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## The Effects of the Environment and Corporate Governance on Illegal Cartel Activity

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Supervisor: Dr. W. Glenn Rowe, *The University of Western Ontario*

A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree  
in Business

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THE EFFECTS OF THE ENVIRONMENT AND CORPORATE GOVERNANCE ON  
ILLEGAL CARTEL ACTIVITY

(Spine Title: The Environment, Corporate Governance and Illegal Activity)

(Thesis format: Monograph)

by

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Graduate Program in Business Administration

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy

The School of Graduate and Postdoctoral Studies  
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**The Effect of the Environment and Corporate Governance on Illegal Cartel Activity**

is accepted in partial fulfillment of the  
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## ABSTRACT

Illegal corporate activity, including the price fixing activity of two or more firms through cartels, costs the global economy billions of dollars a year, yet its causes are neither well studied nor well understood in organizational literature. This thesis explores possible external and internal antecedents of illegal cartel activity through the management lenses of resource dependency theory and agency theory and the criminological theory of strain theory in the examination of the research question “Why do corporations engage in illegal activity?” I posit that illegal international cartel activity is influenced by the environment in which the organization finds itself, moderated by corporate governance mechanisms of the firm, namely board scanning. In tandem, I consider potential internal drivers of illicit corporate behaviour, suggesting that illegal activity, undertaken as a result of a gap between organizational goals and the inability to achieve them through legal means (strain theory), is impacted by the control mechanisms that the owners of corporations and their agents impose on the CEO and managers of the organization.

I explore these proposed antecedents of illegal cartel activity both quantitatively and qualitatively. For the quantitative analysis, I create a matched sample of 296 observations of international firms, covering illegal cartel activity that spans 40 years drawn from a proprietary database containing information on all known international cartels from 1970 to 2008. The qualitative analysis includes first-person, semi-structured interviews with international experts in the area of illegal cartel activity. I take a realist approach, comparing the interview data obtained

from each individual with responses elicited from other interviewees, linking the qualitative data directly to the constructs used in the quantitative data analysis.

I find support in the environmental analysis for the board scanning moderated effects of industry profits and dynamism on illegal cartel activity. The analysis of the internal variables demonstrate that while board level variables such as control method and percentage of outside directors predict illegal corporate activity and CEO control methods, CEO level variables do not predict illegal corporate activity, nor do they mediate board control as it pertains to illegal corporate activity.

My research highlights the impact of the scanning and control mechanisms at the highest levels of the organization on illegal corporate behaviour. In so doing, I find that the influence of the board on the organization's environment is subtle, yet palpable and produces within the organization the conditions where innovation to achieve the perceived wants of the shareholders is implicitly encouraged. I put forward this research as a first step in considering illegal corporate activity in a way that encompasses external influences and internal organizational control mechanisms in a new and innovative manner and as a tool to help both researchers and practitioners better understand how organizational deviance, as manifested through illegal corporate activity, can be prevented.

**Keywords:** Corporate governance, cartels, illegal activity, CEO control, board control, strain theory, resource dependency theory (RDT), agency theory, logistic regression

## **DEDICATION**

To my family

## ACKNOWLEDGEMENTS

This thesis will result in a copyrighted work. It may not reflect the journey that in fact the thesis process has been for me. I could not have completed this odyssey without the assistance and support of many people and while I hope to provide some recognition to these individuals, it is but a small token of gratitude for the time and effort that they have put into making this work what it is. I would like to begin by thanking my proposal committee of Drs. Paul Beamish, Stewart Thornhill and Mark Zbaracki; their comments were instrumental in steering me on this thesis journey. I would also like to thank my dissertation committee of Drs. Paul Beamish, William Judge, David Sharp and Matthew Yeager for their suggestions as to how to further improve this work for subsequent publication. Thanks to Dr. John Connor for the use of his dataset as a foundation for the dataset used in this thesis.

I have been very fortunate to have Dr. W. Glenn Rowe as a supervisor and advisor throughout my PhD career. He provided both professional and personal support when I needed it – whether I knew it or not. He also has served as a guide on my career and I will remain indebted to him for the balance of my career. I would also like to thank my fellow PhD colleague Karin Schnarr for her support in polishing this document and rounding off the rough edges; her assistance is greatly appreciated.

My parents likewise have been very supportive in not only all aspects of my life but more particularly in my decision to leave the business world for the academic – which was not taken lightly and with some trepidation.

Finally, I would like to thank my children, Xander, Abby and Derek for their support, patience and understanding as they encouraged me throughout my PhD studies and were understanding of the time and effort it required.



## TABLE OF CONTENTS

CERTIFICATE OF EXAMINATION .....	ii
ABSTRACT .....	iii
DEDICATION .....	v
ACKNOWLEDGEMENTS .....	vi
TABLE OF CONTENTS .....	viii
LIST OF TABLES .....	xii
LIST OF FIGURES .....	xiii
LIST OF APPENDICES .....	xiv
1. INTRODUCTION .....	1
1.1: Overview .....	4
1.1.1: Level of Analysis .....	6
1.1.2: Illegal Corporate Activity .....	8
1.1.3: The Environment .....	9
1.1.4: Control .....	10
1.1.5: Data and Methodology .....	12
1.1.6: Results .....	13
1.1.7: Discussion .....	14
2. ILLEGAL CORPORATE ACTIVITY .....	17
2.1: Introduction .....	17
2.2: Illegal Activity/White Collar Crimes .....	19
2.3: Illegal Cartel Activity .....	23
2.3.1: Antitrust Crimes .....	23
2.3.2: Price Fixing .....	26
2.3.3: Cartels .....	27
2.4: Summary .....	31
3. THE ENVIRONMENT .....	32
3.1: Introduction .....	32
3.2: Resource Dependency Theory .....	33
3.2.1: Resource Dependency Theory and Cartels .....	36

3.3: Board Scanning.....	37
3.4: The Environment .....	41
3.4.1: Industry Concentration .....	43
3.4.2: Profits.....	46
3.4.3: Munificence .....	49
3.4.4: Dynamism.....	53
3.5: Summary.....	56
4. CONTROL.....	58
4.1: Introduction.....	58
4.2: Strain Theory .....	61
4.2.1: Strain Theory and Organizations .....	64
4.2.2: Strain Theory and Illegal Activity .....	66
4.2.3: Strain Theory – A Call to Action.....	69
4.3: Corporate Governance History.....	69
4.4: Control Systems.....	72
4.5: Incentive Systems .....	76
4.5.1: Cascade Effect .....	78
4.6: Control and Illegal Cartel Activity .....	79
4.7: Board Control .....	82
4.8: Director Independence.....	84
4.9: Summary.....	85
5. ILLEGAL CARTEL ACTIVITY DATA .....	87
6. METHODOLOGY .....	95
6.1: Methodological Approach .....	95
6.2: Quantitative Sample and Data Collection.....	95
6.2.1: Illegal Cartel Activity .....	96
6.2.2: Industry Concentration .....	100
6.2.3: Industry Profits .....	100
6.2.4: Firm Profits.....	101
6.2.5: Munificence .....	101
6.2.6: Dynamism.....	102

6.2.7: Board Scanning.....	103
6.2.8: Complexity.....	105
6.2.9: CEO Control .....	107
6.2.10: Board Control .....	109
6.2.11: Director Independence.....	109
6.2.12: Statistical Tests .....	110
6.3: Qualitative Methods and Data Collection.....	110
6.3.1: Qualitative Methodology.....	110
6.3.2: Qualitative Sample.....	112
6.3.3: Class Actions and Class Action Attorneys .....	113
7. RESULTS .....	116
7.1: Hypothesis 1 .....	121
7.2: Hypothesis 2 .....	127
7.3: Hypothesis 3 .....	131
7.4: Hypothesis 4 .....	131
7.5: Hypothesis 5 .....	134
7.6: Hypothesis 6 .....	137
7.7: Hypothesis 7 .....	141
7.8: Hypothesis 8 .....	144
7.9: Hypothesis 9 .....	147
7.10: Hypothesis 10 .....	148
8. DISCUSSION.....	149
8.1: Introduction.....	150
8.2: Discussion of External Environmental Factors .....	152
8.2.1: Scanning Variable.....	152
8.2.2: Environmental Variables .....	154
8.2.2.1: Industry Concentration.....	155
8.2.2.2: Industry and Company Profits.....	156
8.2.2.3: Munificence.....	158
8.2.2.4: Dynamism .....	160
8.2.3: Environmental Variables Conclusion .....	161

8.3: Discussion of Internal Control Variables.....	161
8.4: Contribution to Theory .....	164
8.5: Contribution to Practice .....	166
8.6: Limitations .....	169
8.7: Future Research .....	173
8.8: Conclusion .....	177
REFERENCES .....	178
APPENDICES .....	190
CURRICULUM VITAE.....	197

## LIST OF TABLES

Table 1: Number of Cartels at Each Observation Level.....	90
Table 2: Legal/Illegal SIC Codes.....	98
Table 3: Descriptive Statistics for Environmental Hypotheses (1-5) .....	119
Table 4: Proportion of N for each Variable (Illegal vs. Legal).....	119
Table 5: Correlation Matrix for Environmental Hypotheses (1-5) .....	120
Table 6A: Industry Concentration x Scanning (Hypothesis 1).....	121
Table 7A: Industry Concentration x Scanning with Controls (Hypothesis 1).....	122
Table 8: All Variables x Scanning (Hypothesis 1-5).....	123
Table 9: Direct Effects of Environmental Variables.....	123
Table 6B: Industry Profits x Scanning (Hypothesis 2) .....	127
Table 7B: Industry Profits x Scanning with Controls (Hypothesis 2) .....	129
Table 6C: Firm Profits x Scanning (Hypothesis 3).....	131
Table 7C: Firm Profits x Scanning with Controls (Hypothesis 3).....	132
Table 6D: Munificence x Scanning (Hypothesis 4).....	135
Table 7D: Munificence x Scanning with Controls (Hypothesis 4).....	135
Table 6E: Dynamism x Scanning (Hypothesis 5).....	137
Table 7E: Dynamism x Scanning with Controls (Hypothesis 5).....	138
Table 10: Descriptive Statistics and Correlation Matrix for Control Hypothesis (6-10)	141
Table 11: Proportion of Data for Illegal vs. Legal Companies.....	141
Table 12: Results for Control Hypotheses (6-10) .....	142

## LIST OF FIGURES

Figure 1: Theoretical Model .....	6
Figure 2: Interaction Effects of Industry Profits x Scanning (Hypothesis 2) .....	128
Figure 3: Interaction Effects of Dynamism x Scanning (Hypothesis 5).....	138
Figure 4: Model with Quantitative Results .....	151

## LIST OF APPENDICES

Appendix A: Guiding Interview Questions for Study 1 .....	190
Appendix B: Ethics Approval.....	191
Appendix C: Guiding Interview Questions for Study 2.....	192
Appendix D: Additional Quotations Regarding the Environmental Variables .....	193
Appendix E: Additional Quotations Regarding CEO and Board Output Controls .....	195

# CHAPTER 1

## INTRODUCTION

Approximately 60 years ago, the Tennessee Valley Authority (a federally owned corporation in the United States) was surprised to discover that the bids they received from a number of companies for a project they had tendered were essentially all the same. This included everything from a \$3 insulator to a \$17 million steam turbine generator. The Tennessee Valley Authority was puzzled by this. The process had been fair, with no one firm having an advantage over the other. The bidding firms themselves were some of the biggest and most trustworthy names in the United States, including Westinghouse and General Electric. There had been no leaks of the bids beforehand and no manipulation of the bids afterwards.

So why were all of the bids the same?

What the authorities eventually discovered has become one of the most famous and studied cartels in North America: the heavy electrical equipment price fixing cartel of the 1950s. Their investigation showed a far reaching, pervasive scheme that involved dozens of some of the United States' largest corporations all working to drive up the profits of the participants by engaging in widespread price fixing. The consequences were significant; not only did the conspirators have to pay healthy fines, a number of individuals went to jail. More fundamentally, it sent shock waves through the business community and regulatory authorities who had believed that the days of illegal price fixing in the United States were long behind them.



In looking to the past to understand the present, it cannot be denied that society was different in the 1950s. As we examine the current state of affairs in the 21<sup>st</sup> century, the environment for business is greatly changed from over a half century ago. The global marketplace has transformed with the implementation of industry-wide codes of conduct and the articulation of corporate ethical guidelines that can be found in almost every annual report. Organizations such as the Department of Justice in the United States, the Competition Bureau in Canada and the European Commission in the European Union have committed substantial amounts of time and resources to ensure illegal corporate activity such as that perpetrated by the heavy electrical equipment pricing cartel never happens again. Sophisticated regulatory schemes have been designed in most developed nations to act as an early warning sign for price fixing and antitrust behaviour, catching it in its infancy.

However, one need only open a newspaper or turn on the television to recognize that illegal corporate activity – including cartels - still occurs; indeed, there seems to be no end to the creativeness and breadth of crimes committed by corporations (Geis, 2007). Some corporations appear to view the legal and regulatory rules to which they are subject as nothing more than suggestions and recommendations on how to conduct business (Box, 1983:351). In fact, the evidence shows that many corporations reoffend even after being sanctioned for a first conviction of corporate crime (Clinard & Yeager, 1980). This suggests that either the sanctions have a limited deterrent effect in general, or that some risk factors increase the probability of recidivism even if the previous sanction did have a deterrent effect for some corporations.

My thesis is inspired by the frequency of illegal corporate activity in our society and how it may be mitigated. This area of study has wide applicability and is of interest to shareholders, boards of directors, management, regulators and legislators, and, at its core, the public at large. I also believe that my research will be useful as a guide to assist corporations in the development of internal board policies and procedures, providing them with precautionary steps they can take to help them avoid the precursors of illegal activity (Coleman, 1987; Datta & Narayanan, 1989).

My research will attempt to place the commission of white collar crimes within a unique theoretical framework that utilizes organizational and criminological theories. Both the organizational and criminological approaches have struggled to adequately describe the theoretical foundation of these corporate behaviours. The management literature speaks to corporate structural and industry level environmental conditions that may lead to or counteract illegal corporate activity (Baucus & Near, 1991; Hill, Kelley, Agle, Hitt, & Hoskisson, 1992; Zahra, Priem, & Rasheed, 2005). The criminology literature speaks to the reasons why corporations, and the people in them, may commit illegal acts on behalf of these corporations (Cohen, 1995; Merton, 1968; Saini & Krush, 2008). However, in both instances, illegal corporate activity is vastly understudied, particularly at the corporate level (Langton & Piquero, 2007) and there is very little research that examines the organizational and criminological aspects of illegal corporate activity in tandem so as to better address the phenomenon. By bridging the management and criminology literatures, I aim to address the research gaps in these fields to help us better understand the causes of illegal corporate activity.

## 1.1 Overview

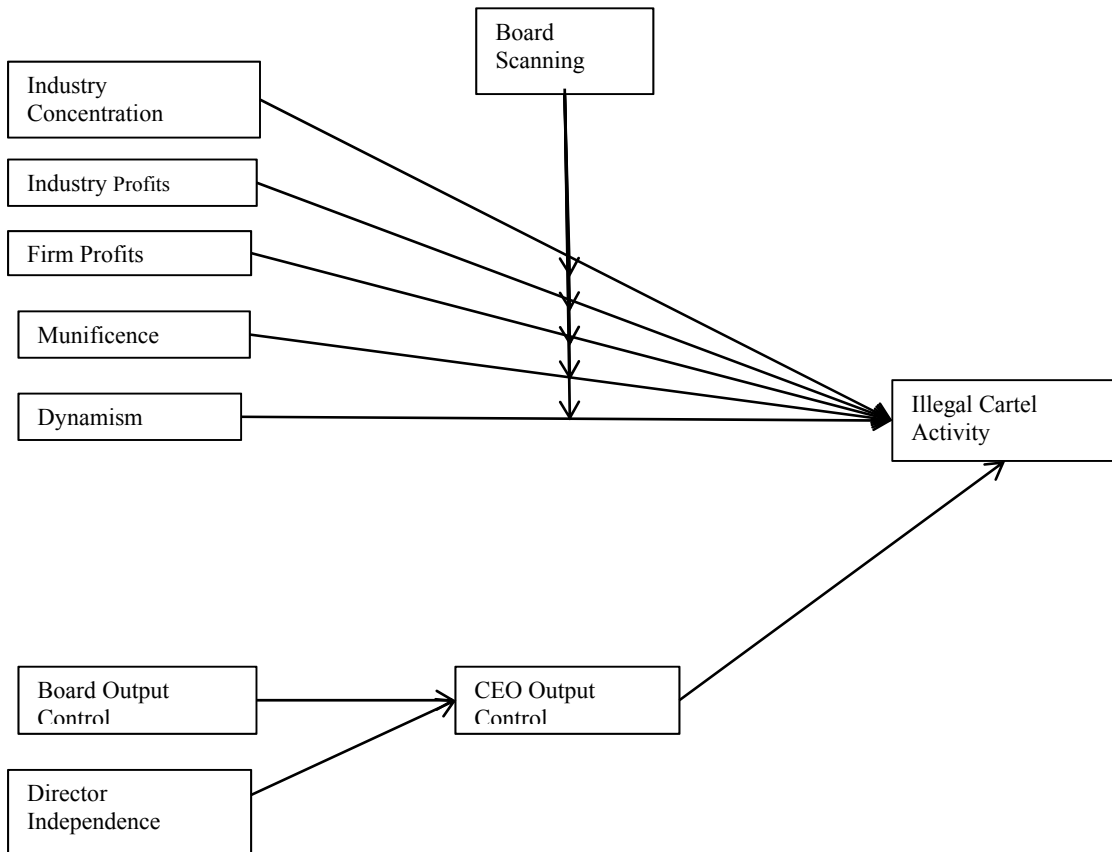
Notwithstanding the billions of dollars of impact that white collar crime broadly and illegal corporate cartel activity in particular have on the global economy, their causes are neither well understood nor well researched in management literature. This thesis aims to explore possible external and internal antecedents of illegal cartel activity through the theoretical lenses of resource dependency theory, agency theory and strain theory in the examination of the research question “Why do corporations engage in illegal activity?” My research posits that illegal cartel activity is influenced by both the environment that the organization finds itself in and the control mechanisms that the owners of corporations and their agents impose on the CEO and managers of the organization.

The environment influences the actions of an organization, particularly when the organization is faced with a scarcity of resources and an inability to control those resources required to fulfill its purposes and survive (Pfeffer & Salancik, 1978). I argue that environmental conditions impact the propensity of an organization to commit illegal activity. As the environment becomes more hostile and it is more challenging for the organization’s management to meet shareholders’ profit expectations, the incentive to engage in illegal activities increases. However, I suggest that the relationship between the environment and illegal activity is impacted by the functions of the board of directors (“board”) of a firm. This is due to the responsibility of the board to scan the organization’s external environment to determine if the existing strategy and actions of the firm are appropriate for the environment within which they find themselves. I propose that the more effective the environmental scanning ability of the board, the more they will be able to assist the management of the organization in dealing with a hostile

environment. Thus, the effectiveness of the scanning of the board moderates the impact of the environment on the propensity of the organization to commit illegal activities. Not only has this moderating relationship not been previously examined, this thesis presents the first time I am aware of the concept of board scanning has been applied to illegal organizational activity.

In tandem, this research means to examine internal organizational characteristics, namely the control methods (behavioural or output based) that exist within the organization, to determine their impact on illegal cartel activity. While some research has been performed in this field (Ordóñez, Schweitzer, Galinsky, & Bazerman, 2009; Pinto, Leana, & Pil, 2008; Schweitzer, Ordonez, & Douma, 2004; Sonnenfeld & Lawrence, 1978), I present the unique argument that the use of output based control mechanisms increases the incidence of illegal activity as viewed through the criminological lens of strain theory (Agnew, 1992, 2001, Merton, 1938, 1968). The control methods of the organization are such that they flow down from the shareholders to the board to the CEO to the top managers (Makri, Lane, & Gomez-Mejia, 2006; Wade, O'Reilly, & Pollock, 2006; Werner & Tosi, 1995). I suggest that the control method that is used on the board influences the control method that is used for the CEO which in turn cascades down the organization to the managers who generally are the ones responsible for the direct actions leading to illegal activity. I provide a conceptual model for the entire framework in Figure 1 below.

**Figure 1: Theoretical Model**



***1.1.1 Level of Analysis***

Organizations are the actors in the model I utilize. It is organizations that are exposed to the environment and take actions based upon that environment. It is for the organization that boards scan the environment then translate that scanning into action. It is organizations that have their own unique control structure and utilize control mechanisms. And, it is the organization's board that has its own unique characteristics that will impact the relationship between attributes of the environment and illegal cartel activity. Thus, appropriately, the unit of analysis will be that of the organization.

This choice makes sense from a theoretical perspective as well. The definition of illegal activity is organizationally based (Slapper, 1999) and both the environment (Merton, 1957; Murphy & Robinson, 2008) and antitrust activities (Simpson & Koper, 1992) have been studied at the organizational level. In addition, cartels, which are part of this antitrust activity, are fundamentally made up of a group of organizations. While the theory of strain theory has been generally used as an individual level theory (Passas, 2001) it has also been linked to organizational and group study (Merton, 1968). Finally the definition of illegal corporate activity recognizes that the organization provides the structures and positions that are necessary to commit illegal activities (Jamieson, 1994; Sutherland, 1940, 1949).

Thus, consideration was given to selecting the proper levels of theory, measurement and analysis (Hitt, Beamish, Jackson & Mathieu, 2007, Rousseau, 1985). The level of theory refers to the focal level to which generalizations are meant to apply. While it is individuals that act and it is within industries that these organizations revolve, it is the organization from which I seek to make generalizations as it is the organization that will engage or not engage in illegal activity. The level of measurement as alluded to is that of the organization and the level of analysis is likewise that of the organization. I do not run into differences in level based upon these selections and analysis (Rousseau, 1985).

Therefore, examining the phenomenon of illegal cartel activity from an organizational perspective is appropriate and is aligned with research to date in order to allow for comparisons across data.

### *1.1.2 Illegal Corporate Activity*

In order to understand how environmental and control behaviours are able to influence the likelihood of illegal cartel activity, it is important to first understand the concepts of white collar crime and the evolution of illegal corporate activity. Chapter 2 presents the concept of illegal corporate activity and discusses the challenges with its operationalization and measurement in management research. Part of this challenge rests in the difficulty in defining illegal corporate activity; each researcher seems to find a different definition to suit his or her own purpose. The definition is important as it informs this research, helps define the generalizability of the results, places boundaries around the research scope, and clearly encompasses the data that will be used. Thus, I employ the following definition for illegal corporate activity:

Criminal acts (by omission or commission) which are the result of deliberate decision-making (or culpable negligence) of those who occupy structural positions within the organization as corporate executives or managers. These decisions are organizationally based - made in accordance with normative goals (primarily corporate profit), standard operating procedures, and cultural norms of the organization - and are intended to benefit the corporation itself. (Slapper, 1999:16)

This research will specifically consider antitrust crimes which are crimes that are aimed at activities that are anti-competitive in nature or otherwise unfairly interfere with the level and quality of competition in the marketplace. A number of developed nations have passed legislation that expressly forbids certain types of anticompetitive activity. This includes price fixing which occurs when two or more competitors agree on list or transaction prices, delivery charges, discounts, rebates, premia, bid prices, exchange rates, and price protection clauses as well as any other activity that a court may feel unduly inhibits competition (Connor, 2001). I define illegal cartel activity as:

Illegal cartel activity is collaborative action with competitors aimed toward the purpose of price fixing which is the result of deliberate decision-making by those who occupy structural positions within the organization such as corporate executives and managers. The decisions are organizationally based, made in accordance with the normative goals, standard operating procedures and cultural norms of the organization and are intended to benefit the organization itself.

In addition, this thesis will look specifically at illegal international price fixing undertaken by cartels some of whose participants were headquartered in the United States. The impact of this activity on the global economy cannot be understated. Connor (2009) estimated that over an 18 year period, that the value of markets where illegal cartel activity has occurred is in the trillions of dollars.

### ***1.1.3 The Environment***

The environment can have a dramatic impact on an organization, affecting the decisions they take and the corporate strategy they adopt in order to compete. But what elements inherent in the environmental condition are the strongest influencers on illegal cartel activity? And do some of them even matter at all? Chapter 3 sets out my arguments as to how elements of the environment cause illegal cartel activity and how the environmental scanning by boards moderates this relationship. To do so, I use resource dependency theory to demonstrate that there are circumstances under which an organization will take illegal actions to acquire or control those resources in the environment that it depends upon to ensure its survival.

While the environment has been described in management literature in a wide variety of ways, this research will focus on five key elements: industry concentration; industry



profits; firm profits; munificence; and, dynamism. I assert that these five environmental characteristics impact the illegal cartel activity of organizations.

However, the relationship is potentially more complicated than just a direct causal link between the environment and illegal cartel activity. Indeed, environmental phenomena, while important as drivers of organizational action, do not impact illegal cartel activity in an unfettered manner. I suggest that two principal responsibilities of the board, namely acting as a buffer between the environment and the organization and assisting the organization in its endeavours to operate within their environment serve to dampen the effect that the environment has on illegal cartel activity. Accordingly, this thesis recommends the examination of the activity of board scanning as a moderator in influencing the relationship between the environment and illegal cartel activity.

Thus, Chapter 3 sets out hypotheses that encapsulate the relationship between the environment, the scanning ability of the board and the commission of illegal cartel activity.

#### ***1.1.4 Control***

While Chapter 3 considers the external environment, Chapter 4 focuses on the internal control mechanisms of the organization, specifically those employed by the board. Corporation governance is the method used in the administration of the corporation's strategies and the actions taken to achieve the corporation's goals. Directors are charged by shareholders to ensure that managers act in the "best interests" of the corporation. The best interests of the corporation are usually meant to be the best interests of shareholders which are conventionally held to be an obligation to maximize profits (Jamieson, 1994).

One of the fundamental ways that corporate governance is manifested within the structure of the corporation itself is through various control mechanisms for the board, the CEO and managers. It is through these control mechanisms that the board can best ensure that the intentions of the shareholders are transmitted to managers and these actions are then monitored (Fama & Jensen, 1983b). There are two basic choices of control methods which can be used separately or in combination to motivate behaviour aligned with the interest of the shareholders: behavioural controls and output controls (Eisenhardt, 1985; Ouchi, 1977).

Chapter 4 sets out the differences in the two control methods and details how they motivate particular behaviours at different levels of the organization. As an example, output types of control methods result in there being an undue influence on short term firm outcomes, namely profits, and little supervision from above (Hill et al., 1992; Robertson & Anderson, 1993) including a lack of supervision of legal issues within the corporation (Jordan, 2010). This short term focus also drives CEOs and managers to concentrate only on the goals and not the means to achieve them. The corporate pressure to meet ever increasing shareholder profit expectations can drive organizations to consider turning to illegal means to achieve these ends, when they are blocked from using legal alternatives; this process is termed strain theory (Agnew, 1992, 2001, Merton, 1938, 1968). Strain theory is a theory often applied in the field of criminology, specifically when considering illegal activity (Agnew 1992, 2001). To the best of my knowledge, the insights from strain theory have not yet been applied to strategic management research; this thesis will address that gap and use anomie to help understand illegal corporate behaviour from a management perspective.

While strain theory animates the goal seeking of the CEO and manager, agency theory informs the relationship between the board, the CEO and managers. I posit a cascading effect whereby the control method (output or behavioural) that the board itself is measured against by shareholders is passed down to the CEO who then passes it down to the managers in charge of carrying out the strategy of the firm. This chapter further hypothesizes that the control method used by the board will be associated with the control method used by the CEO.

### ***1.1.5 Data and Methodology***

The data for illegal cartel activity comes from a proprietary database that contains details of 174 cartels involving 848 separate firms. Details on the cartel activities of the firms includes such things as participation, estimated market share, beginning and end dates of the cartels, levied penalties, fines and court settlements. The data for the other constructs comes from archival sources. Chapter 5 provides a clear description of the source of the data for illegal cartel activity and gives examples of the companies that will be examined in this research.

The hypotheses are complex and multi-faceted. They encompass variables that do not fit into the same analytical scheme such as environmental and control variables and present complex theoretical concepts such as strain theory. All of these elements are directed to the phenomenon of illegal cartel activity to answer a broad encompassing research question exploring what causes illegal corporate activity. Therefore, a rigorous methodological approach was required. It is outlined in Chapter 6.

The quantitative testing of the research relied on archival data for the independent variables. For the dependent variable (illegal cartel activity), the previously mentioned proprietary database was used as it consists of data on international cartels from 1990 to 2008. As the dependent variable is binary, logistic regression was the statistical method employed to analyze the data.

The qualitative research portion consisted of first person interviews with ten class action attorneys who are international experts in the area of illegal cartels and are intended to add colour and context to the quantitative research. The attorneys are intimately involved in the history, causes and effects of illegal cartel activity and so provided useful information on the applicability of the model.

### ***1.1.6 Results***

The analysis of the hypotheses (1-5) was related to the impact of environmental variables on illegal cartel activity when moderating for board scanning. I found that industry profits and dynamism had a significant and robust direct effect on illegal cartel activity, and a significant interaction with the board scanning moderator variable. However, none of the other environmental variables tested were significant, either as a direct effect or when tested in the moderated model with all of the control variables. I found that the board scanning variable received face validity and tentative support from practitioners and that it acted as a rather neutral moderator as evidenced in the small change to the direct effects of the environmental variables. The idea of the effect of the board on illegal activity may be further explored by looking at other indices of the board's

activities namely compliance regimes which were suggested by the attorneys as being the actual mechanism of how the board influences illegal activity, rather than board scanning.

My testing of the hypotheses (6-10) related to governance and organizational control and their impact on illegal corporate activity resulted in mixed results. I confirmed the cascading effect from the board compensation to the CEO compensation as statistically significant. This lends support to the notion that compensation systems from the top of the hierarchy tend to flow down through the organization.

I also found statistical support that an increase in independence of the board results in an increase in output controls for the CEO. Again this offers validation for the thesis in that independent directors have less day to day knowledge of the actions within the organization and so rely on output controls to monitor the performance of the CEO. However, I was unable to find any statistical confirmation for the hypothesis that the CEO control method had any impact on illegal activity. As a result, I was able to statistically support some of the constituent parts of the model but not the whole model itself. While I did not find a link between CEO control and illegal corporate activity through my quantitative analysis, the attorneys I interviewed felt there was a causal link and emphatically stated that output based controls of the CEO did lead to an increase in illegal activity. I believe this discrepancy to be an interesting area for future study.

### ***1.1.7 Discussion***

While we have come a long way from the 1950s, it is clear that illegal corporate activity still regularly occurs in global business. This thesis aims to significantly contribute to the management literature by deconstructing the root causes of illegal cartel activity through

an examination of its external and internal antecedents. I utilize an organizational approach that encompassed traditional antecedents such as the environment and new antecedents such as corporate control mechanisms. Furthermore, I apply resource dependency theory to explain a new moderating mechanism for the environment's impact on illegal cartel activity: board scanning. Finally, the use of strain theory to explain an organizational outcome advances this theory's usage and applies its insight to the field of management.

In directly addressing the research question "Why do corporations engage in illegal activity", the research adds to the management literature in a number of important and necessary ways. First, there continues to be much ambiguity in understanding the effect of characteristics of the environment on illegal cartel activity. The major characteristics include industry concentration, industry and firm profits, munificence, and dynamism, all of which have been studied with puzzling results. My research helps to clarify the relationships these characteristics have with illegal cartel activity in order to inform the ongoing academic debate. In addition, this research tests board scanning activity as a possible moderator of the environment's causation of illegal cartel activity. Board scanning has not been defined and it has not been tested in management literature to date, particularly as it pertains to illegal corporate activity. While I found it only had a significant interaction with industry profits and dynamism, this construct potentially has a much broader applicability and generalizability to corporate governance research.

Second, this research brought strain theory into an organizational context to explain illegal corporate activity. Strain theory has not traditionally been used in management

research; as such, it provides exciting explanatory opportunities for organizational behaviour, especially in the area of corporate deviance.

