

**Sustaining Competitive Advantage:  
Return on Leadership Competency (ROLC) in a Consumer-Driven Supply-Network**

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## **ABSTRACT**

### **Sustaining Competitive Advantage: Return on Leadership Competency (ROLC) in a Consumer-Driven Supply-Network**

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**Linda Silver Coley**

**Chairman: F. Robert Dwyer, Ph.D.**

This dissertation argued that if the firm has evolved to a supply-network unit of competition, then network level core competencies are needed. Specifically, I theorized that “leadership competency” could be “built into the network” as “non-tangible market assets” (Srivastava, Shervani, Fahey 1998) to help in the continuous drive toward sustaining competitive advantage. Considering this, an a priori conceptual model was developed and then supply-network leadership competencies were operationalized (both customer and supplier relationships). This dissertation employed Jago’s (1982) leadership theory (that leadership is both a property and a process) and the competence perspective (Prahalad and Hamel 1990; Dosi and Teece 1998) to ground the theory.

Ultimately, the competencies were tested in a model (with market orientation variables and governance mechanisms) to assess the role of the interacting variables in sustaining competitive advantage. The theory was tested in a multinational, multi billion dollar consumer-driven supply-network. Using structural equation modeling, the effects of variables in a model with sustained competitive advantage were tested and the potential of the theory was supported.

The study also extended the roles of traditional marketing variables. Specifically, this work modified the *market orientation* construct (e.g. Narver and Slater 1990) to

include a *consumer orientation* component and then employed the modified construct as an outward focused antecedent. Furthermore, the study combined and evaluated the effects of several “joint performance” constructs as network safeguards and governance mechanisms.

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## **DEDICATION**

**I dedicate this work to the Spirit of Kindness and the conspiracy to love the world into a relationship with Jesus Christ.**

**I also dedicate it to my husband, Bobby, and my children, Margo and Michael who stood with me, believing in me, through it all.**

**Finally, this work is dedicated to the God Fathers and God Mothers of KPMG PhD Project. I thank them for using their experience to light a path for me to follow, as we collectively prepare to diversify the front of the classroom with our talents.**

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Next, I thank my committee chair and mentor, F. Robert Dwyer for the level of support he exhibited throughout this process. His nominations and professional influence helped to launch me into the marketing academy. Bob’s example of scholarship gave me a road map to reach the goals associated with this project. It was not a mere coincidence that our paths crossed, providing the freedom for dialogue about mutual interests and an opportunity to appreciate the creativity rooted in our differences.

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## TABLE OF CONTENTS

<b>Chapter One: Problem Statement and Significance of Topic</b>	
Chapter Introduction	Page 9
Overview of the Research Goal and Strategy	Page 10
Conceptual Framework for Supply-Network Leadership Competency	Page 13
The Conceptual Model and the Proposed Progression of Studies	Page 17
<i>The “A Priori” Conceptual Model</i>	
<i>The Progression of Work</i>	
Relevance of the Topic	Page 23
Theoretical and Practical Contributions	Page 25
Overview of Chapters: Structure of the Dissertation	Page 28
<b>Chapter Two: Literature Review Part I: Cross-Disciplinary Positioning of the Supply-Network as the Unit of Competition – the Emergent Firm</b>	
Chapter Introduction	Page 30
<i>From “Supply-Chain Management” to a Supply-Network</i>	
<b>Chapter Three: Literature Review Part II: A “New” Theory for the Emergent Firm?</b>	
(Transaction Cost vs. the Network Perspective Vs. Resource Theories of the Firm)	
Chapter Introduction	Page 35
<i>Transaction Cost Theory</i>	
<i>Network Perspective</i>	
<i>Integration of Perspectives</i>	
<i>Resource Dependency Theory</i>	
<i>Resource Based View</i>	
<i>Conclusions</i>	
<b>Chapter Four: Literature Review Part III: Competence Vs. Governance</b>	
Chapter Introduction	Page 48
<i>Integrating the Perspectives</i>	
<b>Chapter Five: Literature Review Part IV: Integrating Traditional Marketing Theory (Relationship Theory and Market Orientation) with the Theory of the Emergent Firm</b>	
Relationship Theory Overview	Page 51
<i>The Expanded Domain of Relationship Marketing</i>	
<i>Relating Relationship Theory, the Expanded Domain, and the Present Thesis</i>	
Market Orientation Theory Overview	Page 55
<i>The Expanded Domain of Market Orientation</i>	
<i>Relating Market Orientation Theory, the Expanded Domain, and the Present Thesis</i>	
<b>Chapter Six: Literature Review Part V: Leadership Theory - Framing Leadership Competency</b>	
Chapter Introduction	Page 56
Definition of Leadership: Framing for Leadership Competency	Page 56
<i>Trait, Style and Skill Leadership Theories</i>	
<i>Trait Theory</i>	
<i>Style or Behavioral Theory</i>	
<i>Skills Theory</i>	
<i>Transformational Vs. Transactional Leadership Theory</i>	
Positioning Supply-Network Leadership Competency	Page 60

## **Chapter Seven: Conceptual Framework and Hypotheses: Supply-Network Relational Leadership Competency, Supply-Network Executional Leadership Competency, Antecedent, Governance and Safeguards, and Outcome**

Supply-Network Leadership Competency Page 62

*Supply-Network Relational Leadership Competency*

*Cooperative Persona*

*Collaborative Competency*

*Supply-Network Executional Leadership Competency*

*Information Visibility and Resource Integration*

*Leadership ↔ Followership Dynamics*

Market Orientation Page 65

Governance and Safeguards Page 66

Sustained Competitive Advantage Page 67

The A Priori Model Hypotheses Page 68

## **Chapter Eight: Qualitative Methodology and Results**

Extended Case Study Methodology Page 69

*Overview of Sources of Information and Study Preparation Procedures*

*Methodology for the Interviews*

Summary and Conclusions from Qualitative Work Page 73

*Overview of Interview Conclusions*

## **Chapter Nine: Quantitative Methodology**

Scale Development, Validity, and Reliability Testing Page 78

Data Collection Page 79

*Survey Research Sample Frame*

*Sample Size*

Research Strategy, the Survey and the Survey Instrument Page 80

*Increasing Response Rate*

*Questionnaire Design*

*Survey Procedure*

Supply-Network Leadership Competency Item Development Page 83

Item Development for the Dependent Variable, Antecedent, and Governance Page 85

*Dependent Measure*

*Antecedent: Market Orientation*

*Measures of Governance and Safeguards*

## **Chapter Ten: Results of the Quantitative Study**

Operationalizing Supply-Network leadership Competency Page 88

*A. Relational Leadership Competency: Unidimensional Measurement and Confirmatory Factor Analysis, Validity, and Reliability*

Definition of Relational Leadership Competency

a. cooperative persona

b. collaborative competency

*B. Executional Leadership Competency: Unidimensional Measurement and Confirmatory Factor Analysis, Validity, and Reliability*

Definition of Executional Leadership Competency

a. information visibility and resource integration

b. leadership ↔ followership dynamics

Test of Hypotheses Page 100

Discussion of Variables in the Model with Functions Page 111



## **Chapter Eleven: Discussion and Implications**

Discussion Page 114

Implications Page 114

*Cross-Disciplinary Scholarship*

*Marketing Scholarship*

*Marketing and Business Practice*

*Limitations*

*Directions for future Research*

**References** Page 120

### **Appendices**

I.	Discussion Guide for Qualitative Interviews and Rationale for the Questions	Page 127
II.	Leadership Scholar / Trait Grid	Page 129
III.	Qualitative “Thick” Answers Relevant to The Current Thesis on Leadership Competencies	Page 130
IV.	A – B: Customer Relational Leadership Competency Scale	Pages 134-35
V.	A – B: Supplier Relational Leadership Competency Scale	Pages 136-37
VI.	A – B: Customer Executional Leadership Competency Scale	Pages 138-39
VII.	A – B: Supplier Executional Leadership Competency Scale	Pages 140-41
VIII.	Sustained Competitive Advantage Scale	Pages 142
IX.	A – F: Outward Focused Market Orientation Scales and Model Statistics	Pages 143-48
X.	A – F: Customer Governance and Safeguards Scales and Model Statistics	Pages 149-53
XI.	A – F: Supplier Governance and Safeguards Scales and Model Statistics	Pages 154-60

### **Tables**

1.	Transaction Cost Economies vs. the Network Perspective	Page 40
2.	An Evolution of Competence and Governance - Supply-Network Unit of Completion	Page 50
3.	Qualitative Findings: Leader Trait / Attribute Grid	Page 77
4.	Leadership Competency Customer and Supplier Variables and Symbols	Page 102
5.	Market Orientation Variables and Symbols	Page 106
6.	Governance and Safeguards Customer and Supplier Variables and Symbols	Page 107
7.	Final Model Variables and Symbols with Functions	Page 111

### **Figures**

1.	A Conceptual Model Sustaining Competitive Advantage in Supply-Networks	Page 18
2.	Work Roles in the Global Strategic Business Units	Page 22
3.	Customer Cooperative Persona Measurement Model	Page 89
4.	Supplier Cooperative Persona Measurement Model	Page 90
5.	Customer Collaborative Competency Measurement Model	Page 92
6.	Supplier Collaborative Competency Measurement Model	Page 93
7.	Customer Information Visibility and Resource Integration	Page 95
8.	Supplier Information Visibility and Resource Integration	Page 96
9.	Customer Leadership ↔ Followership Dynamics	Page 98
10.	Supplier Leadership ↔ Followership Dynamics	Page 99
11. – 12.	H1: Customer and Supplier Relational Leadership Competency Models	Page 101
13. – 14.	H2: Customer and Supplier Executional Leadership Competency Models	Page 103
15. – 16.	H3: and H4: Outward Focused Market Orientation Models	Pages 104 / 5
17. – 18.	H5: and H6: Customer and Supplier Governance and Safeguards Models	Page 108 / 9
19. – 20.	Sustaining Competitive Advantage – Consumer-Driven Supply-Network Path Model	Page 112 / 13

## **Chapter One: Problem Statement and Significance of Topic**

Old inviolable assumptions about the purpose, content, and execution of marketing slowly are giving way to assumptions that more accurately reflect how it is practiced in leading organizations – Srivastava, Shervani, Fahey 1998 p. 2

Once viewed as a freestanding domestic production unit faced with make-or-buy decisions, the atomistic firm has evolved into an embedded supply-network. The basis for the evolution is knowledge of efficiencies created through successful convergence of resources and work routines among internal functions and external network partners. In the continuous drive for consumer, customer, and shareholder value, these efficiencies are important because they translate into cost-savings that influence price and profit. However, a strategic focus on efficiencies is myopic. It could limit the emergent network's ability to envision and implement market related strategies aimed at sustained competitive advantage.

This judgment exposes an interesting dilemma that has not been empirically addressed: How might networks successfully relate to their markets while maintaining the efficiencies created by the convergence of boundary-spanning resources and work routines? Fundamental questions toward understanding this dilemma are: 1) Could supply-network competencies be developed to drive a competitive advantage; and 2) What safe-guards and governance mechanisms are important in sustaining the advantage, given the potential for ex post opportunism (Jap and Anderson 2003)? One way to begin tackling this problem is to identify, understand, operationalize, and test potential supply-network competencies that could drive a competitive advantage in a high-performance network, and then understand the link to safe-guards and governance mechanisms.

Hence, in the context of the supply-network (created by the convergence of internal functions as well as external relationships with suppliers, distributors, and customers) in the

consumer products market, this dissertation seeks to show how *leadership competencies* can be deployed in the drive for a sustained competitive advantage.

This chapter sets the stage for the remainder of the dissertation. First, I outline the research goal and the strategy. Second, I offer the conceptual framework for leadership competency. Next, I present the a priori conceptual model along with the progression of studies for this multi-phased research. Then, the relevance of the topic is established. Finally, the chapter ends with a discussion of the theoretical and practical contributions of this work, as well as a preview of the remainder of the dissertation.

### Overview of the Research Goal and Strategy

The four main goals of this research were to: 1) Explore the supply-network phenomenon with a major multinational firm, its customers, and suppliers to build a foundation for understanding how consumer-driven supply-networks relate to their markets; 2) Operationalize both supply-network *relational leadership competency* and supply-network *process executional leadership competency* from the firm's perspective of customer and supplier relationships; 3) Develop and test a model (with the competencies, and well-studied marketing variables) to determine the effect on sustained competitive advantage; 4) Operationalize "consumer orientation" as a component of the *market orientation* construct and then test it in the model as an externally focused antecedent; 5) Study the effects of governance mechanisms in the model.

The strategy for this multi-phased study was to:

- 1) Enhance conceptual underpinnings by understanding the basic language of leadership, governance, and competitive advantage within the emergent supply-network using an extended case study.

2) Define and operationalize a two variable, two component “construct set” of leadership competencies using psychometric-statistical study. Specifically, using Jago’s (1982) definition of leadership (as both a property and a process) and the competence perspective (Prahalad and Hamel 1990; Dosi and Teece 1998) as foundation, the study formally defines and dimensionalizes:

- a. *Supply-network relational leadership competency* (defined as the superior ability to “create an environment for successful convergence” of resources and work processes via relational traits and dynamic skills among actors (e.g. suppliers, customers) toward sustained competitive advantage in a supply-network.

Supply-network relational leadership competency is conceived as having two components:

- i *Cooperative persona* (traits of human leadership): ability to demonstrate trust, integrity, commitment, confidence, listening, valuing contributions, courage to do the right thing and,
- ii *Collaborative capabilities* (two way  $\leftrightarrow$  skills of human leadership): ability to communicate, ability to be involved, ability to influence, ability to question, ability to negotiate, ability to disagree.

- b. *Supply-network executional leadership competency* (which is defined as the ability to successfully converge work processes and resources to create solutions that go beyond the capabilities of a

single firm in delivering superior value to the market (toward sustaining a competitive advantage) via dynamic leader ↔ follower relationships among a network of firms.

Supply-network executional leadership competency is also conceived as having two components:

- i *External visibility and resource integration* (traits of the network): transparency of information, resource sharing, process visibility, disclosure of certain key measures, openness as to programs and practices and,
- ii *Leadership ↔ followership dynamics* (two way skills of the network): ability to adapt unique capabilities to dynamic business / network goals, cross-boundary influence, intra-firm coordination, boundary-spanning problem solving, inclusiveness, co-ownership of strategy formulation and implementation, cross-boundary responsiveness, cross-boundary accountability.

- 3) Understand if consumer orientation is one of the drivers of *supply-network leadership competency*.
- 4) Understand the role of governance in the convergence of customers and suppliers.
- 5) Propose a model to link the competencies and governance to sustained competitive advantage.

- 6) Test the model among actors in a defined supply-network at the strategic business unit level for the intra-firm effect.

