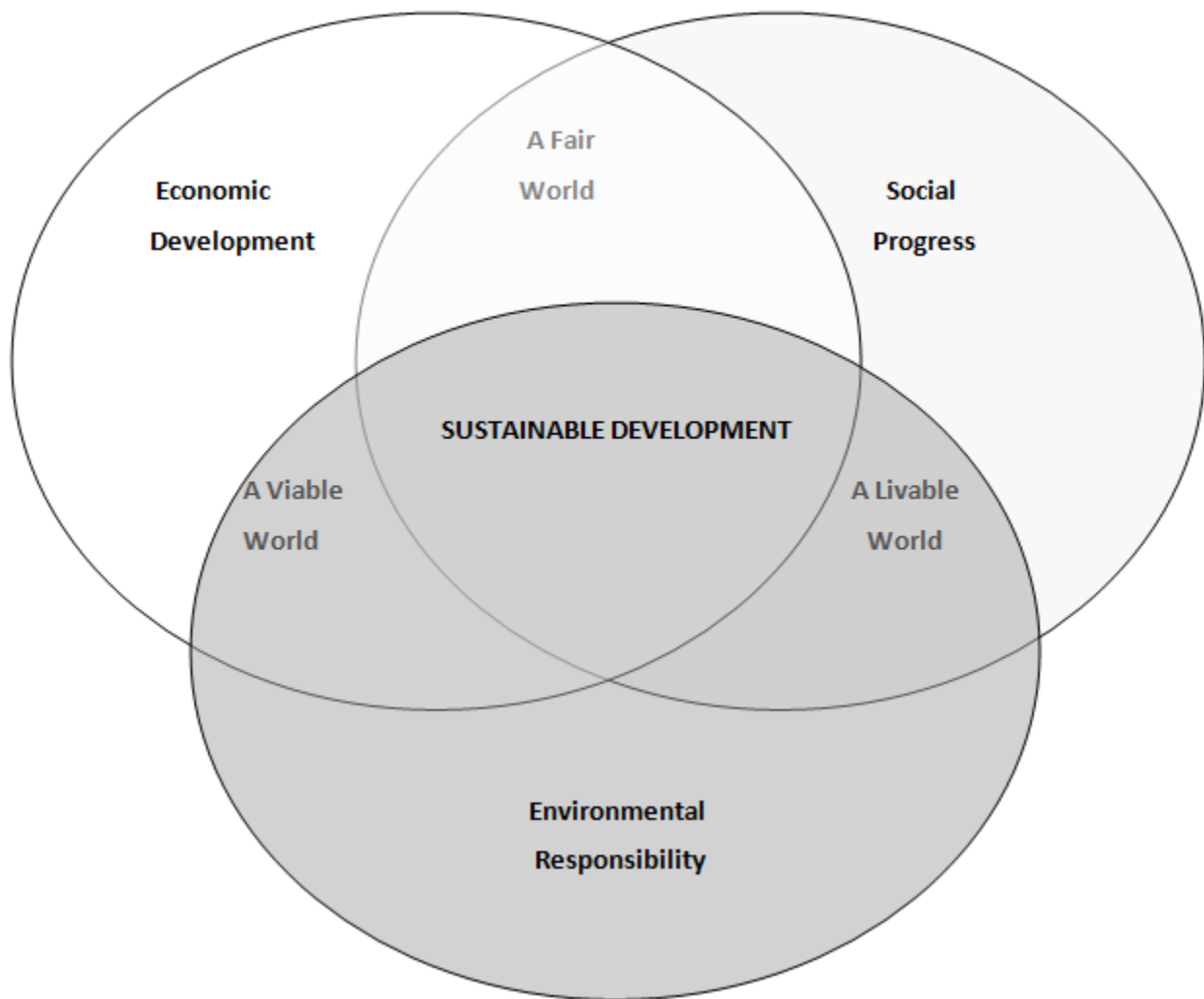
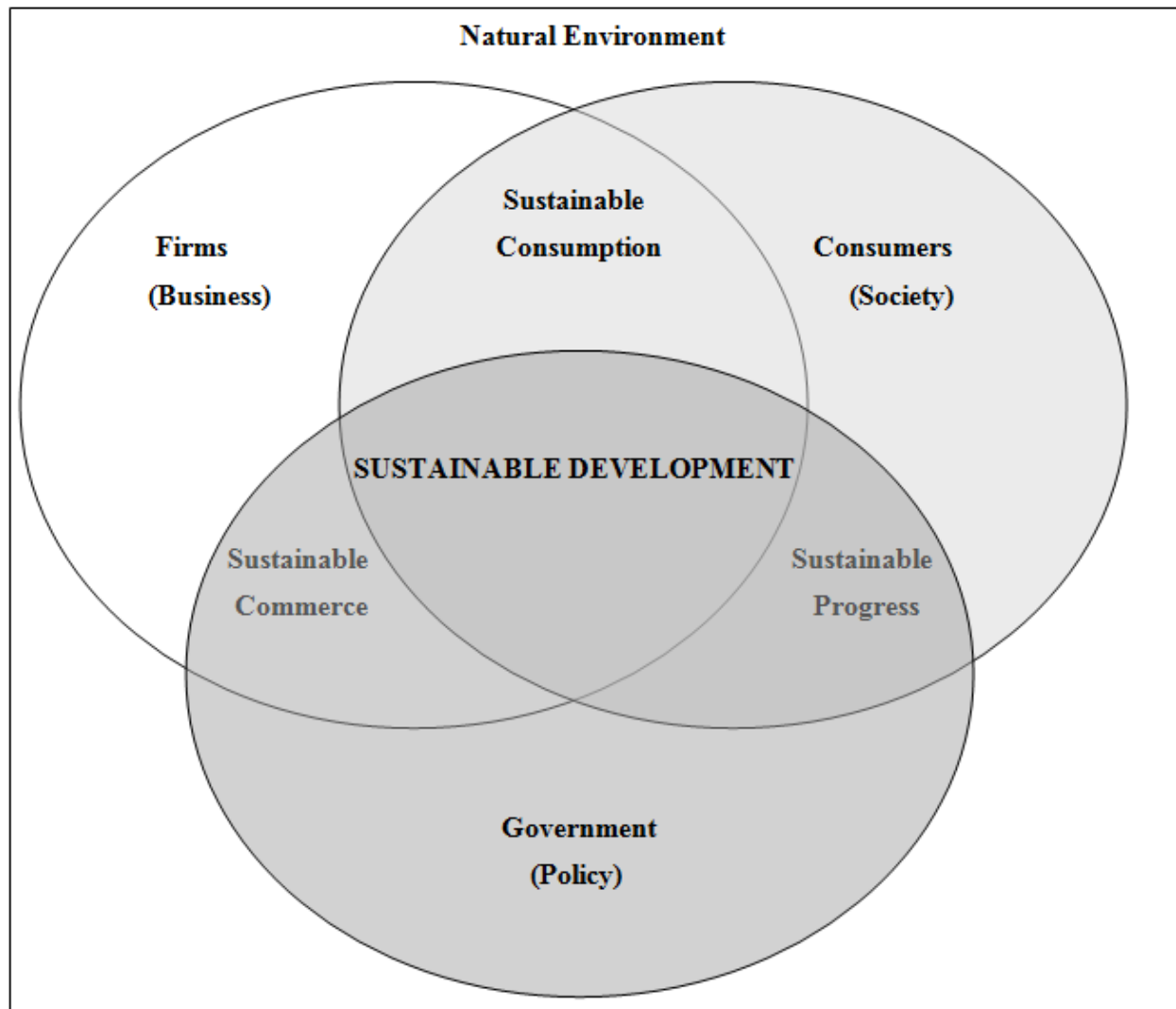




Figure 1-4 is an improvement, but still conveys the false premise that people can make decisions that do not impact the planet. Both figures are fundamentally flawed. The environment is not a component of this interaction; it is the indispensable system in which all of these interactions take place. Using the stakeholder view, I propose a human-centric approach to sustainable development. The human component of sustainable development can be broken down into three groups: 1) business, which includes managers, employees, shareholders, investors, suppliers; 2) society, which encompasses consumers, citizens, communities, and society at large; and 3) government, which includes policy-makers, officials, regulators, politicians, and community leaders. All three operate with and within the natural environment as illustrated in Figure 1-5.

**Figure 1-5. Sustainable Development under the Stakeholder View**



The investigation of resources through multiple stakeholder lenses – and the entire system as a whole – provides marketing with a much-needed voice in the sustainability discussion. Figure 1-5 demonstrates the full scope of sustainable development and offers research directions at the firm-level, consumer-level, and policy-level. Essays 1 and 2 examine the firm-level, or business element, of this dynamic system. When each element is more accurately understood in isolation, scholars will be more capable of exploring their overlaps and

interactions. The first step to examining the business component requires understanding the key variables. Prior to the literature review, qualitative interviews were conducted to help shape the conceptual development of the major constructs employed in both essays.

## **1.6 Qualitative Interviews**

Managers and executives from Brazil, Macedonia, Turkey, Germany and the United States were interviewed to identify commonalities and gaps within the business component of sustainable development. The findings indicate that the meanings of “green,” “environmentally-friendly,” and “sustainability” vary greatly. For instance, the question “What sustainability programs or initiatives has your firm implemented?” garnered responses ranging from employee working conditions to emissions reduction to corporate philanthropy. When asked to explain why they instituted green strategies, government regulations and legal restrictions were the most common answers. However, a sentiment echoed by several respondents was the desire to change that rationale to profitability and firm performance. Another commonality was the ambition to improve this facet of their business – whatever ‘this’ is. Taken together, the interviews provide evidence that firms are struggling with the how, what, and when of sustainable strategies.

Several themes emerged when respondents were asked to identify bridges and barriers to the successful implementation of green strategies. These themes with examples can be found in Table 1-1.

**TABLE 1-1**  
**Qualitative Interviews Emergent Themes and Examples**

<b>Theme</b>	<b>Examples</b>
<b>Recognition of Importance</b>	<p><i>It's important that we're perceived by our customers as a leader in making energy-efficient products.</i></p> <p><i>Being green, environmental, sustainable—whatever you call it—quite simply, is going to be a must for businesses in the very near future. But right now the advantages aren't apparent and the costs are very high.</i></p> <p><i>We need to make the entire supply chain sustainable. We need to ensure that our raw materials comply with sustainability criteria.</i></p>
<b>Building Awareness</b>	<p><i>We need to make more people aware of what we're doing, but we need to raise awareness internally before we can raise awareness externally. We need salespeople to make us distinguishable in our customers' eyes.</i></p> <p><i>We need to be able to calculate the ROI of sustainability investments and clearly demonstrate the benefits from them to our customers; otherwise, we can't convince customers to buy a photovoltaic system.</i></p>
<b>Communicating the Message</b>	<p><i>We need 360 degrees of communication. Sustainability needs to be everywhere; it needs to be in our DNA.</i></p> <p><i>I think that the implementation of sustainability initiatives would be improved if you improve internal communication and allocate adequate budgets for sustainability.</i></p> <p><i>Communication of our initiatives inside and outside of the company is a key to success. You need to study that. It's so important and yet so difficult to handle. It is the toughest issue.</i></p> <p><i>At the end of the day, however, you have to show something, to let people know what you do. So, although communication is important, it all comes down to behaviors. One needs not only to talk the walk but also walk the talk.</i></p>
<b>Addressing Multiple Stakeholders</b>	<p><i>We still have to make profits in order to stay in business. So protecting a share of profits for our shareholders is also important. Sometimes, there may be a conflict between achieving the objective of protecting the planet and protecting a share of business for shareholders.</i></p> <p><i>The fact that we take good care of our employees and the environment does not mean lower profits for our shareholders, on the contrary.</i></p> <p><i>Trying to satisfy the interests of shareholders, investors, planet, and employees is difficult.</i></p> <p><i>Naturally, we have to protect their [stakeholder] interests. It's a key part of our company mission.</i></p> <p><i>Of course, we need to make profits to protect our image to customers and society. If our image is hurt, then we lose share value.</i></p>

<b>Sharing a Unified Vision</b>	<p><i>What we're missing today is an umbrella, a comprehensive process for sustainability. I think the key is to have a commonly accepted definition of sustainability within the company.</i></p> <p><i>The initiatives have to be communicated top-down. People need to get the feeling that the board really believes in the initiatives.</i></p> <p><i>We can't communicate something that has different meanings in peoples' minds. We need something that is uniformly interpreted by people. We need to have a clear definition of what sustainability is.</i></p> <p><i>The interpretation of sustainability needs to be uniform among our employees and managers; it has to mean the same thing to different people.</i></p>
<b>Matching Strategy with Firm Values</b>	<p><i>Sustainability initiatives have to be a strategic topic for our company and be allocated with more resources. As a facilitator, I think that everybody throughout the organization should feel committed to sustainability and at the same time be disciplined in this commitment.</i></p> <p><i>The sustainability report is not an explicit part of our strategy. This has to change so that everyone knows and understands that this is important. Currently, sustainability is more of a side effect of our strategy. However, sustainability should be a part of our strategy and the mindset of our company. To do so we need to specify the activities that we need to engage in.</i></p> <p><i>We need to translate words into specific actions.</i></p> <p><i>We have to make sustainability an explicit dimension of our strategy and also develop sustainability-related objectives. We need to live and execute our philosophy.</i></p>
<b>Innovation leading to Profits</b>	<p><i>Efficiency is the key word here. I think we have a big opportunity to improve efficiency in our products. We should create innovative product technology.</i></p> <p><i>Caring about the environment pays off in the long-term. We always look for solutions that are environmentally-friendly. We do have to follow legislation but doing so also gives us a cutting edge in technology as well as product advantage and differentiation.</i></p> <p><i>We should be innovating more; we should be going the extra mile.</i></p> <p><i>Sustainability can lead to innovative processes and then we can profit by selling these ideas and safeguarding profits for the future.</i></p> <p><i>Making profits is the fuel of R&amp;D and protection of people's jobs and planet. If you don't make profits you cannot secure employability or have resources to make environmentally-friendly products.</i></p>

<b>Prioritizing Employees</b>	<i>Our strategy needs to ensure that we can protect employees' jobs and at the same time create a culture that retains and motivates our employees.</i>
	<i>It's important to keep good employees and not let them go. We need to make sure that our employees are satisfied with their jobs here.</i>
	<i>Our employees are our most valuable asset. Investing in our employees will increase their motivation, i.e., increase of productiveness of our workforce.</i>

## 1.7 Conceptual Definition of Environmental Orientation

Environmental orientation is positioned as an independent variable in both essays for several reasons. First, a common theme among interviews was the need for a unified firm vision and a strategic orientation that matches firm values. This aligns with the current literature, which suggests that companies have not been able to adopt, embrace, or convey a green image. Specifically, Lubin and Esty (2010) indicate that most companies “are flailing around, launching a hodgepodge of initiatives without any overarching vision or plan” (p. 154). Secondly, there have been specific calls to understand green attitudes at different levels of the organization. For example, Dibrell, Craig and Hansen (2011) pose that “Future work should explore more thoroughly how the managerial attitudes toward the natural environment are embedded in an organization's culture” (p. 406). Because top management is instrumental in championing programs that demonstrate recognition of environmental stakeholders (Hunt and Auster 1990), these managers could be ‘green champions’ that promote and diffuse policies and attitudes throughout the organization (Cronin et al. 2011). Further, Menguc and Ozanne (2011) suggest an examination of how a natural environment orientation affects employee attitudes, and how those attitudes impact behavior. Therefore, environmental orientation may act as a bridge between managers, employees, and external organizational stakeholders. Third, the ‘greening of the organization’ is a delicate task. If it is not approached authentically, consumers may infer it as a

ploy (Ginsberg and Bloom 2004). These consumers may believe the company is engaging in greenwashing, or a manipulation tactic with the underlying motive to earn a profit (Laufer 2003). Fourth, and perhaps most importantly, correctly implemented orientations offer an avenue to competitive advantage.

Behavioral orientations have received a lot of attention in the marketing literature, especially in relation to value creation (Jaworski and Kohli 1993; Narver and Slater 1990). Used strategically, they become a firm-specific resource that can enhance performance (Ge and Ding 2005). In particular Kohli and Jaworski's (1990) market orientation is widely acknowledged as a driver of competitive advantage. However, it lacks a theoretical connection with firm performance (Hunt and Lambe 2000). For this reason, specialized orientations have been developed that can be more closely linked to performance outcomes. In particular, innovation-orientation (Hurley and Hult 1998) and production-orientation (Pelbani 2000) are seen as drivers of performance because each places emphasis on advancements and efficiency (Ngo and O'Cass 2009).

As businesses become more eco-conscious, environmental orientation becomes a necessary construct (Munilla and Miles 1993). Environmental orientation shares a foundation with market orientation (Stone, Joseph and Blodgett 2004). Both rely heavily on organizational factors as well as those external factors which may impact its implementation. Specifically, market orientation is contingent upon the generation of, dissemination of, and responsiveness to knowledge (Kohli and Jaworski 1990), and environmental orientation also has these requirements. However, while market orientation focuses on primary stakeholders like customers and competitors (Greenley, Hooley and Rudd 2005), environmental orientation gives equal consideration to primary and secondary stakeholders.

I use Stone and Wakefield's (2000) definition of environmental orientation in both essays: "The organization-wide mission to: generate ecological intelligence pertaining to current and future societal environmental needs, disseminate this intelligence throughout organizational departments, and generate acceptance and responsiveness to these needs through the adaptation of internally developed programs which create and foster organizational and public perception of ecological concern" (p. 22). The outdoor apparel company, Patagonia, is the best example of an environmentally-oriented firm because its entire corporate image is built around commitment to the environment. Their environmental business plan is more than what their managers and employees do; it is who they are.

Banerjee (2002) divides the construct into internal and external components. Internal environmental orientation shares a theoretical basis with organizational culture (Dennis, Neck and Goldsby 1998). Instead of focusing on prescriptive measures that achieve tangible outcomes; culture research tries to understand the unobservable phenomena and forces surrounding a firm (Fiol 1991). It aims to determine the mechanisms for binding individuals into a collective unit (Smircich 1983) and usually involves a set of ideals that are shared by all the members of an organization (O'Reilly and Chatman 1986). Azzone, Bertelè and Noci (1997) posit that "Corporate environmental culture is the main engine of the process of environmental change. It represents the set of values and norms describing how a company perceives the environmental variable" (p. 563). Because internal environmental orientation is conceptually similar to a pro-environmental culture (Banerjee 2001), it will be defined as the values and standards of a firm that relate its level of commitment to the environment.

If internal environmental orientation is talking the green talk, external environmental orientation is walking the green walk. The external component shares theoretical underpinnings



with organizational climate. Organizational climate refers to how – and how well – the organization carries out the values and norms assumed in its culture (Denison 1996). In essence, climate is the ‘what happens around here’ while culture is the ‘why do things happen the way they do’ (Schneider and Rentsch 1988). Climate measures focus on the image being conveyed; they place emphasis on the perceptions of firm practices that are visible to stakeholders outside of the organization (Guion 1973). It is not only the expectations that firm members place on themselves, it is the expectations that they believe are attributable to their customers, shareholders, policy-makers, and society at large. Building on Banerjee’s (2002) classification, external environmental orientation will be defined as how a firm perceives and responds to the environmental demands of the organization’s stakeholders. For example, government regulations might require fewer emissions along the supply chain or shareholders might demand more research & development funding be allocated to finding alternative energy sources. The manner in which firm members perceive and respond to these demands constitutes its external environmental orientation. In this sense, external environmental orientation is the visible image projected to the public while internal environmental orientation is underlying values, goals, ideals that create this image.

## REFERENCES

- Amit, Raphael and Paul J. H. Shoemaker (1993), "Strategic Assets and Organizational Rent," *Strategic Management Journal*, 14 (1), 33-46.
- Azzone, Giovanni, Umberto Bertelè and Giuliano Noci (1997), "At Last We are Creating Environmental Strategies which Work," *Long Range Planning*, 30 (4), 562-71.
- Ashforth, Blake E. and Fred Mael (1989), "Social Identity Theory and the Organization," *Academy of Management Review*, 14 (1), 20-39.
- Banerjee, Subhabrata Bobby (2001), "Managerial Perceptions of Corporate Environmentalism: Interpretations from Industry and Strategic Implications for Organizations," *Journal of Management Studies*, 38 (4), 489-513.
- Banerjee, Subhabrata Bobby (2002), "Corporate Environmentalism: The Construct and Its Measurement," *Journal of Business Research*, 55 (3), 177-91.
- Barney, Jay B. (1986), "Organizational Culture: Can it be a Source of Sustained Competitive Advantage?" *Academy of Management Review*, 11 (3), 656-65.
- Barney, Jay B. (1991), "Firm Resources and Sustained Competitive Advantage," *Journal of Management* 17 (1), 99-120.
- Bhattacharya, C. B. (2010), "Introduction to the Special Section on Stakeholder Marketing," *Journal of Public Policy & Marketing*, 29 (1), 1-3.
- Bhattacharya, C. B. and Daniel Korschun (2008), "Stakeholder Marketing: Beyond the Four Ps and the Customer," *Journal of Public Policy & Marketing*, 27 (1), 13-16.
- Carroll, Archie B. (1979), "A Three Dimensional Model of Corporate Social Performance," *Academy of Management Review*, 4 (4), 497-505.
- Center for Sustainable Enterprise (2010), <http://www.kenan-flagler.unc.edu/cse/cse-overview.cfm>, Accessed 30 January 2013.
- Chan, Ricky Y. K., Hongwei He, Hing Kai Chan and William Y. C. Wang (2012), "Environmental Orientation and Corporate Performance: The Mediation Mechanism of Green Supply Chain Management and Moderating Effect of Competitive Intensity," *Industrial Marketing Management*, 41 (4), 621-30.

- Chorn, Norman H. (1991), "The 'Alignment' Theory: Creating Strategic Fit," *Management Decision*, 29 (1), 20-24.
- Corus, Canan and Julie L. Ozanne (2012), "Stakeholder Engagement: Building Participatory and Deliberative Spaces in Subsistence Markets," *Journal of Business Research*, 65 (12), 1728-35.
- Cronin, Joseph. J. Jeffrey S. Smith, Mark R. Gleim, Edward Ramirez and Jennifer Dawn Martinez (2011), "Green Marketing Strategies: An Examination of Stakeholders and the Opportunities They Present," *Journal of the Academy of Marketing Science*, 39 (1), 158-74.
- Denison, Daniel R. (1996), "What is the Difference between Organizational Culture and Organizational Climate?" A Native's Point of View on a Decade of Paradigm Wars," *Academy of Management Review*, 21 (3), 619-54.
- Dennis, Bryan, Christopher P. Neck and Michael Goldsby (1998), "Body Shop International: An Exploration of Corporate Social Responsibility," *Management Decision*, 36 (10), 649-53.
- Dibrell, Clay, Justin B. Craig and Eric N. Hansen (2011), "How Managerial Attitudes Toward the Environment Affect Market Orientation and Innovation," *Journal of Business Research*, 64 (4), 401-407.
- Donaldson, Thomas and Lee E. Preston (1995), "The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications," *Academy of Management Review*, 20 (1), 65-91.
- Drucker, Peter F. (1986), *Management: Tasks, Responsibilities, Practices*. New York: Truman Talley.
- Eisenhardt, Kathleen M. and Jeffrey A. Martin (2000), "Dynamic Capabilities: What are They?" *Strategic Management Journal*, 21 (10/11), 1105-21.
- Elkington, J. (1998). *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*, Stony Creek: New Society Publishers.
- Engardio, Pete, Kerry Capell, John Carey and Kenji Hall (2007), "Beyond the Green Corporation: Imagine a World in Which Eco-Friendly and Socially Responsible Practices Actually Help a Company's Bottom Line. It's Closer than You Think," *BusinessWeek*, 50 (4019), January 29.
- Ferrell, O. C., Tracy L. Gonzalez-Padron, G. Thomas M. Hult and Isabelle Maignan (2010), "From Market Orientation to Stakeholder Orientation," *Journal of Public Policy & Marketing*, 29 (1), 93-96.
- Fiol, C. Marlene (1991), "Managing Culture as a Competitive Resource: An Identity-Based View of Sustainable Competitive Advantage," *Journal of Management*, 17 (1), 191-211.

- Fisk, George (1974), *Marketing and the Ecological Crisis*, New York: Harper & Row.
- Freeman, R. Edward (1984), *Strategic Management: A Stakeholder Approach*, Pitman Publishing Company, MA.
- Freeman, R. Edward, Jeffrey S. Harrison, Andrew C. Wicks, Bidhan L. Parmar and Simon de Colle (2010), *Stakeholder Theory: The State of the Art*. Cambridge: Cambridge University Press.
- Friedman, Milton (1970), "The Social Responsibility of Business is to Increase its Profits," *New York Times Magazine*, September 13.
- Ge, Gloria L. and Daniel Z. Ding (2005), "Market Orientation, Competitive Strategy and Firm Performance: An Empirical Study of Chinese Firms," *Journal of Global Marketing*, 18 (3/4), 115-42.
- Ginsberg, Jill and Paul Bloom (2004), "Choosing the Right Green Marketing Strategy," *Sloan Management Review*, 46 (1), 79-84.
- Greenley, Gordon E., Graham J. Hooley and John M. Rudd (2005), "Market Orientation in a Multiple Stakeholder Orientation Context: Implications for Marketing Capabilities and Assets," *Journal of Business Research*, 58 (11), 1483-94.
- Guion, Robert M. (1973), "A Note on Organizational Climate," *Organizational Behavior and Human Performance*, 9 (1), 120-25.
- Harper, Gavin and Ken Peattie (2011), "Tracking the Influence of the First Special Issue on 'Green Marketing': A citation Network Analysis," *Social Business*, 1 (3), 239-61.
- Hult, G. Thomas M. (2011), "Market-Focused Sustainability: Market Orientation Plus!" *Journal of the Academy of Marketing Science*, 39 (1), 1-6.
- Hult, G. Thomas M., Jeannette A. Mena, O. C. Ferrell and Linda Ferrell (2011), "Stakeholder Marketing: A Definition and Conceptual Framework," *Academy of Marketing Science Review*, 1 (1), 44-65.
- Hunt, Christopher B. and Ellen R. Auster (1990), "Proactive Environmental Management: Avoiding the Toxic Trap," *Sloan Management Review*, 31 (2), 7-18.
- Kareiva, Peter, Michelle Marvier and Robert Lalasz (2012), "Conservation in the Anthropocene: Beyond Solitude and Fragility," *Breakthrough Journal*, Winter, thebreakthrough.org.
- Hunt, Shelby D. and C. Jay Lambe (2000), "Marketing's Contribution to Business Strategy: Market Orientation, Relationship Marketing and Resource-Advantage Theory," *International Journal of Management Reviews*, 2 (1), 17-43.

- Hurley, Robert F. and G. Thomas M. Hult (1998), "Innovation, Market Orientation, and Organizational Learning: An Integration and Empirical Examination," *Journal of Marketing*, 62 (3), 42-54.
- Jaworski, Bernard J. and Ajay K. Kohli (1993), "Market Orientation: Antecedents and Consequences," *Journal of Marketing*, 57 (3), 53-70.
- Kohli, Ajay K. and Bernard J. Jaworski (1990), "Market Orientation: The Construct, Research, Propositions, and Managerial Implications," *Journal of Marketing*, 54 (2), 1-18.
- Kotler, Philip (2011), "Reinventing Marketing to Manage the Environmental Imperative," *Journal of Marketing*, 75 (4), 132-35.
- Laczniak, Gene R. and Patrick E. Murphy (2012), "Stakeholder Theory and Marketing: Moving from a Firm-Centric to a Societal Perspective," *Journal of Public Policy & Marketing*, 31 (2), 284-92.
- Laufer, William S. (2003), "Social Accountability and Corporate Greenwashing," *Journal of Business Ethics*, 43 (3), 253-61.
- Leopold, Aldo (1949), *A Sand County Almanac*, New York: Oxford University Press.
- Lubin, David A. and Daniel C. Esty (2010), "The Sustainability Imperative," *Harvard Business Review*, 88 (5), 42-50.
- Luo, Xueming and C. B. Bhattacharya (2006), "Corporate Social Responsibility, Customer Satisfaction, and Market Value," *Journal of Marketing*, 70 (4), 1-18.
- Makower, Joel (2013), *State of Green Business 2013*. Retrieved February 18 from [www.greenbiz.com](http://www.greenbiz.com).
- Matten, Dirk and Jeremy Moon (2008), "Implicit and Explicit CSR: A Conceptual Framework for a Comparative Understanding of Corporate Social Responsibility," *Academy of Management Review*, 33 (2), 404-24.
- Menguc, Bulent and Lucie Ozanne (2011), "Challenges of the "Green Imperative": A Natural Resource-Based Approach to the Environmental Orientation-Business Performance Relationship," *Journal of Business Research*, 58 (4), 430-38.
- Mohr, Lois, Deborah Webb and Katherine Harris (2001), "Do Consumers Expect Companies to be Socially Responsible? The Impact of Corporate Social Responsibility on Buying Behavior," *The Journal of Consumer Affairs*, 35 (1), 45-72.
- Munilla, Linda S. and Morgan P. Miles (1993), "The Corporate Social Responsibility Continuum as a Component of Stakeholder Theory," *Business and Society Review*, 110 (4), 371-87.

- Narver, John C. and Stanley F. Slater (1990), "The Effect of a Market Orientation on Business Profitability," *Journal of Marketing*, 54 (4), 20-35.
- Ngo, Liem Viet and Aron O'Cass (2009), "Creating Value Offerings via Operant Resource-Based Capabilities," *Industrial Marketing Management*, 38 (1), 45-59.
- O'Reilly, Charles A. and Jennifer Chatman (1986), "Organizational Commitment and Psychological Attachment: The Effects of Compliance, Identification, and Internalization on Prosocial Behavior," *Journal of Applied Psychology*, 71 (3), 492-99.
- Pelbani, Alfred M. (2000), "Market Orientation and Other Potential Influences on Performance in Small and Medium-Sized Manufacturing Firms," *Journal of Small Business Management*, 38 (1), 48-67.
- Peteraf, Margaret A. (1993), "The Cornerstones of Competitive Advantage: A Resource-Based View," *Strategic Management Journal*, 14 (3), 179-91.
- Polonsky, Michael Jay (1995), "A Stakeholder Theory Approach to Designing Environmental Marketing Strategy," *Journal of Business and Industrial Marketing*, 10 (3), 29-46.
- Polonsky, Michael Jay (2011), "Transformative Green Marketing: Impediments and Opportunities," *Journal of Business Research*, 64 (12), 1311-19.
- Polonsky, Michael Jay and Almat Mintu-Wimsatt (1995), *Environmental Marketing: Strategies, Practice, Theory and Research*, Binghamton: Haworth Press.
- Powell, Thomas C. and Anne Dent-Micallef (1997), "Information Technology as Competitive Advantage: The Role of Human, Business and Technology Resources," *Strategic Management Journal*, 18 (5), 375-405.
- Reed, Richard and Robert J. DeFillippi (2009), "Causal Ambiguity, Barriers to Imitation, and Sustainable Competitive Advantage," *Academy of Management Review*, 15 (1), 88-102.
- Schneider, Benjamin and Joan Rentsch, (1988), *Managing Climates and Cultures: A Futures Perspective*. In J. Hage (Ed.), *Futures of Organizations* (pp. 181-200). Lexington, MA: Lexington Books.
- Sharma, Arun and Gopalkrishnan R. Iyer (2012), "Resource-Constrained Product Development: Implications for Green Marketing and Green Supply Chains," *Industrial Marketing Management*, 41 (4), 599-608.
- Sharma, Arun, Gopalkrishnan R. Iyer, Anju Mehrotra and R. Krishnan (2010), "Sustainability and Business-to-Business Marketing: A Framework and Implications," *Industrial Marketing Management*, 39 (2), 330-41.