Finally, illegal corporate activity is an area that has been left virtually untouched by management researchers (Murphy & Robinson, 2008; Pinto et al., 2008), including very little research on illegal cartel activity (Geis, 2007). Given the significant impact that illegal corporate activity has on the global economy, it is important, both at an academic and practitioner level to have a better understanding of the root causes of this corporate deviant behaviour. I believe that the research undertaken for this thesis contributes towards that goal.

## CHAPTER 2

### ILLEGAL CORPORATE ACTIVITY

#### 2.1 Introduction

This chapter defines and explores the concept of white collar crime as manifested through the illegal corporate activity of cartels. It is this illegal cartel activity, including price fixing and corporate collusion, that is framed as the dependent variable in later sections of this thesis; thus, it is important to have a clear understanding of these concepts including their evolution in the literature, and their application in a legal context. I address how the literature has presented white collar crime. I then define antitrust offenses and provide a clear description of how they are linked to the core activities of cartels. It is worth noting that this section is particularly important for its contextualization of illegal cartel activity within the broader subject of corporate deviance which allows for a discussion on the generalizability of my results, presented in the discussion of this thesis.

As the concept of white collar crime has been approached from a variety of cross-disciplinary perspectives, it is first important to resolve the inherent challenges posed by this multiplicity. Sutherland first brought this multidisciplinary approach to considering this type of crime (1940). He further defined not only what is categorized as white collar crime (1940, 1941, 1945) but also argued that it is partially caused by a person's exposure to criminals in business organizations (1940). Additionally, white collar crime is not just that which is subject to criminal courts but also administrative tribunals and bodies (Sutherland 1940). As noted by Slapper and Tombs (1999:1) "definitional issues



are crucial in the context of a discussion of corporate crime....Definitional questions raise substantive issues regarding extent, causation and regulation; they problematize the nature, and boundaries, of academic criminology; more generally they raise issues regarding the nature of academic work.”

When considering white collar crime, the fundamental issue we must first consider is whether a corporation as an entity can commit a crime or whether a crime can only be committed by individuals (Daboub, Rasheed, Priem, & Gray, 1995). There is divided opinion in this regard. It is human beings that act, not corporations; as such, it is through the behaviour of employees of an organization that crimes are enacted (Shover & Hochstetler, 2002). However, it is suggested that it is the positions in the organization not the people themselves that are responsible for the acts (Jamieson, 1994), that is something that is inherent in one’s position within the organization itself (Sutherland, 1940).

From a legal perspective, corporations now are seen by the law as having a separate personality from their employees and can commit crimes on their own behalf (Slapper, 1999); organizations can take on humanistic qualities. Furthermore, many statutes provide for corporations to sue and be sued on their own behalf, including the statutes that set out the corporations’ general powers. Baucus and Near (1991) noted that Allegheny Bottling (at the time a Pepsi-Cola bottling franchise) was, as a corporation, sentenced to three years in jail. Therefore, organizations can exhibit human characteristics and act in an individualistic way, although they do so through the actions of people (Daboub et al., 1995). Following this logic, corporations as organizations can commit crimes and act in a deviant manner and as a result, be held accountable for these

actions. This recognition of the corporation as an actor is important as most of the analysis presented in this thesis, including the theoretical framework, the dependent variable (the construct of illegal cartel activity) and the majority of independent variables, are measured at the organizational level.

## **2.2 Illegal Activity/White Collar Crime**

For the purposes of this research, a clear definition of illegal cartel activity is required in order to ensure the face validity of the dependent variable. An examination of the literature elicits a number of definitions of white collar crime and illegal corporate activity. I review the primary definitions of these two concepts, discuss their differences and provide a reconstructed definition of illegal cartel activity that is applicable to this thesis as well as to the generalizability of its results.

There are a number of qualities that a definition of illegal cartel activity needs to encompass in order to exhibit the soundness required for the methodology for my thesis. First, as this thesis focuses on illegal international price fixing, a crime for which both individuals and corporations can be held accountable, the definition will need to appropriately capture this activity. Second, the definition will need to reflect the criminal nature of the action in order to respond to the theory that there are base criminal drivers for this type of activity. Third, the definition will also have to be able to accommodate the organizational aspects of the crime as detailed in my model; namely, there are corporate governance actions that speak to the incidence of this activity. Finally, the definition cannot contradict previously proposed and accepted definitions to such an

extent as to fundamentally depart from or reject a solid basis of the definition in previous literature.

The tracing of the evolution of the definitions of corporate illegal activity and white collar crime should begin with an examination of Sutherland's seminal work in the 1940s (Sutherland, 1940, 1941, 1945, 1949). Sutherland first defined what white collar crime was and subsequently looked at several limited and distinct industries including manufacturing, mining and mercantile organizations and several limited and distinct types of violations including restraint of trade, advertising, intellectual property, and labour practices to determine the context of corporate illegal activities (Slapper, 1999, Sutherland 1949). Sutherland coined the term "white collar crime" (Sutherland 1940) to indicate the colour of the collars of those committing the crimes; he was the first researcher to differentiate white collar criminals by their societal status or occupation (Weisburd & Waring, 2001). It is important to recognize that until this analysis, crime was viewed as a concept only applicable to immigrants and the poor (Coleman, 1987; Weisburd & Waring, 2001).

While Sutherland's dichotomization of crime into white collar crime and traditional crime created a new opportunity for the characterization of the construct of crime, the broadness of the term "white collar crime" led to confusion despite his best efforts to simplify its boundaries (Sutherland 1940). Although Sutherland distinguished between the colour of collars he advocated a common cause for crime that was not dependent upon poverty, psychopathic or sociopathic causes (Sutherland 1940). Eventually more robust classifications were developed and adopted to more distinctly analyze the phenomenon by Clinard and Quinney (1967) and others (Coleman, 1987) including

corporate, occupational, governmental, enterprise, and state-corporate crime (Freidrichs, 1996).

Following Sutherland, the most influential researchers of corporate illegal activity were Clinard and Yeager (1980). In their breakthrough study of corporate illegal activity, corporate crime was, for the first time, classified according to the types of violations (administrative, environmental, financial, labour, manufacturing, and unfair trade practices) and matched against the number of violations. They also attempted to link the number of crimes to each corporation, the type of victim and the type of legal response (administrative, civil or criminal) (Clinard & Yeager, 1980). This approach has been replicated in studies ranging from the specific such as automotive recalls (Bromiley & Marcus, 1989) and the electronics industry (Mitchell, Daniels, Hopper, George-Falvy, & Ferris, 1996) to the very general (19 years of activity in the United States economy (Baucus & Near, 1991)). Over the last 30 years, the study of illegal corporate activity has led researchers to analyze the subject through a variety of lenses, including an examination of the primary victims, the nature of the harmful activity, the size and scope of the corporation itself, the type of product or service involved, the primary corporate agent of the crime, the instrument or mechanism used to commit the crime, the type of law invoked, and the specific legal class involved (Freidrichs, 1996).

Before one can adequately define illegal corporate activity, it is critical to understand the concept of illegality. Illegality has traditionally been divided into two classes depending upon who is intended to benefit from the illegal activity (Daboub et al., 1995). The first class of illegal activity is personal crimes where the beneficiary of the activity is an individual. While this class is responsible for a large portion of the incidences of white

collar crime, its consideration is outside the scope of this thesis. This precludes the bad apple theory in criminology which has in any event been discredited. The bad apple theory posits that corporate crime is simply the result of rogue individuals – bad apples such as Nick Leeson at Barings Bank – and not any systemic organizational reason.

It is the second class of illegal activity where the beneficiary of the activity is the corporation that will occupy my focus. This second class is termed illegal corporate crime and is an activity for which the corporation itself can be punished (Baucus & Dworkin, 1991; Daboub et al., 1995; Mitchell et al., 1996; Sz wajkowski, 1985). The primary distinction between the two classes might seem self-evident but it is worth reiterating as it is so fundamental to this thesis. The difference between the two classes is that although there may be some residual benefit to individuals in the commission of illegal corporate activity, the primary beneficiary is the corporation. In addition, the definition of illegal corporate activity recognizes that it is the organization and its structures that are necessary for the commission of illegal activities (Jamieson, 1994).

Scholars in this area have actively considered what the illegal activities themselves should constitute. It has been proposed that corporate illegal activity is not activity that is merely questionable, or unethical, or inadvertent behaviour later identified as illegal (Baucus & Dworkin, 1991), or corporate misconduct (Vaughan, 1999), or merely dubious (Bromiley & Marcus, 1989); it must constitute a breach of the law (Braithwaite, 1985). Further, Baucus and Baucus (1997) argue that these illegal activities could be the result of both intentional and unintentional acts. This is supported by Box (1983) who noted it is very important to recognize both the intention to commit a crime and the indifference to the harm a crime may be causing. It has been pointed out that the mere admission of

the commission of an illegal action does not necessarily mean that the corporation in fact committed an illegal act; the corporation's plea bargain may actually be a conservation of resources with the corporation making a tactical decision to plead guilty rather than face a public, expensive and time consuming battle with the government (Baucus, 1994).

Therefore, the theoretical development and analysis in this thesis is built upon the definition of illegal corporate activity suggested by Slapper:

Criminal acts (by omission or commission) which are the result of deliberate decision making (or culpable negligence) of those who occupy structural positions within the organization as corporate executives or managers. These decisions are organizationally based – made in accordance with normative goals (primarily corporate profit), standard operating procedures, and cultural norms of the organization - and are intended to benefit the corporation itself. (Slapper, 1999:16)

This definition of illegal corporate activity achieves the four criteria outlined previously: it encompasses illegal international price fixing; it is criminological in nature; it is at the organizational level of analysis; and, it is grounded in previous literature. Additionally, this definition is congruent with all of the constructs and theories germane to this thesis and is critical for discussing the generalizability of the results from this research.

## **2.3 Illegal Cartel Activity**

### ***2.3.1 Antitrust Crimes***

Antitrust crimes are a special subset of illegal corporate activity. They are defined as crimes that reduce competitive behaviour, harm societal welfare and generally cause consumers to pay more for goods and services than they would ordinarily pay in a competitive environment (Jamieson, 1994). Antitrust and anticompetitive behaviours are more common than many people realize with one study revealing that 18% of the

surveyed American working population has observed this type of behaviour in their careers (Kaptein & Avelino, 2005). Unfortunately, antitrust activity is not easy to detect as its protagonists work hard to keep it a secret. Its detection requires the dedicated and sophisticated resources of organizations such as the United States Department of Justice to identify and prosecute this type of activity (Baker & Faulkner, 1993). To support these efforts, a number of countries have passed antitrust laws such as the Sherman Antitrust Act (1890) and the Clayton Antitrust Act (1914) in the United States and the Competition Act in Canada (1985). These acts are aimed at prohibiting activities such as price fixing, bid rigging schemes, territory division, and price discrimination between customers and contain provisions to allow for the review of mergers and acquisitions to make sure they will not harm the competitive environment (Jamieson, 1994). As the exact nature of these crimes is specified by each statute, I have provided the relevant sections from each of the three acts for context.

The Sherman Antitrust Act (1890) states:

Section 1:

Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal. Every person who shall make any contract or engage in any combination or conspiracy hereby declared to be illegal shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding \$100,000,000 if a corporation, or, if any other person, \$1,000,000, or by imprisonment not exceeding 10 years, or by both said punishments, in the discretion of the court. (USC 15, Section 1)

Section 2:

Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding \$100,000,000 if a corporation, or, if any

other person, \$1,000,000, or by imprisonment not exceeding 10 years, or by both said punishments, in the discretion of the court. (USC 15, Section 2)

The Clayton Antitrust Act (1914) reads (in regards to mergers and acquisitions):

Section 18:

No person engaged in commerce or in any activity affecting commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital and no person subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the assets of another person engaged also in commerce or in any activity affecting commerce, where in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly. (15 USC, Section 18)

Finally, the Canadian Competition Act (1985) defines illegal corporate activity as:

45. (1) Everyone who conspires, combines, agrees or arranges with another person
- (a) to limit unduly the facilities for transporting, producing, manufacturing, supplying, storing or dealing in any product,
  - (b) to prevent, limit or lessen, unduly, the manufacture or production of a product or to enhance unreasonably the price thereof,
  - (c) to prevent or lessen, unduly, competition in the production, manufacture, purchase, barter, sale, storage, rental, transportation or supply of a product, or in the price of insurance on persons or property, or
  - (d) to otherwise restrain or injure competition unduly
- is guilty of an indictable offence and liable to imprisonment for a term not exceeding five years or to a fine not exceeding ten million dollars or to both. (R.S.C. 1985, C-34)



### ***2.3.2 Price Fixing***

Restraint of trade has as its purpose the increasing of profits for the participating companies compared to that which they might normally gather in a competitive environment. While this thesis uses the term “price fixing” it should be noted that price fixing is a subset of restraint of trade.

Price fixing is a very complex, very expensive global issue. It is estimated to have cost Americans over \$60 billion annually in the early 1980s (Freidrichs, 1996). Over the years, price fixing has occurred in many industries and for every imaginable product or service from airlines to infant formula to electrical equipment. The purpose of price fixing schemes is to raise or maintain prices at a level that is above that which would occur under normal competition (Baker & Faulkner, 1993). By definition, at least two participants are required to fix a price. These participants conspire in secret in order to fix prices, quantities or otherwise manipulate what consumers may pay for the goods and services they seek in a given market (Baker & Faulkner, 1993; Connor, 2006). Within the arrangement, competitors agree on list or transaction prices, delivery charges, discounts, rebates, premia, bid prices, exchange rates, and/or price protection clauses (Connor, 2001). Ultimately, price fixing schemes are concluded in one of two ways: either the colluders end the scheme on their own terms or they are caught.

Price fixing as an antitrust crime is “per se illegal” meaning there is virtually no legal method, with one or two minor exceptions, of price fixing either domestically or internationally with respect to American companies. The arrangement through which price fixing is accomplished through two or more firms is called a cartel. The next

section defines cartels, provides an overview of their historical development and describes their activities.

### ***2.3.3 Cartels***

A cartel is a group of firms, either domestic or international that conspire together to engage in antitrust activity, primarily price fixing. In any market firms have a goal to either increase revenues or decrease costs in order to maximize profits. There is a built in structural incentive for firms in these markets to co-ordinate their actions to raise profits though the restriction in the supply of goods causing prices to rise or through collective pressure on suppliers to depress the costs of producing goods or materials.

The effectiveness of collusion is dependent upon the collective action of these firms which limits the competition for the provision or the supply of goods and services (Porter, 2005; Stigler, 1964). While there are examples of cartels that are legally sanctioned by governments (e.g. OPEC), the vast majority of cartels through their purpose, actions and by definition are considered illegal in much of the industrialized world (Connor, 2006). As described by Berzins and Sofo (2008:669) “a cartel is an illegal commercial agreement, practice or arrangement, and by definition involves a number of players and a variety of complex factors.” The illegal nature of cartels is evidenced through the secrecy they maintain in order to hide their activity from the victims of their actions and from the authorities. It is not uncommon for code names, clandestine meetings, evidence destruction, and false record keeping to be used in order to protect the secrecy of their operations (Berzins & Sofo 2008). Perhaps the clearest

description of a cartel is provided by Connor, drawn from his research into a number of international cartels:

The basic task of a cartel is to set a uniform market transaction price. Uncertainty about the costs of monitoring and policing the agreement will often imply that a cartel will start with a price well below the monopoly price. As experience, discipline and trust grow, the price will ratchet towards that profit-maximizing monopoly price. Thus, a cartel must regularly meet to reset the price, particularly to take into account shifts in demand or supply conditions. If different grades exist, price discounts and premia must be established and adjusted over time. The cartel must establish policies that discourage their members from expanding their sales through service differentiation. All these tasks will be made more effective if the cartel can agree to set observable market shares for each participant or divide markets by geography, product form, or class of customer. Meeting-the-competition clauses in sales agreements are a simple method of detecting cheating. All the cartel's customers then have an incentive to expose below-price transactions. Another enforcement mechanism is the trigger-price agreement; in which cartel members agree to expand output by a prescribed amount should the market price fall below some critical level. (Connor, 2001:30)

Cartels were first identified in the United States in the 1870s in industries including oil, sugar, tobacco, and railroads (Connor, 2001). The history of this era is laden with examples of influential firms in industries colluding to create closed systems where they were able to reap huge profits at the expense of consumers and governments who were funding infrastructure expansions. Due to public outrage at the actions of these various "trusts" as they were called at the time, the United States Congress passed the Sherman Act (1890) as a means to combat actions that restrained free market competition. Due to the vigorous enforcement of the Sherman Act (1890) most of the cartels in the United States were ended prior to World War I (Connor, 2001).

Post World War I saw the rise of European cartels. These cartels differed from the earlier American trusts in that a number of them took on an international flavour

(Connor, 2001). For example, by 1940 the I.G. Farben company in Germany was very active in setting up cartels for pharmaceuticals, synthetic fibres and chemicals, ultimately running over 2,000 cartels in aid of the Axis war effort (Connor, 2001). In an attempt to limit cartel activity after World War II, the United States used its power in post-war Europe and Japan to transplant and enforce anti-collusion structures. As a result of their influence and actions, the next 50 years saw a reduced level of international cartels (Connor, 2001).

It is felt that the increasing internationalization of markets, the globalization of countries and increased competition in what had previously been fairly protected and isolated national and regional markets allowed for a resurgence of international cartel activity in the late 1980s (Connor, 2001). But what magnitude of economic impact does this cartel resurgence have on the global economy? And as cartel activity has been increasingly pervasive and fines and imprisonments are seemingly having little effect on the number and scope of violations, is it actually an impediment to international commerce? We can gather a rough estimate of the impact by examining the incidence of cartel activity internationally as measured by the amount of commerce that is affected by such schemes. As an example, recently accumulated data (Connor, 2009) has quantified the incidence and size of private international cartels. These are cartels where the participants are in more than one country, do not include intranational cartels, and are not sanctioned by the home government. From January 1990 to December 2008, a period of 18 years, there were 516 private international cartels that were the subject of governmental, regulatory or private legal actions. To fully understand the potential impact of these 516 cartels, one can look at the size of the market that they affect. Since

these cartels are aimed at influencing prices within a market, the total affected market size has been used as a measure of the potential disruption in the competitive environment. This measure is obtained by examining the unreported sales using the expected value method (Connor & Helmers, 2007). Connor discovered that illegal cartel activity disrupted markets totalling over \$16 trillion USD over the 18 years, on average over \$800 billion per year (Connor, 2009). Thus, the illegal corporate activity of cartels clearly has an extremely significant impact on global commerce and is worth exploring further.

Combining the definition of illegal corporate activity with the nature of cartels, I propose the following as a definition of illegal cartel activity:

Illegal cartel activity is collaborative action with competitors aimed toward the purpose of price fixing which is the result of deliberate decision making by those who occupy structural positions within the organization such as corporate executives and managers. The decisions are organizationally based, made in accordance with the normative goals, standard operating procedures and cultural norms of the organization and are intended to benefit the organization itself.

It is also appropriate at this juncture to make mention of the similarity between the cartel and the joint venture, alliance or other cross border arrangement between firms which is common (and legal) in today's economy. One of the ways to view this situation is through the OLI paradigm (Dunning, 1988). In this paradigm the "O" stands for Ownership advantages of why a firm would rather own assets in another country than just buying the products. The "L" stands for Locational advantages or where exactly a firm should invest to maximize the return on its ownership of foreign assets. The "I" stands for Internalization advantages of how a firm can capture the advantages of ownership of foreign assets.

Dunning felt that under the “I” portion of the paradigm these organizations could offer greater organizational efficacy than more traditional structures or hierarchies and were interested in exercising monopoly power over assets under their governance. In particular and regarding cartels, Dunning states (Dunning & Lundan, 2008: 288), “[Cartels] are less likely to flourish where there are distinct and substantial differences between the O-specific advantages of the participating firms and where, in order to exploit these advantages, firms need to internalize the markets for them. In particular, there is sometimes a trade-off between the gains of the common governance of intra-firm integration and those arising from inter-firm cooperation. As with any grouping of institutions or countries, much depends on the gains anticipated from cooperative action, and the ways in which these gains are distributed among its members compared with some other modality of achieving the same result.” This area is another perspective that merits further attention in the future as there is clearly another international business perspective that can be brought to bear on analyzing how international cartels operate in today’s global economy.

## **2.4 Summary**

Illegal corporate activity, as articulated in this thesis has foundational elements drawn from previous cross-disciplinary work on illegal corporate activity that stretches back almost 70 years. I am building on this past research by adding the specific characteristics of price fixing and the unique qualities of cartels. This creates a robust definition for the dependent variable in this thesis that is at the organizational level, recognizes the impact of the actions of individuals and captures the phenomenon of interest.

## CHAPTER 3

### THE ENVIRONMENT

#### 3.1 Introduction

Chapter 2 outlined the relationship between illegal corporate activity and cartels. It is important to now consider the theoretical framework underpinning the relationship between the external environment and illegal cartel activity. In particular, I use resource dependency theory (RDT) to explore the environmental conditions that I believe are antecedents to cartel establishment and activity. This chapter sets out my arguments as to how the organization's environment impacts illegal cartel activity and describes how the environmental scanning of the firm's board of directors moderates this relationship. Through the lens of RDT (Pfeffer & Salancik, 1978), I assert that an organization will take illegal actions as a means of acquiring or controlling those resources in the environment upon which it depends to create a temporary or sustained competitive advantage. RDT also supports the interaction of the board with the environment as one of the board's roles is to act in a manner that moderates the relationship between the environment and the organization in addition to assisting the organization in its endeavours to operate within its environment.

I describe the environment that impacts an organization through the use of four major categories: industry concentration (Datta & Narayanan, 1989; Pfeffer & Salancik, 1978; Zahra et al., 2005); profits (Baucus, 1994; Staw & Sz wajkowski, 1975); munificence (Baucus & Near, 1991; Dess & Beard, 1984; Goll & Rasheed, 2005); and dynamism (Dess & Beard, 1984; Keats & Hitt, 1988). I then turn to an analysis of the construct of

board scanning, suggesting it moderates the impact of the environmental phenomena on illegal cartel activity. I posit that board scanning serves as a brake in many instances, dampening the effect that the environment has on illegal cartel activity.

Thus, this chapter will outline hypotheses that encapsulate the relationships among the environment, the scanning ability of the board and the commission of illegal cartel activity.

### **3.2 Resource Dependency Theory**

While resource dependency theory (RDT) was originally developed to provide an alternative perspective to economic theories of mergers and board interlocks, it can also provide insight into precisely the type of inter-organizational relations that have played such a large role in the recent corporate scandals of the 21<sup>st</sup> century (Scott & Davis, 2007). RDT suggests that in order to survive, organizations must seek out and maintain resources that can only be obtained from other firms; therefore, the main driver of interfirm relationships is to allow an organization to gain the resources it requires from its broader environment to achieve a competitive advantage (Pfeffer & Salancik, 1978). As noted by Glasberg and Schwartz (1983:314), “since needed resources are controlled by other large (managerially directed) firms, resource dependency leads to complex structural relationships among firms.” The underlying tenets of RDT are best explained by Pfeffer, who describes the foundations of RDT in the following way:

- 1) The fundamental units for understanding intercorporate relations and society are organizations;
- 2) These organizations are not autonomous, but rather are constrained by a network of interdependencies with other organizations;
- 3) Interdependence, when coupled with uncertainty about what the actions will be of those with which the organization is interdependent, leads to a situation in which the survival and continued



success are uncertain; therefore 4) Organizations take actions to manage external interdependencies, although such actions are inevitably never completely successful and produce new patterns of dependence and interdependence; and 5) These patterns of dependence produce interorganizational as well as intraorganizational power, where such power has some effect on organizational behaviour. (Pfeffer, 1987:26)

Fundamentally, there are three conditions the RDT framework considers when explaining an organization's relationship with the external environment. First, organizations take their external environment into account when determining their actions. Second, organizations have at their disposal various strategies they can use to respond to the environment and these strategies differ across organizations. Finally, power – not efficiency as in transaction cost economics or rationality as in economics – helps to explain what actions an organization may take in order to respond to the environment (Scott & Davis, 2007).

Historically, much of RDT has been used to explain how organizations use mergers and acquisitions (M&As) as a way to reduce uncertainty. However, its applicability began to diminish as M&As lost favour in the 1990s as corporations started to divest themselves of these horizontally attached units. The M&A activity was also reversed with respect to vertical integration as firms began to outsource all but a few core functions. In addition, by the late 1990s the incidence of board interlocks had greatly decreased (Scott & Davis, 2007). As recognized by Scott and Davis (2007:243) “changes in economic times and regulatory regimes, in short lead to changes in the repertoires that organizations used to manage their interdependence.”

RDT, however, has been experiencing a resurgence with several recent studies enriching the discussion around this theory by applying it in new, innovative ways. Casciaro and

Piskorski (2005) introduced the concept of differential power imbalances between organizations that are co-operating with each other, examining the level of their mutual dependence to assess how an organization deals with trying to absorb resources that are providing a constraint and hence uncertainty in the organization's operations. Katila, Rosenberger and Eisenhardt (2008) looked at the competitive aspects of the interfirm interaction including the potential for resource misappropriation between firms. Ozcan and Eisenhardt (2009) used RDT to theorize that the interrelationship of organizations can be socially constructed and multilateral, especially in a networked industry. These research directions move the field forward by addressing the reduction in environmental uncertainty through a diminution in the dependence that RDT asserts organizations strive for.

RDT has been criticized for being unable to explain how organizational competencies are developed, and for its seeming inability to adequately answer whether variables such as transaction costs, learning and legitimacy factor into an organization's decisions to pursue actions to reduce uncertainty in the environment (Barringer & Harrison, 2000). In addition, the avoidance of uncertainty through a decrease in resource dependency was questioned by Gulati and Sytch (2007) who demonstrated that uncertainty could be reduced through joint dependence between firms.

RDT then has seen the subject matter of its initial uses wane only to have researchers in the last few years use the theory to look at different phenomena such as manufacturers performance in procurement relationships (Gulati & Sytch, 2007), alliance network structure (Bae & Gargiulo, 2004), alliance portfolios (Ozcan & Eisenhardt, 2009), and corporate investment in entrepreneurial partnerships (Katila et al., 2008). The theory,

while it has some limitations, has proven to be adaptable and relevant in today's technology, alliance rich, networked world.

### ***3.2.1 Resource Dependency Theory and Cartels***

Cartels and the illegal activities they undertake (particularly price fixing) fit very well within the purview of RDT. In their original conceptualization of RDT, Pfeffer and Salancik (1978) suggested that mergers and acquisitions and alliances would allow an organization to reduce environmental uncertainty through encapsulating, procuring or utilizing resources that would not have been otherwise available (Burgers, Hill, & Kim, 1993). This same logic can be extended to other inter-organizational arrangements including cartels. In fact, Pfeffer and Salancik (1978:179) considered cartels, calling them “overt attempts to organize a set of interdependent organizations, represent[ing] coalitions of organizations with typically at least normative sanctions applied to members who deviate from the proscribed cartel practices.” Unfortunately, while the actions taken by organizations involved in M&As are often a matter of public record, those undertaken by cartels, namely illegal price fixing, are hidden from the view of the regulatory authorities, the public and often the large majority of the employees at the cartel firms themselves. The collusion between firms takes place at the highest levels of the organization, and this coordination is not publicly visible. Indeed, it is “the relative invisibility of behavior, the reliance on ambiguous effects for determining whether or not behavior has occurred, and the historical precedents of economic theory which argued that cartel activity has the single goal of maximizing joint income, [that] have all served to impede the progress of understanding cartel and coalition behaviour” (Pfeffer & Salancik, 1978:181). Thus, while cartels may be an important form of interorganizational

behaviour that reduces the dependency of an organization on others and hence reduces uncertainty, it has seldom been studied.

### **3.3 Board Scanning**

As board scanning is a construct that I assert will moderate the effect of the environment on illegal cartel activity, I provide its description prior to the discussion of the independent variables for ease of comprehension for the reader. I then define each environmental construct (concentration, profits, munificence, and dynamism) and sequentially provide the moderating hypothesis that is aligned with each independent variable.

A Corporate board of directors has a general internal and external monitoring function, working to ensure the organization is operating in an efficient manner and pursuing activities which are in the best interests of the corporation. This monitoring function serves a number of purposes. First, the board has a mandate to ensure that the top management team is acting in accordance with the owners' interests (Fama & Jensen, 1983a, 1983b). This responsibility, a fundamental tenet of agency theory, recognizes that the board has a monitoring role with respect to top management's activities focused on uncovering any discrepancies between the goals of management and the owners of the corporation (Eisenhardt, 1989). The board is seen as the "ultimate monitor responsible for the scrutiny of the actions of the highest managers of the firm, assuring that top managers are directing the firm in directions that are consistent with established mission and strategic plans" (Fields, 2007:335). Second, the board has a duty to review the firm's strategy as developed by management and then to monitor the execution of the strategy as

it is carried out by the organization (Hendry & Kiel, 2004). Finally, the monitoring function of the board assists the organization in adjusting and responding to environmental changes (Goodstein, Gautam, & Boeker, 1994). One of the ways that the board can accomplish these goals is by scanning the environment (Pearce & Zahra, 1991). I define board scanning in this research as the potential ability of the board to assess the environment for strategic and operating uncertainties that may affect the operation and survival of the organization.

The role of the board as interpreted through RDT differs from that presented in agency theory. RDT does not recognize the board's role in setting and influencing strategy. Rather, in RDT the board is seen as a co-optive mechanism that interacts with the external environment to both access important resources and buffer the organization against adverse environmental change (Goodstein et al., 1994; Pearce & Zahra, 1991; Pfeffer & Salancik, 1978). While it has been argued that in exercising their role boards contribute to the strategy process by assessing new external information in a strategic context (Hendry & Kiel, 2004), others present the board solely as a strategic consultant not exercising any real control over the strategy of the organization (Carpenter & Westphal, 2001). However, it is the dual ability of boards to access and assess the external environment that serves as an invaluable asset in shaping the strategy of the firm and its operation. This board scanning function generates advice and counsel from the board, provides a buffer for the organization (assessing new information) and can even elicit external resources.

Both RDT and agency theory agree that the board has a primary responsibility to assess external environmental information which then has an impact on the strategy and actions

of the firm. The board performs this function through monitoring its performance and providing oversight (agency theory) as well as providing advice and counsel, bolstering the public image, creating channels of communication, and providing access to resources and stakeholders (RDT) (Stavish, 2007).

While RDT has been used to describe the influence that the external environment has on the firm it has also been used in a corporate governance role mainly by indicating that the board brings resources to the firm (Pfeffer & Salancik, 1978). Agency theory has also been used extensively in understanding the board's monitoring role (Johnson, Daily & Ellstrand, 1996). It should be noted that there has been an attempt to link agency theory, (the monitoring function) and RDT (board attributes namely human and relational capital) to firm performance (Hillman & Dalziel, 2003). Hillman and Dalziel (2003) also proposed that the external nature of the board would moderate the monitoring of the board. This is noted as there has been some attempt to marry these two theories although it has not been successfully empirically tested to the best of my knowledge. There is therefore some work that has been done to marry this monitoring function which is part of scanning to the performance of the firm.

The board's scanning of the external environment to better assess the firm's strategy and actions should not be undervalued (Ritvo, Salipante, & Notz, 1979). In order to influence organizational processes, the board will need to gather and prioritize data from the environment to form appropriate judgements about key variables and causal connections (Garg, Walters, & Priem, 2003). Therefore, scanning is the initial step in the process of organizational adaptation (Hambrick, 1981).

The board's assessment role, operationalized through its scanning function influences the strategy and actions of the organization (Hambrick, 1981). The better a board scans the external environment, the better they are able to prioritize and collect data from this environment (Hendry & Kiel, 2004). The better they are able to collect data, the better informed their judgements will be when exercising their role as advisors and consultants to the top management team (Murphy & McIntyre, 2007). The better the board is at its environmental scanning function, the better it will be in fulfilling its buffering role by assessing those aspects of the environment that will impact the firm (Pfeffer & Salancik, 1978).

