

**HOW CORPORATE SOCIAL RESPONSIBILITY AFFECTS FIRMS' STRATEGIC
DECISIONS: EXAMINING LINKS AMONG CORPORATE SOCIAL
RESPONSIBILITY, VERTICAL INTEGRATION, AND NEW PRODUCT
INTRODUCTIONS**

by

Maria Jose Murcia

B.A., Universidad de Buenos Aires, 2010

M.B.A., IAE Business School, Universidad Austral, 2012

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

in

THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES
(Forestry)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

July 2018

© Maria Jose Murcia, 2018

The following individuals certify that they have read, and recommend to the Faculty of Graduate and Postdoctoral Studies for acceptance, the dissertation entitled:

How corporate social responsibility affects firms' strategic decisions: Examining links among corporate social responsibility, vertical integration, and new product introductions

submitted by Maria Jose Murcia in partial fulfilment of the requirements

the degree of Doctor of Philosophy

in Forestry

Examining Committee:

Harry W. Nelson, Forestry

Co-supervisor

Rajat Panwar, Management (Appalachian State University)

Co-supervisor

Jorge Tarzijan, Business (Pontificia Universidad Catolica de Chile)

Supervisory Committee Member

Peter Dauvergne, Political Science

University Examiner

James Tansey, Commerce

University Examiner

Additional Supervisory Committee Members:

Roy Suddaby, Business (University of Victoria)

Supervisory Committee Member

Abstract

Firms seek competitive advantages either through cost leadership or product differentiation strategies. Cost leadership may be achieved by shifting away from vertical integration (VI) to vertical de-integration through outsourcing that often results in significant cost and flexibility gains. Product differentiation can be achieved through new product introductions (NPI) that can help firm enter new markets and meet changing consumer needs.

However, modern firms not only face pressure to be competitive, but also to be socially responsible. As firms increasingly incorporate corporate social responsibility (CSR) in their operations, a key question emerges about the effect of CSR on fundamental strategic decisions related to vertical integration (VI) and new product introductions (NPI). The primary aim of this thesis is to address this question. Toward that end, the thesis is divided into three main sections described below.

First, it takes stock of the extant literature on VI, especially because this construct has grown in numerous disparate directions that has led not only to conceptual ambiguity, but also rendered a bewildering array of empirical findings. The first section of this thesis, therefore, synthesizes VI literature before analyzing the effect of CSR on VI. In contrast, NPI -the other construct used in this thesis- is relatively well understood and hence the NPI based empirical section does not need a theoretical precursor.

The second section comprises an examination of the link between CSR and VI. Consistent with transaction costs economics theory, panel data regression results show that higher CSR performance is associated to higher VI. In other words, socially responsible firms tend to vertically integrate, i.e., outsource less.

The third section comprises the analysis of the link between CSR engagement and NPI. In this section, I consider CSR as a multidimensional construct that bundles multiple and even dissimilar activities together. Drawing on the knowledge based view of the firm, panel data regression results show that while discretionary activities concerning environmental and social engagement (labeled as *informal CSR*) directly and positively affect the rate of NPI, compliance-oriented corporate governance activities (labeled as *formal CSR*) do not directly affect the rate of NPI.

Lay Summary

Corporate social responsibility (CSR) practices have become ubiquitous but we do not fully understand know their implications for competitive strategies. This thesis aims to address this gap in knowledge. Specifically, it examines the effect of CSR on how companies decide upon which activities along the value chain (i.e., the vertical integration decision) and products/markets they should be involved (i.e., new product introduction decisions). In terms of the vertical integration (VI) decision, I find that higher CSR performance entails keeping upstream and downstream activities under control which leads to higher levels of VI. In terms of the new product introductions (NPI) decisions, higher levels of informal CSR activities improve employee relations, which through knowledge retention leads to higher levels of NPI.

Preface

This dissertation uses secondary data that I synthesized and analyzed. None of the text of the dissertation is taken directly from previously published sources.

This dissertation is Maria Jose Murcia's original, unpublished, and independent work which is carried out in consultation with and under guidance of her supervisory committee that comprises Drs. Harry Nelson (co-supervisor), Rajat Panwar (co-supervisor), Roy Suddaby (committee member), and Jorge Tarzijan (committee member).

Table of Contents

Abstract.....	iii
Lay Summary	v
Preface.....	vi
Table of Contents	vii
List of Tables	xi
List of Figures.....	xii
List of Abbreviations	xiii
Acknowledgements	xiv
Dedication	xv
Chapter 1: Introduction	1
1.1 Thesis outline and organizing framework.....	4
Chapter 2: Vertical Integration in Management Research - An Integrative Review.....	7
2.1 Synopsis	7
2.2 Introduction.....	8
2.3 Method for Literature Review	10
2.3.1 Sampling	10
2.3.2 Coding.....	13
2.3.3 Analysis.....	13
2.4 Disciplinary, Methodological, and Contextual Orientation of VI Research.....	13
2.4.1 Disciplines Converging in the Study of VI.....	13
2.4.2 Methodological Orientation	14

2.4.3	Contextual Coverage and Units of Analysis.....	15
2.4.3.1	<i>Inter-organizational Relationships</i>	15
2.4.3.2	<i>Intra-organizational Relationships</i>	16
2.4.3.3	<i>Micro-Level Relationships</i>	16
2.5	Theoretical Underpinnings of VI.....	16
2.6	Conceptual Divergence in the VI Literature.....	21
2.6.1	VI as a MAOB decision.....	22
2.6.2	VI as an ‘Architecture’.....	23
2.7	Major Themes in VI Research.....	23
2.7.1	VI as a Substitute and/or Complement of Relational Contracts.....	25
2.7.1.1	<i>Summary</i>	27
2.7.2	VI as a Tool to Cope with Environmental Dynamism.....	27
2.7.2.1	<i>Summary</i>	28
2.7.3	VI as a Tool to Develop Organizational Capabilities and Support Competitive Advantage.....	29
2.7.3.1	<i>Inter-firm Relationships</i>	29
2.7.3.2	<i>Micro-level Relationships</i>	30
2.7.3.3	<i>Summary</i>	30
2.7.4	VI as a Tool to Effect Intra-Firm Coordination.....	31
2.7.4.1	<i>Summary</i>	32
2.8	Emerging and Future Research Directions.....	32
2.9	Discussion and Conclusion.....	35
Chapter 3: Corporate Social Responsibility and Vertical Integration.....		38

3.1	Synopsis	38
3.2	Introduction.....	38
3.3	Conceptual Background.....	42
3.4	Hypotheses.....	45
3.4.1	The RG Perspective	45
3.4.2	The TCE Perspective	49
3.5	Methods.....	53
3.5.1	Approach, Data and Sample	53
3.5.2	Measures	55
3.5.2.1	<i>Vertical Integration</i>	55
3.5.2.2	<i>CSR</i>	56
3.5.2.3	<i>Moderating Variables</i>	57
3.5.2.4	<i>Control Variables</i>	57
3.5.3	Analysis.....	58
3.5.3.1	<i>Baseline Specification</i>	60
3.5.3.2	<i>Instrumental Variables Specification</i>	61
3.5.3.3	<i>Simultaneous Equations Specification</i>	65
3.5.4	Robustness Checks.....	68
3.6	Discussion and Conclusion.....	70
Chapter 4: Corporate Social Responsibility and New Product Introductions.....		75
4.1	Synopsis	75
4.2	Introduction.....	76
4.3	Conceptual Background.....	80

4.4	Theory and Hypotheses.....	84
4.4.1	Informal CSR and NPI.....	84
4.4.2	Formal CSR and NPI.....	88
4.5	Methods.....	92
4.5.1	Data, Sample and Approach.....	92
4.5.2	Independent Variables.....	95
4.5.3	Moderating Variables.....	96
4.5.3.1	<i>Vertical Integration</i>	96
4.5.3.2	<i>R&D intensity</i>	97
4.5.4	Control Variables.....	97
4.5.5	Analysis.....	99
4.5.6	Results.....	100
4.5.7	Robustness Checks.....	105
4.6	Discussion and Conclusion.....	108
	Chapter 5: Conclusion.....	113
5.1	General limitations of the present work.....	114
	Bibliography.....	117
	Appendices.....	149
	Appendix A - Index of Publications.....	149
	Appendix B - Index of Theories.....	153
	Appendix C - Economic Effect of CSR on VI.....	158

List of Tables

Table 1-1 Methodology and Methods Employed	6
Table 2-1 Search Results, Web of Science	12
Table 2-2 VI Definitions per Management Discipline (Number of Articles).....	22
Table 3-1 VI and CSR: Sample Distribution Across Industry Groups.....	54
Table 3-2 VI and CSR: Sample Distribution Across Countries	55
Table 3-3 VI and CSR: Descriptive Statistics and Correlations	59
Table 3-4 VI and CSR: Baseline Specification (Panel Corrected Errors)	60
Table 3-5 VI and CSR: Instrumental Variables Specification (2SLS)	64
Table 3-6 VI and CSR: Simultaneous Equations Specification (3SLS).....	66
Table 3-5 Robustness Checks: VI and CSR as Social and Environmental Performance	69
Table 4-1 NPI and CSR: Sample Distribution Across Countries	93
Table 4-2 NPI and CSR: Sample Distribution Across Industry Groups.....	94
Table 4-3 NPI and CSR: Descriptive Statistics and Correlations.....	100
Table 4-4 NPI and CSR: Negative Binomial Regression Results	102
Table 4-5 NPI and CSR: Robustness Checks - Negative Binomial Regression Results	107

List of Figures

Figure 1-1 Pathways to Competitiveness	2
Figure 1-2 Thesis Organizing Framework	3
Figure 2-1 Articles per Publication.....	14
Figure 2-2 Evolution of Theoretical Orientation of VI Research.....	21
Figure 2-3 VI Organizing Framework	25
Figure 3-1 The RG Perspective - Conceptual Model.....	49
Figure 3-2 The TCE Perspective - Conceptual Model.....	53
Figure 4-1 Conceptual Framework.....	84
Figure 4-2 Thompson Reuters ASSET 4 ESG Scores.....	96
Figure 4-3 Interaction Plot - Informal CSR, VI and the Rate of NPI	104
Figure 4-4 Interaction Plot - Formal CSR, R&D Intensity and the Rate of NPI	105

List of Abbreviations

2SLS	Two-stages Least Squares
3SLS	Three-stages Least Squares
AME	Average Marginal Effect
B2B/G	Business-to-Business/Business-to-Government
B2C	Business-to-Consumer
CSR	Corporate Social Responsibility
ESG	Environmental, Social and Governance
GICS	Global Industry Classification Standard
IRR	Incident Rate Ratio
IRT	Item Response Theory
KBV	Knowledge Based View
MAOB	Make-and-or-Buy
NPI	New Product Introductions
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
R&D	Research and Development
RBV	Resource Based View
RG	Relational Governance
S&P 500	Standard & Poor's 500 index
SET	Social Exchange Theory
TCE	Transaction Cost Economics
US	United States
VA/S	Value-added to Sales ratio
VI	Vertical Integration

Acknowledgements

I have been immensely blessed with the support of my family, the natural and the spiritual. Along the PhD journey, I have been sustained by your love and prayers. Thank you! This would have been impossible without you.

Thank you to so many friends too. I hope you all know how important you have been along this journey!

Special thanks to Dr Rajat Panwar and Dr Jorge Tarzijan for your great faith in my abilities. You believed in me when there was nothing there yet, and provided me with a great opportunity to join UBC. You have also taught me so much along the way. Thanks ever so much!

I am indebted to Dr Harry Nelson and Dr Roy Suddaby for joining the supervisory committee. Thank you for your generosity in sharing your time and wisdom. You have shaped my thinking and I hope you recognize your imprints on this work.

Thank you, Alice, Jen, Meike, and Vilbert! My journey companions. Your friendship is a such a great gift in my life. Thank you for your loving support!

I am thankful to UBC Faculty of Forestry for the funding received that made this research possible.

I would also like to acknowledge the support and encouragement of the faculty at IAE Business School (Argentina) in helping me undertake this journey.

I have been truly blessed during this season of my life. For all those blessings I can count, as well as for those that for some reason I have not been able to count yet, *Deo gratias!*

Dedication

To my family, the natural and the spiritual.

Chapter 1: Introduction

Strategic management scholars have long proposed that firms compete to seek competitive advantages either through cost or product leadership (Porter, 1980). While subsequent scholarly work has argued that these strategy types are not necessarily mutually exclusive, and that some adaptation is necessary to better understand how modern firms compete in contemporary business environments, the basic framework of generic strategies (i.e., cost leadership and product leadership or ‘differentiation’) still remains relevant (Kim, Nam, & Stimpert, 2004; Panwar, Nybakk, Hansen, & Pinkse, 2016).

In recent years, firms pursuing a cost-leadership strategy have increasingly turned to vertical de-integration through outsourcing (Gereffi, Humphrey, & Sturgeon, 2005; Holcomb & Hitt, 2007). The outsourcing of inputs and services that were previously produced in-house has been a key strategic lever for many firms to reap significant cost and flexibility advantages (Contractor, Kumar, Kundu, & Pedersen, 2010). In contrast, firms pursuing a differentiation strategy have focused on speeding the introduction of new products that may help them establish new markets, and meet changing consumer demands (Smith, Collins, & Clark, 2005). These two pathways to competitiveness are illustrated in Figure 1-1.

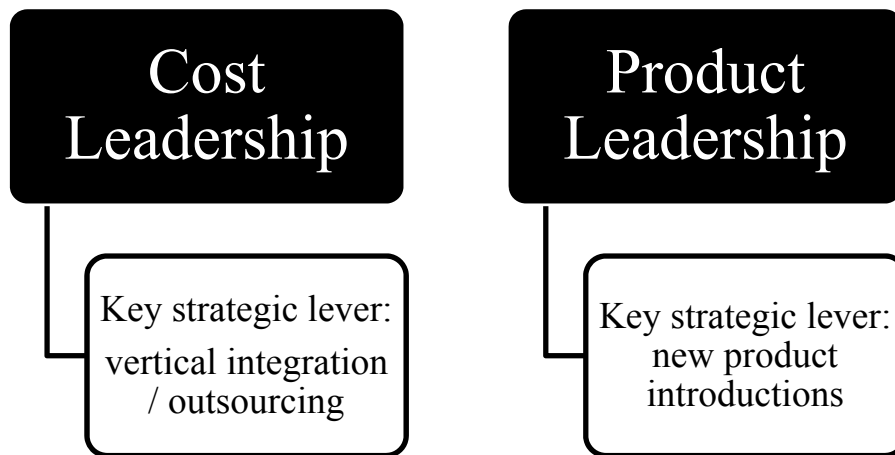


Figure 1-1 Pathways to Competitiveness

At the same time, the paradigm defining competitiveness is shifting (Lister & Dauvergne, 2013). Corporate social responsibility (CSR) -defined as firms’ observable actions that consider a broad set of stakeholders’ expectations including environmental, social and corporate governance performance (Aguinis & Glavas, 2012; Wood, 1991)-, has become a globally adopted practice (Wang, Tong, Takeuchi, & George, 2016). It is commonly suggested that firms’ posture toward CSR demands affect their competitiveness, and even their ability to survive (Lubin & Esty, 2010).

Overall, CSR has emerged as a prevalent phenomenon among firms concerning their response to evolving societal expectations on the role of business (Hendry, 2006). Firms are nowadays expected to demonstrate greater accountability by complying with a new set of rules, norms or codes of conduct (Griffin, 2016; Hoffman, 1999), such that their responsibility goes beyond production and commercialization, and extends to involvement in their communities community, and assume what were traditionally considered the role of the public sector (Smith & Fischlein, 2010). While debate remains about firms’ underlying motivations for CSR engagement (Garriga & Mele, 2004; Griffin & Prakash, 2014), there is a general consensus that it entails

integration of environmental, social, and corporate governance concerns into business operations. As CSR fundamentally affects how a firm would conduct business, CSR potentially affects firms' fundamental strategic decisions.

It is against this backdrop that the overall objective of the present work is to examine how fundamental strategic decisions aimed at gaining competitive advantage by selecting the activities along the value chain, as well as which product/markets a firm should pursue - that is, decisions concerning a firm's scope or boundary (Grant, 2006) - are affected by CSR. Specifically, this thesis analyzes the effects of CSR on vertical integration (VI) and new product introduction (NPI) decisions. Figure 1-2 provides an organizing framework of the thesis summarizing the research objectives.

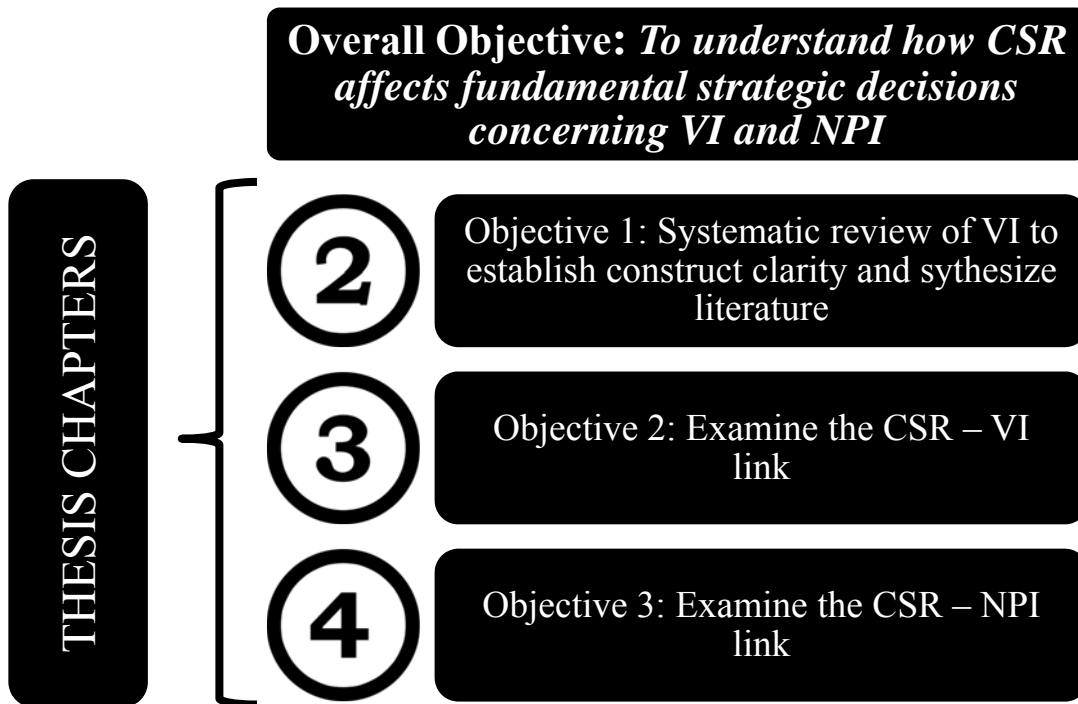


Figure 1-2 Thesis Organizing Framework

This thesis aims to bridge important knowledge gaps. On one hand, while CSR is increasingly grounded in organizational protocols and dedicated corporate functions -often times, with reporting lines into the very senior executives who also decide upon and outline the corporate strategy (Baumann-Pauly, Wickert, Spence, & Scherer, 2013)-, the extent and the mechanisms by which CSR engagement informs other competitively-oriented strategic decisions, has only been partially addressed (Aguinis & Glavas, 2012).

On the other hand, whereas most of the empirical research on the strategic implications of CSR has examined its effect on financial performance (e.g., Orlitzky, Schmidt, & Rynes, 2003; Wang, Dou, & Jia, 2016), the examination of CSR as an antecedent of firm boundary decisions is still in its infancy (Panwar et al., 2016). Furthermore, the present work enriches the theory of the firm by assessing the differential impact of CSR on firm scope. After all, a comprehensive theory of the firm that addresses why firms exist and what determines their scope (Hölmstrom & Tirole, 1989), should appropriately integrate their social responsibilities in a world that increasingly demands more responsible and sustainable corporate behavior.

1.1 Thesis outline and organizing framework

The present thesis is made up of three core studies (chapters 2 ,3, and 4), appended with this introduction (chapter 1) and conclusion (chapter 5) chapter. Thus, the thesis comprises 5 chapters.

Chapter 2 provides a systematic literature review of the scholarly work on VI within the broader management field. Whereas recent scholarly efforts have already synthesized the *acquis* of NPI and related innovation knowledge (e.g., Ahuja, Lampert, & Tandon, 2008; Anderson, Potočnik, & Zhou, 2014; Crossan & Apaydin, 2010; Damanpour, 1991), it has not been the case for VI research. Before analyzing how CSR affects VI, I thus offer a review of the literature on VI

that aims to both clarify prevalent conceptual ambiguities in extant research, as well as to substantiate that the integration of CSR in the analysis of vertical boundaries is both novel and evidence-based (Fink, 2014).

Subsequent to reviewing the VI literature, chapter 3 analyzes how CSR engagement affects VI decisions. In so doing, I draw on two competing theoretical perspectives, namely, relational governance (RG) (e.g., Husted, 1994, 2007; Jones, 1995) and transaction cost economics (TCE) (e.g., Heide, Wathne, & Rokkan, 2007; Short, Toffel, & Hugill, 2016). The two offer conflicting explanations about the link between CSR and VI. Amidst this theoretical dilemma, empirical evidence is missing. Therefore, the second research objective is to reconcile such dilemma by empirically examining whether and through what mechanisms CSR affects the level of VI.

Chapter 4 examines the link between CSR and NPI. In this study, I take a step further and consider CSR as a multidimensional concept that bundles multiple dimensions and related activities together (Hawn & Ioannou, 2016). Specifically, I define CSR as encompassing both informal activities concerning the firm's discretionary engagement in the social and environmental domain, as well as formal activities that originate from compliance-oriented corporate governance activities. I term them *informal CSR* and *formal CSR* respectively. Whereas the extant literature has explored how CSR may affect product innovation broadly, we still have not developed a fuller understanding of how specific CSR dimensions (i.e., informal and formal CSR) may affect the rate of NPI. Chapter 4 thus aims to fill this gap by theorizing and empirically examining whether and through which mechanisms CSR affects the rate of NPI.

Table 1-1 presents the methodological approach and the set of methods employed in each of the three core studies that make up this research.

Chapter	Objective	Methodology	Methods
2	Construct clarity around VI and literature synthesis	Qualitative systematic literature review	Content analysis
3	CSR-VI link	Quantitative	Panel data regression <ul style="list-style-type: none"> • <i>Ordinary least squares</i>
4	CSR- NPI link	Quantitative	Panel data regression <ul style="list-style-type: none"> • <i>Negative binomial regression</i>

Table 1-1 Methodology and Methods Employed

Chapter 2: Vertical Integration in Management Research - An Integrative Review

2.1 Synopsis

This chapter takes stock of the vertical integration (VI) literature in management guided by the following research questions: (i) what are the dominant disciplinary, methodological, and contextual orientations of VI research? (ii) what are the major theoretical lenses that underpin VI research? (iii) how has VI been defined in the literature? (iv) what are the major emerging themes in the literature and what have been the main findings? Results help in synthesizing the literature that thus far has grown in disparate directions.

The review reveals three key insights. First, VI research has strong roots in strategic management and has been most typically subjected to quantitative inquiry. Furthermore, it shows a developed market focus. Second, the literature tends to coalesce around two main categories rooted in the two most popular theoretical approaches deployed for the study of VI, namely, transactional cost economics and the resource based view. Third, in terms of themes, the analysis unraveled that the literature has considered VI a means to: (i) substitute and/or complement relational contracts; (ii) cope with environmental dynamism; (iii) develop organizational capabilities that would support a firm's competitive advantage; and (iv) enact intra-firm coordination. Each of these themes have been deemed to be underpinned by a specific VI definition, and to focus on certain contexts or units of analysis (i.e., dyadic relationships, individuals, intra-firm relationships).

The chapter concludes highlighting emerging and future research directions.

2.2 Introduction

Vertical integration (VI), pertaining to a firm's undertaking of the various activities that make up a value chain, is a foundational concept within the theory of the firm, and thus received substantial attention among management scholars (Brahm & Tarzizán, 2016; Williamson, 2000). While research on VI dates back to the late 1930's with the work of Ronald Coase, it still continues. Just since the turn of the century, 551 articles have been published in management journals that are subscribed in the Web of Science™ database. Similarly, citation counts between 2000 and November 2017 stand at 16,233¹. Academic interest in VI has been steadily growing.

Such a steadfast interest has manifested in VI research being found in multiple disciplines, as well as theoretical traditions. VI literature can be situated within several disciplinary domains such as strategy, marketing, international business, and corporate finance (Grant, 2006). Furthermore, VI research spans through a myriad of organizational issues; including inter-firm relationships, such as buyer-supplier relationships (e.g., Espino-Rodríguez & Padrón-Robaina, 2006; Kedia & Mukherjee, 2009; Lahiri, 2016); decisions upon how to organize human capital at the micro or individual level (e.g., Hatch & Dyer, 2004; Lepak & Snell, 1999); as well as how to effect coordination among different firm's units to achieve organizational success (e.g., de Vries, Hollenbeck, Davison, Walter, & van der Vegt, 2016; Joseph & Ocasio, 2012; Wu, 2015). The manifold research approaches have thus led to not only to a conceptual ambiguity in the field, but also to a bewildering array of empirical findings and theoretical claims.

¹ Figures as of 27 November 2017. These exclude other document types (e.g., non-academic publications, books, book chapters, etc.), as well as publications in other scientific disciplines.

Given the divergence in conceptualization, operationalization, and empirical execution of VI research, a coherent body of literature has not yet emerged. Moreover, due to the lack of construct clarity, scholars may be limited in their ability to more effectively draw on the work of others to re-evaluate extant theory and further strengthen the conceptual foundations of the field (Suddaby, 2010). It is within this backdrop, that this chapter takes stock of the literature guided by the following research questions: (i) what are the boundaries of the research field, that is, the dominant disciplinary, methodological, and contextual orientations of VI research? (ii) what are the major theoretical lenses that underpin VI research? (iii) how has VI been defined in the literature? (iv) what are the major emerging themes in the literature and what have been the main findings? Results shall help in synthesizing the literature that thus far has grown in disparate directions.

This systematic review reveals three key insights. First, VI research has strong roots in strategic management and has been most typically subjected to quantitative inquiry. Furthermore, literature shows a developed market focus. The latter two insights relate to ways in which VI is defined, and to the major phenomena to which it is applied (i.e., themes). As far as definitions are concerned, the literature tends to coalesce around two main categories, rooted in the two most popular theoretical approaches deployed for the study of VI, namely, transactional cost economics (TCE) and the resource based view (RBV). In terms of themes, the analysis showed that the literature has considered VI a means to: (i) substitute and/or complement relational contracts; (ii) cope with environmental dynamism; (iii) develop organizational capabilities that would support a firm's competitive advantage; and (iv) enact intra-firm coordination. Each of these themes have been deemed to be underpinned by a specific VI definition, as well as to focus on certain contexts or units of analysis (i.e., inter-firm relationships, individuals, and intra-firm relationships).

The present review ultimately provides an organizing framework that connects the different elements of the VI field. Starting off the theoretical underpinnings of VI research, I derive the construct definitions most commonly used in the field. Around these major definitional categories, I proceed to classify the literature by identifying major themes that, in turn, help in identifying gaps for future research. In sum, this effort not only intends to clarify the ambiguity about VI that emanates from a multiplicity of research approaches that characterize the extant literature, but also aims to guide future inquiry so that VI knowledge may cumulate more systematically.

The rest of the chapter proceeds as follows. First, I describe the methodology employed to conduct the literature review. Second, I situate the field in terms of its disciplinary, methodological, and contextual orientation. Third, I identify conceptual divergence in VI research and key themes to organize the literature. Fourth, I pinpoint emerging research directions and put forth suggestions for future research. Finally, I discuss my findings and conclude.

2.3 Method for Literature Review

The present review is conducted by selecting relevant literature in the field in a reproducible manner such that minimizes partiality, and synthesizing results in a qualitative fashion (Fink, 2014). The protocol followed for the present work has been modelled on similar reviews published in leading management journals (e.g., Aguinis & Glavas, 2012; Micelotta, Lounsbury, & Greenwood, 2017; Raisch & Birkinshaw, 2008; Zott et al., 2011). The methodology entails three main stages -sampling, coding, and analysis -, which are described below.

2.3.1 Sampling

I minimize the subjectivity in article selection by relying on a pre-defined selection algorithm. In order to capture the breadth of the field, I draw from the Web of Science™ database, a leading source of scholarly research data. Web of Science Social Sciences Citation Index

constitutes one of the most comprehensive repositories of peer-reviewed journals in social sciences. The feature of citation counts allows triage of a large pool of articles based on an objective measure of influence².

The search was run using “*vertical* integrat**” as the overarching search algorithm; document type ‘article’ and ‘review’ (but not book review); and language ‘English’. The algorithm includes the family of stemmed words (e.g.: vertical integration, vertically integrated, vertically integrate, vertically integrated) that were used as the selection criteria for the topic in papers titles, keywords, and abstracts. Search was restricted to the subject areas of ‘business’ and ‘management’; yet unrestricted in terms of years and management journals. Results cover all research complying with the former criteria published as of 10 May 2017.

In building the sample, a grouping strategy similar to Crossan and Apaydin (2010) was deployed. A citation based selection criterion was applied to ensure that the review included the most influential and high quality papers of the field (Saha, Saint, & Christakis, 2003). I define and operationalize “high-impact publications” as those papers that have at least 5 citations per year (using 2015 as the base year), relying on Web of Science™ Social Sciences Citation Index. Considering that citation-based selection discriminates against recent publications, a second group of papers for the period 2015-2017³ which were published in the top 40 Financial Times Research Rank journals⁴ were retained, regardless of their citation count. This criterion assumes that Financial Times’ listed journals would only publish high-quality research, an assumption which is consistent with previous systematic reviews (Crossan & Apaydin, 2010).

² See <http://wokinfo.com/> for more information. Accessed 17 January 2018.

³ Until 10 May 2017.

⁴ 40 Financial Times Research Rank journals list is available online (<http://www.ft.com/cms/s/2/3405a512-5cbb-11e1-8f1f-00144feabdc0.html#axzz4FF18UWA1>, accessed 30 November 2017)

Table 2-1 shows that the search strategy yielded 114 total results. After going through the abstracts and introduction sections of each of the 114 articles, four articles were excluded because VI was not their main focus. Final sample thus yielded 110 relevant articles. The sample covers a majority of papers where VI was declared as the dependent variable or outcome of interest (65 articles, 59 percent of sample). In addition, the search algorithm captured studies that while VI continued to be the focus, the outcome of interest was the economic and non-economic⁵ performance implications of VI decisions (33 articles, 30 percent of sample). Finally, a third group of articles had the synthesis of VI-related knowledge as its main concern (12 articles; 11 percent of sample).

Total Results Found	1283
1st round*	317
2nd round**	139
2nd round (Management <i>only</i>) ***	114

Table 2-1 Search Results, Web of Science

* For search parameters TOPIC: (vertical* integrat*); Timespan=All years.

**First round excluded all papers before 2015 that had less than average 2 citations per year

***Second round excluded all papers before 2015 that had less than average 5 citations per year

****Final sample excluded all remainder Economics journals to focus on *Management* publications

It is worth noting the latter category of articles (i.e., “synthesis”), has approached VI-related literature using a different scope of analysis than that which is attempted here. Articles in the “synthesis” category, either review more general organizational boundaries literature (e.g., Poppo & Zenger, 1998; Santos & Eisenhardt, 2005), focus on specific perspectives -such as

⁵ Examples of outcomes pertaining to non-economic performance include: cycle time, technical or technological performance, defect density, inventory levels and stock out rate, level of trust, as well as level of conflict.

TCE (e.g., Jacobides & Winter, 2012; Wathne & Heide, 2000; Williamson, 1991b), or the RBV (e.g., Espino-Rodríguez & Padrón-Robaina, 2006)-; or concentrate on specific VI-related phenomena – e.g., acquisitions and alliances (Villalonga & McGahan, 2005), or global outsourcing and offshoring (Kedia & Mukherjee, 2009; Lahiri, 2016)-.

2.3.2 Coding

Content analysis was used for conducting this review. Content analysis aims at reducing data and facilitates analysis of a large quantum of text (Krippendorff, 2004). Coding was done using a formalized and inductively derived codebook. To ensure plausibility and reliability, I conducted two rounds of coding, the second involving an independent researcher. Differences were used as opportunities for either expanding or clarifying the codebook. In a third round of analysis, over a consensual codebook, within-theme and between-theme comparisons were employed to identify and elaborate themes (e.g., Eisenhardt, 1989).

2.3.3 Analysis

Pattern matching and explanation building were used at the basis of content analysis. Pattern matching consisted of gross matches and mismatches between each paper and the discrimination criteria. Explanation building, in turn, entailed comparing the findings from different studies on an iterative basis (Yin, 2014).

2.4 Disciplinary, Methodological, and Contextual Orientation of VI Research

2.4.1 Disciplines Converging in the Study of VI

To determine the disciplinary orientation of the field, I classified each publication within a specific disciplinary domain using website content analysis (See Appendix A – Index of Publications). Overall, most influential papers on VI are published in 24 leading management publications and seven disciplinary domains (general management, organizational behavior,

organizational theory, strategic management, marketing, finance, and international business), manifesting the interdisciplinary nature of the field (Figure 2-1, see Appendix A for abbreviations).

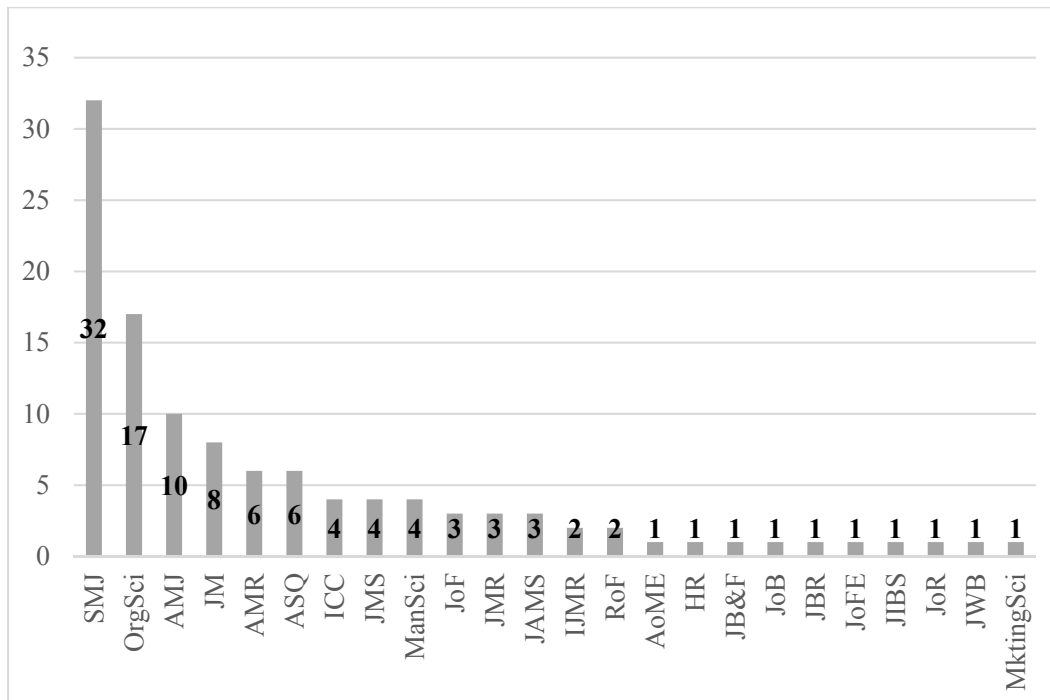


Figure 2-1 Articles per Publication

Despite the multiplicity of disciplines converging on the study of VI, the bulk of the research accumulates under strategic management (64 percent), followed by marketing (14 percent), and organization theory (11 percent) respectively. The largest number of highly-cited articles (n=32) were published in *Strategic Management Journal*, comprising 29 percent of the in-sample articles.