- Smircich, Linda (1983), "Concepts of Culture and Organizational Analysis," *Administrative Science Quarterly*, 28 (3), 339-58.
- Stanton, William J. and Charles M. Futrell (1987), *Fundamentals of Marketing*, New York: McGraw-Hill.
- Steiner, Ivan D. (1972), *Group Process and Productivity*, New York: Academic Press.
- Stone, George W., Mathew Joseph and Jeffrey Blodgett (2004), "Toward the Creation of an Eco-Oriented Corporate Culture: A Proposed Model of Internal and External Antecedents Leading to Industrial Firm Eco-Orientation," *Journal of Business & Industrial Marketing*, 19 (1), 68-84.
- Stone, George W. and Kirk L. Wakefield (2000), "Eco-Orientation: An Extension of Market Orientation in an Environmental Context," *Journal of Marketing Theory and Practice*, 8 (3), 21-31.
- Teece, David J., Gary Pisano and Amy Shuen (1997), "Dynamic Capabilities and Strategic Management," *Strategic Management Journal*, 18 (7), 509-35.
- Winter, Sidney G. (2003), "Understanding Dynamic Capabilities," *Strategic Management Journal*, 24 (10), 991-95.
- Wood, Donna J. (1991), "Corporate Social Performance Revisited," *Academy of Management Review*, 16 (4), 691-718.
- World Commission on Environment and Development (1987), *Our Common Future*, Oxford: Oxford University Press.
- Zhu, Qinghua and Joseph Sarkis (2004), "Relationships between Operational Practices and Performance among Early Adopters of Green Supply Chain Management Practices in Chinese Manufacturing Enterprises," *Journal of Operations Management*, 22 (3), 265-89.

## **TWO ESSAYS ON ENVIRONMENTAL ORIENTATION**

### **CHAPTER TWO: ESSAY ONE**

#### **BUILDING AN ECO-CAPABILITY THROUGH STRATEGY, ORIENTATION, AND INNOVATION**

##### **2.1 Introduction**

Whether or not business will lead the charge to a sustainable society depends on a simple question: can companies be both environmentally-friendly and profitable or is it a ‘one-or-the-other’ (Polonsky and Rosenberger 2001) scenario? With an increasing number of CEOs embracing the importance of sustainability to the future of their business (Lacy, Haines and Hayward 2012), firms have begun to adopt environmental strategies. In 2011, 69% of firms worldwide disclosed some kind of environmental impact data, up from 50% in 2007 (Makower 2013). Researchers across business disciplines have argued the positive impact of these strategies (Sharma et al. 2010); however, many firms have not experienced the financial gains necessary to make the shift worthwhile (Lubin and Esty 2010). This ‘holy grail’ of green marketing literature has been studied theoretically and empirically with neither providing consistent results.

Scholars have begun a steady call for research to determine how to make these initiatives profitable so that sustainability moves from a special interest to a cultural norm across all fields of business (Chan 1999). This call has landed in the marketing discipline, with specific interest in relation to resource allocation (See Tables 2-1 and 2-2). Managers wish to determine which resources will create an advantage for firms in the marketplace. Scholars are expected to deliver



this information and, therefore, acknowledge the need for environmentally-focused measures of these resources and how they impact performance (Chabowski, Mena and Gonzalez-Padron 2011) and competitive advantage (Banerjee, Iyer and Kashyap 2003). Environmental orientation and environmental strategy focus have emerged as important constructs in this regard; however, their assessment alone fails to identify the full impact of a firm's environmental practices. Cronin and colleagues (2011) agree, suggesting there is still not a sound link between environmental strategy and performance. The authors also suggest that while innovation and green technology go hand-in-hand, there is no consensus that stakeholders even consider green products 'innovative.' This leads to ambiguous and often undervalued results. It also represents a sizeable gap in the literature.

This research looks to fill this gap by integrating strategy, orientation and innovation in the environmental context. By leveraging environmental strategy and orientation, I posit that firms can create an eco-capability that optimizes their financial and market performance, as well as the quality associated with their offerings. By measuring the opinions of both managers who are implementing green initiatives and those that are not, it allows for the interpretation of the relative importance of green strategy across firms and industries. Further, it assays the value of the model proposed in Figure 1-5. By isolating managers, a primary stakeholder, it singularly views the business element of sustainable development before overlapping it with consumers or government while maintaining that firms operate within the natural environment and do not simply interact with it.

The essay begins with a review of the resource-based view of the firm (RBV) and how the interconnection of operant resources makes these resources more valuable. Next, dynamic capabilities logic is leveraged to build an eco-capability comprised of human, business, and

technology components. Then the environmental orientation and strategy focus variables are positioned as antecedents to this capability before organizational innovativeness is added to the model. Financial performance, market performance, and perceived quality of the offering are placed as outcomes to measure both profitability as well as impacts on the actual products and services provided by the firm. The essay closes with practical implications for management as well as directions for future research.

**TABLE 2-1**  
**Special Issues on Sustainability in Business Journals**

<b><u>Submission or Publication Date</u></b>	<b><u>Journal</u></b>
March 2012	<i>Journal of Marketing Management</i>
March 2012	<i>International Journal of Physical Distribution and Logistics Management</i>
April 2011	<i>Industrial Marketing Management</i>
April 2011	<i>MIS Quarterly</i>
March 2011	<i>Journal of Marketing Management</i>
February 2011	<i>Journal of the Academy of Marketing Science</i>
August 2010	<i>International Journal of Business Innovation and Research</i>
November 2009	<i>Australasian Marketing Journal</i>
November 2009	<i>Journal of Systems and Information Technology</i>
August 2008	<i>Journal of Systems and Information Technology</i>
January 2006	<i>Journal of Management Studies</i>
Fall 2004	<i>California Management Review</i>
Summer 1998	<i>Journal of Marketing Management</i>
Summer 1995	<i>Journal of Advertising</i>

**TABLE 2-2**  
**Calls for Research in Marketing Journals Linking Sustainability and Resources**

<b>Author &amp; Year</b>	<b>Journal</b>
Kotler 2011	<i>Journal of Marketing</i>
Crittenden et al. 2011	<i>Journal of the Academy of Marketing Science</i>
Connely, Ketchen and Slater 2011	<i>Journal of the Academy of Marketing Science</i>
Polonsky 2011	<i>Journal of Business Research</i>
Aragón-Correa et al. 2008	<i>Journal of Environmental Management</i>
McWilliams, Siegel and Wright 2006	<i>Journal of Management Studies</i>
Baker and Sinkula 2005	<i>Journal of the Academy of Marketing Science</i>
Bhattacharya, Smith and Vogel 2004	<i>California Management Review</i>
Aragón-Correa and Sharma 2003	<i>Academy of Management Review</i>
Banerjee 2002	<i>Journal of Business Research</i>
Maignan and Ferrell 2001	<i>European Journal of Marketing</i>

## **2.2 Theoretical Background**

The construction of an eco-capability requires the understanding of environmental resources; therefore, RBV is a logical starting point. However, this capability would derive its influence from the interconnection of these resources and a firm's ability to apply and utilize them to their full potential. To explain how this capability would create a sustainable competitive advantage, then, requires a discussion of Madhavaram and Hunt's (2008) hierarchy as well as dynamic capabilities.

### **2.2.1 Resource Based View of the Firm**

RBV is often the premise for marketing strategy research because of the relationship between resource deployment and performance (e.g., Barney 1986, 1991; Peteraf 1993). In the area of green strategy and sustainability, RBV lends itself particularly well (Hult 2011).

Managers are starting to realize that policy regulations and changing consumer preferences are not threats to profitability, rather opportunities to build capabilities (Nidumolu, Prahalad and Rangaswami 2009; Aragón-Correa and Sharma 2003; Gago and Antolín 2004). RBV can be viewed through a stakeholder lens as well (e.g., Connelly, Ketchen and Slater 2011; Ruf et al. 2001): a firm with the ability to effectively and efficiently recognize and meet the needs of multiple stakeholders would possess a truly rare and valuable resource.

RBV states that a firm can enjoy a competitive advantage if it acquires and leverages a bundle of valuable resources (Day and Nedungadi 1994). A resource is any asset, piece of information, attribute, or process that allows a firm to develop and implement strategies that increase efficiency or effectiveness (Barney 1991). They can be tangible, such as cash reserves, raw materials and equipment; or intangible, such as customer loyalty, employee expertise and brand reputation (Hunt and Morgan 1996; Grant 1991). Resources are generally difficult to analyze individually because their value is determined by their interplay with current market conditions (Collis and Montgomery 1995).

These categories resemble the operand and operant division of resources developed by economists like Penrose (1959) and later by Constantin and Lusch (1994). Operand resources are those static entities that do not produce any value unless acted upon; such as building equipment or warehouse space. Operant resources are abstract, dynamic, and more complex. Things such as employee values or customer service climate fall into this category. Not only are they intrinsically valuable by themselves, but their application is necessary to derive any value from operand resources.

As the environment becomes a strategic issue, it becomes a potential source for differentiation. While RBV is widely used, and environmental factors such as political and

economic conditions are considered, it fails to incorporate the physical environment (Stead and Stead 1992). In 1995, Hart developed a natural-resource based view of the firm to address this omission. Following the traditional RBV perspective, he posited that firms could create a competitive advantage by matching organizational resources and environmental conditions (Penrose 1959). Specifically, he noted that opportunities lie in investing resources in one of three areas: pollution prevention, product stewardship, and sustainable development (Hart 1995). This natural RBV held the physical environment as not just a key stakeholder, but as a source of competitive advantage in the hands of a savvy firm.

### **2.2.2 Interconnected Operant Resources & Dynamic Capabilities**

Because operant resources gain value when they are utilized simultaneously, Madhavaram and Hunt (2008) developed a hierarchy to determine their incremental value. They proposed that by climbing the hierarchy from basic to composite to interconnected, not only does each individual resource become more valuable, but together they create a competitive advantage that is more sustainable and inimitable (Richey et al. 2011).

In essence, operant resources are more effective when bundled together than when utilized separately. A basic operant resource is a lower-level resource, such as an employee's technical skills, knowledge, or environmental concern, which can be viewed independently and evaluated separately. When two or more of these unrelated basic resources are bundled together, they form a composite operant resource. A highly skilled, environmentally-concerned employee within a highly innovative and adaptive workplace represents a composite operant resource. When two or more highly related composite resources are combined, they form an interconnected operant resource. These represent the greatest opportunity for a competitive advantage as each of the individual resources reinforces the effectiveness of the other. The

skilled, knowledgeable, and concerned employee in an innovative and adaptive workplace with upper level management support represents an interconnected operant resource. These blended resources are more costly for competitors to purchase and more time-consuming for competitors to imitate, making them the most rare, unique, inimitable, and non-substitutable competitive advantages (Richey et al. 2011).

Extending from RBV, dynamic capabilities research focuses not on the resources themselves but on how well firms create new resources or modify existing ones to meet their goals (Eisenhardt and Martin 2000; Helfat and Peteraf 2003). While there is considerable overlap between resources and capabilities, Teece, Pisano, and Shuen (1997) make a clear distinction: a resource is a tangible stock of available factors a firm controlled while a capability is its ability to deploy those resources for some desired outcome. However, firms may convert a resource into a capability by embedding it within the organization or its processes (e.g., Zott 2002). While resources, then, are available to all firms and, therefore, non-specific, capabilities are unique and particular to each firm (Penrose 1959; Day and Nedungadi 1994). While a resource may be difficult to imitate, a capability, by definition, cannot be duplicated without the transfer ownership of the firm itself (Makadok 2001).

Given their conceptual similarity, Williamson (1991) predicted that resource-based and capability-based approaches would most likely be used together to tackle strategic management. While RBV explains the importance of acquiring and bundling resources (Day and Nedungadi 1994), dynamic capabilities represent a firm's ability to build and reconfigure these resources to respond to changes in the external environment (Teece, Pisano and Shuen 1997). The leap from a resource to a capability, then, hinges not on mere possession, but rather, on application and utilization (Ngo and O'Cass 2009). A true capability improves or optimizes the productivity of

other resources (Amit and Shoemaker 1993), which deepens the entrenchment of the capability while strengthening the firm's overall performance. In this way, capabilities are the ability to transform a common resource into a valuable offering for the customer (Teece, Pisano and Shuen 1997; Day and Nedungadi 1994; Grant 1991). In this sense, firms do not compete on products or processes; they compete based on which firm has the capacity to develop new products and processes (Prahalad and Hamel 1990).

Dynamic capability research has seen much progress over the last two decades; however it is often ambiguously employed in marketing and strategic management literature (Wang and Ahmed 2007). In this study, a capability is considered dynamic when it enhances a firm's ability to make decisions, solve problems, identify opportunities and threats, and modify existing resources (Barreto 2010). A firm with a dynamic capability is more adept at handling uncertain forces in the industry or environment and more able to respond with the creation of new products and processes (Teece and Pisano 1994). These dynamic capabilities are instrumental in the development and maintenance of a core competency that is rare, unique, non-substitutable, and difficult to imitate and acquire by competitors (Hunt and Morgan 1996).

Global dynamic capabilities include "effective coordination of inter-organizational relationships on a global basis" and "adaptation, integration, and reconfiguring of internal and external assets to match opportunities in the global marketplace" (Griffith and Harvey 2001, p. 598). When these criteria are fulfilled and managers are capable and committed, the firm may achieve a sustainable competitive advantage (Peteraf 1993; Day and Wensley 1988). Dynamic capabilities theory is particularly applicable when viewed through a stakeholder lens because both the needs of the firm and the needs of its stakeholders are constantly changing. It would suggest that a successful firm would be able to alter or adjust its practices to simultaneously meet

both of these sets of needs. Eventually, it would allow for the matching of corporate social performance and financial performance (Ruf et al. 2001).

### **2.3 Building an Eco-Capability**

Sustainability could be the driver of new product development for the foreseeable future (Nidumolu, Prahalad and Rangaswami 2009), and in the area of sustainability, resources abound. An increasing amount of innovation and new product development can be found in energy conservation, recycling and remanufacturing, renewable energy, pollution reduction, and other green sectors (Lubin and Esty 2010; Pujari, Wright and Peattie 2003; Florida 1996; Hart and Ahuja 1996). But for most firms, these resources have not translated to capabilities (Nidumolu, Prahalad and Rangaswami 2009), which represents a considerable gap and a pressing challenge for marketing scholars.

Hart (1995) suggests that a firm can develop a capability based on its interaction with the environment. Banerjee (2002) and Banerjee, Iyer and Kashyap (2003) have taken concrete steps in this direction, but their constructs are theoretically broad, which limits applicability for managers (Menguc and Ozanne 2011). Marcus and Anderson (2006) advance an environmental capability with four factors. However, because two of these deal with recycling behavior, their measure may more accurately describe a waste management capability. This research attempts to meet in the middle by utilizing the work of Powell and Dent-Micallef (1997), which has been successfully utilized to create both a customer-linking capability (Rapp Trainor and Agnihotri 2010) and an e-Marketing capability (Trainor et al. 2011).

An eco-capability would help operationalize the environmental strategy and orientation constructs in a more meaningful way for managers and scholars. Leveraging the capability literature (Winter 2003; Zollo and Winter 2002; Makadok 2001, Amit and Shoemaker 1993,



Teece, Pisano and Shuen 1997), an eco-capability would involve two things: 1) embedding the environmental resources within the firm so that they are inseparable from the firm itself (Teece 2009), and 2) using these resources to enhance the productivity of other firm resources (Helfat and Peteraf 2003). An eco-capability, then, is a multidimensional construct hinging on the possession, application and utilization of proper resources to create value and increase performance (Ngo and O'Cass 2009). Building from Powell and Dent-Micallef (1997), an eco-capability will be defined as a firm's capacity to deploy environmental human, business, and technology resources to enhance firm performance.

Banerjee (2002) made a specific request to determine the relationship between environmental orientation and environmental strategy. Strategy and orientation are often so implanted in a firm that it is difficult to establish which construct influences the other. Capability research would suggest that when the two operate in conjunction with one another, the resulting construct would be more valuable than both constructs by themselves (Slater, Olson and Hult 2006). For instance, a firm with an environmental strategy focus that is not eco-oriented would appear motivated for the wrong reasons. This organization could be perceived as inauthentic and even as posturing to consumers to gain favor (Laufer 2003). Alternatively, an eco-oriented firm not implementing an environmental strategy would seem misaligned. Stead and Stead (1992) suggest that an environmental strategy would only be effective when the organizational culture, or internal orientation, changes to match it. Each incongruity would result in visible problems to key stakeholders with negative effects on performance. However, used in conjunction with one another, the firm would convey an aligned business plan based on environmental values. The following sections examine these potential contributing factors to an eco-capability.

### **2.3.1 Environmental Orientation as an Antecedent of an Eco-capability**

Barney (1986) suggests that corporate culture could lead to a sustainable competitive advantage for firms if that culture satisfies the characteristics of other resources; that is, the corporate culture must provide economic value, it must be rare and unique, and it must be imperfectly imitable so that competitors cannot copy it. Organizational climate is also a driver of firm performance (Powell and Dent-Micallef 1997). It is a “team-embodied, socially complex organizational resource” that has been shown to be a driver of competitive advantage (Ray, Barney and Muhanna 2004, p. 28).

Environmentalism is a part of a corporate culture and climate when a company “accept[s] the mantra and fully integrates green initiatives across all aspects of the business” (Cronin et al. 2011, p. 164). In essence, that culture and climate become embedded in the organization to such a level that it would be impossible to extract or copy it. When a firm is recognized as being “green,” that descriptor acts as a valuable resource, particularly relative to marketing and supply chain management functions (Chan et al. 2012). Environmental orientation, then, may be an environmental resource that is inseparable from the firm itself (Teece 2009; Amit and Shoemaker 1993). Therefore, a firm with an environmental orientation should be more suited to the creation of an eco-capability. Formally,

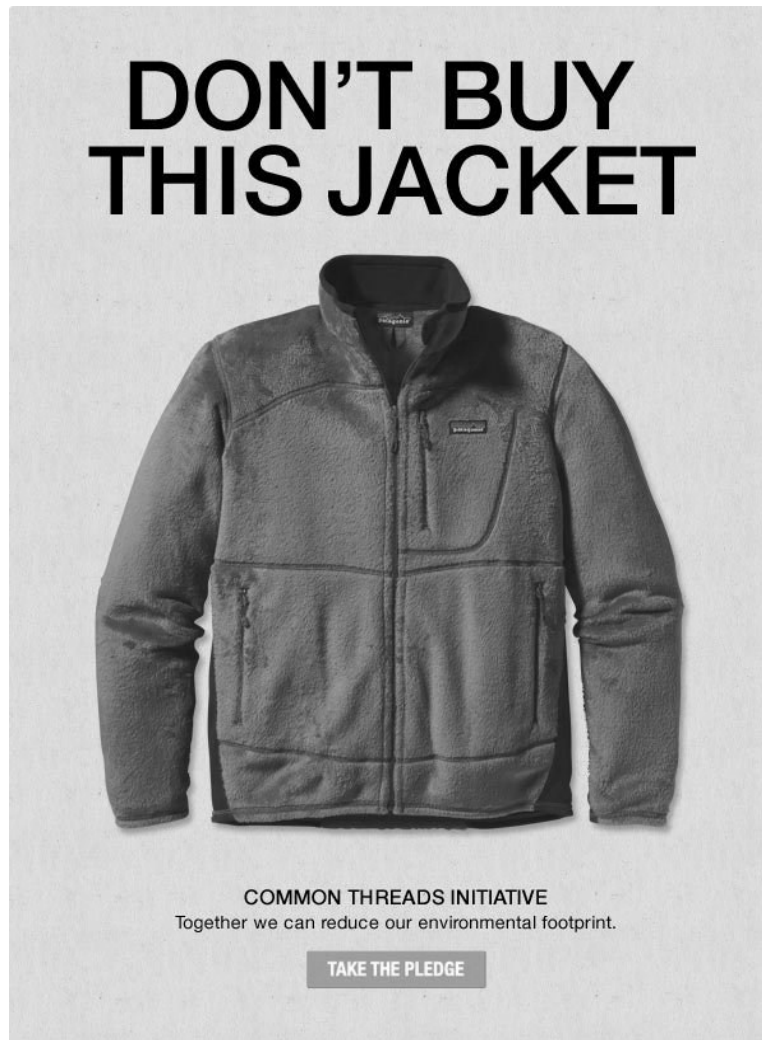
H<sub>1</sub>: Environmental orientation is positively related to eco-capability.

### **2.3.2 Environmental Strategy Focus as an Antecedent of an Eco-capability**

An environmental strategy, like any business strategy, uses sound logic and business sense to achieve the firm’s goals. The difference is that it accomplishes these goals while trying to minimize impact on the environment through pollutants, emissions, or other practices (Olson 2008). An environmental strategy usually starts at the enterprise level, but manifests itself on the

corporate and business unit levels through tangible endeavors to protect or reduce impact on the natural environment (Stone and Wakefield 2000). Banerjee (2002) labels these environmental corporate strategy, which establishes a coherency between the environment and corporate objectives, and environmental marketing strategy, which incorporates the environment into functional decision-making and addresses customer concerns. Chan (2010) refers to them collectively as “the extent to which environmental issues are integrated into the firm’s strategic process” (pgs. 81-82), which will be used to define the environmental strategy focus construct in this study. Again, Patagonia is an example of a firm with an environmental strategy focus. They equate quality to minimizing environmental impact, build environmental awareness into their strategic process, and advertise their environmental concern. Their 2012 “Don’t Buy this Jacket” advertisement in the *New York Times* represents a specific action aimed at promoting their firm’s strategic focus on the environment. See Illustration 2-1.

### Illustration 2-1. Patagonia Advertisement



Capabilities derive their influence from the fact that management has placed emphasis on one area or another. To successfully deploy an eco-capability, then, a firm must place strategic emphasis on environmentalism. By integrating these issues into the strategic planning process, a firm would be investing in things like energy usage, training, and equipment/factory optimization, which are key components of an eco-capability. This would enhance the productivity of other resources as well as the efficiency of the entire firm, which corresponds to Amit and Shoemaker's (1993) definition of a capability. Therefore,

H<sub>2</sub>: Environmental strategy focus is positively related to eco-capability.

### **2.3.3 Organizational Innovativeness as a Moderator**

In 2008, Aragón-Correa and colleagues posited that a firm must be more innovative to develop environmentally-friendly products and processes than non-environmentally-friendly ones. In 2009, Nidumolu and colleagues predicted that a large portion of new product development would be in the area of green technology. Taken together, they anticipated a distinct trend in innovation which has been supported in the marketplace. Consider that in 2005 only four-percent of new products were classified as ‘green’ (UNEP 2005) compared to the over 1,500 products classified as ‘green’ just four years later (Makower 2009). Between 2007 and 2011, the number of firms that publicly disclosed green research & development expenditures rose from 14% to 32% in the United States and from 11% to 27% worldwide (Makower 2013). To date, little research exists on how and why companies integrate sustainability into new product development (Dangelico and Pujari 2010). This study posits that one reason may be to strengthen the firm’s environmental orientation and strategic focus.

Creating a capability from resources involves making those resources dynamic, or affecting some ‘action’ to their mere possession (Teece 2007). In a business landscape dominated by innovation, capabilities also necessitate the integration of technology into the deployment of the bundle of resources (Teece, Pisano and Shuen 1997; Powell and Dent-Micallef 1997; Rapp, Trainor and Agnihotri 2010). Technology certainly plays a role in the development of competitive advantage (Colby and Parasuraman 2003). However, its value is only optimized when it is embraced and properly utilized. For this reason, organizational innovativeness is a more important construct – a capability itself – because it makes another resource more valuable (Luo and Bhattacharya 2006).

Implementation does not always stem from adoption, and so this stage may be the most important part of the technology process (Rogers 1995). Firms that are not ready to implement green technology, by definition, do not have innovativeness as a core firm value. An organization is innovative in a sense that it is consistently focusing on improving its current processes and procedures (Hurley and Hult 1998). Unlike product innovativeness, which simply means that a product is original or unique (Henard and Synsmanski 2001), organizational innovativeness describes a firm culture built around the openness to new ideas. Innovative firms do not only react to changing environments but actually engage in the ‘prediffusion’ aspect an innovation (Rogers 1995). Consequently, this proactive firm culture is instrumental to the embracing of new ideas.

Organizational innovativeness, then, is a good indicator of a firm’s likelihood of implementing environmental technology. For instance, the mere possession of a reverse logistics program is of little value if the process is not formalized and embraced by each member of the supply chain (Genchev, Richey and Gabler 2011). Similarly, if energy-conserving machinery is installed in a factory but the emissions are left to escape and not recycled to provide heat, then the company may not be adequately prepared for the technology. In both cases, the technology has been adopted, but the firm is not ready to implement it. Further, an innovative culture creates an awareness of opportunities (Dibrell, Craig and Hansen 2011). An innovative firm views policy regulations not as unmovable impediments but as obstacles to be overcome (Hunt and Auster 1990). By being proactive, a firm may be seen as going above and beyond legal standards (Shrivastava 1995), which will convey authenticity and avoid the label of greenwashing (Laufer 2003).

Parasuraman's (2000) view of innovativeness describes a firm that is a pioneer of new technology. His definition is well-suited to environmental technology because the firms that are leading the charge toward a sustainable future are indeed pioneers. Rogers (1995) and Parasuraman (2000) identified that the key to unlocking technology's potential is not the technology itself; rather the willingness to be open to new and sometimes risky ideas.

When building an environmental capability, innovativeness should serve as a better predictor than technology itself because it conveys the management's assiduity to those initiatives. A firm that is willing and able to utilize the latest innovation to improve its eco-behaviors is shifting resources to that end. This would be visible to both internal and external stakeholders. However, green innovation is in the critical phase where a misstep translates to lost efficiencies. Much of the emerging green innovation deals with ways to reduce costs by eliminating unnecessary processes, saving energy, or producing less waste, which will eventually allow firms to pass savings on to customers. But the newness of the technology implies inherent risk, and thus, only the most innovative firms will fully embrace and implement it.

The proposed model predicts an interaction between organizational innovativeness and environmental orientation for two reasons. First, environmental orientation is a static construct. It conveys environmental priorities, but an innovative firm will match those priorities with a focus on green technology. When environmental attitudes are built into a firm's orientation, a firm is more likely to be enviropreneurial (Menon and Menon 1997), which requires innovativeness, or being a pioneer of green technology. Secondly, innovative firms turn threats (e.g., government regulations) into opportunities (e.g., going well beyond the regulations). For instance, Patagonia's Footprint Chronicles is an innovative way to communicate its environmental values. Patagonia is embracing and implementing a new technology that enhances its core environmental

image. Their traceable supply chain invites customers to inspect every step of their products' journey and its carbon footprint. See Illustration 2-2. Organizational innovativeness should strengthen the environmental orientation conveyed to stakeholders and aid in the creation of an eco-capability Therefore:

H<sub>3a</sub>: Organizational innovativeness has a positive moderating influence on the relationship between environmental orientation and eco-capability.

**Illustration 2-2. Patagonia's Footprint Chronicles**



Organizational innovativeness should have similar interactive effects with environmental strategy focus. An environmental strategy focus involves integrating environmental impact into the quality standards of firm offerings as well as emphasizing those environmental aspects in their advertisements (Banerjee, Iyer and Kashyap 2003). Patagonia's 2012 advertisement campaign imploring customers to not buy one of their jackets was an obvious environmental marketing strategy (Illustration 2-1); however, its success was dependent on their products having high quality. This high quality stems from a company that is willing to push the envelope



and implement technology that can set their apparel apart from competitors. Any firm can make those claims; however, only firms that are inherently innovative will be able to support them with appropriate green technology and subsequent quality. Therefore, organizational innovativeness should strengthen the firm's environmental strategy and influence the formation of an eco-capability. Stated formally,

H<sub>3b</sub>: Organizational innovativeness has a positive moderating influence on the relationship between environmental strategy focus and eco-capability.

### **2.3.4 Eco-Capability and Firm Performance**

Strategic management literature advances the premise that properly deployed capabilities have a positive influence on performance (e.g., Teece 2007; Zott 2002). It also demonstrates the importance of matching market strategy with the overarching business model (Zott and Amit 2008). However, only a handful of these proposed business model- strategy fits have been explored in the literature (Yin and Zajac 2004). As green business becomes more prominent, this context warrants investigation. This study posits that the effects of environmental strategy and orientation haven't been realized, in part, because they have been operationalized as interconnected resources and not as the antecedents of a dynamic capability. Dibrell, Craig and Hansen (2011) suggest that environmental attitudes matched with innovation increase entrepreneurial processes, which then increase performance. With the moderating influence of organizational innovativeness, Banerjee, Iyer and Kashyap's (2003) static constructs may provide the same benefit as a dynamic capability.