The assumption implicit in this line of logic is that the board is less likely to want the firm to engage in illegal cartel activity than the CEO and the management team does. According to agency theory, the interests of the owners of the firm are most closely guarded by the board whereas the CEO and Management team may have a misalignment between their personal interests and that of the organization. I therefore, for the purposes of this thesis, make the assumption that illegal cartel activity is not in the best long term interests of the organization and will at all times be shunned by the board as contrary to the purposes and goals of the organization whereas the CEO and management team may prioritize their personal interests ahead of the firm's interests and engage in illegal cartel activity.

The board's monitoring role is heightened when its environmental assessment is related to legal issues. Indeed, it has been suggested that the monitoring level of the board is greater when legal actions of the organization are in question (Kesner, Victor, & Lamont, 1986). This may be because "although directors might not know about a firm's

involvement in illegal actions, ignorance of such matters places them in very precarious, and possible severely damaging, legal position” (Kesner et al., 1986:792).

Therefore, the efficacy of the board’s monitoring function is particularly important in regards to legal issues and I assert that there is a very direct connection between data gathering, judgement forming and action in these matters. I suggest that the effectiveness of the board’s scanning function will influence the strategic choices the management of the firm will take in response to its external environment. As the board more effectively monitors the external environment and detects the potential for illegal activity within the industry, it will be more apt to motivate the firm to take action that avoids illegal activities. Conversely, if the board is ineffective in monitoring the external environment, they will be unaware of the potential for illegal activity and will not take action to forestall it from occurring at their organization. This will result in an increased incidence of this type of activity as firms move in the absence of board direction to achieve greater environmental stability.

### **3.4 The Environment**

Although organizations largely have the ability to control and shape their internal situation, the external environment presents an organization with factors that are generally beyond its ability to manage; this lack of control leads to uncertainty (Pfeffer & Salancik, 1978). The environment encompasses resources that influence the organization and upon which the organization is dependent. If an organization is able to determine a mechanism by which to control these external resources, it is able to decrease the threat



of uncertainty and thereby increase the chance of the organization's long term survival (Pfeffer & Davis-Blake, 1987).

One of the uncertainties that organizations are exposed to in the competitive environment is that of price fluctuation, particularly downward pressure on prices as competitors constantly try to outbid each other. This uncertainty impacts the organization in two ways. First, their revenue stream and hence their resource accumulation is unpredictable. Second, the revenue stream is less robust than they would desire. A method for organizations to reduce the uncertainty related to these dependent resources is to attempt to control them. However, the organization is legally and logistically constrained from directly eliminating price fluctuations and unilaterally setting price levels (Baucus, 1994; Vaughan, 1983). An organization can remove or avoid these constraints through a cooperative association with their competitors either directly through a cartel (Gulati & Sytch, 2007) or indirectly through tacit collusion (Barney, 2007). A cartel provides the opportunity for an organization to reduce uncertainty and remove these environmental constraints through collusion with industry peers. This illegal activity allows the organization to predictably accumulate resources that then can be utilized in furthering its goals, including survival. In short, one of the ways that an organization can respond to environmental uncertainty is through participation in an illegal cartel.

Research into the interaction of the environment and the organization has generated a broad range of characteristics used to describe this relationship which can be divided into three main categories. Historically, the first category used industry structure, type and concentration as important indicators of the environment within which an organization operates (Asch & Seneca, 1975; Coleman, 1987; Jamieson, 1994; Zahra et al., 2005).

The second category looked toward firm and industry profits as mechanisms to measure environmental and organizational dependency (Connor, 2001; McKendall & Wagner, 1997; Ornstein, 1972; Simpson, 1986). The final category contained somewhat more sophisticated and theoretically complex measures to delineate the relationship between an organization and its environment. These have included attributes such as munificence and dynamism (Dess & Beard, 1984; Goll & Rasheed, 2005; Keats & Hitt, 1988; Staw & Sz wajkowski, 1975).

I review each of these categories below.

### ***3.4.1 Industry Concentration***

Industry concentration analysis is a common mechanism that has been used to assess the environment within which an organization operates. In particular, industry concentration figures prominently in the assessment of the underlying motivation for antitrust or illegal collusion activities; as the industry becomes more concentrated, the opportunity or at least the probability of collusion increases (Zahra et al., 2005). The structure of the industry, and specifically the number of firms within the industry environment, affects the opportunities that a single organization within the industry may have to engage in collusive conduct. The fewer dominant firms there are (high concentration), the fewer the number of participants required to influence the price (or another aspect of the market such as supply) and the more potentially successful the collusive activity will be (Clinard & Meier, 1979; Coleman, 1987). A low industry concentration requires many industry participants to be involved in antitrust activities. This would not only lower the success rate of any antitrust attempt, it would make it more difficult to conceal from detection

(Coleman, 1987). Most industry concentration research has focused on antitrust violations (McKendall & Wagner, 1997). It is important to recognize that although most of the convicted private international price fixing cartels had fewer than eight members, there have been convictions of cartels of up to 30 members (Connor, 2001).

One of the first studies on concentration and collusive behaviour was Ornstein (1972) who hypothesized that the cost of collusion decreased as the number of industry participants decreased due to lower costs of negotiation, coordination and enforcement, while the degree of dependency between participants increased. Through an examination of 131 non-randomly chosen industrial firms between 1947 and 1960 he found that “concentration displayed no independent relation to profit rates in both producer and consumer goods industries” (1972:537). Therefore, Ornstein advocated that industry concentration not be used as a policy tool to reduce the incidence of cartel activity.

Other researchers have continued the examination of the relationship between industry concentration and collusive activity, achieving conflicting results. Asch and Seneca (1975) studied 51 firms that had been convicted by the courts of collusive behaviour and 50 randomly selected firms that had not and found that no significant difference existed in the industry concentration ratio between the firms that had been convicted and those that had not. In a seeming contradiction of Ornstein (1972) and Asch and Seneca (1975), Pfeffer and Salancik (1978) found that industries with intermediate levels of industry concentration exhibited the highest levels of antitrust violations.

Perhaps the most positive relationship was found by Datta and Narayanan (1989) who compiled a meta-analysis of 22 studies that had up until that time looked at the

concentration-performance relationship and found (using four and eight firm concentration ratios) that while there was a positive correlation, industry concentration explained less than 10% of the performance of the firm. They cautioned that public policy and strategic research should not place much emphasis on the concentration variable as its explanatory power was low and that strategy researchers need to include other relevant structural factors to account for industry attractiveness. Jamieson (1994) summarized the research done in the area of industry concentration and illegal activity and concluded that “at this point, empirical observations have been unable to uncover a causal relationship although theoretical explanations have supported both views [that high concentration does or does not lead to more antitrust activities], perhaps engendering more confusion than coherence surrounding these issues” (Jamieson, 1994:25). Or, in the words of Zahra et al. (2005:810), “To summarize, the preceding discussion highlights the difficulty that researchers encounter in linking industry concentration to corporate commission of illegal acts.”<sup>1</sup>

Given the diverse results regarding the relationship between industry concentration and illegal cartel activity, I do consider it in this study and examine whether any such relationship might be moderated by the board’s scanning activity. To the extent that industry concentration is a cause for illegal cartel activity the board can, through its scanning of the industry structure and the organization’s main competitors, raise suspicions and therefore provide cautionary advice to the CEO and management if there appears to be an opportunity to engage in illegal cartel activity. The board therefore

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<sup>1</sup> Moderation can be used to help explain competing or otherwise non harmonious results and/or establish boundary conditions (Aiken & West, 2001; Baron & Kenny, 1986).

plays a preventative role in dampening the probability of illegal cartel activity taking place. As the amount of the board's scanning activity increases, the preventative role the board plays becomes more effective. Based upon the foregoing I hypothesize that:

*Hypothesis 1: The effect of industry concentration on illegal cartel activity is moderated by the amount of board scanning of the external environment such that for a given level of industry concentration, less scanning by a board will result in a greater probability of illegal cartel activity in industries that are more concentrated.*

### **3.4.2. Profits**

Profits are defined as the residual income when all expenditures and taxes have been accounted for; firms and organizations attempt to maximize profit and, by extension, shareholder value. While they are a primary environmental driver associated with illegal activity, there is some debate within the literature as to which level of profits, industry or firm, should be studied in order to best understand the relationship. I choose to examine both in this research. Through an industry lens, RDT would suggest that if resources in the form of profits are constrained in the industry environment then these resources are providing a source of uncertainty which firms will seek to reduce through removing or controlling the constraints. Firms within the industry can elect to exercise control through entering into a cartel to fix prices to either stabilize or artificially increase industry profits. Additionally, RDT would also advocate that if profits at the firm level are scarce or otherwise constrained a firm would then look to the outside environment to remove and control these constraints, possibly through the auspices of forming or joining a cartel.

The research examining firm and industry profitability and illegal corporate activity demonstrates a pattern similar to that previously discussed for industry concentration. Staw and Sz wajkowski (1975) found that firms whose profits were below average engaged in antitrust violations more frequently. However, when the firm's profits were less than their industry average, they did not engage in antitrust violations more frequently. This can be explained if one considers that antitrust or price fixing violations are in many respects intraindustry phenomena; while at least two firms from an industry are technically required to fix prices, it is more likely that a majority of the top firms are involved. This activity is reasonably more frequent when all the firms in the industry (as opposed to just one or two) are suffering from a profit level that is below that of other industries (possibly because these firms are in competition for capital with other firms in the open market or internally in a diversified conglomerate).

Other researchers have found a variety of other linkages. Asch and Seneca (1975) discovered that both declining firm profitability and low growth led to increased antitrust violations. Simpson (1986) studied firms that were convicted of antitrust behaviour, blending her theorizing and analysis at both the firm and industry levels into a theory of profit squeeze. Since corporations are economic creatures whose main goal is profit generation, as profits are squeezed there is a greater propensity for firms to commit antitrust activity to remedy this situation in order to stabilize profits or protect the growth of the firm (Simpson, 1986). While Simpson found that firm level profitability was unrelated to antitrust activity, industry level profitability (as measured by net income) was negatively and significantly related to antitrust activity in most of her selected industries (chemical, oil, steel, and motor vehicle). These findings indicate that as profits

decline in the industry as a whole, the antitrust violations of the industry increases while there is no significant effect at the firm level (Simpson, 1986).

Simpson's result was contradicted by McKendall and Wagner (1997) who also studied industry profitability as a variable that impacted the levels of illegal activity of corporations. McKendall and Wagner (1997) hypothesized that firms in industries with low profitability have more difficulty meeting performance goals and have fewer slack resources to meet regulatory obligations. Their study of 80 firms found that while industry profitability was not significantly related to illegal activity, it did have an impact on firm level profitability.

The results once again are mixed with respect to the impact of profitability on the incidence of illegal antitrust activity at both the firm and industry levels of analysis. I adopt the research perspective that has demonstrated a negative relationship between profits and illegal activity. As profits at the industry level decrease, stress is placed on the industry. Firms within the industry react to this increased stress, possibly considering illegal activity as a remedy. The boards of these firms, if they have a sophisticated scanning ability, will be more sensitive to this stress, its possible impact on the firm and the potential for illegal cartel activity to be suggested as a solution. The board will be able to use its formal role as firm advisor and its mandate to review strategic plans to influence the organization away from any contemplation of engaging in illegal cartel activity. The same logic applies to the consideration of profits at a firm level; the board recognizes that when a firm's profits are declining, management is likely to consider illegal cartel activity as a possible solution to a decrease in firm profits although the

scanning activity is directed internally. With regards to profitability I hypothesize the following:

*Hypothesis 2: The effect of relative industry profitability on illegal cartel activity is moderated by the amount of board scanning of the external environment such that for a given level of relative industry profitability, less scanning by a board will result in a greater probability of illegal cartel activity in less profitable industries.*

*Hypothesis 3: The effect of relative firm profitability on illegal antitrust activity is moderated by the amount of board scanning of the internal environment such that for a given level of relative firm profitability, less scanning by a board will result in a greater probability of illegal cartel activity in less profitable firms.*

### **3.4.3 Munificence**

In 1975, Staw and Sz wajkowski noted that up to that point, organizational research rarely included an empirical analysis of the impact of munificence in the environment as a determinant of organizational action even though it had such a direct relationship with the availability of external resources. Munificence and scarcity are complementary concepts, with scarcity being a lack of resources within an environment and munificence representing an abundance of resources. When examined through the RDT framework, an organization must try and control resources from the environment in order to meet the organization's goals up to and including survival. The more munificent the environment, the easier it will be to secure these resources and achieve organizational goals. A more munificent environment has fewer constraints on it and more resources available



therefore providing less uncertainty to the organization and a reduced need to resort to illegal cartel activities in order to control these resources and their constraints.

Staw and Szwajkowski (1975) were the first researchers to specifically test the munificence of the environment to examine how it was related to illegal activities. They looked at firms that had committed antitrust activities and used the performance of the firm, the industry the firm participated in and the universe of firms as represented by the Fortune 500 to assess environmental munificence. They discovered that firms that committed illegal cartel activities performed less well than the universe of all firms but the same as their industries. The industries the firms participated in performed significantly worse than the universe of firms. Based upon these results, they concluded that these firms' environments were less munificent, not because of organizational factors such as poor management but because of industry wide factors, specifically "the industrial environments of the companies cited for illegal acts were less munificent than those of other companies in the Fortune 500" (Staw & Szwajkowski, 1975:351).

Subsequent to Staw and Szwajkowski's groundbreaking work, the consideration of munificence in relation to a firm or industry environment became more prevalent in organizational literature. Dess and Beard (1984) took the concept of munificence (describing it as resource abundance and the capacity to support growth for the industry environment in question) and added two more constructs, complexity and dynamism, to the analysis of industry environment demonstrating that all three were in fact separate constructs.

Keats and Hitt (1988) proposed that environmental munificence had an impact on organizational size, operating performance and market performance. Their study of 110 large manufacturing firms measured munificence as the growth in net income and the growth in operating income in the dominant industry over a five year period. Keats and Hitt (1988) found a significant relationship between munificence and organizational size, leading them to conclude that munificence provided opportunities for the growth of the firm as well as the creation of excess slack that supported growth even in inefficient firms.

Following the influence of Staw and Sz wajkowski, Baucus and Near (1991) included the munificence concept in their model of the antecedents of illegal corporate activity specifically examining environmental scarcity. A scarce (less munificent) environment creates more uncertainty (Pfeffer & Salancik, 1978). Namely, as managers attempt to reduce this uncertainty they may choose to engage in illegal activities to increase their chances of gaining the resources necessary to achieve corporate goals including survival (Staw & Sz wajkowski, 1975). Their study of 88 convicted firms in the Fortune 500 from 1974 to 1983 along with 104 randomly selected, non-convicted firms revealed that scarcity (munificence) as measured by the industry growth rate (change in industry value added) resulted in a curvilinear U shaped relationship. They concluded that illegal behaviour was more likely in a less munificent environment versus a moderate level of resource munificence but more likely in a munificent environment than a less munificent environment. With a somewhat confused picture, Baucus and Near advocated a more complex environmental scenario where there is interplay among the environmental variables rather than looking at just one variable on its own. Baucus (1994) continued to

conceptually developing munificence, arguing theoretically that organizations in a less munificent environment will commit illegal activity to control uncertainty and acquire resources based upon pressure or need.

Based on this research, it appears that in environments where there is low munificence, firms require more effort to understand the opportunities and threats presented by the environment (Goll & Rasheed, 1997). As a result, firms are stretched thin and commit less effort to controlling resources or tackling the uncertainties of the environment. One way to make up for this lack of available effort is to take a short cut by committing illegal acts. Goll and Rasheed (1997) hypothesized that a reduced munificence environment leads firms to avoid risk taking and conserve resources. However, they found that in low munificent environments, the result was not significant and was negative in direction while in high munificent environments it was positive and significant. This led them to speculate that in low munificent environments, firms are in a crisis mode and opt for quick and less than optimal responses to the environmental stimuli (Goll & Rasheed, 2005). This speculation supports previous research that in a low munificence environment, firms may resort to illegal activity as it requires fewer resources in order to more quickly and effectively control the environment (Daboub et al., 1995).

In striving to maintain maximum control over constrained resources, a firm faces increasing pressure as the munificence of the environment decreases. As munificence decreases, the constraints and hence uncertainty increases. With this increased uncertainty comes an increased likelihood that the firm will take action to control these constraints and reduce uncertainty. One of the ways in which a firm may control the constraints on revenue and decrease the revenue uncertainty in a low munificent

environment is through the profit enhancement and stability that goes along with illegal cartel activity. The board is able to scan the environment to gain an understanding of its munificence. This understanding of the environment increases as the board's scanning increases. As the board's comprehension of the environment increases, their ability to accurately assess the possibility of illegal cartel activity also increases. They are then better able to advise the organization against adopting this course of action or by taking even more direct steps to ensure this type of activity does not take place. Based upon the foregoing I hypothesize:

*Hypothesis 4: The effect of munificence on illegal cartel activity is moderated by the amount of board scanning of the external environment such that for a given level of munificence, less scanning by a board will result in a greater probability of illegal cartel activity.*

#### **3.4.4 Dynamism**

Dynamism is defined as change that is hard to predict and therefore leads to increased uncertainty for managers and leaders in the organization. As environmental uncertainty increases, then the amount of resources that must be marshalled by the organization to deal with this uncertainty increases, leaving fewer resources available to be devoted to increasing the performance of the organization. Dess and Beard (1984) found that instability in sales, price-cost margin, employment, and value added all were factor components of the dynamism construct. Other researchers have categorized dynamism in slightly different ways. The Keats and Hitt (1988) model presented dynamism as instability, primarily reflected by volatility. They theorized that this stability would only impact diversification; however, they discovered that they had underestimated the

pervasive effect of instability on other constructs in the model. They discovered that instability had significant results, impacting not only on diversification, but also operating performance, market performance and divisionalization leading them to conclude that firms faced with an unstable environment reacted by divesting businesses and developing a simpler structure. As stated by Keats and Hitt (1988:587) “those actions would suggest that the decision focus among the firm was on the reduction of uncertainty by retreating to a better-understood environment and creating a simpler organization rather than on risk reduction through increasing diversification...This reduction of uncertainty may take precedence over risk reduction.”

Baucus and Near (1991) focussed on dynamism in their research suggesting that firms rely in some cases on illegal activity to cope with dynamic, turbulent or rapidly changing environments. As an example, firms trying to exist in turbulent environments may respond to these environments by adding divisions or specialized units to deal with particular aspects of the environment. This results in the diffusion of responsibility for overall business decision-making over several individuals. As a result, no one person has the perspective, authority or knowledge to stop illegal activities. In addition, standard operating procedures are challenging to maintain in ever shifting environments, making it easier for illegal activities to manifest (Baucus & Near, 1991; Zahra et al., 2005). Baucus and Near (1991) felt that dynamism reflected both the degree of turnover in the environment and the interconnections among organizations in the environment. The results of their study indicated a curvilinear relationship between dynamism and illegal activity; a firm in a low dynamic environment was 43% more likely to engage in illegal activity than a firm with a moderate level of dynamism. A firm with a high degree of

dynamism was 51% more likely to behave illegally than a firm with a moderate level of dynamism. Baucus' subsequent theoretical work (1994) likewise suggests that dynamism is related to the opportunity of an organization to engage in illegal activity.

Based on the review of the research to date, a dynamic environment creates more uncertainty which managers seek to reduce (Asch & Seneca, 1975; Keats & Hitt, 1988; Pfeffer & Salancik, 1978). Industry members may organize themselves outside of the normal boundaries of the organization in order to control or reduce uncertainty and respond to unpredictable environmental change (Jamieson, 1994). Generally as dynamism increases, environmental uncertainties increase, constraints on resources in the environment increase and firms will act to reduce uncertainty and constraints. As examples, variance and levels of revenues are constraints leading to uncertainty. One of the ways to decrease the uncertainty associated with variable revenues in the environment is to engage in illegal cartel activities in order to gain stability to expected returns.

However, at very low levels of dynamism there is little room for the firm to legally manoeuvre and as such they will experience operational constraints and environmental uncertainty which they will attempt to reduce thus creating a higher level of illegal cartel activity. As dynamism increases operational constraints are reduced, decreasing environmental uncertainty; therefore, at moderate levels of dynamism illegal cartel activity will be reduced. Once dynamism rises above moderate levels, uncertainty in the environment also begins to increase again and the incidence of illegal cartel activity rises.

The board can scan the environment to assess the dynamism of the environment and its potential implications for the organization. As the relationship between dynamism and

illegal cartel activity varies, the board will be able to take this knowledge of the changes in the environment and project how they may advise the firm in avoiding the illegal cartel activity. Therefore, the board's scanning activity once again serves as basis for the advice that the board provides to the organization; the more scanning by the board, the more directed the advice will be to the organization in avoiding illegal cartel activity caused by dynamism in the environment. Based upon the foregoing I hypothesize:

*Hypothesis 5: The effect of dynamism on illegal cartel activity is moderated by the amount of board scanning of the external environment such that for a given level of dynamism, less scanning by a board will result in a greater probability of illegal cartel activity.*

### **3.5 Summary**

RDT provides a framework through which to examine the dependencies between organizations and their shared environment. As profits are reduced throughout an industry and at each individual firm, and as the environment becomes less munificent and more dynamic, environmental constraints increase producing uncertainties. The firm then attempts to control these constraints and reduce these uncertainties to increase their chance of survival. Illegal cartel activity provides the firm with the structure and opportunity to reduce one of the environmental constraints (competitors) ensuring there are more resources available to be directed to other means of survival.

The temptation to adopt this type of illegal activity can potentially be mitigated by the presence and professional expertise of the board. The board has the ability to scan the environment to determine its potential to impact the operations and future actions of the

firm. As the effectiveness of this scanning activity increases, the board can use this information in their advisory roles to influence firm strategy. The board will act to avoid illegal activity and as such will use information they have gathered to influence the firm away from this activity. Therefore, as the board's scanning becomes more effective, the likelihood that environmental factors will motivate the firm to engage in illegal cartel activity is reduced.



## CHAPTER 4

### CONTROL

#### 4.1 Introduction

Chapter 3 presented hypotheses designed to explore the relationship between the external industry environment and illegal cartel activity; Chapter 4 turns its attention to how the internal operations of the organization, namely board control mechanisms, can impact illegal corporate activities. While separate constructs, the consideration of both the external and internal characteristics form an overarching corporate governance perspective that is designed to present a holistic picture of the antecedents of illegal cartel activity in a way that has not been articulated in research to date.

To be able to interpret the research model as set out in Chapter 4, it is necessary to understand the basic tenets of corporate governance as well as its historical evolution. Corporate governance is the method used in the administration of the corporation's strategies and the actions taken to achieve the corporation's goals. Directors are charged by shareholders to ensure that managers act in the best interests of the corporation. The best interests of the corporation is usually meant to be the best interests of shareholders (Dodge v. Ford 1918), held to be an obligation to maximize profits (Jamieson, 1994).

The power of corporate governance is felt at all levels of the organization – board of directors, CEO and managers – through the administration of a variety of control methods. Indeed, it is these control methods that allow shareholders to best ensure that their intentions are transmitted to the board, CEO and managers and the subsequent actions are then monitored (Fama & Jensen, 1983b). These control mechanisms broadly

take two forms: incentives and dismissal (Seward & Walsh, 1996). Dismissal is generally considered to be the most extreme mechanism as it causes the most upheaval in the organization (Rowe, 1996). Firms more often employ a control system to determine if the subordinate level is motivated and performing satisfactorily in order to apply the appropriate reward or sanction (Goold & Quinn, 1990).

There are two basic choices on how control can be exercised: behavioural controls and output controls (Eisenhardt, 1985; Ouchi, 1977). Output types of control methods result in there being an undue influence on short-term firm outcomes, namely profits, and result in little corporate supervision (Hill et al., 1992; Robertson & Anderson, 1993) including a lack of supervision of legal issues within the corporation (Jordan, 2010). Rather than focus on the means to achieve these goals, the focus on attaining short-term goals can leave the CEO and managers in an ethical dilemma if the legal means to achieve these goals either prove to be ineffective or not available to them. When faced with this decision, the CEO and managers may resort to illegal activity in order to achieve these heavily emphasized corporate goals. This process is termed anomie (Merton, 1938, 1968) a theoretical precursor to strain theory. This chapter will set out the differences in controls and how they motivate particular behaviours at different levels of the organization.

There are a number of reasons why this line of study is very important to the field of corporate strategy specifically and management broadly. First, there is a need for academic insight into the relationship between compensation decisions and firm outcomes as it is an area that has been under-considered in research to date. This includes the need to more closely examine the discrepancy in the deleteriousness of short versus

long-term compensation schemes (Deckop, Merriman, & Gupta, 2006; Harris & Bromiley, 2007). In addition, given the ongoing public interest in CEO compensation packages, there needs to be a more in-depth look at the possible connections between CEO compensation packages and illegal activity (Harris & Bromiley, 2007). Finally, there is a significant gap in the existing literature in that there is no empirical or specified theoretical work in the area of how corporate culture directly impacts corporate illegal activity (Shover & Hochstetler, 2002).

This chapter begins with a discussion of anomie, its origins, its applicability to organizations and its relevance to illegal cartel activity and proceeds to juxtapose this with strain theory (Agnew 1992). This is followed by a brief discussion on corporate history and an examination of control systems. Incentive systems and their impact on behavioural and output goals are then reviewed. I examine how strain theory animates the goal seeking of the CEO and managers, while agency theory animates the relationship between the CEO and the board.

Also at operation is a cascading effect whereby the control method (output or behavioural) that the board is under is passed down to the CEO who then passes it down to the managers in charge of carrying out the strategy of the firm. This chapter further hypothesizes that the control method used by the board will be associated with the control method used by the CEO.

Finally, I posit that the independence of the board influences the control method of the CEO and thence the probability of illegal cartel activity. The theoretical model demonstrating these relationships was presented in Figure 1.

## 4.2 Strain Theory

Strain theory is virtually unheard of in management literature. Its predecessor, anomie, is more common but still seldom used. I will outline the evolution of strain theory spending sometime on anomie as anomie provides a useful, if not current, perspective on the phenomenon of illegal cartel activity. Although Durkheim (as referred to in Merton (1938)) may have been the first to apply this anomie in the subject of deviance (notably suicide), the concept of anomie was most popularly set out in Merton's (1938) original monograph on the subject. While Merton does not specifically address the definition of anomie in his 1938 article, he does suggest its purpose is to provide a conceptual scheme "designed to provide a coherent, systematic approach to the study of socio-cultural sources of deviate behaviour" (Merton, 1938: 672).

Merton's premise was that while every society has goals, the methods for achieving those goals are limited by the institutional norms of the society. He was interested in those cases where there was a disproportionate emphasis on the goals of the society and where the range of possible means of achieving the goals was limited only by technical feasibility. Merton referred to this as winning at all costs. He juxtaposed this idea alongside the emphasis of wealth accumulation in American society as the primary symbol of success. As he noted, "fraud, corruption, vice, crime, in short the entire catalogue of proscribed behaviour, becomes increasingly common when the emphasis on the culturally induced success-goal becomes divorced from a coordinated institutional emphasis" (Merton, 1938:675). Merton emphasized that individuals strive to achieve the culturally advocated symbols of success; the inability to achieve these symbols through legitimate means leads to frustration and the undertaking of undesirable means of action

causing the “ends-justify-the-means” doctrine (Merton, 1938:681). It is this lack of coordination between the means and the ends that leads to anomie. This can occur through an over emphasis of goals or alternatively, goal blockage where the means to achieve the goals are somehow constrained and is referred to as strain theory (Murphy & Robinson, 2008).

There is the potential for strain to occur in organizations where cultural goals are emphasized but the institutional means of achieving those goals are not available to individuals. In Merton’s model, the individuals who are blocked from acting are termed “Innovators”. Innovators in this context do not necessarily carry the laudable attributes they are generally associated with in management literature. As an example, the perpetrators of illegal cartel activity would be Innovators in Merton’s classification system. There is a sense of frustration that occurs in an Innovator where the cultural goals are not achievable by legitimate, institutionalized means. This frustration results in a moral conflict; the Innovator strongly desires to achieve the cultural goal but recognizes he is not able to do so by means that are both legitimate and effective. The Innovator resolves this conflict by foregoing the institutionally acceptable means in order to achieve the culturally preferred success-goal: “The dominant pressure of group standards of success is, therefore, on the gradual attenuation of legitimate, but more or less effective, expedients of vice and crime” (Merton, 1938:679). This results in Innovators trying to achieve institutionally desirable ends without having institutionally sanctioned means to achieve those ends. It is not asserted that those engaged in goal attainment either always break the rules or never break the rules. It is more probable that there are conditions that elicit this behaviour; Innovators may mostly follow the rules, breaking them only where

they feel compelled to do so in order to achieve specific cultural goals (Murphy & Robinson, 2008).

It is worth noting that even though Merton initially presented his concept at the individual level of analysis, he asserted this theory also applied to classes or groups of individuals with regard to group deviance or individual deviance within groups (Merton, 1957; Murphy & Robinson, 2008). Indeed, he himself utilized it in his consideration of political machines (Merton, 1968) and has been supported by other researchers (Messner, 1988).

Anomie fell somewhat out of favour in the 60s and 70s and was kept alive through reference to the more generic strain theory which found greater use for researchers (Agnew and Kaufman, 2010). Agnew (1992) set out the General Strain Theory of Crime in 1992. This theory looked not only at the failure to achieve positively valued goals as did anomie but also regarded the removal of positively valued stimuli and the presentation of negative stimuli (Agnew, 1992) resulting in a more robust criminological theory (Agnew & Kaufman, 2010).

Agnew (2001) encouraged the evolution of strain theory and brought the field up to date a decade later. He noted that there are two types of strains that are relevant: objective strain which the group acknowledges; and, subjective strain which impacts the individual alone. While noting that failure to achieve economic goals may lead to strain, the characteristics (noted below) of the illegal phenomenon I am investigating would lead to strain and hence the illegal activity. The strain that is referred to here would be the strain imposed by the market pressures and compensation that the organization or individual

faced. The characteristics from Agnew (2001) are: the circumstances the victim (organization) found themselves in were not caused by them; the strain inflicted on the victim may seem to be malevolent; the harm can be seen to be severe; the victim believes the strain is undeserved; the strain does not serve a higher cause (such as religion); there is a perceived injustice to how the strain was inflicted upon the victim; the strain violates desired norms (profitability); there may be treatment that is different than colleagues' treatment; the degree of strain is high; the duration of the strain and frequency of the strain is high; the strain is recent; the strain affects the core goals (profit making) of the victim; the strain is associated with low social control (also see Sutherland, 1949 on this point); and the strain creates a pressure or incentive to engage in illegal activity (see Sutherland 1940, 1949 and Clinard & Quinney, 1973 on this point). All these characteristics would collectively lead to strain which would be relaxed by illegal activity (Agnew, 2001).

Strain is a robust theoretical basis that has found favour in the criminological discipline to encapsulate behaviour that is the subject matter of this thesis.

#### ***4.2.1 Strain Theory and Organizations***

There has been very little research that applies strain theory to organizations (Tsahuridu, 2006). In the few cases where researchers have considered strain theory in an organizational context, they have stayed true to Merton's original exposition of the idea and emphasized goal setting rather than paying attention to the process of achieving those goals. Additionally, in cultures with a history of innovation and individualism where goals attainment is highly emphasized, it is not unusual to find examples of illegal

corporate activity (Cohen, 1995). It has been argued that from an organizational perspective corporations are inherently predisposed to crime because they are primarily focused and rewarded by shareholders for the achievement of goals, and uncertainty in their environment prevents them from using legitimate means to accomplish them (Cohen, 1995) and may be seen to be pathological in their pursuit of profits (Bakan, 2005).