2.4.2 Methodological Orientation

Concerning the research methods applied to the study of VI, the field is dominated by empirical papers (both quantitative and qualitative) (n=72; 65 percent)⁶. Within the empirical

⁶ 25 percent of the sample papers were categorized as conceptual work (n=27), whereas the remainder 10 percent were classified as review pieces (n=11).

category, correlational designs, and particularly regression analysis, are the most commonly used (n=45; 57 percent). It can be concluded that VI has been typically subjected to quantitative inquiry.

2.4.3 Contextual Coverage and Units of Analysis

Regarding geographic settings, the largest portion of studies (57 percent) have been conducted in the United States and Canada, followed by a group of “global” studies (18 percent) that surveyed multinational companies. The third largest group of studies (12 percent) have been conducted in Western European countries. Therefore, much like the broader management literature, VI research has maintained a developed country focus (Nicholls-Nixon & Castilla, 2011).

In terms of the range of economic sectors that served as contexts where leading research has been conducted, the distribution is far less concentrated. Over 25 different participating industries have been identified in the results. In fact, the largest portion of studies have been categorized as cross industries studies (17 percent, 19 out of 110). The second largest group makes up to 7 percent of in-sample studies (8 out of 110). Therein researchers have examined VI issues in the automotive industry.

Sample analysis also indicates that the convergence of multiple perspectives in the field have led to the application of the VI construct to three different units of analysis: (1) interorganizational relationships (n=76); (2) intraorganizational relationships (n=22); and (3) micro-level relationships (n=12). I describe these below.

2.4.3.1 *Inter-organizational Relationships*

Within this category, studies focus on a dyad, or a couple of firms as their unit of analysis. These studies are concerned with supplier-buyer relationships (e.g., Mesquita, Anand, & Brush, 2008; Wathne & Heide, 2000), the emergence of partnerships and strategic alliances (e.g., Das &

Teng, 2000; Gulati & Singh, 1998), and foreign markets entry decisions (e.g., through wholly owned operations, joint ventures, or other) (e.g., Brouthers & Brouthers, 2003; Ekeledo & Sivakumar, 1998).

2.4.3.2 *Intra-organizational Relationships*

This group comprises studies that examine organizational structures and the relationships among the different units or links of the value chain inside the firm, including production, marketing, and the provision of after-sales service (e.g., de Vries, Hollenbeck, Davison, Walter, & van der Vegt, 2016; Joseph & Ocasio, 2012; Wu, 2015).

2.4.3.3 *Micro-Level Relationships*

This category analyzes the firm's decision upon how to organize human capital (e.g., internal development / employees, contracting, alliance, etc.) at the individual level (e.g., Hatch & Dyer, 2004; Lepak & Snell, 1999; Mayer & Nickerson, 2005).

2.5 Theoretical Underpinnings of VI

Along the systematic review process, twenty different theoretical perspectives were identified. In most cases, these theories were not used in the conceptual framework of the in-sample articles in a stand-alone basis, but in combination with others. Appendix B provides a definition of each, their seminal references, added to the in-sample frequency and applications from the results.

Data showed that TCE (n=15), followed by RBV⁷ (n=12), and the combination of TCE with RBV (n=11) – that is, studies that have analyzed the claims of both theories- have been the

⁷ I refer to the resource based view as to the umbrella of related ideas including competence, capabilities, dynamic capabilities, the knowledge based view, and evolutionary economics (Carter & Hodgson, 2006; Mahoney & Qian, 2013).

predominant lenses applied to the study of VI. Altogether (n=38) they account for 35 percent of the total sample. However, when considering TCE or RBV in combination with other theories, this sub-sample yields 89 articles, representing 81 percent of the total sample.

The primacy of TCE is explained by the fact that VI has been the foundational problem for this theoretical tradition (Williamson, 2000). TCE research dates to the work of Ronald Coase in the early twentieth century. *The Nature of the Firm* (1937) is considered a seminal piece both for the development of TCE, and the theory of the firm (Holmstrom & Tirole, 1989). Coase's main purpose was to explain why economic activity was organized within firms (Coase, 1937, 1972). Coase argued that “the main reason why it is profitable to establish a firm would seem to be that there is a cost of using the price mechanism” (Coase, 1937: 390). Such costs pertaining to market transactions were later referred to as ‘transaction costs’ (Madhok, 2002).

From a Coasean perspective, the firm was seen akin to a long-term employment contract through which an authority relationship is established (Knudsen, 1995). A resource owner would grant an entrepreneur authority to decide what tasks the resource ought to perform, giving the firm certain flexibility to adapt to unforeseen events (Coase, 1937). Relatedly, the concept of VI, was associated to the idea of a firm taking over or growing along a value chain. To grow along the chain or ‘vertically’ implied undertaking a higher number of the value-adding activities that combined towards the provision of an end-product or service (Porter, 1985). Thus, VI referred to the vertically-linked activities that were performed under a single firm.

Oliver Williamson (1975, 1985), building upon Coasean economics, formally proposed transaction cost economics (TCE) theory, becoming one of the mainstream frameworks to study VI. As earlier mentioned, the original focus of TCE was to tackle the VI question. The latter involved determining when would partners rely on either market relationships, or authority-based

mechanisms (i.e., 'hierarchies' or firms) to carry out a value-adding activity (Williamson, 1975, 1985).

TCE considers the firm as a governance structure at the level of each activity or transaction (Ghoshal & Moran, 1996). It identifies the various dimensions -such as the frequency of interaction between partners, or the amount of uncertainty about an input and its related activities-, along which transactions differ from one another (Williamson, 2000). Notably, Williamson emphasized the transactional risks related to specific assets or investments, which may be vulnerable to expropriation by an opportunistic partner (Williamson, 1985). TCE further explicates that transaction costs arise from agents' bounded rationality (Foss & Weber, 2016; Williamson, 1975), that is, from their limited capacity to identify qualified exchange partners, establish prices, and write contracts that could anticipate all contingencies and sources of potential future conflict (Williamson, 1991a). Hence, economic exchange would typically generate transaction costs (Williamson, 1996).

Overall, in terms of the VI decision, the basic argument emanating from TCE is that the greater the frequency of interaction between partners, the greater the uncertainty, the more specific the assets deployed in the relationship, and the more opportunistic the parties, the higher the transaction costs will be, such that would lead firms to vertically integrate. Otherwise, firms would tend to outsource their activities (Jacobides & Hitt, 2005). From this standpoint, VI constitutes an authority-based governance mechanism that helps in mitigating high-levels of risk of deception among partners (Williamson, Winter, & Coase, 1991).

TCE-based VI research became increasingly popular in the late 1970s and 1980's among management scholars, as the corporate world faced pressures for down-scoping and refocusing to cope with deregulation, accelerated technological change, and increasing global competition

(Bethel & Liebeskind, 1993; Teece, 1992). Fundamental changes in the economic environment led to a significant decrease in transaction costs (e.g., the rise of information technology reduced ‘small-numbers’ bargaining, as well as measurement problems conducive to suppliers’ opportunistic behavior), and thus the relative decrease of the advantages of vertically integrated firms (Bucheli, Mahoney, & Vaaler, 2010). Accordingly, contemporaneous empirical studies suggested that VI would reduce firm value (e.g., Rumelt, 1974).

In the early 1980’s, David Teece would further formalize these findings into a theory of corporate diversification⁸ extending Williamson’s TCE framework. Teece contended that for a firm to efficiently engage in VI, economies of integration were not sufficient, but rather those based on the common and recurrent use of resources, and particularly, of proprietary know-how (Teece, 1980, 1982). Teece’s theoretical work built upon Edith Penrose’s theory developed in the 1950’s. Penrose then focused on the distinctive ways by which firms can manage their resources and capabilities to build up competitive advantages that would result in superior performance (Penrose, 1955; 1959). Management scholars would later refer to this body of knowledge as the RBV (Rugman & Verbeke, 2002).

In terms of the VI decision, the RBV proposed that when proprietary know-how applied across multiple links of the value chain, firms would increase their level of VI (Jacobides & Hitt, 2005). Conversely, when capabilities or knowledge create an advantage for particular segments of a value chain, firms would tend to specialize and outsource (Espino-Rodríguez & Padrón-Robaina,

⁸ Following Penrose (1959), Teece (1980) conceptualized diversification as a form of VI.

2006). This way, RBV developed as another important and popular approach for the study of VI alongside with TCE through today (Lahiri, 2016).

Third after RBV, social exchange theory (SET, n=11), emerged from the sample as another popular theoretical lens deployed in VI studies. This perspective laid in the fields of sociology (e.g., Granovetter, 1985; Powell, 1990), as well as law (Macneil, 1978; 1980). However, it has gained traction among management VI researchers since the 1990's, and continues to be popular to this date (e.g., Argyres & Mostafa, 2016; Heide & John, 1992).

SET emphasizes the individual behavior of actors in interaction with one another, and posits that economic relationships are informed by subjective perceptions rather than objective cost-benefit analyses (Cropanzano & Mitchell, 2005). From this perspective, a general prediction concerning VI decisions is that higher levels of trust -generated as a result of personal relations that arise in the course of economic exchange-, create a sense of duty or obligation such that mitigates the associated hazards of using markets. Moreover, if trust is high, transactions may even occur on an informal basis (Chiles & McMackin, 1996). Upon the whole, trust reduces the need to establish authority relationships within a vertically integrated firm to carry out effective exchanges.

SET, however, has not been typically used on a standalone basis, but in combination with either TCE (6 articles) or RBV theories (4 articles). SET core tenets actually combine very well with those of TCE and RBV. On the one hand, when used along TCE, studies typically focus on the role of repeated social interaction and trust in reducing hazards inherent to market exchange (e.g., Gulati & Nickerson, 2008; Joshi & Stump, 1999; Wathne, Biong, & Heide, 2001). This strand of research is typically referred to as the 'relational governance' (RG) perspective. Economic exchange is assumed to be socially mediated and overlaid with strong expectations of trust and abstention from opportunism (Zaheer & Venkatraman, 1995). On the other hand, when

SET is deployed along with RBV, emphasis is on the qualities of exchange partners (e.g., level of know-how) and that of their interaction with one another (e.g., Hoetker, 2005; Mentzer, Min, & Zacharia, 2000; Mohr & Spekman, 1994).

Figure 2-2 summarizes the evolution of the theoretical orientation of VI research.

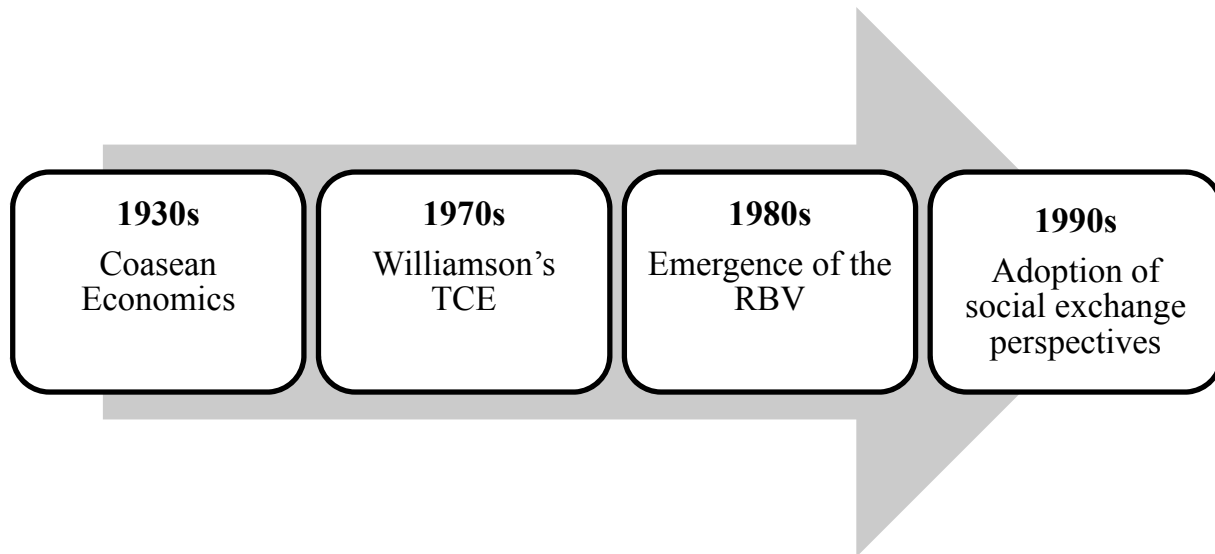


Figure 2-2 Evolution of Theoretical Orientation of VI Research

2.6 Conceptual Divergence in the VI Literature

The account of the evolution of the theoretical orientation of the field showed that management VI research features two primary intellectual influences: TCE and RBV. The deployed inductive coding strategy also showed that VI definitions employed by in-sample articles likewise coalesce around two main categories: (i) VI as a ‘Make-and-or-Buy (MAOB) Decision’, and (ii) VI as an ‘Architecture’. These categories reflect the relative adoption of the TCE or the RBV framework among VI researchers. Hence, VI definitions are underpinned by different theories of the firm, although TCE and RBV may offer complementary rather than substitute explanations of the VI phenomenon (Williamson, 1999). In fact, a number of studies included in

the sample have combined the two theoretical lenses to build their conceptual frameworks (e.g., Argyres & Zenger, 2012; Kapoor & Lee, 2013; Sako, Chondrakis, & Vaaler, 2016). Still, these two broad categories allow for a useful classification of the literature.

The herein proposed definitional categories that emerged from the data have been deemed to diverge not only in terms of the underlying theories of the firm -and the corresponding rationale for VI-, but also in terms of how the firm and the value chain are conceptualized. Out of 110 in-sample papers, 62 percent (n=68) define VI as a MAOB decision; whereas in the remainder 38 percent VI is defined as an architecture (n=42). This distribution replicates across management disciplines, as per Table 2-2. I describe each definition in detail below.

Definition	Finance	International Business	Marketing	Organization Theory	Strategic Management	Total
MAOB Decision	6	4	11	6	42	68
Vertical Architecture	1	1	5	6	28	42
Grand Total	7	5	16	12	70	110

Table 2-2 VI Definitions per Management Discipline (Number of Articles)

2.6.1 VI as a MAOB decision

This definition is fundamentally underpinned by TCE and characterizes the value chain as discrete, separable into individual transactions (Ghoshal & Moran, 1996). In addition, the firm is conceptualized as an adaptive institution, made up of contractual relationships among rational and opportunistic agents, emerging in response to uncertainty (Knudsen, 1995).

MAOB studies refer to VI as a discrete decision of whether to internalize, externally source, or jointly produce an activity or component along the value chain. Markets, ‘hybrids’ (e.g. alliances or joint ventures), and hierarchies represent substitute ways of organizing specific transactions (Williamson, 1991a). While categories may co-exist (e.g., plural sourcing, where firms make *and* buy), these situations are typically treated as a distinct, discrete governance choices (Heide, 2003). The rationale for VI rests on economizing on transaction costs, such that activities featuring a higher risk of deception among partners should be internalized (Jacobides & Hitt, 2005).

2.6.2 VI as an ‘Architecture’

This definition considers the value chain along a *continuum*, breaking with the contrast between the firm and the market (Zenger & Hesterly, 1997). Unlike MAOB studies, the firm is understood as a complex network of interdependent rather than separable transactions, that is, as an ‘architecture’ (Araujo, Dubois, & Gadde, 2003). Moreover, firm behavior is assumed to be underpinned by a path-dependent process of accumulation of resources and capabilities (Nelson & Winter, 1982).

The rationale for VI is chiefly provided by the RBV and it entails internalizing those activities that can better draw from the firm’s wealth of knowledge and resources (Grant, 1996). By the same token, outsourcing entails some form of external contracting that aims to acquire lacking know-how, needed to support firm competitiveness (Espino-Rodríguez & Padrón-Robaina, 2006).

2.7 Major Themes in VI Research

The systematic review further revealed that the concept of VI has been employed mainly in trying to address the following four phenomena: (i) how VI can substitute and/or complement

of relational contracts (n=29); (ii) how to cope with environmental dynamism (n=23); (iii) the development of organizational capabilities that would support a firm's competitive advantage (n=32); and (iv) how to effect intra-firm coordination (n=14)⁹. Moreover, each of these themes have been deemed to be underpinned by a specific VI definition. In addition, the analysis identified that each theme focuses on certain units of analysis (i.e., dyadic relationships, individuals, intra-firm relationships).

In particular, I find that in the first two themes predominates a conceptualization of VI as a MAOB decision. For the first theme (i), 83 percent of the articles employ the MAOB definition. Similarly, in the second theme (ii), 67 percent of the study use the MAOB definition. In these themes (i and ii), the research focus is on dyadic or inter-firm relationships. Regarding the third theme (iii), which encompasses the largest group of papers, the frequency distribution of the definitional categories is more even, although slightly biased towards the VI as 'architecture' definition (56 percent). Here, research has focused on more than one unit of analysis: while a largest group of studies concentrates of dyadic relationships (28 articles), a second group examines VI issues at the micro or individual level (4 articles). Finally, in the fourth theme (iv), the definition of VI as 'architecture' is the most prevalent (67 percent). The fundamental unit of analysis in this theme is intra-firm relationships.

Emerging themes and units of analysis, together with theoretical underpinnings and definitions, gather now all the input elements to map out the VI research field. Figure 2-3 summarizes the organizing framework. The forthcoming sub-sections shall be devoted to

⁹ The themes capture 98 out of 110 in-sample papers. The remainder 12 papers have been coded as "synthesis" as these are review pieces.

describing themes in detail and integrating the various findings of the literature around these major categories.

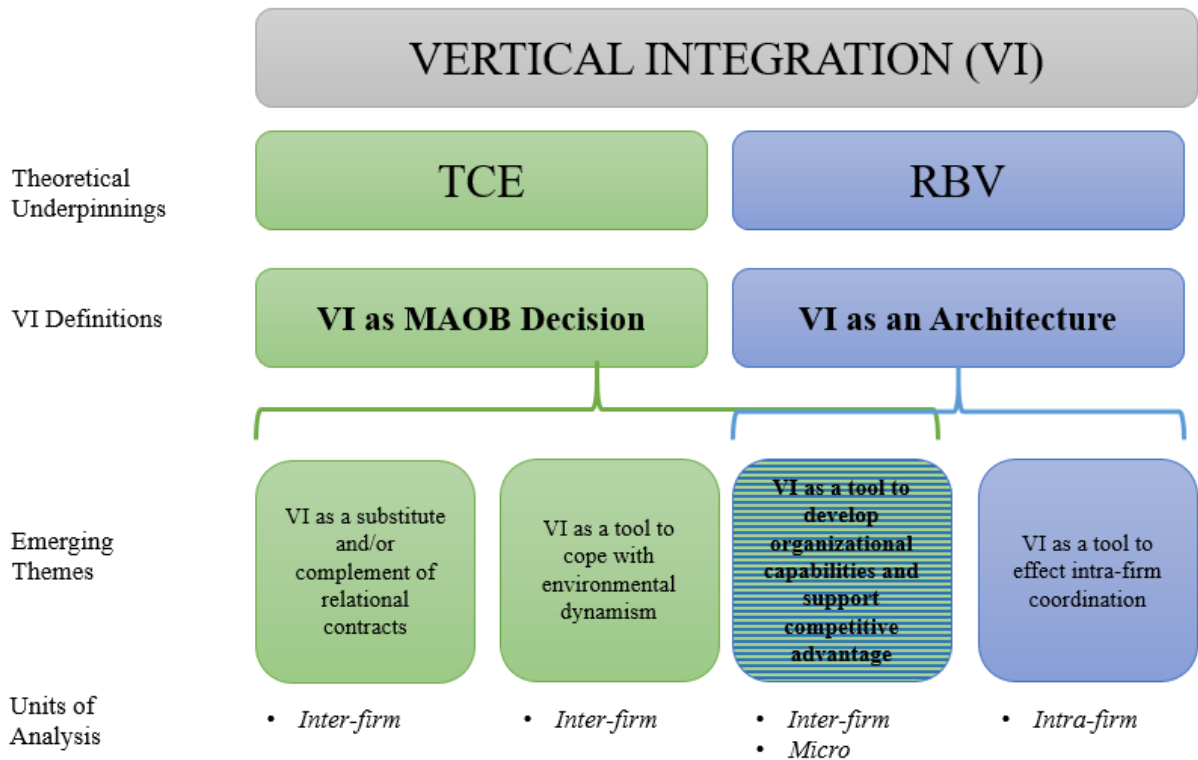


Figure 2-3 VI Organizing Framework

2.7.1 VI as a Substitute and/or Complement of Relational Contracts

The research focus of this theme are inter-firm relationships and how dyadic economic exchange may be supported or governed by social norms. In particular, relational contracts (Macneil, 1978; 1980) constitute governance forms where partners engage in “behavioral routines that facilitate the development of informal self-enforcing safeguards in the relationship” (Sarkar, Aulakh, & Madhok, 2009: 587), leading to collaborative exchange.

Proponents of VI as a substitute of relational contracts borrow from SET and argue that social norms play a significant role in structuring market exchange. By including relational variables (primarily trust), these studies aim to demonstrate that a combined model of governance choice shows higher explanatory power compared to traditional TCE models that focus on transaction characteristics (Argyres & Liebeskind, 1999; Zaheer & Venkatraman, 1995). Moreover, it is contended that while TCE typically treats each transaction as discrete (Gulati, 1995), repeated interaction between partners can breed commitment, coordination, and trust, which, in turn, reduce market hazards that would otherwise call for VI (e.g., Bensaou & Anderson, 1999; Gulati & Nickerson, 2008; Jap & Ganesan, 2000; Mohr & Spekman, 1994; Morris, Farrell, & Reed, 2016; Starkey, Barnatt, & Tempest, 2000). Collaborative inter-firm arrangements would be thus viable even when specific investments might be exposed in the relationship (e.g., Dass, Kale, & Nanda, 2015; Dyer, 1996b, 1997; Heide & John, 1992; Joshi & Stump, 1999; Kale & Shahrur, 2007; Larson, 1992; Madhok, 2002; Strieborny & Kukenova, 2016).

On the other hand, a second sub-group of articles under this theme offers a more nuanced view of relational contracts, as complements of VI. Authors argue that, often times firms engage in plural strategies, that is, simultaneous use market contracting and VI for the same activity or basic transaction (Allen & Phillips, 2000; Heide, 2003; Sako et al., 2016). The combination or co-existence of governance forms can help firms address different needs. In this regard, findings suggest that VI or hybrid agreements are better suited to support the transfer of complex knowledge, whereas outsourcing arrangements are better suited to gather market intelligence and quickly adapt to changing needs (Bradach, 1997; Wuyts, Stremersch, & Franses, 2004).

2.7.1.1 Summary

This theme offers a theoretical debate on the prospects of relational governance as a substitute for VI. More recent studies highlight that partnering on the sole basis of relational contracts may require substantial time and effort to maintain a high level of cooperation and forestall deception among partners (e.g., Ahmadjian & Lincoln, 2001; Barthelemy, 2003; Mentzer, Min, & Zacharia, 2000). Moreover, interpersonal relationships may not offer enough buffer against price and product competition (Wathne et al., 2001). Therefore, firms would typically use a combination of contractual safeguards (e.g., monitoring, incentives, selection) and relational mechanisms (e.g., socialization) to manage opportunism hazards (Mesquita & Brush, 2008; Wathne & Heide, 2000).

2.7.2 VI as a Tool to Cope with Environmental Dynamism

Technological discontinuities which come to generate new industry cycles have been a source of environmental dynamism that has been extensively addressed in relation to the vertical boundaries of the firm. As a general trend, innovations in information technology and performance measurement in the late twentieth century and early 2000s, as they reduced information processing costs and task complexity, have been conducive to enable higher specialization (i.e., lower VI) and more inter-firm exchange in the global economy (e.g., Achrol, 1997; Argyres, 1999; Zenger & Hesterly, 1997).

Yet again, technology disruptions typically create both new firms and industries (Baldwin, 2008; Jacobides, 2005). At inception, the growth opportunities of a new technology are uncertain (Folta, 1998). In an era of fast-paced technical change, the obsolescence of the technological core of a vertically integrated firm can compromise its survival (Afuah, 2001; Balakrishnan & Wernerfelt, 1986; Mitchell & Singh, 1996). Some scholars argue that at higher levels of

uncertainty, higher levels of commitment to a specific technology with VI might be less desirable (e.g., Claussen, Kretschmer, & Stieglitz, 2015; Folta, 1998; Sutcliffe & Zaheer, 1998). Others contend, however, that VI may outperform specialization. They argue that VI may help firms to innovate over multiple cycles of technological innovation due to accumulated investments in integrative capabilities (e.g., Buvik & John, 2000; Gulati, Lawrence, & Puranam, 2005; Helfat & Campo-Rembado, 2016; Hoetker, 2005).

Another source of environmental dynamism considered in relation to VI has been the level of country risk in the context of foreign market entry decisions. Firms tend to prefer to outsource vis-a-vis VI when faced with economic and political uncertainties in new geographic markets (Aulakh & Kotabe, 1997). However, these factors seem to be more relevant for manufacturing firms due their higher investment intensity in physical assets; whereas for service providers, the capacity to trust local partners appears to be a greater challenge (Brouthers & Brouthers, 2003). Research suggests that, for services firms, wholly owned operations (i.e., VI) or hybrid governance (i.e., alliances or joint ventures) might be better suited to cope with behavioural uncertainty compared to outsourcing, especially during the early years of foreign market experience (Ekeledo & Sivakumar, 1998).

2.7.2.1 Summary

This strand of research examines how VI can be a strategic tool to fare with the opportunities and challenges created by the external environment firms face (e.g., new technologies, foreign operations). While moderate levels of environmental dynamism might be compatible with specialization (vis-à-vis VI), firms subject to higher levels of environmental dynamism -concerning, for instance, behavioral uncertainty, informational asymmetry, or regulatory shocks-, would show enhanced performance when vertically integrated due to better

access to information, internal control mechanisms, and advantages related to scale (Gartenberg & Pierce, 2017; Kim & Davis, 2016; Stroebel, 2016; Yiu, Lu, Bruton, & Hoskisson, 2007).

2.7.3 VI as a Tool to Develop Organizational Capabilities and Support Competitive Advantage

This largest group of papers considers VI in terms of its potential to create and sustain competitive advantages by acquiring advantageous resource positions; particularly, specific knowledge (Araujo et al., 2003; Nickerson & Zenger, 2004). Within this theme, the largest sub-group of studies concentrates on inter-firm relationships, whereas a second sub-group examines VI issues at the micro or individual level. I describe these in detail below.

2.7.3.1 Inter-firm Relationships

Studies within this sub-group conclude that shared knowledge across products and services produced by the firm would drive higher levels of VI (e.g., Ahern & Harford, 2014; Argyres, 1996; Grant, 1996; Helfat & Raubitschek, 2000). Firms that contract out know-how, in turn, tend to have less commitment to product or service-specific assets (Dyer, 1996a; Robertson & Gatignon, 1998). Whereas the latter group of firms has been considered more likely to have successful outsourcing experiences, at the same time, these firms face higher technological uncertainty, and are prone to compete in lower growth product/service categories (e.g., Christensen, Verlinden, & Westerman, 2002; Kalnins, 2017; Rothaermel & Deeds, 2004).

Performance advantages (economic and non-economic) of VI have been deemed to be higher when tasks are ill-structured (e.g., because they draw from tacit knowledge) or complex. Conversely, outsourcing would be more advantageous when activities are well structured or simple (Macher, 2006). Notwithstanding the complexity of the activity in question, findings reveal that to outsource successfully, firms may need develop integration capabilities to assimilate knowledge

inside and outside the firm and cope with suppliers' dissimilar know-how, as well as with unpredictable product-level interdependencies (e.g., Brusoni, Prencipe, & Pavitt, 2001; Hobday, Davies, & Prencipe, 2005; Lorenzoni & Lipparini, 1999). In general, knowledge and resources complementarities (both within the firm and with exchange partners), are argued to be at the root of performance disparity of VI decisions (e.g., Argyres & Zenger, 2012; Leiblein, Reuer, & Dalsace, 2002).

2.7.3.2 *Micro-level Relationships*

The second sub-group of micro-level studies have addressed related questions concerning how to organize individual knowledge workers. Here, VI implies transferring the ownership of a productive team (Williamson, 1971). Findings suggest that whereas using employees (i.e., VI) vis-à-vis contractors (i.e., outsourcing) affects the internal development of firm capabilities, such choice does not necessarily impact profitability (Mayer & Nickerson, 2005). Hatch and Dyer (2004) find that firms that are superior at acquiring human capital may enjoy sustained learning and cost advantages. In general, firms would realize greater benefits by outsourcing generic work; while relying upon employees for strategic tasks that draw on proprietary know-how (Lepak & Snell, 1999). These results highlight the importance of retaining and motivating valuable human capital to avoid potential knowledge spinoffs to the competition (Argyres & Mostafa, 2016; Capron & Chatain, 2008).

2.7.3.3 *Summary*

By and large, researchers acknowledge that while hierarchies can more quickly create and transfer knowledge within the firm, outsourcing might be still needed to a certain extent to remain viable in modern, fast-paced business environments (e.g., Arora & Merges, 2004; Lahiri, 2016; Lampel, Lant, & Shamsie, 2000). Studies have found grounds for partial or quasi-integration, both

at the firm and individual level. Provided an appropriate incentive design is in place, collaborative inter-firm exchange (*vis-à-vis* VI) may enable a better matching of firm capabilities with market needs, promote joint innovation with partners, and enhance focal firm's capabilities by means of tapping into partners' specific capabilities (e.g., Chi, 1994; Combs & Ketchen, 1999; Gulati & Singh, 1998; Jacobides & Billinger, 2006; Kapoor & Lee, 2013; Mesquita & Lazzarini, 2008; Vakili, 2016).

2.7.4 VI as a Tool to Effect Intra-Firm Coordination

Research within this theme has been conducted focusing on intra-firm relationships as the unit of analysis. Herein, VI has been considered as a tool to achieve coordination across value-adding activities and functions by aligning incentives and reducing information asymmetries (e.g., Ingene & Parry, 1995; Iyer & Villas-Boas, 2003; Zhou & Wan, 2017).

Among this group of studies, team composition has been proposed as an influential moderator of the relationship between VI and firm coordination. Recent research highlights the role of generalist team members who are acquainted with the multiple functions, and can facilitate the coordination of the overall system. However, a balance between specialist and generalist members should be struck, since a broad focus of the latter may distract organizational attention from specialized, yet high-impact activities (de Vries et al., 2016).

In addition, VI has been considered as a tool to coordinate and leverage employees' knowledge. Findings suggest that hierarchies would strengthen a firm's capability of communicating specific knowledge and enable the provision of high-value products (Wu, 2015). However, vertically integrated firms can realize higher performance benefits provided their members may adapt the configuration of their social capital to changing resource needs. In this regard, an important caveat identified in the literature is that vertically integrated structures may

reinforce relational and cognitive lock-in as employees brace internal vis-à-vis external ties. The latter, in turn, might hurt long-term firm performance (Maurer & Ebers, 2006).

2.7.4.1 Summary

Within this theme, the focal problem of achieving coordination across business activities and functions is seen as comparable to that achieving coordination among firms (Gittell & Weiss, 2004). In this context, it is of interest to determine whether an integrated organizational structure (i.e., VI) may impose a trade-off between coordination and adaptability to changing business environments (Furst, Leimbach, & Prigge, 2017). In general, performance advantages of VI are considered to be greater when synergies and vertical relatedness among units increase (Fan & Lang, 2000; Harrigan, 1985). Recent studies find grounds for partial or quasi-integration. Temporal coupling of specialized units could create organizational architectures that are both differentiated and integrated, providing more enabling conditions for adaptive change (Boumgarden, Nickerson, & Zenger, 2012; Joseph & Ocasio, 2012).

2.8 Emerging and Future Research Directions

Recent studies, as well as the above discussion of review results, have suggested a general trend towards vertical de-integration in more recent decades (Bucheli et al., 2010). The vertically integrated firm has been gradually replaced by network-like value chains, consisting of multiple specialized firms tied together in cooperative exchange relationships around the globe (Kedia & Mukherjee, 2009). The complexity of vertical boundaries has intensified in recent years stimulated by increased competitive pressures, the velocity of technological change, and the dispersion of knowledge across different organizations and geographic markets; explaining the popularity of global outsourcing and offshoring practices (Lahiri, 2016).

Economic advantages of global outsourcing have been deemed to be significant, making these practices widespread (Alcacer & Oxley, 2014). Nevertheless, added to economic performance, corporate social responsibility (CSR) – that is, firms’ observable actions that consider a broad set of stakeholders’ expectations, as well as environmental, social, and corporate governance performance (Aguinis & Glavas, 2012; Wood, 1991)- has become increasingly important to the point of granting companies ‘license-to-operate’(Howard & Grenville, Nash, & Coglianesse, 2008).

In this regard, among the most recent publications in the sample, I identified an emerging strand of research within the second major theme (i.e., ‘VI as a tool to cope with environmental dynamism’) that introduces a new source of complexity, different from previously examined technical or competitive shifts in the operating context firms face. Specifically, two studies investigate the role of institutional pressures (either normative or regulatory) upon firms to justify their decisions and actions for sourcing, production, and distribution to stakeholders (Parmigiani, Klassen, & Russo, 2011). I discuss these in detail below.

First, a publication by Kim and Davis (2016), examines the question of what makes a firm capable to vouch for its value chain. In the context of a recently enacted regulation where firms are required to report on whether their products contain “conflict minerals”, they found that geographically diversified firms, with large and dispersed value chains were less likely to disclose their products as ‘conflict-free’. Moreover, supplier complexity (i.e., the combination of large size and low concentration of the supplier base) reduced the visibility of a firm’s value chain. Authors claim that widespread outsourcing may have impaired firms’ capacity to remain accountable for the practices that yield its products.

Second, Gartenberg and Pierce (2017) have recently studied the role of a specific dimension of CSR -i.e., corporate governance-, and its influence over the effectiveness of VI. Authors argue that, during the latest subprime crisis in the United States (2008-2009), vertically integrated banks with better corporate governance practices showed better loan performance since they had adequate incentives to avoid overaggressive lending and fraud.

This emerging line of inquiry underscores that, as production moves to locations where regulatory institutions may be weak or even absent (e.g., developing countries), a firm's engagement with CSR may have significant implications for vertical boundary-related decisions. Specifically, the advent of CSR may nuance formerly predicted relationships or even predict VI in ways that are not yet examined. For instance, socially responsible firms might want to take greater control over previously outsourced elements that reside in developing markets.

Additionally, these insights resonate with some of the earlier findings of this review, pertaining to VI research strong developed market focus. Whereas empirical evidence is yet missing, I acknowledge these issues have received partial treatment in the TCE literature. Williamson (1985) suggested that we should observe more VI in developing countries where rule of law and enforcement are relatively more deficient, granted that weaker institutions would increase the likelihood of more incomplete contracts.