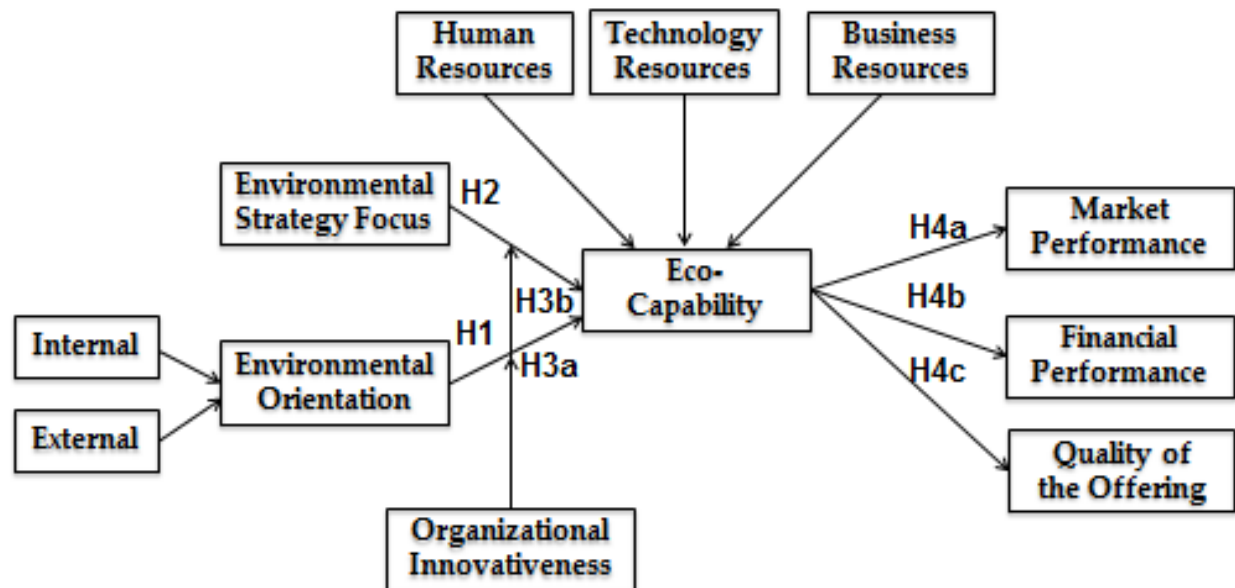
This study examines the effects of an eco-capability on the interrelated outcomes of market and financial performance (Morgan and Piercy 1998) as well as managerial perceptions of the quality provided to customers (Sprott and Shimp 2004). Financial performance is a logical outcome because firms wish to determine if the return on their environmental investments makes

financial sense. Further, because of the time and costs associated with these investments, the determination to continue focusing energies toward them depends on whether or not they are profitable. Equally important is the ability to leverage these initiatives to achieve a larger portion of the market, retain customers, and grow overall sales. For this reason, market performance is placed as an outcome as well. Finally, an underdeveloped outcome of environmental strategy is the offering itself. While there is some evidence to support the positive relationship between perceived quality and environmental processes (Zhu and Sarkis 2004), green offerings still can carry a stigma of inferior quality (Lin and Chang 2012). Therefore, it is important to assess managers' perceptions of how environmental processes impact the quality of their offerings. A positive relationship between eco-capability and perceived quality of the offering would suggest that managers see value in their environmental initiatives. Therefore, it is logical to predict:

H<sub>4</sub>: Eco-capability is positively related to (a) market performance, (b) financial performance, and (c) quality of the offering.

For an illustration of the expected relationships and hypotheses, please see Figure 2-1. A full list of the relevant constructs and their definitions can be found in Table 2-3. Table 2-4 contains a summary of expected hypotheses.

Figure 2-1. Conceptual Model with Hypotheses



**TABLE 2-3**  
**Construct Definitions**

**Environmental Orientation**

The shared values and ethical standards within the firm that reflect the commitment to the natural environment as perceived by managers of that organization (Banerjee 2002); “The organization-wide mission to: generate ecological intelligence pertaining to current and future societal environmental needs, disseminate this intelligence throughout organizational departments, and generate acceptance and responsiveness to these needs through the adaptation of internally developed programs which create and foster organizational and public perception of ecological concern.” (Stone and Wakefield 2000, p. 22)

**Environmental Strategy Focus**

“The extent to which environmental issues are integrated into the firm’s strategic process” Chan 2010, p. 81-82).

**Organizational Innovativeness**

A firm's willingness and ability to innovate (Hurley and Hult 1998).

**Eco-Capability**

“The possession of, application of, and full utilization of environmental resources” (Ngo and O'Cass 2009, p. 47); specifically with regard to human, business and technology resources (Powell and Dent-Micallef 1997).

**Financial Performance**

Managerial perceptions of their firm’s overall financial success relative to competition. This involves both current and expected return on investment as well as profit margin (Morgan and Piercy 1998).

**Market Performance**

Managerial perceptions of their firm’s ability to grow its market share, overall sales, as well as its ability to retain customers relative to competition (Morgan and Piercy 1998).

**Quality of the Offering**

Managerial perceptions of the level of quality of their products or services (Sprott and Shimp 2004).

**TABLE 2-4**  
**Hypotheses**

Number	Relationship
H1	Environmental orientation is positively related to eco-capability.
H2	Environmental strategy focus is positively related to eco-capability.
H3a	Innovativeness has a positive moderating influence on the relationship between environmental orientation and eco-capability.
H3b	Innovativeness has a positive moderating influence on the relationship between environmental strategy focus and eco-capability.
H4a	Eco-capability is positively related to market performance.
H4b	Eco-capability is positively related to financial performance.
H4c	Eco-capability is positively related to the quality of the offering.

## **2.4 Methods**

This section discusses the methods used to test the hypothesized relationships in study 1. The constructs and relationships stem from the theoretical development and logic presented in the previous section. Taken together, they allow for the interpretation of data based on the following procedures. Topics include the construction of the survey instrument, the profile of the sample used to test the relationships, methodological issues and how they were handled, how the data was organized and managed, and properties about the measurements themselves, and the Structural Equation Model (SEM) technique employed to estimate the model. The Internal Review Board approved of this study on October 16, 2012. See Appendix A for document EX-12-CM-068.

### **2.4.1 Research Design**

To test the hypotheses, survey research with constructs previously developed in the literature was deemed most appropriate. Because training participants to act as managers has met with little success (Thomas 2011), a panel of real world managers was sampled. Several steps

were taken to develop the survey instrument. Apart from the papers discussed in the literature review and the foundations of those papers, the qualitative interviews from Chapter One also helped identify the constructs for the structural equation model. The next section provides a description of each measure and how it was adapted to fit this research.

### **2.4.2 Measures**

All variables were measured using 7-point Likert scales anchored by 1=Strongly Disagree and 7=Strongly Agree. Environmental Orientation is conceptualized as a second-order construct composed of Internal Environmental Orientation and External Environmental Orientation. The internal component is defined as how managers perceive their company's environmental values while the external component is how they perceive the company responds to demands from stakeholders regarding the environment. Banerjee, Iyer and Kashyap's (2003) scales were used to capture both first-order constructs. Then, both first-order constructs were loaded onto the second-order construct of Environmental Orientation. Banerjee's (2002) scale was used to measure Environmental Strategy Focus, or the managerial perception of how well a firm has integrated the environment into its strategic planning process. Organizational Innovativeness was measured using a three-item scale developed by Hurley and Hult (1998) and will be defined as the managerial perception of a firm's likelihood to seek out innovation and then implement it.

As discussed, to fully encapsulate the Eco-Capability construct, three types of resources are required: Human Resources, Business Resources, and Technology Resources; therefore, Powell and Dent-Micallef's (1997) scale was utilized in this research. Stewart and Segars (2002) suggest that "the intercorrelations among first-order factors form a system of interdependence (or covariation) that is itself important in measuring the construct" (p. 39). Accordingly, each

resource scale was treated as a first-order construct that forms the second-order Eco-Capability construct. Instead of viewing all items as a collection of related first-order items, this process, which has been validated in the capability literature (e.g., Rapp, Trainor and Agnihotri. 2010; Trainor et al. 2011), treats the resources as distinct variables but also as part of a broader construct. The review of the Eco-Capability construct suggests that while the resources are indeed distinct, they should be integrated simultaneously into the same measurement because of the proposed relationship between them (Rapp, Trainor and Agnihotri 2010).

Financial and Market Performance were measured via self-report scales developed by Morgan and Piercy (1998). Financial Performance is operationalized as how managers evaluate their firm's overall financial success relative to competition. This involves both current and expected return on investment as well as profit margin. Market Performance is defined as how managers evaluate their firm's ability to increase market share, overall sales, as well as the ability to retain customers relative to competition (Morgan and Piercy 1998). Quality of the Offering was adapted from Sprott and Shimp (2004) and is defined as managerial perceptions of the level of quality of their products and services (Sprott and Shimp 2004).

#### **2.4.3 Sampling Frame and Data Collection**

I created the survey in Qualtrics, a website with some unique features needed in this design, including 'skip logic,' which allows for the filter questions discussed below. However, Survey Monkey was used to collect the data. This Internet host service generates participants through advertisements on the website, referrals, and through a marketing partner. It allows users to administer surveys to the general population or to specific groups of individuals. When new members register, they answer questions about demographics and work history so that they can be placed into different groups. Thus, when a targeted request comes in, they have a panel that

fits those requirements. The participant earns “Zoom Points” when they successfully complete a survey. Participants elected for each new survey receive the survey link embedded in an email from the host server.

As stated, firm managers were needed to assess the hypotheses in this study. While Survey Monkey created a panel of managers, the following question served as a double check: “What is your primary role within your company?” Possible choices were: manager, laborer, customer service, front line retail employee, warehouse worker, cashier, and sales. Those who did not select ‘manager’ were immediately redirected to a new page and not awarded Zoom points.

A target number was given to Survey Monkey before launch so that the necessary sample would be collected before closing the survey. Debate exists as to the proper sample size for a model with a given number of parameters. Depending on the size of the model, several rules of thumb have emerged, such as 5:1 (Bentler and Chou 1987), 20 to 1 (Tanaka 1987), 150-200, and so on. G\*Power3 software provides a way to determine the appropriate sample *a priori*. To obtain an effect size of 0.20 with an alpha of 0.05 and get a power of 0.90 with 42 items, a sample of 204 was needed. Survey Monkey sent the survey to 853 panelists over a four-day period. Upon clicking the survey link, 169 stopped at the offset and another 231 failed to answer the first question with the response “manager,” bringing the number to 553.

#### **2.4.4 Attention Measurement**

Several precautions were taken with this survey to minimize bias. To avoid missing and incomplete data, each item was set to ‘force response.’ If a respondent failed to answer a question and clicked the ‘next’ button, an error message appeared on the screen. Only when each question was answered did the software allow the respondent to move to the next set of



questions. This also curbs the effects of mortality bias, which exists when the survey is completed by respondents who have not paid full attention to the items (Schwab 2005).

Two attention filters were also placed within the survey instrument. Failure to correctly answer these filters resulted in the redirection to a new page and no incentive. Each filter was placed within a grouping of items so that the respondent had to carefully examine each set. An example of one such filter can be seen in Table 2-5. A total of 168 respondents failed to correctly answer the first attention filter and 39 incorrectly answered the second, bringing the total usable sample to 246.

**TABLE 2-5**  
**Example of Embedded Attention Measure**

---

---

Overall I would say our products/services have excellent overall quality.
The products/services we sell have very good quality.
This question is simply to gauge attention. Please mark "Agree."
Overall, the products/services we sell are excellent.

---

---

#### **2.4.5 Sample Characteristics**

Upon closing the survey, all responses were downloaded to Excel where they were recoded to be analyzed. At this stage, the data was cleaned and assessed for outliers and other problem cases. Also in this phase, the descriptive information was categorized and formatting issues were addressed to systematize the analytical process.

The final sample consisted of managers from 39 of the 50 United States. The ages ranged from 26 to 84 with a mean of 48. The sample was 53% male and 47% female and the managers averaged 15.5 years of experience with their current company. Respondents were spread across

14 industries, as shown in Table 2-6. This large number was requested to increase generalizability (Shadish, Cook and Campbell 2002).

**TABLE 2-6**  
**Industry Analysis**

Industry	%	Cumulative Percentage
Aerospace	3.0%	3.0%
Business Services	18.0%	21.0%
Education	8.0%	29.0%
Energy	2.0%	31.0%
Government	9.0%	40.0%
Health Care	13.5%	53.5%
High Tech	8.0%	61.5%
Hospitality	4.0%	65.5%
Logistics	1.0%	66.5%
Manufacturing	10.0%	76.5%
Nonprofit	5.0%	81.5%
Pharmaceutical	3.5%	85.0%
Property Management	8.5%	93.5%
Retail	6.5%	100.0%

#### **2.4.6 Exploratory Factor Analysis**

Many of the proposed constructs share theoretical underpinnings. While established scales and expert were used to create and validate the constructs, an exploratory factor analysis (EFA) was warranted to ensure that the items loaded on their proper factors. The loadings and cross-loadings of individual items produced in the EFA allowed for a more streamlined CFA and assessment of convergent and discriminant validity. However, skew and kurtosis were first examined to satisfy the normal distribution tenant of SEM. Data is considered skewed if the

mean differs significantly from the median value; data is considered leptokurtic if data is too closely centered around the mean and platykurtic if the data is less concentrated around the mean than normal distribution. If the kurtosis statistic divided by the standard error is greater than  $\pm 1.96$ , then kurtosis may exist. However, like most statistical tests, many rules of thumb exist. In general, simply examining the histogram of the variables is a more robust test of kurtosis and skewedness. In assessing these statistics and histograms for each item, no problematic items were found. Further, the model estimation technique employed in this study is strong against the violation of normality (Muthén and Muthén 2010)

With the distribution requirements met for SEM, the items for Internal and External Environmental Orientation, Environmental Strategy Focus, Human Resources, Business Resources, and Technology Resources were loaded into a principal components EFA. Particular attention was paid to the Eco-Capability construct and its factor structure. The Eco-Capability construct contains 14 items across three factors. The Human Resources component has four items that deal with: 1) top management commitment, 2) a general workplace consensus, 3) written and oral communication, and 4) flexibility of employees regarding the programs. The Business Resources component has four items that deal with 1) creating a formal, long-term plan, 2) training programs for personnel, 3) benchmarking initiatives against competition, and 4) redesigning processes according to the overall strategy. Finally, the Technology Resource component has five items that assess how well a firm implements technology that 1) helps management in assessing environmental performance, 2) provides employees with up-to-date information about the environmental programs, 3) helps market and promote the initiatives to customers, 4) assists with energy management, and 5) assists with inventory management.

The first step is to determine if all the items load on at least one factor. The next step is to eliminate items that load on more than one factor (Nunnally 1978). Implementing the EFA, the items loaded on three factors; however, four items cross-loaded (loaded on more than one factor). One item each from Human and Business Resources and two items from Technology Resources (four items in total) were eliminated as seen in Table 2-7. After three iterations of the EFA, the final Eco-Capability construct contains nine items, three from each factor. See Table 2-8 for final items and loadings.

**TABLE 2-7**  
**Full EFA on Eco-Capability Construct**

<b>Item</b>	<b>Component 1</b>	<b>Component 2</b>	<b>Component 3</b>
bus3	0.80		
<del>bus1</del>	<del>0.79</del>	<del>0.41</del>	
bus4	0.79		
bus2	0.78		
<del>hum3</del>	<del>0.73</del>		<del>0.42</del>
tech4		0.83	
tech5		0.76	
tech1		0.72	
<del>tech3</del>	<del>0.59</del>	<del>0.70</del>	
<del>tech2</del>	<del>0.62</del>	<del>0.65</del>	
hum2			0.85
hum4			0.79
hum1			0.72

**TABLE 2-8**  
**Reduced EFA on Eco-Capability Construct**

Item	Component 1	Component 2	Component 3
bus3	0.82		
bus4	0.81		
bus2	0.79		
tech4		0.88	
tech5		0.76	
tech1		0.69	
hum2			0.86
hum4			0.80
hum1			0.71

#### 2.4.7 Confirmatory Factor Analysis and Construct Validity

With an initial understanding of the data through EFA, a confirmatory factor analysis (CFA) was performed using Mplus6 (Muthén and Muthén 2010). Because Environmental Orientation and Eco-Capability are second-order constructs, items were first loaded onto their first-order factors and then those factors were loaded onto their corresponding second order construct. Two items within the External Environmental Orientation scale were allowed to correlate, as well as two items within the Human Resources scale and two within the Technology Resources scale. All items loaded on their intended factors (both first- and second-order) and model fit statistics were good ( $\chi^2 = 788.15$ ,  $df = 405$ ,  $p < .001$ ; SRMR = .041; RMSEA = .06; CFI = .95). While the overall  $\chi^2$  is significant,  $\chi^2 / df = 1.95$ , which is an acceptable ratio for model fit.

Even with an adequate fitting model, construct validity is needed before the structural model can be tested. The first step is to achieve convergent validity, or to prove that the items within each variable are measuring the same thing. The items within each scale, in theory, are

related to each other, and convergent validity shows this through reliability analyses. Using Cronbach's alpha, each scale achieved a reliability of at least .80, which is sufficient for internal validity (Nunnally and Burnstein 1994). Each variable with item loadings, coefficient alphas, and average variance extracted (AVE) can be found in Table 2-9.

The second half of construct validity is to demonstrate that variables that are theoretically unrelated are indeed distinct. Discriminant validity is especially important when high inter-construct correlations exist (Farrell 2009). There are several ways to test for discriminant validity, but the most appropriate is the procedure developed by Fornell and Larcker (1981). The simple premise is that the AVE from each construct should be greater than the squared correlation of that construct with another construct. Therefore, even with highly correlated constructs, enough distinction may exist to test the relationships in the model.

Table 2-10 contains the scale means, standard deviations, and correlations among variables. The square roots of the AVEs can be found along the diagonal. Fornell and Larcker (1981) suggest that discriminant validity is achieved when this square root of the AVE is greater than any of the correlation in the corresponding rows and columns. If the correlation between the focal construct and another construct is greater than the square root of the AVE, those two constructs are not considered to be different enough from one another to treat as unique variables. Discriminant validity was not achieved for the Environmental Strategy Focus construct because its correlation with Business Resources was higher than the square root of its AVE. See Table 2-10. Consequently, this variable was removed from analysis, which is a limitation of this research.

Broadly speaking, the examination of closely-related variables presents obstacles. When constructs are conceptually similar, subtle differences are inherently difficult to extract,

especially in an environmental context. However, because many organizations are adopting environmental initiatives and only some are experiencing financial gains, these minute differences are precisely the purpose of this research. Uncovering this variation requires the exploration of conceptually similar constructs to determine how an environmental strategy could be successful for one firm and unsuccessful for another.

While collecting field data from firms would be beneficial, a re-examination of the Powell and Dent-Micallef (1997) capability measure is also warranted. Although the Environmental Strategy Focus items cross-loaded with the Business Resources component items, reliability and content-based analysis reveals related but unique constructs. Moving forward, strategy resources may comprise a fourth component of an environmental capability, which represents a call for future research.

**TABLE 2-9**  
**Scale Items with Factor Loadings and Reliabilities**

<b>Scales with Items, Source &amp; AVE</b>	<b>Coefficient Standardized</b>	
	<b>Alpha</b>	<b>Loadings</b>
<b><u>Internal Environmental Orientation</u></b> (Banerjee 2002); AVE = .91	<b>0.95</b>	
My company has a clear policy statement urging environmental awareness.		0.84
Environmental preservation is a high priority in my company.		0.96
Preserving the environment is a central value in my company.		0.93
My company promotes environmental preservation as a major company goal.		0.94
<b><u>External Environmental Orientation</u></b> (Banerjee 2002); AVE = .79	<b>0.86</b>	
My company has a responsibility to preserve the environment.		0.57
People expect my company to be environmentally-conscious.		0.78
My company strives for an image of environmental responsibility.		0.98
<b><u>Environmental Strategy Focus</u></b> (Banerjee, Iyer and Kashyap 2003); AVE = .88	<b>0.93</b>	
My company has integrated environmental issues into its strategic process.		0.92
In my company, “quality” includes reducing our environmental impact.		0.90
Environmental issues are always considered when we develop new products or services.		0.92
We emphasize the environmental aspects of our company in our ads.		0.80
<b><u>Organizational Innovativeness</u></b> (Hurley and Hult 1998); AVE = .92	<b>0.94</b>	
Innovation is readily accepted in our firm.		0.92
Management actively seeks innovative ideas.		0.91
Technical innovation is readily accepted in program/project management.		0.93
<b><u>Eco-Capability: Human Resources</u></b> (Powell and Dent-Micallef 1997); AVE = .80	<b>0.86</b>	
My company's top management fully supports our environmental initiatives.		0.80
There is a general consensus among all employees about the importance of the environment.		0.77
There is a lot of written and oral communication in my company regarding environmental programs.		Dropped
Our people generally embrace our environmental programs.		0.83



<b><u>Eco-Capability: Business Resources</u></b> (Powell and Dent-Micallef 1997); AVE = .92	<b>0.94</b>	
We have a formal, long-term plan for environmental initiatives.		Dropped
Our personnel are well-trained in how our environmental initiatives benefit the customer or planet.		0.91
We actively research the best environmental practices at other firms in our industry.		0.93
Redesigning processes or products to be more environmentally-friendly has become a key part of our business plan.		0.91
<b><u>Eco-Capability: Technology Resources</u></b> (Powell and Dent-Micallef 1997); AVE = .87	<b>0.91</b>	
My company has implemented technology that...		
...assesses the performance of your environmental initiatives		0.90
...provides information to front-line employees about our environmental programs		Dropped
...provides information to customers about our environmental programs		Dropped
...helps with energy management (e.g., lights, climate control)		0.78
...helps manage inventory in an environmentally-conscious way.		0.93
<b><u>Market Performance</u></b> (Morgan and Piercy 1997); AVE = .89	<b>0.92</b>	
Our Market Share is much better than our main competitor.		0.87
Our Customer Retention is much better than our main competitor.		0.89
Our Sales Growth is much better than our main competitor.		0.91
<b><u>Financial Performance</u></b> (Morgan and Piercy 1997); AVE = .96	<b>0.97</b>	
Our Current ROI is much better than our main competitor.		0.95
Our Anticipated Average Profits per Customer is much better than our main competitor.		0.96
Our Anticipated ROI is much better than our main competitor.		0.97
<b><u>Quality of the Offering</u></b> (Sprott and Shimp 2004); AVE = .92	<b>0.94</b>	
Overall I would say our products/services have excellent overall quality.		0.93
The products/services we sell have very good quality.		0.89
Overall, the products/services we sell are excellent.		0.93

**Table 2-10. Scale Means, Standard Deviations, Correlations and AVEs**

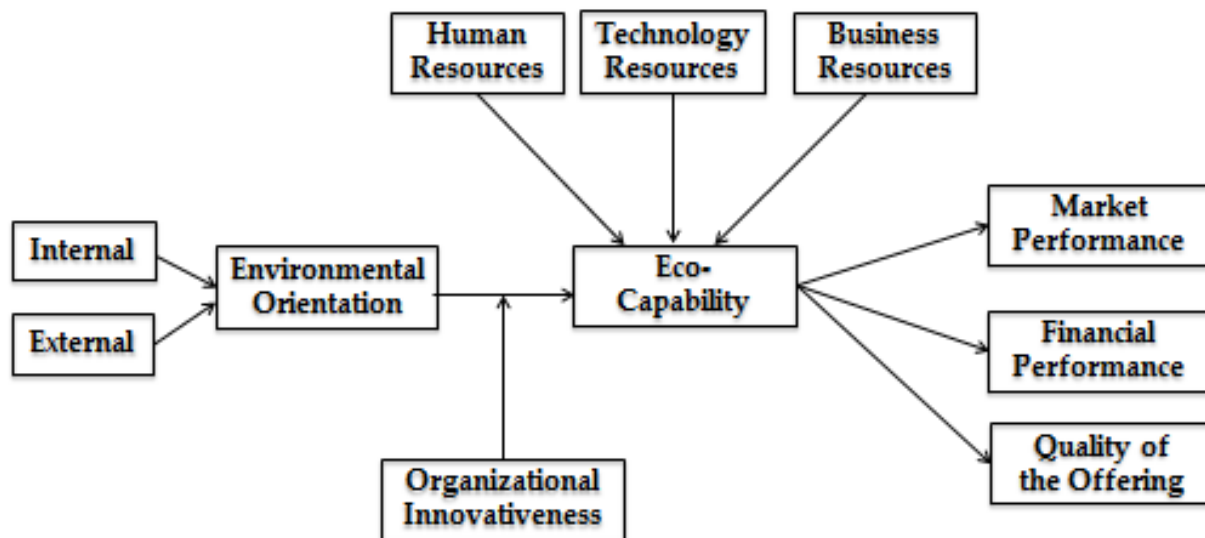
Variable	Mean	Std Dev	1	2	3	4	5	6	7	8	9	10
1. IntEnv Orient	4.23	1.62	<b>(.91)</b>									
2. ExtEnv Orient	4.77	1.32	0.77***	<b>(.79)</b>								
3. Env Strategy	3.84	1.55	0.81***	0.69***	<b>(.88)</b>							
4. Innovative	4.93	1.40	0.50***	0.35***	0.58***	<b>(.92)</b>						
5. Human Res	4.82	1.22	0.73***	0.67***	0.74***	0.57***	<b>(.80)</b>					
6. Business Res	3.82	1.68	0.79***	0.65***	0.89***	0.52***	0.72***	<b>(.92)</b>				
7. Techno Res	3.92	1.68	0.75***	0.64***	0.85***	0.59***	0.66***	0.79***	<b>(.87)</b>			
8. Market Perf	4.24	1.22	0.40***	0.32***	0.46***	0.51***	0.35***	0.41***	0.48***	<b>(.89)</b>		
9. Financial Perf	4.18	1.26	0.42***	0.33***	0.48***	0.49***	0.37***	0.44***	0.49***	0.84***	<b>(.96)</b>	
10. Offer Quality	5.63	1.14	0.14*	0.10	0.18**	0.47***	0.27***	0.18**	0.20***	0.34***	0.29***	<b>(.92)</b>

N = 246

\*( $p < .05$ ); \*\*( $p < .01$ ); \*\*\*( $p < .001$ )

A second CFA was conducted using the full sample but without the Environmental Strategy Focus variable. See the new model in Figure 2-2. All items loaded on their intended factors and model fit statistics were excellent ( $\chi^2 = 570.86$ ,  $df = 301$ ,  $p < .001$ ; SRMS = .04; RMSEA = .06; CFI = .96). The chi-square test results in  $\chi^2 / df = 1.90$ . Fornell and Larcker's (1981) procedure was implemented for a second time, and discriminant validity was achieved as seen in Table 2-11.

**Figure 2-2. New Hypothesized Model**



**Table 2-11. New Scale Means, Standard Deviations, Correlations and AVEs**

<b>Variable</b>	<b>Mean</b>	<b>Std Dev</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
1. IntEnv Orient	4.23	1.62	<b>(.91)</b>								
2. ExtEnv Orient	4.77	1.32	0.77***	<b>(.79)</b>							
3. Innovative	4.93	1.40	0.50***	0.35***	<b>(.92)</b>						
4. Human Res	4.82	1.22	0.73***	0.67***	0.57***	<b>(.80)</b>					
5. Business Res	3.82	1.68	0.79***	0.65***	0.52***	0.72***	<b>(.92)</b>				
6. Techno Res	3.92	1.68	0.75***	0.64***	0.59***	0.66***	0.79***	<b>(.87)</b>			
7. Market Perf	4.24	1.22	0.40***	0.32***	0.51***	0.35***	0.41***	0.48***	<b>(.89)</b>		
8. Financial Perf	4.18	1.26	0.42***	0.33***	0.49***	0.37***	0.44***	0.49***	0.84***	<b>(.96)</b>	
9. Offer Quality	5.63	1.14	0.14*	0.10	0.47***	0.27***	0.18**	0.20***	0.34***	0.29***	<b>(.92)</b>

N = 246

\*( $p < .05$ ); \*\*( $p < .01$ ); \*\*\*( $p < .001$ )

#### **2.4.8 Nonresponse Bias**

Because this study utilized panel data and attention filters, nonresponse bias was considered before moving forward with the analysis. This type of bias presumes that the members of the population of interest that were not included in the analysis may differ significantly in their responses to the same questions. These could be respondents who were filtered out, stopped mid-survey, etc. If this potential subset of the population was to differ significantly on the same questions, the reported findings may not be valid (Armstrong and Overton 1997).

To address this concern, Rogelberg and Stanton (2007) developed a formula to estimate the number of non-respondents required to counter the findings:  $X = n(r_n/r_c - 1)$ . Because the number of non-respondents in this study is known, I use that number ( $X=607$ ), sample size ( $n=246$ ), and average absolute correlation between constructs in Table 2-11 ( $r_n=.512$ ), to calculate the average correlation needed by the non-respondents to alter the findings. This ‘worst case resistance’ technique produced a value of 0.148, which means that non-respondents would have had to produce a correlation of less than 0.148 to significantly impact the results. Given the improbability of such an extremely different correlation, nonresponse bias was deemed unproblematic in this study.

#### **2.4.9 Common Method Variance**

Common method variance (CMV) assumes that some amount of the variance in the model is a product of the methodology and not the constructs and proposed relationships (Podsakoff et al. 2003). Scholars do not agree on the importance or appearance of CMV in empirical research (Spector 2006). In fact, a growing number of papers claim that CMV is either negligible or not as important as previously thought (Goffin and Gellatly 2001). However,

because the data for this study was collected at the same time, several steps were taken before and after the collection to assess and minimize its impact in this study.

First, questions about the same topics were placed in different sections of the survey, with different instructions, different formatting, and different response choices. This not only reduced priming effects (Podsakoff et al. 2003), but by creating proximal and psychological separation, respondents' minds were 'reset' at several points in the survey (Richey and Autry 2009).

Secondly, the survey stated that there were no right or wrong answers, that the answers were completely anonymous, and that there was no embedded data that would permit the matching of individuals to responses.

Given these precautions, CMV is not likely to affect the data. However, two post-hoc analyses ensured this was the case. Harman's (1976) One Factor test determines if the majority of the model's variance can be explained by one factor, assumed to be the method factor (Podsakoff and Organ 1986). To implement this test, a second EFA was performed, which yielded a 4-factor solution accounting for 76.3% of the total variance with each factor having an eigenvalue greater than 1.0. Because no single factor comprised the majority of that variance, the model passes the Harman One Factor Test. However, a more strict procedure developed by Williams, Cote, and Buckley (1989) was also used. Rerunning the CFA, all items were allowed to load on their theoretical constructs as well as a method factor. The AVE for this method factor was 2%, meaning that it accounted for just 2% of the total variance, which is less than the average of 25% found in most studies (Williamson, Cote and Buckley 1989). Given the results of these two tests, CMV is not a problem with the data.