The use of strain theory in a business context follows that corporations are focused on profit as an end or goal; they seek this profit as the main purpose of their existence and are under pressure from shareholders (including members of the corporation that are invested in the stock of the company) to maximize this profit (Clinard & Quinney, 1973, Jamieson, 1994). However, corporations may also have primary goals of growth, stability, maximizing sales, increase in the size of management, or diversification (Vaughn, 1998). These goals are arguably also designed to achieve the long-term profitability of the corporation. This goal of profit maximization is transmitted throughout the organizational hierarchy, ensuring that everyone in the firm recognizes the importance of achieving the profitability goal. The upper management of the corporation is also under increasing pressure from its shareholders – often through the board – to achieve ever increasing profits; as a result, they are incited to not object when less than legal means are utilized (Cohen, 1995). This causes a cascading effect throughout the organization. Pressure in the form of top management desires as well as the continual articulation of the corporate profitability goal can induce middle managers to break the law in order to achieve their, and by implication, the corporation's goals (Passas, 2001).



If individuals or organizations are blocked from achieving goals through legal means, then the chance of innovation within and by that corporation will increase depending upon primary organizational characteristics including firm culture, history, opportunity, and top management preferences (Passas, 2001; Simpson & Koper, 1997). However, it is also conditional on the environment in which the firm finds itself. In competitive situations where there is uncertainty and the corporate culture is predominantly based upon goal attainment, a corporation will opt for innovation in order to realize those goals. Therefore, if an organization is threatened with a possible loss because they do not have existing mechanisms to legally achieve their goals, then they may innovate in order to avert that loss (Vaughan, 1983).

#### ***4.2.2 Strain Theory and Illegal Activity***

While corporate America has traditionally exhibited a laissez faire attitude when it comes to business operations, the increasing occurrences and public attention being paid to white collar crime means that there is a research imperative for business scholars to better understand the motivations behind this type of illegal activity. Strain theory presents a useful lens through which to conduct this analysis, although strain theory is rarely used in the study of white collar crime (Waring, Weisburd, & Chayet, 1995). In a study of the socio-psychological aspects of strain theory it was found that simple illegal white collar crime such as fraud and theft was explainable by the socio-psychological aspects of strain theory at the individual level but that the more complex white collar crimes such as antitrust were better explained by the structural aspects of strain theory at the organization level (Langton & Piquero, 2007; Merton, 1938). Specifically, it was found that while personal and financial motives were not significant predictors of antitrust

offenses, business and organizational motivations were significant (Langton & Piquero, 2007). It has also been argued that for employees to achieve or rise to the level in the corporation where they are able to make decisions that are of an antitrust nature they must be dedicated company personnel who, because of their dedication, put the corporation's dictates above their own personal ethics and mores resulting in an increased propensity to commit antitrust activities on behalf of the corporation (Randall, 1987). This commitment to the organization also suggests a rejection of the individualistic perspective of strain in favour of the collectivist perspective.

As noted, there have been very few applications of the concept of strain to management. One of the few empirical articles that have addressed the issue of illegal activity in combination with Merton's theories was the work of Simpson and Koper (1997). They linked illegal activity to the external environment; environmental uncertainties produce organizational strain that result in deviant (illegal) behaviour. However, they also acknowledge that strain can be internal to the organization, differentiating it from external strain by terming it "operating" strain. Following Merton, they indicated that strain may result when there are internally created pressures to achieve certain strategic goals combined with the absence of the availability of the traditional means by which to successfully achieve these goals. They theorized that firms controlled mainly by financial strategies should see the greatest amount of crime. To test their hypothesis, Simpson and Koper (1997) looked at corporate antitrust criminality as the dependent variable in combination with independent variables including top management succession, firms headed by sales and marketing officers, powerful executive officers, decentralized management structures, and product dominant strategies. They found that

while organizations with high levels of top management succession had lower instances of illegal corporate behaviour, organizations that were run by CEOs from finance and administration units and organizations that followed a product dominant strategy exhibited higher instances of illegal activity.

The calls for further research of strain in management (Caruana, Ramaseshan, & Ewing, 2001) and organizations (Tsahuridu, 2006) were recently answered by Saini and Krush (2008) who studied strain from a structural and organizational perspective. Saini and Krush's (2008) research was particularly interesting as the level of analysis at the structural level was unique as was their conceptualization of the dynamics of top management's control mechanisms as an antecedent to strain. In addition, they framed their research with the same sociological interpretation as Merton (1968). This interpretation suggests that the unit of analysis is the collective or group, that the group or collective's control structure and methods influence the actions of the group and that this approach has the ability to explain a wide range of deviant behaviours.

Saini and Krush (2008) specifically considered the marketing function of an organization, analyzing how the control systems put in place by upper management may contribute to ethical transgressions by the marketing staff. They argued that an organizational emphasis on profit goals where they are not legally attainable under existing conditions leads to strain and then to unethical behaviour. Further, top management's choice of control mechanisms, outputs versus marketing processes, impacts the level of strain in the marketing organization where output controls are manifested by setting performance targets such as market share or profit margins. With a high emphasis on bottom line performance and a corresponding level of operational freedom, they found that the

marketing team may choose the most efficient path to achieve these goals even if that path is unethical. The authors concluded that strain is created when these profit goals are emphasised over the means to achieve them; hence, the level of output controls is positively related to the level of strain in the business unit.

#### ***4.2.3 Strain Theory – A Call to Action***

Strain theory is an interesting and relevant theoretical research approach when considering illegal corporate behaviour. However, organizational strain needs to be operationalized by considering the “degree to which attaining economic goals dominates other considerations in the firm” (Cohen, 1995:199); this would be strengthened through an examination of strain and organizational control mechanisms. Research also needs to focus on the relationship between criminal activity and dimensions of organizational culture including instances where “incentive systems are exclusively performance based” (Cohen, 1995:200). These two potential research topics elicit the broader question of whether corporate type offenses such as antitrust would be better explained through organizational theories rather than socio-psychological theories (Langton & Piquero, 2007). The intent of this thesis is to address the call for further study of organizational strain and illegal activity, and in doing so, augment our knowledge to gain a rich and robust understanding of these phenomena.

#### **4.3 Corporate Governance History**

Even though corporate crime is an extremely popular topic in the mainstream media and practitioner publications, organizational studies have not concentrated on determining what organizational conditions encourage or prevent illegal corporate activity

(Schnatterly, 2003). I suggest in this thesis that corporate crime is partially determined by corporate control, namely, who runs the corporation and how they, themselves are controlled.

In order to frame the conceptualization of corporate control as presented in this thesis, it is helpful to briefly describe the origin and structure of the corporation itself. The corporate form had its origins in Roman law almost 2000 years ago and acquired a separate legal personality (including the ability to sue or be sued and to hold property) and unlimited life in 14<sup>th</sup> century Europe. By the mid-19<sup>th</sup> century, the corporation had evolved from a non-profit membership organization to a for profit business corporation. The shift from closely held to widely held and traded share ownership was accomplished by the early 20<sup>th</sup> century. Today, we are accustomed to corporations with multi-billion dollar global operations and broadly held share ownership (Avi-Yonah, 2005).

Adam Smith foresaw that there would be control issues that would arise as corporations became more complex: “The directors of such companies, however, being the managers rather of other people’s money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own...Negligence and profusion, therefore must always prevail, more or less, in the management of the affairs of such a company” (Smith, 1776).

Smith proved to be prescient in that as the size, complexity and power of corporations grew, the directors ceased to be the sole shareholders creating new accountability issues. As a response, legal systems in many countries stepped in and developed a new, higher

standard of performance expected of directors, requiring of them the same level of responsibility that they would exhibit were they to be the sole shareholders (Monks & Minow, 1995). Directors thus became the formal agents of shareholders with the responsibility of ensuring that senior managers in the firm acted in the best interests of the corporation. The directors became responsible for considering and approving recommendations from the top management team (TMT), and then ensuring their appropriate implementation (Barney, 2007).

Directors' obligations are considered within the context of the shareholder primacy norm, fundamental to corporate law in many developed countries including Canada and the United States. It is perhaps best illustrated in the oft cited 1919 case of *Dodge v. Ford Motor Company* (1919:463):

A business corporation is organized and carried on primarily for the profit of the stockholders. The powers of the directors are to be employed to that end. The discretion of the directors is to be exercised in the choice of means to attain that end, and does not extend to a change in the end itself, to the reduction of profits or to the non-distribution of profits among stockholders in order to devote them to other purposes.

The current state of affairs in corporate governance and fiduciary responsibility has been clearly articulated by the American Bar Association's Committee on Corporate Laws: "Directors have fiduciary duties to shareholders which, while allowing directors to give consideration to others, compel them to find some reasonable relationship to the long term interests of shareholders when so doing" (Committee on Corporate Laws, 1990; Smith, 1998).

The long term interests of the shareholders have generally been interpreted as meaning one thing: financial profits. As a result, the primary, and arguably only, motivating force for the modern corporation is that of profit maximization, on behalf of the shareholders as carried out through the strategies employed by management and approved by the board. Indeed, whatever other goals a corporation may have, they are furthered by the corporation focusing on profit (Jamieson, 1994).

#### **4.4 Control Systems**

Corporate control is the method used in the administration of the corporation's strategy to exert pressure upon both the individuals within an organization and the organization itself to achieve the goals as set out by the various corporate governance structures of the organization. The governing body of the corporation, the board, requires a means by which to motivate their subordinates, the CEO and top management team, so that they attempt to achieve the goals as determined by the board acting on behalf of the shareholders. This means is termed the corporate control system.

Control systems, recognized to be required for the smooth operation and coordination of an organization, exist at all levels of an organization. They are the process by which one level in the hierarchy of an organization can determine if another level is motivated and performing satisfactorily (Goold & Quinn, 1990). Barnard (1938) indicated that the purpose of an organization was to coordinate the actions of individuals who work within the organization to some purpose. In order for the coordination to be successful, there must be agreement between hierarchical levels (for example, the executive and the manager or the manager and the front line worker) in terms of the organizational

objectives which should be as precise as possible in order to ensure there is clarity to guide their achievement (Goold & Quinn, 1990).

Agency theory offers us another explanation. Agency theorists suggest that all agents within an organization need to be motivated by principals in order to perform the tasks expected of them (Eisenhardt, 1985). The absence of this motivation will allow agents to act in a self-interested manner, rather than in the best interest of the board and thus shareholders. This self-interest is manifested at all levels of the organization; therefore, control systems are necessary not only for just upper management, but are also required throughout the entire organizational hierarchy (Goold & Quinn, 1990). Finally, control systems are important as they can provide a signal to management that their intervention is required because the organization is not achieving the goals that have been set out for it. This allows management to decide if correction is needed either to adjust the operation of the organization or the corporate goals (Goold & Quinn, 1990).

While a number of different types of control methods have been addressed in the literature, there are two types that can be monitored and evaluated: behaviour controls and output controls. Mintzberg (1979) refers to output controls as “performance controls” which allow for those being measured to select the means to achieve the outputs desired. The focus on output controls is on the ends not on the means. In order to have satisfactory output controls there must be some degree of reliability and validity in the measurement of the outputs themselves (Ouchi, 1977). For example, if a manager wishes his subordinates to achieve certain sales targets he can simply state the dollar or unit volume of sales to be achieved and rely on that goal to serve as the control method. The manager is unconcerned with how the salesperson achieves these goals; whether the sales



person succeeds is easily verifiable in most companies. Thus, output controls are used when there is a need for quantifiable and simple measures. Surprisingly, it has been found that the use of output measures occurs in exactly the least appropriate type of situation, one where there is complexity, interdependence and lack of expertise on the part of the manager (Ouchi & Maguire, 1975).

The other control mechanism, behaviour controls, is often put in place when the governing body has the ability to understand and enforce the means-ends relationship; in other words, understanding the means by which they desire the subordinate party to achieve the outputs (Ouchi, 1977). As the level of comfort and certainty in the means-ends relationship increases, the level of certainty and comfort in achieving the desired ends also increases. Behaviour controls are most appropriate where the validity or reliability of proposed output controls is questionable, or when there is some degree of knowledge and/or agreement on the means-ends relationship. In the salesperson example, if the manager has some degree of comfort in how successful sales are achieved (such as making a certain number of sales calls, attending certain conventions, submitting a certain number of quotes) then they can specify that these behaviours be attended to with the belief that this will result in the desired outcome of more sales. The manager is specifying the behaviour that they want their sales rep to engage in which will result in the desired outcome.

While behaviour based controls require that the manager have a deep understanding of the business and markets, for behaviour control systems to be effective, it is best if there is close co-ordination between the manager and their subordinates (Hitt, Hoskisson, Johnson, & Moesel, 1996; Hitt, Hoskisson, & Kim, 1997). In the case of a hierarchically

structured organization, behavioural controls exhibit a top down procedures based management model and are useful when the means-ends linkage is known or understood (Snell, 1992).

Behaviour controls are seen as a balance to the output control system as evidenced by Ouchi (1977). Behaviour control is “responsive to the particular needs of the task, the abilities of the individual manager, and the norms of the company” and not useful for comparing the many and varied subunits of a large company (Ouchi & Maguire, 1975:563). While output controls usually stress financial outputs and a short-term focus, they do not deal with things such as the company’s progress regarding competitors and non-financial objectives that may be important to the company’s long-term success including how these outputs may be achieved (Goold & Quinn, 1990). Behaviour based controls in this way are strategic in nature.

Subsequent researchers have found in field studies that organizations use output and behavioural controls in conjunction with each other (Eisenhardt, 1985; Snell, 1992). The balance between them depends upon the extent of salary compensation (behavioural control) or commission compensation (output control) the manager has at his disposal. It also relies on the extent to which the organization exhibits a means-ends understanding and an ambiguity of standards of performance with ambiguity favouring behavioural based controls (Snell, 1992). While the amount of compensation remains fixed, there is an option to allocate the compensation to either behavioural or output related compensation. This discretion is emblematic of the control systems that the organization favours.

## 4.5 Incentive Systems

Incentive systems are thought to send a strong signal regarding the types of behaviour that will be rewarded by management. Agency theory suggests that the “strength, pervasiveness and immediacy” of output (mainly financial) control systems will lead to short-term thinking and a bias towards short-term performance rather than strategic considerations (Goold & Quinn, 1990:46).

There are several reasons why compensation impacts an executive’s response to risk. When faced with the possibility of not achieving their goals, executives engage in riskier behaviour to avoid the loss. It has been demonstrated that when compensated with stock option pay executives took bigger risks than when compensated with stocks alone; the difference between stock and stock option pay is important and significant (Sanders, 2001). Executives rewarded with stock options also tended to take bigger risks (Sanders & Hambrick, 2007). Similarly, executives meeting their performance goals were less likely to engage in risky behaviour so as not to put their goal attainment at risk (Palmer & Wiseman, 1999). When the goal outcomes are independent of the agent’s efforts, transferring incentive risk to the agent may make them react by reducing their effort or taking evasive actions to reduce the risk (Miller, Wiseman, & Gomez-Mejia, 2002). The more the principal knows ahead of time about the outcomes of behaviour then the less sense it makes to rely on outcome measurement as a means of incenting agent performance.

Output control systems generally place the onus on the individual to achieve the goals set out for them and provide them with the independence to do so as they see fit. Often,

these types of systems exhibit a compensation plan that are mostly proportional to the results to be achieved (e.g. variable income) with a very low salary component (Robertson & Anderson, 1993). Within these kinds of systems, executives that receive higher pay are more likely to make decisions that increase the financial viability of the organization while ignoring issues relating to both the legal culpability of the organization and the wellbeing of subordinates (Jordan, 2010). In an output control system the chance of detection to the measured person will be low as the monitoring is relatively hands off and it is easy to conclude that management does not care how the output is achieved, merely that it does so successfully. For example, in a study related to salespersons, Robertson and Anderson (1993) found that the sales force control system had an impact on the ethical reaction patterns of the sales force. Those salespersons operating in a system that was outcome driven (variable pay) and where they were granted independence in their behaviour were more likely to recommend unethical actions.

Incentive systems play a pivotal role in determining the behaviour of those being incented. Behavioural control systems are more difficult to implement but result in more ethical behaviour while output control systems provide for easier monitoring but more unethical behaviour. For any one compensation system there is usually a mixture of output and behavioural controls so in comparing compensation systems one can view them as existing on a continuum with purely output control systems on one end and purely behavioural control systems at the other.

#### ***4.5.1 Cascade Effect***

The control systems that the board puts in place to monitor the CEO will influence the control systems established for the TMT which in turn cascades down to their subordinates. For example, wage systems created for CEOs are mimicked structurally in those created for their subordinates (Carpenter & Sanders, 2002). In addition, incentive systems will cascade down from the top of the organization to the second line managers and so on (Makri et al., 2006; Werner & Tosi, 1995). As the distance in the hierarchy of the organization increases, so too does the relative similarity in compensation and hence control structure diminishes. The closer the subordinate is to the CEO, the more alike the reward systems will be (Wade et al., 2006).

Corporate managers set goals based upon the control system by which they are measured. This places pressure on their subordinates to achieve the goals of their manager by whatever means they have at their disposal – legal or otherwise. One need only look at the history of the creation of the Ford Pinto, where managers set the goal of producing a car under 2,000 lbs. that could be retailed for less than \$2,000. This pressure on engineers to achieve their superiors' goal resulted in a decision by subordinates to save money and achieve the weight requirement by rejecting safety modifications after considering a cost benefit analysis regarding the cost savings as compared to the cost of legal liability related to litigation from accidents (Coleman, 1987). Illegal and unethical behaviour thus becomes permissible as the compensation and control structures from the CEO cascade down the organization to lower operational levels.

#### **4.6 Control and Illegal Cartel Activity**

In agency theory, one of the strongest ways that the principal is able to enforce outcome or behaviour based monitoring of the agent is through the chosen compensation method. Long-term compensation mechanisms tied to objective financial criteria such as stock price or earnings are seen to align the agent's actions with the goals of the principal; as the organization's fortunes rise so too do the fortunes of the agent (Carpenter, 2000). These types of compensation systems are thought to be particularly effective when the agent's behaviour is difficult to measure (Jensen & Murphy, 1990) which often occurs when principals attempt to measure strategic actions aimed at achieving strategic goals (Carpenter, 2000).

One of the most prevalent output control measures employed involves boards using financial incentives to motivate CEOs to meet organizational earnings expectations (Zahra et al., 2005). Agency scholars have suggested that employing financial or output control measures increases the likelihood of financial misrepresentation as the CEO's compensation is skewed towards stock options which would provide an inducement for the CEOs to manipulate earnings in order to increase the value of the options (Harris & Bromiley, 2007).

However, Deckop, Merriman and Gupta (2006) found that compensation packages that included short-term incentives as measured by bonuses were much more deleterious to corporate social performance than those that included long-term incentives as measured by restricted stock and stock options.

If management signals, either through specific sanctioning or through a lack of monitoring that only outputs are important and not the means through which the outputs are achieved, an employee will believe that illegal behaviour is acceptable as long as it successfully leads to outputs (Shover & Hochstetler, 2002). As managers are incented based upon their superiors' incentive system (which may be output oriented) then they are potentially more likely to engage in illegal activities in order to meet their incentives (Daboub et al., 1995). In addition, an organizational focus and demand for high performance at all levels of the organization may lead to further illegal activity (Baucus, 1994; Shover & Hochstetler, 2002), especially if the subunit is particularly crucial for overall goal attainment. A firm's compensation system provides normative support for such illegal activity when it explicitly links the organization's goals to individual goals (Vaughan, 2002).

As these output controls permeate the organization, those portions of the firm that are underperforming will engage in illegal activity to raise their performance and increase their compensation (Pinto et al., 2008). This pursuit of ends (goals) rather than means drives people to illegal activity in order to reach these goals (Merton, 1938; Ordóñez et al., 2009); the pressure to engage in this type of behaviour becomes intensified if it appears that the manager is going to fall just short of the goals. It was found that people with unmet goals will engage in unethical behaviour more than people attempting to do their best (means oriented) (Schweitzer et al., 2004).

It is not just academic research that makes the linkage between control method and illegal corporate activities such as price fixing. In examining a number of companies convicted of illegal corporate activity, managers had compensation systems that relied almost

exclusively on sales volumes and profits. Bonuses and commissions (sometimes exceeding 50% of the base salary) were also based solely on sales and profits (Sonnenfeld & Lawrence, 1978). A divisional manager at a convicted company set out how these control systems worked: “People have been evaluated on the basis of profit and how forcefully they can execute a price increase. Thus, if he does this by price agreement with competitors, he’ll build profit and price credits and get a reward...So, instead of seeing top people explicitly and officially acknowledge the difficult industry conditions, many of the lower officials see only strong pressures and inducements to “get the numbers no matter what”” (Sonnenfeld & Lawrence, 1978:149). Based on this type of first-person account, it is easy to see how the control system that is implemented at the top cascades down through the hierarchy to permeate lower levels of the organization directly impacting actions taken at these levels to satisfy the organization’s goals.

Therefore, if a CEO (and through the cascading effect, managers) is exposed to output based controls and incentive systems, they will take actions to maximize their incentives and reach those goals while minimizing their compensation risk. As previously articulated, through strain theory, the CEO and managers will be overly influenced by the goal setting of the control system which shall lead them to decrease emphasis on the means they and their subordinates use to reach those goals. As an Innovator (as proposed by Merton 1938), this lack of attention to the means makes it more likely that illegal activities will be used to achieve these sanctioned goals if legal means are either unavailable or ineffective.

Illegal cartel activity provides for a steady and higher revenue level which will, in all likelihood, be in accordance with the goals set by the board. Therefore, illegal cartel



activity is a very effective means, albeit not legitimate, of attaining the goals set out by the board. The more that the board emphasizes output based controls the greater the probability that the Innovator scenario will take place and lead to illegal cartel activity. I therefore hypothesize:

*Hypothesis 6: An increase in goal based output control methods for the CEO will increase the probability of illegal cartel activity.*

#### **4.7 Board Control**

Shareholders rely on their elected boards of directors to monitor and control the upper most levels of management. Broadly, the board is generally seen to utilize behavioural control and output control to manage the behaviour of its senior executives. The board's decision to utilize either of these types of controls generally relies upon their desire to achieve the most effective alignment of the interests of the shareholders with those of top management (Fama & Jensen, 1983b). Outcome based controls impose risk upon employees because an undesirable outcome can still occur even when they do their job effectively (Beekun, Stedham, & Young, 1998; Eisenhardt, 1985). When faced with outcome based controls, an employee seeks to minimize risk and therefore the occurrence of an undesirable result. This same logic may be applied to the control mechanisms that shareholders have at their disposal when compensating directors. I argue that directors are less tolerant of risk than shareholders since they derive their income from one firm whereas shareholders can more easily diversify their income streams among firms. Directors usually push for the behaviourally based compensation schemes such as yearly fees. However, an alignment with shareholder interests would indicate a more output

based compensation system may be more effective (Beatty & Zajac, 1994; Deutsch, 2005).

It has been held that there is an incestuous relationship (correlation) between executive compensation and director compensation which has been attributed to “mutual back scratching and/or cronyism” (Brick, Palmon, & Wald, 2002). This result was confirmed in a study of hospitals where it was found that CEOs earned more if directors were paid more (Cardinaels, 2009). Unfortunately, the topic of director compensation has not been deeply explored. In one of the few studies of director compensation it was found that greater director compensation led to greater director effort, and in this case greater output as indicated by transparency (Chiang & He, 2010).

Just as directors are faced with a compensation system that is skewed towards outcome or behavioural based controls, following the cascade theory, they will similarly drive this skewness to the CEO in their control methods who in turn will transmit it down through the organizational hierarchy (Carpenter & Sanders, 2002; Makri et al., 2006; Wade et al., 2006; Werner & Tosi, 1995). In addition, the same agency theories that apply to the shareholder/CEO relationship, I assert may apply to the shareholder/director relationship. The type of control method that the shareholders impose upon the board (or the board imposes on itself) will influence the type of control system that the board imposes on the CEO. I therefore propose:

*Hypothesis 7: An increase in goal based output control methods for the board, will increase the use of a goal based output control method for the CEO.*

Since the board determines the control method of the CEO who then determines the control method of those actors within the organization that may engage in illegal cartel activity the board ultimately impacts illegal corporate activity through the CEO control method. I therefore assert that:

*Hypothesis 8: The relationship between board control method and illegal cartel activity is fully mediated by CEO control method.*

#### **4.8 Director Independence**

The effect of outside or independent directors on various board functions and board performance has received a significant amount of attention from corporate governance scholars. Agency theory would suggest that outsider directors are more aligned with shareholder interests whereas inside directors, even though they would have superior information on the operations of the firm, would have to engage in more problematic self-monitoring and be beholden to the CEO for their position.<sup>2</sup> As a result, conflicts of interest could easily arise (Beatty & Zajac, 1994). Baysinger and Hoskisson (1990) proposed that inside directors would advocate for more behaviourally based compensation for the CEO, while outsider or independent directors would advocate for more output oriented compensation. Therefore, it is not only the control type of compensation received by the directors that affects the control type imparted on the CEO, but it is also the director's status as an insider or outsider that may impact their desire for either output or behavioural controls for the CEO. Outsiders will look to more output

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<sup>2</sup> The assumption that outside directors are less tolerant of risk is questioned by many agency scholars as many outside directors are current or former CEOs and hence not concerned about compensation relatively speaking.

based controls due to their lack of knowledge of the ends-means relationship; conversely, insiders have a greater knowledge of the ends-means relationship and so will push for behaviour based controls for the CEO. I therefore propose:

*Hypothesis 9: An increase in the proportion of outsiders on the board will increase the use of goal based output control systems for the CEO.*

Since the proportion of outsiders determines the control method of the CEO who then determines the control method of those actors within the organization that may engage in illegal cartel activity, the proportion of outside directors ultimately impacts illegal corporate activity through the CEO control method. I therefore assert that:

*Hypothesis 10: The relationship between the proportion of outside directors and illegal cartel activity is fully mediated by CEO control method.*

#### **4.9 Summary**

Corporate governance demonstrates that the board can employ two control methods (behavioural or output) to advance the interests of the shareholders, where their primary interest is usually profit maximization. Through a cascading effect, the board will designate this control method to the CEO who will then impart it to the senior management team and so on down the hierarchy. In organizations with strong drivers towards financial goals, output control methods emphasize goals attainment over the means to achieve those goals. Merton's (1938, 1957, 1968) concept of anomie informs us as to why organizations become Innovators when faced with goals that are difficult to achieve. Anomie (now strain) then provides a mechanism by which goal driven organizations are more likely to use illegal activities to achieve those goals.

I assert characteristics of corporate governance that could influence whether an organization will use illegal activity to achieve their goals. Independent directors on boards influence the type of control method used for the CEO and through cascading, to the upper management and then operational managers. Directors' backgrounds and independence from both the organizational hierarchy (e.g. inside directors) and from the organization itself also have an impact on whether the organization uses illegal cartel activity to achieve its goals.

## CHAPTER 5

### ILLEGAL CARTEL ACTIVITY DATA

The data I have available on illegal cartel activity are robust and comprehensive. The measure for the dependent variable “Illegal Cartel Activity” was taken from a proprietary database compiled by Professor John Connor of Purdue University (“Connor Database”). Dr. Connor has written a text book on cartel activity entitled “Global Price Fixing: Our Customers are the Enemy” (Connor, 2001) and has previously used this dataset in peer reviewed research (Connor, 2006). The sources used for the construction of the database is detailed by Connor and Helmers (2007):

Information is drawn from many sources. First, most discovered cartels are first revealed to the public when fines, a guilty plea, or an indictment is announced in process releases of the DOJ [US Department of Justice], the Canadian Competition Bureau, EC [European Commission], or a score of other national antitrust authorities with active anticartel programs. The brief press releases are followed by additional documents, such as sentencing memorandums, plea agreements, detailed published decisions (in the EU especially), “statements of fact” (in Canada), annual reports, and speeches of antitrust officials. In Europe the most important cartels have the full decisions of the EC (some of them running to more than a hundred pages) posted publically a year or two after the brief press releases about Commission decisions. Lesser decisions are described in the Competition Directorate’s quarterly newsletter. All these documents are preserved on websites of the U.S., Canadian, and the EU antitrust authorities going back to the mid-1980s in most cases. Related U.S., Canadian and European court decisions are fully archived.

A second source of data occurs when an investigation is announced or leaked to the press or when raids on corporate offices are noticed. Then business newspapers, trade magazines, and news services begin to publish pieces on the alleged violators and their industries. Older articles are often available that describe the size, growth and market structures of the affected markets. Once the span of the violation is known, production quantities or list of transaction prices can sometimes be located for some industries. Among the more useful trade magazines and newsletters are *Chemical Market Reporter*, *Oil and Gas Journal*, and similar publications available on major business-and-law search engines (Factiva, LexisNexis).

Third, a small number of academic and government researchers have been compiling similar datasets. Among the most useful are working papers by Levenstein and Suslow (2001, 2002) and Levenstein, Suslow and Oswald (2003). A useful government publication is the OECD (2002) and its annual competition-law reports by members. And of course we have built upon data collected in the authors' previous publications (e.g. Connor 2003).

I use the Connor database for this research and followed the database methodology as previously outlined. The database has been used in peer reviewed research before. Attempts to recreate this database or to selectively choose a year and verify the results have met with disappointment as the sources of the material are so varied and the database itself would have to be recreated to verify. I could find evidence of a selected sample of illegal cases stipulated therein. This database is then at most a population and at least a sample of a population.

The Connor dataset contains data that have been broken down into the following categories: cartel name and location (i.e. global or region of activity); legal status (i.e. investigation open or concluded); market and cartel structure; type of illegal conduct (i.e. bid rigging or 3<sup>rd</sup> party support); the identity of the defendants, both organizationally and personally; cartel affected commerce; monetary penalties and other sanctions; severity of sanctions in relation to sales; cartel duration; dollar damages and overcharges; date exposed and sanctioned by country; and, lag of sanction to date of exposure. Each of these categories is further broken down into sub categories resulting in over 150 subfields. A cartel/company observation occurs when a cartel is first identified and companies are subsequently included as part of the investigation into that cartel.

As an example, in the global citric acid cartel that ran from 1991 to 1995 five companies - Archer Daniels Midland (ADM) of the United States, Bayer AG out of Denmark, Hoffmann- Laroche of Switzerland, Montana AG of Switzerland and Eridania of France - controlled about 55% of the global market for citric acid. These companies were found guilty of anti-trust offenses and were fined and paid damages that totalled (in millions of U.S. dollars) \$142.29 for ADM, \$164.64 for Bayer AG, \$86.17 for Hoffmann-Laroche, \$44.90 for Montana AG and \$1.13 for Eridania. The citric acid cartel would count as five cartel/company observations. The dataset contains 1,582 cartel/company observations covering 174 international cartels. To qualify as an international cartel it had to have included participants from more than one country. In this dataset these international cartels include 848 separate organizations.

However, the Connor dataset does have limitations. These limitations are primarily centred around gaps in the data for particular cartel/company observations. There are over 150 columns of information and few observations populate all fields either because the information was not available or it was not applicable for each cartel/company observation.

The Connor dataset served as the basis for the data that is used in this study. The dataset was narrowed down to cartel/company observations that had the following characteristics: U.S. based head office; the company listed on either the NYSE or NASDAQ; an available cartel start date; and, a cartel end date of 2008 or earlier. Once these selection criteria were applied to the original Connor database, 164 cartel/company observations remained.



80 separate cartels were represented in these 164 observations. These cartels were evenly spread among raw material producers such as hydrogen peroxide and potash and potassium chloride (31 cartels), service providers such as commercial insurance brokerages and tobacco leaf auctions (19 cartels), and processed products cartels such as medical x-ray film, commercial explosives and automotive aftermarket filters (30 cartels). The firms in this sample participated in cartels that varied from a minimum membership of two members for auction house art buyers' and sellers' fees, to a maximum membership of 47 for specialty piping steel. The average number of firms participating in these cartels was 8.6 with a standard deviation of 8.1. It is important to note that while the Connor database identifies international price fixing cartels, the sample for this thesis contains only U.S. firms; thus, by definition, the sample for my research would not contain all of the members of any one cartel. Table 1 details the breakdown of the number of cartels in the sample with their respective observations.