Furthermore, the above identified emerging research directions hold promise in terms of new theoretical lenses, aside from TCE and RBV, starting to gravitate to the study of VI. In particular, organizational institutionalism might offer important insights on firms' behavior in light of their needs to signal their social fitness and gain legitimacy before stakeholders (Greenwood, Oliver, Suddaby, & Sahlin, 2008). While extant literature has surveyed the influence of a number sources of complexity or dynamism on the VI decision, most common operationalization has

circumscribed the analysis of the external environment to the material or economic domain (Suddaby, Foster, & Quinn Tank, 2010). By adopting an organizational institutionalism lens, future research may help broaden the conceptualization and operationalization of the external environment so that it can better reflect the complexity of the strategy construct by incorporating more layers or dimensions (e.g., social, regulatory, environmental, etc.). Moreover, the empirical examination of how CSR affects VI, may provide a finer-grained understanding on how elements of the broader institutional environment become elaborated inside the firm (Suddaby, Elsbach, Greenwood, Meyer, & Zilber, 2010).

In sum, promising avenues for future VI research would include: (i) a broadening of focus to encompass emerging countries with lower levels of institutional development; (ii) an in-depth investigation of the relationship between CSR and VI; (iii) the adoption of organizational institutionalism lenses to the study of shifting vertical boundaries.

2.9 Discussion and Conclusion

The study of VI has drawn upon multiple management disciplinary domains and theoretical traditions, developing in a fragmented way. The present work attempted a transparent review method followed by meaningful synthesis of VI research. Despite efforts to rigorously synthesize the literature, I acknowledge that the scope of this review is limited to a specific sample of this broad body of literature. Nevertheless, I deliberately chose to limit sources to peer-reviewed journals and to a citation criterion since this can be considered validated knowledge and likely to have the highest impact in the field (Crossan & Apaydin, 2010).

The review was structured around four research questions that intended to gather the main input elements to map out the research field. Namely: (i) the dominant disciplinary, methodological, and contextual orientations in the field; (ii) the major theoretical lenses that

underpin VI research; (iii) the VI definitions across the literature; and (iv) the major emerging themes and findings.

As far as disciplinary and methodological orientations concern, the VI field has shown strong roots in the strategic management discipline, which arguably follows from its origins in Economics with the work of Ronald Coase. Moreover, VI has been chiefly subject to quantitative inquiry, with correlational designs as the most popular method of choice. These insights resonate with extant research on the development of strategic management, suggesting that this discipline paradigmatically adopted the style and the language of economics (i.e., econometrics) (Hambrick & Chen, 2008).

In relation to VI research contextual orientation, results present a developed market focus. In addition, regarding units of analysis, results indicate that VI issues have been studied at three different levels: (i) how firms interface with other independent firms (inter-firm relationships), (ii) how different units within the same firm interface with one another (intra-firm relationships), and (iii) how firms deal with individual human resources (micro-level relationships).

In terms of theoretical orientation, TCE has been the dominant framework applied to the study of VI, followed by RBV. The relative adoption of these paradigms among VI researchers have been argued to underpin a conceptual divergence in the field. This review offered a novel typology of VI definitions being employed across the literature. While I do not claim mutual exclusivity between the two proposed categories (i.e., ‘VI as an MAOB decision’ and ‘VI as an architecture’), I remain confident on the usefulness of these definitions in paving the way towards construct clarity and more cumulative management VI research.

The analysis further revealed that the received literature revolves around four major themes. These themes are interconnecting as they show that managers are faced with an assorted

menu of 'tools' to organize relationships along value chains which would have important implications for firm performance and competitiveness. VI constitutes one such tool in that strategic toolbox. If firms integrate the wrong activities, they may grow bloated and inefficient. At the same time, if they outsource core activities that heavily draw from their wealth of know-how, firms may lose the very sources of their competitive advantage.

Finally, the review allowed to derive important knowledge gaps and point out promising avenues of future research. Notably, in the context of modern global value chains, as socially and environmentally concerned stakeholders exert pressure on firms to remain accountable over elements along the value adding process, VI decisions may be predicted by non-economic factors, such as CSR, that have thus far been only partially considered. As suggested, the integration of CSR with VI research may offer good prospects for the continued vibrancy of the field.

Chapter 3: Corporate Social Responsibility and Vertical Integration

3.1 Synopsis

The present chapter takes up one of the main research gaps identified on chapter 2 concerning the relationship between VI and CSR. In specific, this chapter examines whether and how firms CSR commitments affect the level of VI. Two competing hypotheses are entertained. Relational governance (RG) theory predicts that CSR would function as a relational contract enhancing a firm's trustworthiness and, in turn, reducing the need for VI. Transaction cost economics (TCE), in contrast, predicts that CSR would increase transaction costs pertaining to vertical coordination and monitoring, leading to higher VI. Controlling for endogeneity, panel data results show that higher CSR performance is associated with higher levels of VI. Results are thus consistent with a TCE logic. Moreover, they hold with more force under high buyer's asset specificity and geographic diversification that further increase costs of suppliers' monitoring and, in turn, of outsourcing. Findings suggest that high CSR performers would face growing outsourcing costs, increasing the attractiveness of VI to keep supply chain operations under control.

3.2 Introduction

Outsourcing can help firms to operate in an increasingly competitive global market place (Holcomb & Hitt, 2007). Many studies have concluded that vertically disintegrated firms (those that typically outsource their activities) can reap significant economic gains from improvements in the bottom line as production shifts to more cost-efficient vendors and locations; while also benefitting from the knowledge of their suppliers worldwide (e.g., Alcacer & Oxley, 2014; Contractor et al., 2010; Gereffi & Korzeniewicz, 1994; Gereffi et al., 2005).

However, firms not only face pressures to be economically efficient, but also to remain socially responsible (Bansal, 2005; Dauvergne & Lister, 2012). Global firms are required to justify their decisions and actions for sourcing, production and distribution to external stakeholders, to ultimately remain accountable for all upstream and downstream activities (Parmigiani et al., 2011; Scherer, Palazzo, & Seidl, 2013). Moreover, while firms slice their value chains into smaller pieces through outsourcing, their risk of negative reputational spillovers associated with potential third-party misconduct may increase (Short et al., 2016). The latter, in turn, may threaten the success of their CSR engagement (Kim & Davis, 2016).

Take for example the recent case of Ferrero, a global player in the confectionery industry. In September 2014, in order to advance their goal of achieving an ambitious CSR target -i.e., 100 per cent sustainability in the raw materials supply by 2020-, Ferrero acquired the Turkish group Oltan, a supply leader of one of Ferrero's main ingredients, hazelnuts. While Turkish firms like Oltan were known for growing quality hazelnuts, they operated in a context fraught with child labor issues that could potentially negatively impact Ferrero and jeopardize their CSR strategy (Kittilaksanawong & Curcuraci, 2017). While anecdotal evidence suggests that CSR considerations may influence a firm's decision to vertically integrate or not, this link has not been empirically examined. The fundamental goal of this chapter is to shed light on this question.

I consider CSR as firms' voluntary engagement in the environmental and social domain (Vogel 2006), but also include corporate governance to develop a tripartite conceptualization wherein CSR is operationalized in terms of environmental, social and governance (ESG) performance. This conceptualization is consistent with previous empirical studies involving CSR (Cheng, Ioannou, & Serafeim, 2014; Hillman & Keim, 2001).

Extant literature offers conflicting guidance with regards to how CSR may affect a firm's VI decisions. On one hand, the RG perspective suggests that CSR may work as a relational contract (Macneil, 1978, 1980), enhancing a firm's trustworthiness with third parties (i.e., potential suppliers), and reducing the need of costly governance solutions such as VI (e.g., Husted, 1994, 2007; Jones, 1995). From this standpoint, two conditions, when they work collectively with CSR, would drive lower levels of VI: (1) buyer's specific assets, which would function as a pledge for business continuity and trust with suppliers (Poppo, Zhou, & Ryu, 2008); and (2) geographic diversification. As firms expand geographically and enter new supply relationships without a history of prior interactions, CSR performance would help firms signalling trustworthiness and attracting suppliers willing to partner up with reputable customers (Pedersen & Andersen, 2006).

On the other hand, TCE suggests that CSR may increase transaction costs pertaining to the vertical coordination and monitoring of the value chain, leading to higher levels of VI instead (Heide et al., 2007; Short et al., 2016). Furthermore, buyers' asset specificity and geographic diversification would further increase the costs of outsourcing given that, under these two conditions, more coordination and monitoring costs are incurred (Acquier, Valiorgue, & Daudigeos, 2017).

The objective of this study is to reconcile this theoretical dilemma. To do so, I use competing hypotheses as my research framework. Specifically, I test competing hypotheses that draw from RG and TCE theoretical perspectives.

My empirical strategy exploits a rich panel dataset collected from Mergent Online, Global Compustat, Thompson Reuters ASSET4 and the D-SOCIAL-KLD Scores dataset by Carroll, Primo, and Richter (2016). After controlling for endogeneity, I find that higher levels of CSR

performance are associated to higher levels of VI. Furthermore, I find this relationship is stronger under higher levels of buyer's asset specificity and geographic diversification.

A key contribution of the present study is that it addresses ongoing debates on the scope of corporate responsibility under conditions of globalization (Doh, Husted, Matten, & Santoro, 2010; Scherer, Palazzo, & Baumann, 2006). As the growth of civil society puts pressure on corporate actors to act upon an enlarged understanding of responsibility, encompassing all value chain members, CSR engagement emerges as a form of corporate self-regulation that has significant implications for the vertical scope of the firm (Scherer & Palazzo, 2011; Dauvergne & Lister, 2013). Results suggest that high CSR performers would face growing costs from outsourcing, increasing the attractiveness of VI to keep supply chain operations under control.

More broadly, findings about a positive relationship between CSR and VI have important implications for the management of value chains that deserve further research. Notably, the fact that to be able to trade with high CSR performance buyers, suppliers must credibly signal their CSR engagements at low costs to prevent buyers pursue VI. If suppliers do not show high levels of CSR performance, or if they do but are not able to signal their CSR commitments, they would be constrained to partner with buyers that do not prioritize CSR. As a result, different coalitions of buyers and suppliers in terms of their CSR engagement may emerge. Buyers with higher CSR performance would seek to trade with high CSR performance suppliers, whereas buyers with low CSR standards would be more willing to trade with external partners regardless of their CSR performance, most likely favoring low cost suppliers.

The remainder of the chapter is organized as follows. Following this introduction, I first introduce the relevant conceptual background. Second, I develop the research framework using

competing hypotheses. Third, I present the empirical strategy and analyses. After presenting the results, I discuss the implications of my findings for theory, practice and future research.

3.3 Conceptual Background

The VI decision essentially pertains to whether a firm should undertake activities along its value chain in-house or should outsource them, procuring activities from the open market (Williamson, 1975). These “make-or-buy” decisions define the vertical scope of a firm (White & Lui, 2005). As firms undertake a larger number of vertically-linked activities in-house, it is said that they increase the level of VI, or their vertical scope. This way, consistent with the typology introduced on Chapter 2, the present study conceptualizes VI as a ‘MAOB decision’.

Outsourcing - a “buy” decision- is ubiquitous in today's economy and is a common practice in many important industries (Lahiri, 2016). Many global firms at least partly outsource business activities towards addressing competitive priorities of cost, time, innovativeness, quality, and flexibility (Gilley & Rasheed, 2000). Whereas economic advantages of global outsourcing practices are significant (Alcacer & Oxley, 2014), at the same time, the management of social and environmental risks along global value chains has become a strategic necessity as firms seek to align their operations with evolving societal expectations (Porter & Kramer, 2006). This alignment necessitates that firms take responsibility for upstream and downstream activities (Scherer & Palazzo, 2011).

I define CSR as a firm's voluntary engagement in the social and environmental domain (Vogel 2006), but also includes corporate governance, wherein CSR is operationalized in terms of ESG performance. Increasing regulatory demands in the aftermath of corporate scandals and the emergence of socially responsible investing have driven a convergence between corporate governance and CSR (Sparkes & Cowton, 2004). This conceptualization thus acknowledges the

convergence of CSR and corporate governance as a result of evolving societal expectations such that corporations are no longer expected to be mere contributors to the global economy, but are also expected to keep their activities attuned with societal, ethical, legal and communal aspirations (Jamali, Safieddine, & Rabbath, 2008).

Many rationales have been offered as to why firms should or should not pursue CSR (Garriga & Melé, 2004). For example, CSR critics (e.g., Friedman, 1970; Devinney, 2009) argue that CSR is a meaningless proposition and may be detrimental to a firm's interest. CSR proponents, in contrast, present arguments that range from ethical (e.g., Donaldson, 1982; Freeman, 1984) to political (e.g., Bansal, 2005; Campbell, 2007) to instrumental (e.g., McWilliams & Siegel, 2000; Orlitzky et al., 2003; Waddock & Graves, 1997). While debate remains, the instrumental or 'business case' rationale, which focuses on the wide array of benefits that firms could derive from their social engagement, has received substantial scholarly attention as there is a growing interest among practitioners on the consequences of CSR (Panwar, Nybakk, Hansen, & Pinkse, 2017).

In a comprehensive review, Carroll and Shabana (2010), identify four broad categories of benefits that firms can reap from their CSR commitments: (1) cost and risk reduction; (2) strengthened legitimacy and reputation; (3) competitive advantages from stronger relationships and support from key stakeholders; and (4) enhanced financial performance. Whereas most of the empirical research concerning the business case argument has examined the effect of CSR on financial performance, the examination of the strategic implications of CSR for firm's scope decisions is very much in its infancy (McWilliams et al., 2006).

In terms of VI, anecdotal evidence suggests that firms CSR engagement might be a relevant factor in consideration, affecting such strategic decisions. Notwithstanding, such evidence is, at best, mixed, as it lies on both possible sides of the argument concerning the link between CSR and

VI. Namely, some pieces of evidence suggest that CSR might negatively affect VI, whereas other suggest the reverse.

On the one hand, a recent case study on Barilla, one of the most important pasta producers worldwide, concerned by the declining quality of their food products, initiated in 2010 a sustainable farming program that consisted of partnerships with small-holder farmers. This initiative aimed at helping small-holders replacing monoculture with crop rotation by means of supporting their decision-making, and generating widely-accessible guidelines for sustainability-oriented cropping practices. The farming program has been deemed to have improved sustainability of farming practices by establishing clear rules on quality standards of key inputs, generating shared economic, social, as well as ecological benefits for Barilla and their suppliers (Pogutz & Winn, 2016). This way, the latter would offer an example of how CSR engagement might decrease the need of VI, fostering collaboration among value-chain partners.

On the other hand, Taylor Guitars, concerned by the quality and sustainability of their products, decided to acquire an ebony mill in Cameroon in 2012, given that the endangered wood is preferred for guitar fingerboards. The company has since been actively engaged in sustainable ebony harvesting and processing in their wholly-owned mill¹⁰. Similarly, in 2015, IKEA, the Swedish furniture giant, backward vertically integrated into forest land in Romania to secure a long-term access to sustainably managed wood, marking the first time the company manages its own forest operations¹¹. Considering the saliency in the minds of consumers, shareholders, managers and public policy of current debates concerning CSR performance in the context of

¹⁰ <http://articles.latimes.com/2012/jun/07/business/la-fi-taylor-ebony-20120607> (accessed 28 June 2018)

¹¹ <http://www.wsj.com/articles/ikea-gets-deeper-into-the-woods-1438310691> (accessed 28 June 2018)

global value chains (Kim & Davis, 2016), an explicit understanding of whether and how CSR affects VI is a timely inquiry.

In the following section, I propose competing hypotheses to address this inquiry. Competing hypotheses derived from different theories offers a fortuitous situation from a theory testing perspective (Miller & Tsang, 2011). I draw on RG and TCE perspectives to develop the hypotheses that shall be subsequently tested.

3.4 Hypotheses

3.4.1 The RG Perspective

The RG perspective conceptualizes CSR engagement as the voluntary adoption of norms that may limit a firm's opportunistic behavior (Jones, 1995). From this standpoint, CSR would function as a relational governance mechanism (Macneil, 1978; 1980), which refers to the extent to which exchange partners engage in "behavioral routines that facilitate the development of informal self-enforcing safeguards in the relationship" (Sarkar, Aulakh, & Madhok, 2009: 587). Here, economic exchange is understood in a larger context of social interactions that relies on cooperation among partners (Granovetter, 1985). Buyers and suppliers would typically define mutual expectations and make joint plans to deal with future contingencies in the relationship (Mathrani & Mathrani, 2016). Overall, the RG perspective offers compelling explanations of how social interaction can be an effective means to foster interests' alignment, reduce information asymmetries, as well as the incentives for parties to pursue self-serving behavior (Baker, Gibbons, & Murphy, 2002; Poppo et al., 2008).

More specifically, CSR may enable supplier-buyer collaboration via two main mechanisms: (1) shared norms; and (2) the use of network ties. First, as global firms operate in a context of interconnectedness, where their performance depends critically upon their linkages to

other firms (Oliver, 1990), it becomes incumbent upon them to signal their trustworthiness. One particularly powerful signal in this direction is a firm's level of CSR engagement (Husted, 2007). High levels of CSR performance would help firms not only to attract, but also retain suppliers who want to associate with reputable customers (Chen, 2010). As suppliers share professional norms with their buyers, the more likely high-trust cooperation would arise between partners (Husted, 1994). This way, high CSR performance spurs partners' willingness to uphold contracts and even honor informal commitments, enhancing value chain coordination and reducing the incentives to perform activities internally (i.e., VI) (Campbell, 2007).

Second, previous literature suggests that as firms develop their CSR practices, they engage with the firm stakeholders, generating networking opportunities with resource providers which may be of great help towards mitigating emerging conflicts (Aguilera, Filatotchev, & Gospel, 2008). The consolidation of network ties helps firms in conveying an image of legitimacy and fairness in their decisions and procedures (Husted, 1998), building a perception of mutual commitment with partners, which enhances suppliers' willingness to support the firm (Shahzad & Rutherford, 2016). Yet again, the latter increases the incentives to outsource activities.

In sum, the RG perspective argues that in improving their CSR performance, firms develop valuable relational capital that mitigates information-gathering problems and conflicts, and increases trust and collaboration. This would lead to successful inter-organizational exchange, increasing the incentives to outsource vis-à-vis to increase VI. Consistent with this view, I hypothesize:

Hypothesis 1: Higher levels of CSR engagement would negatively affect the level of VI.

Borrowing from the RG literature, two conditions, when working together with CSR, would further decrease the costs of outsourcing vis-à-vis VI: (1) buyer's asset specificity; and (2) geographic diversification.

According to RG theory, buyer's asset specificity – i.e., investments in assets that cannot be profitably deployed for other applications (Williamson, 1985)- may function as a pledge for commitment and business continuity (Poppo et al., 2008). Examples of buyer's-specific assets include investments in suppliers' personnel training, the installation of dedicated equipment, or the set up of relation-specific logistics processes (Joshi & Stump, 1999).

Under higher levels of asset specificity, buying firms' costs of shifting suppliers are higher, such that they will have less incentives to behave opportunistically and can more credibly signal future business to suppliers (Brahm & Tarzijan, 2016). Such expectations of continuity offer suppliers incentives to make reciprocal investments to improve the productivity of the relationship (White & Lui, 2005). From an RG perspective, buyers and suppliers would be willing to make such investments to show their willingness to work together and share risks (Heide & John, 1992). This would lead to trust-based inter-organizational exchange, with increasing incentives to favor market exchanges.

If there is no specificity in the relationship, then the buyer can shift to a different supplier without much penalty which, in turn, would eliminate the credibility of future rewards to the external supplier. In other words, credibility is enhanced when the buyer risks losing value from defection (Williamson, 1983). This interaction may also be rationalized from a different angle: higher incentives for collaboration are most useful when the risk of opportunism is higher, that is, when specificity is present in the transaction. Therefore, when buyer's asset specificity works collectively with CSR, lower levels of VI would be expected.

Second, when firms diversify into multiple geographic markets, they will interact with suppliers that they may not have experienced before (Mitchell & Singh, 1996). In general, as firms enter new markets, they engage in new buyer–supplier relationships which are expected to be characterized by low levels of trust due to the lack of a history of previous interactions (Abdi & Aulakh, 2017). Firms can leverage their CSR engagement to signal trustworthiness to attract local suppliers who want to partner up with socially responsible firms (Su & Tsang, 2015). Additionally, buyer’s high CSR performance can support suppliers’ perceptions of fairness of the exchange (Husted, 1998), which are critical to build up relational quality in complex transactions, particularly those involving new offshore suppliers (Dyer & Singh, 1998; Poppo & Zhou, 2014).

Furthermore, buyers’ CSR performance has been considered an effective safeguard in the context of cross-border exchange, reducing the incentives to undertake activities internally (Husted, 2007). The role of buyers’ CSR performance as a safeguard has been deemed most effective when the supplier can benefit from future co-operation with the buyer, as well as when well-reputed buyers (on the grounds of their high CSR performance), could potentially harm the supplier by communicating non-compliance to other relevant actors, often times through business networks (Pedersen & Andersen, 2006). This way, higher CSR performance and geographic diversification would have a mutually reinforcing, weakening effect on VI. Based on the above discussion, I formulate the following conditional hypotheses:

Hypothesis 2a: The negative effect of CSR on VI will be stronger as buyer’s asset specificity increases

Hypothesis 2b: The negative effect of CSR on VI will be stronger as buyer’s geographic diversification increases

The conceptual model for the RG perspective is summarized on Figure 3-1.

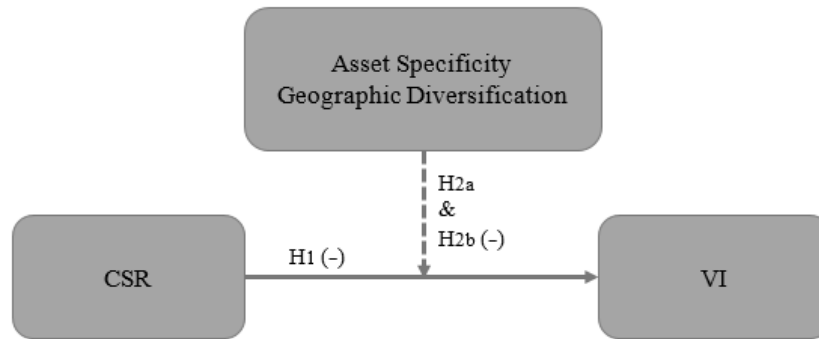


Figure 3-1 The RG Perspective - Conceptual Model

3.4.2 The TCE Perspective

As mentioned in the introduction of this chapter, inasmuch as firms outsource production globally, their legitimate status would be a function not only of their own practices but also of those of their suppliers (Heide, Kumar, & Wathne, 2014). High CSR performing firms, to the extent they value environmental, social, and corporate governance performance, come under pressure to strengthen vertical coordination among suppliers to avoid reputational spillovers as a result of illegal, unethical, or even dangerous behavior at the factory level (Aguilera & Rupp, 2007; Brammer & Pavelin, 2006; Parmigiani et al., 2011). In this context, vertical coordination refers to firms' accountability on how activities are executed and how information between independent firms flows along the supply chain (Buvik & John, 2000).

TCE posits that it is calculation and not trust what, at the end of the day, will determine the extent of cooperation in buyer-supplier relationships (Williamson, 1975, 1985, 1996). From this standpoint, a higher degree of control of suppliers' conduct is considered essential for firms to help them mitigate the risks associated with reputational hazards (Klassen & Vereecke, 2012). Hence, firms would rely on suppliers' monitoring to obtain strategic information about factories'

compliance (Boyd, Spekman, Kamauff, & Werhane, 2007). However, suppliers' conduct may be difficult to control because of information asymmetries (Akerlof, 1970), which may imply that buyers may not trust the suppliers' claims in terms of their CSR standards, resulting in transaction hazards. I thus argue that, if the enforcement of these CSR standards is weak, then monitoring will be needed as a mechanism to economize measurement transaction costs (Barzel, 1982). As a governance strategy, monitoring is here aimed at constraining suppliers' opportunism and mitigating spillover costs by reducing information asymmetries (Short, Toffel, & Hugill, 2016).

Monitoring efforts, nonetheless, may come along with higher transaction costs (Ouchi, 1980). First, improving firms' CSR performance by implementing suppliers' monitoring involves introducing new actors along the supply chain-most frequently, external certification bodies or auditors- (Montiel, Husted, & Christmann, 2012). Incorporating these new actors increases transaction costs, given that firms need to identify reliable partners, craft contracts and enforce compliance mechanisms (Acquier et al., 2017).

Second, monitoring can be perceived as a signal of distrust from the side of suppliers (Heide et al., 2007). The presence of more stringent controls may conflict with suppliers' commitment to self-regulation and reflect buyers' concern that suppliers would work only to boost their own interests. Cooperative exchange may be thus unhinged due to eroded suppliers' perceptions of fairness and trust (Poppo & Zhou, 2014). Moreover, under high monitoring levels, a common reaction of the distrusted party (i.e., supplier) is retaliatory behavior, including non-compliance (Boyd et al., 2007).

In sum, from a TCE perspective, higher levels of CSR performance increase the comparative costs of outsourcing via (1) the incorporation of new actors along the supply chain (i.e., monitors); (2) increasing the likelihood of supplier's retaliatory behavior. Thence, I put forth:

Hypothesis 3: Higher levels of CSR performance would positively affect the level of VI

Again, I examine two conditions that would moderate the relationship between CSR and VI: (1) buyer's asset specificity; (2) geographic diversification.

As suggested above, specific assets typically impose switching costs to buyers: switching vendors tends to be a non-credible threat given that specific assets are worth little outside the supplying relationship (Poppo, Zhou, & Zenger, 2008). Buyer's asset specificity thus exacerbates dependence on the focal supplier (Williamson, 1985). However, in the absence of relational norms, TCE operates under the assumption that suppliers would pursue their self-interest (Artz & Brush, 2000). When there are buyer's specific assets at stake, behavioural uncertainty makes it incumbent to the firm to monitor supplier's potential for opportunistic behavior, such as hold-up (failure to perform) or incompetence (inability to perform), generating additional transaction costs (Grover & Malhotra, 2003). Hence, buyer's asset specificity increases monitoring needs, which would in turn further increase transaction costs of outsourcing, making of VI a more desirable governance choice.

A second factor increasing transaction costs of outsourcing vis-a-vis VI is a firms' exposure to a broader set of geographic markets. Geographically diversified firms face a wider choice of potential transaction partners along with greater uncertainty regarding suppliers' social and environmental capabilities, most valuable for high CSR performing firms (Short et al., 2016). To reduce reputational risks of offshore outsourcing, global firms typically require overseas suppliers to comply with globally recognized standards on environmental sustainability, working conditions, and human rights, which their adherence will be monitored (Montiel et al., 2012).

Buying firms, however, lack embeddedness in the information networks of the host country. Thus, suppliers' monitoring costs increase as the number of host markets that the firm

operates in grows (Acquier et al., 2017; Macher & Richman, 2008). Moreover, as firms expand in the geographical dimension, cultural and institutional distance with exchange partners tends to increase, complicating the understanding of suppliers' behavior and conduct (Contractor et al., 2010). Hence, buyers suffer from the behavioral uncertainty from bringing together partners from disparate socio-cognitive environments, which adds to the uncertainties inherent to a new host country's external environment (Abdi & Aulakh, 2017). In this context, accommodating or overcoming differences requires adjustment by the partners to achieve the objectives of the contract, causing one or both partners to incur greater costs in terms of time and effort (White & Lui, 2005). As transaction costs pertaining to enforcing compliance rise, incentives to perform activities internally increase. I thus argue that the positive link between CSR and VI will be stronger for more geographically diversified firms.

Based on the above discussion, I formulate the following conditional hypotheses:

Hypothesis 4a: The positive effect of CSR on VI will be stronger as buyer's asset specificity increases

Hypothesis 4b: The positive effect of CSR on VI will be stronger as buyer's geographic diversification increases

The conceptual model for the TCE perspective is summarized on Figure 3-2.

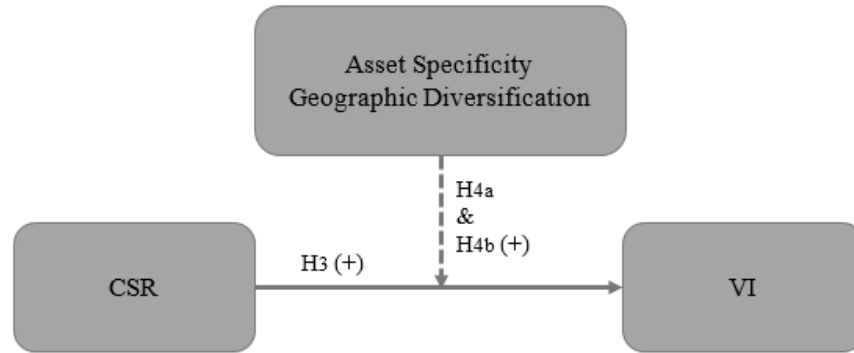


Figure 3-2 The TCE Perspective - Conceptual Model

3.5 Methods

3.5.1 Approach, Data and Sample

The goal of this study is to determine how CSR performance affects the level of VI. I conduct the analyses on a longitudinal, as well as in a cross-industry basis since firms most frequently vertically integrate across industries (Fan & Lang, 2000). This approach intends to contribute to a general understanding of vertical boundaries, overcoming the inherent limitations of cross-sectional, case, sector-specific surveys, or field data.

I rely on a panel of global firms listed under the Standard & Poor's 500 index (S&P 500) along the period 2002-2014. The S&P 500 covers the market capitalizations of 500 large multinational companies having common stock listed on the New York Stock Exchange or NASDAQ. I collected data for firms listed under S&P500 as of November 2016. To determine constituent firms, I relied on Mergent Online © database.

Based on the inherent difficulties in quantitatively measuring VI in the financial and media sectors (e.g., Jacobides, 2005; Morris et al., 2016; Mudambi & Venzin, 2010), I restricted the dataset and excluded firms under the finance, insurance, real estate trust, and global media industry groups. In addition, I excluded members of the S&P500 which have been founded after 2002. I

draw from Global Compustat database to measure VI as it provides panel data for a large population of global firms.

My final sample consists of an unbalanced panel of 285 S&P500 companies along the period 2002-2014, totaling 2881 firm-year observations. The sample includes firm-year pairs from 49 industries, belonging to 19 major industry groups as per Global Industry Classification (GIC) Standard, across 11 countries. Sample distribution across industry groups and countries is described on Tables 3-1 and 3-2, respectively.

Industry Group	Description	Number of Firms
1010	Energy	23
1510	Materials	22
2010	Capital Goods	38
2020	Commercial and Professional Services	3
2030	Transportation	12
2510	Automobiles and Components	8
2520	Consumer Durables and Apparel	14
2530	Consumer Services	6
2550	Retailing	21
3010	Food and Staples Retailing	8
3020	Food, Beverage and Tobacco	18
3030	Household and Personal Products	4
3510	Health Care Equipment and Services	13
3520	Pharmaceuticals, Biotechnology and Life Sciences	23
4510	Software and Services	22
4520	Technology Hardware and Equipment	11
4530	Semiconductors and Semiconductor Equipment	10
5010	Telecommunication Services	5
5510	Utilities	24
GRAND TOTAL		285

Table 3-1 – VI and CSR: Sample Distribution Across Industry Groups

Head Quarters Country	Number of Firms
Bermuda	1
British Virgin Islands	1
Ireland	7
Liberia	1
Netherlands	1
Netherlands Antilles	1
Panama	1
Singapore	1
Switzerland	2
United Kingdom	1
United States	268
GRAND TOTAL	285

Table 3-2 – VI and CSR: Sample Distribution Across Countries

3.5.2 Measures

3.5.2.1 Vertical Integration

There are a host of hybrid quantitative-qualitative methods to measure VI. Hybrid methods are unsuitable for cross-industry research as it is my purpose here. Among the strictly quantitative measurement approaches, the most widely used are the value-added to sales ratio (VA/S) and the input-output connection approach (Fan & Lang, 2000). VA/S has been a common measure (Lajili, Madunic, & Mahoney, 2007) and it aims to reflect that, as firms participate in more activities along the value chain (i.e., increase VI), they increase the amount of value-added¹² (i.e., sales minus purchases) vis-à-vis the share of external purchases.

VA/S scores, however, may be distorted by changes in profitability or by accounting standards concerning tax and depreciation (Hutzschenreuter & Groene, 2009). To calculate the

¹² Following Tucker and Wilder (1977), I measure value added for each firm -year pair as the sum of the following items, which were obtained from Global Compustat: depreciation and amortization, interest expense, labor and related expense, pension and retirement expense, incentive compensation expense, income taxes, net income and rental expense.

VA/S indexes for each company addressing such distortions, I followed the adjustment methodology proposed by Tucker and Wilder (1977):

$$VA/S = VA - (\text{net income} + \text{income taxes}) / \text{Sales} - (\text{net income} + \text{income taxes})$$

3.5.2.2 CSR

To measure CSR, I used a panel dataset with economic, environmental, social, and governance performance (ESG) scores from Thomson Reuters ASSET4. A number of recent studies have adopted ASSET4 ESG dataset to measure firms' CSR performance (e.g., Cheng et al., 2014; Eccles et al., 2014; Hawn & Ioannou, 2016; Ioannou & Serafeim, 2015; Rathert, 2016). Thomson Reuters ASSET4 provides an objective, relevant, auditable, and systematic information tool for investors, who can integrate environmental, social, and corporate governance elements into their investment analysis and decisions. Since 2002, ASSET4 has offered a comprehensive dataset for the assessment of corporate performance within the three CSR pillars: (1) environmental performance; (2) social performance; and (3) corporate governance. Every firm receives a score on each of these pillars every year. Indicatively, I note that for: (1) environmental performance, data would typically include resource (e.g., water or energy) use reduction, emission reduction, and product innovation; (2) for social performance data captures community contributions, health and safety concerns, employees training and development opportunities, human rights engagement, and product responsibility; (3) finally, for corporate governance performance data includes board structure and functions, compensation policy, protection of shareholder rights, vision and strategy, among others¹³.

¹³ Source: Thompson Reuters, ESG Data Fact-sheet. Available online: <https://financial.thomsonreuters.com/content/dam/openweb/documents/pdf/financial/esg-scores-factsheet.pdf>. Accessed 19 February 2018.

For the analysis, I used annual ESG scores from ASSET4 to construct a composite CSR index. Following the convention established by extant CSR literature that has assigned equal importance (i.e., weights) to the three CSR pillars (e.g., Cheng et al., 2014; Hillman & Keim, 2001; Waddock & Graves, 1997; Waldman, Siegel, & Javidan, 2006), I computed CSR as an equally weighted average of the ESG scores of each firm-year pair in the panel database.

3.5.2.3 *Moderating Variables*

Lacking a direct measure of asset specificity (usually obtained through surveys), I relied on secondary data to proxy this construct. Following extant research, I measured asset specificity as the logarithm of the ratio of the book value of a firm's property, plant and equipment to the number of employees (from Global Compustat) (Ziedonis, 2004). Investments in property, plant and equipment are usually difficult to re-deploy and are less likely to be valuable for other firms should the company need to liquidate assets (Berrone, Fosfuri, Gelabert, & Gomez-Mejia, 2013). In addition, a firm's geographic diversification has been measured computing the logarithm number of geographic segments reported per year (from Global Compustat).

3.5.2.4 *Control Variables*

Acknowledging that different industry groups display differences in their levels of capital intensity (Kleindorfer & Wu, 2003), and that industries present differences in their evolutionary stages -with mature industries showing reductions in transaction costs leading to specialization and vertical de-integration (Jacobides and Winter 2005)-, my models include industry fixed effects, grouping firms by GIC industry codes. Consistent with previous research suggesting that vertical scope would be contingent to boundary conditions in the broader political and macroeconomic environment (Peng, 2003), models control for year and country fixed effects as well.