#### **2.4.10 Structural Model Estimation**

Anderson and Gerbing's (1998) two-stage process was utilized to test the model. Because the CFA analysis produced strong results, I conclude that the observed scores are good indicators of the latent variables and proceed with the structural model. A Latent Moderated Structural (LMS) equations method was implemented (Klein and Moosbrugger 2000) to test the model for several reasons. First, this maximum likelihood estimation technique analyzes at the latent construct level. Instead of treating each construct as a composite, where scale items are averaged to create a new variable, all items are included in each stage of the hypothesis testing. Secondly, this technique incorporates errors of the indicator variables in the measurement model and allows for non-normal distribution among exogenous latent constructs (Satorra 1992). Thirdly, Schermelleh-Engel, Klein and Moosbrugger (1998) suggest that estimators in LMS are unbiased and asymptotically normally distributed. Finally, SEM allows for the testing of all of the variables simultaneously without having to enter them in stages while accounting for measurement error (Schumacker and Lomax 2010). In this way, it represents a parsimonious way to assess relationships as they relate to all constructs in the study as opposed to viewing these relationships in isolation.

First, the linear effects model was created to assess the relationships in Figure 2-2 that do not involve interactions. Because Environmental Strategy Focus was removed from the model, those hypotheses were not tested. Specifically, this model examined the relationship between Environmental Orientation and Eco-Capability (H1) as well as the relationship between Eco-Capability and the outcomes of Market Performance (H4a), Financial Performance (H4b) and Quality of the Offering (H4c).

The next step was to test the hypothesized model, which includes the interaction term. Implementing LMS in Mplus6, the newly created interaction term of two latent variables becomes another independent variable. Further, because interaction terms are often not distributed normally, which may lead to Type I error (Shrout and Bolger 2002), the interaction terms created in LMS have means of zero and standard deviations of one to alleviate these concerns (Muthén and Muthén 2010). Similar to using Z-scores, the results are interpreted as standardized weights. This process also decreases the likelihood of multicollinearity. If the interaction model is significantly better than the linear effects model, it demonstrates that the hypothesized moderation should be included in the final model (e.g., Cortina, Chen and Dunlap 2001).

## **2.5 Results of Structural Model**

The linear effects model demonstrated acceptable fit ( $\chi^2 = 690.98$ ,  $df = 333$ ,  $p < .001$ ; RMSEA = .07; CFI = .95). However, when using LMS estimation, the model is fitted to raw data. Therefore, while the statistics reported are relevant for the linear model, they will not be used in model comparison. Further, R-square and change in R-square are not assessed. When estimating latent interactions using this method, the linear model is nested in the hypothesized model. The statistics most important for the two-stage approach are the log likelihood (LL) value and Akaike Information Criterion (AIC) value (Akaike 1974). The AIC is a relative measure of goodness-of-fit, meaning it does not constitute an absolute model fit by testing against a null hypothesis; rather, it allows the comparison of two models. When multiple models are compared, the one with the smallest AIC value is preferred (e.g., Vogel and Feldman 2009). Further, the AIC not only assesses goodness-of-fit, it also penalizes a scholar for adding parameters to overfit a model. In this sense, it is a robust statistic when comparing structural equation models.



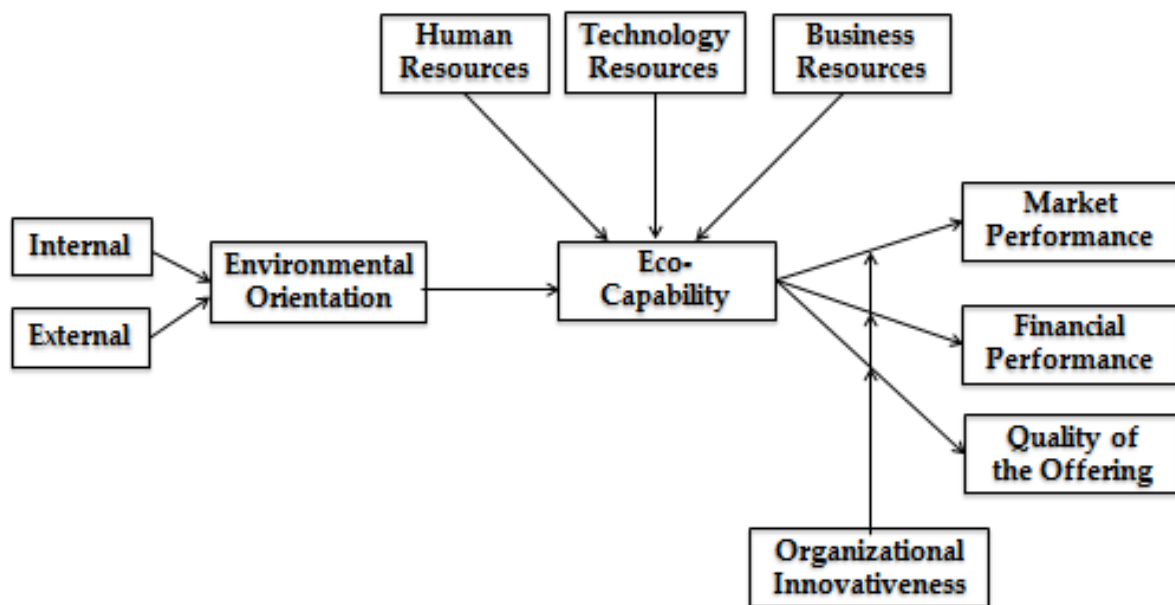
When comparing models with no unknown parameters, such as this one, the log likelihood ratio test is considered the most powerful (Neyman and Pearson 1933). In LMS, the log likelihood ratio statistic, usually denoted by a Lambda,  $\Lambda$ , determines how many times more likely the data is to occur with the hypothesized model than the linear model. After the interaction term is added, a likelihood-ratio test is conducted utilizing the log likelihood statistic (Klein and Moosbrugger 2000). Because this ratio is distributed as a chi-square statistic, it can be used to compute a p-value which will determine whether or not the hypothesized model represents a significant improvement over the linear model (Marsh, Wen and Hau 2004).

The linear effects model produced a log likelihood statistic of 7,870.98 and an AIC of 15,939.96 while providing support for the hypotheses. Specifically, Environmental Orientation is positively related to Eco-Capability (H1;  $\beta = .54$ ,  $p < .001$ ); and Eco-Capability is positively related to Market Performance (H4a;  $\beta = .56$ ,  $p < .001$ ), Financial Performance (H4b;  $\beta = .56$ ,  $p < .001$ ), and Quality of the Offering (H4c;  $\beta = .29$ ,  $p < .001$ ). The hypothesized model produced an AIC of 15,929.42. Because this value is less than the AIC of the linear model, 15,939.96, it is the preferred model. The hypothesized model also produced a log likelihood statistic of 7,864.71. Using the change in log likelihood values as well as the change in degrees of freedom, a p-value was calculated which demonstrated that the hypothesized model was a significant improvement over the linear model ( $\Delta LL = 6.27$ ,  $\Delta df = 1$ ,  $p = .01$ ).

There are several ways to model variables in an empirical study, and often theoretically sound alternatives can be proposed given the same constructs. In SEM, the testing of a theoretically-driven alternative model lends support to the hypothesized model. However, to be able to compare them to the hypothesized model using LMS, alternative models must contain the same nested linear model. Because Organizational Innovativeness has been shown to be a

predictor of performance outcomes (e.g., Hult, Hurley and Knight 2004; Deshpandé, Farley and Webster 1993), I positioned it as a moderator between Eco-Capability and the performance metrics. See Figure 2-3. Rerunning the analysis with the new interaction term, the alternative model produced an AIC of 15,938.38 and a log likelihood statistic of 7,867.34. The represents a better fit than the linear model, but not significantly better ( $\Delta LL = 3.64$ ,  $\Delta df = 3$ ,  $p = ns$ ). More importantly, it is a poorer-fitting model than the hypothesized model. Therefore, the proposed model is preferable to the alternative model, allowing for the interpretation of coefficients from the output. See Table 2-12 for statistics of all three models.

**Figure 2-3. Alternative Model**



**TABLE 2-12**  
**Results of Model Comparison**

Model Description	AIC	AIC Difference	Log likelihood statistic (LL)	LL Difference	$\Delta$ df	p-value
1 Linear	15,939.96		7,870.98			
2 Hypothesized Interaction	15,929.42	-10.54	7,864.71	-6.27	1	< 0.01
3 Alternative Interaction	15,938.38	-1.58	7,867.34	-3.64	3	0.30

Examining the outcomes in the hypothesized model, the results remain significant. Specifically, Eco-Capability is positively related to Market Performance ( $H4a$ ;  $\beta = .56$ ,  $p < .001$ ), Financial Performance ( $H4b$ ;  $\beta = .56$ ,  $p < .001$ ), and Quality of the Offering ( $H4c$ ;  $\beta = .30$ ,  $p < .001$ ). Table 2-13 contains results of the hypotheses tests. The linear relationship between Organizational Innovativeness and Eco-Capability is also represented in the table.

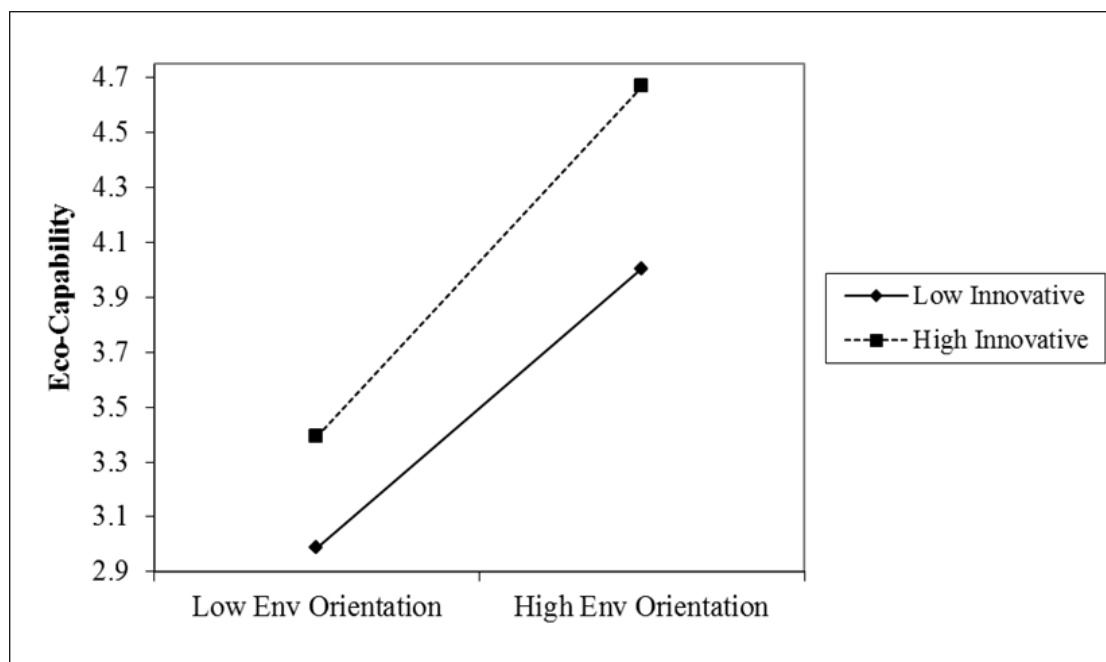
**TABLE 2-13**  
**Results of Hypothesis Testing**

Relationships	Linear Effects Model	Interaction Effects Model
$H_1$ : Environmental Orientation $\rightarrow$ Eco-Capability	0.54 <sup>***</sup>	0.55 <sup>***</sup>
$H_2$ : Environmental Strategy Focus $\rightarrow$ Eco-Capability	<i>nt</i>	--
Innovativeness $\rightarrow$ Eco-Capability	0.24 <sup>***</sup>	0.25 <sup>***</sup>
$H_{3a}$ : Environmental Orientation X Innovativeness $\rightarrow$ Eco-Capability	--	0.07 <sup>**</sup>
$H_{3b}$ : Environmental Strategy Focus X Innovativeness $\rightarrow$ Eco-Capability	--	<i>nt</i>
$H_{4a}$ : Eco-Capability $\rightarrow$ Market Performance	0.56 <sup>***</sup>	0.56 <sup>***</sup>
$H_{4b}$ : Eco-Capability $\rightarrow$ Financial Performance	0.55 <sup>***</sup>	0.56 <sup>***</sup>
$H_{4c}$ : Eco-Capability $\rightarrow$ Quality of the Offering	0.29 <sup>***</sup>	0.30 <sup>***</sup>

$n = 246$ ; \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , *nt* = not tested

As hypothesized, the interaction between Environmental Orientation and Organizational Innovativeness was a significant predictor of the Eco-Capability (H3a;  $\beta = .07$ ,  $p < .001$ ). This is important because it suggests that Organizational Innovativeness has more of an influence as a moderator than an antecedent. Using a procedure developed by Aiken and West (1991), the interaction between Environmental Orientation and Organizational Innovativeness was plotted with information from the hypothesized model. The graph shows the interaction at low (1 standard deviation below the mean), average (the mean), and high (1 standard deviation above the mean) values of Organizational Innovativeness with Environmental Orientation as the independent variable. The positive slope for Environmental Orientation was steepest for those managers who reported high levels of Organizational Innovativeness. This means that the positive relationship between Environmental Orientation and Eco-Capability is strongest for innovative firms and weakest for firms that are not innovative. See Figure 2-4.

**Figure 2-4. Organizational Innovativeness Moderation Effect**



## **2.6 Conclusion**

This study sought to demonstrate the importance of environmental orientation, strategy, and innovation in the construction of an eco-capability. Sampling managers from 14 industries, the results show that orientation is indeed paramount to creating this capability, and that a firm that prioritizes innovation will be better able to optimize it. Williamson (1991) predicted that the resource-based and capability-based views would combine to address strategic management. By viewing this new construct through these theoretical lenses, this study support his prediction and extends it by applying it to environmental strategy. From a practical standpoint, the measurement of managerial perceptions offers straightforward implications as to whether or not the very people enacting the strategies believe they are worthwhile. Taken together, essay 1 could help businesses more fully predict performance based on their environmental initiatives and offer scholars the opportunity to incorporate a new construct into the sustainability discussion.

### **2.6.1 Theoretical Implications**

Sustainability has become conspicuous in many streams of literature, and this study contributes to the discussion from a marketing and strategic management perspective. RBV and sustainability are not strangers, as evidenced by the addition of the natural resource-based view of the firm to the literature (Hart 1995), but managers and scholars are still trying to unlock the potential of its application. This essay examines the business element of the sustainable development model in proposed in Figure 1-5 to better understand one key stakeholder before addressing its overlap with other human components. It acknowledges that every human interaction takes place within the natural environment, which is a step toward better understanding the roles of all human stakeholders.

The major contribution of this research is the development of an eco-capability. By integrating Madhavaram and Hunt's (2008) hierarchy with dynamic capabilities research, this study takes the suggestion of Williamson (1991) and creates a new construct, which offers a more complete assessment of the effectiveness of a firm's environmental initiatives. To date, this may be the most accurate representation of an environmental capability in the literature. Using Powell and Dent-Micallef's (1997) conceptualization, human, business and technology resources are identified as distinct and necessary components. Further, while environmental strategy focus was not analyzed in this study, environmental orientation is shown to be a strong predictor of this capability. Additionally, an eco-oriented firm that is also innovative takes the biggest strides to building a capability from its efforts, which represents a secondary contribution to theory. Specifically, the analysis shows that organizational innovativeness is more accurately included as a moderator of the relationship between orientation and capability than simply as an antecedent of the capability. This validates the importance of integrating sustainability with innovation in theory and practice as predicted by scholars; it also supports the fundamental premise of dynamic capabilities and how they contribute to competitive advantage. Finally, the alternative model demonstrates that organizational innovativeness is more effective in the formation of the capability than in the utilization of that capability to achieve performance outcomes.

Three post hoc analyses position the capability as a mediator between environmental orientation and the outcome variables. In each case, eco-capability mediates the relationship and the indirect effects are significant ( $p < .001$ ). This allows for the interpretation that environmental orientation influences performance through the formation of the eco-capability proposed here. While much more work has to be done, theoretically, this advances our understanding of the

relationships between environmental constructs, and particularly, the means through which they influence outcomes.

### **2.6.2 Managerial Implications**

For decades, the ‘holy grail’ of research involving constructs related to the environment and sustainability has been: ‘does it pay to be green’? As environmental strategies evolve from first mover tactics to the mere costs of doing business, firms are struggling to find the advantage of their green initiatives. This study identifies organizational innovativeness as a key to uncovering that advantage. Results illuminate just how important the ability and willingness to innovate is in securing an eco-capability, and more importantly, how crucial this construct is to achieving a competitive advantage in a green-washed marketplace.

Narver and Slater (1990) suggest that an innovative firm with a matching orientation is best-suited to decide on the appropriate strategy. Cronin et al. (2011) identify ‘green innovation’ and the ‘greening of the organization’ as two separate strategies geared toward this same goal. It is logical, then, that in this study, organizational innovativeness interacted with an environmental orientation to enhance an eco-capability. Building on previous research (Dibrell, Craig and Hansen 2011), when an organization has both an environmental and innovative culture, it is better suited to developing the human, business, and technology resources of an eco-capability. Sharing roots with enviropreneurial marketing (Menon and Menon 1997), this may be the process through which green initiatives lead to profits.

These human, business, and technology resources may provide specific direction and tangible value to managers who consider their firm eco-oriented but have not realized positive outcomes. Specifically, the following were all found to be formative of the eco-capability construct: the human resources of top management commitment, flexibility among the work

force, and a general consensus among employees; the business resources of properly trained personnel, benchmarking against competition, and redesigning processes with environmental strategy; and technology resources that assess performance, assist with inventory management and climate control, and provide employees with information on the environmental programs. While more research is needed, this offers practical guidelines to managers who may be able to pinpoint strengths and weaknesses within their firm.

### **2.6.3 Limitations and Future Research**

Panel data has come under some scrutiny for its lack of generalizability; however, the results of panel data are as generalizable as those gathered through random survey mailings (e.g., Dennis 2001). In fact, online panel data has been utilized in research ranging from strategy (e.g., Richey and Autry 2009) to consumer behavior (Buhremester, Kwang and Gosling 2011) to experimental design (Paolucci, Chandler and Ipeirotis 2010). While panel data is becoming more common and gaining acceptance within the marketing discipline, this study would benefit from field data. Matching these constructs with objective performance metrics would be a robust replication of the perceptual performance measures studied here.

Additional outcomes would also help the robustness of this study. For instance, Ray, Barney and Muhanna (2004) suggest that it is difficult to uncover subtle differences when using all-encompassing outcomes such as financial and market performance. In a study regarding customer service, the authors examined service quality instead of more global outcomes. For the current research, environmental performance or competitive advantage through environmental initiatives may be better indicators of performance. Additional moderators may be useful as well. For instance, being a first mover in regard to resource acquisition and deployment is often considered a competitive advantage (Lieberman and Montgomery 1998). Therefore, program



timing is another construct worth studying in regard to an eco-capability. Trustworthiness and organizational learning may also enhance the understanding of these constructs. Alternatively, scholars could investigate the repercussion of focusing too many resources on environmental capability. Leonard-Barton (2007) describes a ‘core rigidity’ that may emerge from overemphasizing one aspect of a firm at the expense of another. Surely, the time, effort, and capital necessary to create an eco-capability may hinder a firm’s ability to implement another process, which presents an interesting research question.

One of the most difficult aspects of research involving environmental constructs is defining the constructs themselves. Particularly when trying to uncover subtle differences between closely related variables, the task requires a finely tuned survey instrument and proper sample. Banerjee (2002) made a specific request to determine the relationship between environmental orientation and environmental strategy, and one of the goals of this research was to answer this call. In the marketing literature, a ‘green orientation’ is often viewed as one of the three types of green strategy (Cronin et al. 2011), which illuminates the conceptual ambiguity and the work left to be done. As discussed, the strategy construct was removed from this study because it did not pass Fornell and Larcker’s (1981) test for discriminant validity. Overlap exists between the environmental strategy focus and business resources items; however they do capture different concepts. Moving forward, these items may be integrated into the business component or a fourth ‘strategy resources’ component may be added to Powell and Dent-Micallef’s (1997) capability measure. Further research, such as Churchill’s (1979) scale development technique, could be useful in fleshing out these constructs even further.

Finally, organizational innovativeness proved to be an important part of an eco-capability. However, Parasuraman (2000) identifies three other dimensions of technological

readiness that could also influence the construct. Specifically, the insecurity and discomfort dimensions may help scholars extrapolate intricacies among technology. The insecurity dimension deals with managerial skepticism or distrust of the technology while discomfort involves feeling overwhelmed by it. Both of these relate to the idea that green technology implies some risk in its implementation. While this study suggests that managers perceive offerings made through environmentally-friendly processes as having higher quality, these dimensions could help identify why and when this is not the case. Further, because consumers distrust the quality of environmentally-friendly products, all three dimensions are worth examining.

## REFERENCES

- Aiken, Leona S. and Stephen G. West (1991), *Multiple Regression: Testing and Interpreting Interactions*, Newbury Park, CA: Sage.
- Akaike, Hirotugu (1974), "A New Look at the Statistical Model Identification," *IEEE Transactions on Automatic Control*, 19 (6), 716-23.
- Amit, Raphael and Paul J. H. Shoemaker (1993), "Strategic Assets and Organizational Rent," *Strategic Management Journal*, 14 (1), 33-46.
- Anderson, James C. and David W. Gerbing (1998), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin*, 103 (3), 411-23.
- Aragón-Correa, J. Alberto and Sanjay Sharma (2003), "A Contingent Resource-Based View of Proactive Corporate Environmental Strategy," *The Academy of Management Review*, 28 (1), 71-88.
- Aragón-Correa, J. Alberto, Nuria Hurtado-Torres, Sanjay Sharma and Victor J. García-Morales (2008), "Environmental Strategy and Performance in Small Firms: A Resource-based Perspective," *Journal of Environmental Management*, 86 (1), 88-103.
- Armstrong, J. Scott and Terry S. Overton (1977), "Estimating Nonresponse Bias in Mail Surveys," *Journal of Marketing Research*, 14, 396-402.
- Baker, William E. and James M. Sinkula (2005), "Environmental Marketing Strategy and Firm Performance: Effects on New Product Performance and Market Share," *Journal of the Academy of Marketing Science*, 33 (4), 461-75.
- Banerjee, Subhabrata Bobby (2002), "Corporate Environmentalism: The Construct and its Measurement," *Journal of Business Research*, 55 (3), 177-91.
- Banerjee, Subhabrata Bobby, Easwar S. Iyer and Rajiv K. Kashyap (2003), "Corporate Environmentalism: Antecedents and Influence of Industry Type," *Journal of Marketing*, 67 (2), 106-22.
- Barney, Jay B. (1986), "Organizational Culture: Can it be a Source of Sustained Competitive Advantage?" *Academy of Management Review*, 11 (3), 656-65.

- Barney, Jay B. (1991), "Firm Resources and Sustained Competitive Advantage," *Journal of Management* 17 (1), 99-120.
- Barreto, Ilídio (2010), "Dynamic Capabilities: A Review of Past Research and an Agenda for the Future," *Journal of Management*, 36 (1), 256-80.
- Bentler, P. M. and Chih-Ping Chou (1987), "Practical Issues in Structural Modeling," *Sociological Methods & Research*, 16 (1), 78-117.
- Bhattacharya, C. B., N. Craig Smith and David Vogel (2004), "Integrating Social Responsibility and Marketing Strategy: An Introduction," *California Management Review*, 47 (1), 6-8.
- Buhremester, Michael, Tracy Kwang and Samuel D. Gosling (2011), "Amazon's Mechanical Turk: A New Source of Inexpensive, Yet High-Quality, Data?" *Perspectives on Psychological Science*, 6 (1), 3-5.
- Chabowski, Brian R., Jeannette A. Mena and Tracy L. Gonzalez-Padron (2011), "The Structure of Sustainability Research in Marketing, 1958-2008; Future Research Opportunities," *Journal of the Academy of Marketing Science*, 39 (1), 55-70.
- Chan, Ricky Y. K. (1999), "Environmental Attitudes and Behavior of Consumers in China," *Journal of International Consumer Marketing*, 11 (4), 25-52.
- Chan, Ricky Y. K. (2010), "Corporate Environmentalism Pursuit by Foreign Firms Competing in China," *Journal of World Business*, 45 (1), 80-92.
- Chan, Ricky Y. K., Hongwei He, Hing Kai Chan and William Y. C. Wang (2012), "Environmental Orientation and Corporate Performance: The Mediation Mechanism of Green Supply Chain Management and Moderating Effect of Competitive Intensity," *Industrial Marketing Management*, 41 (4), 621-30.
- Churchill, Gilbert A. (1979). "A Paradigm for Developing Better Measures of Marketing Constructs," *Journal of Marketing Research*, 16 (1) 64-73.
- Colby, Charles L. and A. Parasuraman (2003), "Technology Still Matters," *Marketing Management*, 12 (4), 28-33.
- Collis, David J. and Cynthia A. Montgomery (1995), "Competing on Resources: Strategy in the 1990s," *Harvard Business Review*, 73 (4), 118-29.
- Connelly, Brian L., David J. Ketchen Jr. and Stanley F. Slater (2011), "Toward a 'Theoretical Toolbox for Sustainability Research in Marketing,'" *Journal of the Academy of Marketing Science*, 39 (1), 86-100.
- Constantin, James A. and Robert F. Lusch (1994), *Understanding Resource Management*, Oxford, OH: The Planning Forum.

- Cortina, Jose M., Gilad Chen and William P. Dunlap (2001), "Testing Interaction Effects in LISREL: Examination and Illustration of Available Procedures," *Organizational Research Methods*, 4 (4), 324-60.
- Crittenden, Victoria L., William F. Crittenden, Linda K. Ferrell, O. C. Ferrell and Christopher C. Pinney (2011), "Market-Oriented Sustainability: A Conceptual Framework and Propositions," *Journal of the Academy of Marketing Science*, 39 (1), 71-85.
- Cronin, Joseph. J. Jeffrey S. Smith, Mark R. Gleim, Edward Ramirez and Jennifer Dawn Martinez (2011), "Green Marketing Strategies: An Examination of Stakeholders and the Opportunities They Present," *Journal of the Academy of Marketing Science*, 39 (1), 158-74.
- Dangelico, Rosa Maria and Devashish Pujari (2010), "Mainstreaming Green Product Innovation: Why and How Companies Integrate Environmental Sustainability," *Journal of Business Ethics*, 95 (3), 471-86.
- Day, George S. and Prakesh Nedungadi (1994), "Managerial Representations of Competitive Advantage," *Journal of Marketing*, 58 (2), 31-44.
- Day, George S. and Robin Wensley (1988), "Assessing Advantage: A Framework for Diagnosing Competitive Superiority," *Journal of Marketing*, 52 (2), 1-20.
- Dennis, J. Michael (2001), "Are Internet Panels Creating Professional Respondents? A Study of Panel Effects," *Marketing Research*, 13 (2) 34-38.
- Deshpandé, Rohit, John U. Farley and Frederick E. Webster, Jr. (1993), "Corporate Culture, Customer Orientation, and Innovativeness in Japanese Firms: A Quadrad Analysis," *Journal of Marketing*, 57 (1), 23-37.
- Dibrell, Clay, Justin B. Craig and Eric N. Hansen (2011), "How Managerial Attitudes Toward the Environment Affect Market Orientation and Innovation," *Journal of Business Research*, 64 (4), 401-07.
- Eisenhardt, Kathleen M. and Jeffrey A. Martin (2000), "Dynamic Capabilities: What are They?" *Strategic Management Journal*, 21 (10/11), 1105-21.
- Farrell, Andrew M. (2009), "Insufficient Discriminant Validity: A Comment on Bove, Pervan, Beatty and Shiu (2009)," *Journal of Business Research*, 63 (3), 324-27.
- Florida, Richard (1996), "Lean and Green: The Move to Environmentally Conscious manufacturing," *California Management Review*, 39 (1), 80-105.

- Fornell, Claes and David F. Larcker (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research*, 18 (1) 39-50.
- Gago, Roberto Fernández and Mariano Nieto Antolín (2004), "Stakeholder Salience in Corporate Environmental Strategy," *Corporate Governance*, 4 (3), 65-76.
- Genchev, Stefan E., R. Glenn Richey and Colin B. Gabler (2011), "Evaluating Reverse Logistics Programs: A Suggested Process Formalization," *International Journal of Logistics Management*, 22 (2), 242-63.
- Goffin, Richard D. and Ian E. Gellatly (2001), "A Multi-Rater Assessment of Organizational Commitment: Are Self-Report Measures Biased?" *Journal of Organizational Behavior*, 22 (4) 437-51.
- Grant, Robert M. (1991), "The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation," *California Management Review*, 33 (3), 114-35.
- Griffith, David A. and Michael G. Harvey (2001), "A Resource Perspective of Global Dynamic Capabilities," *Journal of International Business Studies* 32 (3), 597-606.
- Harman, Harry H. (1976), *Modern Factor Analysis*, Chicago: The University of Chicago Press.
- Hart, Stuart L. (1995), "A Natural-Resource-Based View of the Firm," *Academy of Management Review*, 20 (4), 986-1014.
- Hart, Stuart L. and Gautam Ahuja (1996), "Does it Pay to Be Green? An Empirical Examination of the Relationship Between Emission Reduction and Firm Performance," *Business Strategy and the Environment*, 5 (1), 30-37.
- Henard, David H. and David M. Szymanski (2001), "Why Some New Products are More Successful than Others," *Journal of Marketing Research*, 38 (3), 362-75.
- Helfat, Constance E. and Margaret A. Peteraf (2003), "The Dynamic Resource-Based View: Capability Lifecycles," *Strategic Management Journal*, 24 (10), 997-1010.
- Hult, G. Thomas M. (2011), "Market-Focused Sustainability: Market Orientation Plus!" *Journal of the Academy of Marketing Science*, 39 (1), 1-6.
- Hult, G. Thomas M., Robert F. Hurley and Gary A. Knight (2004), "Innovativeness: Its Antecedents and Impact on Business Performance," *Industrial Marketing Management*, 33 (5), 429-38.
- Hunt, Christopher B. and Ellen R. Auster (1990), "Proactive Environmental Management: Avoiding the Toxic Trap," *Sloan Management Review*, 31 (2), 7-18.