### Conceptual Framework for Supply-Network Leadership Competency

In this dissertation, a supply-network is conceived as several supply chains. It includes at least three separate entities forming several supply-chains converging cross-functional human capacity and physical resources to accomplish work aimed at supplying superior value. These entities include at a minimum: a focal firm and the firm's suppliers and customers. The supply-chains are each focused on bringing product value to consumers via the web of customer / supplier relationships.

A “*consumer driven supply-network*” has its focus on the consumer and moves from the consumer back to the sources of raw material. This framing is different from the operations management concept of “from raw material to end user”. It is also different from “demand-driven” in that demand-driven is based on forecasts of expected sales and “consumer-driven” incorporates real time work requirements to deliver consumer value beginning at the shelf when the product is chosen. The “shelf-back” premise of product supply is based on the reality of, “losing a customer at the store shelf means missing out on that second chance in the home to build consumer loyalty” [Procter & Gamble's Global Product Supply Officer, Keith Harrison as quoted by David Caruso (2004) in a press conference]. I support this premise and I argue that consistently satisfying this objective, as well as other consumer expectations aimed at sustaining competitive advantage, requires *supply-network leadership competencies*.

Again, the framing for *leadership* in this dissertation is based on Jago's (1982) perspective of leadership. He defines leadership as:

... a *process* and (underline added) a *property*. The process of leadership is the use of noncoercive influence to direct and coordinate the activities of the members of an organized group toward the accomplishment of group objectives. As a property, leadership is the set of qualities or characteristics attributed to those who are perceived to successfully employ such influence (Jago 1982, p. 315).

Jago (1982) further explains that the process of leadership implies "followership", positioned as a dynamic, non-directional (leader ↔ follower) process. On the other hand, properties of leadership are characteristics, traits, and behaviors one would generally expect of a leader.

The definition of competency for the *supply-network leadership competencies*, introduced in this dissertation, is a capacity that goes beyond output generated from the routine human capability of leadership (expected within a single firm) to a combination of leadership capabilities among partners in a supply-network toward "masterwork". Moving from the expectations of a single firm to masterwork in a network of firms is conceived as being established by transcending a mastery of human skills, behaviors, and traits from work within the firm's boundary to cross-boundary work. I am especially focusing on leadership skills, behaviors, and traits, and the dynamic processes that have been ascribed to leadership. I believe these skills, traits, and processes are fundamental for successful convergence of cross-boundary work requirements within a supply-network. The traits and skills of leaders are basically relational traits (like ability to show trust and have integrity) and collaborative skills (like ability to communicate and cooperate). I take these individual human leadership traits and behaviors to form constructs at the aggregate level of the supply-network. The leadership behaviors and processes of interest at that level are the dynamics of openness and the interplay among leaders and followers.

The definition for leadership competency in this dissertation also builds from the concept of core competence, introduced by Prahalad and Hamel (1990) to explain the important strategic advantages a firm might have for leverage. However, it is expanded to the network level to represent what results, “when firms learn to harmonize” Prahalad (1993) resources, both tangible and intangible. The definition also elevates to the network level “distinctive competence” (e.g. Miles and Snow 1978), which is generally used to represent activities in which a firm or one of its units performs best relative to competition. Finally, the definition reflects on the concept of “cooperative competency” introduced by Sivadas and Dwyer (2000) to help explain new product success in internal and alliance-based processes.

*Relational leadership competency* (the ability of cross-boundary entities to create an environment for successful convergence among customers and suppliers in executing the mission) is conceived as a combination of *cooperative persona* (traits like trust, integrity, confidence, and commitment) and *collaborative competency* (skills like communication, influence, questioning, and negotiating).

*Supply-network executional leadership competency* (an ability to successfully converge in delivering superior value to the market) is conceived to consist of the dynamic employment of (internal and external) cross-boundary capabilities and resources. This includes adapting unique cross-boundary information integration and customer-supplier leadership ↔ followership dynamics as capabilities toward business goals.

These competencies, as conceived, are actually intangible “market-based assets” (Srivastava, et al 1998, p. 2). Srivastava, et al (1998) described market-based assets as those that “arise from commingling of the firm with entities in its external environment.”



As conceived, I believe that sustained competitive advantage depends on the success of building network level competencies based on the traits, skills, behaviors, and dynamic interactions among several external (e.g. the firm and its suppliers and customers) and internal (e.g. marketing, R&D, and product supply personnel) entities in dynamic leader ↔ follower relationships, towards a common goal or mission. That is, supply-network leadership is a dynamic, multi-directional process. Therefore followers (e.g. suppliers) should assume the role of leaders (e.g. customers) and leaders should assume the role of followers in given circumstances (Jago 1982) like when suppliers have superior processes. It is my hope that the supply-network leadership competencies described in this dissertation can be developed and recognized as intangible assets, and then leveraged for sustained competitive advantage.

This dissertation rests on the premise that a supply-network (consisting of customers, suppliers and the “focal firm”) needs to deliberately establish core competencies (like the atomistic firm had to do) to successfully compete in the market. I believe that the dynamics of the human capability of leadership (as a property and a process) captured in relationships and processes among cross-boundary actors can be expanded to create unique leadership competencies at the network level. Therefore, I propose a complex three dimensional (firm, customer, supplier) two-phased “construct set” to capture this competency, as a “bundle of unique resources and relationships” (Rumelt 1984 p. 557). And I propose that supply-network relational leadership competency and supply-network executional leadership competency are intangible market assets that, together with governance and market orientation, could be deployed to help drive a sustained competitive advantage in a consumer-driven supply-network.

## The Conceptual Model and the Proposed Progression of Studies

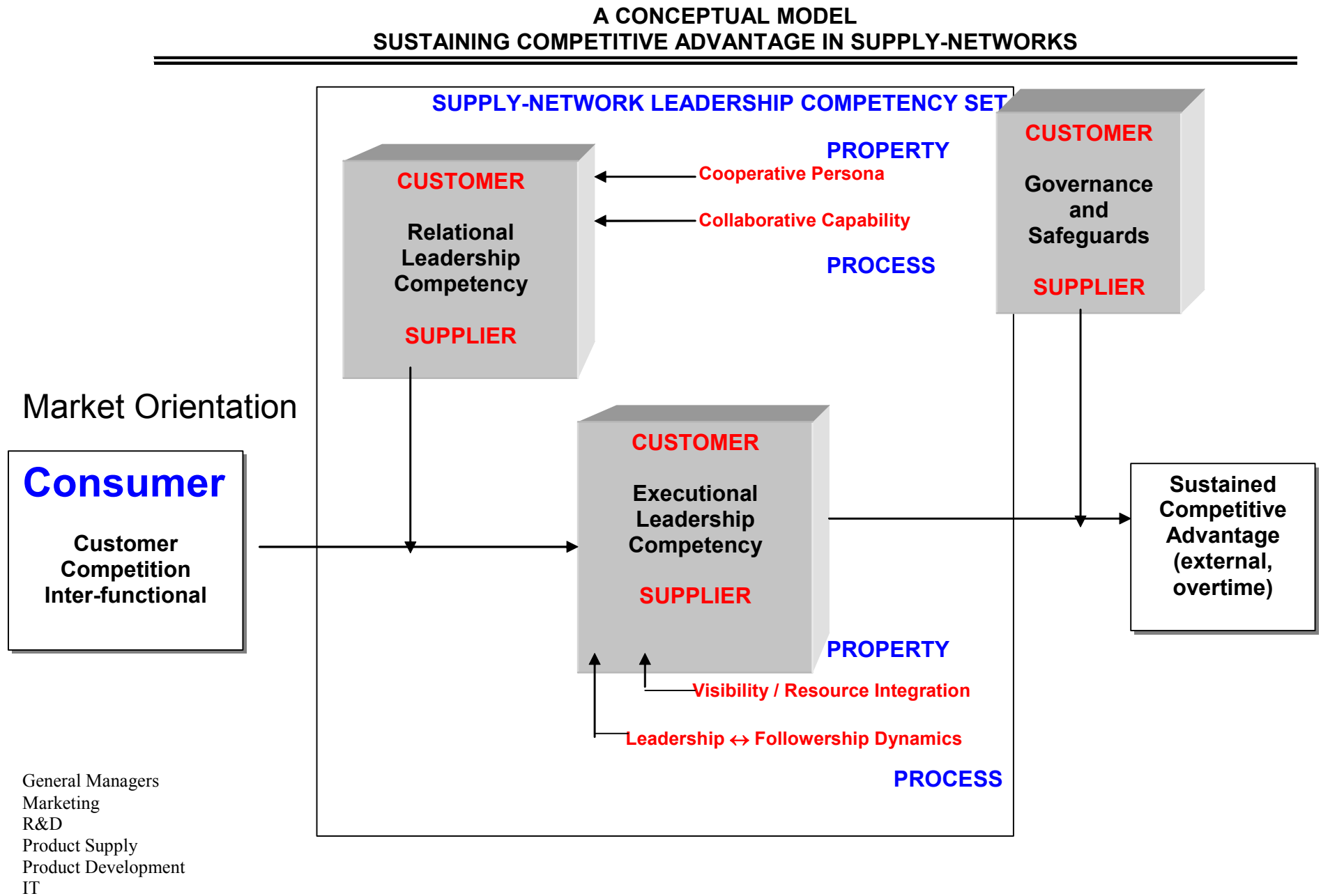
### *The A Priori Conceptual Model*

The complex construct bundle and conceptual model are shown in Figure 1.

In general, the model proposes that a *Market Orientation* (e.g. Narver and Slater 1990; Kohli and Jaworski 1990; Jaworski and Kohli 1993), modified with the addition of a *Consumer Orientation* component (Coley Dissertation 2004) and combined with a “three dimensional” supply-network *relational leadership competency* (among customers, suppliers, and the firm) variable drives *supply-network process executional leadership competency* among the partners.

Then this boundary spanning, leadership competency “asset” helps in *sustaining competitive advantage*. Finally, the relationship between the competency and sustained competitive advantage is conceived to be affected by *governance* mechanisms for both customers and suppliers (which are believed to be necessary to regulate the relationships and provide safeguards to protect the competitive advantage from ex post opportunism (Jap et al 2003)).

Figure 1



### *The Progression of Work*

Again, the main purposes of this work are summarized as: (1) explore the supply-network phenomenon and build a foundation for understanding how networks might relate to their markets, (2) operationalize both *supply-network relational leadership competency* and *supply-network executional leadership competency*, and (3) understand the effect of the leadership competencies on competitive advantage in a model with market orientation and governance.

A starting place is to consider the focal-firm perspective of customer and supplier relationships via case study from leaders in a high performance supply network. Then develop and test the concept among a cross-functional group of leaders in the same network. Therefore, this dissertation uses both qualitative and quantitative research techniques to penetrate three levels of the network:

- 1) A functional area (of a focal firm) responsible for the overall strategic direction of the product supply process;
- 2) Some exposure to suppliers and customers; and
- 3) Business units that employ a network of cross-functional leaders to obtain market oriented goals.

The *first study* is a case study among leaders with functional responsibility either in staff roles or embedded in global business units. This study involves interviews and data collection from thirty two (32) supply-network managers and leaders, at five (5) different levels of the firm (from 1<sup>st</sup> level manager to officer / president), across several supply-chains, and several global

business units within a multi-billion dollar, multinational consumer products' supply-network. It also involves exposure to customer and a supplier firms. The purpose of this study is to better understand the supply-network phenomenon, to gauge the domain of the constructs, understand the terminology or "language" of the network, to verify the types of supply-network relationships, and to have a practical basis for the proposed theory, constructs, and the model refinement.

Several scholars support proactive work to impede misspecification of variables, models, and methods (e.g. Bagozzi and Baumgartner 1994). Specifically, case study methodology is recommended in developing measurement scales and developing grounded theory (e.g. Eisenhardt 1989; McLutcheon and Meredith 1993; and Ellram 1996). The present case study also helps to establish item specification and content validity for each construct of interest.

The interviews, along with the literature reviews, are the basis of the conceptual foundation of this dissertation. As an example of how interviews were employed in understanding the dynamics of the leader ↔ follower relationship: one question asked during the interviews with supply-network managers and leaders was, "What makes a good follower?" Some of the responses included: having the capacity to lead, willingness to engage energy and passion to go after the group's vision, connecting back / hearing / asking / clarifying / questioning the vision and the role, working on solutions, desire to understand their unique contribution to the organization, execution capability, etc. These answers help to establish the proposed leadership ↔ followership dynamics among suppliers and customers or among functions in the strategic business unit.

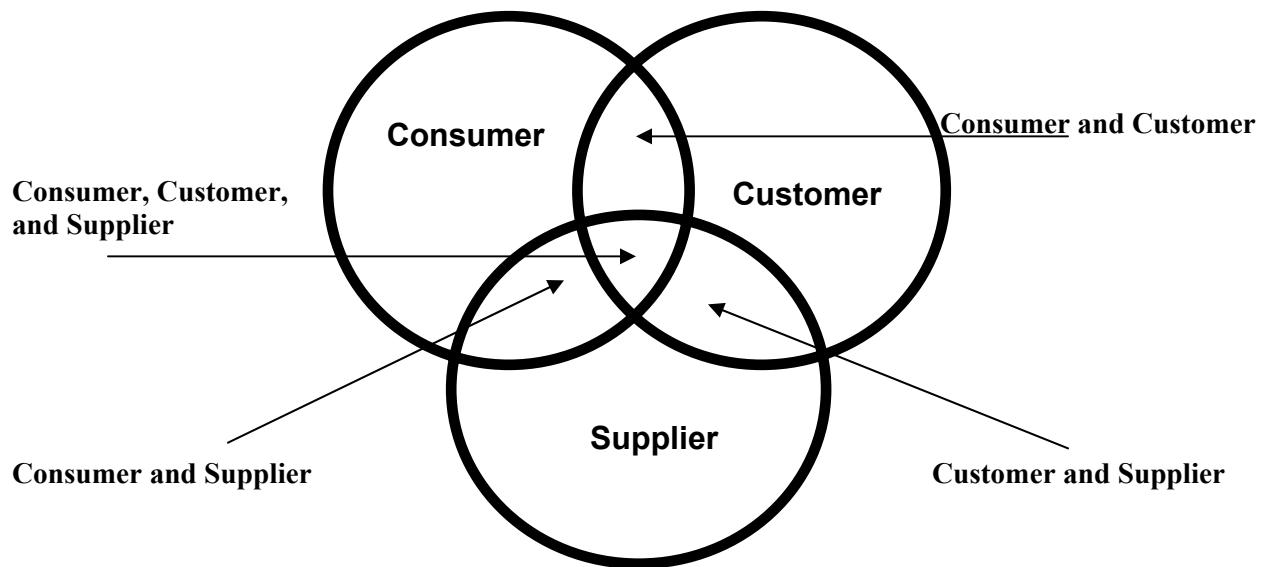
Another example is a question asked to query if respondents attributed a competitive advantage-outcome in any way to leadership, which was: "In your opinion, is there a relationship

between leadership and competitive advantage? If so explain.” One manager, using a “ball team analogy” offered that “the outcome of strong and effective leadership is competitive advantage” and it requires being at the “top of your game.” This type feedback was used to develop the leadership competency construct as “master work” that is conceived to mediate sustained competitive advantage.