I also controlled for a number of firm-level variables. Previous literature has suggested that larger firms have a greater ability to pursue acquisitions and hence would be more prone to VI (Villalonga & McGahan, 2005). I measure firm size computing the natural logarithm of firm's assets (from Compustat). Additionally, firm's financial slack – measured using account receivables to sales ratio (from Compustat), captures how well a company can meet its short-term financial liabilities, and has been deemed to influence risk-taking behavior (Schilling & Steensma, 2002). Firms concerns on supply shortages may can be mitigated through VI, for which they require financial resources (Balakrishnan & Wernerfelt, 1986). I anticipate that an increase in the receivables to sales ratio, reflects a decrease in the availability of short-term financial resources that, in turn, reduces the likelihood of increasing the level of VI.

Lastly, the dependent variable (i.e., VA/S score) implicitly captures that a firm may be active in many industries that may or may not be vertically integrated. Added, internal organization costs are likely to be higher when there is dissimilarity between the activities whereas, the greater the firm's business diversification, the greater the likelihood of commonalities or economies of scope. The latter have been deemed to lead to increases in the level of VI (Hutzschenreuter & Groene, 2009). I thus control for firm business diversification, using the logarithm of the number of business segments as reported in Global Compustat.

3.5.3 Analysis

Table 3-3 depicts descriptive statistics and pairwise correlations for my measures.

	Mean	SD	VA/S	ESG	AS	rectosales	logassets	logbusseg	loggeoseg
VA/S	0.709	0.255	1						
CSR (ESG)	0.645	0.222	0.1342*	1					
Asset Specificity (AS)	9.285	1.575	0.3819*	0.1295*	1				
Slack (rectosales)	0.155	0.156	-0.0529*	0.0601*	0.0421*	1			
Size (logassets)	9.149	1.345	0.2407*	0.5364*	0.3986*	0.1599*	1		
Business Diversification (logbusseg)	2.126	0.727	-0.0396*	0.1758*	-0.0865*	0.1687*	0.1281*	1	
Geographic Diversification (loggeoseg)	2.147	0.754	0.1045*	0.2604*	0.0309*	0.1366*	0.3585*	0.1733*	1

* n = 2881

* Correlations significant at $p < 0.05$

Table 3-3 VI and CSR: Descriptive Statistics and Correlations

I test hypotheses using panel data regression. The nature of the longitudinal data required to run a series of diagnostic tests. Modified Wald test for fixed effect regression models, identified group-wise heteroskedasticity ($p < 0.001$). However, I rejected the null hypothesis for the Wooldridge (2010) test for autocorrelation in panel data, indicating no evidence of first order auto-correlation. To identify the relationship between CSR and VI, I proceeded in a step-wise fashion using a three-pronged approach towards addressing endogeneity concerns. I describe the empirical strategy in detail below.

3.5.3.1 Baseline Specification

The baseline specification examines the relation between CSR and VI using linear OLS regression. Considering the results of initial diagnostic tests, I conducted the analysis using panel-corrected standard errors¹⁴. Results, robust to heteroskedasticity, are presented on Table 3-4.

<i>Dependent Variable</i> Value Added/ Sales	Model 1	Model 2
	<i>b/se</i>	<i>b/se</i>
CSR	0.0983***	0.0923***
	0.0229	0.0222
Asset Specificity (AS) (log)	0.0236**	0.0182**
	0.0080	0.0075
Slack (Receivables/Sales)	(0.0757)***	(0.0775)***
	0.0222	0.0219
Size (log)	0.0092	0.0119*
	0.0062	0.0062
Geographic Diversification (GEO) (log)	0.0158	0.0153
	0.0102	0.0101
Business Diversification (log)	(0.0026)	(0.0019)
	0.0063	0.0062
CSRxAS (log)		(0.0436)***
		0.0109
CSRxGEO (log)		(0.1565)**
		0.0496
Constant	0.4532***	0.4627***
	0.0980	0.0978
Industry Fixed Effects	Yes	Yes
Country Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
No. of Obs	2881	2881
R-Squared	0.4647	0.4745

*p<0.10, **p<0.05, ***p<0.01

Table 3-4 VI and CSR: Baseline Specification (Panel Corrected Errors)

¹⁴ I used the *xtpcse* command in STATA SE 12.

A first baseline model (Model 1) contains industry, country and year fixed effects, along main effect variables and firm level controls. In a subsequent step (Model 2), I test the interaction effects of CSR and buyer's asset specificity and geographic diversification, using the multiplicative moderation approach (Aiken, West, & Reno, 1991).

Model 1 shows the coefficient CSR is positive and significant ($\beta=0.0983$ $p <0.01$). In addition, model 1 shows that after controlling for industry affiliation, asset specificity positively affects VI ($\beta=0.0236$ ($\beta=1.024$ after taking antilog); $p <0.01$).

Model 2 tests moderation. Intervening predictors have been mean-centered to avoid any non-essential multicollinearity, and to be able to compute meaningful cross-product terms (Cohen & Cohen, 1983). The interaction between buyer's asset specificity and CSR (CSRxAS) is positive and significant ($\beta= -0.0436$, after taking anti-log $\beta=1.045$; $p <0.01$), showing that as asset specificity increases, the positive link between CSR and VI is strengthened. Added, the interaction between buyer's geographic diversification and CSR (CSRxGEO) has been deemed positive and significant ($\beta= -0.1565$, after taking anti-log $\beta=1.1694$; $p <0.05$).

Results show expected signs for financial slack (negative and significant) and firm size (positive and significant, after taking anti-log $\beta=1.0119$). I did not find significant main effects of business diversification, and only marginally significant in the case of geographic diversification. A possible explanation for this is that there is no substantial variance along these dimensions in the representative sample of global S&P 500 firms, characterized by a majority US headquartered firms (i.e., 94% of in-sample firms, as per Table 3-2).

3.5.3.2 Instrumental Variables Specification

Baseline regression analyses may break down under certain conditions and produce biased estimates that may lead to incorrect inference (Hamilton & Nickerson, 2003). A key concern herein

is that my former results may be spurious, if driven by measurement errors or omitted variables bias. The latter pertains to the fact that managers may decide upon CSR based on factors that may be unobservable, and may also affect how vertically integrated or dispersed their value chains are (Bascle, 2008).

I address concerns on potential endogeneity using instrumental variables estimation. To conduct the test, I generated two instruments for CSR. Having more than a single instrument is important towards being able to run a number of diagnostic tests to better assess their validity and relevance. Instrument validity entails the satisfaction of what the literature refers to as the ‘orthogonality condition’, which basically means testing the exogeneity or the uncorrelatedness with the error term of the structural equation. Meanwhile, instrument relevance implies the existence of a strong correlation between the endogenous regressor and the instrument in question (Bascle, 2008). Instrument exogeneity and relevance are pre-requisites for robust inference using instrumental variables estimation (Wooldridge, 2010).

First, I used the D-SOCIAL-KLD series by Carroll et al. (2016)¹⁵ to instrument CSR engagement as a composite index, including its three pillars: environmental, social, and corporate governance performance. These scholars have used item response theory (IRT) to model firms’ CSR activities to improve the most widespread measure of CSR, the KLD Index (Waddock & Graves, 1997). The KLD index is constructed for each firm-year pair as the sum of “strength” indicators across the three CSR pillars (i.e., environmental, social, and corporate governance), subtracting out the sum of “concern” indicators, again across CSR pillars (Carroll et al., 2016). The rationale for using D-SOCIAL-KLD scores as one of my instruments is that they account for

¹⁵ Available online at www.socialscores.org, accessed 19 February 2018.

measurement errors that may bias results, given each firm-year score is estimated as a latent variable using IRT techniques (Schumacker & Lomax, 2010). Second, previous research has shown that CSR performance is determined by industry characteristics (Ioannou & Serafeim, 2012). I generated exogenous variation of CSR at the firm level creating an additional instrument by calculating the average CSR (i.e., ESG score) for each industry-year pair, excluding the contribution of the focal firm.

I used two-stages least squares (2SLS) estimation robust to heteroscedasticity and autocorrelation. Following Bascle (2008), I implemented the analysis specifying a generalized method of moments option that allows for clustering errors at the firm level. This specification is deemed to yield efficient estimates and valid inference (Wooldridge, 2010). Results are presented on Table 3-5.

A first baseline model (Model 3) contains industry, country and year fixed effects, along main effect variables, and firm level controls. In a subsequent step, I introduced moderating variables (Model 4).

I report the results of three post-estimation tests to show that instruments satisfy the conditions of exogeneity (i.e., orthogonality) and relevance. First, the rejection of the null hypothesis of the underidentification test (Kleibergen-Paap LM statistic, robust under heteroskedasticity) indicates that the model is identified for the data. Second, the F-Statistic of Kleibergen-Raap rk Wald is over 134 (Model 3) and over 49 (Model 4), showing instruments are relevant and strong. Finally, the over-identification test (Hansen J Statistic, robust under heteroskedasticity) assesses whether instruments comply with the orthogonality condition. If the p-value is small, this suggest the instruments are not exogenous. For this data, the p-value is large enough ($p= 0.2597$) not to reject the null hypothesis for both Models 3 and 4.

	Model 3		Model 4	
	First Stage	Value Added/ Sales	First Stage	Value Added/ Sales
	b/se	b/se	b/se	b/se
CSR		0.2483**		0.2492**
		0.0719		0.0740
dKLD	0.0513***		0.0512***	
(Instrument 1 for CSR: d_social_score)	0.0033		0.0033	
INDESG	(0.0104)**		(0.1125)**	
(Instrument 2 for CSR: industry mean of CSR)	0.0504		0.0516	
AS (log)	(0.0203)**	0.0295**	(0.0193)*	0.0257**
	0.0073	0.0124	0.0075	0.0118
Slack (Receivables/Sales)	(0.0534)	(0.1178)	(0.0530)	(0.1512)**
	0.0486	0.0742	0.0485	0.0705
Size (log)	0.0396***	(0.0090)	0.0398***	(0.0066)
	0.0062	0.0087	0.0064	0.0087
Geographic Diversification (log)	(0.0062)	0.0178	0.0059	0.0170
	0.0072	0.0147	0.0073	0.0138
Business Diversification (log)	(0.0030)	(0.0069)	(0.0032)	(0.0038)
	0.0071	0.0097	0.0072	0.0100
KLDxAS (log)			(0.0015)	
(Instrument 1 for CSRxAS)			0.0014599	
INDESGxAS (log)			(0.0729)**	
(Instrument 2 for CSRxAS)			0.0313449	
KLDxGEO (log)			0.0011	
(Instrument 1 for CSRxGEO)			0.0026	
INDESGxGEO (log)			(0.1167)**	
(Instrument 2 for CSRxGEO)			0.0533	
CSRxAS (log)				0.0030
				0.0180
CSRxGEO (log)				(0.2745)**
				0.1083
Industry Fixed Effects	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
No. of Obs	2178	2178	2178	2178
(Centered) R-Squared	0.4716	0.0247	0.4755	0.0403
Kleibergen-Raap rk LM statistic		194.347		203.329
(Underidentification test)		(p = 0.0000)		(p = 0.0000)
Kleibergen-Raap rk Wald F statistic		134.004		49.926
(Weak identification test)				
Hansen J statistic		0.609		4.016
(Overidentification test)		(p = 0.4352)		(p = 0.2597)

*p<0.10,**p<0.05, ***p<0.01

*: heteroskedasticity and autocorrelation-robust

Table 3-5 VI and CSR: Instrumental Variables Specification (2SLS)

Model 3 shows that instrumental variables regression produces consistent results with the baseline specification. The coefficient CSR is positive and significant ($\beta=0.2483$ $p < 0.01$). Model 4 tests moderation effects. Here, the main effect of CSR of VI is similar as in Model 3. The corresponding interaction term (CSRxGEO) has been deemed positive and significant ($\beta = -0.2745$, after taking anti-log $\beta=1.3159$; $p < 0.05$), showing that as buyer's geographic dispersion increases, the positive link between CSR and VI is strengthened.

3.5.3.3 Simultaneous Equations Specification

Finally, I complement the analyses using simultaneous equations. Towards treating any remaining endogeneity concerns, this time those resulting from simultaneity bias (i.e., causal effects obtained in both directions), I endogenize both CSR and VI and estimate a system of equations (one for each plausible causal direction). I use three-stage least squares (3SLS) as the estimation method to produce consistent estimates (Wooldridge, 2010)¹⁶. In implementing the analysis, I used the same instruments for CSR as in 3.5.3.2 (i.e., '*Instrumental Variables Specification*'). In addition, I instrumented VI using the average VA/S score for each industry-year pair, excluding the focal firm contribution.

Table 3-6 shows simultaneous equation results, which are presented in a step-wise fashion: Model 5 contains industry, country and year fixed effects, along main effect variables and firm level controls; Model 6 tests for moderation effects.

¹⁶ I used the *reg3* command in STATA SE 12.

	Model 5		Model 6	
	Value Added/ Sales	CSR	Value Added/ Sales	CSR
	b/se	b/se	b/se	b/se
CSR	0.2333***		0.2521***	
	0.0560		0.0547	
Value Added/ Sales		0.2903**		0.4168***
		0.1289		0.1090
dKLD		0.0477***		0.0464***
(Instrument 1 for CSR: d_social_score)		0.0028		0.0028
INDESG		(0.1043)**		(0.1028)**
(Instrument 2 for CSR: industry mean of CSR)		0.0384		0.0372
INDVI	(0.3696)***		(0.3023)***	
(Instrument for VI: industry mean of Value Added/Sales)	0.0653		0.0609	
AS (log)	0.0275***	(0.0272)***	0.0207**	(0.0273)***
	0.0073	0.0065	0.0074	0.0064
Slack (Receivables/Sales)	(0.1177)**	(0.0164)	(0.1414)**	(0.0103)
	0.0538	0.0456	0.0534	0.0470
Size (logassets)	(0.0074)	0.0391***	(0.0076)	0.0382***
	0.0080	0.0050	0.0078	0.0053
Geographic Diversification (log)	0.0174**	0.0005	0.0153**	(0.0037)
	0.0073	0.0062	0.0072	0.0069
Business Diversification (log)	(0.0084)	(0.0007)	(0.0059)	(0.0011)
	0.0075	0.0059	0.0074	0.0062
CSRxAS (log)			(0.0564)***	
			0.0135	
CSRxGEO (log)			(0.1415)***	
			0.0260	
KLDxAS (log)				0.0033***
(Instrument 1 for CSRxAS)				0.0011
INDESGxAS (log)				(0.0544)**
(Instrument 2 for CSRxAS)				0.0239
KLDxGEO (log)				0.0043*
(Instrument 1 for CSRxGEO)				0.0025
INDESGxGEO (log)				(0.1058)**
(Instrument 2 for CSRxGEO)				0.0395
Constant	0.8601***	0.0140	0.8475***	(0.0658)
	0.1004	0.1069	0.0979	0.0970
Industry Fixed Effects	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
No. of Obs	2159	2159	2159	2159
(Centered) R-Squared	0.4642	0.5473	0.4702	0.4955

*p<0.10, **p<0.05, ***p<0.01

Table 3-6 VI and CSR: Simultaneous Equations Specification (3SLS)

Model 5 results are comparable to the instrumental variables specification. Specifically, 3SLS results suggest that higher CSR performance is associated with higher levels of VI, yet also higher levels of VI are associated with higher levels of CSR performance. However, a close inspection of the estimated coefficients shows that CSR performance has a higher economic effect compared to VI¹⁷. Firms that score in the 75th percentile of CSR performance have a level of VI that is 8.81 per cent higher compared to firms scoring in the 25th percentile. This is equal to 35 percent of the standard deviation of VI. Conversely, firms that score in the 75th percentile of VI have a level of CSR performance that is 5.96 per cent higher compared to firms scoring in the 25th percentile. This is equal to 27 percent of the standard deviation of CSR. I present these analyses in the Appendix C.

I also qualified the economic effect of CSR on VI compared to the effect of VI on CSR for the model including moderation effects (Model 6), obtaining similar results: controlling for the effect of VI on CSR, CSR performance has a higher economic effect on VI compared to that of VI on CSR (see Appendix C). In addition, model 6 shows positive and significant moderation effects of buyer's asset specificity and geographic diversification. The interaction between CSR and buyer's asset specificity (CSRxAS) in the first column of Model 6 is positive and significant ($\beta = -0.564$, after taking anti-log $\beta = 0.9452$; $p < 0.01$). Likewise, interaction between CSR and buyer's geographic diversification (CSRxGEO) is positive and significant as well ($\beta = -0.1415$, after taking anti-log $\beta = 0.8681$; $p < 0.01$).

¹⁷ I ran these post-estimation analyses using the *predict* option and *aaplot* for each estimated equation in STATA SE 12.

In sum, after conducting the analyses, having controlled for endogeneity, I do not find support either for Hypothesis 1 (i.e., negative relationship between CSR and VI), nor for Hypotheses 2a and 2b (i.e., negative moderation effect of asset specificity and geographic diversification, respectively). But, I do find **support for Hypothesis 3** that proposed a positive relationship between CSR and VI. Furthermore, **Hypothesis 4a and Hypothesis 4b are supported**. The latter proposed positive moderation effects of asset specificity and geographic diversification, strengthening the positive relationship between CSR and VI. These results are consistent with the larger body of TCE research (David & Han, 2004; Geyskens, Steenkamp, & Kumar, 2006). Hence, **data offer support to the TCE perspective**.

3.5.4 Robustness Checks

I further tested the sensitivity of results to different operationalizations of the CSR construct. Consistent with more recent developments in the CSR literature I have argued that corporate governance has grown increasingly aligned to CSR to be now considered one of its constitutive elements (Kolk & Pinkse, 2010). However, CSR has been traditionally associated with the voluntary integration of social and environmental aspects into corporate activities (Vogel, 2006). I thus ran additional analyses considering the distinct effects of the social and environmental performance pillars, excluding corporate governance.

I first ran instrumental variables regression using the average social and environmental scores for each industry-year pair, excluding the contribution of the focal firm, as my instruments for social and environmental performance respectively. As I conducted the analysis, I failed to reject the null hypothesis ($H_0 =$ instruments are exogenous) for the endogeneity test for the proposed endogenous regressors (social and environmental performance) ($p=0.1389$). I therefore

proceeded by the analysis using panel-corrected OLS regression. Results are reported on Table 3-7.

<i>Dependent Variable</i>	Model 7	Model 8
Value Added/ Sales	<i>b/se</i>	<i>b/se</i>
Social Performance	0.0616***	0.0605***
	0.0214	0.0217
Environmental Performance	0.0173	0.0162
	0.0230	0.0238
Asset Specificity (AS) (log)	0.0238***	0.0191**
	0.0081	0.0076
Slack (Receivables/Sales)	(0.0779)***	(0.0793)***
	0.0225	0.0221
Size (log)	0.0090	0.0116*
	0.0063	0.0063
Geographic Diversification (GEO) (log)	0.0162	0.0147
	0.0102	0.0100
Business Diversification (log)	(0.0024)	(0.0019)
	0.0062	0.0062
SocialxAS (log)		(0.0376)***
		0.0129
SocialxGEO (log)		(0.0979)**
		0.0469
EnvironmentxAS (log)		
EnvironmentxGEO (log)		
Constant	0.4728***	0.6955***
	0.0989	0.0741
Industry Fixed Effects	Yes	Yes
Country Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
No. of Obs	2881	2881
R-Squared	0.465	0.4741

*p<0.10, **p<0.05, ***p<0.01

Table 3-7 Robustness Checks: VI and CSR as Social and Environmental Performance

As shown on models 7 and 8, results are consistent with those of the main models. The effect of social performance on VI is positive and significant ($\beta = -0.0605$; $p < 0.01$). The moderation effects of buyer's asset specificity (SocialxAS; $\beta = -0.0376$, after taking anti-log $\beta = 1.0383$; $p < 0.01$) as well as of buyer's geographic diversification (SocialxGEO; $\beta = -0.0979$, after taking anti-log $\beta = 0.9068$; $p < 0.05$), are also positive and significant. In contrast, environmental performance shows no significant effect in relation to VI. An explanation for a weaker effect of environmental performance is that the latter is largely driven by variation in industries environmental externalities (Brammer & Pavelin, 2006). In fact, when industry fixed effects are removed, the coefficient of environmental performance becomes positive and significant.

3.6 Discussion and Conclusion

I have examined how CSR affects a firm's vertical boundaries. The literature presents a theoretical dilemma that this work aimed to reconcile. This dilemma relates to whether firms with higher levels of CSR tend to integrate more operations inside their boundaries to keep further control of their supply chain, or outsource more activities to take advantage of the additional trust with external suppliers. Results provide evidence that higher CSR performance would expand firm boundaries, as is it associated with higher levels of VI.

Confidence in results relies on an identification strategy attentive to endogeneity concerns. I have proceeded in a step-wise fashion in order to address three main sources of endogeneity: errors-in-variables, omitted variables, and simultaneous causality (Bascle, 2008). The former two were tackled using instrumental variables estimation; whereas the latter concerns were dealt with using a simultaneous equations specification. Despite my efforts and consistent results, I remain cautious about inferring causality.

Following a TCE logic, I argue that my results are underpinned by two main mechanisms that increase the transaction costs of outsourcing vis-à-vis VI. First, transaction costs of market exchange increase because high CSR performers, as they value the social and environmental performance of their suppliers, would engage new actors (i.e., typically certification bodies or auditors) to oversee the activities and processes along the value chain (Boyd et al., 2007; Short et al., 2016). Second, increased levels of suppliers' monitoring worsen value chain performance as they seed distrust in buyer-supplier relationships and build up threats of opportunistic behaviors (Heide et al., 2014), which add up to the costs of monitoring and justify the use of VI. The fact that results hold with more strength as the levels of both buyer's asset specificity and geographic diversification increase give additional support to my conjectures. When market exchange features these characteristics, the costs of suppliers' monitoring would further increase for more socially responsible firms, who are concerned about social and environmental performance along the different links of the value chain.

I believe these findings contribute to the TCE literature. The TCE framework uncovers different adaptation needs or governance forms to support each transaction *given* a set of norms or 'parameters' that are determined at a higher level of analysis (Williamson, 2000). In this study, by incorporating CSR into the analysis of VI variation, I aimed to account for the effect of such 'parameters' -namely, societal pressures and informal norms proxied using CSR- on firm behavior (Husted & Folger, 2004; Oliver, 1991). Results suggest that global outsourcing practices might not be compatible with a firm's higher level of CSR engagement. CSR concerns would increase the comparative costs of market exchange as it becomes imperative to monitor supply chains to forestall reputational spillovers from suppliers' misconduct (Heide et al., 2014; Short et al., 2016). This way, my empirical analyses enrich TCE theory by developing a more explicit understanding

of the link between institutional environments and the institutions of governance (Williamson, 1991, 1996).

In addition, I have considered global firms in their political role added to their economic position in society, as they operate value chains where value creation is organised among legally independent suppliers based in different countries (Acquier et al., 2017). While globalization seems to have severely undermined the sovereignty of the nation-state, leading to the absence of 'hard' international law that would regulate business activities, civil society imposes rising license-to-operate demands that global firms need to act upon (Doh et al., 2010; Scherer et al., 2006). In this context, findings suggest the emergence of CSR engagement as an institution of private governance in a globalized world (Brammer, Jackson, & Matten, 2012; Dauvergne & Lister, 2012). Private governance refers to the ability of private actors such as global firms to self-regulate the processes and outcomes of their operations (Rathert, 2016). This way, I contribute to a more nuanced understanding of the scope of CSR in the global firm context and highlight the role of CSR as a legitimation strategy which is not just critical for a firm's survival and success broadly (Kostova & Zaheer, 1999; Scherer & Palazzo, 2011), but specifically having a bearing upon vertical boundary decisions.

That said, these findings also shed light into important areas of management practice. Undoubtedly, these are days when running global firms is not an easy task. Civil society is increasing the surveillance on corporate behavior to protect social and environmental rights (Dauvergne & Lister, 2013; Vasudeva, 2013). Managers are compelled to rethink organizations as not mere devices for structuring economically efficient transactions, but expected to govern economic activities through a logic that is more overarching than that of the market (Ghoshal & Moran, 1996). Results indicate that high CSR performing firms would tend to increase their level

of VI to mitigate business risk. CSR managers are thus encouraged to pursue their agendas at the highest corporate level, given that a stronger synergy between CSR and corporate strategy would allow firms to be more effective in complying with increasing societal expectations on firms to support human rights, uphold environmental standards, and run their business on an ethical fashion.

Notwithstanding so, there should be some boundary conditions in the relationship between CSR and VI. Even firms with the highest CSR standards will need to outsource some activities. These activities should be those in which the additional costs of undertaking them in-house surpasses the additional benefits accrued to monitoring the CSR performance of suppliers. Hence, outsourced activities will tend to be those in which there are higher costs differentials in favor of third parties (e.g., because of differential in capabilities), those in which it is easier to monitor the suppliers' CSR engagement, and those in which the benefits of monitoring suppliers are lower (e.g., either because the activity is not core to the firm portfolio, or there exists common knowledge that relevant suppliers engage in CSR and such that misconduct risk would be lower).

Finally, I recognize a number of limitations to my work. First, I acknowledge that CSR has been subject to multiple characterizations (Dahlsrud, 2008; Garriga & Melé, 2004). In this chapter, and consistent with important previous work in this area (e.g., Cheng et al., 2014; Hillman & Keim, 2001; Waddock & Graves, 1997) I have used a tripartite CSR conceptualization that considers environmental, social and corporate governance performance. Nevertheless, data did not allow for a more disaggregated operationalization of CSR performance into its component activities (e.g., Hawn & Ioannou, 2016). Follow up studies should help in building up a more itemized understanding of the links between CSR activities and corporate strategies.

Second, another concern pertains to the fact that firms could potentially game ESG (CSR) ratings. Yet, for Thompson Reuters ASSET 4, firm reported data is but one of the sources used to build the ratings. Additional sources that Thompson Reuters utilizes to triangulate information include NGOs, independent news sources, as well as stock exchange filings. Furthermore, the dataset has been validated by previous studies (e.g., Cheng et al., 2014; Hawn & Ioannou, 2016; Ioannou & Serafeim, 2012). Moreover, having instrumentalized our CSR using the D-Social-KLD scores, which by construction are robust to measurement error, I maintain confidence in the data and results.

Third, and as it has been mentioned, I remain cautious about inferring causality from the results. Alternative interpretations cannot be ruled out. For instance, I show that the effect of CSR on VI is larger for more geographically diversified buying firms. This evidence is consistent with the monitoring mechanism associated with the TCE perspective. However, it is open to alternative interpretations. For instance, more geographically diversified firms may have greater levels of integration because it is harder to find local suppliers in certain places, making a centralized integrated function relatively more attractive. More generally, this illustrates the caveat of not using experiments to tease out the effects of interest.

Fourth, in this study I have focused on multinational firms and I have given their CSR strategies a ‘global’, homogenous treatment (Husted & Allen, 2006). In particular, I have not explicitly tackled the relationship between global and local (i.e., country-specific) CSR strategies (Rathert, 2016). Future empirical research may generate more fine-grained understanding of how firms’ response to CSR issues in specific host communities may inform their corporate strategies.

In sum, I submit that the joint analysis of CSR at the firm level and vertical boundaries provides important pieces and motivation for developing a more comprehensive theory of the firm.

Chapter 4: Corporate Social Responsibility and New Product Introductions

4.1 Synopsis

CSR might not only affect exchange relationships along the value chain, but also the very outcomes of that value adding process. Indeed, CSR has been considered a driver of product innovation. However, it is acknowledged that CSR is a multidimensional concept encompassing both informal activities concerning the firm's voluntary engagement in the social and environmental domain, as well as formal aspects pertaining to compliance-oriented corporate governance practices. Whereas extant literature has examined the overall effect of CSR on innovativeness, we still lack an understanding of which CSR elements may affect the rate of new product introductions (NPI) more than others. The present chapter bridges this gap.

Drawing from the knowledge based view, I theorize about how distinct CSR dimensions affect the organizational processes through which knowledge is absorbed and ensues NPI. Different theoretical mechanisms are hypothesized by which informal and formal CSR engagement may be associated with an increase in the rate NPI. I test the conceptual framework exploiting a unique panel dataset collected from corporate press releases, Thompson Reuters ASSET4, Global Compustat, and the OECD World Input-Output databases. I find that the mechanisms by which informal and formal CSR are associated to increases in the rate of NPI differ such that while the former directly affects the rate of NPI, the latter does so conditional to R&D intensity. Additionally, the effect of informal CSR on the rate of NPI is stronger the more the firm relies on internal employees vis-à-vis external contractors. The implication of these findings is that while informal CSR would make a firm more innovative, formal CSR would not render NPI in itself, yet it would keep the firm accountable to secure necessary inputs to innovate.

4.2 Introduction

Innovation is a key driver of firm competitiveness and therefore has been an important subject of scholarly inquiry (Anderson et al., 2014). At the heart of a firm's innovative capabilities, are NPI. NPI represent the potential commercial value of such capabilities and are considered a primary mechanism through which firms adapt to changing business environments, and achieve competitive advantages (Katila & Ahuja, 2002; Nadkarni & Chen, 2014).

Whereas the innovation literature has devoted substantial attention to study the role of firms' market orientation and research and development (R&D) investments in the promotion of NPI (Crossan & Apaydin, 2010), a more recent stream of research has argued that a firm's CSR engagement may also affect the rate of NPI (e.g., Flammer & Kacperczyk, 2016; Martinez-Conesa, Soto-Acosta, & Palacios-Manzano, 2017; McWilliams & Siegel, 2000; Nidumolu et al., 2009). These studies argue that CSR may help firms in overcoming organizational inertia and, in turn, foster innovation and NPI (Berrone et al., 2013; Porter & Van Der Linde, 1995).

The extant literature in this realm, however, considers CSR as a unidimensional construct and thus a fine-grained understanding of how various forms of CSR and associated activities may affect NPI has not yet been developed. To overcome this shortcoming, this study considers CSR a multidimensional construct that bundles multiple and even dissimilar activities together (El Akremi, Gond, Swaen, De Roeck, & Igalens, 2018; Hawn & Ioannou, 2016). Specifically, I define CSR as encompassing firms' voluntary engagement in the social and environmental domain, as well as corporate governance performance (Capelle-Blancard & Petit, 2017). As indicated earlier in this work, the relevance of corporate governance for CSR has been partially driven by increasing regulatory demands in the aftermath of corporate scandals and the emergence of socially responsible investing (Sparkes & Cowton, 2004; Young & Thyil, 2014). Thus, while some CSR

activities, such as those associated with engagement in social and environmental issues, are essentially discretionary (Barnett, 2007; McWilliams & Siegel, 2001); others, such as corporate governance, are compliance-oriented or regulatory in nature (Nakpodia, Adegbite, Amaeshi, & Owolabi, 2016). I argue that the previous literature treatment of CSR as a unidimensional concept may have obscured the individual effects of its different elements on the rate of NPI. This study attempts to bridge such gap.

I conceptualize CSR as encompassing both *informal* activities pertaining to ‘beyond-compliance’ engagement on social and environmental issues; and *formal* aspects embodied in the firm’s compliance-oriented corporate governance practices. Drawing from the knowledge based view (KBV)¹⁸, I theorize about how each CSR dimension affects the organizational processes through which knowledge is absorbed -that is, how knowledge is acquired, assimilated, transformed, and exploited (Delmas, Hoffmann, & Kuss, 2011)-, and ensues NPI (e.g., Grant, 1996; Leonard-Barton, 1992). Different theoretical mechanisms are hypothesized by which informal and formal CSR engagement may affect the rate NPI. In addition, I examine indirect moderating effects towards further supporting the main hypothesized mechanisms (Wu & Zumbo, 2008).

Specifically, I hypothesize that high informal CSR performance would help firms attracting the most skilled human resources that can better draw on and expand the firm’s knowledge base. Furthermore, I propose that the level of VI, defined as the firm’s relative reliance on employees vis-à-vis external contractors, positively moderates the positive relationship

¹⁸ I acknowledge that the KBV can be understood as a special case of resource-based theory (i.e., the RBV), where it is assumed that knowledge is the most important firm resource (Eisenhardt & Santos, 2002).

between informal CSR and NPI. By way of explanation, as VI increases, informal CSR would help firms secure the supply of skilled labor as it improves their attractiveness as employers, as well as to mitigate risks related to employee turnover and mobility-induced knowledge spillovers (Flammer & Kacperczyk, 2015). Meanwhile, higher formal CSR performance, as it improves alignment and monitoring, may be conducive to prioritize managers' long-term commitment to NPI (Flammer & Bansal, 2017). In addition, it can help in exerting effort devoted to innovative projects, since better monitoring and performance evaluation may mitigate agency problems associated with management engagement in value-destroying activities. Furthermore, the effect of formal CSR would be positively moderated by R&D intensity. As the latter increases, high formal CSR performance would enable firms build up relational assets to both safeguard and maximize the returns of R&D investments that favor firms' knowledge absorption, and thus be associated with higher rates of NPI.

I find that the mechanisms through which informal and formal CSR engagement affect the rate of NPI differ from one another; such that while the former directly affects the rate of NPI, the latter effect is conditional on R&D intensity. Additionally, the positive effect of informal CSR on the rate of NPI is deemed stronger for firms that are more vertically integrated. The main implication of these findings is that while informal CSR would make a firm more innovative, formal CSR would not render NPI in itself, yet would keep the firm accountable and perceived as trustworthy to secure necessary inputs to innovate.

I test my theoretical framework exploiting a unique panel dataset collected from corporate press releases, Thompson Reuters ASSET4, Global Compustat, and the OECD World Input-Output databases. I draw on a sample of 131 manufacturing S&P 500 index member corporations and 2374 press releases on NPI for the period 2007-2015. My empirical strategy relies on negative

binomial regression, suitable for the estimation of count dependent variables (i.e., NPI). A generalized population-averaged model was employed, robust to the correlation structure of the panel. Furthermore, this specification has been deemed effective in dealing with excess zeros, endogenous treatment effects and attrition bias issues (Freund, Kniesner, & LoSasso, 1999). After running robustness checks, data provided either full or partial support to the proposed hypotheses.

The contribution of this study is twofold. First, I enrich the KBV by advancing theoretical mechanisms by which different types of CSR may support the development and expansion of a firm's knowledge base to address changing business environments. This knowledge, in turn, may be useful to build competitive advantages through NPI. Second, the formal-informal conceptualization contributes to the CSR literature as it unpacks the multidimensionality of CSR (in relation to its effect on NPI) by considering how it has evolved to encompass corporate governance performance, in addition to more traditional considerations of environmental sustainability and social responsibility (Jain & Jamali, 2016). Furthermore, it offers a more nuanced understanding of how different types of CSR engagement and related activities may relatively play out to support organizational performance, and specifically, firm's innovativeness (McWilliams et al., 2006).

The chapter is organized as follows. Following this introduction, I first introduce the conceptual background within which I define CSR as comprising informal and formal activities. Second, I develop the conceptual framework and propose study hypotheses. Third, I present my empirical strategy and analyses. In the end, I present the results and discuss the implications of the findings for theory, practice and future research.

4.3 Conceptual Background

The understanding of the drivers of NPI is pivotal to managing innovation and, ultimately, firm value (Lavie, Stettner, & Tushman, 2010). CSR has been considered one such driver (Nidumolu et al., 2009). Nonetheless, we still have not developed an explicit understanding of how its individual components may affect the rate of NPI.

Anecdotal evidence suggests that a myriad of CSR-related activities may support higher NPI rates. For instance, the mega consumer company Johnson & Johnson maintains that key to sustain the drive for product innovation within their pharmaceutical solutions divisions is to keep highly-motivated R&D teams. For this reason, they have established employee programs, such as paid volunteering opportunities, where staff members may use their skills to make a social or environmental impact for the community, and this way enhance their sense of reward around their jobs¹⁹. Meanwhile, the top management team at L'Oréal, the French cosmetics company, has recently attributed their recent market success with a new portfolio of 'environment-friendly' products to changes in their compensation policies, with brand and country managers having their bonuses linked to environmental targets²⁰.