- Hunt, Shelby D. and Robert M. Morgan (1996), "The Resource-Advantage Theory of Competition: Dynamics, Path Dependencies, and Evolutionary Dimensions," *Journal of Marketing*, 60 (5), 107-14.
- Hurley, Robert F. and G. Thomas M. Hult (1998), "Innovation, Market Orientation, and Organizational Learning: An Integration and Empirical Examination," *Journal of Marketing*, 62 (3), 42-54.
- Klein, Andreas and Helfried Moosbrugger (2000), "Maximum Likelihood Estimation of Latent Interaction Effects with the LMS Method," *Psychometrika*, 65 (4), 457-74.
- Kotler, Philip (2011), "Reinventing Marketing to Manage the Environmental Imperative," *Journal of Marketing*, 75 (4), 132-35.
- Lacy, Peter, Arnaud Haines and Rob Hayward (2012), "Developing Strategies and Leaders to Succeed in a New Era of Sustainability: Findings and Insights from the United Nations Global Compact-Accenture CEO Study," *Journal of Management Development*, 31 (4), 346-57.
- Laufer, William S. (2003), "Social Accountability and Corporate Greenwashing," *Journal of Business Ethics*, 43 (3), 253-61.
- Leonard-Barton, Dorothy (2007), "Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development," *Strategic Management Journal*, 13 (S1), 111-25.
- Lieberman, Marvin B. and David B. Montgomery (1998), "First Mover (Dis)Advantages: Retrospective and Link with the Resource-Based View," *Strategic Management Journal*, 19, 1111-25.
- Lin, Ying-Ching and Chiu-Chi Angela Chang (2012), "Double Standard: The Role of Environmental Consciousness in Green Product Usage," *Journal of Marketing*, 76 (5), 125-34.
- Lubin, David A. and Daniel C. Esty (2010), "The Sustainability Imperative," *Harvard Business Review*, 88 (5), 42-50.
- Luo, Xueming and C. B. Bhattacharya (2006), "Corporate Social Responsibility, Customer Satisfaction, and Market Value," *Journal of Marketing*, 70 (4), 1-18.
- Madhavaram, Sreedhar and Shelby D. Hunt (2008), "The Service-Dominant Logic and a Hierarchy of Operant Resources: Developing Masterful Operant Resources and Implications for Marketing Strategy," *Journal of the Academy of Marketing Science*, 36 (1), 67-82.

- Maignan, Isabelle and O. C. Ferrell (2001), "Corporate Citizenship as a Marketing Instrument – Concepts, Evidence and Research Directions," *European Journal of Marketing*, 35 (3/4), 457-84.
- Makadok, Richard (2001), "Toward a Synthesis of the Resource-Based and Dynamic-Capability Views of Rent Creation," *Strategic Management Journal*, 22 (5), 387-401.
- Makower, Joel (2009), *Taking Care of Business*. Retrieved January 30 from [www.greenbiz.com](http://www.greenbiz.com).
- Makower, Joel (2013), *State of Green Business 2013*. Retrieved February 18 from [www.greenbiz.com](http://www.greenbiz.com).
- Marcus, Alfred A. and Marc. H. Anderson (2006), "A General Dynamic Capability: Does it Propagate Business and Social Competencies in the Retail Food Industry?" *Journal of Management Studies*, 43 (1), 19-46.
- Marsh, Herbert W., Zhonglin Wen and Kit-Tai Hau (2004), "Structural Equation Models of Latent Interactions: Evaluation of Alternative Estimation Strategies and Indicator Construction," *Psychological Methods*, 9 (3), 275-300.
- McWilliams, Abigail, Donald S. Siegel and Patrick M. Wright (2006), "Corporate Social Responsibility: Strategic Implications," *Journal of Management Studies*, 43 (1), 1-18.
- Menguc, Bulent and Lucie Ozanne (2011), "Challenges of the "Green Imperative": A Natural Resource-Based Approach to the Environmental Orientation-Business Performance Relationship," *Journal of Business Research*, 58 (4), 430-38.
- Menon, Ajay and Anil Menon (1997), "Enviropreneurial Marketing Strategy: The Emergence of Corporate Environmentalism as Market Strategy," *Journal of Marketing*, 61 (1), 51-67.
- Morgan, Neil A. and Nigel F. Piercy (1998), "Interactions between Marketing and Quality at the SBU Level: Influences and Outcomes," *Journal of the Academy of Marketing Science*, 26 (3), 190-208.
- Muthén, Linda K. and Bengt O. Muthén (2010), *Mplus User's Guide* (6<sup>th</sup> ed.), Los Angeles: Muthén and Muthén.
- Narver, John C. and Stanley F. Slater (1990), "The Effect of a Market Orientation on Business Profitability," *Journal of Marketing*, 54 (4), 20-35.
- Neyman, Jerzy and Egon Pearson (1933), "On the Problem of the Most Efficient Tests of Statistical Hypotheses," in *Philosophical Transactions of the Royal Society of London. Series A, Containing Papers of a Mathematical or Physical Character*, 231, 694-706.
- Ngo, Liem Viet and Aron O'Cass (2009), "Creating Value Offerings via Operant Resource-Based Capabilities," *Industrial Marketing Management*, 38 (1), 45-59.



- Nidumolu, Ram, C. K. Prahalad and M. R. Rangaswami (2009), "Why Sustainability is Now the Key Driver of Innovation," *Harvard Business Review*, 87 (9), 1-10.
- Nunnally, Jim C. (1978). *Psychometric Theory*, New York: McGraw Hill.
- Nunnally, Jim C. and Ira H. Bernstein (1994), *Psychometric Theory*, 3rd ed. New York: McGraw-Hill.
- Olson, Eric G. (2008) "Creating an Enterprise-Level 'Green' Strategy," *Journal of Business Strategy*, 29 (2), 22-30.
- Paolucci, Gabriele, Jesse Chandler and Panagiotis G. Ipeirotis (2010), "Running Experiments on Amazon Mechanical Turk," *Judgment and Decision Making*, 5 (5), 411-19.
- Parasuraman, A. (2000), "Technology Readiness Index (TRI), A Multiple-Item Scale to Measure Readiness to Embrace New Technologies," *Journal of Service Research*, 2 (4), 307-20.
- Penrose, Edith T. (1959), *The Theory of the Growth of the Firm*, New York: John Wiley.
- Peteraf, Margaret A. (1993), "The Cornerstones of Competitive Advantage: A Resource-Based View," *Strategic Management Journal*, 14 (3), 179-91.
- Podsakoff, Philip M. and Dennis W. Organ (1986). "Self-Reports in Organizational Research: Problems and Prospects," *Journal of Management*, 12 (4) 531-44.
- Podsakoff, Philip M., Scott B. MacKenzie, Jeong-Yeon Lee and Nathan P. Podsakoff (2003), "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology*, 88 (5) 879-903.
- Polonsky, Michael Jay and Philip Rosenberger III (2001), "Reevaluating Green Marketing: A Strategic Approach," *Business Horizons*, 44 (5), 21-30.
- Powell, Thomas C. and Anne Dent-Micallef (1997), "Information Technology as Competitive Advantage: The Role of Human, Business and Technology Resources," *Strategic Management Journal*, 18 (5), 375-405.
- Prahalad, C. K. and Gary Hamel (1990), "Strategy as a Field of Study: Why Search for a New Paradigm?" *Strategic Management Journal*, 15 (S2), 5-16.
- Pujari, Devashish, Gillian Wright and Ken Peattie (2004), "Organizational Antecedents of Environmental Responsiveness in Industrial New Product Development," *Industrial Marketing Management*, 33 (5), 381-91.

- Rapp, Adam, Kevin J. Trainor and Raj Agnihotri (2010), "Performance Implications of Customer-Linking Capabilities: Examining the Complementary Role of Customer Orientation and CRM Technology," *Journal of Business Research*, 63 (11), 1229-36.
- Ray, Gautam, Jay B. Barney and Waleed A Muhanna (2004), "Capabilities, Business Processes, and Competitive Advantage: Choosing the Dependent Variable in Empirical Tests of the Resource-Based View," *Strategic Management Journal*, 25 (1), 23-37.
- Richey, R. Glenn Jr., Chadwick B. Hilton, Michael G. Harvey, Lauren Skinner Beitelspacher, Mert Tokman, and Miriam Moeller (2011), "Aligning Operant Resources for Global Performance: An Assessment of Supply Chain Human Resource Management," *Journal of Management & Organization*, 17 (3), 364-82.
- Richey, R. Glenn Jr. and Chad W. Autry (2009), "Assessing Interfirm Collaboration/Technology Investment Tradeoffs: The Effects of Technological Readiness and Organizational Learning," *International Journal of Logistics Management*, 20 (1), 30-56.
- Rogelberg, Steven G. and Jeffrey M. Stanton (2007), "Understanding and Dealing with Organizational Survey Nonresponse," *Organizational Research Methods*, 10 (2) 195-209.
- Rogers, Everett M. (1995), *Diffusion of Innovations*, New York: The Free Press.
- Ruf, Bernadette M., Krishnamurty Muralidhar, Robert M. Brown, Jay J. Janney and Karen Paul (2001), "An Empirical Investigation of the Relationship Between Change in Corporate Social Performance and Financial Performance: A Stakeholder Theory Perspective," *Journal of Business Ethics*, 32 (2), 143-56.
- Satorra, Albert (1992), "Asymptotic Robust Inferences in the Analysis of Mean and Covariance Structures," *Sociological Methodology*, 22, 249-78.
- Schermelleh-Engel, Karin, Andreas Klein and Helfried Moosbrugger (1998), "Estimating Nonlinear Effects Using a Latent Moderated Structural Equations Approach," *Interaction and Nonlinear Effects in Structural Equation Modeling*, 203-38.
- Schumacker, Randall E. and Richard G. Lomax (2010), *A Beginner's Guide to Structural Equation Modeling* (3<sup>rd</sup> Ed.), New York: Routledge Academic.
- Schwab, Donald P. (2005), *Research Methods for Organizational Studies* (2nd ed.), Mahwah, NJ: Lawrence Erlbaum Associates.
- Shadish, William R., Thomas D. Cook and Donald T. Campbell (2002), *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*, Houghton Mifflin Company: Boston, MA.

- Sharma, Arun, Gopalkrishnan R. Iyer, Anju Mehrotra and R. Krishnan (2010), "Sustainability and Business-to-Business Marketing: A Framework and Implications," *Industrial Marketing Management*, 39 (2), 330-41.
- Shrivastava, Paul (1995), "The Role of Corporations in Achieving Ecological Sustainability," *Academy of Management Review*, 20 (4), 936-60.
- Shrout, Patrick E. and Niall Bolger (2002), "Mediation in Experimental and Nonexperimental Studies: New Procedures and Recommendations," *Psychological Methods; Psychological Methods* 7 (4), 422.
- Slater, Stanley F. Eric M. Olson and G. Thomas M. Hult (2006), "The Moderating Influence of Strategic Orientation on the Strategy Formation Capability-Performance Relationship," *Strategic Management Journal*, 27 (12), 1221-31.
- Spector, Paul E. (2006), "Method Variance in Organizational Research: Truth or Urban Legend?" *Organizational Research Methods*, 9 (2), 221-32.
- Sprott, David E. and Terence A. Shimp (2004), "Using Product Sampling to Augment the Perceived Quality of Store Brands," *Journal of Retailing*, 80 (4), 305-15.
- Stead, W. Edward and Jean Garner Stead (1992), *Management for a Small Planet: Strategic Decision Making and the Environment*, Newbury Park, CA: Sage.
- Stewart, Kathy A. and Albert H. Segars (2002), "An Empirical Examination of the Concern for Information Privacy Instrument," *Information Systems Research*, 62 (1), 2-18.
- Stone, George W. and Kirk L. Wakefield (2000), "Eco-Oriented: An Extension of Market Orientation in an Environmental Context," *Journal of Marketing Theory and Practice*, 8 (3), 21-31.
- Tanaka, J. S. (1987), "How Big is Big Enough?": Sample Size and Goodness of Fit in Structural Equation Models with Latent Variables," *Child Development*, 58 (1), 134-46.
- Teece, David J. (2007), "Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance," *Strategic Management Journal*, 28 (13), 1319-50.
- Teece, David J. (2009), *Dynamic Capabilities and Strategic Management: Organizing for Innovation and Growth*, New York: Oxford University Press.
- Teece, David J. and Gary Pisano (1994), "The Dynamic Capabilities of Firms: An Introduction," *Industrial and Corporate Change*, 3 (3), 537-56.
- Teece, David J., Gary Pisano and Amy Shuen (1997), "Dynamic Capabilities and Strategic Management," *Strategic Management Journal*, 18 (7), 509-35.

- Thomas, Rodney W. (2011). "When Student Samples Make Sense in Logistics Research," *Journal of Business Logistics*, 32 (3) 287-290.
- Trainor, Kevin J. Adam Rapp, Lauren Skinner Beitelspacher and Niels Schillewaert (2011), "Integrating Information Technology and Marketing: An Examination of the Drivers and Outcomes of e-Marketing Capability," *Industrial Marketing Management*, 40, 162-74.
- United Nations Environment Programme (UNEP) (2005), "Talk the Walk: Advancing Sustainable Lifestyles through Marketing and Communications," Retrieved January 30, 2013 from [www.unep.fr](http://www.unep.fr).
- Vogel, Ryan M. and Daniel C. Feldman (2009), "Integrating the Levels of Person-Environment Fit: The Roles of Vocational Fit and Group Fit," *Journal of Vocational Behavior*, 75 (1), 68-81.
- Wang, Catherine L. and Pervaiz K. Ahmed (2007), "Dynamic Capabilities: A Review and Research Agenda," *Strategic Management Journal*, 9 (1), 31-51.
- Williamson Oliver E. (1991), "Strategizing, Economizing, and Economic Organization," *Strategic Management Journal*, 12 (S2), 75-94.
- Williamson, Larry J., Joseph A. Cote and M. Ronald Buckley (1989), "Lack of Method Variance in Self-Reported Affect and Perceptions at Work: Reality or Artifact?" *Journal of Applied Psychology*, 74 (3), 462-68.
- Winter, Sidney G. (2003), "Understanding Dynamic Capabilities," *Strategic Management Journal*, 24 (10), 991-95.
- Yin, Xialoi and Edward J. Zajac (2004), "The Strategy/Governance Structure Fit Relationship: Theory and Evidence in Franchising Arrangements," *Strategic Management Journal*, 25 (4), 365-83.
- Zhu, Qinghua and Joseph Sarkis (2004), "Relationships between Operational Practices and Performance among Early Adopters of Green Supply Chain Management Practices in Chinese Manufacturing Enterprises," *Journal of Operations Management*, 22 (3), 265-89.
- Zollo, Maurizio and Sidney G. Winter (2002), "Deliberate Learning and the Evolution of Dynamic Capabilities," *Organization Science*, 13 (3), 339-51.
- Zott, Chrisoph (2002), "Dynamic Capabilities and the Emergence of Intraindustry Differential Firm Performance: Insights from a Simulation Study," *Strategic Management Journal*, 24 (2), 97-125.
- Zott, Christoph and Raphael Amit (2008), "The Fit between Product Market Strategy and Business Model: Implications for Firm Performance," *Strategic Management Journal*, 29 (1), 1-26.

## **TWO ESSAYS ON ENVIRONMENTAL ORIENTATION**

### **CHAPTER THREE: ESSAY TWO**

#### **BUILDING A ‘GREEN’ SALES FORCE THROUGH A STRATEGIC ALIGNMENT OF SHARED VALUES**

##### **3.1 Introduction**

It is often easier to attach a green label to a product, acquire a certificate, or simply follow governmental guidelines than it is to embody environmental protection and conservation as a core firm value (Baker and Sinkula 2005). Studies show that consumers can tell the difference between real and disingenuous green initiatives (Crane 2000), which may be the reason for the lethargic adoption of green products (Lin and Chang 2012). The desire for authentic and transparent information from firms suggests that for a green strategy to be effective, it must establish an environmental orientation that is visible to its customers.

Typically, boundary-spanning employees are more visible to customers than managers because they interact with them. The boundary spanner, or front line employee, is the customer service representative that solves a customer problem or the in-store sales associate who helps select the optimal product to fulfill a customer need. Through these encounters, a customer learns the priorities, or the orientation, of the firm. Just as a customer service representative who displays superior hi-tech knowledge may convey a firm’s innovation orientation, a sales associate who promotes the carbon footprint or improved life cycle of a product may convey a firm-wide emphasis on the environment, or an environmental orientation.

Firms also seek satisfied, high-performing employees. These ‘brand champions’ or ‘brand evangelists’ can be tremendous assets leading to positive outcomes such as word-of-mouth and loyalty (VanAuken 2003). Because boundary spanners are most responsible for conveying a firm’s orientation, their perception of the firm’s environmental orientation is of vital importance (Menguc and Ozanne 2011). To date, however, salesperson attitudes toward the environment and how they impact performance and satisfaction have not been studied. This is especially pertinent given Makower’s (2013) finding that “Employers are increasingly linking workforce health and happiness to safer, greener working environments. For many companies, green [is] a competitive advantage, helping to attract and retain the best and brightest” (p. 62). This represents an important gap in both the sales and marketing literature because it addresses the ‘holy grail’ question: does it pay to be green?

The current study looks to fill this gap by investigating how a firm-level environmental orientation impacts the effort and participation of its individual salespeople, and ultimately, performance and satisfaction. Using strategic alignment theory (Chorn 1991) and social identity theory (Ashforth and Mael 1989), this research posits that a firm will derive the most success from their environmental initiatives if its environmental values are shared among its salespeople. Salespeople who personally value environmental conservation would be more likely to embody the firm’s environmental orientation, and consequently, put forth more into their work. Ultimately, this strategic alignment between salesperson and firm values should lead to positive outcomes for both the firm (sales performance) and the salesperson (job satisfaction). Further, this essay investigates the model of sustainable development proposed in Chapter One. By examining salespeople in isolation, it stays within the business element of the human

stakeholders represented in Figure 1-5; the goal is that a better understanding of one stakeholder will make studying its interactions with other stakeholders more meaningful.

This essay utilizes an Input-Process-Output (IPO) framework. As conceptualized first by Steiner (1972), the IPO framework positions a process variable as the link between inputs and outputs. Most often used to understand team dynamics, it applies here because the variables under investigation reflect organizational goals and ideas (i.e., orientation, identity, participation, performance, satisfaction). Further, as discussed in the future research section, the IPO framework lends itself to positioning the process variable as a mediator to outputs which eventually loops back to the inputs (Ilgen et al. 2005). Conceptually, this overlaps with identity theory, which states that identities gain strength and become more important to the individual in a cyclical fashion.

The essay begins with an examination of the theoretical background before developing the input, process, and output variables of the IPO framework. Next, logic is presented for the proposed relationships between the firm-level input variable and the individual-level moderating constructs of organizational and environmental identity on effort and participation. The last stage of the model tests the influence of the process variables on individual outcomes of sales performance and job satisfaction. The essay concludes with implications for managers and scholars.

### **3.2 Theoretical Background**

An increasing amount of literature suggests that an alignment between organizational members, values, or strategies can influence that organization's performance. Conceptually, this alignment shares underpinnings with theories across disciplines, including congruity, reciprocity, social exchange, and matching. Given the scope of this research, strategic alignment and social

identity theories are discussed. This allows for the borrowing of both strategy and consumer behavior literature, which provides a unique and thorough theoretical grounding for the model in Figure 3-1.

### **3.2.1 Strategic Alignment Theory and Social Identity Theory**

Strategic alignment theory was first conceptualized in the information technology (IT) literature as firms attempted to match their objectives with a burgeoning growth in technical knowledge. According to Henderson and Venkatraman (1999), the reason firms were not gaining the projected returns on their IT investments was that they lacked an alignment between their business strategy and IT strategy. This alignment hinged on how well a firm's strategy, competitive environment, management, and organizational culture complemented each other (Chorn 1991). Strategic alignment theory also suggests that performance is optimized when organizational culture and firm strategy are aligned across the organization and the administrative structure is in place to assist execution of the firm's goals (Henderson and Venkatraman 1999).

Zott and Amit (2008) echoed this finding by demonstrating the positive effect of coordinating a novelty-based business model with a correctly matched product strategy on performance. Their business model construct refers to the overarching structure of an organization and how structure impacts stakeholders based on the core values of the firm. Inherent in their conceptualization is how the company is perceived by these partners, customers, employees, etc. Building from this argument, this research proposes that environmental orientation would be fundamental to the business model of an environmental firm. As defined in Chapter One, environmental orientation is a culture that is designed to diffuse through an organization, eventually becoming a shared code among each member (Chan 2010). Its success



lies in creating a match between management and employees. Therefore, employees who are equally environmentally-minded and would be willing to work harder for their company represent a strategy that matches the business model. Using the logic presented by Zott and Amit (2008), this congruity may lead to increased performance.

Congruity between employees and their organization involves some sort of shared value system, which results in overlapping identities. Individuals generally have two subjective identities: their personal identity, which is unique, and their social identity, which arises from belonging to a group (Oakes 1987). Personal identity may drive a decision based on what is intrinsically rewarding for the individual. Because social identity is a measure of how much group membership means to an individual, it drives actions based on the norms and values of that group (Haslam, Powell and Turner 2000). Depending on the salience of the group identity, an individual will be more or less likely to embody and act upon the beliefs and standards of the group (Turner 1982). In turn, the more an individual defines his or her identity in terms of being a part of the group, the more the group influences their behaviors.

One way that individuals identify with a group is based on consumption habits. For example, the airline industry all but establishes group identities for their consumers based on how frequently they fly. It is not surprising, then, that passengers identify themselves as either ‘business class elite’ or ‘economy class’ customers, and subsequently, with that group of customers. Because green consumption is often very visible, it may represent a pronounced identity for consumers in that group. Consider the eco-friendly automobile industry. While the industry is moving away from conspicuousness, hybrid cars were first built to look different and stand out from non-hybrids. For hybrid owners, it allowed for easy identification with other members of that group.

As environmental awareness grows, people are choosing to either be ‘green’ or ‘non-green’ buyers (Lin and Chang 2012; Gupta and Ogden 2009). Research has shown that individuals who consider themselves green buyers, or eco-friendly consumers, have a strong identity with others in that group (Stets and Biga 2003). This identity can drive future behavior in two ways. Logically, Toyota Prius drivers may not buy as much gasoline as a direct consequence of their car; less intuitively, they may be more likely to purchase Energy Star appliances than consumers not in that group.

While predicting consumer behavior is critical to answering the ‘holy grail’ question, this research poses a related but different query: can a strong identity with environmental responsibility manifest itself in other green behaviors, specifically, work behavior? One of the most important groups to which most individuals belong is their place of employment. Because individuals spend so much time working for one organization, this social identity becomes one of the strongest (Bergami and Bagozzi 2000). Abela (2001) suggests that part of our innate human identity is found within communities and that because employment provides this community, work is actually a part of our human composition.

Numerous studies have shown the direct link between identity and behavior (e.g., Mael and Ashforth 1992; Stryker and Serpe 1982); still, uncovering the consequences of forming group identities continues to be a major goal of social identity research decades after Ashforth and Mael’s (1989) seminal piece. By working for a green company, individuals can channel their identity through their work by aligning personal values with that of the firm. An individual with a strong social identification tends to engage in behaviors that strengthen the salience of that identity, which makes that identification more distinctive and results in even more behaviors (Stets and Biga 2003). Identification with a firm allows employees to embrace and become loyal

to its corporate culture (Kelman 1961). While group identification is studied consistently in the management literature, the interplay of environmental identity and organizational identity has not been examined. As the number of firms with environmental orientations grows, so does the need to understand employee attitudes toward it (Menguc and Ozanne 2011), which constitutes an important gap in the identity literature.

### **3.3 Conceptual Development**

Environmental orientation serves as the input variable in the IPO framework; its conceptual development can be found in Chapter One. This section investigates the process variables of effort and participation and the outcome variables of sales performance and job satisfaction. It also builds hypotheses and positions two moderators, organizational identity and environmental identity, in the conceptual model.

#### **3.3.1 Process Variable: Effort**

Employee effort has received a lot of attention in the sales and management literature. This is not surprising as managers want to maximize the performance of the individual members of the organization. Just as a store manager seeks employees that focus high levels of energy on customer service or a factory manager seeks employees who focus energy on production, a sales manager seeks a sales force that works long hours and devotes high levels of energy to selling and relationship management. Because of the inherent link between sales and profitability, it is in a firm's best interest to have a motivated sales force.

Brown and Peterson (1994) suggest that effort consists of two dimensions: the amount of time that a salesperson devotes to an activity and the intensity with which that salesperson works. The amount of time devoted to an activity is often operationalized as the number of hours. The intensity dimension of effort (Brown and Leigh 1996), defined as the level of energy that a

salesperson commits to his or her work (Brown and Peterson 1994), is more appropriate in this study given the perceptual outcomes.

Work also has psychological value. In fact, Abela (2001) proposes that one of the three ‘purposes of the firm’ is to enable employment; not just as a means of income, but as an opportunity to build character and fulfill a basic human need to be a part of a community. Cherrington (1980) suggests that individuals gain both instrumental value and terminal value from working. Instrumental value is how the work contributes to obtaining other goals. For instance, an individual works to earn money to be able to pay rent or a mortgage. In this case, working is merely a means to an end (Brown and Peterson 1994). Terminal value, alternatively, provides the individual with self-worth, dignity, and a feeling of usefulness (Cherrington 1980). Conceptually, the orientation of a firm would not impact the instrumental value of a salesperson’s work (a paycheck is a paycheck); however, salespeople who work for an eco-oriented firm may experience an increase in the terminal value of their job.

### **3.3.2 Process Variable: Participation**

Normally, vertical communication within a firm occurs from the top down as managers convey firm values and brand initiatives to employees (Van Egeren and O’Connor 1998). The environmental orientation construct in this study is an example. Employee participation, on the other hand, is the reverse flow of communication. Since Vargo and Lusch’s (2004) Service Dominant Logic, much of the literature on participation deals with customers; however, it has roots as an employee-level variable (Morhart, Herzog and Tomczak 2009). Participation is similar to effort, but instead of energy being directed towards sales or production, it is energy directed toward the betterment of the organization itself. Closely related to involvement, employees participate with their organization when they take some ownership of what it stands

for and specific actions to improve its image (Ben-ner and Jones 1995). Several types of participation exist (e.g., outcome-based, process-based, consultative, short term, etc.). Regardless of typology, it entails feedback from the employee, in this case, the salesperson, to managers. It can take the form of actual input to the decisions being made or suggestions and ideas to better communicate the brand image (Sundar and Ashok 2011). For the purposes of this research, I extend Bettencourt's (1997) conceptualization to define salesperson participation as any active behaviors toward the development of the organization and strengthening of its brand image.

Participation may be crucial in the feedback loop of social identity and the proposed feedback loop of the IPO framework, described as Input-Mediator-Output-Input, or IMOI (Ilgen et al. 2005). Participation can also be a key component to brand champions (Morhart, Herzog and Tomczak 2009). This concept shares a foundation with Cronin et al.'s (2011) green champions. Green champions promote green strategies within the organization, engage in green behaviors (Cronin et al. 2011), and are often responsible for instituting organizational policies. However, Drumwright (1994) notes that often these green champions are not upper management, and therefore, not in a position to introduce environmental policies. In this situation, the green champion's effectiveness is limited by the traditional vertical flow of communication. I suggest that participation is one avenue for these green champions who lack the authority to still be able to champion the cause.

### **3.3.3 Input to Process: Environmental Orientation Influence on Effort & Participation**

Environmental orientation, from a salesperson perspective is how salespeople perceive the environmental culture and climate of their organization (Banerjee, Iyer and Kashyap 2003). The internal component measures the degree to which the salesperson believes that environmental preservation is a shared firm value. The external component measures how well

the salesperson thinks the firm conveys that image. These assessments go beyond mission statements and corporate jargon; their perception is an assessment of organizational leadership.

Firm leaders set the tone for the entire organization (Huffman and Hegarty 1993) and institutionalize the ideals or values that underlie the policies and practices (Hunt, Wood and Chonko 1989). With environmental strategies, support from upper management is critical. For instance, Richey et al. (2013) find that even when firms have a strong strategic focus on the environment, they may not experience financial gains unless those strategies receive consistent support from top management. Further, Pujari, Wright and Peattie (2004) posit that for buyers seeking environmentally-friendly suppliers, quality leadership is a key component to facilitating this business-to-business partnership. Because environmental policies often changes internal reward systems, employees may be reluctant to embrace the changes (Carter, Ellram and Tate 2007), which makes it even more crucial to measure this construct from a salesperson point of view.

Ashforth and Mael (1989) made a call to determine how the leadership of an organization translates to other organizational members. Specifically, they wanted to determine the effects that identification with a group has on the individuals' internalization of these values and their reification of the firm. According to Schneider et al. (1994), "employees observe what happens to them (and around them) and then draw conclusions about their organization's priorities. They then set their own priorities accordingly. Thus, these perceptions provide employees with direction about where they should focus their energies and competencies" (p. 18). Environmental attitudes of top managers become part of the organizational culture (Dibrell, Craig and Hansen 2011), and are visible to other stakeholders. For instance, if an executive who claims that energy

conservation is a core firm value drives a behemoth Hummer to the office, how does that reflect in the employee's assessment of the firm's environmental orientation?

Chen, Sawyer and Williams (1997) posit that organizations can be committed to 'moral philosophies,' which means that a firm can commit to environmental values by ensuring that the environment is viewed as a key stakeholder. Keogh and Polonsky (1998) find that commitment to the environment has a consequential effect on employees within the organization. This top management commitment can play a major role in environmental orientation (Banerjee, Ayer and Kashyap 2003).

Organizational climate literature can also lend theoretical insight to understanding this relationship. In particular, service climate research suggests that certain motivating factors are crucial in the facilitation of quality customer service (Ray, Barney and Muhanna 2004). Once thought to be interchangeable with motivation, scholars now make the distinction that motivation acts as an antecedent to effort (e.g., Naylor, Pritchard and Ilgen 1980). Motivation represents a psychological predisposition to certain behavior while effort represents the energy utilized in that behavior. The distinction is crucial to this study as environmental orientation and the moderator variables are predicted to increase the motivation to exert effort and to participate via feedback. If the proper goals are not emphasized by managers, salespeople may be left with ambiguous motivations and the strategy will not be as effective. On the other hand, enthusiastic and supportive management can have a direct and positive impact on the success of firm strategy if implemented correctly (van Egeren and O'Conner 1998).

Some of the motivational factors to an organizational service climate are how well defined the service quality standards are, how properly they are measured, and how consistently the boundary-spanning employees are rewarded for quality service delivery. Facilitators include

things like the personnel training to deliver this service quality message, the communication within the customer service unit and among other departments, and simply whether or not the firm has the policies in place that allow employees to deliver the service. These motivators and facilitators are instrumental to the creation of employees who are able and willing to convey the firm's service climate to its customers as well as express themselves to managers. Sharing a foundation with organizational climate, an environmental orientation is also comprised of these types of motivators and facilitators, which suggests that it, too, may influence employee behavior.