Many respondents, especially at the lower leadership levels, saw developing successful products with market longevity as the basis of sustaining competitive advantage. The insight from lower level and top level leaders captures the relationship between competitive advantage and the proposed leadership competencies. Using several levels of managers also aided in choosing a variable to represent the sustained competitive advantage concept that were generally understood by several levels of leaders and followers who participated in the final study.

*The main study* for this dissertation was designed to build from the case study. Responses from individuals, in seven global business units and a global business “operation” (sales) were used to explore the phenomenon from the perspective of a web of cross-functional leaders. These cross-functional leaders were grouped based on their “work focus”: either a single focus on consumer, customer, or supplier work; or a combination focus on consumer and customer; consumer and supplier; customer and supplier; or consumer, customer, and supplier work as diagramed in Figure 2.

**Figure 2: Work Roles in the Global Strategic Business Units**



First the market orientation variable was evaluated with the added consumer orientation component. This evaluation used the complete set of cross-functional leaders to determine if the network could indeed be market-oriented and consumer-driven.

Next both the relational leadership competency construct and the executional leadership competency construct were developed for both customers and suppliers and then evaluated among cross-functional respondents (Marketing, R&D, IT, Finance, etc) with specific external focus (as described in Figure 2. Several “joint performance” safeguards and governance mechanisms (goal congruence, bilateral idiosyncratic investments, achievement of joint competitive advantage and joint profit performance) were also explored based on the respondents’ perspectives about customers and / or suppliers, respectively.

This study established the validity of the constructs, determined reliability, and then it was used as input for developing an embedded model.

*The final deliverable* for this dissertation is a structural equation model outlining the relationships of the interacting variables in the study.

### Relevance of the Topic

Marketing scholars have recognized the impending evolution to a supply-network unit of market competition over three decades. They predicted a convergence of boundaries among functions, channels, cultures, countries, and suppliers (e.g. Anderson 1982, Webster 1992, Achrol 1997, Day 1997, Kinnear 1999, Achrol and Kotler 1999, and Srivastava, Shervani, Fahey 1999). Some marketing scholars even predict an eventual void of scholarship to understand the impact of the phenomenon on markets and the marketing function as an area of work. Further, they have continuously called for study of the phenomena.

Despite the calls, the challenge remains daunting and virtually un-tackled. Study of the supply-network phenomenon is menacing because it requires consideration of complex models with multiple theories (e.g. the network perspective to establish a framework for the study of cooperative behavior and competitive behavior in the same model; resource-dependency theory to explain a conceptual framework for boundary-spanning work convergence within the supply-network as a market-related strategy; transaction cost theory recognizing the reality of occasion for opportunism in a networked “business unit” with separate economic entities; and relationship theory to link human behaviors and traits. In the case of this dissertation, I add a review of leadership theory and the competency perspective (resource-advantage theory) to define the fiber of a “winning” supply-network toward sustained competitive advantage. This theory is the foundation needed to explain the creation of the non-tangible competencies as assets not easily



copied by competitors. I also review the competing concept of governance, which is conceived as necessary to protect against ex post opportunism (Jap et al 2003).

In addition to multiple theories, the exploration required penetration of cross-functional positions and business units within the firm as well as penetration of corporations external to the firm. The study also included a cross-disciplinary literature review.

Data collection incorporated perspectives from cross-functional managers and leaders within the focal firm concerning suppliers as well as customers. Indeed, Kinnear (1999 p. 113) acknowledged the importance of this viewpoint by asserting, “The old mode of research that focused on a functional marketing issue in a freestanding domestic company simply does not deal meaningfully with the critical issues of the new world of marketing.”

This work is important because it addresses real challenges to the future of marketing. First it penetrated a leading supply-network in the consumer products industry to explore the phenomena among product supply leaders in several staff and business unit functions in a network of global supply-chains. Then it established fundamental competencies believed necessary for successful convergence in the delivery of superior consumer value. It tested an antecedent to the competencies and proposed a market related outcome. Data were collected cross-functionally among strategic business units.

This work is also important because marketing is lagging in generating theory to explain the ramifications of the evolution to a supply-network economy. Likewise, there are very few studies that explore the connection of the evolution to intangible resources as value-added in these networks. Recognizing that extensive conceptual and empirical work is needed to understand the ramifications of core business processes (like supply-chain management) Srivastava, Shervani, and Fahey (1999 p. 177) suggested that marketing scholars assume

responsibility for the work of “market-focused theories of exploration that addresses the development and testing of opportunities that will take the organization’s marketing strategy in new directions.” This dissertation accepted the challenge.

Contending that the network needs to establish supply-network competencies (like the firm has done) in the drive for sustained competitive advantage is relatively new thinking for marketing scholars. Developing and testing supply-network relational leadership competency and supply-network executional leadership competency is a starting point in understanding the market impact of the supply-network evolution. Also, modifying the market orientation construct to tie it to consumer orientation and then testing it in a model with the new competencies solidly links the phenomena to the traditional discipline of marketing.

Operationalizing the competencies also has importance outside the marketing field. Williamson (1999 p 1093), comparing competence and governance perspectives in the context of transaction cost economics maintains:

The study of competence is also important..... Its obvious importance and intuitive appeal notwithstanding, a relentless commitment to operationalization of competence is needed (to help build knowledge)..... Predictions, data, and empirical tests provide the requisite screen. Awaiting such developments, the competence perspective relies primarily on success stories to make its case.

### Theoretical and Practical Contributions

This dissertation makes several theoretical and practical contributions. In general it combines both theories of exploration and exploitation.

First, this work penetrates boundaries of a leading supply-network to explore the supply-network phenomenon. While the purpose of penetration is foundational and substantive for this specific work, which explores avenues for sustained competitive advantage, other benefits are derived. Specifically, as an embedded scholar, (1) I provide additional marketing perspective to

the multinational firm's Global Product Supply functional unit (that had traditionally been focused on efficiency and reliability) as it implements its strategies for a consumer-driven supply network; and (2) I receive first hand knowledge to generate understanding for theory and practice that will take organizational marketing strategy into new directions (see Srivastava et al 1999 for significance of infusing business processes with marketing perspective).

Second, this work develops the concepts for two *supply-network competencies*: *relational leadership competency* and *process executional leadership competency* using leaders' (within the firm) perspectives about external and internal areas of the network (focal firm: functions and strategic business units, and the supplier and customer network units<sup>1</sup>). This approach offers an opportunity for marketing to better understand how to develop theory to help shape the future of the supply-network phenomenon toward sustained competitive advantage.

Third, there is virtually no empirical study in the marketing literature that links a competitive advantage to the emergent supply-network phenomenon. This link provides for theories of exploitation. Specifically, the focus is on leveraging the human capability embedded in internal and external non-tangible market assets to transcend to the network level (customer and supplier relationships) and enhance a sustained competitive advantage. This is important to the field because marketing scholars have long called for the development of marketing theory and empirical study that responds to the emergent change.

Operations management scholars, manufacturing managers, and logisticians have studied supply-chain evolution but they primarily have considered manufacturing reliability and cost savings aligned with the efficiency perspective. Still, they are rightly credited with theory and practices that lead to increasing the profitability of the firm by (1) reducing costs through

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<sup>1</sup> Supplier and customer exposure was at the supervision of the host firm during the qualitative phase of the work. Even though contacts were made, supplier and customer input were not directly sought during the quantitative phase of the work due to concern by the researcher for the possible ramifications on the host firm's business.

eliminating waste, eliminating paper trails, and reducing inventory in the supply-chain, (2) eliminating the number of transactions by consolidating the supplier base, and (3) introducing efficiency and time saving processes like just-in-time supply, continuous replenishment, efficiency yield increases, and six-sigma. While attention to efficiency is an expected business norm, a focus on efficiency instead of a strategic market focus is myopic. It limits resources and human capabilities that could be devoted to market innovation and superior, consumer appreciated product development --- sources of sustained competitive advantage.

Finally, this research also makes a theoretical contribution by extending and integrating several cross-disciplinary literature streams (e.g. marketing, leadership, sociology, management, logistics, and economics). Only through integration of literature streams among disciplines can we fully understand the impact of the evolution to a network form of governance. Specifically, a cross-disciplinary theoretical contribution is made because this work fills a gap in the competency theory literature stream (Williamson 1999).

One of the practical contributions of this research is the idea that networks should intentionally establish competencies from the convergence of work routines and then link the competencies to a business-related outcome. This study proposes that both supply-network relational leadership competency and supply-network process executional leadership competency (established by converging non-tangible market assets) could drive a sustained competitive advantage.

The case study, the field study, and the proposed model of the supply-network phenomenon offer a better understanding of how leadership operates in various cross-boundary relationships. It demonstrates leadership skills and traits needed at the network level in creating an environment for “successful convergence” to execute joint processes. Then, the study shows

how these dynamics could lead to a sustained competitive advantage for the network. Another practical contribution is an understanding of the role of governance for both suppliers and customers (in the same study). I establish that this concept is important in networks where much of the exchange is relational, thus having an opposing orientation to the need for governance. This dissertation addresses this dilemma in the case study, the literature review, the field study, and the final model.

### Overview of Chapters: Structure of the Dissertation

The structure of the dissertation follows. After this chapter, Chapter Two integrates cross-disciplinary theory to document the evolution of the atomistic firm to a network form of governance. The chapter includes a general review of the network perspective and then it focuses on the supply-network to position it as the unit of competition.

Given this positioning, in Chapter Three, the question of the theory of the firm is addressed by contrasting and juxtaposing the supposedly competing transaction cost theory and the network perspective (NP); then the two perspectives are integrated to position the supply-network as an economic unit with boundary-spanning social actors carrying out the “human capability of work” (Jaques and Cason 1994). Next, resource-dependency theory (RDT) is offered to help explain the evolution to the network perspective and to show a logical progression to close relationships. After this, resource-advantage theory is reviewed to establish the competency perspective since I have proposed placing governance and competence in the same model. This review is necessary since some scholars would view governance and competence as competing theory. Following this review, Chapter Four is put forth to address the “competing theory” idea that seems to resonate with the competency perspective vs. the

governance perspective. The result of this review is agreement with Williamson (1999, p 1106) “that both are needed in our efforts to understand complex economic phenomena ...” posed by the supply-network. Chapter Five is employed to position traditional marketing theory (relationship theory and the theory of market orientation) as fundamental to the evolution. Chapter Six is devoted to a review of the leadership literature since leadership theory provides the foundation for defining the constructs of interest. Chapter Seven develops the conceptual framework positioning the conceptual model including the outward focused antecedent (market orientation with the addition of the consumer element), the proposed leadership competency constructs, and the effect of governance in sustaining competitive advantage.

Chapter Eight presents the methodology and results for the qualitative study and Chapter Nine covers the methodology for the quantitative work. Finally, the results for the quantitative phase are presented in Chapter Ten.

## **Chapter Two: Literature Review Part I: Cross-Disciplinary Positioning of the Supply-Network as the Unit of Competition – the Emergent Firm**

A key feature of present day business is the idea that it is supply-chains (networks) that compete, not companies (Christopher 1992), and the success or failure of supply-chains (networks) is ultimately determined in the market place by the end consumer – Christopher, 2001.

Multidisciplinary interest in understanding the implications of supply chain management to market competition continues to escalate. However, for the most part, this multi-disciplinary investigation is happening in each discipline with a view through the lenses of respective areas of “functional responsibility” and without sufficient cross-functional collaboration. For example, marketing scholars have questioned the effects of governance, relationship management, trust, opportunism, and expectations of exchange relationships. Operations management scholars have studied the effect on inventory management and production practices. Finance and accounting scholars have looked at the cost and profit implications throughout the supply-chain. Management scholars have wondered about human resource behaviors and network structural implications of the firm. However, logisticians were the first scholars to study the effects of supply chain management and reverse logistics on delivery options to drive cost savings and spark the supply-chain management phenomenon.

Several scholars have posed that seeking a sustained competitive advantage through supply-chain management is “one of the most significant paradigm shifts of modern business management” (e.g. Lambert and Cooper 2000).

Tracing its origins from the traditional channel of distribution, a supply-chain can be viewed as a unit within a supply-network. Networks (e.g. Thorelli 1986) are the “emergent firm” on the horizon (Achrol 1997, Achrol, et al 1999).

This dissertation embraces the notion that considering just the atomistic firm in market questions of sustaining competitive advantage is no longer relevant (Kinnear 1999). This expanded view of the firm suggests not only cross-functional collaboration but also corporate boundary-spanning collaboration and unprecedented cooperation among a network of firms. I respect the view that recognizes the supply-network as a factor in market competition. Therefore, I join the argument that marketing, as a function and a field has a role to play in developing strategy to leverage the competitive advantage of supply-networks (Lambert et al 2000; Srivastava, et al 1998).

#### *From “Supply-Chain Management” to a Supply-Network*

Coined by practitioners, a “supply-network” closely resembles Achrol’s (1997) vertical market network but it is not conceived as an “integrator” like Nike, Liz Claiborne, or Dell. It is conceived to consist of a focal firm organized with sophisticated business units of cross-functional actors and several supply-chains working to gain value from both internal and external relationships. The supply-chains in a supply-network consist of internal functions organized around a product or service and both their upstream suppliers and down stream customers. The supply-network accomplishes work through a combination of tangible and intangible intra-firm and inter-firm capabilities. Firms in a supply-network “create and share value far in excess of what they can do acting alone” (Anderson and Narus 1999 p 250).

The marketing literature lacks a generally accepted conceptual framework for the supply-network concept as the unit of competition because the network perspective originated outside of the field. Specifically, early scholars of network theory were primarily organizational and social theorists (e.g Levine and White 1961; Granovetter 1985). Considering the impact on markets of doing work via a network, marketing scholars joined the argument of an evolution to a



“network” economic unit (e.g. Miles and Snow 1992; Achrol 1997; Achrol, et al 1999). The recognition of this evolution in the marketing literature can be used as foundation to justify a new dimension to market competition.

To this point, Achrol, et al (1999 p 146) offered, “Marketing outcomes are increasingly decided by competition between networks of firms rather than by competition among firms.”

Describing several types of networks, he offered the following general definition:

a network organization is distinguished from a simple network of exchange linkages by the density, multiplexity, and reciprocity of ties and a shared value system defining membership roles and responsibility. (Achrol 1997 p. 59)

According to Thorelli (1986 p.36), strategic issues that could align a network of firms are “turnkey contracts and ‘systems selling’; barter and reciprocal trading; make-lease-or-buy decisions; split vs. unified sourcing; transactions between divisions of companies; cartels; interlocking directorates; joint ventures, mergers and acquisitions; diversification; internationalization; (and) vertical integration.” The economics and implementation of these issues are rooted in either transaction costs theory or resource dependency theory. Therefore, decisions among alternative solutions are likely to consider cost and efficiencies. However, the focus of this dissertation is the supply-network that is organized around products, countries, or technology and driven by consumer solutions. Efficiency is not seen here as a strategic objective but rather it is regarded as a business norm.