CSR has been traditionally associated with the voluntary integration of social and environmental aspects into corporate activities (e.g., Wood 1991; Vogel, 2006). However, the intensification of public scrutiny and governmental regulation in the aftermath of a series of corporate scandals in the late 1990s and early 2000s (e.g., Parmalat, WorldCom, Enron, among others), have led firms to develop CSR disclosure and reporting capabilities (Lubin & Esty, 2010).

¹⁹ <https://www.jnj.com/caring-and-giving/johnson-and-johnson-program-lets-employees-take-paid-time-off-work-to-do-good-national-volunteer-week>, accessed 27 December 2017.

²⁰ <https://www.greenbiz.com/article/inside-look-loreals-sustainability-makeover>, accessed 25 October 2017.

Moreover, the growth of socially responsible investment added up to the mounting normative pressure on firms (Sparkes & Cowton, 2004). The latter wrought a considerable broadening of corporate governance beyond accountability to shareholders, to keep business activities attuned to environmental and social needs (Shahzad & Rutherford, 2016).

Whereas foundational CSR and corporate governance literatures evolved in a relatively independent way due to apparently divergent foci - i.e., CSR literature has been typically deemed stakeholder-focused (e.g., Clarkson, 1995; Maignan & Ralston, 2002), while corporate governance concentrated on managers and shareholders (e.g., Fama, 1980; Jensen & Meckling, 1976) -, such divergence has been challenged as firms have been increasingly required to create shareholder value through stakeholder engagement, with the integration of social and environmental concerns into business strategies (García-Castro & Aguilera, 2015; Jain & Jamali, 2016; Jamali et al., 2008). Moreover, the broadening of corporate governance, requiring firms to promote fairness, transparency, and accountability before both investing and non-investing stakeholders, has led to the adoption of a holistic approach that integrates company, shareholder, and wider stakeholder concerns under CSR (e.g., Ayuso, Rodríguez, García-Castro, & Ariño, 2014; Harjoto & Jo, 2011; Mason & Simmons, 2014; Taneja, Taneja, & Gupta, 2011; Walls, Berrone, & Phan, 2012). As a result, corporate governance is currently deemed an integral element of CSR (e.g., Gill, 2008; Kolk & Pinkse, 2009; Young & Thyil, 2014). Accordingly, I consider CSR as encompassing both *informal* activities pertaining ‘beyond-compliance’ engagement on social, as well as environmental issues; and *formal* activities, comprising the firm’s compliance-oriented corporate governance practices.

Informal CSR pertains to discretionary corporate initiatives to further social welfare and environmental protection, beyond the interest of the firm and that which is required by law

(Barnett, 2007; McWilliams & Siegel, 2001). Informal CSR thus covers the activities that coalesce in the social and environmental pillars of CSR. These typically include philanthropy and community contributions, employee relations, commitment to health and safety in business operations, environmental management, as well as the firm's ethical stance towards consumers (Brammer, Millington, & Rayton, 2007).

Meanwhile, formal CSR encompasses CEO incentive alignment, board monitoring mechanisms (including representation of non-financial stakeholders), and the alignment and monitoring of the top management team; as well as shareholders' rights and compliance with the takeover market (Misangyi & Acharya, 2014). It materializes into procedures to enforce legal compliance with external monitors (e.g., regulators and investors), as well as official documents such as CSR reports, and codes of conduct (Lubin & Esty, 2010; Nakpodia et al., 2016). As a whole, corporate governance activities aim to offer guides for decision making and reinforce discipline across the organization, to ultimately provide solid templates to run the business (Jamali et al., 2008).

While acknowledging that a global institutional infrastructure of CSR has emerged - notably, with public and civil society sectors playing a key role in the uptake of CSR reporting (Sandra Waddock, 2008) -, added to the fact that CSR is increasingly grounded in organizational protocols, and, in a number of cases, dedicated corporate functions (Baumann-Pauly et al., 2013; Wang et al., 2016), I argue that the informal-formal CSR framework still offers a useful classification of the different nature or emphasis of CSR activities. Arguably, informal CSR emphasizes the emergent pattern of social interactions within the firm and with its stakeholders; whereas formal CSR emphasizes regulatory compliance, as well as the set of rules and structures for coordinating and controlling activities. This way, the proposed CSR conceptualization mirrors

the classical distinction between the informal and formal organization (McEvily, Soda, & Tortoriello, 2014).

An additional concern that may arise regarding the informal-formal CSR classification, here introduced pertains to the characterization of formal activities. Should the latter be only circumscribed to compliance to laws and regulations, we would not likely observe any variability among firms along this dimension. Nevertheless, what formal CSR performance intends to capture is a firm's distinctive capacity – i.e., through the use of idiosyncratic management practices-, to control its rights and responsibilities through the creation of incentives, as well as checks and balances in order to generate long-term shared value for shareholders and stakeholders (Thompson Reuters, ASSET4²¹). This way, whereas the definition of the rights and responsibilities that need to be governed may largely stem from regulation (notably, from the adoption of the Sarbanes-Oxley Act of 2001, in the case of public firms), it is reasonable to assume that the *implementation* of governance structures to direct those objectives would vary from firm to firm (Walls et al., 2012).

The forthcoming section connects formal and informal CSR with NPI, towards developing a finer-grained understanding on how each CSR element may serve as a catalyst for product innovation. The theoretical framework is summarized on Figure 4-1.

²¹ See <https://financial.thomsonreuters.com/content/dam/openweb/documents/pdf/financial/esg-scores-methodology.pdf> for more information. Accessed 28 June 2018.

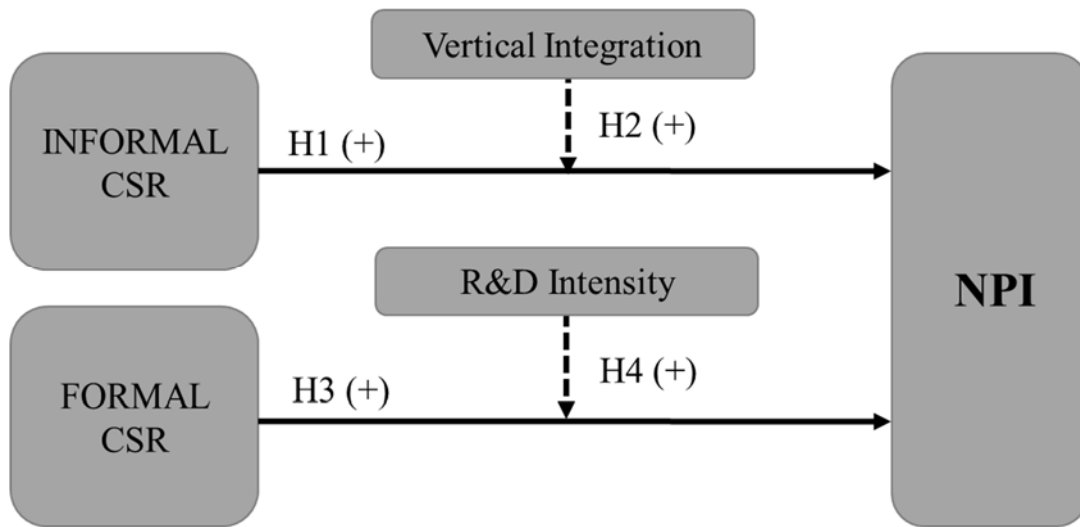


Figure 4-1 Conceptual Framework

4.4 Theory and Hypotheses

4.4.1 Informal CSR and NPI

A basic tenet of the KBV is that tacit knowledge embedded in the competence of individuals, along with work organizing practices that are firm-specific and relatively immobile, can form the basis of competitive advantage (Grant, 1996; Kogut & Zander, 1992). Thus, what makes firms more competitive is not only the specific knowledge and skill that employees bring with them, but also the tacit knowledge derived from continued interaction among organizational members (Araujo et al., 2003). Moreover, the pattern of relationships inside the firm provides a platform to decide upon how to mobilize existing knowledge, as well as the framework to foster new knowledge creation and innovation (Penrose, 1959; Kor, Mahoney, & Michael, 2007).

An important caveat, however, is that while firms may have access to people's valuable knowledge, poor work design or mismanagement of employees may not adequately deploy their knowledge as to achieve innovations (Salvato & Vassolo, 2017). Furthermore, employees exhibit

discretion in their decision to contribute to the collective success of the firm (Wright, Dunford, & Snell, 2001). Thus, barriers to knowledge transfer pertain to motivational dispositions of employees (Gupta & Govindarajan, 2000). Therefore, a critical management task is to engage individuals across the organization to be able to mobilize the productive knowledge that may yield NPI (Zander & Kogut, 1995). Consistent with this view, I argue that higher informal CSR performance may not only help firms to attract knowledgeable workforce, but also foster employees' engagement and participation in innovative projects that would be associated with a higher rate of NPI (Flammer & Kacperczyk, 2016).

First, informal CSR may serve as an effective tool to attract top-quality human resources to support firms' innovativeness (Brammer & Millington, 2008). Previous research suggested that high informal CSR performance enhances organization's attractiveness to prospective employees by signaling good working conditions inside the firm (Turban & Greening, 1997). Furthermore, as informal CSR engagement improves firm's reputation, by extension, it enhances the organizational identification of prospective employees who desire to work for socially responsible firms (Carmeli, Gilat, & Waldman, 2007). This way, informal CSR would help firms attracting a larger pool of candidates which, in turn, would enable them to recruit among the most skilled human resources that can better draw on and expand the firm's knowledge base (Padgett & Galan, 2010).

Second, informal CSR has been regarded an important relationship-based incentive for existing (i.e., vis-à-vis prospective) employees (Flammer & Luo, 2017). To the extent that it may also enhance organizational identification inside the firm, informal CSR would improve employees' engagement (El Akremi et al., 2018). Specifically, higher informal CSR performance would foster employees' commitment to organizational values and practices (Surroca, Tribó, &

Waddock, 2010). Additionally, by offering employees shared governance through advancement programs, informal CSR would enhance their perceptions of work content and meaningfulness that, in turn, would lead to higher job satisfaction and engagement (Carnahan, Kryscynski, & Olson, 2017).

In addition, informal CSR as a relationship-based incentive has been deemed to have important implications for the knowledge absorption process (i.e., including knowledge acquisition, assimilation, transformation, and exploitation) that would encourage higher rates of NPI (Delmas et al., 2011). Informal CSR, as it improves employees' relations and intraorganizational communication, would serve as an enabler of 'horizontal' learning across diverse business units (Brammer et al., 2007; Marcus & Geffen, 1998). Moreover, firms that intensively pursue informal CSR would be better positioned to absorb external knowledge from stakeholders, by which firms may learn to better respond to ongoing environmental issues, as well as to anticipate future regulations and social trends (Pinkse, Kuss, & Hoffmann, 2010). With these inputs, firms may come up with new products that would more likely satisfy consumers' expectations and succeed in the market (McWilliams & Siegel, 2000; Shiu & Yang, 2017).

Upon the whole, informal CSR would prompt processes of organizational learning within the firm, such that they involve experimentation and the development of different commercial exploitation ideas that draw on both existing and new knowledge (Fiol, 1994). Such learning processes have been deemed to develop into firm-level capabilities that may drive innovations (e.g., Cohen & Levinthal, 1990; Sharma & Vredenburg, 1998). Overall, informal CSR would help in creating an environment in which engaged employees would be more prone to participate in innovative projects, share extant know-how, and experiment with new knowledge towards generating NPI (Flammer & Kacperczyk, 2016). I thus put forth:

Hypothesis 1: An increase in informal CSR performance would be associated with an increase in the rate of NPI.

The above discussion suggests that informal CSR is instrumental to an increased organizational identification (Carmeli et al., 2007). Again, core to the KBV is the idea that internal resources, and chiefly employees' embedded knowledge, are strategically important for firm's innovativeness and success (Wright et al., 2001). From this vantage point, knowledge inside the firm would have higher economic value, compared to that of the market, as firms enable the development of a shared identity among employees that supports coordination and knowledge sharing and, in turn, innovativeness (Kogut & Zander, 1996). Recent research supports this conclusion as it is argued that interpersonal relationships and constructive dialogue within the firm - i.e., such that employees can productively exchange proposals for change-, would reduce distances between knowledge exchange partners and congeal into firm-level innovative capabilities (Salvato & Vassolo, 2017). In other words, the KBV submits to the idea that 'who constitutes an organizational member' matters for knowledge mobilization purposes (Almeida, 1996; Grant, 1996).

Therefore, a firm that 'owns' their productive teams -that is, firms that are more vertically integrated as they rely more on internal employees vis-à-vis external contractors (Williamson, 1971)-, would experience reinforcing (positive) consequences from the attribution of employees as organizational members. Namely, expected cooperation among attributed organizational members would induce knowledge sharing and organizational learning that would be associated with higher NPI rates (Kogut & Zander, 1996; Korschun, 2015). Conversely, a firm that more heavily relies on external contractors (i.e., vis-à-vis employees) is not likely to fully realize the value of new workers to the organization in the short run. The economic value of contractors tends

to increase in the longer run, as they become familiar with the communication system among organizational members, as well as the peculiarities of their own specific task (Kor and Mahoney, 2000). In addition, heavier reliance on contractors may lead to negative externalities pertaining to mobility-induced knowledge spillovers (Gupta & Govindarajan, 2000). As workers walk out the firm, they typically take with them valuable skills and firm specific knowledge, eroding the firm knowledge base. Furthermore, they can take this knowledge to join rival firms or start new ventures, resulting in a loss of proprietary know-how to the competition (Flammer & Kacperczyk, 2015).

It follows that when informal CSR and a higher reliance on employees vis-à-vis external contractors (i.e., a higher level of VI) work collectively, their joint effect would have a stronger positive effect on the rate of NPI. First, because as VI increases, informal CSR would help firms secure a supply of skilled-labor as it improves their attractiveness as employers (Padgett & Galan, 2010). Second, as informal CSR enhances employees' engagement, firms may mitigate risks related to employee turnover and mobility-induced knowledge spillovers (Carnahan, Kryscynski, & Olson, 2017; Flammer & Kacperczyk, 2015). The former discussion leads to the following conditional hypothesis:

Hypothesis 2: The positive relationship between informal CSR performance and the rate of NPI is positively moderated by the level of VI.

4.4.2 Formal CSR and NPI

The alignment and monitoring of organizational members is one of the main areas of focus of formal CSR activities (Misangyi & Acharya, 2014). The extant KBV literature has emphasized managers' need for achievement and recognition to generate adaptive responses to the environment such as NPI (e.g., Kor & Mahoney, 2000; Leonard-Barton, 1992). Hence, it is of

great importance to provide adequate incentives to the management team to pursue knowledge-enhancing projects, and chiefly to those managers who play more critical roles in knowledge integration activities (Taylor & Helfat, 2009).

Incentives are particularly important to supporting long-term value creation through NPI in publicly traded companies. In such contexts, managers face quarterly earnings pressures that may be more conducive to make business decisions to improve short-term returns, rather than future competitiveness (Zhang & Gimeno, 2016). The pursuit of NPI generally increases the firm's operational risk by binding R&D resources in the long run (Husted, 2005). In addition, R&D budgets are difficult to meet without significant departures when firms experiment with newer and more uncertain technologies (Flammer & Bansal, 2017). On their part, managers might decide not to exert enough effort on NPI; either because they dislike the risk innovation involves (since they may risk losing their jobs if things go the wrong way), or simply because they prefer not to, particularly if lacking incentives to demonstrate increased performance (Aghion, Van Reenen, & Zingales, 2013). Consistent with this view, I argue that higher formal CSR performance, as it improves alignment and monitoring, may be conducive to incentivize managers' long-term commitment to NPI, as well as to exert effort devoted to innovative projects (Sapra, Subramanian, & Subramanian, 2014).

First, in absence of compensation policies that clearly tie rewards to long-term value creation, managers' interests would not be aligned with the pursuit of long-term value-creation projects, as it is the case of NPI (Atanassov, 2013). Hence, the use of long-term incentives may help foster management commitment to NPI (Lerner & Wulf, 2007). Formal CSR engagement partly entails the adoption of compensation policies that direct managers' attention to objectives that may be less salient in the short term (e.g., social or environmental performance), but

financially material in the long run, thereby enhancing governance quality (Flammer, Hong, & Minor, 2016). Flammer and Bansal (2017) support this claim in that they find that formal CSR activities pertaining to executive compensation would induce firms' adoption of a long-term orientation. Thus, higher formal CSR performance would help aligning managers incentives to prioritize long-term R&D projects which, in turn, would support a higher rate of NPI.

Second, higher formal CSR performance is partly related to higher institutional ownership, which has been deemed to promote greater innovativeness (Aghion et al., 2013). The rationale behind this claim is that institutional investors gravitate to stocks of firms with good corporate governance practices to economize on monitoring costs (Chung & Zhang, 2011). Furthermore, institutional owners are primarily concerned with consistent returns over time, and thus tend to exert influence to promote NPI-related efforts through increased R&D expenditure to support long-term economic performance (Johnson & Greening, 1999).

Third, higher formal CSR performance would allow for better monitoring and performance evaluation of managers such that they avoid shirking or engaging in other value-destroying activities (Atanassov, 2013). More stringent monitoring and better performance evaluation may mitigate agency problems associated with asymmetric information and discipline managers, fostering their increased commitment to innovation (Hitt, Hoskisson, & Ireland, 1990). The latter would manifest in managers championing R&D efforts and NPI ideas, as well as higher levels of effort devoted to implement innovative projects (Hitt, Hoskisson, Johnson, & Moesel, 1996). Based on the above arguments, I put forth:

Hypothesis 3: An increase in formal CSR performance would be associated with an increase in the rate of NPI

Investments in R&D represent firms' knowledge acquisition and favor knowledge absorption that may yield NPI (Delmas et al., 2011). From a KBV perspective, knowledge absorption is the main firm's function, and thus it is core to its mission (Araujo et al., 2003). Thereby, top management's primary concern is to identify, acquire, build, deploy, and protect such investments (Marcus & Geffen, 1998). Doing so is a complex process affected by both uncertainty and potential agency conflicts (Amit & Schoemaker, 1993). Against this backdrop, formal CSR may help in securing R&D investments to grow the firm's knowledge base at lower costs (Ho et al., 2011). Previous literature suggests that for R&D-intensive firms, formal CSR engagement would enable firms build up important relational assets to both safeguard and maximize the returns of these investments (Tang, Hull, & Rothenberg, 2012; Wang & Choi, 2013).

First, high formal CSR performance may signal a firm's sound risk control, as well as its commitment to be transparent and fair with all its stakeholders (Schneider & Scherer, 2015; Shahzad & Rutherford, 2016). To the extent that firms can contract with stakeholders based on trust and cooperation, firms will benefit from reduced agency and transaction costs (Jones, 1995). In addition, the availability of credible data about the firm strategy to resource owners through CSR reports further reduces informational asymmetries, which would result in lower capital constraints for R&D funding (Cheng et al., 2014).

Second, higher formal CSR performance would not only lower the cost of R&D funding, but also provide the guidance and specific technical knowledge on how to better allocate resources into R&D projects (Zahra & Filatotchev, 2004). Formal CSR engagement involves the establishment of a monitoring function over firm's executives that, along with control functions, constitutes an important source of tacit knowledge (Athanassiou & Nigh, 1999). The board of directors would offer valuable experience and advice on different technologies that would both

lead into more successful NPI, and assure investors an appropriate return on their investment (Ho et al., 2011). Based on the above discussion, I expect the positive link between formal CSR and the rate of NPI to be stronger the more heavily the firm invests on R&D. I thus put forth the following conditional hypothesis:

Hypothesis 4: R&D intensity positively moderates the relationship between formal CSR and the rate of NPI

4.5 Methods

4.5.1 Data, Sample and Approach

To test my theoretical framework, I relied on a sample of corporations listed in the S&P 500 index. Focus on S&P 500 firms offers availability of credible data for new products and financial information disclosures, given that listed members are subject to high levels of scrutiny from the public, as well as from the investment community (Cheng et al., 2014).

NPI was measured as a count reported in newspapers, magazines, scientific and industry journals. Product count is considered a robust measure of rate of NPI over a wide range of research settings (e.g., Damanpour, 1991). To identify NPI, I use the Dow Jones Factiva database that includes news information from multiple sources, including industry-specific, technological, and scientific publications. The database offers over 35,000 sources, from 200 countries, in 26 languages. NPI reported from these sources have met industry's definition of technological innovation and reflect actual product introductions (Lavie & Rosenkopf, 2006). Furthermore, Dow Jones Factiva allows for searches of results at the corporate level, allowing to capture NPI activity from all subsidiary companies, as well as from mergers and acquisitions which may have taken place during the period of reference.

Because of the difficulties in measuring NPI for services firms, I restricted the sample to manufacturing firms (Nerkar & Roberts, 2004). This criterion yielded 151 firms from 27 GICS industries.

In terms of the time span, I collected data on our independent variables from 2006 to 2014 and on the rate of NPI data from 2007 to 2015. I ensured that independent variables are based on a temporal frame just prior NPI data and, by means of such time separation, the study design would allow for a stronger causal claim. This further restricts the sample to include firms that were at least 1 year old by 2006. The final sample consists of an unbalanced panel of 134 firms, headquartered in 6 different countries, across 12 major industry groups, along 7 years, totaling 882 observations. Sample distribution across countries and industry groups is summarized on Tables 4-1 and 4-2, respectively.

Head Quarters Country	Number of Firms
Ireland	8
Netherlands	1
Netherlands Antilles	1
Singapore	1
Switzerland	1
United States	122
GRAND TOTAL	134

Table 4-1-NPI and CSR: Sample Distribution Across Countries

Industry Group	Description	Number of Firms
1010	Energy	2
1510	Materials	14
2010	Capital Goods	26
2020	Commercial & Professional Services ²²	4
2510	Automobiles & Components	8
2520	Consumer Durables & Apparel	9
3020	Food, Beverage & Tobacco	13
3030	Household & Personal Products	2
3510	Health Care Equipment & Services	9
3520	Pharmaceuticals, Biotechnology & Life Sciences	23
4520	Technology Hardware & Equipment	12
4530	Semiconductors & Semiconductor Equipment	12
	GRAND TOTAL	134

Table 4-2 – NPI and CSR: Sample Distribution Across Industry Groups

NPI data extraction rendered 2374 press releases in English language. Two independent coders checked headlines to ensure the content is about NPI rather than other company information. Examples of items that have been captured by our search yet do not meet the definition of NPI include: new facility openings, releases on earnings/financial results, promotional events, rebranding, senior management moves, among others. In addition, raters coded for the number of products introduced for each release and ensured that headlines reporting on the same product launch were excluded ($\kappa = 0.8643^{23}$).

²² This group gathers the following firms: Cintas, Republic Services, Stericycle, and Waste Management. While their primary activity pertains to provide services to other firms, they engage in manufacturing activities. To cite but one example, Cintas designs, manufactures and implements corporate identity uniform programs, and provides entrance mats, restroom cleaning and supplies, tile and carpet cleaning, promotional products, first aid, safety, fire protection products and services and document management services for more than 1 million businesses (Source: Factiva).

²³ Cohen's kappa coefficient measures inter-rater agreement for qualitative (categorical) items (i.e., NPI).

As the dependent variable, following Nadkarni and Chen (2014), I used a three-year average of NPI data (“NPI3”), consistent with that idea-to-market cycles would typically span through three years (Griffin, 1993).

4.5.2 Independent Variables

I draw from Thomson Reuters ASSET4 database to construct CSR variables. Several prominent recent studies have adopted ASSET4 dataset to measure firms’ CSR performance (e.g., Cheng et al., 2014; Eccles et al., 2014; Hawn & Ioannou, 2016; Ioannou & Serafeim, 2012; Rathert, 2016). Thomson Reuters ASSET4 provides an objective, relevant, auditable, and systematic information tool for investors who want to integrate CSR with economic criteria into their investment analyses and decisions. Since 2002, ASSET4 has offered a comprehensive dataset for the assessment of corporate performance within three CSR pillars: (1) environmental performance; (2) social performance; and (3) corporate governance performance. Every firm receives a score on each of these pillars every year. Figure 4-2 depicts the categories included in these three pillars²⁴.

Consistent with the theoretical framework, I measured *formal CSR* engagement using firms corporate governance score for each year. *Informal CSR*, on its part, was conceptualized as encompassing both social and environmental performance. After mean-centering predictors to avoid any non-essential multicollinearity, I first inspected the resulting pairwise correlations between the social and environmental CSR dimensions. I observed that social and environmental scores are highly co-linear, showing the highest pairwise correlation (0.7870, $p < 0.01$). In addition, the environmental pillar includes product innovation as one of its constituent categories (as per

²⁴ Source: Thomson Reuters, ESG Data Fact-sheet.

Figure 4-2). Given that the latter most surely constitutes a source of endogeneity, added to the fact that essential multicollinearity may render highly unstable partial regression coefficients for those independent variables that are highly correlated (Cohen & Cohen, 1983), I measured informal CSR only using firms social score for each year.

ASSET4 ESG Scores		
ENVIRONMENTAL PERFORMANCE	SOCIAL PERFORMANCE	CORPORATE GOVERNANCE
<ul style="list-style-type: none"> * Resource Reduction * Emission Reduction * Product Innovation 	<ul style="list-style-type: none"> * Community * Diversity * Health and Safety * Employment, Training and Development * Human Rights * Product Responsibility 	<ul style="list-style-type: none"> * Board Structure * Compensation Policy * Board Functions * Shareholder Rights * Vision and Strategy

Figure 4-2 Thompson Reuters ASSET 4 ESG Scores

4.5.3 Moderating Variables

According to the theoretical framework, VI and R&D intensity moderate the main effects of informal and formal CSR respectively. To measure these variables, I relied on secondary data from Global Compustat. I describe each measure in detail below.

4.5.3.1 Vertical Integration

I measure VI using the value-added to sales ratio (VA/S). VA/S has been a common employed measure in the literature (Lajili, Madunic, & Mahoney, 2007). The ratio aims to reflect

that, as firms increase the proportion of value-added (i.e., sales minus purchases) generated in-house, they increase their relative reliance on internal employees vis-à-vis external contractors.

As mentioned earlier on Chapter 2, VA/S may be distorted by changes in profitability or by accounting standards concerning tax and depreciation (Hutzschenreuter & Groene, 2009). The measurement methodology proposed by Tucker and Wilder (1977) was employed, leading to the adjusted ratio:

$$VA/S = VA - (net\ income + income\ taxes) / Sales - (net\ income + income\ taxes)$$

4.5.3.2 R&D intensity

I measured R&D intensity as R&D expense normalized by firm sales (i.e., ratio R&D expense to sales). This way, the effect of R&D expense on NPI is controlled by the effect of firm's revenue, which is considered to affect the return of R&D efforts (Cohen & Levinthal, 1990). R&D expenses that were missing in Compustat were considered to be zero, given that accounting rules mandate that these should be reported separately (Lev, Petrovits, & Radhakrishnan, 2010).

4.5.4 Control Variables

I included a number of firm level control variables, which were extracted from Global Compustat. I controlled by available financial slack (measured as debt to equity ratio), firm size (measured as the logarithm of the number of employees), prior diversification (measured as the logarithm of total business segments), and firm's age (measured in logarithmic scale).

Financially healthy organizations, with higher levels of available financial slack, are better able to fare with losses when innovations are not successful, and are therefore able to take on greater risks by investing in NPI-related efforts (Damanpour, 1992). I measure the availability of slack resource using the debt to equity ratio. Since the latter captures the level of financial leverage

the firm incurs, I expect that an increase of the debt to equity ratio would lead to a decrease on the rate of NPI (Hull & Rothenberg, 2008).

In addition, firm size was included as a control given that larger firms have more capabilities, a greater number of professionals, and technical know-how, which would support higher rates of NPI (Camisón-Zornoza & Lapiedra-Alcamí, 2004). Moreover, scale economies in R&D benefit larger firms (Ahuja et al., 2008). I also controlled for prior diversification on the basis that firms with a broader product/market base have greater incentives to invest in basic research that, in turn, would lead to higher rates of NPI (Nelson, 1959).

Lastly, firm age would be associated with increases in the rate of NPI (Sørensen & Stuart, 2000). Yet again, aging may yield difficulties in keeping pace with social demands and possibly build up into ‘cultural inertia’ (i.e., a firm’s complacency on ‘how firms are done’), which may compromise its capacity to innovate (Tushman & O’Reilly, 1996).

Given that the dependent variable measures the average count of NPI in the last three years, I also controlled for industry growth in t-3 as a measure of market structure and the state of competition that would influence the likelihood of firms investing in preemptive NPI (Ahuja et al., 2008). This is as well consistent with previous market-cycle research (Bowman & Gatignon, 1995; Griffin, 1993). I measured industry growth as the growth rate of the global industry value added, which was extracted from the OECD World Input-Output tables²⁵.

Finally, country level institutions, such as the supply of science and the appropriability regime, may also influence firm-level innovation (Conti, Gambardella, & Novelli, 2013). I include country fixed effects to account for the latter sources of variance. In addition, economic booms

²⁵ Available online: <http://www.wiod.org/home>, accessed 19 February 2017.

can foster higher NPI rates as firms improve their slack resources, whereas busts may do otherwise (Cheng & Kesner, 1997). Data encompass the global financial crisis years (2008-9) (National Bureau of Economic Research, see www.nber.com). For this reason, models control for year fixed effects to capture upturns and downturns in the broader business environment.

4.5.5 Analysis

I used negative binomial regression analysis for panel data, which is suitable for the estimation of dependent variables based on counts (i.e., NPI). The likelihood ratio test strongly rejected the null hypothesis that errors do not exhibit over dispersion ($p < 0.01$). Thus, a Poisson model is rejected in favor of a generalized version, that is, negative binomial regression (Wooldridge, 2010). Hausman (1978) specification test rendered no fixed effects. In addition, predictors were lagged to provide temporal separation and exogenous variation²⁶.

I modelled a generalized population-averaged model. These models are robust and allow for the correlation structure in the data, presenting repeated measurements on the same subjects (i.e., firms) over time (Crouchley & Davies, 1999). Furthermore, Freund and colleagues (1999) found that this specification is an effective strategy to deal with excess zeros, endogenous treatment effects and attrition bias issues (Freund et al., 1999).

I tested the effect of informal and formal CSR on the rate of NPI in three models. Model 1 includes the control variables only; Model 2, adds the main effects of informal and formal CSR

²⁶ It is worth noting that the independent variables are yearly variables, whereas the dependent variable (NPI3) considers three years of NPI. However, the measurement of NPI3 is ahead of the independent variable year. For instance, our first observation in the data for the dependent variable for each firm is in 2008 where NPI3 is computed as the average of NPI of 2006, 2007, and 2008. Accordingly, the independent variables for that NPI3 observation are measured in 2007.

(to test hypotheses 1 and 3); Model 3, introduces the interaction terms (to test hypotheses 2 and 4). Moderation was tested using a multiplicative approach (Aiken et al., 1991).

To provide an accurate interpretation of the modelled coefficients, I compare the average marginal effects (AME), following recommended best practice on the use of non-linear models (Hoetker, 2007; Wiersema & Bowen, 2009). Furthermore, I provide interaction plots to offer a richer understanding of these effects on the rate of NPI.

4.5.6 Results

Table 4-3 provides the descriptive statistics and pairwise correlations among study variables.

	Mean	SD	NPI3	Formal CSR	Informal CSR	R&D int.	Vertical int.	Slack resource	Size (log)	Diversification (log)	Age (log)	Industry growth
NPI3	1.805	7.237	1.000									
<i>Study Variables</i>												
Formal CSR**	0.000	0.129	0.0750*	1.000								
Informal CSR**	0.000	0.261	0.1402*	0.6139*	1.000							
<i>Moderators</i>												
R&D intensity**	0.000	1.412	0.013	-0.1098*	-0.0568*	1.000						
Vertical integration**	0.000	0.214	0.049	0.1101*	0.1870*	-0.1813*	1.000					
<i>Controls</i>												
Slack resource	1.824	11.540	0.004	0.014	0.0032	-0.0127	0.0339	1.000				
Size (log)	3.082	1.261	0.1508*	0.3288*	0.4553*	-0.1177*	0.3001*	0.0374	1.000			
Diversification (log)	2.223	0.735	-0.028	0.1678*	0.1873*	-0.0723*	0.2453*	0.0062	0.4759*	1.000		
Age (log)	4.078	0.813	0.013	0.1776*	0.3862*	-0.0732*	0.1119*	0.0059	0.4264*	0.3607*	1.000	
Industry growth	0.080	0.521	-0.025	0.002	-0.0650*	-0.002	0.0209	0.0016	-0.0231	0.0044	-0.0161	1.000

* n = 882, Correlations significant at p<0.05

** = Mean-centered variables

Table 4-3 NPI and CSR: Descriptive Statistics and Correlations

Table 4-4 summarizes negative binomial regression results. The dependent variable is a count variable, and my specification models the logarithm of the expected count as a function of the predictor variables. Table 4-4 presents exponentiated coefficients, and thus the effect is presented on a multiplicative scale. Coefficients can be interpreted as follows: for a one-unit change in the predictor variable, the difference in the logarithms of expected counts of NPI (i.e., the growth rate of the response variable) is expected to change by the respective regression coefficient, given the other predictor variables in the model are held constant (Cameron & Trivedi, 2010). By taking logarithms of the model coefficients, I obtain the incident rate ratios (IRR) for each of the variables, which provide the rate at which the events of interest (i.e., NPI) occur (Buis, 2010).

That said, in count dependent variable models, the sign or direct relationship between the independent and the dependent variable is not given by the model coefficient, but chiefly by the marginal effect (Wiersema & Bowen, 2009). The marginal effect conveys the effect of a unit change in an independent variable on the dependent variable, and does not equal the variable's model coefficient. Moreover, it varies with the values of all model variables. Accordingly, I calculate average marginal effects (i.e., the average of the computation of the marginal effect for all observations, henceforth AME) to assess the sign of the effect of each variable on the rate of NPI.

<i>Dependent Variable</i> Log(NPI3)	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE</i>	<i>AME</i>	<i>B</i>	<i>SE</i>	<i>AME</i>	<i>B</i>	<i>SE</i>	<i>AME</i>
<i>Controls</i>									
R&D intensity (centered, t-1)	2.9737***	0.8070	7.2533***	1.6016	1.2164	3.6821	3.2930**	1.6099	7.7904**
Vertical integration (centered, t-1)	0.7274	0.5237	1.7743	0.5718	0.5456	1.3145	1.2874**	0.5546	3.0456*
Slack resource (t-1)	-0.0053***	0.0026	-0.0129*	-0.0055*	0.0033	-0.0127	-0.0048	0.0034	-0.0113
Size (log, t-1)	0.6058***	0.1093	1.4777***	0.5157***	0.1312	1.1857***	0.5181***	0.1329	1.2257***
Diversification (log, t-1)	-0.1229	0.2202	-0.2999	-0.0616	0.2590	-0.1416	-0.1179	0.2665	-0.2788
Age (log, t-1)	-0.2225	0.3617	-0.5428	-0.5055*	0.2960	-1.1622*	-0.4798*	0.2873	-1.1350*
Industry growth (t-3)	-0.3856***	0.1857	-0.9406*	-0.3611**	0.1615	-0.8301*	-0.3415**	0.1518	-0.8079*
<i>Study Variables</i>									
Formal CSR (centered, t-1)				-1.5924*	0.9275	-3.6609	-1.2781	0.9439	-3.0237
Informal CSR (centered, t-1)				2.9260***	0.7930	6.7270**	2.9468***	0.7607	6.9713**
<i>Moderation</i>									
Formal CSRxR&D intensity (t-1)							13.7614**	6.0098	32.5555**
Informal CSRxVertical integration (t-1)							4.3191**	1.8354	10.2177*
Constant	Included			Included			Included		
Country Fixed Effects	Included			Included			Included		
Year Fixed Effects	Included			Included			Included		
No. of Obs	882			859			859		
Wald chi-square	754.31***			685.08***			687.34***		

*p<0.10, **p<0.05, ***p<0.01

Table 4-4 NPI and CSR: Negative Binomial Regression Results

Hypothesis 1 proposed that informal CSR will relate positively to the rate of NPI. As per Table 4-4 (Model 3), the coefficient of informal CSR is positive and significant ($B= 2.9468$; $p<0.01$). The coefficient shows that, for each unit increase²⁷ on informal CSR performance, firms are expected to have a rate of NPI 1.0807 times larger (i.e., the IRR obtained as $\log(2.9468)$). The AME is also positive and significant ($AME = 6.9713$, $p, 0.05$). Hence, hypothesis 1 is supported.