Borrowing from consumer behavior literature, when making purchases, it typically requires effort to be environmentally-friendly. For one thing, green products are usually more expensive than their 'brown' counterparts (Johri and Sahasakmontri 1998). But extra monetary expenditure aside, they often require the customer to do additional research. For instance, someone who is happy with brand X would minimize effort by continuing to buy brand X. But environmentally-conscious consumers constantly look for ways to minimize their personal environmental impact. They research new products, keep up with the latest company and industry information, investigate regulations imposed by policy-makers. In general, they spend time prioritizing the natural environment in their own life and consumption habits. Therefore, being a green consumer also requires more effort.

Applying this logic to organizational behavior, it requires effort to be a green company. Managing public relations, identifying new policies, applying for and obtaining certifications, funding research & development, etc., are expensive and time-consuming endeavors. This type of effort requires motivation. Altruism is a motivator of green consumption (e.g., Greening and Turban 2000), and I suggest that it may also be a motivating factor to salesperson effort.



Altruism can be defined as “the intention to benefit others as an expression of internal values” (Price, Feick and Guskey 1995, p. 257). It is the motivation to act toward some individual or collective goal. From a salesperson viewpoint, altruism can be thought of as an increase in the terminal value of one’s work, which is both rewarding to the salesperson and the organization. In the same way that a consumer spends more time and money to make a purchase that is better for the planet (Greening and Turban 2000), salespeople who work for an organization that is eco-oriented may feel motivated to work harder because their company is better for the planet than a competitor. Therefore,

H<sub>1a</sub>: Environmental orientation is positively related to salesperson effort.

Salespeople who perceive their firm as environmentally responsible may also be more willing to offer ways to bolster the image of their company through participation. Their perceptions of firm priorities provide direction as to how they should spend their energy (Schneider et al. 1994). If the image of environmental preservation is diffused by managers throughout the organization, salespeople will be more aware of that image and more likely to offer suggestions to strengthen it, thus increasing their altruism and the terminal value of their work. As a firm becomes more eco-oriented, therefore, I predict salespeople will be more likely to offer feedback to their managers on ways to enhance the firm’s image. Formally,

H<sub>1b</sub>: Environmental orientation is positively related to salesperson participation.

### **3.3.4 Moderating Effect: Organizational Identity**

Not all identities carry the same weight. For instance, an individual may be a casual fan of the Boston Red Sox who occasionally catches a game or a diehard member of “Red Sox Nation” who has never missed an inning. The identity salience of the latter is much stronger than the former. Logically, the behaviors of a diehard fan would be more influenced by this identity

(more time spent researching the team, a willingness to pay more for merchandise, stronger emotions for wins and losses, and so on). That same diehard Red Sox fan may also be a contented employee of retail outlet, a disgruntled employee of an auto manufacturer, or an overworked employee of a law firm. The salience of this individual's identity with each of these employers would be different; further, each identity would also be different than the identity with the Red Sox. Typically, individuals identify themselves as an employee of a company before that of a fan of a sports franchise. The stronger identity is considered more salient. As the salience, or the strength of the identity, increases, so does its influence on behavior (Oakes 1987). As seen in the Red Sox example, this behavior can be manifest in time spent engaging in related activities (Stryker and Serpe 1982). However, in this study, I suggest it will manifest itself through salesperson effort and participation.

According to Ashforth (2001), this salience depends on two things. First, it must be of subjective importance to the individual, meaning that the identity is built around a core personal value; secondly, the behavior must be relevant to the situation. Stets and Biga (2003) posit that identity salience determines how willing an individual is to act upon the identity. This distinguishes identity salience from identity prominence, or merely the importance of that identity. This is an important distinction, especially within the organizational management literature. In their seminal study, Mael and Ashforth (1992) demonstrate that the identity salience of alumni with their alma mater influences school donations, recruitment, and satisfaction. This suggests that identification with a group enhances the level of support of that group (Ashforth and Mael 1989).

Organizational identity can be defined as a oneness that an individual has with the organization (Mael and Ashforth 1992), or a congruence between employee and organizational

values (Thakor and Joshi 2005). It represents a congruity or alignment of individual and organizational principles. Meyer, Becker and van Dick (2006) suggest that when employee beliefs and ideals overlap with the organization's, these employees can move from a temporary, 'situated' identification to a more enduring, 'deep-structure' identification. Reichers (1985) posits that the strength of identification with an organization leads to a willingness to expend effort on its behalf. Applied to the sales context, this suggests:

H<sub>2a</sub>: Organizational identity has a positive moderating influence on the relationship between environmental orientation and salesperson effort.

Salespeople who identify with their company may support it in ways other than increasing their work intensity. As congruence with organizational values grows, employees may feel more connected or tied to the organization (Thakor and Joshi 2005). Salespeople who refer to their organization as "we" instead of "they" will be more likely to develop deep-structure identification (Meyer, Becker and van Dick 2006). Logically, these salespeople would be more inclined to provide constructive feedback and strengthen an organizational image that reflects on them personally. Therefore, salespeople with a strong organizational identity may have higher levels of participation. Formally,

H<sub>2b</sub>: Organizational identity has a positive moderating influence on the relationship between environmental orientation and salesperson participation.

### **3.3.5 Moderating Effect: Environmental Identity**

Strategic alignment suggests that when employee and managerial values complement the goals and mission of a firm, that firm will optimize performance (Hamel and Prahalad 2005). Gregory et al. (2009) find that employee values are critical to the effectiveness of organizational culture in the health care industry while Badovick and Beatty (1987) demonstrate that the level of congruency between employees and manager values impacts overall firm performance.

Further, inconsistencies between employee and firm values can actually result in conflict or compromise the employee's values (Chen, Sawyer and Williams 1997).

Rivera (2012) examined the hiring practices of 120 firms and discovered that while skill sets and knowledge are important, cultural matching is a more significant indicator of a) whether or not the candidate would be hired and b) if that candidate would be successful. Even more telling, when making hiring decisions, this cultural similarity is even capable of trumping concerns of productivity. This mentality has been echoed in the both popular press (Hill 2012) and self-help literature (Schawbel 2009) as college graduates look for ways to set themselves apart from the competition. Paralleling the literature on terminal value, Schawbel (2009) suggests that employees of the current generation might actually prefer work that is meaningful to work that is high-paying. The cultural matching phenomenon has benefits for the hiring firm as well. When employees receive more terminal value from their work, they tend to stay longer, which cuts down on costs incurred from hiring and training (Rivera 2012).

Intuitively, an organization with an environmental orientation would be considered 'green'; however, Davis (1991) proposes that for an organization to truly be considered environmentally-conscious, it requires environmentally-concerned employees. In consumer behavior literature, attitudes are often a predictor of behavior, as demonstrated by the theory of planned behavior (Ajzen 1985). However, the relationship between pro-environmental attitudes and behavior is ambiguous (Peattie and Crane 2005). Statistics vary, but in general, the number of consumers who profess environmental concern is much larger than the number of consumers who make environmentally-concerned purchases (Ginsberg and Bloom 2004). This disconnect is interesting to scholars; to firms it is an acute problem. Executives seek an accurate predictor of green behavior, and clearly, attitudes are not that. Considering the work of Stets and Biga (2003),

who find that environmental identity better captures personal values regarding the natural environment; and that of Whitmarsh and O'Neill (2012), who find that environmental identity is a far better indicator of pro-environmental behavior than attitudes, this research advances that environmental identity may influence green work behavior.

According to Rivera (2012), environmentally-minded executives and managers would find it important to hire other environmentally-minded employees to join their company. From a strategic standpoint, salespeople with an environmental identity would align with an environmentally-oriented firm. They would more strongly embrace their role within the company, which would lead to further identification (Stets and Biga 2003). Social identity theory holds that individuals tend to engage in activities that are congruent with their strongest identities (Ashforth and Mael 1989), so the stronger the environmental identity, the more likely an individual will engage in pro-environmental behaviors. When that identity is congruent with the firm the individual works for, I posit that this pro-environmental behavior will manifest via support of that institution (Mael and Ashorth 1992). One avenue of support may be increased time and energy put toward completing duties and responsibilities. Therefore, I predict an interaction between environmental orientation and salesperson effort as follows:

H<sub>3a</sub>: Environmental identity has a positive moderating influence on the relationship between environmental orientation and salesperson effort.

When identities overlap, individuals become intertwined with the fate of the organization (Ashforth and Mael 1989). Individuals who personally identify with the environment are more likely to engage in pro-environmental behaviors (Whitmarsh and O'Neill 2010). I extend this logic to predict that a pro-environmental identity shared between an organization and an individual will be an even better indicator of behavior. These individuals will be even more

aligned with the firm's mission and goals, and thus be likely to support the organization via participation to ensure its (and by extension, their) fate. Formally,

H<sub>3b</sub>: Environmental identity has a positive moderating influence on the relationship between environmental orientation and salesperson participation.

### **3.3.6 Process to Output: Influence of Effort on Performance & Satisfaction**

While effort itself can be viewed as an outcome, organizations are typically more interested in how effort translates to performance. Sales performance will be defined as the ability of salespeople to meet the sales expectations 1) in their territory and 2) of their sales manager (Van Dyne and LePine 1998). Studies have shown that effort leads to higher productivity, which increases performance (e.g., Sujan, Weitz and Kumar 1994). I suggest that this increased effort through strategic alignment will have a similar effect. Formally,

H<sub>4a</sub>: Salesperson effort is positively related to sales performance.

From a stakeholder perspective, one purpose of a firm is to offer employment that satisfies employees mentally and psychologically (Abela 2001). And while the financial benefits of sales performance are more obvious, a satisfied salesperson is likely to stay with the organization longer, thus, driving down the expense of hiring and training new employees (Rivera 2012; Rutherford, Park and Han 2011). Therefore, I investigate the outcome of job satisfaction, which will be defined as a salesperson's overall contentedness with his or her job (Wanous and Lawler 1972). White (1959) first argued that effort directly influences satisfaction regardless of performance, but that relationship has received some criticism. Brown and Peterson (1994) test competing models to provide further support that effort could influence both performance and satisfaction independently. Building from effectance theory, the authors propose that individuals possess an innate desire to be effective. When work is fulfilling and challenging, it can influence employee happiness regardless of how well they performed (Deci

and Ryan 1985). In essence, when individuals put more into their work, they get more out of it, most likely in the way of terminal value. Therefore, I posit that effort based on congruity between salespeople and the organization will lead to a more satisfied sales force. Formally,

H<sub>4b</sub>: Salesperson effort is positively related to job satisfaction.

### **3.3.7 Process to Output: Influence of Participation on Performance & Satisfaction**

An environmental orientation is a normative expression of a firm's values and how to act based on those values. When relationships are governed by normative rules, they gain strength through trust, cooperation, and shared values. When the proper balance is struck, there is the potential for high-quality relationships (Berry and Parasuraman 1991) that lead to loyalty (Sierra and McQuitty 2005), the desire to continue working for the organization (Reichers 1985), and ultimately, commitment (Cropanzano and Mitchell 2005). A shared sense of environmental responsibility is one such normative rule that may govern these high quality relationships. Like effort, participation is an important firm goal on its own, but its value is fully realized when it impacts performance and satisfaction. Research has demonstrated the link between participation, productivity, and performance (Ben-ner and Jones 1995). I posit that participation governed by the normative rule of environmental responsibility will create strong, committed relationships that drive their sales performance. Thus,

H<sub>5a</sub>: Salesperson participation is positively related to sales performance.

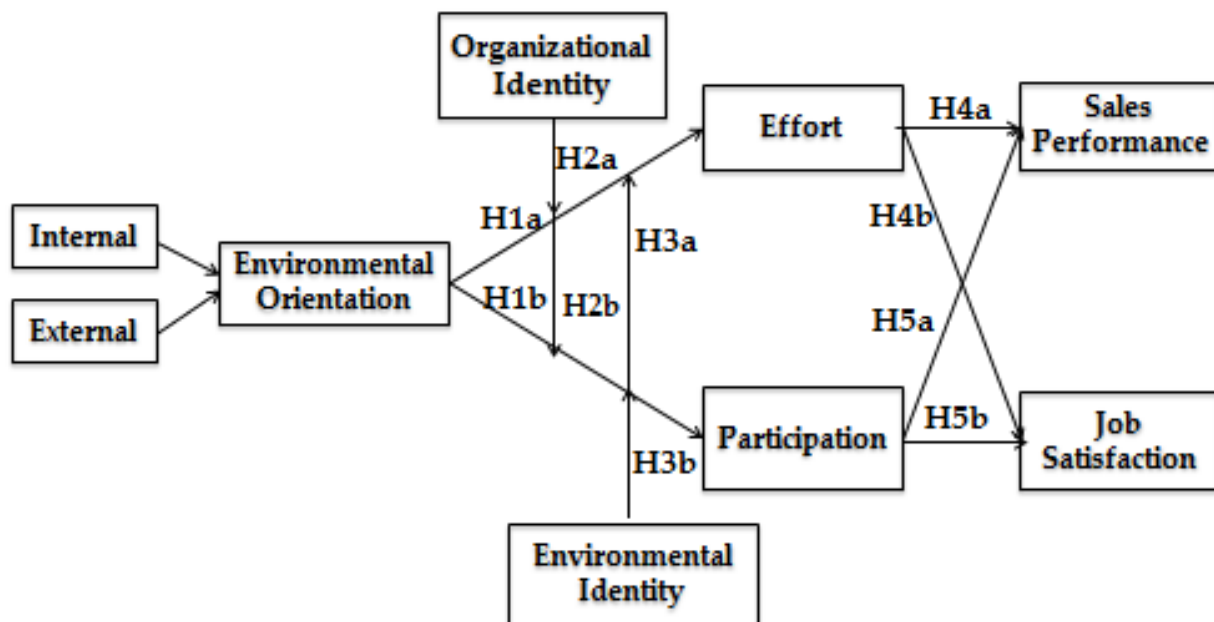
Finally, I suggest that participation has a positive influence on job satisfaction. Building from the IPO literature, process variables can interact to create emergent states, which develop over the life of the work team (Ilgen et al. 2005). At the individual level, when work is stimulating and gratifying, employees are happier (Deci and Ryan 1985). Logically, employees who participate are most likely stimulated and gratified by their work or they would not bother to provide constructive feedback. In turn, this inherently rewarding job may create an emergent

state of satisfaction. This echoes role theory which claims that individuals anticipate the satisfaction of their prosocial behavior. Further, when participation is attributed to shared values, it positively influences self-esteem (Oakes and Turner 2006), and the stronger those values align, the more satisfaction an individual attains (Stryker and Serpe 1982). Therefore, I predict that participation will lead to a more satisfied salesperson. Formally,

H<sub>5b</sub>: Salesperson participation is positively related to job satisfaction.

For an illustration of the expected relationships, see Figure 3-1. A full list of the relevant constructs and their definitions can be found in Table 3-1. Table 3-2 contains a summary of the expected hypotheses.

**Figure 3-1. Conceptual Model with Hypotheses**





**TABLE 3-1**  
**Construct Definitions**

**Environmental Orientation**

The shared values and ethical standards within the firm that reflect the commitment to the natural environment as perceived by salespeople of that organization (Banerjee 2002); “The organization-wide mission to: generate ecological intelligence pertaining to current and future societal environmental needs, disseminate this intelligence throughout organizational departments, and generate acceptance and responsiveness to these needs through the adaptation of internally developed programs which create and foster organizational and public perception of ecological concern.” (Stone and Wakefield 2000, p. 22)

**Environmental Identity**

The amount of consideration or interest an individual gives to the natural environment. As opposed to a held value, concern arises from cognitive dissonance where an individual expects or desires something different from the status quo (Bansal 2003, p. 517).

**Organizational Identity**

“The perceived oneness with or belongingness to an organization” (Bhattacharya, Rao and Glynn 1995, p. 46). When a person identifies with an organization, he or she perceives a sense of connectedness to an organization and defines him- or herself in terms of the organization (Mael and Ashforth 1992, p. 104).

**Effort**

The level of intensity with which a salesperson engages in firm activities and responsibilities (Brown and Peterson 1994, p. 71).

**Participation**

The providing of high quality input to managers within a firm to enhance its brand image (Morhart, Herzog and Tomczak 2009, p. 123).

**Sales Performance**

The ability of salespeople to meet the sales expectations 1) in their territory and 2) of their sales manager (Van Dyne and LePine 1998, p. 111).

**Job Satisfaction**

The overall contentedness that a salesperson has with his or her job (Wanous and Lawler 1972).

**TABLE 3-2**  
**Hypotheses**

<b>Number</b>	<b>Relationship</b>
H1a	Environmental orientation is positively related to salesperson effort.
H1b	Environmental orientation is positively related to salesperson participation.
H2a	Organizational identity has a positive moderating influence on the relationship between environmental orientation and salesperson effort.
H2b	Organizational identity has a positive moderating influence on the relationship between environmental orientation and salesperson participation.
H3a	Environmental identity has a positive moderating influence on the relationship between environmental orientation and salesperson effort.
H3b	Environmental identity has a positive moderating influence on the relationship between environmental orientation and salesperson participation.
H4a	Salesperson effort is positively related to sales performance.
H4b	Salesperson effort is positively related to job satisfaction.
H5a	Salesperson participation is positively related to sales performance.
H5b	Salesperson participation is positively related to job satisfaction.

### 3.4 Methods

This section discusses the methods used to empirically examine the hypothesized relationships in study 2. First, I review the construction of the survey instrument and how the sample was obtained before describing sample characteristics and the procedures used to account and test for potential biases. Then, I explain the Structural Equation Model (SEM) analysis implemented to test the hypotheses. A scanned copy of the IRB protocol approval (EX-12-CM-068) can be found in Appendix A.

### **3.4.1 Research Design**

The qualitative interviews discussed in Chapter One were instrumental in the formulation of this study, but quantitative methods were utilized to test the hypotheses. All scales were previously developed in the literature and employed in their current form or modified to fit the nature of this study. Panel data was deemed the most appropriate means to collect the sample.

### **3.4.2 Measures**

Unless otherwise noted, all variables were measured using 7-point Likert scales anchored by 1=Strongly Disagree and 7=Strongly Agree. Environmental Orientation is conceptualized as a second-order construct composed of Internal Environmental Orientation and External Environmental Orientation. The internal component is defined as how salespeople view their company's environmental values while the external component is their perception of how the firm responds to demands from stakeholders regarding the environment. Banerjee, Iyer and Kashyap's (2003) scale was used to capture both first-order constructs, which were then loaded onto the second-order construct of Environmental Orientation. Brown and Leigh's (1996) scale was used to capture salesperson Effort, defined as the level of intensity with which a salesperson engages in firm activities (Brown and Peterson 1994). Salesperson Participation was operationalized using Morhart, Herzog and Tomczak's (2009) three-item scale where 1=Never and 7=As Often as Possible. It is defined as providing managers with feedback to strengthen the company's brand image. Sales Performance is defined as a personal assessment of how well a salesperson meets and exceeds sales expectations (Van Dyne and LePine 1998) and is assessed using a three-item scale adapted from Johlke et al. (2000) where 1=Needs Improvement and 7=Is Outstanding. Finally, following Grandey (2003), Job Satisfaction was measured using the three-item overall satisfaction scale from the Michigan Organizational Assessment Questionnaire. In

this study, it is defined as a salesperson's overall contentedness with his or her job (Wanous and Lawler 1972).

### **3.4.3 Sampling Frame and Data Collection**

The survey was developed in Qualtrics and launched through Survey Monkey. This platform generated the panel, disseminated the survey via email, and awarded "Zoom points" to those participants who completed the survey. Using questions about demographics and work history, Survey Monkey created a panel specifically for this study from their database of potential respondents. The responses were logged in Qualtrics which provided the author with access to the completed responses.

While the Survey Monkey panel consisted of self-reported salespeople, three questions were added to ensure this was the case. The first question simply asked respondents to choose their primary role within their company. Possible choices were: sales, laborer, customer service, front line retail employee, warehouse worker, and cashier. The second question asked, "Do you report directly to a sales manager?" and the third asked, "Do you have a sales territory?" Those who did not select "sales" in question one or answered "no" to question two or three were redirected to a new page and did not collect Zoom points.

The purpose of these questions was to guarantee that the sample was an accurate representation of the general population under investigation. Many occupations involve some level of sales but are more focused on customer service or front-line retail work. While studying these employees would be interesting for future research, this study was concerned with the effect of the constructs on professional selling behaviors. Particularly, the Sales Performance measure asks about respondents' ability to meet the sales goals in their territory and the ability to

meet and exceed goals assigned to them. Questions two and three were safeguards to ensure that the variables were properly operationalized.

G\*Power3 was used to determine the sample size *a priori*. This software allowed the investigator to calculate the number of respondents needed to obtain an effect size of 0.2 with an alpha of 0.05 and a power of 0.90 with 26 items, which was found to be 182. The target number was then provided to Survey Monkey prior to launch. Survey Monkey sent the survey to 4,625 panelists over a ten-day period. After the first question, the sample was reduced to 1,414 as 3,211 had a primary role within their company other than sales. (For example, 1,566 answered “customer service”). Questions two and three eliminated 558 potential respondents who either did not report to a sales manager or have a sales territory. Another 535 stopped taking the survey at some point, which reduced the number to 335.

#### **3.4.4 Attention Measurement**

Several precautions were included to minimize potential biases in the data. A ‘force response’ setting assured that respondents answered every question in the survey before moving to the next page. This prevented missing and incomplete data as well as mortality bias, which stems from surveys completed by respondents who have not been paying attention to the questions (Schwab 2005). To further reduce mortality bias, two attention filters were placed within the questionnaire. Both filters were positioned within a set of items to disguise the attention item. An incorrect response led to a final page where the respondent was thanked for their time but not awarded any Zoom points. See Table 3-3 for an example of an attention filter. A total of 80 respondents missed the first attention filter and 17 missed the second, which produced a final sample of 224.

**TABLE 3-3**  
**Example of Embedded Attention Measure**

When someone criticizes my company, it feels like a personal insult.
I am very interested in what others think about my company.
When I talk about my company, I usually say 'we' rather than 'they.'
This question is simply to gauge attention. Please mark "Somewhat Agree."
When someone praises my company, it feels like a personal compliment.

### 3.4.5 Sample Characteristics

Upon opening the survey link, the respondents answered a series of scale items. When the target was reached, Survey Monkey closed the survey. I then downloaded the file to Excel where it was cleaned and assessed for problem cases. Items and variables were coded and the descriptive information was put into categories for analysis.

The final sample was diverse with salespeople working in 9 industries and 37 of the 50 United States. (An industry breakdown can be found in Table 3-4). This wide range of industries was requested to improve generalizability of the findings (Shadish, Cook and Campbell 2002). The sample was 61% male and 39% female while ages ranged from 19 to 80 with a mean of 49. On average, sales associates had 18 years of experience in sales, 16 years with their current company, 10 years in their current industry, and 6 years with their current sales manager.

**TABLE 3-4**  
**Industry Analysis**

Industry	%	Cumulative Percentage
Automotive	8.0%	6.0%
Business Services	18.0%	21.0%
Construction/Manufacturing	21.0%	29.0%
Food/Hospitality/Travel	13.0%	31.0%
High Tech	10.0%	53.5%
Media	4.0%	61.5%
Pharmaceutical	7.0%	65.5%
Real Estate	3.0%	66.5%
Retail	16.0%	100.0%

### 3.4.6 Confirmatory Factor Analysis and Construct Validity

Before the confirmatory factor analysis (CFA), skew and kurtosis were investigated to satisfy the assumption of SEM that the data is distributed normally. Skewed data is data in which the median is significantly different from the mean; kurtosis is an issue if the data is centered too closely around the mean or too far away from the mean. If either of these is present, the data may not be normally distributed, and therefore SEM would not be a valid analysis. The code for interaction terms in Mplus combats this issue (Muthén and Muthén 2010), but two extra steps ensured it. Overlaying the normal distribution curve with each item's histogram of distribution and examining the kurtosis statistic and corresponding standard errors gives a tangible assessment of normality. In both cases, no problems were found in the data.

With the assumptions met, the CFA was performed using Mplus6. Environmental Orientation is a second order construct comprised of internal and external components; therefore, items were first loaded onto their first-order constructs, and then those factors loaded onto the second order construct. Two items within the External Environmental Orientation scale were

allowed to correlate. All items loaded on their intended factors (both first and second-order) and model fit statistics were good ( $\chi^2 = 562.39$ ,  $df = 277$ ,  $p < .001$ ; SRMR = .051; RMSEA = .07; CFI = .95). While the overall  $\chi^2$  is significant,  $\chi^2 / df = 2.03$ , which is an acceptable ratio for model fit.

Convergent and discriminant validity analyses validated the constructs. Convergent, or internal, validity confirms that the items actually measure the construct that they are theoretically intended to measure. This was achieved through reliability analyses, as each construct had a Cronbach's alpha above .80 (Nunnally and Burnstein 1994). All constructs with item loadings, coefficient alphas, and average variance extracted (AVE) can be found in Table 3-5.

Table 3-6 contains scale means, standard deviations, and correlations among variables. A procedure developed by Fornell and Larcker (1981) was used to assess discriminant validity, or the uniqueness of the constructs. To achieve discriminant validity, the variance extracted from each construct should be greater than the squared correlation of that construct with another construct, thus confirming that theoretically unrelated variables are indeed unrelated. First, I obtained the AVE of each variable and then placed the square root of those AVEs on the diagonal of Table 3-6. Because these values are greater than all of the correlations in the corresponding rows and columns, discriminant validity was achieved (Fornell and Larcker 1981).



**TABLE 3-5**  
**Scale Items with Factor Loadings and Reliabilities**

Scales with Items, Source and AVEs	Coefficient Alpha	Standardized Loadings
<b><u>Internal Environmental Orientation</u></b> (Banerjee 2002); AVE = .96	<b>0.98</b>	
My company has a clear policy statement urging environmental awareness.		0.84
Environmental preservation is a high priority in my company.		0.96
Preserving the environment is a central value in my company.		0.93
My company promotes environmental preservation as a major company goal.		0.94
<b><u>External Environmental Orientation</u></b> (Banerjee 2002); AVE = .88	<b>0.93</b>	
My company has a responsibility to preserve the environment.		0.57
People expect my company to be environmentally-conscious.		0.78
My company strives for an image of environmental responsibility.		0.98
<b><u>Environmental Identity</u></b> (Laveria, Kleine and Kleine 2002); AVE = .94	<b>0.96</b>	
The natural environment is something I often think about.		0.57
The environment is important to me.		0.78
Environmental preservation means a lot to me.		0.98
<b><u>Organizational Identity</u></b> (Mael and Ashforth 1992); AVE = .78	<b>0.86</b>	
When someone criticizes my company, it feels like a personal insult.		0.92
I am very interested in what others think about my company.		0.90
When I talk about my company, I usually say 'we' rather than 'they.'		0.92
When someone praises my company, it feels like a personal compliment.		0.80
<b><u>Effort</u></b> (Brown and Leigh 1996); AVE = .88	<b>0.91</b>	
When I work, I do so with intensity.		0.92
I strive as hard as I can to be successful in my work.		0.91
When there is a job to be done, I devote all of my energy to it.		0.93
<b><u>Participation</u></b> (Morhart, Herzog and Tomczak 2009); AVE = .88	<b>0.91</b>	
I let my manager know of ways we can strengthen our brand image.		0.99
I make constructive suggestions on how to improve our programs or processes.		0.91
If I have a useful idea on how to improve our business, I share it with my manager.		0.93

<b><u>Sales Performance</u></b> (Johlke et al. 2000); AVE = .92	<b>0.95</b>	
My ability to generate a high level of sales dollars...		0.87
My ability to exceed the sales targets and objectives assigned to me...		0.89
My ability to meet the sales goals in my territory...		0.91
<b><u>Job Satisfaction</u></b> (Smith, Kendal and Hulin 1969); AVE = .87	<b>0.90</b>	
Generally speaking, I am very satisfied with my job.		0.93
I am generally satisfied with the kind of work I do in my job.		0.89
In general, I like working for my company.		0.93

**Table 3-6. Scale Means, Standard Deviations, Correlations and AVEs**

<b>Variable</b>	<b>Mean</b>	<b>Std Dev</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
1. Internal Environmental Orientation	4.34	1.73	<b>(.96)</b>							
2. External Environmental Orientation	4.70	1.58	0.85***	<b>(.88)</b>						
3. Environmental Identity	5.23	1.48	0.53***	0.65***	<b>(.94)</b>					
4. Organizational Identity	5.49	1.08	0.41***	0.44***	0.31***	<b>(.78)</b>				
5. Effort	6.00	0.87	0.25***	0.28***	0.35***	0.21**	<b>(.88)</b>			
6. Participation	5.59	1.03	0.26***	0.27***	0.21***	0.35***	0.38***	<b>(.88)</b>		
7. Sales Performance	5.59	1.12	0.19**	0.16*	0.01	0.12	0.39***	0.39***	<b>(.92)</b>	
8. Job Satisfaction	5.78	1.09	0.33***	0.30***	0.20**	0.57***	0.35***	0.45***	0.32***	<b>(.87)</b>

N = 224

\* (p<.05); \*\* (p<.01); \*\*\* (p<.001)

### 3.4.7 Nonresponse Bias

Given the number of respondents filtered out of the dataset, nonresponse bias was addressed before analysis. Nonresponse bias exists when the portion of the population of interest not surveyed by the investigator differs significantly from the sampled portion in their answers to the same questions. This un-surveyed portion is comprised of any respondents who were filtered out, stopped short, or simply didn't open the link. Nonresponse bias is important to consider when using panel data because if a significant difference does exist, the findings may not be valid (Armstrong and Overton 1997).

To address this concern, Rogelberg and Stanton (2007) developed a formula to estimate the number of non-respondents required to counter the findings:  $X = n(r_n/r_c - 1)$ . Because the number of non-respondents in this study is known, I use that number ( $X=4,401$ ), sample size ( $n=224$ ), and average absolute correlation between constructs in Table 3-6 ( $r_n=.328$ ), to calculate the average correlation needed by the non-respondents to alter the findings. This 'worst case resistance' technique produced a value of 0.016, which means that non-respondents would have had to produce a correlation of less than 0.016 to significantly impact the results. Given the unlikelihood of those respondents producing this correlation this low, nonresponse bias is not considered an issue with the data.

### 3.4.8 Common Method Variance

Common method variance (CMV) assumes that some amount of the variance in the model is a product of the methodology and not the constructs and proposed relationships (Podsakoff et al. 2003). Scholars disagree on the importance (and even the presence) of CMV in marketing research (Spector 2006). Still, several steps were taken before the data collection to diminish the presence of CMV in this study. To limit 'yeah-sayers' and inflated performance

metrics, the opening segment stated that 1) all responses would be anonymous, 2) there were no right or wrong answers, and 3) the link contained no embedded information that could be used to match data to individuals. This precaution let respondents know that their responses would not be seen by their managers, therein making their answers more genuine. To limit priming effects, questions were formatted in several different ways, and similar constructs were placed in different sections and with different response choices (Podsakoff et al. 2003).