**Table 1: Number of Cartels at each Observation Level**

<b>Number of Observations</b>	<b>Number of Cartels at Observation Level</b>
1	51
2	12
3	7
4	3
5	1
6	4
10	1
17	1
<b>Total: 164</b>	<b>Total: 80</b>

The Connor data contains an estimate of the market share for all of the participants in the cartel in the market in which they were fixing prices as a whole. The original source

documentation does not always contain this information. Where it is included it is usually only an estimate due to the inherent problems in assessing market share over the number of years in which the cartel was in operation. My methodological approach included collecting industry data from as close a date as possible to the inception of the cartel. This is critical as cartels can be formed to influence industry metrics. In fact, the basis of much of the litigation (whether originating from government agencies or private parties seeking compensatory damages) surrounds what actual effect, if any, the cartel had on such things as market share and pricing. It is difficult to quantify; even in lawsuits with expert witnesses produced on both sides of the argument, there is little, if any, agreement. Therefore, the data on market share is termed an estimate in the Connor database and in the sample I have selected. The estimate of the market share controlled by the cartels in the sample was included for 48 of the 80 cartels and ranged from a low of 25% for the soda ash cartel to 100% for many cartels including SRAMs (Static Random Access Memory devices) for computers, the insecticide BT for forests and specialty piping steel. The average market share estimate for these 48 cartels was 92% with a standard deviation of 39%.

Along with variability in the size of the cartels and variability in their market share, there was variability in the size of the markets affected. Again, during the legal proceedings related to cartel activity, there was little agreement as to the actual size of the markets influenced by these cartels. In my sample, the smallest market affected was that for the Three Tenors CD of which AOL Time Warner was the American cartel participant. The Three Tenors market was estimated at \$500,000 USD, very small as compared to other documented cartel activity. More typical were the industrial diamonds cartel in a global

market estimated to be worth \$600 million and the disposable contact lens market which was estimated to be worth over a billion dollars.

In the Connor dataset, cartel members were punished through a finding of guilt in criminal, regulatory or civil actions and were generally penalized monetarily. The fines varied with the extent of damages, market size and other legal aggravating factors such as whether coercion was involved in the execution of the cartel. The fines also varied by country and by type. For example, UCAR Inc. was the American participant in the graphite electrodes cartel (graphite electrodes are used in electric arc furnaces in the steel industry) from 1992 to 1998. This company was fined \$110 million in the United States and subjected to another \$256 million in monetary damages from a civil suit. The graphite electrodes cartel was also fined \$20 million in Canada and \$43.1 million by the European Commission.

Another important variable documented in the Connor dataset is the duration of the cartels. In the 80 cartels contained in my sample, cartel activity ranges from a four month duration for the cruise lines fuel surcharge cartel and five month duration for the Three Tenors CD to a high of 311 months for the soda ash cartel and 360 months for the cartel involved in the construction of gas pipelines on the northern slopes of Alaska. The average was 86 months with a standard deviation of 73 months; a typical example is the high fructose corn syrup cartel which lasted 77 months. In my sample, the earliest start date was 1966 and the latest start date was 2007, while the earliest end date was 1970 and the latest 2008.

My sample also included firms that are household names such as AOL Time Warner, Dow Chemical, DuPont, Prudential Insurance, Goodyear, Sherwin Williams, Haliburton, United Airlines, MasterCard, VISA, Proctor and Gamble, Pfizer, Nordstrom, Ford Motor Company, Exxon Mobile, Goldman Sachs, General Electric, and Johnson & Johnson. The characteristics of each company were generally captured in the cartel level data and each company had the particulars of its participation detailed in the sample.

One factor that is interesting to note is the recidivists that appear numerous times throughout the sample. Of the 164 observations there were 127 separate firms represented. Crompton Corporation was involved in seven separate cartels. ADM was involved in six cartels: carbon dioxide from 1968 to 1992; sodium glutamate from 1987 to 1995; glucose and fructose corn syrup from 1989 to 1995; citric acid from 1991 to 1995; and, MSG and nucleotides from 1992 to 1996. Three firms were involved in four cartels (DuPont, Dow and Exxon), two firms had participated in three cartels (AIG and FMC Corp.) and 14 firms participated in two cartels.

These multiple convictions added a concerning complexity to the analysis. Time is an important variable in assessing the state of the environment and the firm prior to the commencement of illegal cartel activity. In many cases there were overlapping time frames with these recidivists; the proper time to view the firm just prior to the illegal cartel activity was therefore clouded by this almost continual state of participation in illegal activity. Selecting matching companies also became problematic. If I had rejected all cases where there was recidivism then I would have been left with 112 cartel/company observations. However, I believe that their inclusion is defensible. The thrust of this thesis is that the status of the environment and the firm's corporate

governance at t-1 is causative of the firms' illegal cartel activity at t. If a firm is in a more or less continuous state of illegal cartel activity in various industries (this data sample contains no instances of the same industry being the subject of cartel activity), then there may well be a difference when compared to the matching firms where no illegal cartel activity occurs. I did not measure the change in the environment or corporate governance in the same firm.

Even with the information gaps, the database from which my sample was selected is robust and comprehensive. In addition, the sample contained enough data points to conduct my statistical analysis.

## CHAPTER 6

### METHODOLOGY

#### 6.1 Methodological Approach

The study of the factors that may impact or predict illegal cartel activity is complicated as it is both multilevel and complex. Given that there is relatively little research in this area, the initial methodological challenge was to decide which research paradigm was most appropriate to explore the research question of why firms engage in illegal cartel activity. Quantitative methods were attractive as my hypotheses assert cause and effect and antecedent relationships for the phenomenon (Cohen, Cohen, West, & Aiken, 2003) which would suggest a post positivist approach to this research question. However, this phenomenon also lent itself to qualitative analysis since illegal cartel activity is nuanced and influenced by the specifics around each individual occurrence indicating an interpretive approach to the research question. Therefore, for a robust understanding of the phenomenon, qualitative methods were used to inform and add context to the quantitative findings at different levels and units of the analysis (Tashakkori & Teddlie, 2003) leading to a pragmatist approach.

#### 6.2 Quantitative Sample and Data Collection

As the quantitative data collection and analysis formed the core component and method for my research, it is helpful to provide a description of the constructs, detailing how each was measured and indicating its data source. Wherever possible, priority was given to aligning the data measurement with previous research on cartel activity. Given that the dependent variable is dichotomous (either the illegal activity was committed or it was

not), the data involving the dependent variable of illegal cartel activity was analyzed using logistic regression (Cohen et al., 2003). All other analyses employed OLS regression unless otherwise stipulated. All data for interactions were mean centred.

### ***6.2.1 Illegal Cartel Activity***

I began by reviewing the proprietary dataset detailing illegal cartel activity. Illegal cartel activity can be measured by observing whether the company committed illegal cartel activity or it did not. In order to perform this type of analysis using my dataset, I included a number of observations from firms that were not convicted (or even suspected) of illegal cartel activity in order to be able to match them to firms who had been convicted of illegal cartel activity. The matching technique paired firms according to both the timeframe within which the illegal cartel activity started and the type of firm that conducted the illegal activity. The time frame within which the illegal activity began is an important matching criterion; as I am suggesting that there is a causal relationship between the independent variables and the commission of the illegal cartel activity it was important to show the time relationship. The Connor database allowed for this comparison as it includes the start, end and duration of the illegal cartel activity. All matching cases were for firms in existence at the time of the beginning of the illegal cartel activity.

Secondly, all firms were matched with firms who, at the time period of the start of the original offense, were of similar size (Lehmborg, Rowe, White, & Phillips, 2009). While size has been measured a number of ways including through total assets (Ornstein, 1972), for this research size was measured in net sales. Since I am only dealing with American

firms, the matching firms were taken from the S&P 1500 universe of firms with no single firm used as a match more than once. For a firm close in size to more than one observation, the next closest firm at the relative date was used. This matching method is preferable to the matching method of Asch and Seneca (1975) which simply used a random sample of firms from the general population. A paired samples t test was performed to ensure that the two matching firms did not significantly differ in size (Lehmberg et al., 2009); the t test was not significant..

To further understand any industry effects I have run statistical tests to determine how similar the portfolio of industries is between the illegal and legal datasets. I used the 2 digit SIC code for this analysis as this gives a somewhat broader measure of the similarity of industries. The 3 and 4 digit codes were seen to be too parsimonious since each of these industry levels could be tainted by the illegal activity.

I used cross tab analysis for this nominal data to assess the similarity of the portfolio of 2 digit industries between the illegal and legal data. I tested for the contingency co-efficient which is a measure of the association based upon the Chi square. The value ranges from 0 to 1, with 0 indicating no association between the row and column variables and values closer to 1 indicating a high degree of association between the variables. The contingency co-efficient for this data was 0.986 indicating a high degree of association.

I also tested for the uncertainty co-efficient which measured the association that indicates the proportional reduction in error when values of one variable are used to predict values of the other variable. In this case I found that the legal dataset reduces the error of the



illegal dataset by 79.2%, a favourable result indicating confidence in the similarity of the datasets.

Finally, I tested the Lambda co-efficient which is a measure of association that reflects the proportional reduction in error when values of the independent variable are used to predict the values of the dependent variable. A value of 1 means the independent variable perfectly predicts the dependent variable while a value of 0 indicates there is no predictive capacity of the independent variable vis à vis the dependent variable. The analysis indicated a score of 0.648 which shows a favourable association between the legal and illegal datasets. I am confident with this analysis that the association between the portfolio of the illegal and the legal industries is strong and that industry related issues with the analysis are not great.

**Table 2: Legal/Illegal SIC Codes**

<b>2 Digit Sic Code</b>	<b>Industry Description</b>	<b>Legal</b>	<b>Illegal</b>
10	Metal Mining	0	1
13	Oil and Gas	2	4
20	Food and Kindred Products	12	9
21	Tobacco Products	1	1
24	Lumber and Wood Products	2	3
25	Furniture	1	1
26	Pulp and Paper	4	2
28	Chemicals and Allied Products	18	35
29	Petroleum Products	3	8
30	Rubber and Plastic Products	1	1
32	Glass, Concrete , Stone Products	0	1
33	Metal Manufacturing	5	2
34	Metal Products	2	2
35	Machinery	9	7
36	Power and Electrical Products	8	6

37	Motor Vehicles	5	7
38	Laboratory and Metering Devices	4	8
40	Railroads	2	1
42	Trucking warehousing and storage	2	1
44	Water Transportation	2	3
45	Air Transportation	7	7
47	Transportation Services	1	1
50	Wholesale Durable Goods	2	0
51	Wholesale Non-Durable Goods	1	2
52	Retail Building Materials	1	0
53	Retail Department Stores	5	2
56	Retail Apparel and Accessories	4	1
57	Retail Home Furniture	1	0
58	Retail Eating and Drinking	2	0
59	Retail Misc.	1	0
60	Commercial Banks	3	3
61	Financial Services	2	0
62	Security and Commodity Brokers	8	5
63	Insurance	9	11
64	Insurance Services	9	7
73	Business Services	7	2
75	Automotive Services	1	0
78	Motion Picture and Related Services	0	1
99	Other	1	3
	Total	148	148

This resulted in a final sample of 296 observations, where half were for firms that committed illegal activity and half were for firms that were not charged and convicted. The data were obtained through the Connor Database and the Compustat database. There was difficulty in getting data for all of these observations, particularly those before 1990, which resulted in quantitative analysis being conducted on between 180 and 185 observations depending upon available data.

### ***6.2.2 Industry Concentration***

Historically, industry concentrations have been measured through concentration ratios, calculated as the four firm value of shipments (Asch & Seneca, 1975; Ornstein, 1972). This is the percentage of the total industry value of shipments held by the top four firms. A meta-analysis conducted by Datta and Narayanan (1989) concluded that concentration measured by four and eight firms' market shares in an industry are appropriate. I used industry concentration ratios at the four and eight firm level as compiled by the U.S. Census Bureau in 1987, 1992, 1997 or 2002, using data from the Census year before and closest to the year that the illegal cartel activity began. The data regarding the start date of the cartel was obtained from the Connor database. I have selected the closest census before the cartel began because the census afterward may be affected by the operation of the cartel itself. Following the methodology proposed by Datta and Narayanan (1989), the analysis was run separately for both the four and eight firm concentration levels.

### ***6.2.3 Industry Profits***

Research in the antitrust area has utilized a number of different ways of measuring profits. As examples, Ornstein (1972) used the ratio of net income after taxes as one of his measures of profit to equity while McKendal and Wagner (1997) used the five year average return on assets for the industry. Interestingly, Asch and Seneca (1975) did not even detail how they measured profits or sales. In my construct for industry profit I used the five year average of both the return on equity and return on assets, starting before the incidence of the illegal cartel activity. This data was then divided by the market average for these indices to produce a ratio. The market average was the S&P 1500 universe of

companies. Companies or industries that made up over 10% of the market were excluded from the average in order to not skew the results. The ratios were summed to produce an index; according to Boyd, Gove and Hitt (2005), an index is a preferable form of measurement to a single measure. This index was used in the analysis with the dependent variable. The data used were taken from the Compustat database.

#### ***6.2.4 Firm Profits***

Firm profits were measured in a similar way to industry profits; an index for firm profits was calculated using the five year average of return on assets and equity for the firm in question. Similar to the determination of industry profits, this measure was compared to the average market return on equity and return on assets to produce a ratio. The market average was calculated as described in section 6.2.3. Once again, these two ratios were summed to produce an index of firm profits which was used in the analysis with the dependent variable. The data used were taken from the Compustat database.

#### ***6.2.5 Munificence***

The determination of the level of munificence, and what should be included in the construct itself, has been calculated in a variety of ways in studies on illegal corporate activity. Staw and Sz wajkowski (1975) used the mean return on equity and sales for the preceding five years of the industry's, firm's and market's performance to measure munificence. While the authors rejected the measure of a percentage change in profits and sales as less valid indicators, Dess and Beard (1984) found that growth in sales, price to cost margin, total employment, and number of establishments loaded on munificence. Other researchers in this area included different factors in their munificence construct.

Keats and Hitt (1988) used growth in net income and growth in operating income, Baucus and Near (1991) employed growth in industry value added and finally Goll and Rasheed (1997) measured munificence as the regression slope of the value of shipments. I adopted Keats and Hitt's measurement by measuring munificence as the regression slope of the difference between industry sales and cost of goods sold (a rough estimate of net income) over a five year period before the incidence of illegal cartel activity. I regressed the difference of sales from the cost of goods sold on time and use the regression slope from this OLS regression. This data were taken from the Compustat database.

#### ***6.2.6 Dynamism***

Dynamism, as a construct, has been considered in a number of different ways, some more robust and inclusive than others. Dess and Beard (1984) found that the measures of instability of sales, price to cost margin, employment, and value added loaded on their measure of environmental instability whereas Keats and Hitt (1988) (using the name instability as opposed to dynamism) only looked at the instability of net sales and operating income over a five year period prior to the time frame in question. Baucus and Near (1991) measured complexity of a firm by the number of four digit businesses the firm was in. I followed the measurement technique used by Keats and Hitt (1988) by taking the standard error of the regression slope co-efficient and dividing it by the mean value of the net sales and net incomes over a five year period. These two measures were combined in an index for analysis with the dependent variable. This data were available from the Compustat database

### ***6.2.7 Board Scanning***

Board scanning is a construct that has very rarely been dealt with empirically in the literature. To inform this construct, I searched both the ProQuest ABI Global Research Database and the Web of Science Database on such topics as “board scanning”, “director scanning”, “board of directors scanning” and found only one article on this topic, a 1979 study by Ritvo, Salipante and Notz (1979) that looked at board problem recognition and used board scanning as the independent variable. Methodologically, they used a survey that was sent to hospital board members. I then expanded the search to include the concept of corporate scanning more broadly. This search was more fruitful, locating a number of articles which incorporated the CEO and the TMT rather than just scanning carried out by the board. This research stream relied upon a broader toolbox of methods to demonstrate the validity of the scanning construct including the survey method (Boyd & Fulk, 1996; Garg et al., 2003; Goll & Rasheed, 1997), interviews (Daft, Sormunen, & Parks, 1988), case studies (Ngamkroekjoti & Johri, 2000), and simulations (Hough & White, 2004).

It has been suggested that the board scanning function is partially developed from the knowledge that a director obtains from their experience in general (Murphy & McIntyre, 2007) and from serving on other boards in particular (Carpenter & Westphal, 2001). The experience of individual directors and the fact they may serve on other boards indicates a superior scanning ability. A reasonable proxy for this ability is to determine whether the director is an outside or an inside director. An outside director will arguably have a better scanning potential than an inside director as a result of a more intense immersion in the external environment.

In scanning the external environment and its attendant information processing requirements, a larger board has greater ability than a smaller board (Sanders & Carpenter, 1998); in general this also applies to the general monitoring function of the board (Petra & Dorata, 2008). Furthermore, I assert that having more directors on the board will result in an enhanced scanning ability as each director brings with them the skill, time and effort to scan the environment and bring the information back to the organization. This ability accumulates as the number of directors increases. Finally, the relative size of the firm will also affect the scanning effectiveness of the board. The larger the firm the more overall scanning is required to achieve a given level of effectiveness. As the proportion of outside directors and the total number of directors are important when considering the board's effectiveness in scanning the external environment, my measure for this construct was an index of the two measures. As noted previously, an index provides better construct validity than single indicators, single ratios or discrete indicators (Boyd et al., 2005). This index was compiled by adding the percentage of outside directors to the log of the number of directors, generating an index measure of between 0 and 2.5. This data were obtained from the companies' annual reports and the Compustat database.

Given that board scanning is not a common variable, it was important to ensure that this conceptualization was appropriate. I developed face validity for board scanning by interviewing six current and former board members on their views of board external environmental scanning. These board members represented both for-profit (manufacturing, consulting and financial services) and not-for-profit (economic development commissions and religious institutions) organizations. The goal of these

interviews was to provide insight into the conceptualization of board scanning, ensuring that it was consistent with both theory and practice. The interviews followed a semi-structured format (Glaser & Strauss, 1967) and were conducted by telephone. I began by introducing the research topic and asked interviewees to describe their thoughts and experiences with board scanning. I followed three main areas in the interviews:

1. How do board members scan the external environment for issues that may have some impact on the organization;
2. Does the size of the board have any impact on the effectiveness of the board's scanning activities; and,
3. Does the percentage of outsiders affect the board's effectiveness in scanning?

All interviews were approximately thirty minutes long and followed the semi structured questions outlined in Appendix A. The ethics approval is contained in Appendix B. The individuals interviewed confirmed that the proportion of outside directors and the total numbers of directors are important when considering the board's effectiveness in scanning the external environment. Thus, the index I constructed was used as the indicator for board scanning.

### ***6.2.8 Complexity***

I included complexity as a control variable in the environmental analysis. A more complex external environment requires greater information processing by the firm as there are significantly more inputs and/or outputs that each requires more complex and difficult resource acquisitions or output dispositions. This relationship has been demonstrated in RDT research; Dess and Beard (1984) used environmental complexity as



an indicator of the amount of heterogeneity and therefore uncertainty that a manager would perceive in the environment.

This concept was furthered through research by Keats and Hitt (1988:573) who introduced complexity in their study defining it as “heterogeneity and concentration of environmental elements”. The construct of heterogeneity can be defined as the degree of similarity and diversity in the organization’s environment (Baucus & Near, 1991). Their underlying assumption in measuring complexity was that the environmental elements they chose to study would vary in their number, diversity and distribution and that this would affect the information processing requirements of the organization; the more complex the elements, the more complex the systems a firm would need to have in place to interpret the information. Keats and Hitt (1988) speculated that a complex external environment placed a constraint on firm growth by requiring the organization to devote resources to internal operations to manage the complexity rather than externally focused activities such as acquiring competitively advantageous resources or reducing uncertainty.

The more complex and uncertain an environment the more constraints will be placed on the resources in the environment. A firm will seek to control the constraints on the resources in the environment in order to reduce the uncertainty emanating from that environment (Pfeffer & Salancik, 1978). Illegal cartel activity allows a firm to increase its level of control over its environment by controlling the interdependency of the firm with its competitors thereby removing one of the constraints on revenues. Therefore, at high levels of environmental complexity one would expect that there would be an

increased incidence of illegal cartel activity as firms attempt to reduce the level of uncertainty in their external environment.

The construct of complexity (which includes the idea of heterogeneity) was created by Dess and Beard (1984). Complexity has been measured in several ways in the literature depending on the phenomenon of interest. This has included constructing measures of technical complexity by measuring the percentage of scientists and engineers in an industry's workforce and the diversity of product categories (Sharfman, Dean, Dess, & Rasheed, 1991), counting the number of competitors faced and the number of geographic markets (Miller & Chen, 1996), and calculating the average number of employees per firm (Jarley, Fiorito, & Delaney, 1997).

The measurement of complexity or heterogeneity is closely aligned with that of industry concentration; complexity can be measured as the level of dispersion within an industry. The less concentrated the industry, the more firms there will be and the more heterogeneous the market place. I used the market share of the 50 largest firms in the industry to measure complexity and heterogeneity. The lower the percentage of market control that these 50 firms had, the more complex the industry. To obtain the measure of complexity, I examined data from the U.S. Census Bureau in 1987, 1992, 1997, and 2002 and used whichever year's data fell closest to, yet was before, the year that the illegal corporate activity commenced.

### ***6.2.9 CEO Control***

The CEO's main responsibility is to direct the company in the best interests of the shareholders, largely considered to be achieving the strongest possible long-term return

on their investment. To align the CEO with the long-term goals of the shareholders (through the board of directors), successful behaviourally directed controls will be those with a long-term perspective. Traditionally, they have included such things as salary and fixed bonuses.

Output controls are those controls that use incentives to focus the CEO's attention on short-term results (Hoskisson, Hitt, & Hill, 1993; Ordóñez et al., 2009); therefore, there are also elements of the CEO's compensation that are focussed on short-term earnings expectations and include elements such as stocks and stock options (Zahra et al., 2005). Output controls are those on which the CEO has less influence and they vary from year to year; the CEO will attempt to avoid output controls in order to reduce their risk. Davila and Penalva (2006) propose that the variability in a CEO's total compensation from year to year is primarily due to variations in the compensation that are dependent upon output controls such as earnings performance.

To measure behavioural controls and output controls, I took the residuals of the regression of total CEO compensation over the five years before the start of the illegal cartel activity and considered them to indicate a measure of variation of CEO compensation over and above base pay. This fluctuation over and above base pay is predicated upon the attainment of output measures specified in the compensation plan. Low variation is either an indication of goal achievement and hence some measure of certainty while high variation is an indication of the difficulty in achieving the goals of the organization. The residuals were the variation in the CEO's compensation which I argue are tied to short-term incentives as they change and vest from year to year. This was taken as the sum of the squares from the mean of the five year series of

compensation data. The control ratio was the average of the residuals over this five year period divided by the average total CEO compensation for the same five year period. The higher the variability in CEO compensation and hence the output portion of the CEO control, the higher the control ratio. The lower the variability of the CEO compensation, the lower the output control ratio and the more behaviorally based I considered the control ratio to be. This information was available from the Compustat database.

#### ***6.2.10 Board Control***

Board control was measured in a similar fashion to the CEO control; it was calculated by determining the total compensation of the board members as well as the residuals of their total compensation over the five year period prior to the illegal cartel activity. The ratio of the residuals to the total compensation determined the control ratio of the board. Board compensation data were available from the Compustat database.

#### ***6.2.11 Director Independence***

Directors were considered independent (an outsider) if they did not hold a paid role inside the firm. If the information was available to determine affiliated directors, those usually being directors from professional organizations such as accountancy firms and legal firms, then they were coded as inside directors. It was a binary construct; an individual was either an independent board member or not. This measure was a ratio of the number of independent directors as a fraction of the whole board. This information was available from the annual reports of the companies.

### ***6.2.12 Statistical Tests***

It was important to ensure that the variables being tested in this thesis were subjected to tests that ensured statistical rigour. To test for discriminant validity, Variance Inflation Factors were used for all independent variables put forward in this thesis (Bagozzi, Yi, & Phillips, 1991). In addition, skewness and kurtosis were checked for every continuous variable. If the skewness was greater than two or the kurtosis greater than seven, then windsorization (Ferguson, 1961) was used on the data to lower the skewness or kurtosis values. While other statistical diagnostics are more challenging in logistic regressions than they are in OLS regression, the measurement of deviance residuals (as opposed to the normal distribution of residuals as seen in OLS) and the identification of outliers through graphs were used as recommended in the literature (Cohen et al., 2003).

## **6.3 Qualitative Sample and Data Collection**

### ***6.3.1 Qualitative Methodology***

Qualitative data can be used to provide for a greater depth of understanding and holistic explanation of the phenomenon in question and help answer the research question in a more robust way (Sheth & Babiak, 2010). Qualitative research is well accepted in the study of social sciences and is fundamentally interpretive in nature; the researcher draws upon the data to make an interpretation in pursuit of an answer to the research question (Creswell, 2003).

I planned the qualitative research design in terms of both its methodology and sample in order to increase the chance of this analysis providing valuable detail and texture to the research question. For my research, the qualitative research included conducting 10

semi-structured interviews with international experts in the area of illegal cartel activity. I took a realist approach, comparing the interview data obtained from each individual with responses elicited from other interviewees, as well as eventually linking the qualitative data directly to the constructs used in the quantitative data analysis. The ethics approval is provided in Appendix B and the list of semi-structured interview questions for the attorneys is set out in Appendix C.

I conducted semi-structured interviews with primarily (8) plaintiff side (those attorneys representing the consumers in these lawsuits as opposed to the companies committing the illegal cartel activities) class action attorneys involved in prosecuting illegal cartel activity and two attorneys who conduct defense side work on behalf of corporations and individuals. The initial section of the interview was unstructured to ascertain their general views on the causes (including environmental and organizational) underlying why firms engage in illegal cartel activity. I then obtained the attorneys' opinions and reactions to the various constructs of the model I proposed and queried them as to whether they believed there was a causal effect of the antecedents.

The interviews, which averaged over one hour in length, all took place by telephone and were digitally recorded and then transcribed. The interpretation process began once the data had been coded. Unlike a strictly qualitative method, the subordinate qualitative method used for this research did not seek to gather data until the point of saturation. Rather, the data was gathered then interpreted in light of the primary quantitative method. As described by Morse and Niehaus (2009), the qualitative data can be used to confirm the quantitative analysis or to describe or explain it.

The value of the qualitative approach was that it provided for an enriched perspective of illegal cartel activity based upon a sample of many cases that each attorney had participated in. Additionally, while my initial quantitative sample (before including my matching firms) only included cases where there had been a conviction, the qualitative sample included cases where there was not a conviction but may have been a settlement and ongoing cases where there is not yet a resolution. Furthermore, the qualitative method was able to touch upon relationships among the antecedents or to other antecedents that were not captured by the current model.

The point of interaction between the qualitative and quantitative sections occurred when the findings of the qualitative method were integrated with the findings of the core quantitative method. The qualitative findings either supported or refuted the quantitative findings, and resolved any ambiguity inherent in the quantitative findings. This allowed me to present research findings that are more compelling and informed than had I undertaken either quantitative or qualitative methods alone.

### ***6.3.2 Qualitative Sample***

The qualitative sample was taken from the ranks of class action attorneys that specialize primarily in the plaintiff side of price fixing cartel lawsuits although some of the attorneys did have defense experience as well. Attorneys were chosen as their views on the overall phenomenon are extremely well informed and encompass the different levels of analysis. Class action attorneys have a vested interest in understanding as much of the phenomenon as possible as they are financially rewarded for utilizing this information on

behalf of their clients. Their clients are usually the customers that buy the products from the companies or are the alleged transgressors themselves.

The convenience sample for the qualitative research included senior, experienced class action plaintiff side attorneys primarily practicing in the United States and Canada. My contact with these attorneys was initially through a Canadian class action plaintiff side attorney who has been involved in every such case in Canada and is a board member of the American Antitrust Institute. The American Antitrust Institute is an independent, Washington-based, not-for-profit education, research and advocacy organization that is supportive of an increased role for competition in the American and world economy. The Canadian attorney made the introductions on my behalf to the top U.S. attorneys in order to facilitate my interviews. I contacted 20 lawyers which resulted in 10 interviews being conducted with 10 different lawyers based on the timeframes for this research. This was an international sample as the lawyers were located in the United States (Washington, D.C., New York, Los Angeles, and San Francisco) and Canada (Toronto and Ottawa).

### ***6.3.3 Class Actions and Class Action Attorneys***

From my own knowledge and experience as a previously practicing (and still licensed) attorney who has conducted trials as both plaintiff and defence counsel, has advised corporations regarding anticompetitive and price fixing matters, and has conducted research into hundreds of cases, class action plaintiff lawyers are extremely well informed about all relevant details of why a particular cartel formed, conducted operations and then ended. These attorneys spend, either themselves or through their junior and associate lawyers, law clerks and various experts, thousands of hours of



research time combing through literally tens of thousands of documents related to cartels. They are assisted by the legal obligation of the allegedly offending organizations to disclose this information, in order to understand who did what, when and why regarding these illegal cartels.

In the process of trying to prove that organizations joined cartels and set out to engage in illegal cartel activity, plaintiffs' attorneys are aided by the legal system. Once they can establish that there is a class of persons allegedly harmed by the defendant(s) a number of legal devices come into play. The most crucial of these devices is the discovery process which is made up of documentary discovery and oral examinations or depositions. In documentary discovery both sides have to produce for the other side all of the documents in their possession that may be relevant to the subject matter of the litigation. The number of documents that are produced is usually in the tens of thousands and in larger cases it is not unusual for it to be in the hundreds of thousands. These documents are all categorized on CDs for use and ease of searching. In the oral discovery or deposition each side must produce a person or several persons who can represent the organization and answer questions on its conduct and its documentation. Again, these oral examinations go on for at least tens and often hundreds of hours. In short, the discovery process is long, extensive, very expensive, and fully explores the antecedents of illegal cartel activity. It is through this process, the gathering and review of written and oral depositions that plaintiffs' attorneys gather the evidence they need to bring the case to trial and gain the depth of insight which will inform this thesis.

The attorneys that represent the plaintiffs are highly educated, skilled and experienced in the area of illegal cartel activity. Over the years, as the number of similar cases

conducted by the attorney increases, they learn more about how, when and why cartels come into existence, persist and eventually are ended. Thus, class action attorneys are ideally suited to provide general information based upon specific cases about the antecedents to illegal cartel activity. It is by interviewing these attorneys that I gained valuable insight into the myriad of forces that create and sustain the commission of illegal cartel activity by organizations.

## CHAPTER 7

### RESULTS

This chapter presents the results of my analysis on a hypothesis by hypothesis basis for the sake of clarity. As outlined in Chapter 6, the analysis utilized historical economic and compensation data using logistic and linear regression techniques. First-person interviews were conducted with various class action attorneys in North America who are experts on cartel activity.

All of the quantitative analysis used standard logistic regression techniques except where noted. For each of the hypotheses, I have first outlined the quantitative results, followed by the qualitative findings. For the environmental variables, namely industry concentration, industry profitability, firm profitability, munificence, and dynamism, I analysed the data in three ways in order to ensure robustness of the results. Since these environmental variables all are theorized to be moderated by board scanning, I first regressed the independent environmental variable on the dependent variable (illegal cartel activity) moderated by the moderator (board scanning); all results are presented in Tables 4A-E. I then repeated this analysis and added in all of the other environmental independent variables as control variables as well as the complexity variable; the results of this analysis are contained in Tables 5A-E. Finally, I regressed all of the environmental independent variables as moderated by board scanning on illegal activity while including all of the other environmental independent variables as controls as well as their interaction terms with the board scanning variable; these results are set out in Table 8.

The second part of my analysis examined the relationship between board and CEO control and illegal cartel activity. I conducted standard linear regression where required, logistic regression when testing against binary variables (illegal cartel activity) and a three step process to test the mediation effect of CEO control on the relationship between board control and illegal corporate activity. The results are presented in Table 12.