Granovetter (1985), in arguing against Oliver Williamson’s (e.g. 1975, 1981) earlier “markets and hierarchies” perspectives of efficiencies and cost, suggests that most business behavior is “closely embedded in networks of interpersonal relationships” (or exchange relationships). However, close relationships alone do not sustain a competitive advantage. Understanding how to sustain competitive advantage in networks begins with insight on why networks exist.

Positioning a network as the economic unit of competition (like the firm) is a phenomenon that creates a paradox that must be addressed before the network can be studied as a unit of analysis. Specifically, the question becomes: if the network is the unit of completion, then what is the theory of the firm? The “primary requisites of a theory of the firm are to explain the reasons for existence of the firm and what limits its size and scope.” (Conner 1991 p.139)

The supply-network as the “unit of competition” concept has both economic and relational (social) connotations to explain its theory. As to size and scope, some firms in consumer-driven supply-networks are larger in size than the GNP of some countries (e.g. Wal-Mart) and the scope of these supply-networks is “towards borderlessness” (trans-corporate and transnational). Therefore, one theory of the firm may not be able to elucidate this concept.

The paradox is addressed in this dissertation by first understanding that economic actions are best explained by economic theory like transaction cost. On the other hand, the network perspective has relational fiber tied to social theory. Both are needed. Organization scholars and economists would argue that the two perspectives are contradictory (see Williamson 1999). To counter this, I would argue that the emergent firm, which consists of several legal entities operating virtually as one network, requires non-traditional thinking and proactive reasoning to capture a descriptive theory of the firm. The idea of separate economic structures forming a close relational unit to work as one firm, without consideration of transaction costs and governance does not fit with reality. That is, some level of opportunism is anticipated *ex ante* (Williamson 1971, 1981) and *ex post* (Jap et al 2003) because human actors (agents of the respective firms) are to some extent self-serving.

Do we need a “new” network theory of the firm to address the supply-network as the unit of exchange? This question is addressed in Chapter 3 [note: this review and the Table 2 are updated from a working paper (Coley 2001)].

### **Chapter Three: Literature Review Part II: A “New” Theory for the Emergent Firm? (Transaction Cost Vs. The Network Perspective Vs. Resource Theories of the Firm)**

There is no apparent consensus across disciplines, or even within disciplines, regarding the theory of the firm because a major new theory seems to emerge every decade – Slater 1997 p. 162.

I began my argument by suggesting that the usefulness of well-studied theories (like transaction cost theory) can be increased by proactively combining new perspectives of the firm (like the supply-network as the unit of competitions) to reflect reality in major corporations. In this section I first review and juxtapose transaction cost theory and the network perspective, Finally, I offer an integrated perspective to address the question: If a supply-network is the unit of competition, then what is the theory of the firm?

#### *Transactional Cost Theory:*

##### *Reasons for Firm’s Existence, Market Exchange Assumptions, Strategic Orientation*

There was a time when firms existed primarily to efficiently provide a production function through hierarchical vertical integration (e.g. Coase 1937; Williamson 1971, 1991). Transactions in the hierarchical firm were usually impersonal and based on best price. Best price usually meant the lowest cost in an arms-length bidding environment that included unsociable haggling.

A number of core assumptions underlie the transaction cost perspective. First, the governance viewpoint holds that “firm and market are alternate modes of governance” for a completing set of transactions (Coase, 1937; Williamson 1985, 1996, 1998, 1999). The choice between the two depends on the cost differences between the two modes of transaction (Williamson 1999). Market forms of governance rely on price, competition, and contracts to

manage the exchange process. On-the-other hand, hierarchical forms of governance are controlled by the right of “managerial fiat” (Williamson 1975).

The second and third assumptions of transaction cost theory concern the behavior of human actors. Even though they are bounded in ability, according to Oliver Williamson (1999), “transaction cost economics ascribes foresight rather than myopia to human actors.” Actors have the capacity to look ahead, plan, reason, and make changes; however, the concept of bounded rationality (Simon 1961) renders limitations to the ability of human agents’ intentions. Transaction cost theory further maintains that there is an extreme self-interest element to human behavior that is operationalized as opportunism. This self-interest trait limits the ability of humans (or firms) to self-fulfill promises or to self-govern.

The forth assumption is that the unit of analysis is the transaction (Williamson, 1971, 1975, 1999) and the transaction is driven by the needs that are to be full-filled (Williamson 1999). Further, there is a tendency for economic actors to favor exchanges that minimize transaction cost. The exchange process or transactions usually occur both inside and outside of the organization when a good or service cannot be reasonably vertically integrated into the firm.

#### *Network Perspective:*

##### *Reasons for Firm’s Existence, Market Exchange Assumptions, Strategic Orientation*

Networks and specifically the supply-network exist, like any organization “due to economies of scale, specialization, and ability to reduce transaction costs” (Thorelli 1986 p. 37). However, networks pursue more than cost minimization; they provide economies of scope and reach by use of what Granovetter (1973) labels as “social connections.” The social connections are human beings joined for interaction to conduct work on behalf of legally separate business

entities. The structure of a network and its trend toward borderlessness is its defining characteristic. In other words:

A network organization is an interdependent condition of task- or skill-specialized economic entities (independent firms or autonomous organizational units) that operates without hierarchical control but is embedded, by dense lateral connections, mutuality, and reciprocity, in a shared value system that defines “membership” roles and responsibility (Achrol, et al 1999).

A supply-network’s division of labor is accomplished through a series of firms providing specialization or unique knowledge, which leads to certain core competencies (Teece, Pisano, and Shuen 1997) or capabilities. The cost and the division of labor notwithstanding, the continued existence of a particular network is believed to be due to social embeddedness and inter-group ties. Human agents form the “relational ties” between firms.

Other assumptions follow. First, the network and the markets *are not* alternate modes of governance for a competing set of transactions. Partners in a network buy from and sell to each other based on reciprocity arrangements usually involving cash but other arrangements like bartering are also possible (Torelli 1986). Close relationships are built by commingling on key processes and sole source relationships are established for parts and scarce raw materials in just-in-time supply. Srivastava, et al (1998) conceived these relationships that are approaching borderlessness as “market-based assets”. However, it should be noted that prior to any relationship being established, some human party in a focal or primary firm exercised “source selection authority” to determine a best value to jump-start the relationship. This sole source relationship is established with the understanding that the focal firm will only buy from the network partner as long as service and quality are consistently high and the price does not exceed the market price.

The “formal contract” is often replaced with a “collaboration agreement” and an open purchase order suitable for “just-in-time” replenishment and continuous supply of products (e.g. commodities, raw materials, and component parts) and services (e.g. information technology). Some scholars have stated that these arrangements are “not enforced by legal ordering (and)....profits are split up through ongoing adjustments and bargaining” (Buvik and John 2000 p. 53). Further, there is usually no alternate supplier source qualified by the focal firm to provide this same function. This renders the exchange relationship closer than an occasional or “arms length” transaction (Dwyer, Schurr, and Oh 1987). This reciprocity arrangement continues until volume and performance requirements need to be renegotiated to the satisfaction of both parties. Governance in close relationships also relies on commitment and trust being established at some point.

The second and third assumptions concern the behavior of human actors representing the separate entities commingled in the network. The behavior of the supplier, the focal firm, and the customer in the network is personified primarily through a “spokesperson”. This relationship actor is a designated person with authority to act on behalf of the firm. The spokesperson has the source selection authority to recommend termination of the relationship if a market deal has better value. In the case of customers and suppliers, depending on the size of the firm, that person is perhaps the chief operating officer or chief executive officer (small supplier) or a top-manager contact with authority to make decisions (larger firm). Though the relationships are based on trust and commitment, these concepts are bounded by the human nature of the “spokesperson” representing the firm. Humans are rational but to a limit (Cyert and March 1963) and firms fall within those limits because of human representation. Humans are also social beings and are governed by social reasons outside of a business context. The same

analogy applies to opportunism or self-interest, especially given the power of a resource needed “just-in-time” by a firm with source selection authority. Consider: economic decisions are made by social beings.

The unit of analysis for a network governance structure is another question that needs to be addressed. Some consider it to be the “pattern of relationships”. In summarizing the unit of analysis Nohria et. al. (1992 p. 6) affirms:

In sum, a network perspective on organization-environment relations pushes beyond abstract notions of environmental uncertainty, resource dependencies, and institutional pressures. It seeks to locate the precise source of these environmental forces by analyzing the pattern of relationships among the organizations that make up the environment.

The key areas of comparison between transaction costs and the network perspective are summarized in Table I:



**TABLE 1**

	<b>Transactional Cost Economies</b>	<b>Network Perspective</b>
	<p><b>Overall sources:</b> (Coase 1937; Williamson 1975; Slater 1997):</p> <p>Markets and firms are alternative mechanisms for coordinating transactions, and the choice of one or the other is based on the respective cost associated with the transaction.</p> <p>Other assumptions: alternative is vertical integration; guarding against opportunism is a key concern; a transaction occurs when a good or service is transferred across a separable interface; the criterion for organizing cost by market or firm is cost minimization.</p>	<p><b>Building on overall sources:</b> Granovetter 1985; Achrol 1997; Achrol and Kotler 1999); Coley Dissertation Case Study 2003:</p> <p>Interdependent coalition of task or skill-specialization economic entities (business forms or autonomous organizational units).</p> <p>They operate without hierarchical control but are “embedded, by dense lateral connections, mutuality, and reciprocity, in a shared value system that defines ‘membership’ roles and responsibility”</p>
<b>Type of Human Interaction</b>	Arm’s Length / Adversary	Relational / Collaborative
<b>Basis of Evaluation</b>	From Cost to Efficiency	From Efficiency to Competency
<b>Goal of Firm</b>	Profit Maximization	Value Maximization
<b>Stakeholder to Satisfy</b>	Shareholder	Stakeholders (Shareholder, Supplier, Customer, and Consumer)
<b>Financial System</b>	Economies of Scale	Economies of Scope
<b>Supplier Negotiations</b>	Haggling	Cooperative and collaborative
<b>Purchasing Strategy</b>	Best Price	Best Value
<b>Information Strategy</b>	Confidential	Reciprocal
<b>Boundaries</b>	Firm’s Borders	Toward Borderlessness
<b>Business operation</b>	Process Departments / Functional Specificity	Process Teams / Boundary-spanning
<b>Production Strategy</b>	Mass Production	Mass Customization
<b>Market Orientation</b>	Competitive – Customer – Profitability	Customer – Competitive – Innovation
<b>Pricing</b>	Dictatorial	Negotiation
<b>Behavior</b>	Skeptical	Trusting
<b>Profit Orientation</b>	Shareholder	Customer / Network
<b>People</b>	Employees within the Firm	Associates throughout the Network
<b>Governance</b>	Contracts / Specifications	Collaborative agreements
<b>Innovation</b>	In-house / Long Term	Network / Quicker Turn Around
<b>Quality</b>	Monitored by manufacturing, Rejected, Returned	Monitored by Suppliers and all Focal firm actors toward 0% defects

### *Integration of Perspectives*

Transaction cost theory is well developed, has evolved over time, and withstands the test of scrutiny. A network theory of the firm is in the embryonic stage of questions and discussion. When the supply-network is viewed through both lenses, strikingly similar assumptions are noticed. First, both perspectives use structure to describe the organization and each is organized to accomplish a certain division of labor. The traditional firm's hierarchically-integrated division of labor for production is replaced with a dynamically-integrated network of firms performing work routines.

The consumer driven supply-network can be conceptualized, as a dynamically integrated system of firms with the consumer at the top of the network. The relational actors are suppliers and customers. With the majority of transactions at arm's length, transactional suppliers are also included in the supply-network. Supply-networks as conceived in this dissertation are believed to have emerged to expand competency but another objective underlying the formation of networks is a desire to reduce the transaction costs of a focal firm acting alone.

Networks and particularly supply-networks operate under other assumptions that are similar to a vertical hierarchal firm. The formal contracts of transaction cost economics needed ex ante are not visible ex post; however, the network's open purchase orders and "agreed to" quality standards (that appear to be akin to the old fashioned handshake) are the results of contracts formed sometime earlier at the beginning of the relationship. The open purchase order with expectations of quality is like an "understood contractual form of governance". Relationship theory's commitment and trust variables are needed to enhance governance in close relationships, but they are usually coupled with governance mechanisms and the "source selection authority reminder" is ever present.

The reciprocity arrangement in networks looks like a relational attraction not requiring a contract; however, the source selection authority of the focal firm, established at the beginning of the relationship, is a form of managerial governance. The option of future negotiations set up to handle changes in circumstances is also a form of control.

Supplier partners in a vertical market network are like employees in a hierarchical firm. With that analogy, occasional short falls in supply service from a sole source supplier resource are handled like an internal resource shortfall problem. Similarly, they are handled through collaboration, feedback, intervention, and joint problem solving. Also similar to transaction costs, patterns of continuous failure to meet specifications after intervention can result in a gradual termination of the relationship while another source is being qualified.

Transaction cost theory considers behavioral traits of bounded rationality and opportunism. In networks these tendencies could be multiplied. In the case of bounded rationality, humans acting on behalf of the network are bounded by their own limitations and the network is bonded by the collective rationality of the actors assigned to carry out a function resulting from a negotiated arrangement. In the case of opportunism, the network representatives may see opportunities for personal gain or collective firm gain in the decision or work process and act accordingly.

At first blush the unit of analysis seemed to be the “interaction” or “relationship pattern” for a network firm vs. the “transaction” for transaction cost theory. However, with blinders off, the “interaction” within the near borderless relationships that exists between firms in a network has been “purchased” for a fee and the cost for this interaction was negotiated ex ante. The point is, the price for these now close relationships could have been settled years or months before, but certainly it happened. Further, the dynamic relationships continue to be governed with an open-

ended negotiation process and a clear knowledge of who has the “selection authority”. The unit of analysis may in fact still be the transaction cost but the lowest bid concept of transaction cost theory now becomes the “best collaborated value” concept for supply-networks. Further, cost is now viewed differently because of performance and social ties. In other words, the transaction cost is weighted with quality and value of a particular non-tangible competency or tangible products, services, or set of routines coupled with the strength of “social” ties, and then renegotiated. In network theory, the strength or weakness of the social ties and embeddedness of the relationship between firms diminishes the degree to which the transaction cost is the level of analysis, but cost will continue to play a role.

This integrated perspective is not completely sufficient to explain the evolution to a network form of governance. However it does suggest, like Rindfleisch and Heide (1997) and Williamson (1999), that there is opportunity to increase the usefulness of transaction cost theory by moving beyond Williamson 1975 to later considerations of transaction cost economics.