Given these precautions, the likelihood of CMV is greatly reduced, but two post-hoc tests validated this claim statistically. First, I performed an exploratory factor analysis (EFA) on all of the items. The EFA yielded a 7-factor solution accounting for 85.1% of the total variance in the study with each factor having an eigenvalue greater than 1.0 and no single factor comprising the majority of that variance. Thus, the data passed the Harman (1976) One Factor test. Next, I reran a CFA with all of the items loading on their theoretical constructs as well as a method factor. In essence, this allows the investigator to determine what percentage of the variance in the data can be attributed to the collection method. Williamson, Cote and Buckley (1989) posit that, on average, 25% of the variance in a model can be attributed to this method factor. Using Fornell and Larcker's (1981) test for discriminant validity, I assessed the average variance extracted (AVE) by the method factor. Because it accounted for 4% of the variance, CMV is not a problem with the data.

### **3.4.9 Structural Model Estimation**

Following Anderson and Gerbing's (1998) two-stage process, the measurement model was specified via CFA followed by the structural model presented here. Structural Equation Modeling (SEM) is the most appropriate technique for this study because it allows the researcher to test of all of the variables simultaneously and views the model as a whole instead of

examining each relationship in isolation. Another benefit is that SEM takes measurement error into consideration (Schumaker and Lomax 2010). Specifically, I utilized the Latent Moderated Structural (LMS) equations method to test the model (Klein and Moosbrugger 2000). This technique analyzes the latent constructs as opposed to composite variables averaged from items, which is a more robust assessment. Further, Schermelleh-Engel, Klein, and Moosbrugger (1998) suggest that estimators in LMS are unbiased and asymptotically normally distributed. Because it incorporates each indicator and error term in the analysis, LMS is particularly amenable to non-normal distribution (Satorra 1992).

First, a linear effects model was created to assess the relationships in Figure 3-4 without interactions. This model examined the relationship between Environmental Orientation and Effort (H1a) as well as the relationship between Environmental Orientation and Participation (H1b). Regarding outcomes, this model tested the relationship between Effort and Sales Performance (H4a) and Job Satisfaction (H4b), as well as the relationship between Participation and Sales Performance (H5a) and Job Satisfaction (H5b).

Next, the hypothesized model was estimated to examine hypotheses 2a, 2b, 3a, and 3b. When testing interactions in Mplus using LMS, latent variables and their interactions have means of zero and standard deviations of one (Muthén and Muthén 2010). Like double mean-centering, this helps alleviate concerns of non-normality and decreases the likelihood of multicollinearity (Shrout and Bolger 2002). The log likelihood statistic, distributed as a chi-square value, determines the change in the model due to the interaction. A significantly different statistic demonstrates that the hypothesized moderation should be included in the final model (e.g., Cortina, Chen and Dunlap 2001).

### 3.5 Results

The linear effects model demonstrated acceptable fit ( $\chi^2 = 673.88$ ,  $df = 284$ ,  $p < .001$ ; RMSEA = .08; CFI = .94). However, because the model is fitted to raw data, traditional statistics cannot be computed in LMS. Instead, the linear model is nested within the hypothesized model and the two are compared using a log likelihood ratio test (Klein and Moosbrugger 2000). In this sense it is more robust, but requires reporting different fit statistics, specifically, the log likelihood (LL) value and Akaike Information Criterion (AIC) value (Akaike 1974). The AIC is used to compare the goodness-of-fit between two competing theoretical models. The model with the smaller AIC is the better-fitting model and, therefore, is considered superior to the alternative (e.g., Vogel and Feldman 2009). Because the AIC statistic penalizes a scholar for adding parameters to over-fit a model, it is a robust statistic when comparing structural equation models.

The log likelihood ratio test, however, is considered the most powerful test when comparing latent class models (Neyman and Pearson 1933). In LMS, the log likelihood ratio statistic is distributed as a chi-square value. Using this ratio and the change in degrees of freedom, a p-value can be computed to determine if the hypothesized model is a significant improvement over the linear model (Marsh, Wen and Hau 2004).

The linear effects model produced a log likelihood value of 7,050.77 and an AIC value of 14,287.55. This model does not, however, provide support for hypothesis 1a or 1b, suggesting that Environmental Orientation by itself is not significantly related to either Effort or Participation. This finding will be discussed in the conclusion section. Hypotheses 4a-b and 5a-b are supported as Effort is positively related to both Sales Performance (H4a:  $\beta = .38$ ,  $p < .001$ ) and Job Satisfaction (H4b;  $\beta = .28$ ,  $p < .001$ ); Participation is also related to both Sales Performance (H5a:  $\beta = .33$ ,  $p < .01$ ) and Job Satisfaction (H5b;  $\beta = .47$ ,  $p < .001$ ).

The hypothesized model produced an AIC value of 14,251.82, which is less than the AIC of the linear model, 14,287.55. The hypothesized model also produced a log likelihood value of 7,028.91. Using the change in log likelihood values as well as the change in degrees of freedom, a p-value was calculated which demonstrated that the hypothesized model was a significant improvement over the linear model ( $\Delta LL = 5.47$ ,  $\Delta df = 4$ ,  $p < .001$ ).

Before interpreting coefficients, to assess the strength of the hypothesized model, I tested an alternative model where Environmental Identity and Organizational Identity were positioned as moderators between Effort and Participation and the outcomes variables. See Figure 3-2. Rerunning the analysis with the new interaction term, the alternative model produced an AIC of 14,288.44 and a log likelihood value of 7,047.22. This represents a significantly poorer fit than the hypothesized model. Additionally, this model was not significantly better than the linear model. Finally, I tested a three-way interaction between Environmental Orientation, Organizational Identity, and Environmental Identity on Effort and Participation (Figure 3-3). While this model was significantly better than the linear model, it was not better than the hypothesized model. Given these post-hoc tests for model supremacy, the proposed model is deemed the best fitting model, and thus, I interpret coefficients from that output. See Table 3-7 for statistics of models tested.

**TABLE 3-7**  
**Results of Model Comparison**

Model Description		AIC	AIC Difference	Log likelihood statistic (LL)	LL Difference	$\Delta df$	p-value
1	Linear	14,287.55		7,050.77			
2	Hypothesized Interaction	14,251.82	-35.73	7,028.91	-21.86	4	< 0.001
3	Alternative Interaction	14,288.44	0.89	7,047.22	-3.55	8	0.90
4	Three-way Interaction	14,264.25	-23.30	7,035.12	-15.65	8	< 0.05



Figure 3-2. Alternative Model

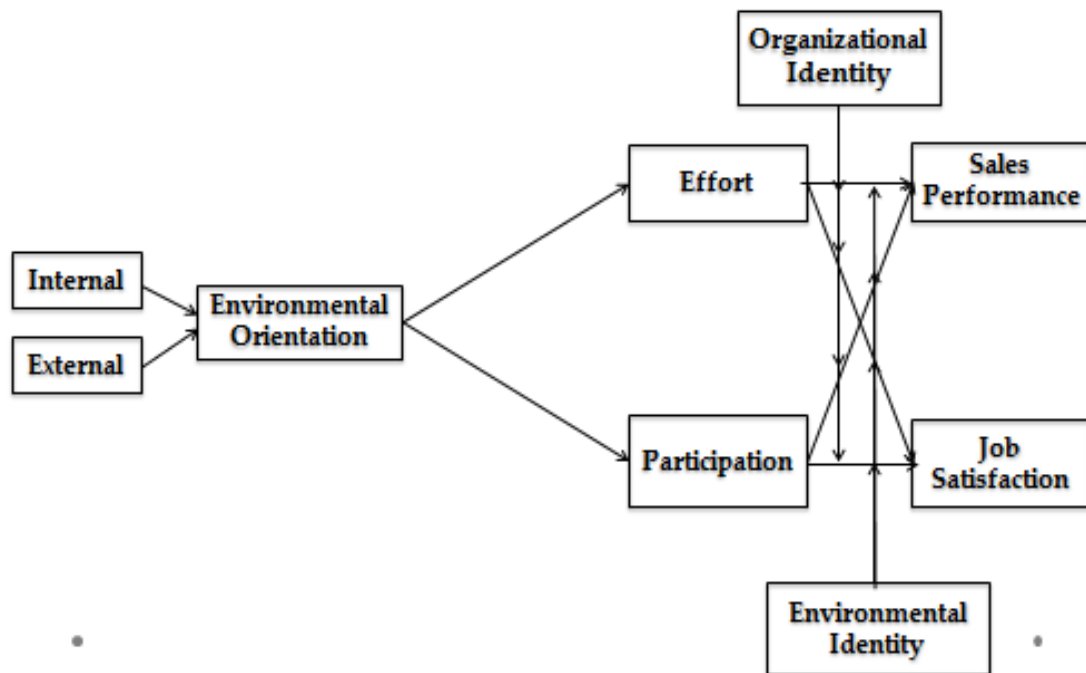
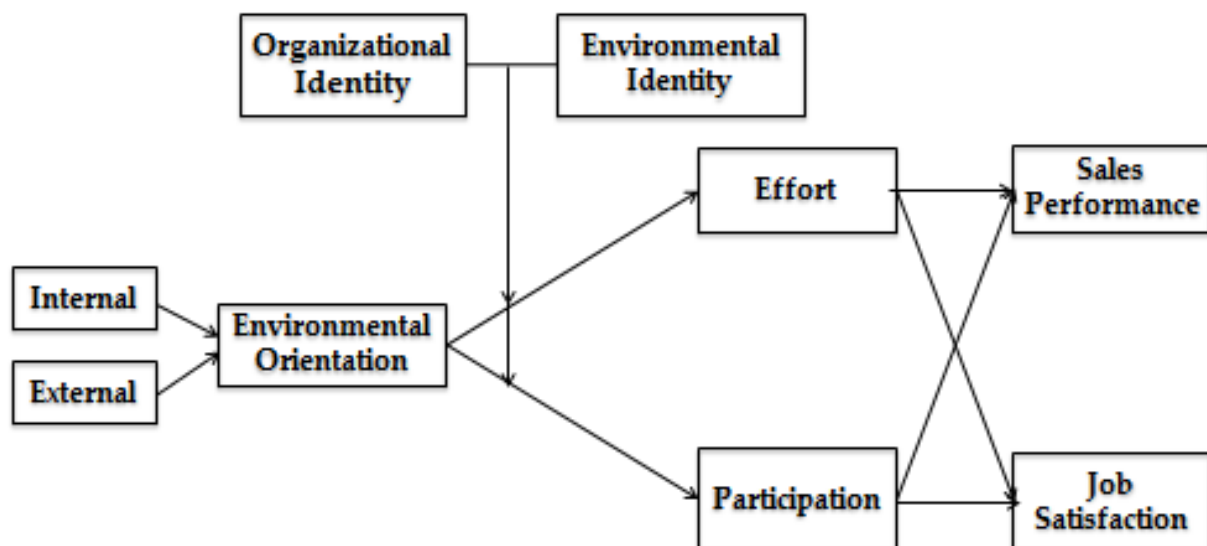


Figure 3-3. Three-way Interaction Model



Examining the outcomes in the hypothesized interaction model, the relationship between Effort and Job Satisfaction loses significance, but the other three remain significant. Specifically, the results show that Effort is positively related to Sales Performance (H4a;  $\beta = .38$ ,  $p < .001$ ); Participation is positively related to Sales Performance (H5a;  $\beta = .33$ ,  $p < .001$ ) as well as Job Satisfaction (H5b;  $\beta = .47$ ,  $p < .001$ ). See Table 3-8 for a list of hypothesized relationships. The table also contains linear effects of the moderator variables on Effort and Participation.

**TABLE 3-8**  
**Results of Hypothesis Testing**

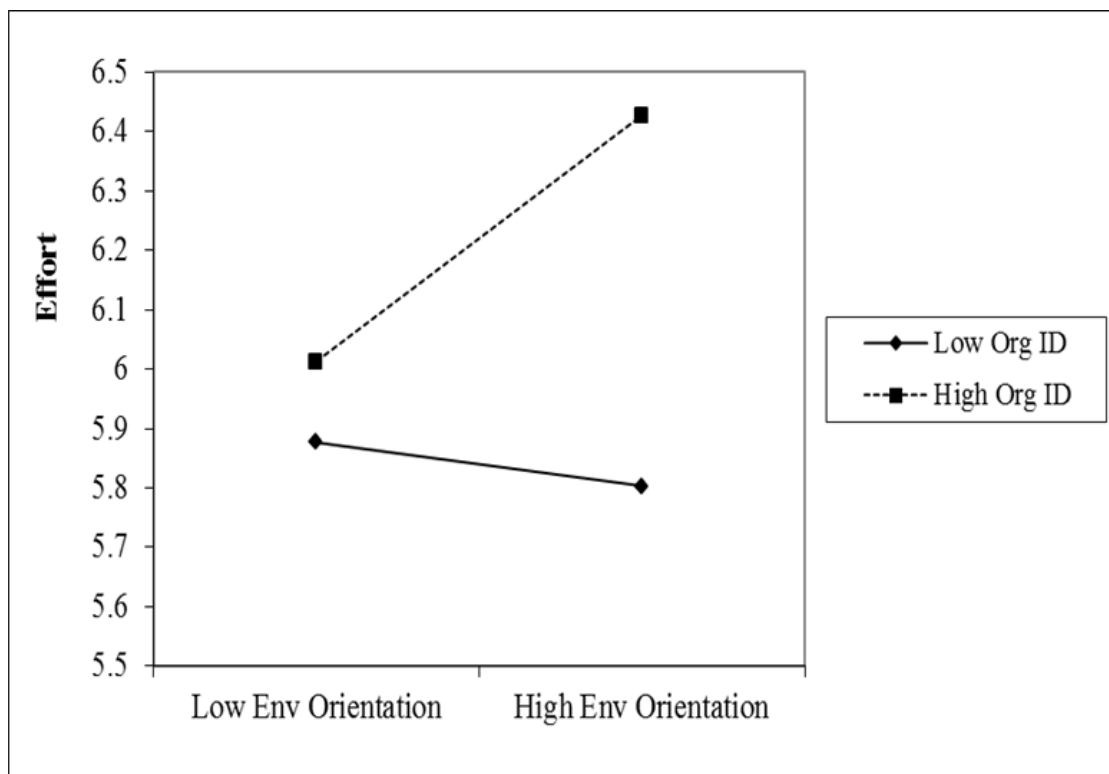
<b>Relationships</b>	<b>Linear Effects Model</b>	<b>Interaction Effects Model</b>
H <sub>1a</sub> : Environmental Orientation → Effort	0.05	0.02
H <sub>1b</sub> : Environmental Orientation → Participation	0.09	0.03
Organizational Identity → Effort	0.11	0.16 <sup>**</sup>
Organizational Identity → Participation	0.31 <sup>***</sup>	0.36 <sup>***</sup>
Environmental Identity → Effort	0.30 <sup>***</sup>	0.16 <sup>*</sup>
Environmental Identity → Participation	0.07	0.07
H <sub>2a</sub> : Environmental Orientation X Organizational Identity → Effort	--	0.11 <sup>**</sup>
H <sub>2b</sub> : Environmental Orientation X Organizational Identity → Participation	--	0.12 <sup>**</sup>
H <sub>3a</sub> : Environmental Orientation X Environmental Identity → Effort	--	0.01
H <sub>3b</sub> : Environmental Orientation X Environmental Identity → Participation	--	0.04
H <sub>4a</sub> : Effort → Sales Performance	0.38 <sup>***</sup>	0.38 <sup>***</sup>
H <sub>4b</sub> : Effort → Job Satisfaction	0.28 <sup>***</sup>	0.28
H <sub>5a</sub> : Participation → Sales Performance	0.33 <sup>**</sup>	0.33 <sup>***</sup>
H <sub>5b</sub> : Participation → Job Satisfaction	0.47 <sup>***</sup>	0.47 <sup>***</sup>

$n = 224$ ; \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

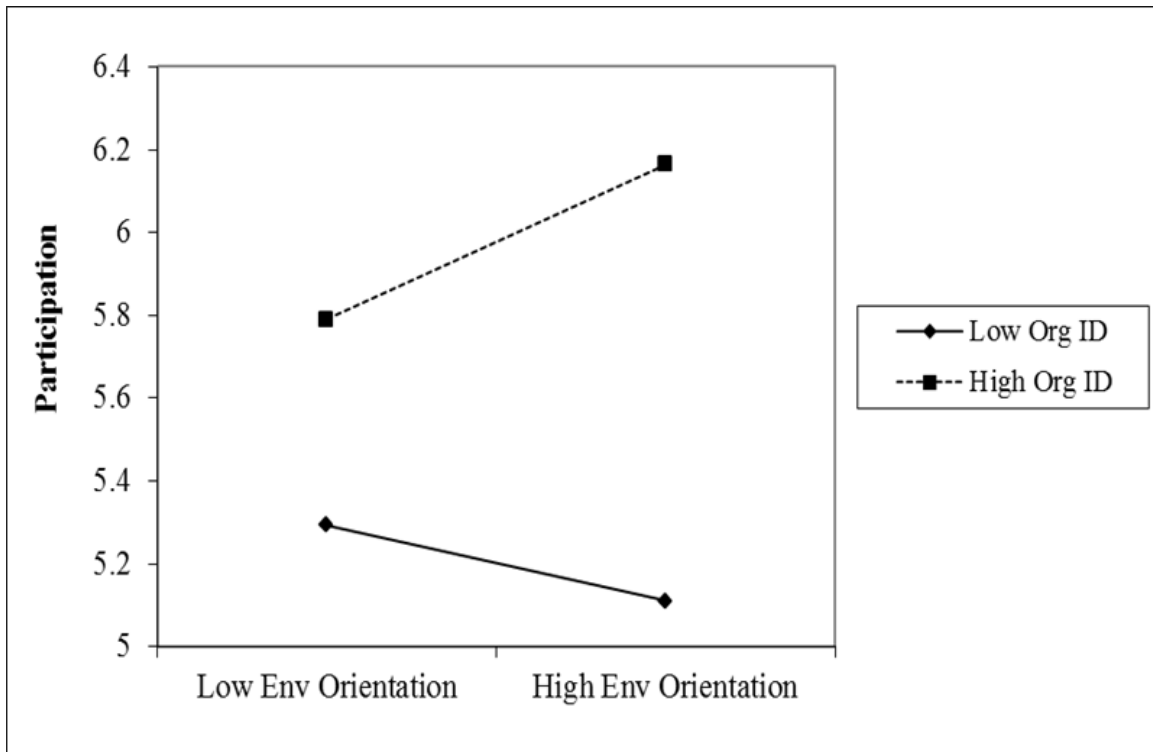
Because the interaction between Environmental Orientation and Organizational Identity was a significant predictor of Effort (H2a;  $\beta = .11$ ,  $p < .01$ ) and Participation (H2b;  $\beta = .12$ ,  $p < .01$ ), I implemented Aiken and West's (1991) procedure to illustrate the relationships. First, I

placed Environmental Orientation on the horizontal axis and then Effort and Participation on the vertical axes, respectively. Two lines were then positioned on the graph to demonstrate how the slope changes at differing levels of Organizational Identity. For both Effort (H2a) and Participation (H2b), the slope for Environmental Orientation was positive for those salespeople with high Organizational Identity and negative for those salespeople with low Organizational Identity. This means that the relationship between Environmental Orientation and Effort as well as the relationship between Environmental Orientation and Participation is strongest for those salespeople who identity with their company. Interestingly, these relationships are not just weak when the salesperson has low Organizational Identity; the relationship reverses direction. See Figures 3-4 and 3-5.

**Figure 3-4. Organizational Identity Moderation Effect on Effort**



**Figure 3-5. Organizational Identity Moderation Effect on Participation**

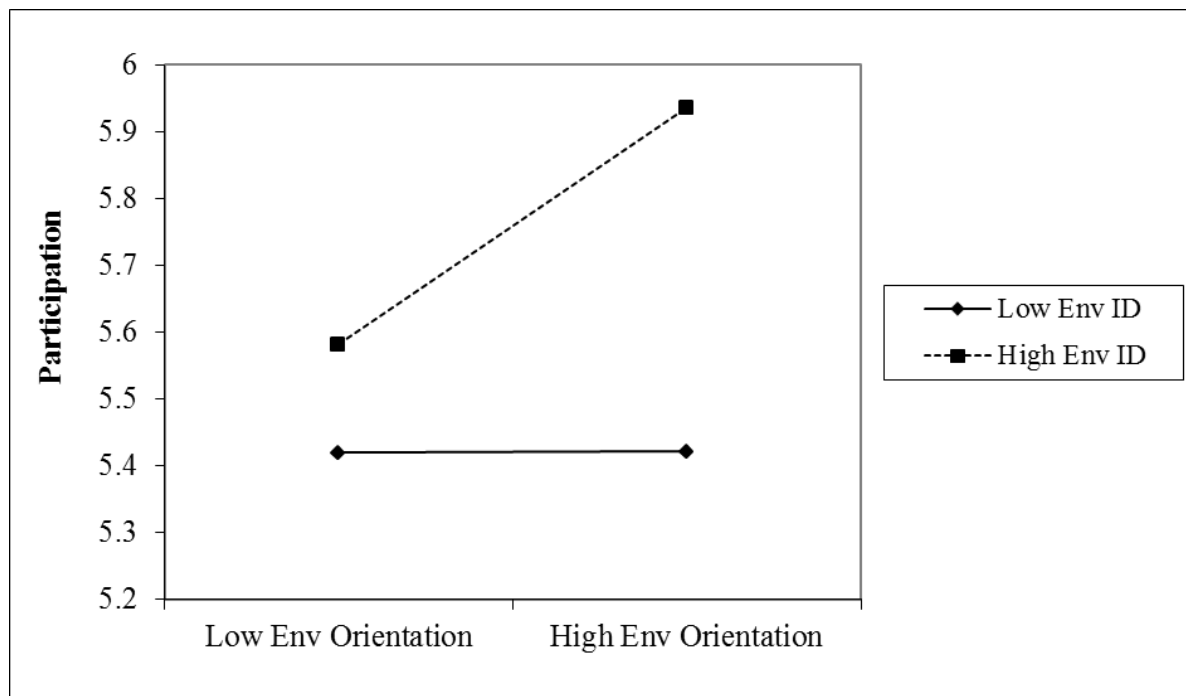


Examining both the linear and hypothesized models, Environmental Identity had direct effects on Effort. Further, the interaction terms (Environmental Orientation X Organizational Identity and Environmental Orientation X Environmental Identity) were significantly correlated. For this reason, I estimated two more models. In the first (Model A), I constrained the Organizational Identity construct. In the second (Model B), I constrained the Environmental Identity construct. Because the constructs are not theoretically similar, this allowed me to examine the unique variance of both constructs and both interactions, much like a hierarchical regression.

Model A produced similar results to the full-hypothesized model. The interaction gained strength and the effects on the outcomes did as well. In Model B, the interaction between

Environmental Orientation and Environmental Identity became significant on the path to Participation. Again, I used Aiken and West's (1991) interaction procedure to plot the coefficients. Environmental Orientation remained on the X-axis and Participation was positioned on the Y-axis with two lines representing the differing levels of Environmental Identity. The positive slope for Environmental Orientation was steepest for those salespeople with high Environmental Identity and flattest for those salespeople with low Environmental Identity. This suggests that the positive relationship between Environmental Orientation and Participation is strongest for those salespeople who share environmental concern as a personal value and weakest for those who do not. In fact, for those with low Environmental Identity, the slope is not significantly different from zero. See Figure 3-6.

**Figure 3-6. Environmental Identity Moderation Effect on Participation**



### **3.6 Conclusion**

Behavioral orientations are typically measured as manager-level variables. However, other employees often have their fingers on the pulse of the organization from a production and operational level, and therefore offer a unique and valuable point of view. As the environment becomes increasingly important to businesses and consumers, it is imperative to understand how employees perceive their own firm's environmental orientation. This study took the first step in this direction by investigating salespeople. Not only will these findings give scholars a new perspective on what invokes eco-friendly behaviors, it will provide managers with tangible strategies to increase the productivity and satisfaction of their sales force. Further, by concentrating on salespeople, I hope to more fully understand one stakeholder within the business element of sustainable development before measuring how their perceptions interact with those from other stakeholders in Figure 1-5.

#### **3.6.1 Theoretical Implications**

This study has several theoretical implications. First, firm-level orientations are most effective when shared by the entire organization; however in this study, environmental orientation had no linear effects to salesperson effort or participation. Theoretically, this implies that it requires more than just a strategic orientation to alter employee productivity, performance, and satisfaction. In an environmental context, the behavioral orientation must be matched with an individual level identity to have any influence on the salesperson. In this sense, these variables are true moderators. Further, this is a powerful affirmation of strategic alignment theory in a green business setting. In the case of environmental identity, the relationship gained strength when values and ideals aligned; in the case of organizational identity, the relationship actually changed directions. Empirically, this finding also supports Zott and Amit (2008) who

show that an overarching organizational structure matched with a strategic orientation has a positive impact on performance.

Secondly, the theory of planned behavior has failed to predict environmental actions based on attitudes. This mismatch has consistently confused scholars trying to identify the green consumer. These results suggest that social identity theory may be better suited to the task. Specifically, this study reinforces the applicability of environmental identity as a driver of green behavior. Theoretically, the scope of this finding could extend beyond employees and into the consumer behavior literature, which would be of interest to a broad spectrum of scholars.

Finally, using an IPO framework, I positioned orientation as the input, effort and participation as the processes, and performance and satisfaction as outputs in the model. This framework is traditionally implemented with teams; however, in this study it was tested with individual behavior. Initially, the contribution is that this framework applies to not more than just teams within an organization; it applies to individual salespeople. But looking more closely, perhaps the IPO is applicable because environmentally-conscious salespeople form a subconscious ‘team’ themselves. Similarly, salespeople who identify strongly with their organization may share an unspoken – perhaps unknown – bond based on a mutual value system. These teams are not the traditional ones set up by management to complete a task; rather, they form organically and unintentionally. They do not have a specific duty to perform, but they identify with each other in a way that makes their processes and outputs similar. Moving forward, this could allow scholars to both use the IPO framework more liberally and to understand the social dynamics of identity with an organization.

### **3.6.2 Managerial Implications**

As firms try to gain an advantage from their environmental resources, quality employees become more instrumental to success than the gears and cranks they operate (Vargo and Lusch 2004). Companies are realizing that creating greener working environments can foster a productive and happy work force (Makower 2013), and the results of this research provide tangible ways for managers to do just that. This study demonstrates that salespeople who perceive a oneness with an environmentally-oriented organization put more effort into their work and are more likely to give constructive feedback to their managers about ways to improve the company image. This implies that managers should retain salespeople who view their job as more than a means to pay the bills. Effort and participation may be highest, then, for those employees who garner terminal, and not just instrumental, value from their employment. Salespeople who view their job as just a paycheck are not as tied to the fate of the organization and have less incentive to embrace its orientation. Alternatively, the findings suggest that when an organization is part of their identity, salespeople are more likely to embrace the orientation and put more into their job.

Perhaps the most interesting conclusion for sales managers is that environmentally-conscious salespeople working for an environmentally-oriented firm are the most likely to give feedback. In this study, participation was highest for those employees whose personal environmental values aligned with their sales organization. Because salespeople are often in contact with the customer and other stakeholders, their contribution to and understanding of the brand image is paramount. Managers wishing to optimize their environmental orientation want employees who are willing to suggest ideas and strategies to better convey that image. Therefore, this finding has tangible implications for the hiring practices of environmentally-oriented firms.



For instance, an eco-conscious pharmaceutical company looking to launch a new drug may survey potential sales candidates about their personal environmental values. The firm would be able to hire individuals who would be more likely to offer tangible suggestions to strengthen that image. Further, these new hires would be more satisfied with their job because they share a concern for the environment. Satisfied salespeople are more likely to become embedded in an organization (Mitchell et al. 2001), which leads to job retention. Because it is more cost effective to retain current employees than hire new ones, this hiring strategy may even provide financial benefits.

While it may seem simple to hire salespeople with values that match your firm's values, there are some obstacles. First, defining a cultural match between firm and employee is difficult. This study examined the fit between values based on the environment, which may be a more easily-accessed and quantifiable personal value than other underlying firm cultures. Rivera (2012) suggests that while matching new hires based on culture is a good idea, for the most part, companies are struggling to quantify and codify this cultural fit. Additionally, managers must be cautious when hiring based on cultural fit. On one hand, hiring only 'green' employees has the potential to become discrimination, particularly if these values correspond to ethnicity or nationality. On the other hand, while cultural fit is important, sometimes values do not trump work experience, potential, and skillsets. While a company filled with 'people I'd like to have a beer with' may lead to higher job satisfaction, it may decrease job performance and productivity. In sum, it is expensive to hire and train new sales associates. Thus, it would benefit managers to consider the cultural fit of employees before making those decisions. In doing so, they can maximize the chances of hiring satisfied, hard-working individuals who care about the fate of the company.

### 3.6.3 Limitations & Future Research

This study has a few limitations that may provide avenues for future research. First, panel data has its detractors, and this research would benefit tremendously from additional field research. Secondly, salespeople represent only a portion of the boundary spanner segment. While higher productivity through effort has been shown to increase performance (e.g., Sujan, Weitz and Kumar 1994), little testing has been done outside of the sales context (Roberts, Lapidus and Chonko 1994). I purposefully eliminated other boundary spanners from this study (retail sales associates, customer service, cashiers, etc.); however, the interaction of identity and orientation on these employees is equally important.

Third, the IPO framework literature suggests a more complex model that incorporates a feedback loop (Ilgen et al. 2005). The model proposed here tested interaction effects, but it did not hypothesize mediation. The IMOI framework positions the process variable as a mediator, which could add even more insight to these relationships. Specifically, does increased effort via an alignment between firm and salesperson values actually *drive* sales performance? Similarly, does increased participation via alignment actually *drive* job satisfaction? Using the same data, moderated mediation model could shed light onto this possibility.

For firms looking to maximize their environmental orientation and net more outcomes from their environmental strategies, a feedback loop could determine if these outputs strengthen the inputs themselves. Social identity theory posits that identities become more salient when they grow in importance to the individual. Increased performance and satisfaction may, in turn, strengthen the identity of the salesperson with the company and the environment, thus continuing the cycle and completing the IMOI model. Additional outputs, such as word-of-mouth and

intention to leave could also be examined, and while not hypothesized, the performance to satisfaction relationship could also be replicated using this data.