I also find support for hypothesis 2, which proposed that the interaction between informal CSR and VI would positively affect the rate of NPI. As per Table 4-4, the interaction coefficient is positive and significant ($B= 4.3191$; $p<0.05$). The coefficient can be interpreted as that the interaction between informal CSR and VI (i.e., the joint effect) yields, on average, an expected rate of NPI 1.4630 times larger (i.e., the IRR obtained as $\log(4.3191)$). Figure 4-3 depicts the moderation effect as the marginal effect of the interaction between VI and informal CSR at different percentiles (p) of each variable's distribution. The interaction plot shows that while both lines trend upward, as the level of VI increases, the effect on the predicted rate of NPI shifts outward, implying a stronger positive effect. The AME of the interaction is also positive and significant, thus lending support to hypothesis 2.

²⁷ ASSET4 CSR pillars' scores are calculated by equally weighting and z-scoring all underlying data points and comparing them against all companies in the ASSET4 universe. The result is therefore a relative measure of performance, z-scored and normalized to position the score between 0 and 100 percent. Thus, a unit increase entails a one percent increase in the z-score, which entails an increase above the mean performance of the CSR pillar being measured.

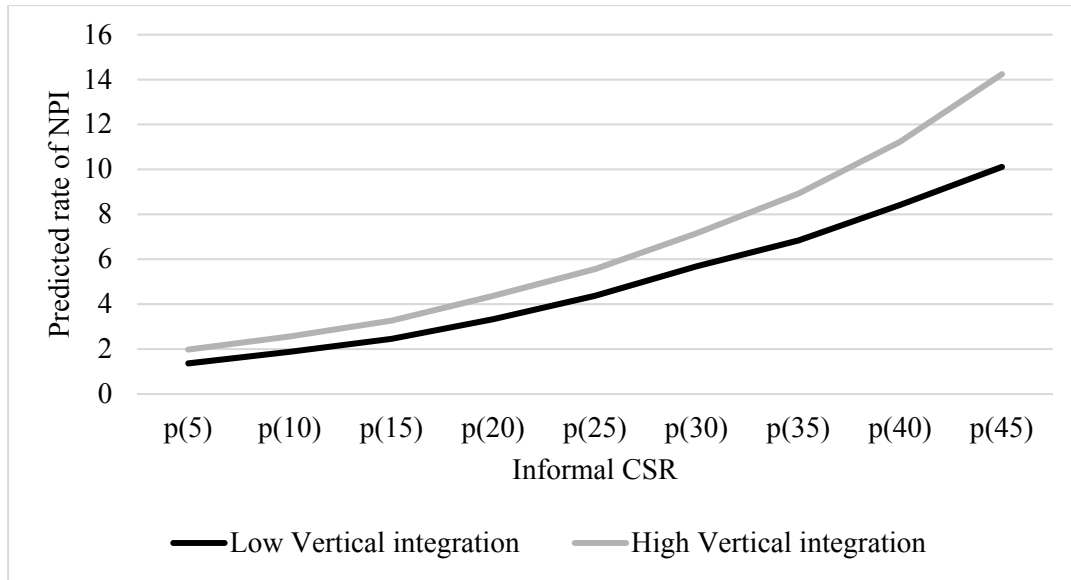


Figure 4-3 Interaction Plot - Informal CSR, VI and the Rate of NPI

Hypothesis 3 posited that the effect of formal CSR on the rate of NPI would be positive. As shown in Table 4-4, the coefficient is not significant ($B = -1.2781$; $p > 0.10$); likewise, the AME. Hence, hypothesis 3 is not supported.

Finally, hypothesis 4 predicted that the interaction between formal CSR and R&D intensity would positively affect the rate of NPI. The interaction coefficient ($B = 13.7614$; $p < 0.05$); likewise, the AME. The model coefficient can be interpreted as an IRR, such that the joint effect of formal CSR and R&D yields an expected rate of NPI 1.1386 times larger. The interaction plot on Figure 4-4 shows that as the level of R&D intensity increases, the line shifts outward trending upwards, implying a stronger positive effect of formal CSR on the rate of NPI. Therefore, hypothesis 4 is supported.

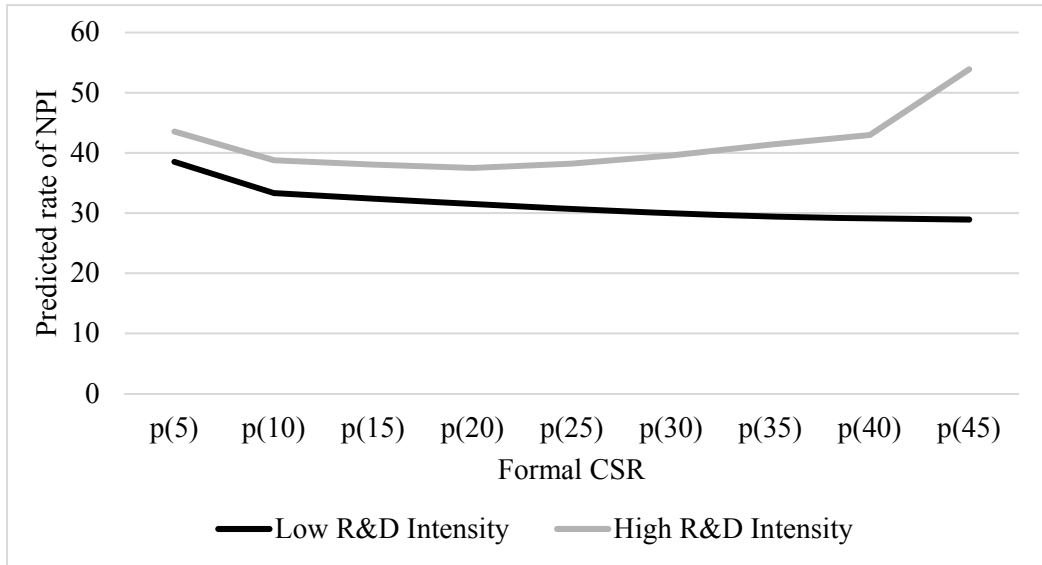


Figure 4-4 Interaction Plot - Formal CSR, R&D Intensity and the Rate of NPI

From the above analysis it can be concluded that whereas informal CSR has a direct positive effect on the rate of NPI (i.e., 1.08 times higher per unit increase), formal CSR shows no significant direct effect. Yet the effect of formal CSR on NPI is conditional to R&D intensity, rendering, on average, a 1.14 times higher rate of NPI, holding other variables constant. However, the latter moderation effect is lower than that of the interaction between informal CSR and VI (1.14 vis-à-vis 1.46). In sum, **data provided support for hypotheses 1, 2, and 4; while not so for hypothesis 3.**

4.5.7 Robustness Checks

Results robustness was tested in several ways. Specifically, I tested the sensitivity of the former regression models by employing alternative measures of CSR, NPI, and industry-level effects.

First, previous studies have suggested that discretionary CSR activities (i.e., informal CSR) and R&D intensity could be highly correlated and potentially jointly determined, rendering

unstable partial regression coefficients (e.g., McWilliams & Siegel, 2000; Padgett & Galan, 2010). To address these concerns, I used a latent variable measurement of informal CSR. Specifically, I employed the D-SOCIAL-KLD scores by Carroll, Primo, and Richter (2016). These scholars have used item response theory (IRT) to improve one of the most widespread measure of discretionary CSR, the KLD Index. Each firm-year score is estimated as a latent variable, and in this way, accounts for measurement errors that may bias results (Carroll et al., 2016). After running the corresponding negative binomial regressions, I obtained comparable results. The latter are reported on Table 4-5.

I also employed different measures of the dependent variable, NPI. I ran regressions using one, two, and four-year averages of NPI, instead of a three-year average as per my original formulation. Results were consistent with the main models.

Finally, I tested sensitivity trying different measures to control for industry level effects. First, I run regressions using industry fixed effects, grouping firms by GIC industry group codes. Once again, results were consistent with those of the main models. Additionally, following Flammer and Kacperczyk (2016) I examined whether the effect of CSR on NPI differs depending on whether the industry is consumer-focused or business-to-consumer (B2C), or business-to-business/government (B2B/G) focused. I ran the analysis using the partition proposed by Lev et al. (2010, p. 188), including “B2C” as a dummy variable in the model. The latter did not render a significant regression coefficient.

<i>Dependent Variable</i> Log(NPI3)	Model 4			Model 5		
	<i>B</i>	<i>SE</i>	<i>AME</i>	<i>B</i>	<i>SE</i>	<i>AME</i>
<i>Controls</i>						
R&D intensity (centered, t-1)	0.8398	1.4481	0.7346	3.5102	2.7780	3.2430
Vertical integration (centered, t-1)	1.0061	0.7540	0.8801	1.7030***	0.6168	1.5734**
Slack resource (t-1)	0.0013	0.0016	0.0011	0.0012	0.0017	0.0011
Size (log, t-1)	0.3559*	0.1854	0.3113*	0.3428*	0.1945	0.3167*
Diversification (log, t-1)	-0.4919	0.4424	-0.4303	-0.5321	0.5037	-0.4916
Age (log, t-1)	-0.3525	0.2999	-0.3083	-0.2794	0.3035	-0.2582
Industry growth (t-3)	-1.0781*	0.6651	-0.9430	-0.9681	0.6621	-0.8944
<i>Study Variables</i>						
Formal CSR (centered, t-1)	-0.5083	1.2532	-0.4446	0.5167	1.2106	0.4774
KLD (centered, t-1)	0.1891*	0.1096	0.1654	0.1699	0.1145	0.1569
<i>Moderation</i>						
Formal CSRxR&D intensity (t-1)				20.1387*	10.82248	18.6058*
KLDxVertical integration (t-1)				0.6240**	0.2626	0.5765*
Constant	Included			Included		
Country Fixed Effects	Included			Included		
Year Fixed Effects	Included			Included		
No. of Obs	590			590		
Wald chi-square	325.36***			332.44***		

*p<0.10, **p<0.05, ***p<0.01

Table 4-5 NPI and CSR: Robustness Checks - Negative Binomial Regression Results

4.6 Discussion and Conclusion

The KBV implies that in keeping up with ever-changing business environments, product innovation is a more feasible path for some firms rather than others (Helfat & Winter, 2011). This suggests that some firms appear to possess certain capabilities that give them a comparative advantage in developing new products (Lockett & Thompson, 2001). CSR has been considered one such capability (Nidumolu et al., 2009). Nevertheless, its treatment in extant literature as a unidimensional construct has provided a limited understanding of the relative effect of different CSR dimensions on the rate of NPI.

This study presented a finer-grained conceptualization of CSR as encompassing both formal and informal aspects. The theoretical framework proposed that both formal and informal CSR would positively affect the rate of NPI.

On the one hand, I found that informal CSR positively affects the rate of NPI to the extent it facilitates tacit knowledge transfer and integration within the organization (Flammer & Kacperczyk, 2016). Organizational members vis-à-vis external contractors are better suited for NPI-related tasks that draw on the wealth of proprietary know-how, since social relationships within firms do better than external markets in knowledge transfer and communication (Kogut & Zander, 1992; 1996). Informal CSR would enhance the quality of employee relations which, in turn, would help firms develop and apply specialized knowledge through increased employee cooperation and commitment (Flammer & Luo, 2017). Accordingly, the positive link between informal CSR and the rate of NPI was deemed stronger the more the firm relied on employees relatively to external contractors.

The fact that this result holds with more force as firms are more vertically integrated provides support to the claim that informal CSR engagement enables a social context that would

foster behavioral attitudes conducive to innovativeness among organizational members. Notwithstanding so, there should be some boundary conditions for such moderating effect. Arguably, some employee groups are more instrumental to innovation-based advantages than others. Given dual pressures for efficiency and flexibility, firms would most likely depend on external contractors for generic work; while relying upon employees for strategic tasks that draw on the wealth of their proprietary know-how (Wright et al., 2001).

On the other hand, I found that a direct effect of formal CSR on the rate of NPI was not significant. Formal CSR activities constitute a source of explicit knowledge in the form of rules and procedures that help in aligning the organization and keeping it accountable to external stakeholders (Barney, Wright, & Ketchen, 2001). However, as these become institutionalized as widely adopted “best practices”, they may not by themselves be a source of competitive advantage and directly affect the rate of NPI (Eisenhardt & Martin, 2000). According to the KBV, more than the availability of explicit knowledge, it is the organizational ability to effectively absorb tacit knowledge what will have the greatest impact on firm innovativeness (Alavi & Leidner, 2001; Zander & Kogut, 1995). Moreover, this result suggests that financial incentives or compensation oversight may be less important than an enabling working environment, where employees are given the opportunity to envision improvement opportunities and act creatively upon them (Salvato & Vassolo, 2017).

Notwithstanding so, failure to deliver high levels of formal CSR performance can lead firms to a situation where they cannot fully realize the benefits of the knowledge and resources they can acquire and control, should the governance system forsake to incentivize and monitor innovation-driven behaviors (Atanassov, 2013; Barney et al., 2001). The fact that results support an indirect effect of formal CSR through the moderation of R&D intensity, gives credence to this

conjecture. In specific, findings indicate that formal CSR would constitute an important signal of a firm's trustworthiness and, as such, an effective tool to get valuable advice on how to secure financial resources to grow R&D budgets, and well as on how to better direct organizational energies to exploit market opportunities.

I believe these findings contribute to the KBV literature. Specifically, the conceptual framework proposed theoretical mechanisms by which different types of CSR engagement congeal into capabilities that firms can employ to alter their knowledge base, and, in turn, build sustainable competitive advantages through NPI.

In addition, the informal-formal CSR conceptualization contributes to the CSR literature on a descriptive and an instrumental level. On a descriptive level, I consider how CSR has evolved into a multidimensional construct encompassing dimensions concerning both discretionary (i.e., environmental sustainability and social responsibility, herein labeled *informal* CSR), and compliance-oriented activities (i.e., corporate governance, herein labeled *formal* CSR). Meanwhile, on an instrumental level, findings contribute to the strategic CSR literature by offering a more nuanced understanding of how different types of CSR engagement may relatively play out to support and enhance firm's innovativeness (McWilliams et al., 2006). Study results ultimately highlight that the assessment of the effects of CSR on organizational outcomes that considers CSR as a composite construct may suffer from aggregation issues (Capelle-Blancard & Petit, 2017). Against this shortcoming, this work accounted for the effect of each pertinent CSR dimension on the rate of NPI. Furthermore, results indicated that both the mechanisms and magnitudes of the contribution of each component differ from one another.

These findings also have relevant implications for management practice. As societal views on the role of business in society evolve and CSR becomes a more prevalent mechanism among

firms to manage stakeholders' expectations (Wang et al., 2016), managers need to be mindful about its strategic role for the firm. While formal CSR remains largely out of the control of management as it largely stems from all-encompassing, homogenous regulatory requirements -and thus may not provide a *direct* source of competitive advantage-, results suggest that for R&D intensive firms, high formal CSR performance provides a platform for the acquisition of R&D funding, as well as access to advice networks (i.e., through the board of directors) that enhance firms resource allocation which, collectively, may support higher rates of NPI. Meanwhile, informal CSR remains under management's discretion. This study offers evidence that informal CSR engagement may serve as an important employee governance tool, such that firms may better attract and retain knowledgeable talent that would engage in innovative projects and contribute to overall organizational success.

Finally, I acknowledge a number of limitations of my work. First, as discussed on Chapter 3, concerns pertaining to the possibility of firms gaming social and corporate governance scores, can be mitigated by noting that Thompson Reuters ASSET4 relies on multiple sources to triangulate their data. Moreover, this dataset has been validated by previous studies (Malik, 2015). Additionally, robustness analyses using alternative measures of CSR were conducted to enhance confidence in the results.

Second, regarding model specification, all predictors were included with one lag in order to partially address reverse causality concerns (Nadkarni & Chen, 2014). In addition, the type of negative binomial estimation employed has been considered an effective strategy to deal with excess zeros, endogenous treatment effects and attrition bias issues (Freund et al, 1999). Furthermore, robustness analyses were conducted incorporating informal CSR measured as a latent variable. Nonetheless, while the above mentioned cautionary measures were intended to

control for potential endogeneity bias, I remain cautious about inferring causality from results. (Quasi)Natural experiments offer great potential to address the caveats of the present study. However, there are important trade-offs involved in using experimental or ‘CSR shocks’ data. Often times, data would more easily capture specific CSR initiatives or dimensions (e.g., Flammer & Bansal, 2017; Flammer & Kacperczyk, 2016); while not apprehending CSR in its multidimensionality.

Third, NPI decisions are core to the horizontal boundaries of the firm (Grant, 2006). However, results should be interpreted with caution in what regards to the horizontal scope of the firm. In the analyses, I have only focused on NPI, while not considering product exits. Thus, results cannot determine the *net* effect on firms’ horizontal scope.

Lastly, product counts have not been qualified over a spectrum of radical vis-à-vis more incremental innovations. Relatedly, the NPI data does not yet allow to determine how these are related to the current portfolio of firm products. An important area of future inquiry involves the construction of measures of portfolio (dis)similarity. This way, subsequent empirical work could generate finer-grained data to better understand how CSR affects not only the breadth but also the depth of firms’ innovative capabilities. Hopefully these limitations can be taken up by the scholarly community as promising avenues for future research.

Chapter 5: Conclusion

The paradigm defining competitiveness is shifting. Added to the challenges posed by rapid technological change, hypercompetition, and globalization, corporations are at the helm of numerous environmental, social, and corporate governance issues, and are therefore increasingly looked upon to provide stewardship in addressing them through CSR initiatives (Dauvergne & Lister, 2013). However, the link between firms' CSR engagement and competitively-oriented strategic decisions has remained only partially addressed. The overall motivation for this thesis was to develop an explicit understanding how CSR affects fundamental strategic decisions, specifically those concerning VI and NPI.

This thesis makes three theoretical contributions. First, through systematically reviewing the extant VI literature, it clarifies the ambiguity around this important construct. Furthermore, the review substantiates the novelty of integrating CSR with the analysis of vertical boundaries. Second, this thesis has made significant contributions to the TCE and KBV literatures by advancing theoretical mechanisms by which CSR would affect the level of VI and the rate of NPI. Third, while extant literature on strategic CSR has been prevalent on anecdotal evidence, conflicting theoretical arguments, and the availability of cross-sectional firm-level data (Malik, 2015), this thesis offers a systematic empirical examination of the implications of CSR on corporate scope that draws from panel data, accounting for dynamic effects.

The findings of this thesis also shed light into important areas of management practice. Managers are faced with an assorted menu of 'tools' to organize firm boundaries that would have implications for firm competitiveness and survival. Chapter 2 showed that VI would constitute one such tool in the strategic toolbox. The systematic literature review suggested that, whereas firms

may profit from flexibility and efficiency gains of outsourcing practices, de-integrating core activities might erode the very sources of their competitive advantages.

In addition, as societal expectations of CSR grow, managers feel compelled to rethink organizations as mere devices for structuring economically efficient transactions, and govern value chain activities considering their engagement with CSR. Chapter 3 examined the link between CSR and VI. Findings elucidate that high CSR performing firms would tend to be more vertically integrated such that they may minimize business risks, as well as comply with increasing stakeholders' expectations concerning social responsibility. In addition, results point out to the emergence of CSR as form of corporate self-regulation, which may potentially expand firms' vertical boundaries.

Lastly, chapter 4 examined how different CSR dimensions and related activities would affect the rate of NPI. Findings suggest that formal CSR activities pertaining to corporate governance - which typically stem from regulatory requirements -, would not directly affect NPI. However, as firms increase their levels of R&D intensity, formal CSR would be positively associated with higher rates of NPI, through lower R&D funding constrains and better resource allocation. On its part, informal CSR, has been found to be positively associated with higher rates of NPI. In this regard, results indicate that informal CSR engagement would serve as an employee governance tool, such that firms may better attract and retain talent that would engage in NPI activities that would aid in promoting overall firm competitiveness.

5.1 General limitations of the present work

The notion of “responsibility” alludes to the (non-observable) values' structure of the firm and its participant actors (Furness & Nelson, 2016). The concept of CSR encompasses broad

symbolic, cultural, and firm-level identity traits (Suddaby et al., 2010). Hence, CSR content or meaning is expected to vary from firm to firm.

That said, the present study has drawn on a narrower and more technical working definition of CSR that focuses on observable activities (Frederick, 1994; Wood, 1991). Moreover, my working definition of CSR employed does not capture the myriad of different behaviors depending on competing definitions, but only what is captured by ESG scores (Dahlsrud, 2008; Gibson, Hassan, & Tansey, 2013).

Second, the thesis largely relies on secondary data from large multinational corporations. Sample selection intended to maximize the number of observations, in terms of companies, years, and industry sectors. Furthermore, focus on S&P 500 firms offered availability of credible self-reported data (e.g., financial indicators or new products announcements), as listed firms are subject to high levels of scrutiny from the public, as well as from the investment community (Cheng et al., 2014). Care must be taken, however, in extending the implications of the thesis' findings beyond the sample. In particular, results may not apply to small and medium-sized enterprises (SMEs). Extant literature suggests that SMEs CSR engagement may be characteristically different from that of large firms (Soundararajan, Jamali, Spence, 2018).

Third, whereas reliance on longitudinal, cross-industry, as well as cross-country secondary data has allowed for a more systematic test of the links among CSR, VI, and NPI, future case-based research shall help in contextualizing these findings, providing more textured and rich insights on how CSR may be affecting ways of doing business in specific economic sectors, facing different institutional environments.

Fourth, and once again, causal inferences from empirical results in the absence of randomized experiments must be subject to caution.

Overall, I believe the present research advances the scholarship it sought to address and future studies might build upon it by further nuancing the proposed relationships, and finding ways to overcome its limitations.

Bibliography

- Abdi, M., & Aulakh, P. S. (2017). Locus of uncertainty and the relationship between contractual and relational governance in cross-border interfirm relationships. *Journal of Management*, 43(3), 771–803.
- Achrol, R. S. (1997). Changes in the theory of interorganizational relations in marketing: Toward a network paradigm. *Journal of the Academy of Marketing Science*, 25(1), 56-71.
- Achrol, R. S., & Kotler, P. (1999). Marketing in the network economy. *Journal of Marketing*, 146-163.
- Acquier, A., Valiorgue, B., & Daudigeos, T. (2017). Sharing the shared value: A transaction cost perspective on strategic CSR policies in global value chains. *Journal of Business Ethics*, 144(1), 139–152.
- Afuah, A. (2001). Dynamic boundaries of the firm: Are firms better off being vertically integrated in the face of a technological change? *Academy of Management Journal*, 44(6), 1211-1228.
- Aghion, P., Van Reenen, J., & Zingales, L. (2013). Innovation and institutional ownership. *American Economic Review*, 103(1), 277-304.
- Aguilera, R., & Rupp, D. (2007). Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations. *Academy of Management Review*, 32(3), 836-863.
- Aguilera, R., Filatotchev, I., & Gospel, H. (2008). An organizational approach to comparative corporate governance: Costs, contingencies, and complementarities. *Organization Science*, 19(3), 475-492.
- Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of Management*, 38(4), 932-968.
- Ahern, K. R., & Harford, J. (2014). The importance of industry links in merger waves. *Journal of Finance*, 69(2), 527-576.
- Ahmadjian, C. L., & Lincoln, J. R. (2001). Keiretsu, governance, and learning: Case studies in change from the Japanese automotive industry. *Organization Science*, 12(6), 683-701.
- Ahuja, G., Lampert, C., & Tandon, V. (2008). Moving beyond Schumpeter: Management research on the determinants of technological innovation. *Academy of Management annals*, 2(1), 1-98.
- Aiken, L., West, S., & Reno, R. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, California: Sage Publications.

Akerlof, G. 1970. The market for lemons: Qualitative uncertainty and the market mechanism. *Quarterly Journal of Economics*, 84(3): 488-500.

Alavi, M., & Leidner, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly*, 107–136.

Albert, S., & Whetten, D. (1985). Organizational identity. *Research in Organizational Behavior*, 7, 263-295.

Alcacer, J., & Oxley, J. (2014). Learning by supplying. *Strategic Management Journal*, 35(2), 204-223.

Alchian, A. (1977). Some economics of property rights. In *Economic forces at work* (pp. 127–149). Indianapolis, IN: Liberty Press.

Alchian, A., & Demsetz, H. (1972). Production, information costs, and economic organization. *American Economic Review*, 62(5), 777-795.

Allen, J. W., & Phillips, G. M. (2000). Corporate equity ownership, strategic alliances, and product market relationships. *Journal of Finance*, 55(6), 2791-2815.

Almeida, P. (1996). Knowledge sourcing by foreign multinationals: Patent citation analysis in the US semiconductor industry. *Strategic Management Journal*, 17(S2), 155–165.

Amit, R., & Schoemaker, P. J. (1993). Strategic assets and organizational rent. *Strategic management journal*, 14(1), 33-46.

Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297–1333.

Ansoff, H. (1958). A model for diversification. *Management Science*, 4(4), 392-414.

Araujo, L., Dubois, A., & Gadde, L. E. (2003). The multiple boundaries of the firm. *Journal of Management Studies*, 40(5), 1255–1277.

Argyres, N. S. (1996). Evidence on the role of firm capabilities in vertical integration decisions. *Strategic Management Journal*, 17(2), 129-150.

Argyres, N. S. (1999). The impact of information technology on coordination: evidence from the B-2 “Stealth” bomber. *Organization Science*, 10(2), 162-180.

Argyres, N. S., & Liebeskind, J. (1999). Contractual commitments, bargaining power, and governance inseparability: Incorporating history into transaction cost theory. *Academy of Management Review*, 24(1), 49-63.

- Argyres, N. S., & Mostafa, R. (2016). Knowledge inheritance, vertical integration, and entrant survival in the early US auto industry. *Academy of Management Journal*, 59(4), 1474-1492.
- Argyres, N. S., & Zenger, T. R. (2012). Capabilities, transaction costs, and firm boundaries. *Organization Science*, 23(6), 1643-1657.
- Arora, A., & Merges, R. P. (2004). Specialized supply firms, property rights and firm boundaries. *Industrial and Corporate Change*, 13(3), 451-475.
- Artz, K., & Brush, T. (2000). Asset specificity, uncertainty and relational norms: an examination of coordination costs in collaborative strategic alliances. *Journal of Economic Behavior & Organization*, 41(4), 337-362.
- Atanassov, J. (2013). Do hostile takeovers stifle innovation? Evidence from antitakeover legislation and corporate patenting. *The Journal of Finance*, 68(3), 1097-1131.
- Athanassiou, N., & Nigh, D. (1999). The impact of US company internationalization on top management team advice networks: A tacit knowledge perspective. *Strategic Management Journal*, 83-92.
- Aulakh, P. S., & Kotabe, M. (1997). Antecedents and performance implications of channel integration in foreign markets. *Journal of International Business Studies*, 145-175.
- Ayuso, S., Rodríguez, M. A., García-Castro, R., & Ariño, M. A. (2014). Maximizing stakeholders' interests: An empirical analysis of the stakeholder approach to corporate governance. *Business & Society*, 53(3), 414-439.
- Baker, G., Gibbons, R., & Murphy, K. (2002). Relational contracts and the theory of the firm. *Quarterly Journal of Economics*, 117(1), 39-84.
- Balakrishnan, S., & Wernerfelt, B. (1986). Technical change, competition and vertical integration. *Strategic Management Journal*, 7(4), 347-359.
- Baldwin, C. Y. (2008). Where do transactions come from? Modularity, transactions, and the boundaries of firms. *Industrial and Corporate Change*, 17(1), 155-195.
- Bansal, P. (2005). Evolving sustainably: A longitudinal study of corporate sustainable development. *Strategic Management Journal*, 26(3), 197-218.
- Bansal, P., & Song, H.-C. (2017). Similar but not the same: Differentiating corporate sustainability from corporate responsibility. *Academy of Management Annals*, 11(1), 105-149.
- Barnett, M. L. (2007). Stakeholder influence capacity and the variability of financial returns to corporate social responsibility. *Academy of Management Review*, 32(3), 794-816.

Barney, J., Wright, M., & Ketchen, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, 27(6), 625–641.

Barthelemy, J. (2003). The seven deadly sins of outsourcing. *Academy of Management Executive*, 17(2), 87-98.

Barzel, Y. 1982. Measurement cost and the organization of markets. *Journal of Law and Economics* 25(1) 27-48.

Bascle, G. (2008). Controlling for endogeneity with instrumental variables in strategic management research. *Strategic Organization*, 6(3), 285-327.

Baum, C. (2001). Residual diagnostics for cross-section time series regression models. *The Stata Journal*, 1(1), 101-104.

Baumann-Pauly, D., Wickert, C., Spence, L. J., & Scherer, A. G. (2013). Organizing corporate social responsibility in small and large firms: Size matters. *Journal of Business Ethics*, 115(4), 693-705.

Becker, G. (1962). Investment in human capital: A theoretical analysis. *Journal of Political Economy*, 70(5, Part 2), 9-49.

Becker, G. S. (1964). *Human capital: a theoretical and empirical analysis, with special reference to education*. New York: National Bureau of Economic Research: Columbia University Press.

Bensaou, M., & Anderson, E. (1999). Buyer-supplier relations in industrial markets: When do buyers risk making idiosyncratic investments? *Organization Science*, 10(4), 460-481.

Berle Jr A. A., & Means, G. C. (1932). *The modern corporation and private property*. New York: MacMillan.

Berrone, P., Fosfuri, A., Gelabert, L., & Gomez-Mejia, L. (2013). Necessity as the mother of “green” inventions: Institutional pressures and environmental innovations. *Strategic Management Journal*, 34(8), 891-909.

Bethel, J., & Liebeskind, J. (1993). The effects of ownership structure on corporate restructuring. *Strategic Management Journal*, 14(S1), 15-31.

Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.

Boumgarden, P., Nickerson, J., & Zenger, T. R. (2012). Sailing into the wind: Exploring the relationships among ambidexterity, vacillation, and organizational performance. *Strategic Management Journal*, 33(6, SI), 587–610.

Bourdieu, P. (1977). *Outline of a theory of practice*. West Nyack: Cambridge University Press.

- Bowman, D., & Gatignon, H. (1995). Determinants of competitor response time to a new product introduction. *Journal of Marketing Research*, 32(1), 42.
- Boyd, D. E., Spekman, R. E., Kamauff, J. W., & Werhane, P. (2007). Corporate social responsibility in global supply chains: A procedural justice perspective. *Long Range Planning*, 40(3), 341–356.
- Bradach, J. L. (1997). Using the plural form in the management of restaurant chains. *Administrative Science Quarterly*, 276-303.
- Brahm, F., & Tarziján, J. (2014). Transactional hazards, institutional change, and capabilities: Integrating the theories of the firm. *Strategic Management Journal*, 35(2), 224-245.
- Brahm, F., & Tarzijan, J. (2016). Relational Contracts and Collaboration in the Supply Chain: Impact of Expected Future Business Volume on the Make-or-Buy Decision. *Journal of Supply Chain Management*, 52(3), 48–67.
- Brahm, F., & Tarziján, J. (2016). Toward an integrated theory of the firm: The interplay between internal organization and vertical integration. *Strategic Management Journal*, 37(12), 2481–2502.
- Brammer, S., & Millington, A. (2008). Does it pay to be different? An analysis of the relationship between corporate social and financial performance. *Strategic Management Journal*, 29(12), 1325–1343.
- Brammer, S., & Pavelin, S. (2006). Corporate reputation and social performance: The importance of fit. *Journal of Management Studies*, 43(3), 435-455.
- Brammer, S., Jackson, G., & Matten, D. (2012). Corporate social responsibility and institutional theory: New perspectives on private governance. *Socio-Economic Review*, 10(1), 3-28.
- Brammer, S., Millington, A., & Rayton, B. (2007). The contribution of corporate social responsibility to organizational commitment. *The International Journal of Human Resource Management*, 18(10), 1701–1719.
- Brouthers, K. D., & Brouthers, L. E. (2003). Why service and manufacturing entry mode choices differ: The influence of transaction cost factors, risk and trust. *Journal of Management Studies*, 40(5), 1179–1204.
- Brusoni, S., Prencipe, A., & Pavitt, K. (2001). Knowledge specialization, organizational coupling, and the boundaries of the firm: Why do firms know more than they make? *Administrative Science Quarterly*, 46(4), 597–621.
- Bucheli, M., Mahoney, J. T., & Vaaler, P. M. (2010). Chandler's living history: The visible hand of vertical integration in nineteenth century America viewed under a twenty-first century transaction costs economics lens. *Journal of Management Studies*, 47(5, SI), 859–883.

- Buis, M. L. (2010). Stata tip 87: Interpretation of interactions in non-linear models. *The Stata Journal*, 10(2), 305-308.
- Burns, T., & Stalker, G. M. (1961). *The management of innovation*. London: Tavistock Publications.
- Buvik, A., & John, G. (2000). When does vertical coordination improve industrial purchasing relationships? *Journal of Marketing*, 64(4), 52-64.
- Cameron, A. C., & Trivedi, P. K. (2010). *Microeconometrics using Stata (Vol. 2)*. College Station, TX: Stata Press.
- Camisón-Zornoza, C., & Lapiedra-Alcamí, R. (2004). A meta-analysis of innovation and organizational size. *Organization Studies*, 25(3), 331-361.
- Campbell, J. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review*, 32(3), 946-967.
- Capelle-Blancard, G., & Petit, A. (2017). The weighting of CSR dimensions: One size does not fit all. *Business & Society*, 56(6), 919-943.
- Capron, L., & Chatain, O. (2008). Competitors' resource-oriented strategies: Acting on competitors' resources through interventions in factor markets and political markets. *Academy of Management Review*, 33(1), 97-121.
- Carmeli, A., Gilat, G., & Waldman, D. A. (2007). The role of perceived organizational performance in organizational identification, adjustment and job performance. *Journal of Management Studies*, 44(6), 972-992.
- Carnahan, S., Kryscynski, D., & Olson, D. (2017). When Does Corporate Social Responsibility Reduce Employee Turnover? Evidence from Attorneys Before and After 9/11. *Academy of Management Journal*, 60(5), 1932-1962.
- Carroll, A., & Shabana, K. (2010). The business case for corporate social responsibility: A review of concepts, research and practice.
- Carroll, R. J., Primo, D. M., & Richter, B. K. (2016). Using item response theory to improve measurement in strategic management research: An application to corporate social responsibility. *Strategic Management Journal*, 37(1, SI), 66-85.
- Carter, R., & Hodgson, G. M. (2006). The impact of empirical tests of transaction cost economics on the debate on the nature of the firm. *Strategic Management Journal*, 27(5), 461-476.