Recommending a theory of the emergent firm is beyond the scope of this dissertation. However, the challenges presented with the argument that supply-network as a unit of competition, would be irresponsibly addressed without considering a perspective about the theory of the firm. However, while this exercise may help explain why the emergent firm exists, it does not capture the reason for the evolution to the network structure and the broad scope. To discuss this I consider that at a different level, the networked structure of the emergent firm and its infrastructure is tied to resource-dependency theory.

### *Resource-Dependency Theory*

A firm's resources are tangible and intangible. They are internal and external. Resource-dependency theory concerns dependence on external tangible resources. Some resources are core resources and some are generic (like the internet). For example, information is a vast resource for the emergent supply-network. Information technology enables managers and leaders to get work done in a timely, real time environment while at the same time facilitating volumes of current and historical data needed for decision-making. IT and communications resources (intranet, internet, telephone, face-to-face, fax) literally can be considered the infrastructure for channeling information through supply-networks. However, this process of communicating information through the channels of distribution among internal and external supply-partners, while extremely important, requires enormous time to manage.

Therefore, strategic decisions to have information supply-partner relationships (like Hewlett-Packard and Proctor & Gamble) carry out this function (when it is not a core competency) are not surprising. However, the decision creates an unprecedented level of dependency among the firms. This example of resource-dependency seems to make clear the role of resource dependency theory in positioning the reasoning behind the evolution of the supply-network as the unit of competition. When the scope of the work between partners is trans-national, then resource-dependency takes on a new meaning, because supply partners that control the infrastructure can affect business results. This type of dependency causes customers and suppliers to change the way they work. They become closer in proximity and more concerned with compatibility of intangible resources like values and culture; and they may need to weave their capabilities together in order to develop strategic resources. This extreme relationship is used to demonstrate what's on the horizon and to position the role of resource-

dependency theory as a possible “co-theory” in explaining the evolution to a supply-network as the unit of competition. While resource-dependency theory may help to explain the evolution to a network form of governance, it, too, falls short as a sole theory of the emergent firm. Specifically, it does not capture the concepts of competency and governance incorporated in this thesis. Governance is captured in transaction cost theory. The concept of competence is the subject of the resource-based view of competitive advantage.

### *Resource Based View of Competitive Advantage*

The resource-based view of the firm “focuses on costly-to-copy attributes of the firm as ... fundamental drivers of performance and competitive advantage.” (Conner 1991 p 121). It commands interest and continues to be debated by strategy scholars across disciplines concerning its potential as a “new theory” of the firm (see Journal of Management, Special Issue 1991, vol. 17, No 1 for a review). However, at one level this approach has an internal focus on strategic resources as a theoretical framework (as opposed to external partner dependency). Even so, this theory of the firm is relevant to the concept of the supply-network as the unit of competition because “internal” can be expanded to mean within the network.

Marketing scholars (Hunt 1995; Hunt and Morgan 1995; 1997) joined the resource view debate with their “resource-advantage” theory of competition. Resource advantage theory purports that: “strategy is about creating core competencies so that the firm can positively influence its environment” (O’Keeffe, Mavondo, Schroder 2003, p.1 in a thesis under the tutelage of Hunt<sup>2</sup>). The theory generally agrees with Prahalad, et al (1990) that core competencies are resources that form the basis of sustained competitive advantage and they are

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<sup>2</sup> This comparison is from a paper prepared as a result of a two week visit by Professor Shelby Hunt to the Monash University’s Department of Marketing.

difficult for competitors to imitate, purchase, or substitute. Included in this list are traditional resources (like people, processes, products, services, etc) and “complex human resource systems within the corporation (underlines added) and [nontraditional resources outside the corporation like] relationships with customers and suppliers.” This theory moves away from the power and dependency perspective of relationships toward cooperation and collaboration.

### *Conclusions*

Resource-dependency theory, transaction cost theory, the resource-based view and the network perspective are needed to help explain the evolution to a supply-network unit of competition. However, no single theory captures the concept of the emergent firm. Even so, this work takes the position that a “new” theory of the firm is not needed to understand the evolution or explain the reality.

When viewed through the lens of transaction cost theory, the supply-network is not so different from a traditional vertical hierarchal firm. That is, the network perspective can be viewed in part as a potential update of transaction cost theory. Further, it seems clear that the resource advantage view of the firm can be used as an underlying perspective (with transaction cost theory) in explaining the theory of the firm as a networked unit of competition. Considering the theories in combination addresses both the competency and the economic issues of concern. Transaction cost theory of the firm is a well-used economic theory in framing governance. Similarly, the resourced-based view of the firm (like resource advantage theory) is recognized for potential in framing competence.

More effort is needed in studying the supply-network phenomenon within the framework of existing theories of the firm without myopic blinders. It seems to me that the challenge for

sustained competitive advantage at the network level is to develop core competency from resources embedded in the network and “protecting them” with safeguards and governance to counter self-serving behavior. This dissertation addresses this challenge by developing boundary-spanning competencies and employing governance in the same model. Since the competence and the governance perspectives spring from seemingly “competing theory” (resource advantage theory and transaction cost theory respectively) and could be viewed by several scholars as conflicting, a review to address this issue follows in Chapter Four.



#### **Chapter Four: Literature Review Part III: Competence Vs. Governance.**

Given that both governance and competence are both bounded rationality constructs, and hold that organization matter, they both share a lot of common ground .... I see the relation between competence and governance as both rival and complementary – more the later than the former .... Healthy tensions are posed between them. Both are needed in our efforts to understand complex economic phenomena [like supply-networks] as we build toward a science of organization – Williamsom 1999 p. 1106

Despite the rivalry between the competence and governance perspectives, I maintain that both competence and governance are needed in a model created to explore the supply network as a unit of competition in sustaining a competitive advantage among legally (as opposed to operationally) separate entities. Like the focal firm, the network unit of competition needs a core competency. This boundary-spanning competence is what establishes the advantage. On the other hand, boundary-spanning governance is needed to prevent ex post opportunism (Jap et al 2003). Initial findings from a case study associated with this dissertation support my assumption that some governance mechanism is needed to govern close network relationships toward sustaining competitive advantage. Specifically, a senior manager in the case study related that in the past, sometimes the cost from close suppliers crept above the price the suppliers were offering in the market (even to competitors). Now, this firm's "collaboration agreements" protect against this threat to the added value of the relationship. This seems to demonstrate that the old fashioned handshake personified by relational fiber of close business relationships (even with an ex ante governing contract) may work better in theory than practice (for empirical support for this viewpoint see Wathne, Biong, and Heide 2001p.54 that reports, "... interpersonal relationships do not play the frequently mentioned role of buffer against price and product competition.").

Governance is empirically well studied (e.g. Heide and John 1988; Heide 1994; Lush and Brown 1996; Wathne and Heide 2000; Jap et al 2003). However, a fundamental problem with competence is that all the evidence is virtually anecdotal. Therefore, before it can be tested in a model to determine the effect on competitive advantage, it has to be operationalized (a goal of this dissertation). Williamson (1999 p 1093), comparing competence and governance perspectives in the context of transaction cost economics maintains:

The study of competence is also important..... Its obvious importance and intuitive appeal notwithstanding, a relentless commitment to operationalization of competence is needed (to help build knowledge)..... Predictions, data, and empirical tests provide the requisite screen. Awaiting such developments, the competence perspective relies primarily on success stories to make its case.

To aid in the understanding of the common ground of competence and governance, and the appropriateness of both constructs in a single model of the supply-network as the unit of competition, Table 2 juxtaposes the two perspectives [see Oliver Williamson (1999) for a complete review that contrasts competence vs. governance for the study of strategy.]

I expand the concepts appearing in Williamson (1999) by deriving “boundary-spanning competence and governance” to apply to this dissertation.

### *Integrating the perspectives*

Integrating these concepts of competence (the resource advantage perspective) and governance (transaction cost theory) to a boundary-spanning position embraces a joint explanation for the supply-network as the unit of competition. A reliance on joint theory to explain the emergent firm is consistent with the belief that while the efficiency perspective of transaction cost theory should not be a strategic focus, it should be considered a norm within any economic unit. On the other hand, the resource based view is seen as the foundation for

commingling human capabilities [Dickson 1992; Hunt et al 1995; Dickson 1996; Hunt et al 1997; also see Deligonul and Cavusgil (1997) for a debate on the theories.].

The next chapter, Chapter Five, links the supply-network unit of competition to traditional marketing concepts.

**Table 2**  
**An Evolution of Competence and Governance to the Supply-Network Unit of Competition**

	<b>Competence “C”</b>	<b>Governance “G”</b>	<b>Boundary-Spanning “C &amp; G”</b>
	<b>Overall Source:</b> (Williamson 1999)	<b>Overall Source:</b> (Williamson 1999)	
<b>Firm</b>	Organization of processes	Production Unit	Supply- Network Unit
<b>Firm and Market</b>	Alternate Modes	Alternate Modes	Alternate Modes
<b>Purposes Served</b>	Effectiveness / Competence	Efficiency	Efficiency and Core Competence
<b>Describing the Firm</b>	Coordination / resource allocation	Governance Structure	Externally and internally focused coordination to form intangible Market-based assets  Governance structure: multiple “joint performance” governance mechanisms and safeguards
<b>Choice Decision Criteria</b>	Capability / Core Competence trade offs	Transaction Cost Difference	Dynamic transaction costs / value; added competency
<b>Human Actors</b>	Bounded rationality Relational	Bounded rationality Opportunism	Relational Leader ↔ Follower bounded rationality  Efficient opportunism*
<b>Unit of Analysis</b>	Routine (recommended by OW)	Transaction	Routine as a function of cost and value resource interaction as a function of cost and value
<b>Empirical Evidence</b>	Ex Post rationalization for success; Evidence is anecdotal	Evidence Supports Theory	Tested in this dissertation

\* a concept that allows and builds in some level of opportunism into the relationship (John 2004 mid-west marketing camp)

## **Chapter Five: Literature Review Part IV: Integrating Traditional Marketing Theory (Relationship Theory and Market Orientation) with the Theory of the Emergent Firm**

Using current and potential marketing strategies as a guide [in the drive for a sustained competitive advantage in supply-networks], managers should ask what relational and intellectual assets would be required ideally to attract, win, and retain customers [or consumers]. Such judgments would compel managers to think in terms of market-based assets .... Traditionally studied variables, like... market orientation ....., must be linked [to the phenomena]..... – Srivastava, Shervani, & Fahey 1998 p. 15.

### Relationship Theory Overview

In the context of the channel of distribution, marketing scholars over two decades have advanced theory to explain interpersonal interactions in the channel of distribution. Indeed, Dwyer, Schurr, and Oh (1987) indicated that interpersonal relationships in the business exchange portfolio include both “discrete transactions” and “relational exchange” paradigms. Discrete transactions are “market exchanges ... [which] occur when the firm buys on price, uses multiple sources of supply, and tends to switch suppliers frequently” (Frazier, Spekman, and O’Neal 1988 p. 52). Relational exchange is characteristically longer-term and is usually between business partners who compliment each other for business success. This exchange is also the fiber connecting supply-network entities.

Marketing scholars have addressed relationship norms (Dwyer, et al 1987; Spekman, Isabella, MacAvoy, and Forbes 1996) and behavioral issues of trust (Anderson and Weitz 1989; Morgan and Hunt 1994) and commitment (Gundlach, Achrol, and Mentzer 1995). They have also addressed the ramifications of information sharing and open and honest communication (Anderson, et al 1990; Anderson, Hakansson, and Johanson 1994), and partnership attributes, communication, behavior and conflict resolution techniques (Mohr and Spekman 1994) in close business relationships.

### *The Expanded Domain of Relationship Marketing*

The boundaries of marketing management and the marketing function (in facilitating the exchange process) continue to evolve and include questions of up-stream and down-stream, inter-firm relationship management, and coordination (Frazier, et al 1988; Webster 1992; Kotler 1992). The shift toward recognizing supply-chain management as a marketing process has lead marketing scholars to an examination of value created by “networks of firms ... where assets are commingled.” (Shervani et al 2003 p. 29)

Marketing scholars have also advanced questions of dependency in close channel relationships (e.g. Heide, et al 1988) offering resource-dependency theory as the foundation. Further, they have addressed the questions of transaction costs (e.g. Dwyer and Oh 1988; Rindfleisch, et al 1997) and governance (e.g. Gundlach and Achrol 1993; Heide 1994; Cannon, Achrol, and Gundlach 2000, Heide 2003).

More recently, marketing scholars are asking the broader questions relating to the consequences of a supply-network. These questions consider outcomes, implications, and advantages of commingling work conducted by internal and external actors. For example: Srivastava et al (1998) developed theory to address external market-based assets and shareholder value from a financial consequence perspective. They also proposed and empirically tested (2003) a model of buyer’s resource allocation decisions on the basis of networks.

Sivadas et al (2000) empirically examined organizational factors influencing new product success in internal vs. alliance-based processes; and they introduced the concept of “cooperative competency.” Wathne et al (2001) developed a conceptual framework of how relationship

variables and marketing variables influence the choice of suppliers; and they tested the framework empirically in the context of business-to-business services.

### *Relating Relationship Theory, the Expanded Domain, and the Present Thesis*

This dissertation is dedicated to understanding how a consumer-driven supply-network can attain a sustained competitive advantage based on building network level competencies as external market-based assets. This dissertation expands previous work of relationship theorist by integrating the study of relational variables with leadership traits, skills, and behaviors to form the competencies (leadership theory is reviewed in the next chapter).

In the context the products market, the present work expands previous marketing work by combining theory previously considered competing theory (transaction cost theory) and Governance Vs. RA and Competence) in the same model to explore the effect on sustained competitive advantage. It also expands the field by proposing a modified version of the traditional market orientation variable as the antecedent. The market orientation literature is reviewed in the next section.

### Market Orientation Theory Overview

The conceptualization of *market orientation* was introduced over a decade ago by two sets of scholars (Kohli and Jaworski 1990; Narver and Slater 1990), with different conceptualizations:

1. Kohli and Jaworski (1990 p. 1) view market orientation as the “implementation of the marketing concept.”

They broaden the definition to encompass “an organization wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization wide responsiveness” (1990 p.6).

2. Narver and Slater (1990 p. 20) view market orientation as related to sustainable competitive advantage.

They defined it as “the business culture that most effectively and efficiently creates superior value.” Their conceptualization includes three behavioral components: customer orientation, competitor orientation, and inter-functional coordination; and two decision criteria (which were later dropped but continue to be of interest to some scholars): long-term focus and profitability.

While there is significant empirical work that studies and improves upon these conceptualizations of market orientation in firm performance (see for example Deshpande, Farley, and Webster 1993; Deng and Dart 1994; Gray, Matear, Boshoff, and Matheson 1998; Han, Kim, and Srivastava 1998; Matsuno, Mentzer, and Ozsomer 2002), virtually no market orientation work has considered the distinction between a “consumer orientation” and a “customer orientation”. This distinction is important to the present dissertation since the effect of market orientation on the proposed competency construct is in a “consumer-driven” supply-network.