The qualitative analysis was designed to allow for an exploration of each of the hypothesized relationships that were tested in the quantitative analysis. Interviewees were asked for their insight based upon extensive knowledge of illegal cartel activity; in many of the cases they were able to render their opinions and insights on these relationships. Throughout the results section I incorporate the qualitative data on a hypothesis by hypothesis basis. I begin by detailing, for each hypothesis, the observations of the attorneys on the underlying direct relationship between the independent variable and illegal cartel activity as their views are important to the theoretical validity of the concepts being tested.

While conducting interviews, I found eliciting comments on the moderating effect of board scanning was more effective when it followed a conversation about direct effects. However, due to the nature of the interview process there was necessarily overlap in some of the responses that the attorneys gave to my questions; I have noted where this occurred but found it to be particularly valid in the responses regarding the board scanning moderator. As a result, in reporting on the qualitative data obtained regarding the scanning moderator, I include all of the comments from the attorneys in one section, directly following the quantitative and qualitative reporting of results for Hypothesis 1. As the comments of the attorneys on board scanning hold equally for all of the

hypotheses, I only included them once, up front, to avoid unnecessary repetition. I have also included a sample of additional comments in Appendix D (environmental variables) and E (internal control variables).

I now present the results of my analysis. Prior to running the analysis and in order to ensure statistical rigour, I identified outliers through graphs (Cohen et al., 2003) and tested for skewness and kurtosis. If the skewness was greater than two or the kurtosis greater than seven, then windsorization (Ferguson, 1961) was used on the data to lower the skewness or kurtosis values. In addition, where appropriate, I tested variance inflation factors. All variance inflation factors were calculated using OLS models and did not indicate that multicollinearity was a concern (Neter, Wasserman, Kunter, & Li, 1996). Descriptive statistics for the variables (before windsorization) used in the environmental hypotheses (1-5) are presented in Table 3, the description of what portion of N came from those firms that participated in illegal activity versus those others is contained in Table 4, and their correlation matrix is provided in Table 5. The different Ns resulted from the ability to get data in certain years for certain variables. While the N is close in most cases there were some discrepancies due to data collection issues in Compustat. I do not believe these discrepancies have affected the analysis or results. Descriptive statistics and a correlation matrix for the variables used in the control hypotheses (6-10) are provided in Table 8 and the description of the proportion of N derived from illegal cartel firms versus the matching firms is contained in Table 11.

**Table 3: Descriptive Statistics for Environmental Hypotheses (1-5)**

	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
Illegal Cartel Activity	296	0.50	0.50	0	1.00
Industry Concentration	185	38.50	21.40	3.50	100
Industry Profits	184	0.99	0.87	-4.38	2.03
Firm Profits	183	1.23	3.49	-37.63	15.76
Munificence	184	0.07	0.15	-0.29	0.92
Dynamism	184	0.07	0.15	-0.16	0.92
Board Scanning	183	-0.001	0.28	-0.71	0.45
Complexity/ Heterogeneity	187	79.30	21.17	20.70	100

**Table 4: Proportion of N for Each Variable (Illegal vs. Legal)**

	<b>Illegal</b>	<b>Legal</b>
Illegal Cartel Activity	148	148
Industry Concentration (both at the 4 and 8 level)	94	91
Industry Profits	93	91
Firm Profits	92	91
Munificence	93	91
Dynamism	93	91
Board Scanning	92	90
Complexity	93	94

**Table 5: Correlation Matrix for Environmental Hypotheses (1-5)**

	Illegal Cartel Activity	Industry Concentration	Industry Profits	Firm Profits	Munificence	Dynamism	Board Scanning	Complexity/Heterogeneity
Illegal Cartel Activity	1.00							
Industry Concentration	-0.10	1.00						
Industry Profits	-0.49**	-0.15*	1.00					
Firm Profits	-0.15*	0.07	0.41*	1.00				
Munificence	-0.08	-0.13	0.01	-0.02	1.00			
Dynamism	0.13	-0.02	0.01	0.06	0.01	1.00		
Board Scanning	-0.18*	0.07	0.18*	-0.01	-0.04	-0.17*	1.00	
Complexity/Heterogeneity	0.01	0.69*	0.06	0.01	-0.09	0.07	0.09	1.00

† p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

## 7.1 Hypothesis 1

Hypothesis 1 suggested a relationship between industry concentration and illegal activity, moderated by the scanning variable. To review:

*Hypothesis 1: The effect of industry concentration on illegal cartel activity is moderated by the amount of board scanning of the external environment such that for a given level of industry concentration, less scanning by a board will result in a greater probability of illegal cartel activity.*

### 7.1.1 Industry Concentration - Straight Interaction

The results from the logistic regression with no control variables indicate that the hypothesis is supported ( $\beta=-0.90$ ;  $p<0.05$ ). The  $R^2$  (Cox and Snell, used throughout for logistic regression) is only 0.06 indicating a minimal effect. The specifics of this analysis can be found in Table 6A. Throughout the analysis, industry concentration was measured and reported using the four firm concentrations. As a robustness check I also tested using the eight firm concentrations without any change in the results.

**Table 6A: Industry Concentration x Scanning (Hypothesis 1)**

	$\beta$ (S.E.)
Industry Concentration	-0.01 (0.01)
Board Scanning	-2.02 (0.78)**
Industry Concentration x Scanning	-0.09 (0.05)

N = 183,  $\chi^2 = 10.80$ ,  $p<0.01$ ,  $R^2 = 0.06$  Cox and Snell, 0.08 Nagelkerke  
†  $p<0.10$ , \*  $p<0.05$ , \*\*  $p<0.01$ , \*\*\*  $p<0.001$



### 7.1.2 Industry Concentration - Interaction with Environmental Controls

I then added the other environmental independent variables into the analysis as control variables and again tested the hypothesis. The results indicate no significant result or support (Table 7A). Model 1 in Table 7A is just the control variable, Model 2 is the control variable with all the independent variables and Model 3 adds in the interaction term. This format will be used throughout the balance of Hypothesis 1-5.

**Table 7A: Industry Concentration x Scanning with Controls (Hypothesis 1)**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
Constant	-0.53 (0.15)	-4.39 (0.73) <sup>***</sup>	-5.63 (1.03) <sup>**</sup>
Complexity	0.07 (0.03)	0.01 (0.01)	0.02 (0.02)
Industry Conc.		-0.17 (0.02)	-0.19 (0.17)
Industry Profits		-1.52 (0.52) <sup>**</sup>	-1.49 (0.53) <sup>**</sup>
Firm Profits		-0.06 (0.27)	-0.14 (0.30)
Munificence		-0.98 (1.86)	-0.85 (1.85)
Dynamism		-0.01 (0.00) <sup>***</sup>	-0.01 (0.00) <sup>***</sup>
Scanning		-2.03 (1.12) †	-2.02 (0.78) <sup>**</sup>
Industry Concentration x Scanning			0.07 (0.08)
$\chi^2$	0.29	132.49 <sup>***</sup>	133.42 <sup>***</sup>
Cox & Snell	0.00	0.51	0.52
Nagelkerke	0.00	0.69	0.70

N = 183, † p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### 7.1.3 Industry Concentration - Interaction with Environmental Controls and Interactions

Likewise, when the interactions terms of all the independent environmental variables were added into the equation, I found no significant result for the interaction of industry concentration and board scanning (Table 8).

**Table 8: All Variables x Scanning (Hypotheses 1-5)**

	<b>β (S.E.)</b>	<b>Wald</b>
Industry Concentration	-0.02 (0.02)	0.61
Industry Profits	-2.88 (0.73)	15.69***
Firm Profits	0.12 (0.35)	0.13
Munificence	-0.78 (2.43)	0.10
Dynamism	-0.01 (0.00)	33.28***
Board Scanning	-7.92 (3.19)	6.16*
Industry Concentration x Scanning	0.15 (0.15)	1.11
Industry Profits x Scanning	-8.30 (2.57)	10.41***
Firm Profits x Scanning	-4.80 (1.51)	0.10
Munificence x Scanning	4.87 (13.04)	0.14
Dynamism x Scanning	-0.01 (0.00)	13.43***
Complexity/Heterogeneity	0.02 (0.02)	1.46

N = 183,  $\chi^2 = 166.07$ ,  $p < 0.001$ ,  $R^2 = 0.60$  Cox and Snell, 0.80 Nagelkerke

†  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

For robustness I also tested all the direct effects with the complexity control, set out below in Table 9.

**Table 9: Direct Effects of Environmental Variables**

	<b>β (S.E.)</b>	<b>Wald</b>
Industry Concentration	-0.02 (0.02)	1.15
Industry Profits	-1.52** (0.50)	9.23**
Firm Profits	-0.03 (0.24)	0.02
Munificence	-1.26 (1.83)	0.47
Dynamism	0.001*** (0.00)	31.51***
Complexity/Heterogeneity	0.02 (0.02)	1.46

N = 183,  $\chi^2 = 128.772$ ,  $p < 0.001$ ,  $R^2 = 0.51$  Cox and Snell, 0.68 Nagelkerke

†  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

#### ***7.1.4 Industry Concentration - Qualitative Analysis***

The class action cartel lawyers interviewed were supportive of Hypothesis 1. They all agreed that a greater industry concentration leads to an increase in illegal activity and that the moderating effect of increased scanning would decrease the amount of illegal activity. When asked about the direct effect of high industry concentration and illegal cartel activity, a seasoned attorney from New York with experience involving cases in the accounting industry remarked:

*“I am finding...the higher the concentration, the more apt there is to be illegal activity.”*

This point was echoed by a Toronto attorney:

*“The fewer players there are, the easier it is to establish a cartel and the easier it is to monitor compliance with the cartel.”*

Thus, all (10 out of 10) attorneys were in agreement that higher industry concentrations lead to higher levels of illegal activity although they suggested that a single concentration measure may not have enough granularity to properly answer this question. Therefore, there is support for Hypothesis 1 (without control variables) and the general opinion of the attorneys in the qualitative results.

I will now examine the qualitative data regarding the moderator variable, board scanning.

#### ***7.1.5 Industry Concentration - Qualitative Analysis regarding Board Scanning***

The issue of the moderating impact of the board scanning variable was discussed by each of the interviewees. It is important to note that the scanning variable was more likely to be described by the interviewees as “board oversight”. Also, none of the attorneys was

aware of any instances where the board of an organization shut down an illegal cartel and they were quick to remark that this is not an action they (the interviewees) would usually be privy to. However, based upon their experience they still felt comfortable commenting on the dynamics between the board and the conduct of illegal activity. The comments and results of my discussions with the attorneys on scanning are, unless noted, equally applicable to all of the environmental hypotheses (1-5) and will be dealt with here in totality rather than repeating them in the reporting of subsequent hypotheses.

The general theme of the interviews on board scanning was articulated by an attorney in New York City (New York):

*“The board plays an oversight and generally a tone setting role with the company. I mean if the board says they are and want all their people to be above board, this will act in some way as a deterrent to people acting illegally.”*

A number of the attorneys interviewed also do consulting work with companies on how to avoid illegal cartel activity; this education starts at the board level as suggested by an attorney in the United States.<sup>3</sup>

A concept upon which almost all of the interviewees could agree was that aside from the general compliance regime, the board would usually have little knowledge as to the exact goings on within the corporation, especially with respect to illegal cartel activity. While there was general agreement that higher levels of independent board members increased the likelihood of catching illegal activity as it was occurring or being contemplated, they

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<sup>3</sup> In some instances, I have not identified attorneys specifically by city in order to protect their identity.

believed this relationship to be minor. Therefore, the moderating effect of scanning was not considered by them to be a strong influencer. In fact, they believed that the impetus outlined in the control section of the thesis would far outweigh the impact that a board position or threat would have on the actions of executives and managers. As noted by one former U.S. prosecutor, who is now defense counsel:

*“The board meets a few times a year and talks about strategy and how to pay the CEO. Their knowledge of and impact on the day to day goings on of the company are minimal. I think the board make up you speak of [the components of the scanning variable] would have some marginal impact but things such as the other relationships you talk of [environmental forces] are much more relevant. That has been my experience anyways.”*

A U.S. defense attorney specifically referenced the difference of attitude regarding compliance held by inside and outside directors:

*“In my experience dealing with boards and compliance issues, outside directors seem to be more sensitive to this issue and push for stricter compliance throughout the company. In addition, because they do not know the day to day operations they are more comfortable with across the board compliance programs to protect themselves and the company, Insiders have more confidence in the compliance of day to day operations so do not feel additional compliance measures are needed.”*

In general, 8 out of 10 of the attorneys felt that the scanning variable was seen to offer some, albeit weak, moderating effect on the environmental factors being analysed. As the opinions expressed by these attorneys applied to the moderating effect on all of the environmental hypotheses (Hypotheses 1-5), the reporting that follows of the insights from the qualitative comments only detail the impact of the direct effects of the environmental variables on illegal activity. It should be assumed as per the attorneys interviewed, that the moderating effect of board scanning would be minor and in the direction hypothesized.

## 7.2 Hypothesis 2

Hypothesis 2 explored the relationship between illegal activity and industry profitability.

I predicted:

*Hypothesis 2: The effect of relative industry profitability on illegal cartel activity is moderated by the amount of board scanning of the external environment such that for a given level of relative industry profitability, less scanning by a board will result in a greater probability of illegal cartel activity.*

### 7.2.1 Industry Profits - Straight Interaction

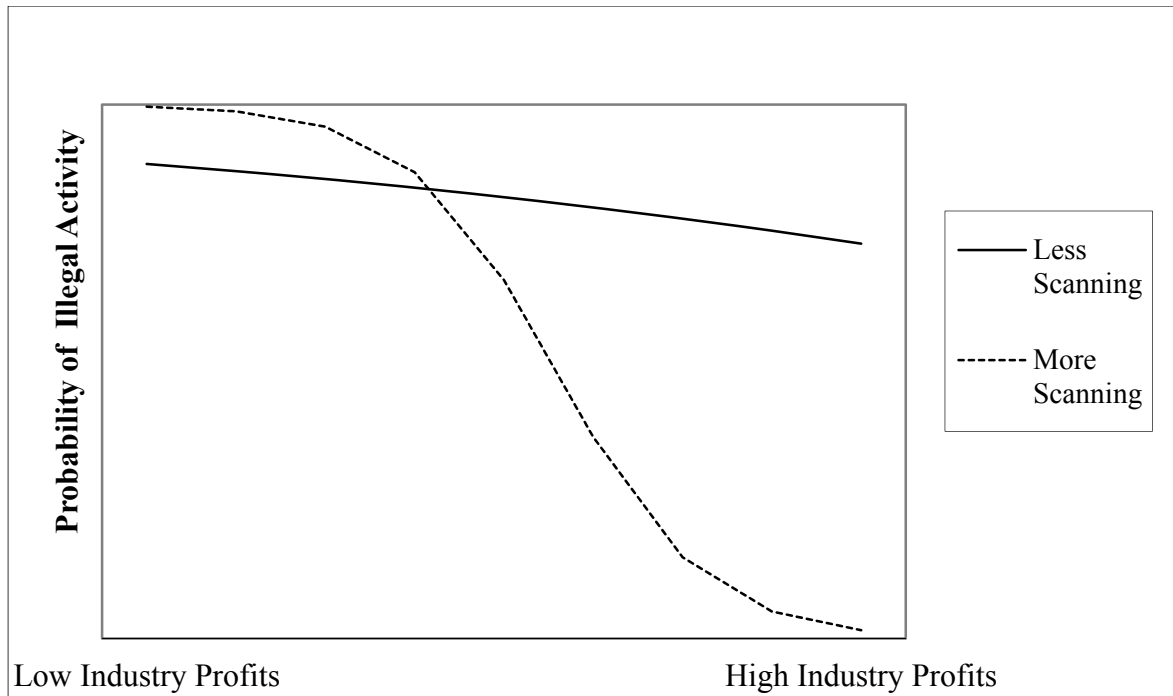
In analysing this relationship using just the independent variable and the interaction term of board scanning, I found strong support in the anticipated direction ( $\beta=-5.43$ ;  $p<0.001$ ) and a large  $R^2$  of 0.35 indicating a medium effect (Table 6B and Figure 2). The scanning line may look linear but in fact is non-linear; this is a function of the graphing program that was used.

**Table 6B: Industry Profits x Scanning (Hypothesis 2)**

	$\beta$ (S.E.)
Industry Profits	-2.69 (0.46) <sup>***</sup>
Board Scanning	-1.06 (0.95)
Industry Profits x Scanning	-5.43 (1.41) <sup>***</sup>

N = 183,  $\chi^2 = 78.23$ ,  $p<0.001$ ,  $R^2 = 0.35$  Cox and Snell, 0.47 Nagelkerke  
†  $p<0.10$ , \*  $p<0.05$ , \*\*  $p<0.01$ , \*\*\*  $p<0.001$

**Figure 2: Interaction Effects of Industry Profits x Scanning (Hypothesis 2)**



**7.2.2 Industry Profits - Interaction with Environmental Controls**

Likewise, when the other environmental independent variables were added in as control variables the support was very strong for the interaction term ( $\beta = -14.41$ ;  $p < 0.001$ ) and the model had an  $R^2$  of 0.56 (Table 7B).

**Table 7B: Industry Profits x Scanning with Controls (Hypothesis 2)**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
Constant	-0.53 (0.15)	-4.39 (0.73)***	-5.63 (1.03)**
Complexity	0.07 (0.03)	0.01 (.01)	0.02 (0.02)
Industry Concentration		-0.17 (.02)	-0.02 (0.02)
Industry Profits		-1.52 (0.52)**	-2.62 (0.63)***
Firm Profits		-0.06 (.27)	-0.23 (0.17)
Munificence		-0.98 (1.86)	-1.32 (2.02)
Dynamism		-0.01 (0.00)***	-0.01 (0.00)***
Scanning		-2.03 (1.12) †	-2.02 (0.78)**
Industry Profits x Scanning			-14.41 (1.95)***
$\chi^2$	0.29	132.49***	146.50***
Cox & Snell	0.00	0.51	0.56
Nagelkerke	0.00	0.69	0.74

N = 183, † p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### ***7.2.3 Industry Profits - Interaction with Environment Controls and Interactions***

Finally, when all of the interaction terms were added the support remained strong for the interaction between industry profits and board scanning ( $\beta=-5.43$ ;  $p<0.001$ ) (Table 8).

From a quantitative perspective, this hypothesis found strong support in the data.

### ***7.2.4 Industry Profits - Qualitative Analysis***

There was a clear consensus from the interviewees that declining industry profits are a strong precursor to illegal cartel activity. It was a common theme that maintaining profits seemed to be of greater importance than increasing profits. This was articulated by a New York attorney:

*“Falling prices for example, are very often what leads to anticompetitive activity. There can be a lot of competition that leads to a fall in prices then they [companies] begin to get together to try to stem the tide. Often, what has induced the falling price is foreign competition, such as the Chinese coming in with very cheap goods that are almost of good quality. Other companies then get together to try to stop the falling prices. You’d*



*see stable prices then, rather than prices zooming up as reflective of cartel activities.”*

The interviewees also mentioned that capacity utilization agreements are a special form of illegal cartel activity that have the effect of increasing or at least maintaining industry profits at a level otherwise not reflective of the competitive environment. This type of industry profit manipulation was commented on by an attorney in San Francisco:

*“Well, what I find is that there are capacity utilization agreements where a company has excess capacity but chooses not to use it and keep this supply tight. If you look at a company’s capacity utilization, you’ll often find implicit agreements not to produce more and undercut the price that would in essence keep the profits up. So capacity utilization is a very useful area to look at.”*

The discussion surrounding industry profits was one the attorneys were interested in and had many opinions. This discussion also provided a vehicle to discuss the general prevailing view of the causes of illegal cartel activity from an industry perspective.

The interviews provided support (10 out of 10 attorneys) for the hypothesis that lower industry profitability was an important precursor to illegal cartel activity. It was brought out by the attorneys that there are nuances to this hypothesis, most notably that downward pressures on profits are a powerful impetus for illegal cartel activity. In addition, it is often a function of the industry; increased foreign competition, barriers to entry and capital utilization can be an impetus for this illegal activity. The attorneys agreed that in general, better board scanning (as previously indicated) would also influence this relationship. All in all there was strong qualitative as well as quantitative support for this hypothesis.

### 7.3 Hypothesis 3

While Hypothesis 3 was similar to Hypothesis 2, it changed the level of analysis from the industry to the firm, testing for the moderating effect of board scanning on firm profitability. I suggested:

*Hypothesis 3: The effect of relative firm profitability on illegal antitrust activity is moderated by the amount of board scanning of the internal environment such that for a given level of relative firm profitability, less scanning by a board will result in a greater probability of illegal cartel activity.*

#### 7.3.1 Firm Profits - Straight Interaction

I found support ( $\beta = -.0.74$ ;  $p < 0.10$ ) for this hypothesis when including just the interaction term and the independent variable in the regression analysis (Table 6C). However, there was a small  $R^2$  of 0.08.

**Table 6C: Firm Profits x Scanning (Hypothesis 3)**

	<b><math>\beta</math> (S.E.)</b>
Firm Profits	-0.40 (0.16)*
Scanning	-1.51 (0.71)*
Firm Profits x Scanning	-0.74 (0.43) <sup>†</sup>

N = 183,  $\chi^2 = 15.56$ ,  $p < 0.001$ ,  $R^2 = 0.08$  Cox and Snell, 0.11 Nagelkerke

<sup>†</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

### 7.3.2 Firm Profits - Interaction with Environmental Controls

There was no significant statistical support when the independent environmental variables were added into the analysis (Table 7C).

**Table 7C: Firm Profits x Scanning with Controls (Hypothesis 3)**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
Constant	-0.53 (0.15)	-4.39 (0.73)***	-5.63 (1.03)**
Complexity	0.07 (0.03)	0.01 (0.01)	0.02 (0.02)
Industry Concentration		-0.17 (0.02)	-0.02 (0.02)
Industry Profits		-1.52 (0.52)*	-1.42 (0.54)**
Firm Profits		-0.06 (0.27)	-0.12 (0.29)
Munificence		-0.98 (1.86)	-1.15 (1.88)
Dynamism		-0.01 (0.00)***	-0.01 (0.00)***
Scanning		-2.03 (1.12) <sup>†</sup>	-1.93 (1.14) <sup>†</sup>
Firm Profits x Scanning			-0.88 (1.06)
$\chi^2$	0.29	132.49***	133.15***
Cox & Snell	0.00	0.51	0.52
Nagelkerke	0.00	0.69	0.70

N = 183, <sup>†</sup> p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### 7.3.3 Firm Profits - Interaction with Environmental Controls and Interactions

There was no significant statistical support when the independent environmental variables and their interaction terms were included (Table 8).

### 7.3.4 Firm Profits - Qualitative Analysis

The attorneys strongly agreed (all 10 attorneys) with the proposition that a firm's profits impacted whether organizations undertook illegal activity and suggested it was sometimes difficult to separate the influence of company profits and industry profits. This included noting a connection between the industry cycle and overall profitability

which influences the profitability potential of companies. A New York attorney spoke to this relationship:

*“When the economy tightens up, the companies do not have the available capital at their disposal, but, the pressures for growth and positive numbers are still there and that’s where basically middle to lower management and the sort of the frontline sales folks gets squeezed to generate some returns and that’s when the cartel activity takes place.”*

For an organization to become involved in a cartel, the first step is for an organization to feel the need to participate in the cartel based upon the organization’s own profits. The industry level of analysis recognizes the success they have in forming a cartel.

Most of the commentary from the attorneys related to the fact that company profit level pressure would lead to the desire to maintain or increase the profits, which in turn would lead to cartel activity. An attorney from Ottawa suggested a causal chain:

*“I think it is probably to make their numbers better, first of all at the divisional level or product line level and particularly if they are usually under environmental business pressures. As circumstance becomes important, I think it increases motivations to try to preserve profits to avoid erosion and things like that, that can lead to price fixing.”*

The pressure to improve a company’s profit margin may have company specific drivers, such as M&As as outlined by this New York attorney who discussed a company that manufactured filters:

*“In the filters industry, the allegation was that one of the major players in the field was just taken over by a conglomerate, and the newly installed chief of the filters division said that our parent needs profit margins to be higher than they are currently, and so find out from XYZ [another company in the industry] where their pricing is going. Our new parent wanted price increases; we haven’t had a price increase in this market in 10 years, and the last time we did (in 1996) all of us in the industry ended up at the same market shares at lower prices, because nobody worked together. Let’s go out there together, that’s what allegedly was said.”*

The attorneys also had opinions regarding the internal corporate mechanics that motivated specific functions within the corporation to pursue illegal cartel activity. A Washington, D.C. attorney stated that these internal mechanics may not be so clear:

*“Sales people reaching out to their competitors to make certain commissions stay high, I can see that. But I don’t know much about that as being the inducement at the top to do that. Sure it’s in the back of their mind, when profit falls because of excess of competition so to speak, that they lose their jobs.”*

There is clearly a connection between individual corporate profitability (as opposed to industry) and illegal cartel activity whether driven by M&A activity or macro business cycles. Corporate profitability is an initial motivation to pursue this kind of activity, which is itself part of a general industry phenomena which provides the environment for a cartel to take shape. The general consensus from the attorneys interviewed provides qualified support for the hypothesis. Therefore, this hypothesis is supported to some degree by both the quantitative and qualitative data.

#### **7.4 Hypothesis 4**

Hypothesis 4 looked at the relationship between munificence and illegal activity while moderated by board scanning. In particular:

***Hypothesis 4: The effect of munificence on illegal cartel activity is moderated by the amount of board scanning of the external environment such that for a given level of munificence, less scanning by a board will result in a greater probability of illegal cartel activity.***

### 7.4.1 Munificence - Straight Interaction

The interaction between munificence and board scanning presented no significant result when testing just the interaction term (Table 6D).

**Table 6D: Munificence x Scanning (Hypothesis 4)**

	<b>β (S.E.)</b>	<b>Wald</b>
Munificence	-0.94 (1.13)	0.69
Board Scanning	-1.60 (0.72)	5.03*
Munificence x Scanning	3.91 (6.33)	0.38

N = 183,  $\chi^2 = 6.92$ ,  $p < 0.10$ ,  $R^2 = 0.04$  Cox and Snell, 0.05 Nagelkerke

†  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

### 7.4.2 Munificence - Interaction with Environmental Controls

The interaction presented no significant result when the other environmental independent variables were included as controls (Table 7D).

**Table 7D: Munificence x Scanning with Controls (Hypothesis 4)**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
Constant	-0.53 (0.15)	-4.39 (0.73)***	-5.63 (1.03)**
Complexity	0.07 (0.03)	0.01 (0.01)	0.02 (0.02)
Industry Concentration		-0.17 (0.02)	-0.02 (0.02)
Industry Profits		-1.52 (0.52)**	-1.51 (0.52)**
Firm Profits		-0.06 (0.27)	-0.07 (0.27)
Munificence		-0.98 (1.86)	-1.17 (1.96)
Dynamism		-0.01 (0.00)**	-0.01 (0.00)***
Scanning		-2.03 (1.12)†	-2.00 (1.12)†
Munificence x Scanning			-2.49 (7.78)
$\chi^2$	0.29	132.49***	132.59***
Cox & Snell	0.00	0.51	0.52
Nagelkerke	0.00	0.69	0.69

N = 183, †  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

### ***7.4.3 Munificence - Interaction with Environmental Controls and Interactions***

This interaction presented no significant result when the other environmental variables and their interaction terms were included in the model (Table 8).

### ***7.4.4 Munificence - Qualitative Analysis***

When interviewing the attorneys on the issue of munificence (the abundance of resources), it was difficult for them to specifically speak to this concept as they were not used to thinking of an industry in such terms. Therefore, their opinions and thoughts were rather less informed than that for other constructs such as industry or firm profitability and industry concentration. The concept of munificence centred on such things as inputs (fuel) and industry capacity. Regarding inputs, a Toronto attorney commented:

*“I would say that illegal cartel activity is usually responding to negative business conditions rather than where we see the opportunity, where we just exploit people. That may be because the company doesn’t want to be perceived as an exploiter. Cartels about fuel surcharges sometimes they, you know, run up prices and people do not react well in the context of that market.”*

In general the attorneys supported the idea that the less munificent the environment, the more likely there was to be illegal cartel activity and they relied upon their previous and more general comments on board oversight and scanning to describe any moderating relationship.

I would conclude that there is marginal support for this hypothesis from a qualitative perspective keeping in mind that these attorneys were unfamiliar with the concept as outlined in this thesis; however, there was no support from a quantitative perspective.

## 7.5 Hypothesis 5

With hypothesis 5, I looked at how the dynamism of the industry impacted illegal activity and how the moderator (scanning) was involved in the relationship:

*Hypothesis 5: The effect of dynamism on illegal cartel activity is moderated by the amount of board scanning of the external environment such that for a given level of dynamism, less scanning by a board will result in a greater probability of illegal cartel activity.*

### 7.5.1 Dynamism - Straight Interaction

In analysing this relationship using just the independent variable of dynamism, the statistical relationship of the interaction term of was significant ( $\beta=-0.003$ ;  $p<0.001$ ) with a large  $R^2$  of 0.51 (Table 6E). I provide the graph in Figure 3; the co-efficients are so small as to preclude the graphing program from being able to graph the interaction.

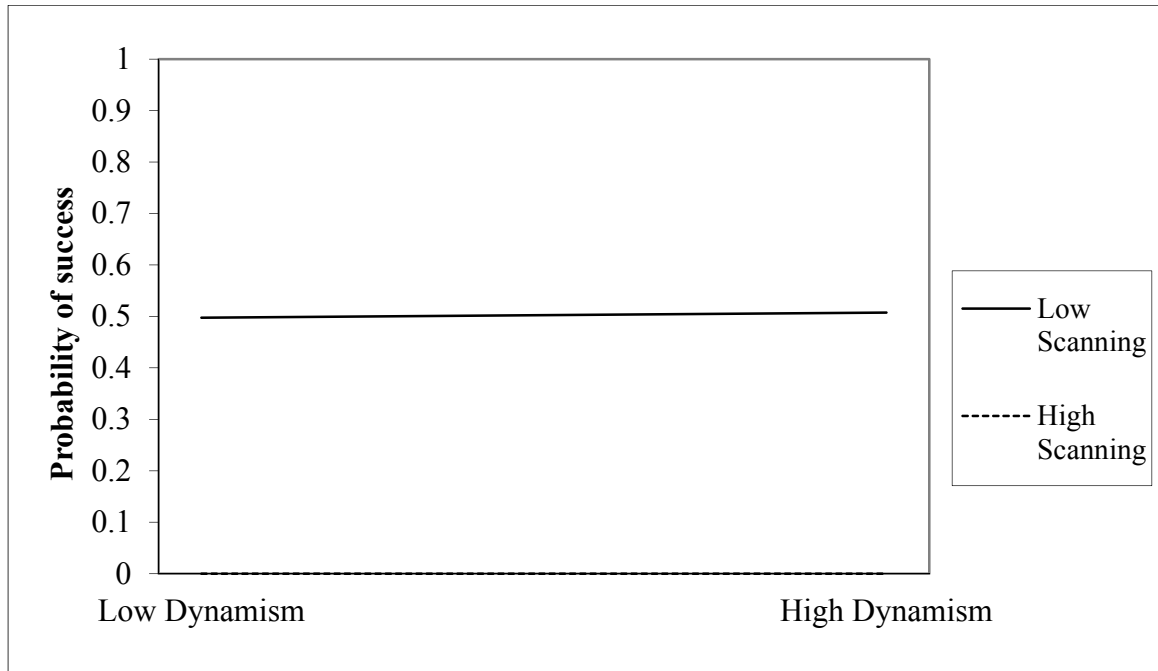
**Table 6E: Dynamism x Scanning (Hypothesis 5)**

	<b><math>\beta</math> (S.E.)</b>
Dynamism	0.01 (0.00)
board Scanning	-14.89 (2.89)
Dynamism x Scanning	-0.003 (0.01)

N = 183,  $\chi^2 = 130$ ,  $p<0.001$ ,  $R^2 = 0.51$  Cox and Snell, 0.68 Nagelkerke  
†  $p<0.10$ , \*  $p<0.05$ , \*\*  $p<0.01$ , \*\*\*  $p<0.001$



**Figure 3: Interaction Effects of Dynamism x Scanning**



**7.5.2 Dynamism - Interaction with Environmental Controls**

The addition of the control variables saw the interaction between dynamism and board scanning remain significant and in the expected direction ( $\beta=-0.01$ ;  $p<0.001$ ) with an increase in the  $R^2$  to 0.57 (Table 7E).