Fourth, sales force technology has received a good deal of attention in the literature, but environmental technology (or technology that helps convey a firm's environmental orientation to a salesperson) has not been studied. If a shared goal of environmental preservation influences effort and participation, any means of conveying that orientation may further solidify the alignment and, subsequently, performance. In a sales force, managerial and/or peer pressure may lead salespeople to adopt certain technologies (Robinson, Marshall and Stamps 2005), especially if it is thought to boost performance. A study investigating the pressures associated with environmental sales force technology would illuminate how it shapes perceptions of environmental orientation. Further, it would shed light onto how salespeople utilize this technology to increase their performance.

## REFERENCES

- Abela, Andrew (2001), "Profits and More: Catholic Social Teaching and the Purpose of the Firm," *Journal of Business Ethics*, 31 (2), 107-16.
- Aiken, Leona S. and Stephen G. West (1991), *Multiple Regression: Testing and Interpreting Interactions*, Newbury Park, CA: Sage.
- Ajzen, Icek, (1985) "From Intentions to Actions: A Theory of Planned Behavior," pgs. 11-39 in *Action Control: from Cognition to Behavior*, edited by Kuhl and Bergmann, Berlin: Springer.
- Akaike, Hirotugu (1974), "A New Look at the Statistical Model Identification," *IEEE Transactions on Automatic Control*, 19 (6), 716-23.
- Anderson, James C. and David W. Gerbing (1998), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin*, 103 (3), 411-23.
- Armstrong, J. Scott and Terry S. Overton (1977), "Estimating Nonresponse Bias in Mail Surveys," *Journal of Marketing Research*, 14, 396-402.
- Ashforth, Blake E. (2001), *Role Transitions in Organizational Life: An Identity-Based Perspective*, Mahwah, NJ: Lawrence Erlbaum Associates.
- Ashforth, Blake E. and Fred Mael (1989), "Social Identity Theory and the Organization," *Academy of Management Review*, 14 (1), 20-39.
- Badovik, Gordon J. and Sharon E. Beatty (1987), "Shared Organizational Values: Measurement and Impact upon Strategic Marketing Implementation," *Journal of the Academy of Marketing Science*, 15 (1), 19-26.
- Baker, William E. and James M. Sinkula (2005), "Environmental Marketing Strategy and Firm Performance: Effects on New Product Performance and Market Share," *Journal of the Academy of Marketing Science*, 33 (4), 461-75.
- Banerjee, Subhabrata Bobby, Easwar S. Iyer and Rajiv K. Kashyap (2003), "Corporate Environmentalism: Antecedents and Influence of Industry Type," *Journal of Marketing*, 67 (2), 106-22.

- Banerjee, Subhabrata Bobby (2002), "Corporate Environmentalism: The Construct and its Measurement," *Journal of Business Research*, 55 (3), 177-91.
- Bansal, Pratima (2003), "From Issues to Actions: The Importance of Individual Concerns and Organizational Values in Responding to Natural Environmental Issues," *Organization Science*, 14 (5), 510-27.
- Ben-ner, Avner and Derek C. Jones (1995), "Employee Participation, Ownership and Productivity: A Theoretical Framework," *Industrial Relations: A Journal of Economy and Society*, 24 (4), 532-54.
- Bergami, Massimo and Richard P. Bagozzi (2000), "Self-Categorization, Affective Commitment and Group Self-Esteem as Distinct Aspects of Social Identity in the Organization," *British Journal of Social Psychology*, 39 (4), 555-77.
- Berry, Leonard L. and A. Parasuraman (1991), *Marketing Services*, New York: The Free Press.
- Bettencourt, Lance A. (1997), "Customer Voluntary Performance: As Partners in Service Delivery," *Journal of Retailing*, 73 (3), 383-406.
- Bhattacharya, C. B., Hayagreeva Rao and Mary Ann Glynn (1995), "Understanding the Bond of Identification: An Investigation of Its Correlates among Art Museum Members," *Journal of Marketing*, 59 (4), 46-57.
- Brown, Steven P. and Thomas W. Leigh (1996), "A New Look at Psychological Climate and its Relationship to Job Involvement, Effort, and Performance," *Journal of Applied Psychology*, 81 (4), 358-68.
- Brown, Steven P. and Robert A. Peterson (1994), "The Effect of Effort on Sales Performance and Job Satisfaction," *Journal of Marketing*, 58 (2), 70-80.
- Carter, Craig R., Lisa M. Ellram and Wendy Tate (2007), "The Use of Social Network Analysis in Logistics Research," *Journal of Business Logistics*, 28 (1), 137-68.
- Chan, Ricky Y. K. (2010), "Corporate Environmentalism Pursuit by Foreign Firms Competing in China," *Journal of World Business*, 45 (1), 80-92.
- Chen, Al Y., Roby B. Sawyer and Paul F. Williams (1997), "Reinforcing Ethical Decision Making through Corporate Culture", *Journal of Business Ethics*, 16 (8), 855-65.
- Cherrington, David J. (1980), *The Work Ethic: Working Values and Values that Work*. New York: Amacom.
- Chorn, Norman H. (1991), "The 'Alignment' Theory: Creating Strategic Fit," *Management Decision*, 29 (1), 20-24.

- Cortina, Jose M., Gilad Chen and William P. Dunlap (2001), "Testing Interaction Effects in LISREL: Examination and Illustration of Available Procedures," *Organizational Research Methods*, 4 (4), 324-60.
- Crane, Andrew (2000), "Facing the Backlash: Green Marketing and Strategic Reorientation in the 1990s," *Journal of Strategic Marketing*, 8 (3), 277-96.
- Cropanzano, Russell and Marie S. Mitchell (2005), "Social Exchange Theory: An Interdisciplinary Review," *Journal of Management*, 31 (6), 874-900.
- Davis, John (1991), *Greening Business: Managing for Sustainable Development*, Oxford: Blackwell.
- Dibrell, Clay, Justin B. Craig and Eric N. Hansen (2011), "How Managerial Attitudes toward the Environment Affect Market Orientation and Innovation," *Journal of Business Research*, 64 (4), 401-07.
- Drumwright, Minette E. (1994), "Socially Responsible Organizational Buying: Environmental Concern as a Noneconomic Buying Criterion," *Journal of Marketing*, 58 (3), 1-19.
- Fornell, Claes and David F. Larcker (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research*, 18 (1), 39-50.
- Ginsberg, Jill and Paul Bloom, 2004. "Choosing the Right Green Marketing Strategy," *Sloan Management Review*, 46 (1), 79-84.
- Grandey, Alicia A. (2003), "When "The Show Must Go On": Surface Acting and Deep Acting as Determinants of Emotional Exhaustion and Peer-Rated Service Delivery," *Academy of Management Review*, 46 (1), 86-96.
- Gregory, Brian T., Stanley G. Haris, Achilles A. Armenakis and Christopher L. Shook (2009), "Organizational Culture and Effectiveness: A Study of Values, Attitudes and Organizational Outcomes," *Journal of Business Research*, 62 (7), 673-79.
- Greening, Daniel W. and Daniel B. Turban (2000), "Corporate Social Performance as a Competitive Advantage in Attracting a Quality Workforce," *Business & Society*, 39 (3), 254-80.
- Gupta, Shruti and Denise T. Ogden, (2009), "To Buy or not to Buy? A Social Dilemma Perspective on Green Buying," *Journal of Consumer Marketing*, 26 (6), 376-91.
- Hamel, Gary and C. K. Prahalad (2005), "Strategic Intent," *Harvard Business Review*, 83 (7/8), 148-61.
- Harman, Harry H. (1976), *Modern Factor Analysis*, Chicago: The University of Chicago Press.

- Henderson, J. C. and N. Venkatraman (1999), "Strategic Alignment: Leveraging Information Technology for Transforming Organizations," *IBM Systems Journal*, 38 (1), 472-84.
- Hill, Logan (2013), "Job Applicants' Cultural Fit Can Trump Qualifications," *Bloomberg Businessweek*, January 3: <http://www.businessweek.com/articles/2013-01-03/job-applicants-cultural-fit-can-trump-qualifications#p2>.
- Huffman, Richard C. and W. Harvey Hegarty (1993), "Top Management Influence on Innovation: Effects of Executive Characteristics and Social Culture," *Journal of Management*, 19 (3), 549-75.
- Ilgen, Daniel R., John R. Hollenbeck, Michael Johnson and Dustin Jundt (2005), "Teams in Organizations: From Input-Process-Output Models to IMOI Models," in *Annual Review of Psychology*, 56, 517-43.
- Johlke, Mark C., Dale F. Duhan, Roy D. Howell and Robert W. Wilkes (2000), "An Integrated Model of Sales Managers' Communication Practices," *Journal of the Academy of Marketing Science*, 28 (2), 263-77.
- Klein, Andreas and Helfried Moosbrugger (2000), "Maximum Likelihood Estimation of Latent Interaction Effects with the LMS Method," *Psychometrika*, 65 (4), 457-74.
- Hunt, Shelby D., Van R. Wood and Lawrence B. Chonko (1989), "Corporate Ethical Values and Organizational Commitment in Marketing," *Journal of Marketing*, 53 (3), 79-90.
- Johri, Lalit M. and Kanokthip Sahasakmontri (1998), "Green Marketing of Cosmetics and Toiletries in Thailand," *Journal of Consumer Marketing*, 15 (3), 265-81.
- Kelman, Herbert C. (1961), "Processes of Opinion Change," *Public Opinion Quarterly*, 25 (1), 57-78.
- Keogh, Paul Douglas and Michael Jay Polonsky (1998), "Environmental Commitment: A Basis for Environmental Entrepreneurship?" *Journal of Organizational Change Management*, 11 (1), 38-49.
- Lin, Ying-Ching and Chiu-Chi Angela Chang (2012), "Double Standard: The Role of Environmental Consciousness in Green Product Usage," *Journal of Marketing*, 76 (5), 125-34.
- Mael, Fred and Blake E. Ashforth (1992), "Alumni and their Alma Mater: A Partial Test of the Reformulated Model of Organizational Identification," *Journal of Organizational Behavior*, 13 (2), 103-23.
- Makower, Joel (2013), *State of Green Business 2013*. Retrieved February 18 from [www.greenbiz.com](http://www.greenbiz.com).

- Marsh, Herbert W., Zhonglin Wen and Kit-Tai Hau (2004), "Structural Equation Models of Latent Interactions: Evaluation of Alternative Estimation Strategies and Indicator Construction," *Psychological Methods*, 9 (3), 275-300.
- Menguc, Bulent and Lucie Ozanne (2011), "Challenges of the "Green Imperative": A Natural Resource-Based Approach to the Environmental Orientation-Business Performance Relationship," *Journal of Business Research*, 58 (4), 430-38.
- Meyer, John P., Thomas E. Becker and Rolf van Dick (2006), "Social Identities and Commitments at Work: Toward and Integrative Model," *Journal of Organizational Behavior*, 27 (5), 665-83.
- Mitchell, Terrence R., Brooks C. Holtom, Thomas W. Lee, Chris J. Sablinski and Miriam Erez (2001), "Why People Stay: Using Job Embeddedness to Predict Voluntary Turnover," *Academy of Management Journal*, 44 (6), 1102-21.
- Morhart, Felicitas M., Walter Herzog and Torsten Tomczak (2009), "Brand-Specific Leadership: Turning Employees into Brand Champions," *Journal of Marketing*, 73 (5), 122-42.
- Muthén, Linda K. and Bengt O. Muthén (2010), *Mplus User's Guide* (6<sup>th</sup> ed.), Los Angeles: Muthén and Muthén.
- Naylor, James C., Robert D. Pritchard and Daniel R. Ilgen (1980), *A Theory of Behavior in Organizations*, New York: Academic Press.
- Neyman, Jerzy and Egon Pearson (1933), "On the Problem of the Most Efficient Tests of Statistical Hypotheses," in *Philosophical Transactions of the Royal Society of London. Series A, Containing Papers of a Mathematical or Physical Character*, 231, 694-706.
- Nunnally, Jim C. (1978). *Psychometric Theory*, New York: McGraw Hill.
- Nunnally, Jim C. and Ira H. Bernstein (1994), *Psychometric Theory*, 3<sup>rd</sup> ed. New York: McGraw-Hill.
- Oakes, Penelope J. (1987), "The Salience of Social Categories," In *Rediscovering the Social Group: A Self-Categorization Theory*, Oxford and New York: Basil Blackwell.
- Oakes, Penelope J. and John C. Turner (2006), "Social Categorization and Intergroup Behavior: Does Minimal Intergroup Discrimination Make Social Identity More Positive?" *European Journal of Social Psychology*, 10 (3), 295-301.
- Peattie, Ken and Andrew Crane (2005), "Green Marketing: Legend, Myth, Farce or Prophecy?" *Qualitative Market Research*, 8 (4), 357-70.



- Podsakoff, Philip M., Scott B. MacKenzie, Jeong-Yeon Lee and Nathan P. Podsakoff (2003), "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology*, 88 (5) 879-903.
- Price, Linda L., Lawrence F. Feick and Audrey Guskey (1995), "Everyday Market Helping Behavior," *Journal of Public Policy & Marketing*, 14 (2), 255-66.
- Pujari, Devashish, Gillian Wright and Ken Peattie (2004), "Organizational Antecedents of Environmental Responsiveness in Industrial New Product Development," *Industrial Marketing Management*, 33 (5), 381-91.
- Ray, Gautam, Jay B. Barney and Waleed A Muhanna (2004), "Capabilities, Business Processes, and Competitive Advantage: Choosing the Dependent Variable in Empirical Tests of the Resource-Based View," *Strategic Management Journal*, 25 (1), 23-37.
- Reichers, Arnon E. (1985), "A Review and Reconceptualization of Organizational Commitment," *Academy of Management Review*, 10 (3), 465-76.
- Richey, R. Glenn Jr., Carolyn F. Musgrove, Stephanie T. Gillison and Colin B. Gabler (2013), "Environmental Focus and Program Timing: The Impact of Resource Commitment on Green Marketing Performance," (*working paper*).
- Richey, R. Glenn Jr. and Chad W. Autry (2009), "Assessing Interfirm Collaboration/Technology Investment Tradeoffs: The Effects of Technological Readiness and Organizational Learning," *International Journal of Logistics Management*, 20 (1), 30-56.
- Rivera, Lauren A. (2012), "Hiring as Cultural Matching: The Case of Elite Professional Service Firms," *American Psychological Review*, 77 (6), 999-1022.
- Robinson, Leroy Jr., Greg W. Marshall and Miriam B. Stamps (2005), "Sales Force Use of Technology: Antecedents to Acceptance," *Journal of Business Research*, 58 (12), 1623-31.
- Rogelberg, Steven G. and Jeffrey M. Stanton (2007), "Understanding and Dealing with Organizational Survey Nonresponse," *Organizational Research Methods*, 10 (2) 195-209.
- Rutherford, Brian, JungKun Park and Sang-Lin Han (2011), "Increasing Job Performance and Decreasing Salesperson Propensity to Leave: An Examination of an Asian Sales Force," *Journal of Personal Selling and Sales Management*, 31 (2), 171-84.
- Satorra, Albert (1992), "Asymptotic Robust Inferences in the Analysis of Mean and Covariance Structures," *Sociological Methodology*, 22, 249-78.
- Schawbel, Dan (2009), *Me 2.0: Build a Powerful Brand to Achieve Career Success*, New York: Kaplan Publishing.

- Schermelleh-Engel, Karin, Andreas Klein and Helfried Moosbrugger (1998), "Estimating Nonlinear Effects Using a Latent Moderated Structural Equations Approach," *Interaction and Nonlinear Effects in Structural Equation Modeling*, 203-38.
- Schneider Benjamin, Sarah K. Gunnarson and Kathryn Niles-Jolly (1994), "Creating the Climate and Culture of Success," *Organizational Dynamics*, 23 (1), 17-29.
- Schumacker, Randall E. and Richard G. Lomax (2010), *A Beginner's Guide to Structural Equation Modeling* (3<sup>rd</sup> Ed.), New York: Routledge Academic.
- Schwab, Donald P. (2005), *Research Methods for Organizational Studies* (2nd ed.), Lawrence Erlbaum Associates: Mahwah, NJ.
- Shadish, William R., Thomas D. Cook and Donald T. Campbell (2002). *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*, Houghton Mifflin Company: Boston, MA.
- Shrout, Patrick E. and Niall Bolger (2002), "Mediation in Experimental and Nonexperimental Studies: New Procedures and Recommendations," *Psychological Methods; Psychological Methods* 7 (4), 422.
- Sierra, Jeremy J. and Shaun McQuitty (2005), "Service Providers and Customers: Social Exchange Theory and Service Loyalty," *Journal of Services Marketing*, 19 (6), 392-400.
- Spector, Paul E. (2006), "Method Variance in Organizational Research: Truth or Urban Legend?" *Organizational Research Methods*, 9 (2), 221-32.
- Steiner, Ivan D. (1972), *Group Process and Productivity*, New York: Academic Press.
- Stets, Jan E. and Christ F. Biga (2003), "Bringing Identity Theory into Environmental Sociology," *Sociological Theory*, 21 (4), 398-423.
- Stone, George W. and Kirk L. Wakefield (2000), "Eco-Oriented: An Extension of Market Orientation in an Environmental Context," *Journal of Marketing Theory and Practice*, 8 (3), 21-31.
- Stryker, Sheldon and Richard T. Serpe (1982), "Commitment, Identity Salience, and Role Behavior: Theory and Research Example," In W. Ickes & E. S. Knowles (eds.), *Personality, Roles, and Social Behavior*, (199-218). New York: Springer-Verlag.
- Sujan, Harish, Barton A. Weitz and Nirmalya Kumar (1994), "Learning Orientation, Working Smart, and Effective Selling," *Journal of Marketing*, 58 (3), 39-52.
- Sundar, K. and Kumar P. Ashok (2011), "Employee Participation in Decision Making-A Research Study," *International Journal of Marketing & Management Research*, 2 (7), 50-69.

- Thakor, Mrugank V. and Ashwin W. Joshi (2005), "Motivating Salesperson Customer Orientation: Insights from the Job Characteristics Model," *Journal of Business Research*, 58 (5), 584-92.
- Turner, John C. and Penelope J. Oakes (1986), "The Significance of the Social Identity Concept for Social Psychology with Reference to Individualism, Interactionism and Social Influence," *British Journal of Social Psychology*, 25 (3), 237-52.
- VanAuken, Brad (2003), *Brand Aid: An Easy Reference Guide to Solving Your Toughest Branding Problems and Strengthening Your Market Position*, New York: American Management Association.
- Van Dyne, Linn and Jeffrey A. LePine (1998), "Helping and Voice Extra-Role Behaviors: Evidence of Construct and Predictive Validity," *Academy of Management Journal*, 41 (1), 108-19.
- Van Egeren, M. and S. O'Connor (1998), "Drivers of Market Orientation and Performance in Service Firms," *Journal of Services Marketing*, 12 (1), 39-58.
- Vargo, Stephen L. And Robert F. Lusch (2004), "Evolving to a New Dominant Logic for Marketing," *Journal of Marketing*, 68 (1), 1-17.
- Vogel, Ryan M. and Daniel C. Feldman (2009), "Integrating the Levels of Person-Environment Fit: The Roles of Vocational Fit and Group Fit," *Journal of Vocational Behavior*, 75 (1), 68-81.
- Wanous, John P. and Edward E. Lawler (1972), "Measurement and Meaning of Job Satisfaction," *Journal of Applied Psychology*, 56 (2), 95-105.
- White, Robert W. (1959), "Motivation Reconsidered: The Concept of Competence," *Psychological Review*, 66 (5), 297-333.
- Whitmarsh, Lorraine and Saffron O'Neill (2010), "Green Identity, Green Living? The Role of Pro-Environmental Self-Identity in Determining Consistency across Diverse Pro-Environmental Behaviours," *Journal of Environmental Psychology*, 30 (3), 305-14.
- Williamson, Larry J., Joseph A. Cote and M. Ronald Buckley (1989), "Lack of Method Variance in Self-Reported Affect and Perceptions at Work: Reality or Artifact?" *Journal of Applied Psychology*, 74 (3), 462-68.
- Zott, Christoph and Raphael Amit (2008), "The Fit between Product Market Strategy and Business Model: Implications for Firm Performance," *Strategic Management Journal*, 29 (1), 1-26.

## **TWO ESSAYS ON ENVIRONMENTAL ORIENTATION**

### **CHAPTER 4**

#### **OVERALL CONCLUSION**

##### **4.1 Introduction**

This dissertation serves as an in-depth examination of the environmental orientation construct. The first chapter lays the foundation by differentiating the literature on CSR, green marketing, and sustainable development. It also frames both essays with stakeholder theory, which propositions that firms take the wants and needs of all its stakeholders into consideration when making decision (Freeman 1984). Building from Banerjee (2002) and Stone and Wakefield (2000), the chapter closes with the development of the focal construct of environmental orientation. Chapter Two presents essay 1, the main goal of which is the advancement of an eco-capability and how it affects performance outcomes. In Chapter Three, essay 2 approaches environmental orientation from the salesperson perspective, offering that their perceptions of a firm-level variable could impact individual sales performance and job satisfaction. This closing chapter focuses on theoretical and managerial implications from each section and areas for extending this stream of research.

##### **4.2 Chapter One Implications**

Chapter One acts as a conceptual starting point for the two empirical essays as well as a theoretical springboard for future research. As evidenced by the ambiguity between terminology, scholars are still struggling to properly define green marketing, CSR, and sustainability. More

problematic is that managers are implementing strategies based on these vague constructs and contradicting results (Lubin and Esty 2010). By redefining the traditional view of sustainable development, this chapter more accurately depicts the relationship between human stakeholders and the fundamental stakeholder of the natural environment (Leopold 1949). This representation is important because it conceptualizes the reality that any human action or interaction affects the planet in some way. Each exchange between business, society, and government stakeholders takes place within nature, and this recognition may shape how we view these exchanges in the future.

The business component of Figure 1-5 was the primary focus on this research for two reasons. First, the qualitative interviews and extant literature made it clear that businesses do not yet know what it means to be an environmental business. Until this is more evident, it seems impractical to examine how consumers or policy-makers view these firms. In short, how can we measure customer behaviors toward green business when we don't fully understand green business? Secondly, customers are skeptical of environmental programs for a myriad of reasons (Ginsberg and Bloom 2004); meanwhile, policy-makers are handcuffed in terms of pushing eco-policies due to concerns of economic growth in a recovering global economy. Taken together, the burden may be on business, more than any other human component, to facilitate and implement sustainable initiatives. For marketing scholars, this represents a call for research: can we deliver a consistent message to firms about what a sustainable business model is and how it will benefit their bottom line? As global citizens of a non-renewable planet, it represents a normative mandate: can we answer the preceding question so that more firms adopt these strategies and, as a society, we lessen our toll on the environment?

## **4.2 Chapter Two Implications**

“Building an Eco-Capability through Strategy, Orientation and Innovation” begins to answer the first question. The biggest contribution of this study is the tangible strides to the formation of a construct that would fully demonstrate the benefits of an environmental orientation and strategy. Using Powell and Dent-Micallef’s (1997) template, I develop and test an eco-capability composed of human resources, business resources, and technology resources. Indeed, one reason firms are hesitant to adopt environmental initiatives is that it does not always help the bottom line (Polonsky and Rosenberger 2001). But these findings show that market share and return on investment can be increased when environmental resources are leveraged as a capability. Further, managers of these firms actually perceive greater quality in their offerings, which refutes another common criticism of green products – usually from consumers – that they are lower quality (Lin and Chang 2012).

Another contribution from this study is demonstrating the positive influence of the interaction between environmental orientation and organizational innovativeness on the eco-capability. Two factors led to this prediction. First, scholars have suggested that in the coming years innovation would stem from efficiencies and environmental initiatives (Nidumolu, Prahalad and Rangaswami 2009). Secondly, technology is one of the three components of Powell and Dent-Micallef’s (1997) capability conceptualization. Based on this, I tested the interaction between innovative culture and environmental orientation, finding that high levels of each were most likely to influence an eco-capability.

## **4.3 Chapter Three Implications**

“Building a ‘Green’ Sales Force through a Strategic Alignment of Shared Values” makes three main contributions. First, this essay measures an organizational variable from the

salesperson level. Environmental orientation has not been studied as a psychological climate of individual employees (James and Jones 1974), which extends our understanding of the construct. This extension is logical because it offers insights from those most responsible for conveying the image of environmental orientation.

Secondly, it demonstrates the importance of aligning firm ideals with individual employee values (Hamel and Prahalad 2005) in an environmental context. This study shows that when salespeople who care about the environment work for an environmental organization, they are more inclined to offer suggestions to strengthen the company's image. Further, when salespeople feel a oneness with an environmental company, they not only provide this same type of feedback, they also put more effort into their job. Importantly, salespeople with low organizational identify actually work harder for organizations with a low environmental orientation and try harder to improve the image of non-environmental firms. The implications of this are especially pertinent to executives of environmentally-oriented firms. According to this research, their orientation could actually be detrimental if their sales force does not identify with the company. Therefore, it is paramount that managers make concrete strides to enrich the connection between their firm and employees.

Third, this study attempts to answer the basic, but elusive question: does it pay to be green? While essay 1 takes a more direct approach via global performance measures, essay 2 measures the impact on individual outcomes. Logically, firms want to maximize individual performance because it is directly related to firm performance. Finally, a job can provide more than just a paycheck, especially if employees find meaning in their work. This terminal value (Cherrington 1980) may be the reason that when employee and firm values align, salespeople are more likely to be satisfied with their job.

#### **4.4 Future Research Directions**

The basic premise of sustainability is simple: do not compromise the earth and its resources for future generations (WCED 1987). The current environmental crisis calls for firms to push the envelope with regard to green strategy and technology, but firms will not heed this call unless it is profitable. Therefore, it is the duty of academia to demonstrate that firms can earn green from being green. These two essays are just one step toward this end. Through the building of an eco-capability and the strategic alignment of employee and manager values, scholars can start to pinpoint the bridges to successful implementation of sustainable initiatives, and managers can start to reap the benefits of their environmental orientation.

This dissertation poses more questions than it answers, and as such, future research is ripe with opportunity. Given the role of environmental orientation in both studies, the first question would be to discover how environmental orientation moves from the manager to the employee. While self-reported perceptual measures are important, especially at the early stages of this research, a multi-level approach matching managers with employees to create dyadic data would potentially uncover the mechanisms by which this orientation is diffused through the organization.

One limitation of the first essay was the dropping of the environmental strategy focus construct. This highlights the difficulty of properly defining similar constructs and provides a specific goal for future research. Further, by testing moderated mediation, scholars could measure the indirect effects of environmental orientation on the outcome variables in both studies. For instance, in essay 1, does an eco-capability mediate the relationship between environmental orientation and market and financial performance? In essay 2, does the salesperson perception of firm orientation have indirect effects on performance on satisfaction?



Do effort and participation act as mediators as predicted by the IMOI (Ilgen et al. 2005) framework? These questions provide a blueprint for future research and a better understanding of the role of orientation in an environmental business model.

Finally, environmental responsibility is only one part of sustainable development. For the sake of parsimony, the social and political components were largely ignored in this study. However, the theoretical underpinnings could be transferred to these other areas. With essay 1, scholars could examine philanthropy and social initiatives. In essay 2, other pro-social behaviors could be investigated to see if alignment does indeed predict how salespeople perform across prosocial agendas.

## REFERENCES

- Banerjee, Subhabrata Bobby (2002), "Corporate Environmentalism: The Construct and its Measurement," *Journal of Business Research*, 55 (3), 177-91.
- Cherrington, David J. (1980), *The Work Ethic: Working Values and Values that Work*, New York: Amacom.
- Freeman, R. Edward (1984), *Strategic Management: A Stakeholder Approach*, Pitman Publishing Company, MA.
- Ginsberg, Jill and Paul Bloom (2004), "Choosing the Right Green Marketing Strategy," *Sloan Management Review*, 46 (1), 79-84.
- Hamel, Gary and C. K. Prahalad (2005), "Strategic Intent," *Harvard Business Review*, 83 (7/8), 148-61.
- Ilgen, Daniel R., John R. Hollenbeck, Michael Johnson and Dustin Jundt (2005), "Teams in Organizations: From Input-Process-Output Models to IMOI Models," in *Annual Review of Psychology*, 56, 517-43.
- James, Lawrence R. and Allan P. Jones (1974), "Organizational Climate: A Review of Theory and Research," *Psychological Bulletin*, 81 (12), 1096-12.
- Leopold, Aldo (1949), *A Sand County Almanac*, New York: Oxford University Press.
- Lin, Ying-Ching and Chiu-Chi Angela Chang (2012), "Double Standard: The Role of Environmental Consciousness in Green Product Usage," *Journal of Marketing*, 76 (5), 125-34.
- Lubin, David A. and Daniel C. Esty (2010), "The Sustainability Imperative," *Harvard Business Review*, 88 (5), 42-50.
- Nidumolu, Ram, C. K. Prahalad, and M. R. Rangaswami (2009), "Why Sustainability is Now the Key Driver of Innovation," *Harvard Business Review*, 87 (9), 1-10.
- Polonsky, Michael Jay and Philip Rosenberger III (2001), "Reevaluating Green Marketing: A Strategic Approach," *Business Horizons*, 44 (5), 21-30.

Powell, Thomas C. and Anne Dent-Micallef (1997), "Information Technology as Competitive Advantage: The Role of Human, Business and Technology Resources," *Strategic Management Journal*, 18 (5), 375-405.

Stone, George W. and Kirk L. Wakefield (2000), "Eco-Oriented: An Extension of Market Orientation in an Environmental Context," *Journal of Marketing Theory and Practice*, 8 (3), 21-31.

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

## APPENDIX A – IRB Approval

Office for Research  
Institutional Review Board for the  
Protection of Human Subjects



October 22, 2012

Colin B. Gabler  
Dept. of Management & Marketing  
College of Commerce & Business Admin.  
Box 870225

Re: IRB #: EX-12-CM-068, "Two Essays on Eco-Orientaion: Building a Competitive Advantage through an Eco-Based Capability and Strategic Alignment"

Dear Mr. Gabler:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given exempt approval according to 45 CFR part 46.101(b)(2) as outlined below:

*(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.*

This approval expires on October 21, 2013. If the study continues beyond that date, you must complete the appropriate portion of the Continuing Review Form. If you modify the application, please complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the appropriate Closure form.

Should you need to submit any further correspondence regarding this application, please include the assigned IRB application number.

Good luck with your research.

Sincerely,



358 Rose Administration Building  
Box 870127  
Tuscaloosa, Alabama 35487-0127  
(205) 348-8461  
FAX (205) 348-7189  
TOLL FREE (877) 820-3066

Carpantato T. Myles, MSM, CIM  
Director & Research Compliance Officer  
Office of Research Compliance  
The University of Alabama