Although the conceptualizations have not been previously modified and tested to consider a consumer orientation, Mavondo and Farrell (2000) studied the generalizability of the Narver and Slater (1990) and the Kohli, Jaworski, Kumar (1993) models of market orientation across business markets and consumer markets. Their interest was stimulated in part by the fact that the conceptualizations are different but the models are considered theoretically equivalent. Therefore, the focus of their work was to determine if the two qualitatively different types of businesses used the same frame of reference for market orientation. They concluded that the Narver and Slater approach is more generalizable across samples in all respects. However, the Kohli et al (1993) model “presented problems” as if the respondents were responding to two different constructs. Although they did not suggest it, the “problem” could be the “end

customer” (vs. consumer) reference in the items of the construct. Indeed, business markets and consumer markets have different end users (businesses vs. consumers respectively).

### *The Expanded Domain of Market Orientation*

The utility of a market orientation is being elevated to the study of supply-networks. Stretching the concept of market orientation to the field of logistics Waller, Dabholkar, and Gentry (2000) dubbed “postponement and product customization” as “market orientation” supply-network strategies to understand its relationship to performance. They concluded that both concepts could be market-oriented strategies to gain competitive advantage. Citing empirical research that has shown a positive relationship between market orientation and performance, they advise (p.153, 2000) “... more work is needed on market-orientated supply-chain management (supply-network strategy).”

### *Relating Market Orientation, the Expanded Domain, and the Present Thesis*

This dissertation answers the challenge of expanding traditional marketing concepts to address supply-network problems. Market orientation was chosen as the antecedent for the present work because it is externally focused (customer and competitor) and well tested. External focus is a prerequisite of consumer-driven supply-networks. A well-tested antecedent like market orientation is also necessary to test (but not sufficient) in establishing nomological validity. However, the need for a distinction between customer and consumer in market orientation is another dilemma that must be addressed in this dissertation. I address this challenge in the methodology section by using aspects of conceptualizations, but changing “end user” to consumer in the Kholi et al (1993) model version, as well as adding new items unique to the test site. Since the Narver et al model proved generalizable across samples (Mavondo et al 2000) this conceptualization is also included.



## Chapter Six: Literature Review Part V: Leadership Theory

### Framing Leadership Competency

If you become the leader you ought to be on the inside [internal focus] you will be able to become the leader you ought to be on the outside [external focus]. People [customers and suppliers] will want to follow you and when that happens, .... you will be able to tackle anything in this world. – Maxwell 2002

Leadership is complex. The myriad theories, concepts, interests and definitions evidence the complexity. The definition of leadership proposed by Jago (1982) with two dimensions (property and process) is most suitable to ground the constructs conceived in this dissertation. The present chapter summarizes Jago's view of leadership. Then, it integrates trait, style, and skill leadership theories to position the elements needed to help frame the leadership competency constructs proposed for this work. Next, transformational leadership is reviewed because it is the leadership theory that is concerned with the values of leaders and the influence of these values on the performance of followers.

Finally, these leadership concepts are combined with the competency perspective to shape the conceptualization of leadership competency in the supply-network.

### Definition of Leadership: Framing Leadership Competency

The grounding definition of leadership in this dissertation builds from Jago's (1982) definition:

Leadership is both a *process* and a *property*. The *process* of leadership is the use of *noncoercive influence* to direct and *coordinate* the activities of the members of an organized group toward the accomplishment of *group objectives*. As a *property*, leadership is the set of qualities or characteristics attributed to those who are perceived to *successfully employ such influence* (Jago 1982, p. 315; emphasis added).

Leadership is not only a collection of human qualities or characteristics but it is also the interactive process needed to accomplish a specific mission. According to Jago (1982) leadership implies "followership". The process of leadership is displayed by interaction between

two or more people (or entities: e.g. supplier, focal firm, customer, consumer). Additionally, the process depends on the leader ↔ follower relationship, towards a common goal or mission.

Jago positions leadership as a dynamic, non-directional process. This implies that followers can assume the role of leaders and leaders can assume the role of followers in given circumstances. For example, a retail customer is a follower and the supplier is the leader if the supplier has developed a new technology that is appropriate at the retail level. However, the customer may want to take the leadership role to implement (or execute) the technology. The grounding definition “does not involve force, coercion, or domination; and it is not necessarily implied by the use of such titles as manager, supervisor, or superior” (Jago 1982).

In summary, it is generally well accepted that one part of leadership is reflected in the characteristics of the leader. The *property* portion of Jago’s leadership construct is associated with characteristics. This covers traits, behaviors, and skills of individual leaders. The properties of leadership shapes the “*cooperative persona*” portion of the proposed two part relational leadership competency construct developed in this dissertation. Another important part of the leadership definition is the influence process that “assists groups of individuals toward goal attainment” (Northouse 2003). Collaboration is a “process word” involving leader ↔ follower dynamics such as negotiations. Therefore, *collaborative competency* is framed as the process portion of supply-network relational leadership competency. Leadership trait and style theories are used to conceptualize *cooperative persona* while leadership skill theory is used (along with Jago’s 1982 definition) to frame collaborative competency. These are the two components of relational leadership competency.

The goal attainment aspect of leadership is execution. The same ideas of leadership (property and process) that are used to help develop the conceptualization for relational

leadership are used to develop *supply-network executional leadership competency*. This competency is defined in this dissertation as the ability of boundary-spanning relationships to successfully converge in delivering superior value to the market (i.e. to execute is to implement the plan). It is also conceived as incorporating two components: the trait part of this definition is the internal and external *information integration*; and the process portion is the *customer-supplier leadership ↔ followership dynamics*.

### *Trait, Style, and Skill or Behavior Leadership Theories – The Basis for Relational Leadership Competency*

*Trait Theory* assumes that personality traits are critical to effective leadership. This theory is based on years of research that concentrated on the belief that great leaders have innate qualities. Some *traits* of a leader are variables like trust, integrity, and motivation (as summarized by Northhouse 2004). Some trait variables in the leadership literature (e.g. trust and integrity) are like relationship variables used in the marketing literature. Traits of leadership that work well with followership include charisma and the ability to have vision (e.g. Slater 2001).

*Style or Behavioral Theory* focuses on what leaders do and how they act. As the forerunner of this concept, researchers at Ohio State University (late 1940s) conducted studies that identified two types of behavior actions of the leaders (relational and task oriented). Further, Nahavandi and Malekzadeh (1993) summarizing two decades of work found that a leader's personality style or behavior, when matched to situational requirements will achieve high group performance. I use this theory to frame the “cooperative persona” and “information sharing and visibility and integration of resources” concepts. These variables are matched with their respective process, situational variable (collaboration and leader ↔ follower dynamics).

*Skills Theory* of leadership suggests the use of knowledge and competencies (technical, conceptual, and human) to accomplish a set of goals and objectives (Nourhtouse 2003). This theory suggests skills needed for collaboration. Knowledge and competence are very important skills for collaboration in cross-boundary relationships. Technical skills imply knowledge and conceptual skills are the ability to work with ideas and concepts. Skills and behavior imply what leaders can accomplish (task-oriented like collaboration). Traits and characteristics imply persona, which is about whom the leaders appear to be (i.e. relationally oriented).

#### *Transformational Vs. Transactional Leadership Theory*

According to Northhouse (2003), transformational leadership is a concept that embraces emotions, values, standards, and long-term goals while at the same time being attentive to followers needs and respecting them as full human beings (not as subordinates). The sum of the interpersonal interaction raises the level of both the leader and the follower. Transformational leadership links the roles of leaders and followers and to some extent personifies Jago's (1982) definition of leadership. The leader ↔ follower interactions of transformational leadership can be associated with the dynamics of leadership in Jago's definition. The relational traits of a transformational leader personify the property portion of the grounding definition. The construct's components are: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. This type of leadership is more compatible with relational exchange fiber that underlies the supply-network as a unit of competition concept.

On the other hand transactional leadership is the opposite positioning. It can be compared with discrete transactions, arms-length exchange. Transactional leadership is opportunistic; it does not focus on the needs of subordinates or their developments, and it is based on contingent reward. This would not be appropriate theory to ground supplier and customer relationships in a

supply-network positioned as the unit of competition. Therefore, transformational leadership is the umbrella leadership concept of the supply-network leadership competencies. An attractive feature of this theory is the association with performance.

### *Positioning Supply-Network Leadership Competency*

The role of competence and theory to support it was reviewed in Chapter Four. I briefly highlight key points to define *supply-network leadership competency*.

Competency is referred to as core competence (Prahalad, et al 1990), distinctive competence (Miles and Snow 1980) and core capabilities. That is, there is no distinction between competency and capability and the words are used interchangeably. Therefore, I first distinguish between capability and competency before defining supply-network leadership competency. Capability is seen here as specific leader ability or characteristic (e.g. the capability to trust; the ability to influence) and it suggests potentiality. On the other hand, competency is conceptualized as a combination of leader capabilities or a hierarchy of competencies and it suggests mastery. Competency is defined in this dissertation as a capacity that goes beyond routine capability to a level that approaches masterwork. As defined, competency is viewed as established through a mastery of skills, behaviors, and traits related to the “human capability of work” (Jaques, et al 1994).

I am especially interested in leadership skills, behaviors, and traits that are fundamental for successful convergence in cross-boundary work (internal and external). These include collaborative skills and behaviors (like communication and feedback) and relational traits (like trust, integrity, and commitment) interacting with cognitive skills (knowledge, judgment, decrement). I am particularly concerned with the competency needed to creatively leverage the best of technically-involved processes across strategic business units and across firm boundaries.

Also, both suppliers and customers need this leadership competency to effectively participate, collaborate, and influence business results in the dynamic leader ↔ follower relationship. The next chapter, Chapter Seven, presents the conceptual framework.

## **Chapter Seven: Conceptual Framework and Hypotheses: Supply-Network Relational Leadership Competency and Supply-Network Executional Leadership Competency, Antecedent, governance and Safeguards, and Outcome Variable.**

Business leaders are beginning to make the connection between execution and results....[Michael] Dell's insight was that building to order, executing superbly, and keeping a sharp eye on costs would give him an unbeatable advantage. .... Leadership without the discipline of execution is incomplete and ineffective. Without the ability to execute, all other attributes of leadership become hollow (underlines added) – Bossidy and Charan 2002.

### Supply-Network Leadership Competency

Like Jago's definition of leadership, supply-network leadership competency is conceived to be both a property and a process. It is a three-dimensional (firm, customer, and supplier), two variable, construct set with 1) a relational variable and 2) an executional variable.

The relational variable considers leadership behavior, traits, skills, and style in its framing. And the framing of the executional variable considers the network characteristics (i.e. information sharing) and leader ↔ follower dynamics. In turn, each dimension of the construct set is conceived to have two components. These components are capabilities (or abilities) that combine to form the higher order competencies (see Figure 1 page 18).

*Relational Leadership Competency* is the ability of participating units to create an environment for “leadership level” convergence of business processes and resources among partners (e.g. suppliers / customers) to create solutions through dynamic leader ↔ follower traits and interactions in a supply-network. The variable has two components. The first dimension is *cooperative persona*. It considers leadership traits and it shapes the character, principles, and values of the environment. As with an individual, persona suggests personality traits and abilities important to leadership. Grounded in leadership trait (e.g. Stogdill) and style theory (e.g. Nahavandi et al 1993), cooperative persona helps to set the stage for supply-network performance by creating a transformational leadership environment with ability to have

confidence in partners, ability to be committed to a network's partner's goals, ability to show trust, ability to listen, ability to value contributions of others, and ability to have the courage to do the right thing.

The second dimension is *collaborative competency* which includes leadership skills and behaviors related to the task (vs. the trait) element of leadership. Collaborative competency is the ability of partners to dynamically collaborate with influence. This suggests that the actors must respect a supply-network partner's conceptual and technical skills. Variables that were conceived to comprise collaborative competency have two-way, leader ↔ follower connotations. They are: insistence on knowing why a change in strategy is made, willingness to get involved in negotiations of other options, asking and questioning when options are unclear, not following blindly, arguing a point of view when there is a difference of opinion, ability to influence when a partner has a different point of view, assertiveness in offering alternate solutions and options, and open and frank communication in boundary-spanning problem solving. This conceptualization considers the decision-making collaboration scale developed by Anderson, Martin, and Infante (1998).

When the two dimensions work together, I believe a leadership environment is created for successful convergence in the supply-network toward sustaining competitive advantage. I call this “relational leadership competency” and I hypothesize:

H1: Relational Leadership Competency is a two factor structure composed of cooperative persona and collaborative competency.

*Supply-Network Executional Leadership Competency* is defined as the ability to successfully converge processes and resources in implementing a leadership plan to deliver



superior value to the market through dynamic leader ↔ follower traits and interactions. This variable is also conceptualized to be comprised of two parts.

The first part is *information visibility and resource integration* (external). This component is comprised of traits of the supply-network including: ability to share sales and volume information to plan mutual supply-chain events, ability to share people resources as needed for responsiveness, ability to understand each other's pricing structure, open and visible order processing (to share defects before they hit the shelf), ability to share movement of goods information (to initiate claims closure upon shipment), ability to share market trend information, and ability to share procurement information.

The second dimension is *leadership ↔ followership dynamics* which (like collaborative competency) includes leadership skills and behaviors related to the task (vs. the trait) element of supply-network leadership. Leadership ↔ followership dynamics embraces having the ability to adapt unique capabilities of dynamic business processes / network goals alternating who takes the lead and who is to follow based on capabilities. This construct also suggests that the actors must respect a supply-network partner's conceptual and technical skill. Specific competencies are: consumption volume forecasting information for market demand planning, ability to be proactive in addressing problems that mutually affect the businesses, proactive in initiating planning sessions to address potential problems, ability to become a follower when the other partner makes good suggestions about your business operation, ability to feel a sense of co-ownership when the other partner is leading the implementation of a market strategy, ability to take suggestions from a supply-network partner that could influence how you run your operation (i.e. in general, the construct captures the ability to alternate between leader and follower roles).

I believe two conceived dimensions work together to form executional leadership competency. Therefore, I hypothesize about the dimensions of the supply-network executional leadership competency construct as follows:

H2: Executional Leadership Competency is a two factor structure composed of a) information visibility and resource integration; and b) leader-follower dynamics.

*Market Orientation* (e.g. Kohli et al 1990 and Narver et al 1990) was the a priori choice as an antecedent to test the consumer driven supply-network concept because it has external focus on the customer and competitor and because it is well studied in the marketing literature. A link to this variable could further establish the supply-network phenomenon in marketing.