- Chen, S.-F. S. (2010). Transaction cost implication of private branding and empirical evidence. *Strategic Management Journal*, 31(4), 371–389.
- Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal*, 35(1), 1–23.
- Cheng, J. L. C., & Kesner, I. F. (1997). Organizational Slack and Response to Environmental Shifts: The Impact of Resource Allocation Patterns. *Journal of Management*, 23(1), 1–18.
- Cheung, S. N. S. (1983). The contractual nature of the firm. *Journal of Law and Economics*, 26(1), 1-21.
- Chi, T. (1994). Trading in strategic resources: Necessary conditions, transaction cost problems, and choice of exchange structure. *Strategic Management Journal*, 15(4), 271-290.
- Chiles, T. H., & McMackin, J. F. (1996). Integrating variable risk preferences, trust, and transaction cost economics. *Academy of Management Review*, 21(1), 73-99.
- Christensen, C. M., Verlinden, M., & Westerman, G. (2002). Disruption, disintegration and the dissipation of differentiability. *Industrial and Corporate Change*, 11(5), 955–993.
- Chung, K. H., & Zhang, H. (2011). Corporate governance and institutional ownership. *Journal of Financial and Quantitative Analysis*, 46(1), 247-273.
- Clarkson, M. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of Management Review*, 20(1), 92-117.
- Claussen, J., Kretschmer, T., & Stieglitz, N. (2015). Vertical Scope, Turbulence, and the Benefits of Commitment and Flexibility. *Management Science*, 61(4), 915–929.
- Coase, R. (1937). The nature of the firm. *Economica*, 4(16), 386-405.
- Coase, R. (1972). Industrial organization: a proposal for research. In *Economic Research: Retrospect and Prospect, Volume 3, Policy Issues and Research Opportunities in Industrial Organization* (pp. 59-73). NBER.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. (2nd -- ed.). Hillsdale, N.J: L. Erlbaum Associates.
- Cohen, W., & Levinthal, D. (1990). Absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly*, 128-152.
- Combs, J. G., & Ketchen Jr, D. J. (1999). Explaining interfirm cooperation and performance: toward a reconciliation of predictions from the resource-based view and organizational economics. *Strategic Management Journal*, 867-888.

- Conti, R., Gambardella, A., & Novelli, E. (2013). Research on Markets for Inventions and Implications for R&D Allocation Strategies. *Academy of Management Annals*, 7(1), 717–774.
- Contractor, F. J., Kumar, V., Kundu, S. K., & Pedersen, T. (2010). Reconceptualizing the firm in a world of outsourcing and offshoring: The organizational and geographical relocation of high-value company functions. *Journal of Management Studies*, 47(8), 1417–1433.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874–900.
- Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of Management Studies*, 47(6), 1154–1191.
- Crouchley, R., & Davies, R. (1999). A comparison of population average and random-effect models for the analysis of longitudinal count data with base-line information. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 162(3), 331-347.
- Dahlsrud, A. (2008). How corporate social responsibility is defined: An analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management*, 15(1), 1-13.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 555-590.
- Damanpour, F. (1992). Organizational size and innovation. *Organization Studies*, 13(3), 375-402.
- Das, T., & Teng, B. (2000). A resource-based theory of strategic alliances. *Journal of Management*, 26(1), 31-61.
- Dass, N., Kale, J. R., & Nanda, V. (2015). Trade credit, relationship-specific investment, and product market power. *Review of Finance*, 19(5), 1867-1923.
- Dauvergne, P., & Lister, J. (2012). Big brand sustainability: Governance prospects and environmental limits. *Global Environmental Change*, 22(1), 36-45.
- Dauvergne, P., & Lister, J. (2013). *Eco-business: A big-brand takeover of sustainability*. MIT Press.
- David, R. J., & Han, S. K. (2004). A systematic assessment of the empirical support for transaction cost economics. *Strategic Management Journal*, 25(1), 39–58.
- de Vries, T., Hollenbeck, J. R., Davison, R. B., Walter, F., & van der Vegt, G. S. (2016). Managing coordination in multiteam systems: Integrating micro and macro perspectives. *Academy of Management Journal*, 59(5), 1823-1844.

- Delmas, M., Hoffmann, V. H., & Kuss, M. (2011). Under the tip of the iceberg: Absorptive capacity, environmental strategy, and competitive advantage. *Business & Society*, 50(1), 116-154.
- Demsetz, H. (1967). Toward a theory of property rights. *American Economic Review*, 57(2), 347-359.
- Devinney, T. M. (2009). Is the socially responsible corporation a myth? The good, the bad, and the ugly of corporate social responsibility. *Academy of Management Perspectives*, 23(2), 44-56.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147-160.
- Doh, J., Husted, B. W., Matten, D., & Santoro, M. (2010). Ahoy there! Toward greater congruence and synergy between international business and business ethics theory and research. *Business Ethics Quarterly*, 20(3), 481-502.
- Donaldson, L. (2001). *The contingency theory of organizations*. Thousand Oaks, California: Sage Publications.
- Dyer, J. H. (1996a). Does governance matter? Keiretsu alliances and asset specificity as sources of Japanese competitive advantage. *Organization Science*, 7(6), 649-666.
- Dyer, J. H. (1996b). Specialized supplier networks as a source of competitive advantage: Evidence from the auto industry. *Strategic Management Journal*, 271-291.
- Dyer, J. H. (1997). Effective interfirm collaboration: how firms minimize transaction costs and maximize transaction value. *Strategic Management Journal*, 535-556.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23(4), 660-679.
- Eccles, R., & Serafeim, G. (2013). The performance frontier. *Harvard Business Review*, 91(5), 50-60.
- Eccles, R., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835-2857.
- Eisenhardt, K. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.
- Eisenhardt, K., & Martin, J. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, 1105-1121.

- Eisenhardt, K., & Santos, F. (2002). Knowledge-based view: A new theory of strategy. In Pettigrew, A. M., Thomas, H., & Whittington, R. (Eds.). *Handbook of strategy and management*, (pp. 139-164).
- Ekeledo, I., & Sivakumar, K. (1998). Foreign market entry mode choice of service firms: A contingency perspective. *Journal of the Academy of Marketing Science*, 26(4), 274-292.
- El Akremi, A., Gond, J.-P., Swaen, V., De Roeck, K., & Igalens, J. (2018). How do employees perceive corporate responsibility? Development and validation of a multidimensional corporate stakeholder responsibility scale. *Journal of Management*, 44(2), 619-657.
- Espino-Rodríguez, T. F., & Padrón-Robaina, V. (2006). A review of outsourcing from the resource-based view of the firm. *International Journal of Management Reviews*, 8(1), 49-70.
- Fama, E. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 288-307.
- Fan, J. J. P. H., & Lang, L. H. P. L. (2000). The measurement of relatedness: An application to corporate diversification. *Journal of Business*, 73(4), 629-660.
- Fink, A. (2014). *Conducting research literature reviews: from the internet to paper*. Thousand Oaks, California: Sage Publications.
- Fiol, C. M. (1994). Consensus, diversity, and learning in organizations. *Organization Science*, 5(3), 403-420.
- Fiol, C., & Lyles, M. (1985). Organizational learning. *Academy of Management Review*, 10(4), 803-813.
- Flammer, C., & Bansal, P. (2017). Does a long-term orientation create value? Evidence from a regression discontinuity. *Strategic Management Journal*, 38(9), 1827-1847.
- Flammer, C., & Kacperczyk, A. (2015). Corporate social responsibility and the prevention of knowledge spillovers: Evidence from inevitable disclosure doctrines. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2661881>
- Flammer, C., & Kacperczyk, A. (2016). The impact of stakeholder orientation on innovation: Evidence from a natural experiment. *Management Science*, 62(7), 1982-2001.
- Flammer, C., & Luo, J. (2017). Corporate social responsibility as an employee governance tool: Evidence from a quasi-experiment. *Strategic Management Journal*, 38(2), 163-183.
- Flammer, C., Hong, B., & Minor, D. (2016). Corporate Governance and the rise of integrating corporate social responsibility criteria in executive compensation: Antecedents and outcomes. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2831694>

- Folta, T. (1998). Governance and uncertainty: The tradeoff between administrative control and commitment. *Strategic Management Journal*, 1007-1028.
- Foss, N., & Weber, L. (2016). Moving opportunism to the back seat: Bounded rationality, costly conflict, and hierarchical forms. *Academy of Management Review*, 41(1), 61-79.
- Frederick, W. C. (1994). From CSR1 to CSR2: The maturing of business-and-society thought. *Business & Society*, 33(2), 150-164.
- Freund, D. A., Kniesner, T. J., & LoSasso, A. T. (1999). Dealing with the common econometric problems of count data with excess zeros, endogenous treatment effects, and attrition bias. *Economics Letters*, 62(1), 7-12.
- Friedman, M. (1970). The social responsibility of business is to increase its profits. *New York Times Magazine* 13 September 1970.
- Furness, E., & Nelson, H. (2016). Are human values and community participation key to climate adaptation? The case of community forest organisations in British Columbia. *Climatic change*, 135(2), 243-259.
- Furst, A., Leimbach, M., & Prigge, J. K. (2017). Organizational multichannel differentiation: An analysis of its impact on channel relationships and company sales success. *Journal of Marketing*, 81(1), 59-82.
- Garcia-Castro, R., & Aguilera, R. V. (2015). Incremental value creation and appropriation in a world with multiple stakeholders. *Strategic Management Journal*, 36(1), 137-147.
- Garriga, E., & Melé, D. (2004). Corporate social responsibility theories: Mapping the territory. *Journal of Business Ethics*, 53(1), 51-71.
- Gartenberg, C., & Pierce, L. (2017). Subprime governance: Agency costs in vertically integrated banks and the 2008 mortgage crisis. *Strategic Management Journal*, 38(2), 300-321.
- Gereffi, G., & Korzeniewicz, M. (1994). *Commodity chains and global capitalism*. Westport, Conn: Praeger.
- Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. *Review of international political economy*, 12(1), 78-104.
- Geyskens, I., Steenkamp, J., & Kumar, N. (2006). Make, buy, or ally: A transaction cost theory meta-analysis. *Academy of Management Journal*, 49(3), 519-543.
- Ghoshal, S., & Moran, P. (1996). Bad for practice: A critique of the transaction cost theory. *Academy of Management Review*, 21(1), 13-47.

- Gibson, B., Hassan, S., & Tansey, J. (2013). *Sustainability assessment: criteria and processes*. Routledge.
- Gill, A. (2008). Corporate governance as social responsibility: A research agenda. *Berkeley Journal of International Law*, 26(2), 452.
- Gilley, K. M., & Rasheed, A. (2000). Making more by doing less: An analysis of outsourcing and its effects on firm performance. *Journal of Management*, 26(4), 763–790.
- Gioia, D. A., Schultz, M., & Corley, K. G. (2000). Organizational identity, image, and adaptive instability. *Academy of Management Review*, 25(1), 63-81.
- Gittell, J. H., & Weiss, L. (2004). Coordination networks within and across organizations: A multi-level framework. *Journal of Management Studies*, 41(1), 127-153.
- Goddard, J., Molyneux, P., Wilson, J. O. S., & Tavakoli, M. (2007). European banking: An overview. *Journal of Banking and Finance*, 31(7), 1911-1935.
- Gort, M. (1984). *Diversification and integration in American industry*. Westport, Conn: Greenwood Press.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481-510.
- Grant, R. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(S2), 109-122.
- Grant, R. (2006). Corporate strategy: managing scope and strategy content. In A. Pettigrew, H. Thomas, & R. Whittington (Eds.), *Handbook of strategy and management* (pp. 72–97). London: Sage Publications.
- Greenwood, R., Oliver, C., Suddaby, R., & Sahlin, K. (Eds.) (2008). *The SAGE Handbook of Organizational Institutionalism* (pp. 1–46). London: Sage Publications.
- Griffin, A. (1993). Metrics for measuring product development cycle time. *Journal of Product Innovation Management*, 10(2), 112-125.
- Griffin, J. J. (2016). *Managing corporate impacts: Co-creating value*. Cambridge University Press.
- Griffin, J. J., & Mahon, J. F. (1997). The corporate social performance and corporate financial performance debate: Twenty-five years of incomparable research. *Business & society*, 36(1), 5-31.

- Griffin, J. J., & Prakash, A. (2014). Corporate responsibility: Initiatives and mechanisms. *Business & Society*, 53(4), 465-482.
- Grover, V., & Malhotra, M. K. (2003). Transaction cost framework in operations and supply chain management research: theory and measurement. *Journal of Operations Management*, 21, 457–473.
- Gulati, R. (1995). Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances. *Academy of Management Journal*, 38(1), 85-112.
- Gulati, R., & Nickerson, J. A. (2008). Interorganizational trust, governance choice, and exchange performance. *Organization Science*, 19(5), 688-708.
- Gulati, R., & Singh, H. (1998). The architecture of cooperation: Managing coordination costs and appropriation concerns in strategic alliances. *Administrative Science Quarterly*, 781-814.
- Gulati, R., Lawrence, P. R., & Puranam, P. (2005). Adaptation in vertical relationships: Beyond incentive conflict. *Strategic Management Journal*, 26(5), 415–440.
- Gupta, A., & Govindarajan, V. (2000). Knowledge flows within multinational corporations. *Strategic Management Journal*, 473-496.
- Hambrick, D. C., & Chen, M. J. (2008). New academic fields as admittance-seeking social movements: The case of strategic management. *Academy of Management Review*, 33(1), 32-54.
- Hamilton, B., & Nickerson, J. (2003). Correcting for endogeneity in strategic management research. *Strategic Organization*, 1(1), 51-78.
- Hannan, M. T., & Freeman, J. (1977). The population ecology of organizations. *American Journal of Sociology*, 929–964.
- Harjoto, M. A., & Jo, H. (2011). Corporate governance and CSR nexus. *Journal of Business Ethics*, 100(1), 45-67.
- Harrigan, K. (1985). Vertical integration and corporate strategy. *Academy of Management Journal*, 28(2), 397-425.
- Hatch, N. W., & Dyer, J. H. (2004). Human capital and learning as a source of sustainable competitive advantage. *Strategic Management Journal*, 25(12), 1155–1178.
- Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica: Journal of the Econometric Society*, 1251–1271.
- Hawn, O., & Ioannou, I. (2016). Mind the gap: The interplay between external and internal actions in the case of corporate social responsibility. *Strategic Management Journal*, 37(13), 2569–2588.

- Heide, J. B. (2003). Plural governance in industrial purchasing. *Journal of Marketing*, 67(4), 18-29.
- Heide, J. B., Kumar, A., & Wathne, K. H. (2014). Concurrent sourcing, governance mechanisms, and performance outcomes in industrial value chains. *Strategic Management Journal*, 35(8), 1164–1185.
- Heide, J., & John, G. (1992). Do norms matter in marketing relationships? *Journal of Marketing*, 32-44.
- Heide, J., Wathne, K., & Rokkan, A. (2007). Interfirm monitoring, social contracts, and relationship outcomes. *Journal of Marketing Research*, 44(3), 425-433.
- Helfat, C. E., & Campo-Rembado, M. A. (2016). Integrative capabilities, vertical integration, and innovation over successive technology lifecycles. *Organization Science*, 27(2), 249-264.
- Helfat, C. E., & Raubitschek, R. S. (2000). Product sequencing: Co-evolution of knowledge, capabilities and products. *Strategic Management Journal*, 21(10–11), 961–979.
- Helfat, C. E., & Winter, S. G. (2011). Untangling dynamic and operational capabilities: Strategy for the (N) ever-changing world. *Strategic Management Journal*, 32(11), 1243–1250.
- Hendry, J. R. (2006). Taking aim at business: What factors lead environmental non-governmental organizations to target particular firms? *Business & Society*, 45(1), 47-86.
- Hillman, A. J., & Hitt, M. A. (1999). Corporate political strategy formulation: A model of approach, participation, and strategy decisions. *Academy of Management Review*, 24(4), 825-842.
- Hillman, A., & Keim, G. (2001). Shareholder value, stakeholder management, and social issues: what's the bottom line? *Strategic Management Journal*, 125-139.
- Hitt, M. A., Hoskisson, R. E., & Ireland, R. D. (1990). Mergers and acquisitions and managerial commitment to innovation in M-form firms. *Strategic Management Journal*, 29-47.
- Hitt, M. A., Hoskisson, R. E., Johnson, R. A., & Moesel, D. D. (1996). The market for corporate control and firm innovation. *Academy of management journal*, 39(5), 1084-1119.
- Ho, J. L. Y., Wu, A., & Xu, S. X. (2011). Corporate Governance and returns on information technology investment: evidence from an emerging market. *Strategic Management Journal*, 32(6), 595–623.
- Hobday, M., Davies, A., & Prencipe, A. (2005). Systems integration: a core capability of the modern corporation. *Industrial and Corporate Change*, 14(6), 1109-1143.

- Hoetker, G. (2005). How much you know versus how well I know you: Selecting a supplier for a technically innovative component. *Strategic Management Journal*, 26(1), 75–96.
- Hoetker, G. (2007). The use of logit and probit models in strategic management research: Critical issues. *Strategic Management Journal*, 28(4), 331-343.
- Hoffman, A. (1999). Institutional evolution and change: Environmentalism and the US chemical industry. *Academy of Management Journal*.
- Holcomb, T., & Hitt, M. (2007). Toward a model of strategic outsourcing. *Journal of Operations Management*, 25(2), 464-481.
- Hölmstrom, B. R. (1979). Moral hazard and observability. *The Bell Journal of Economics*, 74-91.
- Hölmstrom, B. R., & Tirole, J. (1989). The theory of the firm. In Schmalensee, R., Armstrong, M., Willig, R. D., & Porter, R. H. (Eds.), 1, 61–133.
- Homans, G. (1961). *Human behavior: Its elementary forms*. New York: Harcourt, Brace.
- Howard-Grenville, J., Nash, J., & Coglianese, C. (2008). Constructing the license to operate: Internal factors and their influence on corporate environmental decisions. *Law & Policy*, 30(1), 73-107.
- Hull, C., & Rothenberg, S. (2008). Firm performance: The interactions of corporate social performance with innovation and industry differentiation. *Strategic Management Journal*, 29(7), 781-789.
- Husted, B. (1994). Transaction costs, norms, and social networks: A preliminary study of cooperation in industrial buyer-seller relationships in the United States and Mexico. *Business & Society*, 33(1), 30-57.
- Husted, B. (1998). Organizational justice and the management of stakeholder relations. *Journal of Business Ethics*, 17(6), 643-651.
- Husted, B. (2005). Risk management, real options, corporate social responsibility. *Journal of Business Ethics*, 60(2), 175-183.
- Husted, B. (2007). Agency, information, and the structure of moral problems in business. *Organization Studies*, 28(2), 177-195.
- Husted, B. W., & Allen, D. B. (2006). Corporate social responsibility in the multinational enterprise: strategic and institutional approaches. *Journal of International Business Studies*, 37(6), 838–849.

- Husted, B., & Folger, R. (2004). Fairness and transaction costs: The contribution of organizational justice theory to an integrative model of economic organization. *Organization Science*, 15(6), 719-729.
- Hutzschenreuter, T., & Groene, F. (2009). Changing Vertical Integration Strategies under Pressure from Foreign Competition: The Case of US and German Multinationals. *Journal of Management Studies*, 46(2), 269–307.
- Ingene, C. A., & Parry, M. E. (1995). Channel coordination when retailers compete. *Marketing Science*, 14(4), 360-377.
- Ioannou, I., & Serafeim, G. (2012). What drives corporate social performance? The role of nation-level institutions. *Journal of International Business Studies*, 43(9), 834–864.
- Ioannou, I., & Serafeim, G. (2015). The impact of corporate social responsibility on investment recommendations: Analysts' perceptions and shifting institutional logics. *Strategic Management Journal*, 36(7), 1053–1081.
- Iyer, G., & Villas-Boas, J. M. (2003). A bargaining theory of distribution channels. *Journal of Marketing Research*, 40(1), 80-100.
- Jacobides, M. G. (2005). Industry change through vertical disintegration: How and why markets emerged in mortgage banking. *Academy of Management Journal*, 48(3), 465–498.
- Jacobides, M. G., & Billinger, S. (2006). Designing the boundaries of the firm: From “make, buy, or ally” to the dynamic benefits of vertical architecture. *Organization Science*, 17(2), 249-261.
- Jacobides, M. G., & Hitt, L. M. (2005). Losing sight of the forest for the trees? Productive capabilities and gains from trade as drivers of vertical scope. *Strategic Management Journal*, 26(13), 1209-1227.
- Jacobides, M. G., & Winter, S. G. (2005). The co-evolution of capabilities and transaction costs: Explaining the institutional structure of production. *Strategic Management Journal*, 26(5), 395–413.
- Jacobides, M. G., & Winter, S. G. (2012). Capabilities: Structure, agency, and evolution. *Organization Science*, 23(5), 1365-1381.
- Jacobson, R. (1992). The “Austrian” school of strategy. *Academy of Management Review*, 17(4), 782-807.
- Jain, T., & Jamali, D. (2016). Looking inside the black box: The effect of corporate governance on corporate social responsibility. *Corporate Governance: An International Review*, 24(3), 253-273.

- Jamali, D., Safieddine, A. M., & Rabbath, M. (2008). Corporate Governance and Corporate Social Responsibility Synergies and Interrelationships. *Corporate Governance: An International Review*, 16(5), 443–459.
- Jap, S. D., & Ganesan, S. (2000). Control mechanisms and the relationship life cycle: Implications for safeguarding specific investments and developing commitment. *Journal of Marketing Research*, 37(2), 227-245.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Johnson, R. A., & Greening, D. W. (1999). The effects of corporate governance and institutional ownership types on corporate social performance. *Academy of management journal*, 42(5), 564-576.
- Jones, T. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. *Academy of Management Review*, 20(2), 404-437.
- Joseph, J., & Ocasio, W. (2012). Architecture, attention, and adaptation in the multibusiness firm: General electric from 1951 to 2001. *Strategic Management Journal*, 33(6, SI), 633–660.
- Joshi, A. W., & Stump, R. L. (1999). The contingent effect of specific asset investments on joint action in manufacturer-supplier relationships: An empirical test of the moderating role of reciprocal asset investments, uncertainty, and trust. *Journal of the Academy of Marketing Science*, 27(3), 291-305.
- Kale, J. R., & Shahrur, H. (2007). Corporate capital structure and the characteristics of suppliers and customers. *Journal of Financial Economics*, 83(2), 321-365.
- Kalnins, A. (2017). Pricing variation within dual-distribution chains: The different implications of externalities and signaling for high- and low-quality brands. *Management Science*, 63(1), 139-152.
- Kapoor, R., & Lee, J. M. (2013). Coordinating and competing in ecosystems: how organizational forms shape new technology investments. *Strategic Management Journal*, 34(3), 274-296.
- Katila, R., & Ahuja, G. (2002). Something old, something new: A longitudinal study of search behavior and new product introduction. *Academy of Management Journal*, 45(6), 1183-1194.
- Kedia, B. L., & Mukherjee, D. (2009). Understanding offshoring: A research framework based on disintegration, location and externalization advantages. *Journal of World Business*, 44(3), 250-261.
- Kim, E., Nam, D. I., & Stimpert, J. L. (2004). The applicability of Porter's generic strategies in the digital age: Assumptions, conjectures, and suggestions. *Journal of Management*, 30(5), 569-589.

- Kim, Y. H., & Davis, G. (2016). Challenges for global supply chain sustainability: Evidence from the conflict minerals reports. *Academy of Management Journal*, 59(6), 1896-1916.
- Kittilaksanawong, W. and Curcuraci, O. (2017). *Ferrero Group: Achieving sustainability through supply chain integration*. Ivey Publishing.
- Klassen, R. D., & Vereecke, A. (2012). Social issues in supply chains: Capabilities link responsibility, risk (opportunity), and performance. *International Journal of Production Economics*, 140(1), 103-115.
- Kleindorfer, P., & Wu, D. (2003). Integrating long-and short-term contracting via business-to-business exchanges for capital-intensive industries. *Management Science*, 49(11), 1597-1615.
- Klepper, S. (1997). Industry life cycles. *Industrial and Corporate Change*, 6(1), 145–182.
- Klepper, S., & Graddy, E. (1990). The evolution of new industries and the determinants of market structure. *RAND Journal of Economics*, 27–44.
- Knudsen, C. (1995). Theories of the firm, strategic management, and leadership. In Montgomery, C. A. (Ed.). *Resource-based and evolutionary theories of the firm: Towards a synthesis* (pp. 179-217). US: Springer.
- Kogut, B., & Kulatilaka, N. (2001). Capabilities as real options. *Organization Science*, 12(6), 744-758.
- Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3), 383-397.
- Kogut, B., & Zander, U. (1996). What firms do? Coordination, identity, and learning. *Organization Science*, 7(5), 502–518.
- Kolk, A., & Mauser, A. (2002). The evolution of environmental management: from stage models to performance evaluation. *Business strategy and the environment*, 11(1), 14-31.
- Kolk, A., & Pinkse, J. (2009). The integration of corporate governance in corporate social responsibility disclosures. *Corporate Social Responsibility and Environmental Management*, 17(1), 15-26.
- Kolk, A., & Pinkse, J. (2010). The integration of corporate governance in corporate social responsibility disclosures. *Corporate Social Responsibility and Environmental Management*, 17(1), 15-26.
- Kor, Y. Y., & Mahoney, J. T. (2000). Penrose's resource-based approach: The process and product of research creativity. *Journal of Management Studies*, 37(1), 109-139.

- Kor, Y. Y., Mahoney, J. T., & Michael, S. C. (2007). Resources, capabilities and entrepreneurial perceptions. *Journal of management studies*, 44(7), 1187-1212.
- Korschun, D. (2015). Boundary-spanning employees and relationships with external stakeholders: A social identity approach. *Academy of Management Review*, 40(4), 611–629.
- Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *Academy of Management Review*, 24(1), 64-81.
- Krippendorff, K. (2004). *Content analysis: An introduction to its methodology* (2nd ed.). Thousand Oaks, California: Sage.
- Lahiri, S. (2016). Does outsourcing really improve firm performance? Empirical evidence and research agenda. *International Journal of Management Reviews*, 18(4), 464-497.
- Lajili, K., Madunic, M., & Mahoney, J. (2007). Testing organizational economics theories of vertical integration. In Ketchen, D. J., Ketchen Jr, D. J., & Bergh, D. D. (Eds.). *Research methodology in strategy and management* (pp. 343-368). Emerald Group Publishing Limited.
- Lampel, J., Lant, T., & Shamsie, J. (2000). Balancing act: Learning from organizing practices in cultural industries. *Organization Science*, 11(3), 263-269.
- Larson, A. (1992). Network dyads in entrepreneurial settings: A study of the governance of exchange relationships. *Administrative Science Quarterly*, 76-104.
- Lavie, D., & Rosenkopf, L. (2006). Balancing exploration and exploitation in alliance formation. *Academy of Management Journal*, 49(4), 797-818.
- Lavie, D., Stettner, U., & Tushman, M. L. (2010). Exploration and exploitation within and across organizations. *Academy of Management Annals*, 4(1), 109–155.
- Lawrence, P., & Lorsch, J. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly*, 1-47.
- Leiblein, M. J., & Miller, D. J. (2003). An empirical examination of transaction- and firm-level influences on the vertical boundaries of the firm. *Strategic Management Journal*, 24(9), 839–859.
- Leiblein, M. J., Reuer, J. J., & Dalsace, F. (2002). Do make or buy decisions matter? The influence of organizational governance on technological performance. *Strategic Management Journal*, 23(9), 817–833.
- Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, 13(S1), 111-125.

- Lepak, D. P., & Snell, S. A. (1999). The human resource architecture: Toward a theory of human capital allocation and development. *Academy of Management Review*, 24(1), 31-48.
- Lerner, J., & Wulf, J. (2007). Innovation and incentives: Evidence from corporate R&D. *Review of Economics and Statistics*, 89(4), 634-644.
- Lev, B., Petrovits, C., & Radhakrishnan, S. (2010). Is doing good good for you? How corporate charitable contributions enhance revenue growth. *Strategic Management Journal*, 31(2), 182–200.
- Lockett, A., & Thompson, S. (2001). The resource-based view and economics. *Journal of Management*, 27(6), 723–754.
- Logsdon, J. M., & Wood, D. J. (2002). Business citizenship: From domestic to global level of analysis. *Business Ethics Quarterly*, 12(2), 155-187.
- Lorenzoni, G., & Lipparini, A. (1999). The leveraging of interfirm relationships as a distinctive organizational capability: A longitudinal study. *Strategic Management Journal*, 317-338.
- Lubin, D., & Esty, D. (2010). The sustainability imperative. *Harvard Business Review*, 88(5), 42–50.
- Macher, J. T. (2006). Technological development and the boundaries of the firm: A knowledge-based examination in semiconductor manufacturing. *Management Science*, 52(6), 826–843.
- Macher, J., & Richman, B. (2008). Transaction cost economics: An assessment of empirical research in the social sciences. *Business and Politics*, 10(1), 1-63.
- Macneil, I. R. (1978). Contracts: Adjustment of long term economic relationship under classical, neo-classical, and relational contract law. *Northwestern University Law Review*, 72, 854-906.
- Macneil, I. R. (1980). *The New Social Contract*. New Haven: Yale University Press.
- Madhok, A. (2002). Reassessing the fundamentals and beyond: Ronald Coase, the transaction cost and resource-based theories of the firm and the institutional structure of production. *Strategic Management Journal*, 23(6), 535–550.
- Mahoney, J. T. (1992). The choice of organizational form: vertical financial ownership versus other methods of vertical integration. *Strategic Management Journal*, 13(8), 559-584.
- Mahoney, J. T. (1995). The management of resources and the resource of management. *Journal of Business Research*, 33(2), 91-101.
- Mahoney, J. T., & Pandian, J. R. (1992). The resource-based view within the conversation of strategic management. *Strategic Management Journal*, 13(5), 363-380.

- Mahoney, J. T., & Qian, L. (2013). Market frictions as building blocks of an organizational economics approach to strategic management. *Strategic Management Journal*, 34(9), 1019–1041.
- Maignan, I., & Ralston, D. A. (2002). Corporate social responsibility in Europe and the US: Insights from businesses' self-presentations. *Journal of International Business Studies*, 33(3), 497-514.
- Malik, M. (2015). Value-enhancing capabilities of CSR: A brief review of contemporary literature. *Journal of Business Ethics*, 127(2), 419-438.
- March, J. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71–87.
- Marcus, A., & Geffen, D. (1998). The dialectics of competency acquisition: Pollution prevention in electric generation. *Strategic Management Journal*, 1145-1168.
- Martinez-Conesa, I., Soto-Acosta, P., & Palacios-Manzano, M. (2017). Corporate social responsibility and its effect on innovation and firm performance: An empirical research in SMEs. *Journal of Cleaner Production*, 142(Part 4), 2374–2383.
- Mason, C., & Simmons, J. (2014). Embedding corporate social responsibility in corporate governance: A stakeholder systems approach. *Journal of Business Ethics*, 119(1), 77-86.
- Mathrani, A., & Mathrani, S. (2016). Relational governance in outsourcing partnerships. *Competitiveness Review*, 26(4), 435–452.
- Maurer, I., & Ebers, M. (2006). Dynamics of social capital and their performance implications: Lessons from biotechnology start-ups. *Administrative Science Quarterly*, 51(2), 262–292.
- Mayer, K. J., & Nickerson, J. A. (2005). Antecedents and performance implications of contracting for knowledge workers: Evidence from information technology services. *Organization Science*, 16(3), 225-242.
- McEvily, B., Soda, G., & Tortoriello, M. (2014). More Formally: Rediscovering the missing link between formal organization and informal social structure. *Academy of Management Annals*, 8(1), 299–345.
- McGrath, R. G. (1997). A real options logic for initiating technology positioning investments. *Academy of Management Review*, 22(4), 974-996.
- McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: Correlation or misspecification? *Strategic Management Journal*, 21(5), 603–609.
- McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, 26(1), 117-127.

- McWilliams, A., Siegel, D. S., & Wright, P. M. (2006). Corporate social responsibility: Strategic implications. *Journal of Management Studies*, 43(1), 1-18.
- Mentzer, J. T., Min, S., & Zacharia, Z. G. (2000). The nature of interfirm partnering in supply chain management. *Journal of Retailing*, 76(4), 549-568.
- Mesquita, L. F., & Brush, T. H. (2008). Untangling safeguard and production coordination effects in long-term buyer-supplier relationships. *Academy of Management Journal*, 51(4), 785–807.
- Mesquita, L. F., & Lazzarini, S. (2008). Horizontal and vertical relationships in developing economies: Implications for SMEs' access to global markets. *Academy of Management Journal*, 51(2), 359-380.
- Mesquita, L. F., Anand, J., & Brush, T. (2008). Comparing the resource-based and relational views: knowledge transfer and spillover in vertical alliances. *Strategic Management Journal*, 29(9), 913-941.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340-363.
- Micelotta, E., Lounsbury, M., & Greenwood, R. (2017). Pathways of institutional change: An integrative review and research agenda. *Journal of Management*, 43(6), 1885–1910.
- Miller, K. D., & Tsang, E. W. K. (2011). Testing management theories: critical realist philosophy and research methods. *Strategic Management Journal*, 32(2), 139–158.
- Mintzberg, H. (1979). *The structuring of organizations: a synthesis of the research*. Englewood Cliffs, N.J: Prentice-Hall.
- Misangyi, V. F., & Acharya, A. G. (2014). Substitutes or complements? A configurational examination of corporate governance mechanisms. *Academy of Management Journal*, 57(6), 1681–1705.
- Mitchell, W., & Singh, K. (1996). Survival of businesses using collaborative relationships to commercialize complex goods. *Strategic Management Journal*, 169-195.
- Mohr, J., & Spekman, R. (1994). Characteristics of partnership success: Partnership attributes, communication behavior, and conflict resolution techniques. *Strategic Management Journal*, 15(2), 135-152.
- Montiel, I. (2008). Corporate social responsibility and corporate sustainability separate pasts, common futures. *Organization & Environment*, 21(3), 245-269.

- Montiel, I., Husted, B., & Christmann, P. (2012). Using private management standard certification to reduce information asymmetries in corrupt environments. *Strategic Management Journal*, 33(9), 1103-1113.
- Morris, J., Farrell, C., & Reed, M. (2016). The indeterminacy of “temporariness”: Control and power in neo-bureaucratic organizations and work in UK television. *Human Relations*, 69(12), 2274-2297.
- Mudambi, R., & Venzin, M. (2010). The strategic nexus of offshoring and outsourcing decisions. *Journal of Management Studies*, 47(8), 1510–1533.
- Nadkarni, S., & Chen, J. (2014). Bridging yesterday, today, and tomorrow: CEO temporal focus, environmental dynamism, and rate of new product introduction. *Academy of Management Journal*, 57(6), 1810-1833.
- Nakpodia, F., Adegbite, E., Amaeshi, K., & Owolabi, A. (2016, In Press). Neither principles nor rules: Making corporate governance work in Sub-Saharan Africa. *Journal of Business Ethics*, doi: <https://doi.org/10.1007/s10551-016-3208-5>.
- Nelson, R. (1959). The economics of invention: A survey of the literature. *Journal of Business*, 32(2), 101-127.
- Nelson, R., & Winter, S. (1982). *An evolutionary theory of economic change*. Cambridge, Massachusetts: Harvard University Press.
- Nerkar, A., & Roberts, P. (2004). Technological and product-market experience and the success of new product introductions in the pharmaceutical industry. *Strategic Management Journal*, 25(8-9), 779-799.
- Nicholls-Nixon, C., & Castilla, J. (2011). Latin America management research: Review, synthesis, and extension. *Journal of Management*, 37(4), 1178-1227.
- Nickerson, J., & Zenger, T. (2004). A knowledge-based theory of the firm -The problem-solving perspective. *Organization Science*, 15(6), 617-632.
- Nidumolu, R., Prahalad, C., & Rangaswami, M. (2009). Why sustainability is now the key driver of innovation. *Harvard Business Review*, 87(9), 56–64.
- North, D. C. (1990). *Institutions, institutional change, and economic performance*. New York: Cambridge University Press.
- O’Reilly, C. (1991). Organizational behavior: Where we’ve been, where were going. *Annual Review of Psychology*, 42(1), 427-458.