**Table 7E: Dynamism x Scanning with Controls (Hypothesis 5)**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>
Constant	-0.53 (0.15)	-4.39 (0.73)***	-5.63 (1.03)**
Complexity	0.07 (0.03)	0.01 (0.01)	0.07 (0.02)
Industry Concentration		-0.17 (0.02)	-0.01 (0.02)
Industry Profits		-1.52 (0.52)*	-1.42 (0.52)**
Firm Profits		-0.06 (0.27)	-0.24 (0.32)
Munificence		-0.98 (1.86)	-0.37 (2.18)
Dynamism		-0.01 (0.00)***	-0.01 (0.00)***
Scanning		-2.03 (1.12) <sup>†</sup>	-13.90 (3.11)***
Dynamism x Scanning			-0.01 (0.00)***
$\chi^2$	0.29	132.49***	133.15***
Cox & Snell	0.00	0.51	0.57
Nagelkerke	0.00	0.69	0.76

N = 183, <sup>†</sup>  $p<0.10$ , \*  $p<0.05$ , \*\*  $p<0.01$ , \*\*\*  $p<0.001$

### ***7.5.3 Dynamism - Interaction with Environmental Controls and Interactions***

The addition of the environmental control variables interaction with the scanning variable did not change the previous results. The interaction between dynamism and board scanning remained significant ( $\beta=-0.01$ ;  $p<0.001$ ) (Table 8).

### ***7.5.4 Dynamism - Qualitative Analysis***

The attorneys were somewhat split on the impact of dynamism on illegal cartel activity. I noticed this split based upon those attorneys on the West Coast (San Francisco and Los Angeles) and those on the east coast (Washington, Toronto, Ottawa and New York). The West Coast attorneys had a high level of experience in the high tech industries and so were familiar with cartels in rapidly changing industries. The East Coast attorneys had the bulk of their experience in the more service oriented and commodity industries that were lower on dynamism.

A Los Angeles attorney whose experience was mostly in the high tech area provided his opinion on the differences between cartel activity in high and low tech industries:

*“There are commodities such as milk products that everybody just takes for granted. A fix on those products doesn’t have to be very big in order to create gigantic profit. You get a company like X which is a super market to the world; people within the company decide they actually are going to talk to their competitors and fix prices and it’s caught on video tape and it’s pretty amazing how simple it was. Then you also have high technology products where it’s something very, very special like LCD’s, DRAM’s, or SRAM’s and the stuff is being made and the technology is changing literally every month or two months or few months. In order to keep up if you can’t be the one that’s the technological genius who keeps your product at the forefront of the consumer’s expectations and wants, then you turn to other means to try to do that. That’s a whole different variety but, I think in each of those categories the economics and the profit driving portion of why people do these things might be both different and familiar enough.”*

The results for this hypothesis were in some ways more complicated than conceptualized in this thesis. There seems to be a great difference between industries and their speed of change; unfortunately, a direct comparison from an experimental perspective was not possible. Several of the attorneys provided a triangulation of ideas by commenting that the high tech industries were more volatile and dynamic on a number of levels than the more traditional commodity industries. However, both offered different incentives based upon their market dynamics to engage in or give rise to illegal cartel activity. One can surmise that in volatile markets cartel activity will primarily focus on moderating the downward pressure on prices while in a less dynamic industries where the activity is easier to spot, if it does occur, the main incentive would be to raise prices. These comments dovetail with earlier comments by attorneys that most cartels are managing downward pressure on prices and the maintenance of profits as opposed to increasing profits.

Therefore, this hypothesis was not supported as there was not a clear consensus as to the impact of volatility on the creation and sustaining of illegal cartel activity. As with the other hypotheses, the moderating effect of the scanning variable was one of general application and would hold for this hypothesis as well.

I next move on to testing the internal control hypotheses. Table 10 (below) outlines the descriptive statistics for the variables used in this analysis and Table 11 outlines the proportion of data points that came from each of those firms that conducted illegal activity and those that did not. I have included a sample of attorney comments for this part of the model in Appendix E.

**Table 10: Descriptive Statistics and Correlation Matrix for Control Hypotheses (6-10)**

	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>	<b>1.</b>	<b>2.</b>	<b>3.</b>	<b>4.</b>
1. Illegal Corporate Activity	296	0.50	0.50	0.00	1.00	1.00			
2. Board Control	182	37.01	43.76	0.00	238.00	0.46**	1.00		
3. CEO Control	136	303.96	213.00	4.00	987.00	0.11	0.14	1.00	
4. % Outside Directors	202	0.85	0.12	0.17	1.00	-0.16*	-0.32	0.18*	1.00

† p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

**Table 11: Proportion of Data for Illegal vs. Legal Companies**

	<b>Illegal</b>	<b>Legal</b>
Illegal Activity	148	148
Board Complexity	92	90
CEO Control	69	67
% Outside Directors	100	102

## 7.6 Hypothesis 6

With hypothesis 6, I moved from the testing of the environmental variables to the internal control based variables. Specifically, in hypothesis 6 I theorized the following:

*Hypothesis 6: An increase in goal based output control methods for the CEO will increase the probability of illegal cartel activity.*

### 7.6.1 CEO goal based output controls

Since the logistic coefficient for CEO control was not statistically significant, there is no simple relationship between CEO control and illegal cartel activity. Illegal cartel activity is thus not likely to be related to variability in goal based compensation for the CEO. Therefore, hypothesis 6 was not supported (Table 12).

**Table 12: Results for Control Hypotheses (6-10)**

	<b>Hypothesis 6: DV: Illegal Activity</b>	<b>Hypothesis 7: DV: CEO Control</b>	<b>Hypothesis 8: DV: Illegal Activity</b>	<b>Hypothesis 9: DV: CEO Control</b>	<b>Hypothesis 10: DV: Illegal Activity</b>
CEO Control	0.01 (0.01)		0.00 (0.00)		0.00 (0.00)
Board Control		0.64 <sup>†</sup>	0.05 (0.10) <sup>***</sup>		
% Outside Directors				315.83 (150.85) <sup>*</sup>	-6.06 (2.14) <sup>**</sup>
Constant	-0.40 (0.30)	280.36 <sup>***</sup>	-1.86 (0.48) <sup>***</sup>	37.72 (130.86)	4.79 (1.84)
R <sup>2</sup>		0.02		0.03	
Nagelkerke R <sup>2</sup>	0.02		0.38		0.111
Model Chi-square	1.61		46.17 <sup>***</sup>		11.684 <sup>**</sup>
N	136	136	136	202	136

<sup>†</sup> p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Unstandardized coefficients are shown. Standard errors are in parentheses

### 7.6.2 CEO goal based output controls - Qualitative Analysis

Contrary to the quantitative findings, there was some (7 out of 10 attorneys) qualitative support for the hypothesis that CEO control, as evidenced by the compensation measurement utilized in this research, did have an impact on illegal cartel activity. The generality of the support was evidenced in these comments from a Toronto attorney:

*“If it is profit at all cost and you have to meet your quarterly or your annual numbers no matter what, then you know, that’s a signal to the Vice Presidents or the lower level executives and the managers, that it’s get your numbers no matter what versus, you know, a more non-financially oriented or, I must say ethically oriented message coming from the top.”*

This cascading effect as set out in the theory sections of this thesis was further supported by a New York attorney:

*“There is another question whether very top management knew or not. They set out an atmosphere to allow it to happen. I mean upper management wants to make sure middle management is doing things that will increase upper management’s pay.”*

While there was some doubt expressed by a number of attorneys that this cascading effect was the main motivator for managers (non CEOs) to construct and carry out cartel activity since it was not usually the CEO that was directly implicated in this type of activity, the majority felt that CEOs, while protected, influenced and knew about the goings on of their managers. This was noted by a Washington attorney:

*“In my experiences, CEOs keep a close eye on profit and loss and are generally tapped in to whether or not collusions are happening. They know for a government to bring a case against the CEO it can be much more difficult. CEOs are aware or at least turn to blind eye to their underlings who are in contact with competitors because prices are a key factor in a firm’s profitability.”*

Human Resource customs and trends also pay a part in this analysis. Over the last 40 years there have been changes in these trends in the United States as to how CEOs and senior managers are compensated. A New York attorney talked extensively about how this has impacted compensation trends:

*“Yeah it’s interesting because in my past life or one of my past lives if there was a healthy compensation scheme it’s obvious we’d jump to that. There was a period where the percentage of the variable that’s attributable to performance would be individually measured. In other*

*words, how did you do for our company; did our market share go up a point or two and for every point it goes up you get compensated because the trigger is there. Then there was a movement away because of the cyclical nature of some businesses. In the HR environment they moved to a model where your compensation is a function of performance relative to your peers. So you take the cluster of industry companies and sort of sorted out what their growth rate was this year as a group and then you position your individual company relevant to that and then the individuals will get compensated on whatever the bench marks they established for that relationship. The back side to that or the potential negative side to that is that creates an incentive for all the peers to get together. All the salesmen say, well okay let's just try to hold the line here or we all agree to reallocate the market shares this way so there all relative to each other where we are okay. You tried to make the analysis more precise by tying performance to or bonus to performance relative to peers but it ends up creating a harmony of interest among the people that are trying to earn those bonuses with their competitors."*

This hypothesis was not quantitatively supported. There was support for the cascading theory and support that CEO compensation itself can be a motivating factor. However, there are several cautions from the attorneys when trying to use compensation as a causative effect, since the field of executive compensation is subject to a number of variables and these variables have changed over time. Therefore, this hypothesis was not supported.

## **7.7 Hypothesis 7**

I hypothesized that the goal based compensation system for the board also had an impact on illegal activity. In particular:

***Hypothesis 7: An increase in goal based output control methods for the board, will increase the use of a goal based output control method for the CEO.***

### ***7.7.1 Board Goal Based Output Controls***

Hypothesis 7 predicted that an increase in goal based output control methods for the board will increase the use of a goal based output control method for the CEO. Board control was found to be a significant predictor of CEO control ( $\beta=0.64$ ;  $t=1.78$ ;  $p<0.1$ ); however, the  $R^2$  of 0.02 suggested that it was a very small effect. Therefore, hypothesis 7 was supported (Table 12).

### ***7.7.2 Board Goal Based Output Controls - Qualitative Analysis***

From a qualitative perspective, the attorneys did not have a lot of knowledge or opinions on board compensation; it just was not something that they had considered or something that they had encountered in the prosecution and defense of illegal cartel activity. While they were supportive of the general cascading theory as set out in hypothesis 6 and felt it would also apply to board behaviour, they were not able to directly speak to a case or cases where this phenomenon was evident.

This hypothesis received weak statistical support ( $p<0.1$ ) while only tenuous support from the attorneys.

## **7.8 Hypothesis 8**

I then brought the concepts of board control and CEO control together to suggest the following relationship:

***Hypothesis 8: The relationship between board control method and illegal cartel activity is fully mediated by CEO control method.***



### ***7.8.1 Mediation of Board Control by CEO Control***

Hypothesis 8 predicted that the relationship between board control method and illegal organizational activity is fully mediated by the CEO control method. This was tested using the Baron and Kenny approach (Baron & Kenny, 1986). While the first two steps were found to be significant (Board control related to illegal activity and board control related to CEO control), the third step which tested whether CEO control mediated, either fully or partially, the relationship between board control and illegal cartel activity was not significant. Therefore, hypothesis 8 was not supported (Table 12).

### ***7.8.2 Mediation of Board Control by CEO Control - Qualitative Analysis***

Hypothesis 8 and the fully mediated effect was not something easily explored with the attorneys. In my explanation of this hypothesis and their reaction to it there was very little that could add to the quantitative analysis.

However, the attorneys did have opinions on how these three constructs could be connected and how complicated it may be. A New York attorney suggested:

*“If you look at the CEOs in the fine arts office case, both those guys kind of said this helps my pay packet so that’s pretty good. I think that it was a significant component of poor [board] participation as seen in a lot of corporations. A board was there to oversee management. But you know the management had a very, very significant input let’s say on, on what the board would decide or what was put to the board and how it was put to the board.”*

This hypothesis did not receive statistical support.

## 7.9 Hypothesis 9

This hypothesis examined the relationship between director independence and CEO control systems:

***Hypothesis 9: An increase in the proportion of outsiders on the board will increase the use of goal based output control systems for the CEO.***

### 7.9.1 Outside Directors

Hypothesis 9 predicted that an increase in the proportion of outsiders on the Board will increase the use of goal based output control systems for the CEO. There was a testing of this hypothesis using OLS regression resulting in a significant model ( $p < 0.05$ ) and a significant direct effect ( $\beta = 315.83$ ;  $t = 2.09$ ;  $p < 0.05$ ) suggesting support for hypothesis 9. However, the effect was small with an overall  $R^2$  of 0.04 (Table 12).

### 7.9.2 Outside Directors – Qualitative Analysis

Even though the attorneys generally supported the board scanning construct as evidenced in the environmental analysis, they could not definitively say that there was a relationship between the fact someone was an independent director (or the proportion of independent directors) and illegal cartel activity. This skepticism was expressed by a Washington attorney in this manner:

*“I would imagine that you are not going to have somebody on the board who is going to come and start attacking you if you are the CEO. You are going to have people who are friendly. I mean you may have one or two outside directors but basically these are your buddies right?”*

However, some felt that independent members could add some value in being alert for illegal cartel activity, albeit in a general sort of way as suggested by an attorney from New York:

*“I think there’s a slight tendency for outsiders to be more detached from management and therefore they feel obviously more individually based. They will feel more comfortable in asking management or challenging some management assumption from the inside.”*

Therefore, while there was quantitative support for the relationship between the percentage of outside directors and CEO control, this relationship was not supported by my interviews with attorneys.

## **7.10 Hypothesis 10**

This hypothesis examined the relationship between outside directors and illegal cartel activity:

*Hypothesis 10: The relationship between the proportion of outside directors and illegal cartel activity is fully mediated by CEO control method.*

### **7.10.1 Mediation of Outside Directors by CEO Control Method**

Hypothesis 10 predicted that the relationship between outside directors and illegal organizational activity is fully mediated by the CEO control method. This was tested using the Baron and Kenny approach (Baron & Kenny, 1986). While the first two steps were found to be significant (outside directors related to illegal activity and outside directors related to CEO control), the third step which tested whether CEO control mediated, either fully or partially, the relationship between outside directors and illegal cartel activity was not significant. Therefore, hypothesis 10 was not supported (Table 12).

## CHAPTER 8

### DISCUSSION

#### 8.1 Introduction

The topic of illegal cartel activity and its relationship to corporate governance issues, specifically the role of boards, is one that has not been explored in research to date. Given the ongoing corporate governance scandals that continue to occur with alarming frequency in developed countries, it is an area that needs to be better understood.

This thesis presents the theory and analyses required to explore the research question “Why do organizations engage in illegal activity?” I address this question by undertaking a methodological approach including analysis utilizing a proprietary dataset and interviews with knowledgeable legal experts.

There is a seventy year history on what is meant by illegal corporate activity. I thoroughly reviewed the applicable literature and in doing so, developed a definition that applies specifically to illegal cartel activity, the dependent variable in this research:

Illegal cartel activity is collaborative action with competitors aimed toward the purpose of price fixing which is the result of deliberate decision-making by those who occupy structural positions within the organization such as corporate executives and managers. The decisions are organizationally based, made in accordance with the normative goals, standard operating procedures and cultural norms of the organization and are intended to benefit the organization itself.

Research has demonstrated that the environment has an impact on why organizations conduct illegal activity. Using the lens of resource dependency theory, I established the parameters through which the environment affects an organization, increasing the

possibility of the occurrence of illegal cartel activity. Furthermore, I introduced the construct of board scanning as a moderator to this model to demonstrate how the effectiveness of the board's scanning capability can reduce the incidence of illegal cartel activity.

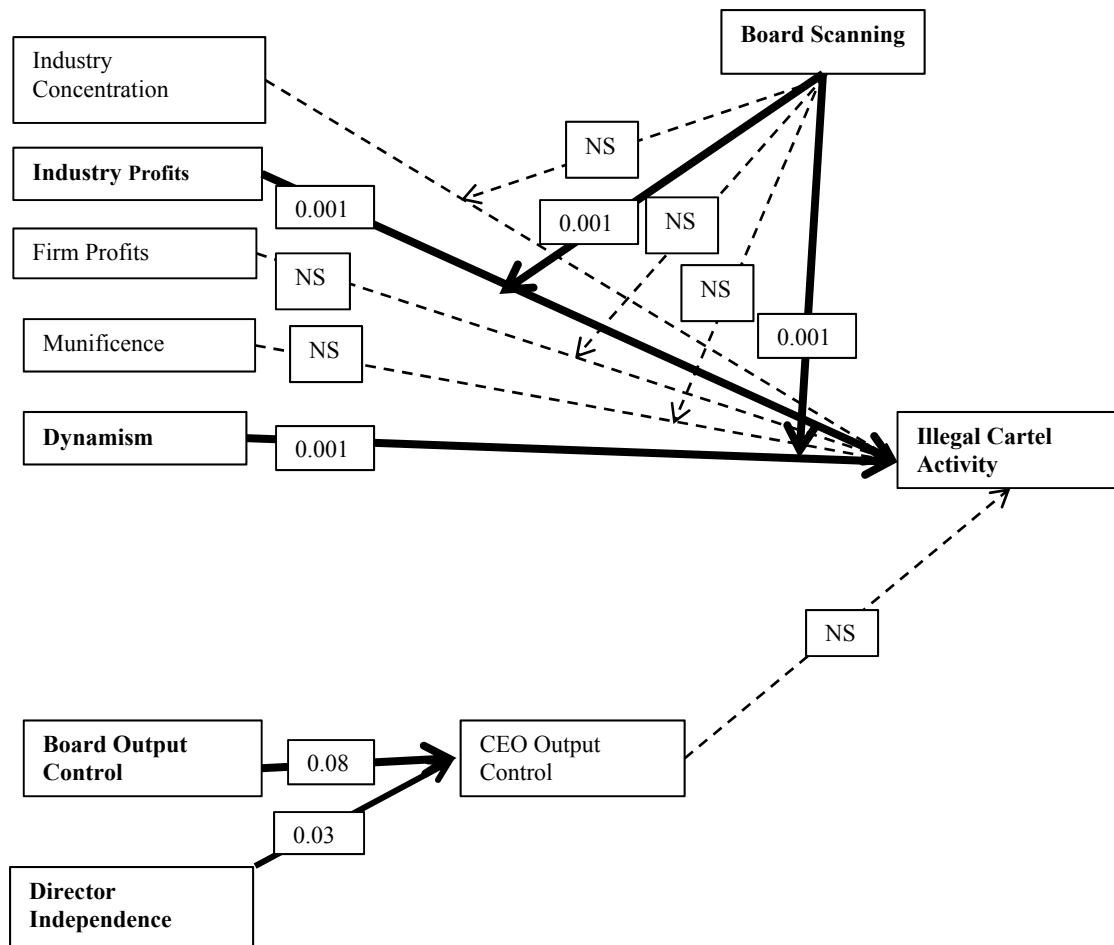
There are always ways in which an organization is internally constructed and governed that may have an impact on the undertaking of illegal cartel activity. Specifically, how a board is remunerated affects how the CEO and managers are remunerated. This is important because certain types of remuneration encourage the CEO and top managers to focus on the ends they are supposed to achieve instead of the means by which to get there. I hypothesized that too little focus on the means to achieve the required ends can result in a greater incidence of illegal cartel activity.

This two pronged explanation as to the causes of illegal cartel activity is reflected in the comments of an attorney from San Francisco who practices in the area of illegal cartel activity:

*“I think my personal view is that illegal corporate activity tends to occur when there are times of crisis or I think once there is sort of depth of problems. I think you are going to find that for all sorts of things there has been a lot of collusion that went on in the last couple of years or is going on now because firms are under extreme pressure to meet market share parts of targets or quarterly revenue targets. You have this really bad mixture of recession, efforts to cut costs, efforts to cut corners, reduction of compliance programs, greater stresses on managers and salesman at every level to get sales done, and greater desperation. On the flip side, you are getting customers who are trying to squeeze more money and producers because they are under lot of stress as well so I tend to think the people in that situation take baby steps towards reaching situations where they would admit finding themselves in middle of a price fixing case.”*

I created and tested a model of environmental and internal control factors that I hypothesized could lead to illegal activity. I present a summary of the results of this hypothesis testing in Figure 4 below.

**Figure 4: Model with Quantitative Results**



## **8.2 Discussion of External Environmental Factors**

The thesis set out to better understand how environmental variables, namely, industry concentration, industry profits, firm profits, munificence, and dynamism impact illegal cartel activity as moderated by the board scanning variable. I now briefly review each of the environmental variables to reiterate the frame that underpins the discussion of the results obtained. I begin with a commentary on the board scanning variable that I used as a moderator in my analysis.

### ***8.2.1 Scanning Variable***

Previous research has already tested the direct effects of the environmental variables I included in this research. I felt it was important to examine whether these main environmental effects were in fact subject to a moderation effect related to board structure and make up. I developed a scanning variable based upon previous literature.

The board scanning variable is a combination of the size of the board and the independence of the board. After developing this variable, I conducted semi-structured interviews with board members and CEOs in order to gain further insight that allowed me to validate and refine the conceptualization of this variable (Bouquet & Birkinshaw, 2008). The board scanning variable received face validity from these board members and CEOs as a viable variable for measurement of this moderation effect; the interviewees all (6 out of 6) felt that having a greater number of board members would allow for enhanced scanning of the external and internal environment to be able to better detect and prevent illegal activity. Likewise, they also felt that the independence of the board would assist in scanning the external and internal environment to detect and prevent illegal

activity. The initial affirmation of this variable led me to hypothesize the moderating effect on the environmental forces.

The international attorneys who specialize in illegal cartel activity that were interviewed as part of the qualitative analysis of this thesis were in general (7 out of 10) agreement that independent directors provide more scrutiny than inside directors as it broadly relates to illegal activity. While inside directors may understand the operations of the firm in more detail, it was felt that the independent directors would view potentially illegal situations or risk more critically and objectively. The attorneys also largely agreed (7 out of 10) that the more directors there were on the board, the greater the chance that illegal activity or its precursors would be monitored and addressed. However, they felt the impact that would be felt as a result of the difference in the scrutiny of inside directors and outside directors and the number of directors was middling at best.

Of greater concern to the thrust of this thesis from a corporate governance view was the attorneys' skepticism that board members would actually be in a position to detect illegal activity. The attorneys' views and interactions with boards and executives led them to believe that in their experience, boards were mostly ineffectual in sniffing out and correcting the precursors and occurrence of illegal activity. However, the attorneys were quite sure that the board, in their role as leaders in the organization, did have an indirect effect on the incidence of illegal activity. They fully supported the concept of the cascading mechanism where the tone, tenor and emphasis of the board in relation to compliance permeates down through the organization and has an effect on the frequency of illegal activity. While the attorneys did not provide direct evidence of this belief, they



have found that boards that emphasized compliance appeared to govern organizations that experienced few legal difficulties.

To summarize, the board scanning moderator did have validity and showed results that were informative for the discussion of the relationship between these environmental variables and illegal cartel activity. However, the compliance emphasis of boards and its effect on illegal or other regulatory non-compliance is worthy of further study as it was consistently brought up by the attorneys as a potentially stronger mechanism than the board scanning variable used herein.

### ***8.2.2 Environmental variables***

The environmental variables have all been previously studied in the context of their direct effect on the propagation of illegal activity. Each one of these variables had found favour in previous studies that tested for causal relationships between the articulated variables and the presence of illegal organizational activity. For robustness, I also tested for direct effects with the appropriate controls using the cartel dataset; only industry profits and dynamism were significant (Table 9). In addition, during the qualitative interviews I asked the attorneys for their expert opinion on the direct effect of each of the environmental variables on illegal cartel activity. While the majority of environmental factors (industry concentration, industry profits, munificence and dynamism) were primarily external to the company in question, I also included the internal variable of firm profits given its potential impact.

This thesis adds to the governance literature in testing these relationships using a new type of illegal organizational activity, namely price-fixing cartels and by using this

context to apply the board scanning moderator to these variables for the first time. I now provide a synopsis of each of the environmental variables followed by a critical discussion of their impact on illegal activity both directly and as moderated by the board scanning variable.

### ***8.2.2.1 Industry concentration***

Industry concentration figures prominently in the assessment of the underlying motivation for antitrust or illegal cartel activities; as the industry becomes more concentrated (as measured by 4 and 8 company concentration levels), the opportunity or at least the probability of collusion increases (Zahra et al., 2005). A low industry concentration requires many industry participants to be involved in antitrust activities which would not only lower the success rate of any antitrust attempt, it would make it more difficult to conceal from detection (Coleman, 1987). However, it is important to recognize that although most of the convicted private international price fixing cartels had fewer than eight members, there have been convictions of cartels of up to 30 members (Connor, 2001).

Industry concentration has been a subject of great interest to class action cartel attorneys. The attorneys, especially those with U.S. Department of Justice prosecutorial experience, were quite adamant that industry concentration was related to cartel activity. It is a Department of Justice litmus test to look at industry concentration in order to determine if a cartel may exist in a particular industry.<sup>4</sup> A high industry concentration allows for the efficient operation of a cartel; the fewer the players that dominate an industry, the easier

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<sup>4</sup> The field of IO economics stemmed from studies on industry concentration to detect price fixing potential in an industry.

it is to form a cartel because fewer consents or participants are required. Likewise, the higher the industry concentration, the easier it is to maintain a cartel as it is easier to internally police who is obeying the pricing or capacity practices mandated by the cartel. There was complete agreement among all attorneys that a higher industry concentration indicated a higher potential for cartel activity, a sentiment that reinforced previous research in this area.

As noted, I tested the direct effects of the environmental variables on illegal cartel activity (Table 9). I found no direct effect of industry concentration on illegal activity. The addition of the scanning variable as a moderator elicited a significant result only when there were no control variables. This did not inspire confidence in this hypothesis. Therefore, while there was previous research on this variable that would indicate it represents a degree of uncertainty in the environment, I found only a small moderated effect that would substantiate and extend prior findings.

#### ***8.2.2.2 Industry and firm profits***

Profits are defined as the residual income when all expenditures and taxes have been accounted for; firms and organizations attempt to maximize profit and, by extension, shareholder value. While they are a primary environmental driver associated with illegal activity, there is some debate within the literature as to which level of profits, industry or firm, should be studied in order to best understand the relationship. Through an industry lens, RDT would suggest that if resources in the form of profits are constrained in the industry environment then these resources are providing a source of uncertainty which firms will seek to reduce through removing or controlling the constraints. Firms within

the industry can elect to exercise control through entering into a cartel to fix prices to either stabilize or artificially increase industry profits. Additionally, RDT would also advocate that if profits at the firm level are scarce or otherwise constrained, a firm would then look to the outside environment to remove and control these constraints, possibly through the auspices of forming or joining a cartel.

It is unsurprising that all of the attorneys agreed with the premise that a decrease in profits (uncertainty to a specified income stream) either at the industry or the firm level would put pressure on companies and the individuals within them to engage in illegal activity to remedy this situation. The attorneys did draw a clear distinction between the motivational power of industry profitability and corporate profitability. While they felt overall that it was a decrease in corporate profitability that was the instant cause of looking for ways to increase this type of profitability, it was a decrease or loss of momentum in industry-wide profitability that enabled or set up the conditions for a cartel to be created and then maintained. They felt that the internal pressures of the corporation to achieve a certain level of profitability provided the impetus for seeking remedies. The fact that the industry itself was experiencing low profitability provided the pool of willing co-conspirators who themselves were, due to industry factors, experiencing low profitability. There is therefore a symbiotic relationship between these two types of profitability. The attorneys felt that of the two, industry profitability would be a greater indicator of the potential for illegal activity since it signaled an opportunity for there to be more than one corporation in a poor profit position and therefore ripe to be approached and engaged in illegal activity. The attorneys overwhelmingly supported the previous

research in that a decrease or low growth in profitability would be an indicator of illegal activity.

Only industry profits remained significant in directly predicting illegal activity when the other environmental variables were included as controls. In fact, industry profits were very significant in all of the models tested, whether measured as a direct effect, just with the moderator or with the moderator and all of the control variables. It also received face validity from the attorneys. It is one of the very clear-cut findings of this thesis that industry profits are a strong indicator of the presence of illegal activity and that their effect is moderated by the board scanning variable. Company profits on the other hand were significant until control variables were introduced, suggesting that while they have a bearing on illegal activity, it is not as strong an effect as industry profits.

From a moderation perspective, it appears that the premise of the board scanning variable, with its increased external vigilance, is also at play with industry profits in that the scanning variable moderates the impact of industry profits on illegal activity. This is reasonable as my contention is that this increased scanning of the external environment would have such an effect.

### ***8.2.2.3 Munificence***

Munificence and scarcity are complementary concepts, with scarcity being a lack of resources within an environment and munificence representing an abundance of resources. When examined through the RDT framework, an organization must try and control resources from the environment in order to meet the organization's goals up to and including survival. The more munificent the environment, the easier it will be to

secure these resources and achieve organizational goals. A more munificent environment has fewer constraints on it and more resources available therefore providing less uncertainty to the organization and a reduced need to resort to illegal cartel activities in order to control these resources and their constraints.

While previous research supports the contention that a lack of resources will lead to a company seeking innovative ways to gain these resources (including illegal activity), the attorneys I talked to did not view the business landscape in these terms and so were only able to generally support the position of a lack of resources leading to illegal activity. In general, they agreed that resources in the shape of capacity or produced and supplied products were a key determinant in whether a cartel would be desirable (in the case of limited supply) and provide a way to execute the cartel (in terms of controlling the industry capacity). Unfortunately, I was unable to directly measure these types of capacities due to limitations in my data. Therefore, while the attorneys conceptually supported the contention that munificence is tied to illegal activity, their vision of how this connection operated was different than that measured by my research.

My analysis found that munificence exhibited no direct effects on illegal activity and the moderation was not significant. As a result, I cannot conclude that my operationalization of munificence has a causal relationship with illegal cartel activity. Given the insight from the attorneys, I suggest a different operationalization of munificence may be required to test this construct.

#### ***8.2.2.4 Dynamism***

Dynamism is defined as change that is hard to predict, leading to increased uncertainty for managers and leaders in the organization. Generally, as dynamism increases environmental uncertainties increase, constraints on resources in the environment increase and firms will act to reduce both uncertainty and constraints. As an example, variance in revenues is a constraint leading to uncertainty; one of the ways to decrease the uncertainty associated with variable revenues is to engage in illegal cartel activities in order to gain stability to expected returns.

Despite my best efforts the attorneys did not understand what was meant by dynamism as it has been theoretically and empirically developed in management literature. However, they did have their own practitioner definition of dynamism that they relied upon; they viewed dynamism as indicative of how vigorous the competition was within an industry. The attorneys had varying views (depending upon which industries and the types of industries they had been exposed to) as to how their conceptualization of dynamism impacted illegal cartel activity. The point of departure between the qualitative and quantitative elements in my thesis was in the operationalization of the variable. The concept itself seemed to find favour with both parts of the analysis but requires further work in the operationalization to encapsulate the thrust of the attorneys' visions of this variable.

Dynamism was found to have a significant direct effect on illegal activity. While the effect was small, there also was a very significant effect when the moderator was added into the analysis. I view dynamism as a variable that is indicative of those environments

where there is the incidence of illegal activity, yet it remains a peripheral variable. The effect is small yet intense and I believe it indicates that where there are environments in flux there is a risk reducing urge by companies within the industry to act in concert to reduce this risk. Price fixing is an easy way to do this.