- Oliver, C. (1990). Determinants of interorganizational relationships: Integration and future directions. *Academy of Management Review*, 15(2), 241-265.
- Ouchi, W. (1980). Markets, bureaucracies, and clans. *Administrative Science Quarterly*, 129-141.
- Padgett, R. C., & Galan, J. I. (2010). The Effect of R&D Intensity on Corporate Social Responsibility. *Journal of Business Ethics*, 93(3), 407-418.
- Panwar, R., Nybakk, E., Hansen, E., & Pinkse, J. (2016). The effect of small firms' competitive strategies on their community and environmental engagement. *Journal of Cleaner Production*, 129, 578-585.
- Panwar, R., Nybakk, E., Hansen, E., & Pinkse, J. (2017). Does the business case matter? The effect of a perceived business case on small firms' social engagement. *Journal of Business Ethics*, 144(3), 597-608.
- Parmigiani, A., Klassen, R., & Russo, M. (2011). Efficiency meets accountability: Performance implications of supply chain configuration, control, and capabilities. *Journal of Operations Management*, 29(3), 212-22.
- Pedersen, E. R., & Andersen, M. (2006). Safeguarding corporate social responsibility (CSR) in global supply chains: How codes of conduct are managed in buyer-supplier relationships. *Journal of Public Affairs*, 6(3-4), 228-240.
- Peng, M. (2003). Institutional transitions and strategic choices. *Academy of Management Review*, 28(2), 275-296.
- Penrose, E. T. (1955). Limits to the Growth and Size of Firms. *American Economic Review*, 45(2), 531-543.
- Penrose, E. T. (1959). *The theory of the growth of the firm*. New York: Wiley.
- Peteraf, M. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179-191.
- Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. New York: Harper & Row.
- Pinkse, J., Kuss, M. J., & Hoffmann, V. H. (2010). On the implementation of a 'global' environmental strategy: The role of absorptive capacity. *International Business Review*, 19(2), 160-177.
- Podolny, J., & Page, K. (1998). Network forms of organization. *Annual Review of Sociology*, 24(1), 57-76.

- Pogutz, S., & Winn, M. I. (2016). Cultivating ecological knowledge for corporate sustainability: Barilla's innovative approach to sustainable farming. *Business Strategy and the Environment*, 25(6), 435-448.
- Poppo, L., & Zenger, T. (1998). Testing alternative theories of the firm: Transaction cost, knowledge-based, and measurement explanations for make-or-buy decisions in information services. *Strategic Management Journal*, 853-877.
- Poppo, L., & Zhou, K. (2014). Managing contracts for fairness in buyer–supplier exchanges. *Strategic Management Journal*, 35(10), 1508-1527.
- Poppo, L., Zhou, K., & Ryu, S. (2008). Alternative origins to interorganizational trust: An interdependence perspective on the shadow of the past and the shadow of the future. *Organization Science*, 19(1), 39-55.
- Poppo, L., Zhou, K., & Zenger, T. (2008). Examining the conditional limits of relational governance: specialized assets, performance ambiguity, and long-standing ties. *Journal of Management*, 45(7), 1195-1216.
- Porter, M. E. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. New York: Free Press.
- Porter, M. E. (1981). The contributions of industrial organization to strategic management. *Academy of Management Review*, 6(4), 609-620.
- Porter, M. E. (1985). *Competitive advantage: creating and sustaining superior performance*. New York; London: Free Press.
- Porter, M. E., & Kramer. (2006). Strategy & society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12), 78–92.
- Porter, M. E., & Van Der Linde, C. (1995). Toward a new conception of the environment-competitiveness relationship. *Journal of Economic Perspectives*, 9(4), 97–118.
- Powell, W. W. (1990). Neither market nor hierarchy: Network forms of organization. *Research in Organizational Behavior*, 12, 295-336.
- Raisch, S., & Birkinshaw, J. (2008). Organizational ambidexterity: Antecedents, outcomes, and moderators. *Journal of Management*, 34(3), 375-409.
- Rathert, N. (2016). Strategies of legitimation: MNEs and the adoption of CSR in response to host-country institutions. *Journal of International Business Studies*, 47(7), 858–879.
- Rindfleisch, A., & Heide, J. B. (1997). Transaction cost analysis: Past, present, and future applications. *Journal of Marketing*, 30-54.

- Robertson, T. S., & Gatignon, H. (1998). Technology development mode: A transaction cost conceptualization. *Strategic Management Journal*, 515-531.
- Rothaermel, F. T., & Deeds, D. L. (2004). Exploration and exploitation alliances in biotechnology: A system of new product development. *Strategic Management Journal*, 25(3), 201–221.
- Rugman, A., & Verbeke, A. (2002). Edith Penrose's contribution to the resource-based view of strategic management. *Strategic Management Journal*, 23(8), 769-780.
- Rumelt, R. R. (1974). *Strategy, structure, and economic performance*. Cambridge, Massachusetts: Division of Research, Graduate School of Business Administration, Harvard University.
- Rumelt, R., Schendel, D., & Teece, D. (1994). *Fundamental issues in strategy: a research agenda*. Boston, Mass: Harvard Business School Press.
- Saha, S., Saint, S., & Christakis, D. (2003). Impact factor: A valid measure of journal quality? *Journal of the Medical Library Association*, 91(1), 42-46.
- Sako, M., Chondrakis, G., & Vaaler, P. M. (2016). How do plural-sourcing firms make and buy? The impact of supplier portfolio design. *Organization Science*, 27(5), 1161-1182.
- Salvato, C., & Vassolo, R. (2017, In Press). The sources of dynamism in dynamic capabilities. *Strategic Management Journal*, doi: <https://doi.org/10.1002/smj.2703>.
- Santos, F. M., & Eisenhardt, K. M. (2005). Organizational boundaries and theories of organization. *Organization Science*, 16(5), 491-508.
- Sapra, H., Subramanian, A., & Subramanian, K. V. (2014). Corporate governance and innovation: Theory and evidence. *Journal of Financial and Quantitative Analysis*, 49(4), 957-1003.
- Sarkar, M. B., Aulakh, P. S., & Madhok, A. (2009). Process capabilities and value generation in alliance portfolios. *Organization Science*, 20(3), 583–600.
- Scherer, A. G., Palazzo, G., & Baumann, D. (2006). Global rules and private actors: Toward a new role of the transnational corporation in global governance. *Business Ethics Quarterly*, 16(4), 505–532.
- Scherer, A. G., Palazzo, G., & Seidl, D. (2013). Managing legitimacy in complex and heterogeneous environments: Sustainable development in a globalized world. *Journal of Management Studies*, 50(2), 259–284.
- Scherer, A., & Palazzo, G. (2011). The new political role of business in a globalized world: A review of a new perspective on CSR and its implications for the firm, governance, and democracy. *Journal of Management Studies*, 48(4), 899-931.

- Scherer, F. M., & Ross, D. (1980). *Industrial market structure and economic performance* (2nd ed.). Boston: Houghton Mifflin.
- Schilling, M. A., & Steensma, H. K. (2002). Disentangling the theories of firm boundaries: A path model and empirical test. *Organization Science*, 13(4), 387-401.
- Schneider, A., & Scherer, A. G. (2015). Corporate governance in a risk society. *Journal of Business Ethics*, 126(2), 309–323.
- Schumacker, R. E., & Lomax, R. G. (2010). *A beginner's guide to structural equation modeling*. New York: Routledge.
- Schumpeter, J. A. (1934). *The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle*. Cambridge, Massachusetts: Harvard University Press.
- Shaffer, B. (1995). Firm-level responses to government regulation: Theoretical and research approaches. *Journal of Management*, 21(3), 495-514.
- Shahzad, A., & Rutherford, M. (2016). Stakeholder-centric governance and corporate social performance: A cross-national study. *Corporate Social Responsibility and Environmental Management*, 23(2), 100-112.
- Sharma, S., & Vredenburg, H. (1998). Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities. *Strategic Management Journal*, 729-753.
- Shiu, Y., & Yang, S. (2017). Does engagement in corporate social responsibility provide strategic insurance-like effects? *Strategic Management Journal*, 38(2), 455-470.
- Short, J. L., Toffel, M. W., & Hugill, A. R. (2016). Monitoring global supply chains. *Strategic Management Journal*, 37(9), 1878–1897.
- Simon, H. A. (1962). The architecture of complexity. *Proceedings of the American Philosophical Society*, 106(6), 467-482.
- Simon, H. A. (1991). Bounded rationality and organizational learning. *Organization Science*, 2(1), 125-134.
- Smith, K. G., Collins, C. J., & Clark, K. D. (2005). Existing knowledge, knowledge creation capability, and the rate of new product introduction in high-technology firms. *Academy of management Journal*, 48(2), 346-357.
- Smith, T. M., & Fischlein, M. (2010). Rival private governance networks: Competing to define the rules of sustainability performance. *Global Environmental Change*, 20(3), 511-522.

- Sørensen, J., & Stuart, T. (2000). Aging, obsolescence, and organizational innovation. *Administrative Science Quarterly*, 45(1), 81-112.
- Soundararajan, V., Jamali, D., & Spence, L. J. (2017, In Press). Small Business Social Responsibility: A Critical Multilevel Review, Synthesis and Research Agenda. *International Journal of Management Reviews*, doi: <http://dx.doi.org/10.1111/ijmr.12171>.
- Sparkes, R., & Cowton, C. J. (2004). The maturing of socially responsible investment: A review of the developing link with corporate social responsibility. *Journal of Business Ethics*, 52(1), 45–57.
- Starkey, K., Barnatt, C., & Tempest, S. (2000). Beyond networks and hierarchies: Latent organizations in the UK television industry. *Organization Science*, 11(3), 299-305.
- Strieborny, M., & Kukenova, M. (2016). Investment in relationship-specific assets: Does finance matter? *Review of Finance*, 20(4), 1487-1515.
- Stroebel, J. (2016). Asymmetric information about collateral values. *The Journal of Finance*, 71(3), 1071-1112.
- Su, W., & Tsang, E. (2015). Product diversification and financial performance: The moderating role of secondary stakeholders. *Academy of Management Journal*, 58(4), 1128-1148.
- Suddaby, R. (2010). Editor's comments: Construct clarity in theories of management and organization. *Academy of Management Review*, 25(3), 346–357.
- Suddaby, R., Elsbach, K. D., Greenwood, R., Meyer, J. W., & Zilber, T. B. (2010). Organizations and their institutional environments—Bringing meaning, values, and culture back in. *Academy of Management Journal*, 53(6), 1234–1240.
- Suddaby, R., Foster, W., & Quinn Tank, C. (2010). Rhetorical history as a source of competitive advantage. In Baum & Lampel (Eds.). *The globalization of strategy research* (pp. 147-173). Emerald Group Publishing Limited.
- Surroca, J., Tribó, J., & Waddock, S. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic Management Journal*, 31(5), 463-490.
- Sutcliffe, K. M., & Zaheer, A. (1998). Uncertainty in the transaction environment: An empirical test. *Strategic Management Journal*, 1-23.
- Taneja, S. S., Taneja, P. K., & Gupta, R. K. (2011). Researches in corporate social responsibility: A review of shifting focus, paradigms, and methodologies. *Journal of Business Ethics*, 101(3), 343-364.

- Tang, Z., Hull, C., & Rothenberg, S. (2012). How corporate social responsibility engagement strategy moderates the CSR–financial performance relationship. *Journal of Management Studies*, 49(7), 1274-1303.
- Taylor, A., & Helfat, C. E. (2009). Organizational linkages for surviving technological change: Complementary assets, middle management, and ambidexterity. *Organization Science*, 20(4), 718–739.
- Teece, D. (1980). Economies of scope and the scope of the enterprise. *Journal of Economic Behavior & Organization*, 1(3), 223-247.
- Teece, D. (1982). Towards an economic theory of the multiproduct firm. *Journal of Economic Behavior & Organization*, 3(1), 39-63.
- Teece, D. (1992). Competition, cooperation, and innovation: Organizational arrangements for regimes of rapid technological progress. *Journal of Economic Behavior & Organization*, 18(1), 1-25.
- Teece, D., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- Tucker, I., & Wilder, R. (1977). Trends in vertical integration in the US manufacturing sector. *The Journal of Industrial Economics*, 81-94.
- Turban, D. B., & Greening, D. W. (1997). Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal*, 40(3), 658–672.
- Tushman, M., & O'Reilly, C. (1996). The ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38(4), 8-29.
- Vakili, K. (2016). Collaborative promotion of technology standards and the impact on innovation, industry structure, and organizational capabilities: Evidence from modern patent pools. *Organization Science*, 27(6), 1504-1524.
- Vasudeva, G. (2013). Weaving together the normative and regulative roles of government: How the Norwegian Sovereign Wealth Fund's responsible conduct is shaping firms' cross-border investments. *Organization Science*, 24(6), 1662-1682.
- Villalonga, B., & McGahan, A. M. (2005). The choice among acquisitions, alliances, and divestitures. *Strategic Management Journal*, 26(13), 1183–1208.
- Vogel, D. (2006). *Market for virtue: The potential and limits of corporate social responsibility*, rev ed., Brookings Institution Press, Washington, DC.

- Von Neumann, J., & Morgenstern, O. (1944). *Theory of games and economic behavior*. Princeton University Press.
- Waddock, S. (2008). Building a new institutional infrastructure for corporate responsibility. *Academy of Management Perspectives*, 22(3), 87-108.
- Waddock, S., & Graves, S. (1997). The corporate social performance-financial performance link. *Strategic Management Journal*, 303-319.
- Waldman, D., Siegel, D., & Javidan, M. (2006). Components of CEO transformational leadership and corporate social responsibility. *Journal of Management*, 43(8), 1703–1725.
- Walls, J. L., Berrone, P., & Phan, P. H. (2012). Corporate governance and environmental performance: Is there really a link? *Strategic Management Journal*, 33(8), 885-913.
- Wan, W., Hoskisson, R., & Short, J. (2011). Resource-based theory and corporate diversification: Accomplishments and opportunities. *Journal of Management*, 37(5), 1335-1368.
- Wang, H., & Choi, J. (2013). A new look at the corporate social–financial performance relationship the moderating roles of temporal and interdomain consistency in corporate social performance. *Journal of Management*, 39(2), 416-441.
- Wang, H., Tong, L., Takeuchi, R., & George, G. (2016). Corporate social responsibility: An overview and new research directions. *Academy of Management Journal*, 59(2), 534.
- Wang, Q., Dou, J., & Jia, S. (2016). A meta-analytic review of corporate social responsibility and corporate financial performance: The moderating effect of contextual factors. *Business & Society*, 55(8), 1083-1121.
- Wathne, K. H., & Heide, J. B. (2000). Opportunism in interfirm relationships: Forms, outcomes, and solutions. *Journal of Marketing*, 64(4), 36-51.
- Wathne, K. H., Biong, H., & Heide, J. B. (2001). Choice of supplier in embedded markets: Relationship and marketing program effects. *Journal of Marketing*, 65(2), 54-66.
- White, S., & Lui, S. S. Y. (2005). Distinguishing costs of cooperation and control in alliances. *Strategic Management Journal*, 26(10), 913–932.
- Wiersema, M. F., & Bowen, H. P. (2009). The use of limited dependent variable techniques in strategy research: issues and methods. *Strategic Management Journal*, 30(6), 679–692.
- Williamson, O. (1971). The vertical integration of production: market failure considerations. *The American Economic Review*, 61(2), 112-123.

- Williamson, O. (1975). *Markets and hierarchies, analysis and antitrust implications: A study in the economics of internal organization*. New York: Free Press.
- Williamson, O. E. (1983). Credible commitments: Using hostages to support exchange. *The American Economic Review*, 519-540.
- Williamson, O. E. (1985). *The economic institutions of capitalism: firms, markets, relational contracting*. New York: Free Press.
- Williamson, O. E. (1991a). Comparative economic organization: The analysis of discrete structural alternatives. *Administrative Science Quarterly*, 269-296.
- Williamson, O. E. (1991b). Strategizing, economizing, and economic organization. *Strategic Management Journal*, 12(S2), 75-94.
- Williamson, O. E. (1996). *The mechanisms of governance*. New York: Oxford University Press.
- Williamson, O. E. (1999). Strategy research: governance and competence perspectives. *Strategic Management Journal*, 1087-1108.
- Williamson, O. E. (2000). The new institutional economics: taking stock, looking ahead. *Journal of Economic Literature*, 38(3), 595-613.
- Williamson, O. E., Winter, S. G., & Coase, R. H. (1991). *The nature of the firm: origins, evolution, and development*. New York: Oxford University Press.
- Wood, D. J. (1991). Corporate social performance revisited. *Academy of Management Review*, 16(4), 691-718.
- Wooldridge, J. M. J. (2010). *Econometric analysis of cross section and panel data*. MIT Press.
- Wright, P. M., Dunford, B. B., & Snell, S. A. (2001). Human resources and the resource based view of the firm. *Journal of Management*, 27(6), 701-721.
- Wu, A. D., & Zumbo, B. D. (2008). Understanding and using mediators and moderators. *Social Indicators Research*, 87(3), 367.
- Wu, Y. (2015). Organizational Structure and Product Choice in Knowledge-Intensive Firms. *Management Science*, 61(8), 1830-1848.
- Wuyts, S., Stremersch, S., & Franses, P. H. (2004). Vertical marketing systems for complex products: A triadic perspective. *Journal of Marketing Research*, 41(4), 479-487.
- Yin, R. K. (2014). *Case study research: design and methods (5th ed.)*. Thousand Oaks, California: Sage Publications.

- Yiu, D. W., Lu, Y., Bruton, G. D., & Hoskisson, R. E. (2007). Business groups: An integrated model to focus future research. *Journal of Management Studies*, 44(8), 1551-1579.
- Young, S., & Thyil, V. (2014). Corporate social responsibility and corporate governance: Role of context in international settings. *Journal of Business Ethics*, 122(1), 1–24.
- Zaheer, A., & Venkatraman, N. (1995). Relational governance as an interorganizational strategy: An empirical test of the role of trust in economic exchange. *Strategic Management Journal*, 16(5), 373-392.
- Zahra, S. A., & Filatotchev, I. (2004). Governance of the entrepreneurial threshold firm: a knowledge-based perspective. *Journal of Management Studies*, 41(5), 885–897.
- Zander, U., & Kogut, B. (1995). Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. *Organization Science*, 6(1), 76–92.
- Zenger, T. R., & Hesterly, W. S. (1997). The disaggregation of corporations: Selective intervention, high-powered incentives, and molecular units. *Organization Science*, 8(3), 209-222.
- Zenger, T. R., Felin, T., & Bigelow, L. (2011). Theories of the firm–market boundary. *Academy of Management Annals*, 5(1), 89–133.
- Zhang, Y., & Gimeno, J. (2016). Earnings pressure and long-term corporate governance: Can long-term-oriented investors and managers reduce the quarterly earnings obsession? *Organization Science*, 27(2), 354–372.
- Zhou, Y. M., & Wan, X. (2017). Product variety and vertical integration. *Strategic Management Journal*, 38(5), 1134-1150.
- Ziedonis, R. H. (2004). Don't fence me in: Fragmented markets for technology and the patent acquisition strategies of firms. *Management science*, 50(6), 804-820.
- Zott, C., Amit, R., & Massa, L. (2011). The business model: Recent developments and future research. *Journal of Management*, 37(4), 1019–1042.
- Zucker, L. (1983). Organizations as institutions. *Research in the Sociology of Organizations*, 2(1), 1-47.

Appendices

Appendix A - Index of Publications

Full Publication Name	Abbreviation	Disciplinary Affiliation	Exemplary Quote from Website
Academy of Management Journal	AMJ	General Management	<i>The Academy of Management Journal is the flagship empirical journal in management, and has been indispensable reading for management scholars for more than five decades.</i>
Academy of Management Review	AMR	General Management	<i>The Academy of Management Review is ranked among the top five most influential and frequently cited management and business journals. AMR is a theory development journal that publishes the highest quality conceptual work being done in the field.</i>
Academy of Management Executive	AoME	General Management	<i>Effective February 2006 the Academy of Management Executive has changed its name to the Academy of Management Perspectives (AMP). AMP publishes articles and symposia that address important issues concerning management and business.</i>
Administrative Science Quarterly	ASQ	General Management	<i>Administrative Science Quarterly is a top-ranked, quarterly, peer-reviewed journal that publishes the best theoretical and empirical papers on organizational studies from dissertations and the evolving, new work of more established scholars, as well as interdisciplinary work in organizational theory, and informative book reviews.</i>
Human Relations	HR	Organizational Behavior, Organizational Theory	<i>Human Relations seeks high quality research papers that extend our knowledge of social relationships at work and organizational forms, practices and processes that affect the nature, structure, and conditions of work and work organizations.</i>
Industrial and Corporate Change	ICC	Strategic Management	<i>Industrial and Corporate Change is committed to presenting and interpreting corporate organization and change, innovation, industrial structures and dynamics, drawing from a variety of disciplines, including economics, management, history, political science, and sociology.</i>

Full Publication Name	Abbreviation	Disciplinary Affiliation	Exemplary Quote from Website
International Journal of Management Reviews	IJMR	General Management	<i>The International Journal of Management Reviews is the leading global review journal in Organisation and Management Studies.</i>
Journal of the Academy of Marketing Science	JAMS	Marketing	<i>The Journal of the Academy of Marketing Science is devoted to the study and improvement of marketing and serves as a vital link between scholarly research and practice by publishing research-based articles in the substantive domain of marketing</i>
Journal of Banking & Finance	JB&F	Finance	<i>The Journal of Banking and Finance publishes theoretical and empirical research papers spanning all the major research fields in finance and banking.</i>
Journal of Business Research	JBR	General Management	<i>The Journal of Business Research applies theory developed from business research to actual business situations. Recognizing the intricate relationships between the many areas of business activity, JBR examines a wide variety of business decisions, processes and activities within the actual business setting.</i>
Journal of International Business Studies	JIBS	International Business	<i>The top-ranked journal in the field of international business, Journal of International Business Studies is multidisciplinary in scope and interdisciplinary in content and methodology, publishing content from across the six sub-domains of international business studies.</i>
Journal of Marketing	JM	Marketing	<i>Established in 1936, Journal of Marketing has been the recognized leader in its field for more than seven decades. JM is positioned as the premier, broad-based, scholarly journal of the marketing discipline that focuses on substantive issues in marketing and marketing management.</i>
Journal of Marketing Research	JMR	Marketing	<i>Journal of Marketing Research concentrates on the subject of marketing research, from its philosophy, concepts, and theories to its methods, techniques, and applications.</i>
Journal of Management Studies	JMS	General Management	<i>The Journal of Management Studies is a globally respected, multidisciplinary journal with a long-established history of excellence in management research.</i>

Full Publication Name	Abbreviation	Disciplinary Affiliation	Exemplary Quote from Website
Journal of Business	JoB	General Management	<i>The Journal of Business ceased publication with the November 2006 issue. Founded in 1928, The Journal of Business was the first scholarly journal to focus on business-related research and played a pioneering role in fostering serious academic research about business.</i>
Journal of Finance	JoF	Finance	<i>The Journal of Finance publishes leading research across all the major fields of financial research. It is the most widely cited academic journal on finance.</i>
Journal of Financial Economics	JoFE	Finance	<i>The Journal of Financial Economics is a peer-reviewed academic journal covering the field of finance It is considered to be one of the premier finance journal.</i>
Journal of Retailing	JoR	Marketing, Strategic Management	<i>The Journal of Retailing is devoted to advancing the state of knowledge and its application with respect to all aspects of retailing, its management, evolution, and current theory. The field of retailing includes both products and services, the supply chains and distribution channels that serve retailers, the relationships between retailers and members of the supply channel, and all forms of direct marketing and emerging electric markets to households.</i>
Journal of World Business	JWB	International Business	<i>The Journal of World Business is a premier journal in the field of international business. JWB publishes cutting-edge research that reflects important developments in the global business environment and advances new theoretical directions and ways of thinking about global phenomena.</i>
Management Science	ManSci	General Management	<i>Management Science is a scholarly journal that publishes scientific research on the practice of management focusing on the problems, interest, and concerns of managers. Within its scope are all aspects of management related to strategy, entrepreneurship, innovation, information technology, and organizations as well as all functional areas of business, such as accounting, finance, marketing, and operations.</i>
Marketing Science	MktingSci	Marketing	<i>We are THE premier journal focusing on empirical and theoretical quantitative research in marketing.</i>

Full Publication Name	Abbreviation	Disciplinary Affiliation	Exemplary Quote from Website
Organization Science	OrgSci	General Management	<i>Organization Science is widely recognized as one of the top journals in the fields of strategy, management, and organization theory. The journal publishes ground-breaking research about organizations, including their processes, structures, technologies, identities, capabilities, forms, and performance</i>
Review of Finance	RoF	Finance	<i>The Review of Finance, the official journal of the European Finance Association, aims at a wide circulation and visibility in the finance profession. The journal publishes high-quality papers in all areas of financial economics, both established and newly developing fields.</i>
Strategic Management Journal	SMJ	Strategic Management	<i>The journal publishes original material concerned with all aspects of strategic management. It is devoted to the improvement and further development of the theory and practice of strategic management and it is designed to appeal to both practising managers and academics.</i>

Appendix B - Index of Theories

Theory	Definition	Key References	Frequency	VI in-sample Applications
Agency	Argues that in the modern corporation, in which share ownership is held, managerial actions depart from those required to maximise shareholder returns.	(Berle and Means 1932; Jensen and Meckling 1976; Fama 1980)	5	(Gartenberg & Pierce 2017; Mahoney 1992; Allen & Phillips 2000; Wathne & Heide 2000; Argyres 1999)
Competitive Dynamics	Derived from the Austrian School of Economics, competitive dynamics considers competition to be interactive or 'dynamic' such that its building blocks comprise action/reaction dyads.	(Jacobson, 1992; Schumpeter, 1934)	1	(Capron & Chatain, 2008)
Complex Systems	Firms are considered as complex systems, that is, made up of several tasks that interact in a non-simple way. Tasks may non-decomposable, or (nearly) decomposable with moderate levels of knowledge interaction.	(Simon 1962)	3	(Nickerson & Zenger 2004; Mesquita & Brush 2008; Wu 2015)
Contingency	Focuses on the adaptation of organizations to circumstances of scale, task uncertainty and strategic scope by appropriate selection of structural arrangements	(Burns & Stalker, 1961; Donaldson, 2001; Lawrence & Lorsch, 1967; Mintzberg, 1979)	12	(Balakrishnan & Wernerfelt, 1986; Boumgarden et al, 2012; Bradach, 1997; Ekeledo & Sivakumar, 1998; Furst et al., 2017; Gittell & Weiss, 2004; Gulati et al., 2005; Gulati & Singh, 1998; Harrigan, 1985; Joseph & Ocasio, 2012; Mayer & Nickerson, 2005; Zhou & Wan, 2017)
Game Theory	Focuses on the study of mathematical models of conflict and cooperation between rational decision-makers	(Von Neumann & Morgenstern, 1944)	1	(Ingene & Parry, 1995)

Theory	Definition	Key References	Frequency	VI in-sample Applications
Human Capital	This perspective examines the stock of knowledge, habits, social and personality attributes, embodied in the ability to perform labor that can generate economic value.	(Becker 1962; 1964)	2	(Kedia & Mukherjee, 2009; Lepak & Snell, 1999)
Industrial Organization (IO)	IO posits that industry structure determines conduct -that is similar to strategy-, which in turn determines performance	(Porter, 1981; Scherer & Ross, 1980)	6	(Ahern & Harford, 2014; Dass et al., 2015; Fan & Lang, 2000; Goddard, Molyneux, Wilson, & Tavakoli, 2007; Iyer & Villas-Boas, 2003; Kale & Shahrur, 2007)
Industry Life Cycle (ILC)	Industries are considered to evolve along 3 main stages (development, growth, and maturity) where firms shift from an innovation-based to a cost leadership-based competition regime.	(Klepper 1997; Klepper and Graddy 1990)	4	(Helfat & Campo-Rembado, 2016; Jacobides, 2005; Jacobides & Winter, 2012; Vakili, 2016)
Information Economics (IE)	IE is a branch of microeconomics that studies how information affect economic decisions. A core area of study considers information asymmetries and their implications for contract theory.	(Alchian & Demsetz, 1972; Hölmstrom, 1979)	4	(Heide 2003; Kalnins 2017; Stroebel 2016; Strieborny & Kukenova 2016)
Organizational Behavior	Focuses on individual and group dynamics within an organization. In other words, how employees act alone or in teams.	(O'Reilly, 1991)	1	(de Vries et al., 2016)

Theory	Definition	Key References	Frequency	VI in-sample Applications
Networks	A network is a set of actors connected by ties. Actors (“nodes”) can be persons, teams, organizations, concepts, etc. Different ties are assumed to function differently rendering differences in social capital, cognition, among other group processes.	(Bourdieu, 1977; Podolny & Page, 1998; Powell, 1990)	8	(Achrol, 1997; Achrol & Kotler, 1999; Baldwin, 2008; Larson, 1992; Maurer & Ebers, 2006; Morris et al., 2016; Starkey et al., 2000; Wuyts et al., 2004)
Organizational Identity	Identity is defined as those features of an organization that in the eyes of its members make the organization distinctive from other similar organizations, and are viewed as having continuity over time.	(Albert & Whetten, 1985; Gioia, Schultz, & Corley, 2000)	1	(Santos & Eisenhardt, 2005)
Organizational Institutionalism (NIT)	NIT posits that organizations are influenced by widespread social understandings that define what it means to be rational. By appearing to be rational, organizations avoid social censure and minimize demands for accountability, improving their chances of survival.	(DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Zucker, 1983)	1	(Lahiri, 2016)
Organizational Learning	Refers to continuous processes that enhance an organization’s ability to make sense of and respond to change, as well as generate commercial outputs, given the limits imposed by the tractability of the problem in question, the cognitive limitations of individuals, and the time available.	(Simon 1991; March 1991; Fiol and Lyles 1985)	2	(Ahmadjian & Lincoln, 2001; Rothaermel & Deeds, 2004)

Theory	Definition	Key References	Frequency	VI in-sample Applications
Political Economy	This perspective studies production and trade and their links with custom, government and law. Corporate political activities are defined as actions that aim to shape policy in ways favorable to the firm.	(A. J. Hillman & Hitt, 1999; North, 1990; Shaffer, 1995)	2	(Yiu et al. 2007; Mesquita & Lazzarini 2008)
Population Ecology	Population ecology focuses on organizational birth and death, as well as organizational growth and change. This perspective considers the competitive processes alike natural selection. Emphasizes relative inability of managers to effect quick organizational adaptation.	(Hannan & Freeman, 1977)	1	(Lampel et al., 2000)
Property Rights	A key tenet of this perspective is that a comparative analysis of markets, hierarchies, and government intervention is required to attenuate negative and support positive externalities.	(Alchian, 1977; Cheung, 1983; Coase, 1960; Demsetz, 1967)	2	(Arora & Merges, 2004; Poppo & Zenger, 1998)
Real Options	Real options emerged as a financial approach for evaluating investments in uncertain environments. In strategy, this perspective has been employed to study corporate growth and flexibility options in the context of joint ventures, and market entry, among others.	(Bruce Kogut & Kulatilaka, 2001; McGrath, 1997)	4	(Claussen et al., 2015; Folta, 1998; Leiblein & Miller, 2003; Villalonga & McGahan, 2005)

Theory	Definition	Key References	Frequency	VI in-sample Applications
Resource Based View (RBV)	RBV emphasizes firms' ability to create and sustain competitive advantage by acquiring and defending advantageous resources positions	(Penrose 1959; Peteraf 1993; Teece, Pisano, and Shuen 1997; Nelson and Winter 1982; Kogut and Zander 1992)	12	(Mahoney 1995; Grant 1996; Mitchell & Singh 1996; Lorenzoni & Lipparini 1999; Helfat & Raubitschek 2000; Christensen et al., 2002; Araujo et al., 2003; Hatch & Dyer 2004; Hobday et al., 2005; Macher 2006; Argyres 1996; Espino-Rodríguez & Padrón-Robaina 2006)
Resource Dependence Theory (RDT)	Focuses on how organizations seek to affect the supply of critical resources by managing their dependencies on other organizations (e.g., by careful placement of directors)	(Pfeffer & Salancik, 1978)	1	(Kim & Davis, 2016)
Social Exchange Theories (SET)	This perspective explains social change and stability as a process of negotiated exchanges between parties.	(Blau, 1964; Granovetter, 1985; Homans, 1961)	11	(Mentzer et al., 2000; Heide & John 1992; Mohr & Spekman 1994; Gulati 1995; Zaheer & Venkatraman 1995; Chiles & McMackin 1996; Joshi & Stump 1999; Wathne et al., 2001; Hoetker 2005; Gulati & Nickerson 2008; Argyres & Mostafa 2016)
Transaction Cost Economics (TCE)²⁸	TCE builds off the notion that the governance of exchange agreements is costly and that governance forms vary in their ability to facilitate exchange depending on the attributes of the transaction in question.	(Williamson 1975;1985; 1991)	15	(Argyres & Liebeskind, 1999; Bensaou & Anderson, 1999; Brouthers & Brouthers, 2003; Buvik & John, 2000; David & Han, 2004; Dyer, 1996a, 1996b, 1997; Jap & Ganesan, 2000; Leiblein et al., 2002; Rindfleisch & Heide, 1997; Robertson & Gatignon, 1998; Sutcliffe & Zaheer, 1998; Williamson, 1991b; Zenger & Hesterly, 1997)

²⁸ The remainder of the articles (11 out of 110) in sample have been categorized as using a combination of TCE and RBV as the theoretical lenses employed in the article on equal footing. The list includes: Afuah, 2001; Argyres & Zenger, 2012; Aulakh & Kotabe, 1997; Barthelemy, 2003; Brusoni et al., 2001; Chi, 1994; Combs & Ketchen, 1999; Jacobides & Billinger, 2006; Kapoor & Lee, 2013; Madhok, 2002; Sako et al., 2016.

Appendix C - Economic Effect of CSR on VI

Variable	Mean	Std. Dev.	25th percentile	75th percentile
VI (VAtoS)	0.7086	0.2554	0.5880	0.8765
CSR (ESG)	0.6452	0.2219	0.4356	0.8536

Model 5

Dependent Variable	Predicted at 25th percentile	Predicted at 75th percentile	% Change	% of Dependent Variable Std. Dev.
VI (VAtoS)	0.6517	0.7398	8.81%	34.52%
CSR (ESG)	0.6248	0.6844	5.96%	26.85%

Model 6

Dependent Variable	Predicted at 25th percentile	Predicted at 75th percentile	% Change	% of Dependent Variable Std. Dev.
VI (VAtoS)	0.6534	0.7382	8.47%	33.17%
CSR (ESG)	0.6242	0.6854	6.12%	27.57%