### ***8.2.3 External Variables Conclusion***

This analysis found that industry profits and dynamism had a significant and robust direct effect on illegal cartel activity, and a significant interaction with the board scanning moderator variable. Therefore, this research, which used a sample of illegal cartels, does not fully support previous research in this area.

My research adds to our collective knowledge of how the concept of board scanning interacts with traditional corporate governance environmental variables to impact illegal organizational activity. I found that the board scanning variable received face validity and tentative support from practitioners and that it acts as a rather neutral moderator as evidenced in the small change to the direct effects of the environmental variables. The idea of the effect of the board on illegal activity may be further explored by looking at other indices of the board's activities namely compliance regimes which were suggested by the attorneys as being the actual mechanism of how the board influences illegal activity.

### **8.3 Discussion of Internal Control Variables**

I apply a theory not traditionally used in the management literature strain theory, in an organizational context to explain illegal corporate activity (Agnew 1992, Merton, 1968). I believe there is a need for further research on the contribution strain theory could have



in management (Caruana et al., 2001) and organizations (Tsahuridu, 2006). As this theory becomes more readily accepted as a tool for management research, I feel there are also broader implications for corporate governance as well as human resource theory. I have suggested in this thesis that deviance, in particular illegal activity, be considered at the organizational level, rather than just as actions by an individual or group of individuals. This is predicated on the recognition that organizations are legally recognized as being capable of committing crimes and injuring society and the environment. There are other laws, designed to protect the very same societies and environments that place restrictions around how firms are able to achieve their organizational goals. When this occurs and there is an organizational imperative to realize these goals, the organization and those within it become innovative in finding routes to these objectives by going outside of the boundaries established by society (Merton 1938, 1968). This innovation becomes the impetus for organizational deviance and illegal activity in the drive to realize organizational goals.

In short, my argument is that to the extent organizations are pushed through shareholders, special interest groups or legislation to focus more on the results of their operations (and specifically financial results), the more illegal organizational activity will be encouraged. This highlights the tension inherent in an incentive scheme that encourages innovation which can manifest through positive or negative activities. While in both cases organizational goals can be achieved, goal attainment achieved through negative innovation can place the organization at legal risk.

The results from my research are mixed with respect to the theories in this part of the model. I was able to confirm the cascading effect from the board compensation to the

CEO compensation as statistically significant. This lends support to the notion that compensation systems from the top of the hierarchy tend to flow down through the hierarchy.

I was also able to find statistical support that an increase in independence of the board results in an increase in output controls for the CEO. Again this offers verification for the thesis in that independent directors have less day to day knowledge of the actions within the organization and so rely on output controls to monitor the performance of the CEO. There was a direct effect measured between the independence of the board and illegal activity which led to the result that in the board Scanning variable a high proportion of independent directors was good in that this assisted in moderating the incidence of illegal activity and in the control part of the model a high proportion of independent directors was associated with a greater incidence of illegal activity. This may be explained by the different focuses of the independent directors; externally in the case of scanning and internally in the case of CEO control.

However, I was unable to find any statistical confirmation for the hypothesis that the CEO control method has any impact on illegal activity. As a result, I was able to statistically support some of the constituent parts of the model but not the whole model itself.

I do feel that the hypothesized model bears further review as it is mostly supported from a quantitative perspective and received strong qualitative support for the balance. The model may require further modification as the linkages between CEO compensation vis-à-vis control methods require additional study; it is clear from the evidence of the

attorneys that there is a linkage but in its present form the operationalization of the construct does not adequately reflect the underlying theoretical thrust of the construct. There also may be linkages between the environmental variables and the control methods related to environmental uncertainty and type of control method used (Henri, 2006).

Additionally, as shall be noted in the future research section of this thesis there may be an opportunity to theorize how strain theory could be associated with the environmental variables in the top part of my model.

#### **8.4 Contribution to Theory**

By thoroughly exploring the phenomenon and antecedents of illegal organizational activity, I advance several strands of cross-disciplinary theory, all of which have academic and practical applicability.

First, I apply a theory not traditionally used in the management literature, namely strain theory in an organizational context to explain illegal corporate activity (Agnew, 1992, 2001, Merton, 1968). In so doing, I heed the call to research the contribution strain could have in management (Caruana et al., 2001) and organizations (Tsahuridu, 2006). As this theory becomes more readily accepted as a tool for management research, I believe we will discover there are also broader implications for corporate governance as well as human resource theory. I have added to the boundaries of this theory by extending it directly to management actions within the context of corporate crime. This is the first time to my knowledge that strain has been extended to address this neglected area of criminology (Geis, 2007).

Strain theory encapsulates the ongoing motivational tensions within organizations and found partial support in my research. I have advanced our understanding of our approach to illegal activity by using this theory in conjunction with other common management theories of control. In the end Innovators, as Merton would describe them, are acting in response to a situation they cannot control; the desire to achieve the goals of the organization is more powerful than the societal (and legal) prohibitions against such action. The juxtaposition of management control systems with actions derived from strain theory advances our theories of organizational action.

This research also expands upon and clarifies work that has been done in the past on illegal corporate activity, extending the applicability of RDT and agency theory. The management literature on illegal corporate activity is fairly sparse (Murphy & Robinson, 2008; Pinto et al., 2008); my study of cartels and the examination of the control method of the board influencing the control method of the CEO will help address this deficit. I also believe that this is the first time that board scanning activity is used as a moderator of the environment's causation of illegal cartel activity and one of the very few times a board scanning activity variable has been used at all.

I have advanced our theorizing about RDT by linking it to the makeup of the board and the board's external scanning ability to control the unknown risks of the environment. Theoretically, RDT can be seen as an explanatory avenue of how boards interact with the organization and environment to control the actions of the organization in order to minimize uncertainty. I have tried to extend this thinking by suggesting a construct, board scanning, which can act as a mechanism by which the organization interacts with

its environment. This moderator serves both as an uncertainty detector and an influence on the actions of the firm.

I believe that this thesis has expanded our thinking in the areas of environmental awareness and organizational action in the specific context of deviant behaviour. In so doing, it sets the stage for future research and theorizing to broaden the appeal of strain theory in management research and of RDT in work that examines how organizations scan and react to the environment.

### **8.5 Contribution to Practice**

One of the unique strengths of this thesis is that the research is based not only on archived data, but also on the interview results from very knowledgeable and previously unexplored experts in the field, namely those lawyers that are involved in investigating, defending and prosecuting illegal cartels. This thesis gains from the time they provided to share their knowledge to ensure that this research would be relevant to current practice in the field of organizational deviance. I also interviewed individuals who sit on corporate boards to solicit their first-person experiences with corporate governance issues as they pertain to scanning activity.

I believe that this research will benefit practice in a number of ways. First, there are potentially significant implications for remuneration practices in organizations. Through understanding how compensation systems may impact illegal activity, I provide insight into how best to proactively design compensation systems that minimize the incentives for illegal activity and reduce its incidence. While I was statistically unable to support this contention, it was unambiguously the opinions of the class action attorneys that a

compensation system that places an undue emphasis on achieving the ends specified by the system at the expense of the means will result in increased illegal activity. The law of unintended consequences is in full operation in this context. Organizations must take much more care in balancing the output and process aspects of their human resource compensation systems. In compensation decisions, too much of a reliance on outputs only encourages those who have innovative tendencies (a good thing) to use these tendencies to become an Innovator in Merton's context (potentially a negative). Balance is required.

Second, the corporate governance structure of the organization may impact the compensation of the CEO. By recognizing how board independence impacts compensation, governance structures can be arranged to more adequately co-create the appropriate compensation structure. The dataset used for this research includes data from several decades; it is clear that the greater the ratio of independent directors, the greater the reliance on output control mechanisms for the CEO. In this thesis, I have gathered and included qualitative evidence (7 out of 10 attorneys) that suggests that the greater the output control mechanisms for the CEO, the greater the incidence of illegal activity. Thus, we are left with the result that independent boards inadvertently are associated with an increase in illegal activity. This result is counter-intuitive and has significant implications for the corporate governance regime in North America, particularly in a time where increasing the independence of boards is being mandated through legislation such as the Sarbanes-Oxley Act. By striving for and creating legal mechanisms mandating more accountable management through independent boards, we may in fact be creating the conditions that exacerbate the occurrence of organizational deviance. A balance must

be struck between the trend to more independent boards and a tendency to structure CEO compensation to be more output based. This will require enhanced skill sets and training at the board level to more adequately assess the CEO's performance from a means perspective rather than an ends perspective.

Additionally, the results that the compensation profile of the board is aligned with that of the CEO provide interesting views on how CEO compensation is derived. Board compensation, and the fact that it is aligned with CEO compensation (through the cascading effect outlined in this thesis) could be used by compensation consultants and board Human Resources committees in arriving at the best methods of setting CEO compensation. If there is an inherent bias in boards aligning CEO compensation with their compensation maybe it is board compensation that needs to be changed first before CEO compensation is changed in order to provide a more aligned compensation system within the top ranks of the organization.

Governments have the ability to adopt a regulatory approach to mandate that organizations adopt measures that encourage the means rather than the ends. Regulators have options at their disposal including both carrot and stick approaches to influence the behaviour of organizations and individuals within organizations. A commonly used technique is the imposition of very onerous financial penalties to the organization and its constituents for engaging in this type of misdirected innovative behaviour. This may drive not only compensation decisions but also hiring choices and internal organizational policies, provided the penalties are both known to the relevant parties and they are of sufficient size to alter or circumscribe behaviour. Another common practice is for

regulatory powers to proscribe specific means oriented behaviour by organizations which can be used in tandem with penalties.

From a policy perspective, the legislated purpose of the organization can be amended to include not only the ends of the organization but the means available to achieve these ends. While it is a cultural tenet in our society that organizations act legally, a specific provision that organizations will act in a manner that is to benefit society will act to condemn innovative behaviour that is not only just illegal but also more broadly detrimental to society. While I believe a provision such as this will complicate the duties of the board, it may be necessary to assist in curbing this type of behaviour and add to the importance of the board scanning variable. This additional societal buffer layered with legal sanctions will help to minimize this negative innovative behaviour.

Corporate governance is also addressed through an emphasis on the scanning activity of the board. I did not find that board scanning alone, as measured in this thesis, had an impact on illegal activity but that it moderated already significant direct effects of a number of environmental variables including dynamism and industry profits. The ability of the size and independence of the board to scan the external environment for risk and uncertainty was supported by qualitative evidence and quantitatively supported where those risks were significant.

## **8.6 Limitations**

The most important limitation deals with generalization issues of the findings. The data that I used for the quantitative analysis is taken from a proprietary dataset detailing illegal activity that is itself conspiratorial and complicated. It involves an interaction between



two or more parties to engage in the illegal activity as opposed to much of the illegal activity that occurs in North America such as fraud or tax evasion where only one party is required. As such, it involves a degree of complexity and co-ordination in order to successfully reap the benefits of this activity.

From a data perspective, it should be recognized that since the data are gathered from over 40 years of cartel activity, there have been a number of environmental factors that have not been accommodated by this dataset. In particular, there are factors related to corporate governance trends, both legislative and market driven. For example, the Sarbanes-Oxley Act that came into effect in 2003 with its heavier emphasis on outside directors is not incorporated here. Likewise, trends in the environment variables affected by macro-economic forces such as industry profits are not specifically addressed. Finally, trends in executive compensation resulting from CEO disclosure requirements that arose in the 1990s are not included. I have tried to mitigate these issues by using a matching methodology but these issues may impact different industries in unique ways and since I have not controlled for industry there may be spurious effects not accounted for. It should be noted that the matching process required me to compare different 4 digit SIC code industries as using the same industry was not advised as price fixing is an industry phenomenon.

The data is also for U.S. companies that have participated in international cartels. There may be differences in this set of companies from those U.S. companies that only participated in domestic (only US) cartels. This problem may relate to the complexity of a firm's operations in that they operate in conjunction with international partners either domestically or internationally. As such, anecdotally from the attorneys that I

interviewed, these companies are on average larger than those that participate in U.S. only cartels. However, the size variable has been addressed in the matching scheme used in this methodology.

This research may also be limited by the depth of knowledge of the subjects interviewed with regard to academic theories and discourse. The qualitative analysis relied upon practitioners who were unfamiliar with the criminological theories involved as well as certain environmental factors. While it was beneficial to speak directly to practitioners, I found their data not especially congruent with some of the variables such as the dynamism and complexity variables. However, I view this as a necessary limitation in that the value of their experience far outweighs any limitations in their understanding of the academic nuances in models and variables.

I also view it as a limitation that the operationalization of behaviour variables in the control methods is a difficult task and subject to many other forces that are themselves difficult to identify, let alone measure. Why persons behave in certain ways is and has been a very difficult process to quantify and while I have attempted to be robust in addressing the direction of the theory to date, there may be still work yet to do.

Also the scanning variable has little construct validity and much work needs to be done there to alleviate this situation. There is a rather large but admittedly equivocal empirical literature suggesting that large boards are ineffectual boards due to the diffusion of responsibility and difficulty of any meaningful debate in relatively large groups of people. Furthermore, there is a literature suggesting that insider-dominated boards are

more knowledgeable about the firm and its industry than outsiders are. As such this variable requires further work.

The Connor database was not reproducible within the time constraints involved and as such caution must be exercised to view it as a population although it has been successfully used in peer reviewed research before.

It must be recognized that I interviewed only 10 attorneys and although they have experiences in over 100 international cartel cases, a greater sample would have been preferred.

Furthermore, I have made the assumption that illegal cartel activity is and is held to be not in the best interests of the corporation. I have assumed that likewise, boards would view this activity as not to be encouraged. I have not empirically tested this assertion and as such it resides in this thesis as an assumption. The CEO control variable could be further tested by finding alternate data sources to confirm whether the variance in the control variable matches up with the salary, bonus, stock option structure of the CEO's in question. While this was tried with the current data source, it was found that a random sample over the 40 years in question was not possible as the data were quite naturally more granular as it became more current. This is due to legislative and reporting reasons. I view this as both a limitation and a challenge for increasing the validity of the CEO control variable.

Finally, my argument is limited in that it does not address all the possible reasons for an organization to engage in illegal activity. There are many environmental elements that may influence an organization's decision to engage in corporate deviance. In addition,

the behaviour of an organization is a necessarily complex phenomena and I have addressed only one motive for this type of negative innovative behaviour. For example, the choice between positive or negative innovation to achieve organizational goals may be culturally dependent.

## **8.7 Future Research**

The direction of future research is to first extend the generalizability of the research, improve on the validity of the board scanning and board and CEO control variables and follow the suggestions of some of the attorneys as to how to further explore the relationship between the board and illegal activity.

Improving the generalizability of the results is centred on the limitations of the data as has been set out above. Different types of illegal activity can be used; indeed, there is no dearth of illegal activity that one can draw upon to develop further datasets to be tested. It would also be advantageous to understand how the various corporate governance regimes (such as CEO compensation reporting and Sarbanes-Oxley) have had an impact on this model.

The scanning variable requires additional testing to increase its validity; it is recently developed and only tested using a narrow dataset. It may be that other elements of board organization can or should be incorporated such as committee structure and complexity. This may help in understanding the nuances of how boards scan the external environment to recognize and handle environmental uncertainties that may affect the organization.

The board and CEO control variables can be further validated by qualitative interviews with compensation experts, board members and executives to see how to quantify means

based or ends based compensation structural elements. This could include exploratory, inductive work.

Complementary avenues for research have suggested themselves through the interviews with the attorneys. The first is that the board's real impact on illegal activity may be in the area of general compliance to all statutes, regulations and company policies. This compliance is seen by the attorneys as something that the board publically endorses and emphasizes through company websites, annual reports, etc. It is therefore possible to develop methodologies to address the board's degree of interest in compliance and measure it against the actual degree of compliance of the firm. This area of exploration was highly recommended by many of the attorneys as set out in the following example:

*“Management really comes down to control systems and diligence at the board is to legal compliance, legal risk exclusively managed.”*

The attorneys also felt that culture, in the international sense, played a large role in the incidence of illegal activity. They suggested that national culture is of prime importance to the tolerance and legitimacy of price fixing cartels. An attorney from Los Angeles noted that “in some cultures, a legitimate strategy is to get together and conspire to keep the prices up.” This concept of potential differences based on country culture was echoed by an attorney from Washington, D.C.:

*“In the United States we have this idea that you have to make money every year and if you lose it you are out of your job as the CEO. Other countries have a much different view of it - they have a long term view of it. I can run this company for a certain amount of time at a loss put everybody out of business in ten years and then I can reach the benefits of that for another 20 years. They think long term. It is profit driven but, not immediate profits but, it's always profit driven.”*

This concept of foreignness and cultural differences arose as a new area not hypothesized in this study and thus could provide an attractive angle for future research.

The attorneys also felt that there was merit in understanding how boards reacted to being publicly charged and that the independence of the board would be a differentiating factor in their reaction to illegal activity. The attorneys felt there was some degree of variability as to how boards reacted to subpoenas and charges of illegal activity; the reaction in itself could have an impact on further occurrences of illegal activity. Recidivism is an interesting topic as it addresses the matter of systemic organization issues that lead to illegal activity versus one-offs or rogue employees that may be the proffered explanation as to why illegal activity was conducted. The concept of board makeup impacting their reaction to legal sanctions and recidivism could be addressed in future research.

Another avenue of related study could examine the differences in action undertaken by different levels of independent boards once the illegal activity is uncovered. A number of attorneys commented that boards were more effective once the illegal activity was brought to their attention rather than as a preventative force, and the action they undertake may be different as suggested by a New York attorney:

*“I don’t know that having independent boards will have any effect on whether or not a company engages a price fixing. It may have an effect on how a company reacts once a price fixing scheme is discovered. For example, if you have an independent board, that board may be more motivated to want to figure out what happened and clean it up and get the bad actors out.”*

I would find it also helpful if the assumption about what various actors feel is in the best interests of the firm, including illegal activities, was empirically explored to determine its

veracity. Furthermore, the assumption that outside directors are less tolerant of risk than inside directors needs to be substantiated.

In applying strain theory to this research it is noted that I have only applied it to the control section of this research. Strain theory may equally be influenced by the environmental variables as set out in the first part of my model as possible sources of strain and as such should be studied. The industry profit and munificence variables would be seen as contributors to the strain that was felt and as such would be supportive of strain theory in a direct relationship with illegal activity. Having chosen not to theorize the use of strain theory in the environmental portion of my thesis, some work will be required to develop the theoretical portion of this study to the environmental variables I have used. I already have the data and intend to pursue how these environmental variables may be seen as sources of strain in organizations.

Additionally, there is a need to explore these types of cartels in the context of international business arrangements. Dunning has explained how cartels fit into the OLI paradigm and that they can be viewed as just another form of international business arrangement. There is possibly some very fruitful ideas and comparisons that can be made between these arrangements and legal modalities of operations (Dunning & Lundan, 2008).

Finally, in exploring this phenomenon I have gone far afield to find and apply theories to build and test this model. There seems to be room for theory development in the corporate governance realm to be able to tie structure and behaviour together in the running of organizations. While this theory development would necessarily be broader

than the model developed within this thesis, I found in the process of building this model a deficiency in the corporate governance theories available for use. I would recommend extensive inductive research to better understand the mechanics and machinations of all of the corporate governance actors from shareholders to senior executives.

## **8.8 Conclusion**

I have developed a theoretical model of the external and internal causes of illegal activity and tested this model with a proprietary dataset. Although I believe I have advanced both theory and practice, the results were mixed. However, I feel that this work will further our understanding of organizational deviance which is critical given its impact on organizations, individuals, regulators, law enforcement, and the general public. I hope that this research has provided some benefit on this account and will be used to better inform boards of directors in their duties and responsibilities. Ultimately, my goal is that it assists in the detection and prevention of illegal corporate activity.



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## **Appendix A: Guiding Interview Questions for Study 1**

1. How do board members determine what emerging external issues may affect the organization?
2. Does the size of the board affect the board's effectiveness in understanding external issues that may impact the organization?
3. Does the percentage of outside directors (those not directly employed by the organization) affect the board's effectiveness in understanding external issues that may impact the organization?

## Appendix B: Ethics Approval



Richard Ivey School of Business  
The University of Western Ontario

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### Use of Human Subjects - Ethics Approval Notice

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**Principal Investigator:** Glenn Rowe  
**Re PhD Candidate:** David Kunsch  
**Review Number:** 024/10 BREB  
**Protocol Title:** The Effects of the Environment and Corporate Governance in Illegal Cartel Activity - Interviews  
**Ethics Approval Date:** October 26, 2010      **Expiry Date:** October 26, 2011  
**Documents Reviewed and Approved:** Ethics Protocol, Information Letters, Interview Questions

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This is to notify you that The Ivey School of Business Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the applicable laws and regulations of Ontario has granted approval to the above named research study on the approval date noted above.

This approval shall remain valid until the expiry date noted above assuming timely and acceptable responses to the NMREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the UWO Updated Approval Request Form.

During the course of the research, no deviations from, or changes to, the study or consent form may be initiated without prior written approval from the NMREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of monitor, telephone number). Expedited review of minor change(s) in ongoing studies will be considered. Subjects must receive a copy of the signed information/consent documentation.

Investigators must promptly also report to the NMREB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to this office for approval.

Members of the NMREB who are named as Investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the NMREB.

Signature:

Roderick White

Associate Dean - Faculty Development & Research

*This is an official document. Please retain the original in your files.*

## **Appendix C: Guiding Interview Questions for Study 2**

1. Background information and experience of interviewee
2. Specific experience of the interviewee in their relationship to cartels i.e. Regulator role, class action lawyer cartel, number and type of cases
3. Experience as to the causes of cartel behavior along with qualifications and specific examples:
  - a. Comments on each specific antecedent along with examples
  - b. Comments on how the interviewee has synthesized or otherwise collated the antecedents to arrive at what in their mind, is a classification system for these antecedents
  - c. Comments on the mechanism that these antecedents utilize in order to enable the illegal cartel activity
4. Comments on the proposed model and the relevance and relationship of each construct within the model and the construct validity of each construct

**Appendix D: Additional Quotations Concerning the Environmental Variables**

Industry Concentration	<p><i>“I would say generally the fewer players there are and the easier it is to collude because it’s easier to keep three people on board and the pricing is more transparent when there are only three suppliers than say when there is ten.” (Attorney, San Francisco)</i></p>
Industry Profits	<p><i>“Bad economic times, the industry most probably in the United States is going down the hole. Most competitors are killing them and the three or four companies who actually covered most of the North American markets got together and fixed prices. They did so to try and preserve the economic viability of their industries against foreign competition.” (Attorney, Los Angeles)</i></p> <p><i>“In the chemical industry, there are high fixed costs and then demand drops. There is therefore, a lot of surplus capacity, and you know, the price will be down or there may be a little bit of price manipulation where we might help each other out. This helps get back to a sort of environment of profit price margins that they consider to be more reasonable than what might prevail in an environment of over capacity.”(Attorney, Washington, D.C.)</i></p>
Firm Profits	<p><i>“Frankly, as a lawyer or a former practitioner you understand the cyclical nature of the business. I just find it a fascinating observation that contributes the worst times or bad to conspire. They are basically trying to deliver returns any way they can”</i></p> <p><i>(Attorney, New York)</i></p> <p><i>“I’ve been doing antitrust work on and off for 40 years and a company’s profitability does impact the decision to engage in crime or not.” (Attorney, New York)</i></p>
Munificence	<p><i>“I feel that if companies and I suppose industries have more access to resources and stuff they need to operate, then they will perform better, or at least have cheaper inputs, so will be more profitable. That brings me back to the fact that industry or company profitability is a driver.” (Attorney, Toronto)</i></p>



Dynamism	<p><i>“People thought that the tech industry was unsusceptible to collusion because it was a very dynamic and innovative market. What happened was that the participants sort of just gauged their conduct to account for that kind of volatility and they just got a little bit more sophisticated and complex. Salesmen are very smart and it doesn’t matter what the market requirement is they will try to adjust it in a way if they want to collude.” (Attorney, San Francisco)</i></p>
Scanning	<p><i>“The board should be setting the rules. They can act as the ultimate punishment for the CEO so they in effect are threatening others that if they do not behave they will be fired.”(Attorney, Canada)</i></p> <p><i>“So I think that is probably the area [illegal activity] of high sensitivity now, but probably still at most company’s directors would be a little, you know, sort of removed from this other than perhaps now starting to ask more generally, you know, how are you dealing legal and ethical compliance issues in a way that it gives the company risks in various areas. Outside board members seem to be better at this than others.” (Attorney, Toronto)</i></p> <p><i>“As to the number of board members leading to better compliance I agree in principle that this is the case.” (Attorney, United States)</i></p>

## Appendix E: Additional Quotations Regarding CEO and Board Output Controls

Board Control	<p><i>“If there is going to be compliance it has to come from the top as well. They really have to set a tone from the top but even well counselled companies can find their companies with a risk of collusion for a whole host of different reasons. A company can buy another company with not too sufficient due diligence and then they find that the new company they bought is involved in price fixing. That happens quite frequently. Or they can have subsidiaries overseas in countries that don’t have a compliance culture. There may be great compliance training in the U.S. but there isn’t in say Brazil. That just happened to Whirlpool, in their Brazilian subsidiary that was involved in price fixing on compressors and pled guilty last year so you really have to look to little gaps in compliance programs which is directed by the board and the CEO.” (Attorney, Los Angeles)</i></p> <p><i>“These are people who work together more or less for several years and they do not want to rock the boat so when the board votes itself a raise it quite naturally will lead to a discussion as to whether the CEO needs a raise to keep pace even though he may not deserve it. So I think it is a group of golfing buddies who all want to get along well together – so I can see how this can happen.” (Attorney, Ottawa)</i></p> <p><i>“The point is if you focus excessively on financial performance, then the short cut to financial performance is noncompetition.” (Attorney, New York)</i></p>
CEO Control	<p><i>“I have never seen anything that is really tied to compensation. Maybe more job security might be one but, I have never seen it so closely. I have not seen that where someone says that I want to fix prices because I want a bigger commission next year. I have seen it more as like I want to preserve our existing sort of status quo.” (Attorney, New York)</i></p> <p><i>“It definitely gets the attention of the CEO as it’s such a credible part of the whole businesses, who determines price, what the price is, what the price will be going forward. After all his performance comes from profits.”(Attorney, Washington, DC)</i></p>

Cascading Effect	<p><i>“Everything is talked about now in companies and I would say this idea that there was some rogue employee at the bottom who was doing this and no one else knows about it is not accurate. I mean if this is going on, it’s going on at all levels of the company, extending to ones to the top. It’s just pricing and price positions were so critical to a company that they tend to involve people from highest level of the company.” (Attorney, Los Angeles)</i></p>
% Outside Directors	<p><i>“I find that the most open to this [compliance] approach are those board members that are from outside of the firm without any previous affiliation. They are more by the book sometimes than those from within the firm who may be more apt to rely on excuses because of extenuating circumstances as to why compliance is not 100% necessary, outside board members are a little more black and white.” (Attorney, United States)</i></p> <p><i>“Having more members and more outside members is better for compliance in general as there are more people to ask questions. I feel independent board members have more of a jaundiced eye regarding information presented to them by management.” (Attorney, United States)</i></p> <p><i>“And boards are kind of giving continuous instruction to kind of run these compliance programs and the management are doing them in order to substantiate to their boards. Perhaps that they are taking measures to guard against these possible risks, but you never know the extent to which it has an actual effect.”(Attorney, Toronto)</i></p>

## CURRICULUM VITA

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**Post-Secondary Education  
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2007 – 2012, Ph.D. Business Administration

Wayne State University  
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York University  
Osgoode Hall Law School  
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General Motors Institute (now Kettering University)  
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1982 – 1987, B.S.E.E.

**Honours and Awards:** Southern Management Association – Strategy/OT Stream – Best  
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Plan of Excellence, The University of Western Ontario (2007-  
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**Related Work  
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Bittner School of Business, St. John Fisher College  
2011-2012

Lecturer (Strategy, Corporate Governance, Business Law)  
Richard Ivey School of Business, University of Western Ontario  
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Lecturer (Corporate Governance)  
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### Peer Reviewed Proceedings:

- Kunsch, D., Schnarr, K. and Rowe, W. G. (2012) The Relational Effect of the Rule of Law: A Comparative Study of Japanese and South Korean Foreign Direct Investment. Under revise and resubmit at the *Asia Pacific Journal of Management*.
- Schnarr, K. and Kunsch, D. (2011) Board Relationships and Information Flows: The Importance of Committee Interaction in a Post-Sarbanes-Oxley World. *Proceedings of the Southern Management Association*, Annual Meeting, Savannah, GA.
- Kunsch, D. (2010) Board Complexity and Firm Diversity: Match Making and Performance. *Proceedings of the Administrative Sciences Association of Canada*, Annual Meeting, Regina, SK.
- Kunsch, D. and Rowe, W. G. (2009) Japanese FDI and the Rule of Law. *Proceedings of the Southern Management Association*, Annual Meeting, Ashville, NC.
- Kunsch, D. (2009) Can Judgment Be Taught in Business Schools? Lessons from Ethics. *Proceedings of the Administrative Sciences Association of Canada*, Annual Meeting, Niagara Falls, ON.
- Kunsch, D. and Rowe, W. G. (2008) Why Corporate Illegal Activity is Caused by a Lack of Attention. *Proceedings of the Southern Management Association*, Annual Meeting, St. Petersburg, FL.

### Non-Peer Reviewed Articles:

Kunsch, D. & Rowe, W. G. (Nov/Dec. 2008) Fire the Bum. *Ivey Business Journal*  
[http://www.iveybusinessjournal.com/article.asp?intArticle\\_id=797](http://www.iveybusinessjournal.com/article.asp?intArticle_id=797)

### Cases:

- Kunsch, D. and Foerster, S. (2009) BCE Inc. Bondholders vs. Shareholders, Supreme Court Showdown? Registered with Ivey, 9B09N027 (Case) and 9B09N015 (Teaching Note).
- Kunsch, D., Chiang, Y., and Rowe, W. G. (2008) Teaching Note for Lee and Li, Attorneys-at-Law and the Embezzlement of NT\$3 Billion by Eddie Liu (A) and (B). Registered with Ivey, 8B08M79.
- Kunsch, D., Riaz, S., and Rowe, W. G. (2008) Teaching Note for Strategic Leadership at Coca-Cola: The Real Thing. Registered with Ivey Case, 9B08M040.

### Refereed Conference Presentations:

- Kunsch, D., Rowe, W. G., and Schnarr, K. (2011) By Any Means Necessary: The Effects of Anomie and Control on Illegal Organizational Activity. Recipient of Best Doctoral paper in the Strategy/OT stream, **Southern Management Association Meeting**, Savannah, GA.
- Kunsch, D., Rowe, W. G., & Schnarr, K. (2011) Do the Ends Justify the Means: A Cross-Disciplinary Approach to Illegal Organizational Activity. **18<sup>th</sup> Annual International Business Ethics Conference**, New York, NY.
- Schnarr, K. and Kunsch, D. (2011) A Brave New World: Committee Member Prominence in an “Evolved” Corporate Governance Environment. **Strategic Management Society**, Annual Meeting, Miami, FL.
- Kunsch, D. (2010) Board Complexity and Firm Diversity: Match Making and Performance. **Administrative Sciences Association of Canada**, Annual Meeting, Regina, SK.
- Kunsch, D. & Rowe, W. G. (2009) Japanese FDI and the Rule of Law. **Southern Management Association**, Annual Meeting, Ashville, NC.
- Kunsch, D. (2009) Can Judgment Be Taught in Business Schools? Lessons from Ethics. **Administrative Sciences Association of Canada**, Annual Meeting, Niagara Falls, ON.
- Kunsch, D. & Rowe, W. G. (2008) Why Corporate Illegal Activity is Caused by a Lack of Attention. **Southern Management Association**, Annual Meeting, St. Petersburg, FL.