However, the variable does not have a consumer dimension and this component is needed to test the “consumer-driven” concept of a consumer-driven supply network. Therefore, this study operationalized the consumer orientation considering the findings Mavondo et al (2000) who noted that the Kohli et al (1993) model “presented problems” as if the respondents were responding to two different constructs, when tested in consumer vs. industrial markets. I believe the “problem” could be the use of “end customer” reference in the items of the construct because (as noted earlier) business markets and consumer markets have different end users (businesses vs. consumers respectively). In the present study, I simply use the word consumer (instead of “end user”) and offer it as an additional dimension of the current three dimensional (customer orientation, competitor orientation, and inter-functional coordination) Narver, et al (1990) market orientation construct. Therefore, I hypothesize that:

H3: Consumer Orientation is a component of the Market Orientation construct.

The Naver, et al (1990) construct was used in this study because scholars attest to its generalizability across markets (e.g. Mavondo et al 2000). It was also the choice because it is generally accepted that the construct measures a business “market culture” as opposed to the “implementation of the marketing concept”.

A further modification of market orientation considers the outward focus of a consumer driven supply network. Considering this focus, the inter-functional aspect of the market orientation variable is replaced with variables that are conceptualized to capture an outwardly focused business orientation that requires cross-functional cooperation (i.e. “we place great value on consumer innovations” and “we reinvent the way we do business to win in the market place”). With this modification, I predict that the:

H4: Outward Focused Business Philosophy Orientation is a component of the Market Orientation construct.

Accepting the conceptualization of market orientation as a business culture, I further hypothesize that this modified version of:

H5: Market Orientation can be modeled as the antecedent in a consumer-driven supply-network toward sustaining competitive advantage.

*Governance and Safeguards* are believed to be essential in a model employing the supply-network leadership competencies conceived in this work, to help drive and sustain competitive advantage. Indeed, governance and safeguards are thought to be needed to address possible ex post opportunism. For this dissertation, in considering the complexity of supply networks, governance is conceived as a second order construct. That is (like market orientation) governance is thought to have more than one component. Indeed, customer governance and supplier governance may also be different elements with different functions. In fact, governance for one customer (supplier) may be different than governance for another customer (supplier) in

the same network. This conceptualization considers that if the competencies are to work in helping to sustain competitive advantage some provision for “efficient opportunism” (John, 2004) has to be considered. One way to allow for opportunism to be efficiently controlled is to build in “expectations of continuity” and other joint performance variables (so customers and particularly suppliers will see “what’s in it for me?”).

Using scale items from Jap et. al. (2003) I model and test three of their joint performance variables (joint profit performance, expectations of relational continuity, joint achievement of competitive advantage) with goal congruence and relationship investment variables as supply-network safeguards and governance mechanisms. This conceptualization of the variables (as governance mechanisms and safeguards) considers: if the relationships that support the competencies are mutually benefiting, then sustaining competitive advantage is more likely. This perspective on joint performance as a governance mechanism in a consumer-driven supply network is supported by the case study in this dissertation (as to expectations of supplier relationships). It also considers that if both parties are benefiting, there may be less tendency for opportunistic behavior.

Therefore I predict:

H6: That governance can be modeled as a multi variable construct with different functions per governance component in a supply-network.

H7: Customer and supplier governance and safeguards will behave differently in the model.

*Sustained Competitive Advantage* is an externally-focused measure and should be considered over a span of time by definition. To address this conceptualization, while building on existing scales, a modified version of the Song and Perry innovation scale (1997a and 1997b) was employed. To capture the “over time”

element, respondents were asked to think of a successful brand in their business before answering a list of questions. This part of the question considered that the firm has several billion-dollar brands and all of these successful brands are mature brands. Afterwards, respondents were asked to think of a new brand of product like the one they were currently thinking of and then they were asked a series of questions. The external element was captured by asking them to answer (on a scale from 1 – 5) from a customer or consumer perspective [e.g. We win with customers when our products like this one offer a noticeable consumer advantage (e.g. stronger, last longer, more reliable, more functional)].

### The A Priori Model Hypotheses

The main purpose of this work was the development of the leadership competencies as market-based assets for the aggregate supply-network from the firm's perspective. The final deliverable is an explanatory model that demonstrates a possible rendition of a consumer-driven supply-network incorporating the leadership competencies, market orientation, and governance. The *a priori* theoretical framework shown in Chapter One, Figure 1 proposed that sustained competitive advantage in a consumer driven supply network is a function of market orientation, governance, and customer (and supplier) leadership variables. Therefore, I hypothesize:

H9: Sustaining competitive advantage in a supply network is a continuous process related to functions of MO, governance, and supply network leadership competencies.

## **Chapter Eight: Qualitative Methodology and Results**

### Extended Case Study

#### *Overview of Sources of Information and Study Preparation Procedures*

A case study was conducted among thirty two (32) leaders in a multinational high-performance supply-network in the consumer products market. The purpose of the case study was to enhance conceptual underpinnings for the main study by understanding the basic language of leadership, governance, and competitive advantage within the emergent supply-network. The process used was as follows:

- 1) The leadership, governance, and competency concepts were reviewed in both scholarly refereed and popular non-refereed journals and publications generally available in the public domain for a fee (obtained through local book stores, the University of Cincinnati Libraries, and data base resources).
- 2) Non-refereed material on leadership, governance, and competence available at no charge via the Internet was obtained.
- 3) External published materials generally available in the public domain concerning the multinational firm were reviewed.

- 4) External published material generally available in the public domain concerning “Best in Class” or best practices firms (including competitors) as they relate to leadership development were consulted.
- 5) Internal business strategies were provided during on-going orientation sessions with key operations and supply leaders. This included confidential strategies and future plans for the firm. The orientation included meetings, documents, video presentations, a meeting with a supplier, a presentation with a customer, a leadership training college with plant managers, intranet sources, and on-going observations over a one year period (all covered under a confidential disclosure agreement dated July 9<sup>th</sup> 2003).
- 6) Finally, internal depth interviews with 32 key global leaders were conducted.
- 7) The entire process was linked to un-published dissertation pre-proposal draft and models authored by Linda Silver Coley (1/03 – 11/03) and corporate strategy documents launched by the senior vice president and officer of Global Product Supply. These exchanges were covered by a confidential disclosure agreement dated July 9<sup>th</sup> 2003.

### *Methodology for the Interviews*

A literature search on leadership and competency was conducted using cross-disciplinary sources. Then, project leaders provided a business orientation over the course of one week

before the start of the work. The orientation included sharing of corporate strategies, history, action plans, and discussion on structure. Following the literature review and the business orientation, the interview question guide was developed. The questions were based on findings from the literature search, the business orientation, an understanding of the global product supply unit's mission and strategies, an understanding of the broad corporate leadership agenda, and the objectives of an internal leadership "college curriculum" for director-level managers. The specific strategy for the interview instrument follows:

- Two strategies were targeted for focus during the depth interviews to understand the potential to include both the property of leadership and the process of leadership (Jago 1982) in the model and to understand the relationship between leadership and competitive advantage.
- Interview questions were aimed at understanding micro level leadership characteristics as well as macro level effects. The questions are shown in APPENDIX I with rationale for each question.

Face-to-face interviews were conducted for leaders in the headquarter city. Leaders outside the city and outside of the country were interviewed via telephone. All participants were asked the same questions. However, some participants were probed beyond the basic questions when interest, expertise in a specific business strategy area, or level of engagement in the process dictated. After the formal interviews were conducted some product supply managers that were embedded in the global business units (GBUs) provided additional insight (including on the spot



lectures concerning their approach to interaction and collaboration with the GBU to obtain results, for example), books, documentation (e.g. a leadership and leadership talk sheets from the CEO), and other material that they thought would aid the process were shared.

Immediately following the interview, a grid was given to the leaders that contained leader traits / attributes / characteristics that had been tested over five decades. Most leaders took the time to fill out the grid during the face-to-face interview, others needed extra time, and those not in the city were emailed the grid. Sixty-three traits/attributes/characteristics found in the literature over five decades were included in the final trait grid (see APPENDIX II for findings in the literature search). The leaders were asked to select the ten most personally important traits / attributes / characteristics and then they were asked to rank them as to importance (high 1 – 10 low) to their work. They were given the opportunity to list any traits / attributes / characteristics that were important to them but not included on the list. They were also asked to list any (including new) traits / attributes / characteristics they felt would be important given the strategic direction of the firm and its supply-network.

**Note 1:** The design of the leader trait interview instrument in this study pulled language from over five decades of validated empirical studies (some of which are embedded in the firm's leadership model). However, the grid also clearly acknowledged the test firm's leadership model language (even though that language was not useful to the current study and has been omitted) by listing the five leadership capabilities in the fourth column and giving respondents an opportunity to "list any attributes I might have missed that may be important to you". This process was used to ensure the relevance of the data collected to the

test firm and the interest of the subjects while obtaining the information needed for this dissertation

**Note 2:** Leaders felt comfortable mentioning names of individuals, countries, cultures, or groups especially when associated with positive or negative experiences or when making a comparison. However, all individual references to individuals, countries, culture, or groups were substituted with “XYZ”, “name omitted”, “area omitted”, or “culture omitted” even if positive information was shared.

**Note 3:** Sensitive information was omitted at the author’s discretion if it did not add value.

**Note 4:** If a particular theme seemed to reoccur or if more explanation seemed beneficial, the respondent was probed further.

### Summary of Conclusions from Qualitative Work

#### *Overview of Interview Conclusions*

Key conclusions from the interview follows: A more complete review of key themes is shown as APPENDIX III.

### *Overall Conclusions from the Qualitative Review*

- A. Most leaders are concerned with the “properties of leadership” (the set of qualities and characteristics associated with personal success for individual) and not the process of leadership.
- B. There appears to be emphasis on a culture change in support of the strategic direction of the firm toward a consumer driven supply chain. This parallels a leadership theory described in the literature as Transformational Leadership, which is based on leader behavior and follower admiration.
- C. The trait, behavior, and style approach to leadership can lead to “actors”. Desired leadership style or behavior should be modeled with an understanding of the dynamics of leadership as a property and a process, preferably, with a focus on specific sustainable business outcomes.
- D. While desirable leadership traits like vision, passion, trust, trustworthiness, and integrity (for example) are believed by some to be teachable attributes possessing these traits naturally may make leaders more believable among followers.
- E. Leaders need attributes, skills, styles, and behaviors that foster both strategy formulation and implementation.
- F. Cross-functional collaboration with influence is clearly a skill of importance that needs to be highlighted in the model. This conclusion is based on unsolicited feedback among cross-functional leaders embedded in the strategic business units.

G. The term leadership capability is too general to encourage association with specific outcomes. (Capability suggests potentiality vs. mastery. Example: I may have the capability to drive a truck because I can drive; but I may never be superb as a truck driver because I don't have the passion, vision, or interest to develop the skills to high level of competence. Still, I am capable.). Therefore "competency" was the term decided for this dissertation for the higher order constructs and "capability" was chosen as the language of the observables.

#### *Findings and Conclusions Specific to the Internal Interviews*

A. There was a gap in the area of linking the dynamics of leadership and followership to results and outcomes. Only a small number of higher level participants spoke of results, achievement, or outcomes.

B. Inappropriate leader behavior can affect results.

C. Some leaders have greater insight on leadership skills that have a "human dimension." This language included:

- how to really care about people and the human side of the business,
- recognition and crediting,
- how to value people, and
- how to show that you have high values (indicating if you do have high values – you don't have to tell followers you do – they know by your consistent behavior).

They further mentioned:

- treating people as individuals,
- really knowing them, and
- valuing their capabilities.

These leaders also shared their skills and ability on how to:

- be a "generous listener"
- "integrate large amounts of information" and
- "penetrate" complicated situations to get results.

D. Much of the language of the business culture (e.g. integrity, trust, passion, focus, courage, competence, visionary, character, communication and listening) has played back as important to work of most participants both in the interview conversations and from the forced trait exercise. However, language that did not play back that is also important (based on literature searches and interviews among higher band leaders) is: achievement, results, commitment, influence, empathy, cooperativeness, interpersonal, and motivation.

*Review of Findings from Trait / Attribute / Characteristics Grid (also see Table 3)*

Language of the culture that played back as most important “in your current leadership role” across all levels included:

- Integrity
- Passion
- Trust
- Focus

Other relatively popular mentions were:

- Courage
- Competency
- Visionary
- Character
- Communication
- Listening

Concepts important to the culture that did not play back at high levels, even though respondents had an opportunity to add to the list, were:

- Achievement
- Results
- Commitment

**Table 3**

<b>Trait / Attribute /</b>	<b>Total</b>	<b>%</b>	<b>Mean</b>	<b>Mode</b>	<b>Median</b>	<b>Range</b>
<b>Integrity</b>	<b>24</b>	<b>75</b>	<b>3.05</b>	<b>1</b>	<b>2.00</b>	<b>1 - 9</b>
<b>Courage</b>	<b>20</b>	<b>63</b>	<b>5.53</b>	<b>6</b>	<b>6.00</b>	<b>2 - 10</b>
<b>Passion</b>	<b>15</b>	<b>47</b>	<b>4.93</b>	<b>2</b>	<b>4.00</b>	<b>1 - 9</b>
<b>Competence</b>	<b>15</b>	<b>47</b>	<b>4.15</b>	<b>1</b>	<b>3.50</b>	<b>1 - 10</b>
<b>Listening</b>	<b>15</b>	<b>47</b>	<b>5.36</b>	<b>6</b>	<b>5.50</b>	<b>1 - 10</b>
<b>Visionary</b>	<b>14</b>	<b>44</b>	<b>4.57</b>	<b>5</b>	<b>5.00</b>	<b>1 - 10</b>
<b>Trust</b>	<b>13</b>	<b>41</b>	<b>4.00</b>	<b>3,4</b>	<b>3.50</b>	<b>1 - 9</b>
<b>Character</b>	<b>10</b>	<b>31</b>	<b>4.20</b>	<b>1</b>	<b>4.00</b>	<b>1 - 9</b>
<b>Communication</b>	<b>10</b>	<b>31</b>	<b>5.00</b>	<b>3</b>	<b>4.00</b>	<b>2 - 8</b>
<b>Intelligence</b>	<b>9</b>	<b>28</b>	<b>4.44</b>	<b>1,2</b>	<b>4.00</b>	<b>1 - 9</b>
<b>Confidence</b>	<b>9</b>	<b>28</b>	<b>5.22</b>	<b>7</b>	<b>5.00</b>	<b>1 - 10</b>
<b>Initiative</b>	<b>9</b>	<b>28</b>	<b>6.00</b>	<b>7,9</b>	<b>7.00</b>	<b>1 - 9</b>
<b>Relationships</b>	<b>9</b>	<b>28</b>	<b>6.30</b>	<b>8</b>	<b>8.00</b>	<b>2 - 10</b>
<b>Problem Solving</b>	<b>9</b>	<b>28</b>	<b>6.63</b>	<b>6,9</b>	<b>7.00</b>	<b>2 - 10</b>
<b>Focus</b>	<b>8</b>	<b>25</b>	<b>5.88</b>	<b>4,8,10</b>	<b>6.00</b>	<b>1 - 10</b>
<b>Judgment</b>	<b>7</b>	<b>22</b>	<b>5.57</b>	<b>3</b>	<b>5.00</b>	<b>3 - 10</b>
<b>Persistence</b>	<b>7</b>	<b>22</b>	<b>5.86</b>	<b>3,6</b>	<b>6.00</b>	<b>3 - 10</b>
<b>Energy</b>	<b>7</b>	<b>22</b>	<b>6.28</b>		<b>7.00</b>	<b>1 - 10</b>
<b>Achievement</b>	<b>7</b>	<b>22</b>	<b>6.29</b>	<b>9</b>	<b>7.00</b>	<b>2 - 9</b>
<b>Self-confidence</b>	<b>7</b>	<b>22</b>	<b>6.60</b>	<b>7</b>	<b>7.00</b>	<b>2-10</b>
<b>Positive Attitude</b>	<b>7</b>	<b>22</b>	<b>7.10</b>	<b>7</b>	<b>7.00</b>	<b>4 - 10</b>
<b>Servant hood</b>	<b>6</b>	<b>19</b>	<b>8.17</b>	<b>9,10</b>	<b>8.17</b>	<b>8 - 10</b>
<b>Insight</b>	<b>6</b>	<b>19</b>	<b>4.83</b>	<b>5</b>	<b>5.00</b>	<b>4 - 6</b>
<b>Influence</b>	<b>6</b>	<b>19</b>	<b>3.50</b>	<b>4,5</b>	<b>4.50</b>	<b>1 - 6</b>
<b>Cognitive ability</b>	<b>5</b>	<b>16</b>	<b>6.80</b>	<b>8</b>	<b>8.00</b>	<b>3 - 9</b>
<b>Sense of humor</b>	<b>5</b>	<b>16</b>	<b>6.00</b>	<b>6</b>	<b>6.00</b>	<b>1 - 10</b>
<b>Knowledge</b>	<b>5</b>	<b>16</b>	<b>3.80</b>	<b>2</b>	<b>2.00</b>	<b>2 - 7</b>
<b>Responsibility</b>	<b>5</b>	<b>16</b>	<b>4.60</b>		<b>5.00</b>	<b>2 - 10</b>
<b>Drive</b>	<b>5</b>	<b>16</b>	<b>4.20</b>	<b>10,2</b>	<b>5.00</b>	<b>2 - 10</b>
<b>Objectivity</b>	<b>5</b>	<b>16</b>	<b>8.40</b>	<b>9</b>	<b>9.00</b>	<b>7 - 9</b>
<b>Adaptability</b>	<b>4</b>	<b>13</b>	<b>8.75</b>		<b>9.50</b>	<b>6 - 10</b>
<b>Sensitivity</b>	<b>4</b>	<b>13</b>	<b>6.00</b>		<b>7.00</b>	<b>3 - 8</b>
<b>Empathy</b>	<b>4</b>	<b>13</b>	<b>7.50</b>		<b>5.00</b>	<b>5 - 10</b>
<b>Cooperativeness</b>	<b>4</b>	<b>13</b>	<b>6.00</b>		<b>6.50</b>	<b>2 - 9</b>
<b>Commitment</b>	<b>4</b>	<b>13</b>	<b>5.00</b>		<b>8.50</b>	<b>1 - 9</b>
<b>Interpersonal</b>	<b>3</b>	<b>9</b>	<b>4.00</b>		<b>3.00</b>	<b>2 - 6</b>
<b>Emotional Bal.</b>	<b>3</b>	<b>9</b>	<b>7.30</b>	<b>10</b>	<b>10.00</b>	<b>2 - 10</b>
<b>Authenticity</b>	<b>3</b>	<b>9</b>	<b>5.00</b>		<b>8.50</b>	<b>1 - 9</b>
<b>Tolerance</b>	<b>2</b>	<b>7</b>	<b>5.50</b>			<b>3 &amp; 8</b>
<b>Self-Discipline</b>	<b>2</b>	<b>7</b>	<b>7.50</b>			<b>7 - 8</b>
<b>Discernment</b>	<b>2</b>	<b>7</b>	<b>7.50</b>			<b>5 &amp; 10</b>
<b>Enthusiasm</b>	<b>2</b>	<b>7</b>	<b>9.50</b>			<b>9 &amp; 10</b>
<b>Tact</b>	<b>1</b>	<b>3</b>				<b>6</b>
<b>Motivation</b>	<b>1</b>	<b>3</b>				<b>8</b>
<b>Responsiveness</b>	<b>1</b>	<b>3</b>				<b>9</b>
<b>Charisma</b>	<b>1</b>	<b>3</b>				<b>10</b>
<b>TOTAL</b>	<b>320</b>					

## **Chapter Nine: Quantitative Methodology**

### **Scale Development, Validity, and Reliability Testing**

Scale content development and domain specification resulted from 1) the findings and conclusions from the case study; 2) the review of the leadership, competency, management, marketing, logistics, purchasing, and operations management literature; 3) follow-up interviews with key experts in the field; and 4) review with academic scholars.

Construct validity was determined using a procedure recommended by Anderson and Gerbing (1988). Objectives were: 1) to specify the domain of observables related to the construct using case study, input from academic scholars, and theory; 2) to determine the extent to which observables tend to measure what they were designed to measure using confirmatory factor analysis; and 3) to determine whether a supposed measure of the construct correlated in expected ways with measures of other constructs. Reliability was checked using coefficient  $\alpha$ , after confirmatory factor analysis had been conducted (Anderson and Gerbing 1988).

Existing scales were modified and used for all well studied concepts (market orientation, governance, and sustained competitive advantage). However, in each case the scales were retested to determine if items loaded and constructs behaved as expected. Items for main constructs of interest begin with APPENDIX IV. All items were measured on a five-point Likert scale.

## Data Collection and Sample Frame

### *Survey Research Sample Frame*

Respondents who were qualified as participants for this study were an “organization wide” group of cross-functional leaders and managers (e.g. Marketing, IT, Finance, R&D, Market Development, Customer Development, Engineering) at five different levels (i.e. Brand Managers to Presidents of strategic business units) of the same multinational, multi-billion dollar firm headquartered in the Midwest. Managers and leaders were from eight different strategic business units. Specifically, the names were taken from company organization charts ranging from the level of president, general managers, vice president, directors, associate directors, to brand manager (or first level managers). The positions in the firm and responsibility were verified using the in-house intranet “people finder” system which gives work area and chain of command for each individual.

The respondents in the study were responsible for outward-focused work as demonstrated in Figure 2, Chapter One. They either worked in cross-functional global business units or in a corporate role supporting consumers, customers, work with suppliers (i.e. purchases), or a combination among the entities.

### *Sample Size*

Three hundred and forty one (341) surveys were sent using a commercially available electronic survey instrument and one hundred and seventy five (175<sup>3</sup>) usable surveys were

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<sup>3</sup> Leaders had a tendency to skip questions that were not in their area of outward focus (for example a leader primarily responsible for the customer, did not always answer the questions about suppliers. Therefore a procedure for handling missing data discussed in Byrne (1998 p. 46) was used.



returned (50%). This return rate compared well with recent surveys conducted within the same firm with an averaged response rate of about 33%.

### *Research Strategy, the Survey and the Survey Instrument*

The design of the instrument and the control of the data were maintained by the author. However, the instrument carried the logo of the test site.

### *Increasing Response Rate*

Since only one logo could fit on the electronic design, the logo of the test site was employed as a signal that the survey was endorsed by the firm. Having the test site's logo on the survey helped establish the legitimacy of the work. Further, the invitation letter for participation was authored by a senior level officer of the firm. To test for technical problems a pre-run of the survey was conducted first among one business unit. Issues of outside URL (due to concern about SPAM), penetration of the extremely secure firewall (even though clearance had been granted, some participant's level of security was too high for regular clearance), elements of surprise that the work was being conducted, and questions of authorization (the invitation letter at first was attached to the survey to minimize disruption and contact of busy executives), bounce back questions to the officer who sent out the letter (this interruption would have been immobilizing) surfaced and were handled.

The solution was to mail a pre-announcement to each potential respondent under blind cover using an in-house email address and copying the executive assistant for the officer of the firm (to maintain confidentiality while signaling legitimacy). The pre-announcement advised the potential respondents to expect the survey, explained the outside email address, and offered

follow-up numbers of well respected managers along with the study coordinator if there were questions. Two weeks after the initial announcement, non-respondents were sent one reminder note. The survey design had a built in system such that if the survey had been initiated but was idle for too long the system would send it back to the sender. These respondents were also given a second chance.

### *Questionnaire Design*

Given the complexity of supply-networks, the survey instrument was designed to accommodate structural equation modeling considering generally accepted rules concerning number of parameters vs. number of cases (Byrne 1998), the goal was at least 100 – 180 participants.

The first question on the survey (“In my opinion, our business uses the words “consumer” and “customer” in the same context?”) was added to empirically establish that consumers and customers are different in the minds of managers and leaders in the consumer products markets.

This question was important to help establish whether the supply-network was indeed “consumer-driven” as proposed in the theory. The next question clarified the outward focused work of the respondents: (consumer, customer, consumer and customer, supplier, supplier and customer, supplier and consumer, consumer, customer and supplier). Again, the diagram in Figure 1 demonstrates the work focuses. This clarification was important to the outward focused strategy and theory. The next part of the survey proceeded in the order that variables were expected to be in the model considering a “from self back” or “consumer back” (or market orientation) strategy. Therefore, the study began with questions about the consumer, customers,

competitors, and some general business questions that were used to establish the market orientation construct. Next, questions were asked concerning customer, customer governance, followed by suppliers, then supplier governance, and finally a sustained competitive advantage variable was tested. Optional classifying information (i.e. years with the firm, movement into other assignments, and level within the firm) was included at the end of the survey.

### *Survey Procedure*

Company email addresses were obtained for each potential respondent and placed in a list serve with first and last names (important for direct follow-up). From a PC site outside the firm, the emails were sent with a computer generated invitation to participate in the study from the officer of product supply. The respondents were told that a PhD candidate had been working on the Global Product Supply Operations team for a year and needed to conduct a final study to complete her work. He added that he would appreciate it if they participated in the attached survey that should take about fifteen minutes. Then he invited them to click on the attached site. When the site was initiated, the presentation graphics were a company logo in an appropriately coordinated background with a banner of text that read “Global Product Supply / Business / Functions / Survey”. Instructions advised that their input was important to gathering information to better understand perceptions as they relate to business and market phenomena in the supply network. They were further told that it was extremely important that their answers be “complete and honest, based on their personal frame of reference about the current reality (not what is desired) concerning their business or work unit.” They were instructed that in answering some questions, to “please use your best judgment based on your frame of reference”. Then they were told that the survey was designed to take about 15 minutes. However they were advised that, it

could take a little more or less time based on their familiarity with the information being gathered. They were also advised that the questionnaire was designed so that you could pause if needed to --- then come back and continue where you left off. The respondents were also told to just “simply follow the directions for each question and then click your answer with your mouse”. Important to industry survey work, they were given a date that their response was needed and given names and numbers for follow-up in case of questions.

Next, they were advised that there are no risks in participating in the survey and their confidentiality would be maintained at all times because the data will be compiled in the aggregate and coded by an outside party. That is, no one respondent will be identified in the analysis. Finally, they were told that moving to the next page would signal agreement to participate in the survey.

Alternating shades of blue were used to separate the questions. Consciously, the background was chosen to facilitate reading and reduce fatigue. Respondents were allowed to move back and forth through the survey; however, if the session was interrupted with a long pause, answers that had been given could not be changed.

#### Supply-Network Leadership Competency Item Development

Following the qualitative case study among 32 managers and leaders, as well as a cross-disciplinary literature review, items were developed for the potential constructs. Proposed items with definitions for both Relational Leadership Competency constructs (cooperative persona and cooperative competency) were sent to academic scholars at three different universities. After, receiving their input, modifications were made where appropriate. The items were then scrambled and sent to selected managers who were asked to assign the items to one definition or

the other. It was noted that some of the reversed items seemed to cause problems. Therefore some were changed; however, a few reversed items were kept for quality control. The items tested and the final items are shown in the results in Chapter Nine. The directions used to help operationalize the components of the relational leadership constructs, and the items tested for the constructs are shown in APPENDIX IV A – B (customer) and V A – B (supplier).

Next, the proposed items for the Executional Leadership Competency constructs (information visibility / resource sharing; and leader ↔ follower dynamics) were developed for both supplier and customer relationships. The supplier leadership competency constructs were reviewed in a follow-up interview with a supply team operations expert and then a global purchases expert. Proposed items for the customer leadership competency constructs were reviewed by a global market development expert who lead the North American customer operations and who had international customer focus and experience. After the items were developed, a test was conducted with two director level managers who were responsible for purchases within two different global business units with separate supply chains.

Suggested modifications and wording was considered after each construct development session and changes were incorporated if the interpretation and the intent were inconsistent. The directions used to help operationalize the customer and supplier executional leadership constructs, and the items tested are shown in APPENDIX VI A – B (customer) VII A – B supplier. The two factor models are discussed in the results section and shown as APPENDIX VII A – B

### Item Development for the Dependent Variable, Antecedent, and Governance

For the most part, established measures were chosen and modified for these variables. However, the qualitative study and two follow-up interviews with the senior vice president over the global supply operations, helped to link supply-network strategy, business strategy, governance, and sustained competitive advantage to items and constructs for these variables. The items for market orientation were guided by the marketing literature and the qualitative study.

#### *Dependent Measure*

The dependent measure in this study was *sustained competitive advantage*. This concept was captured using existing scales reported (Bruner, James and Hensel 2001) to have been developed by Song, et al (1997 a, 1997 b) reflecting items developed by Cooper (1979) and Zierger and Maidique (1990) to measure new product superiority relative to competing products and later revised to measure product differentiation. Song et al (1997a and b) scales were 10 point Likert vs. the five point scale used in the present study. Bruner, et al 2001 reported that the authors cited coefficient alphas of .89, .90 (for US and Japanese samples respectively). They also reported confirmatory factor analysis was used to purify the scale resulting in a coefficient alpha of .89 for a five item scale. Extensive pre-testing was cited to have provided strong face validity of the measures established.

Since a “sustained competitive advantage” has an outward focus (competitive advantage) and it is over time (sustained), the respondents in this study were asked to think of an existing brand in their business area that was successful in the market as a reference point to capture the “over time” element. The language of the components of market orientation: consumer

orientation, customer orientation, and competitive orientation captured the outward focused strategy of the firm. The choice of an established brand to capture sustained competitive advantage recognizes the finding in the qualitative study that managers at certain levels do not integrate resources when thinking about competitive advantage. The measures are shown in APPENDIX VIII.

#### *Antecedent: Market Orientation*

The well studied market orientation construct was chosen as the antecedent in this study because it adapts well to testing theory in an outward-focused, consumer-driven supply-network. The nomological, discriminant, and convergent validity of market orientation is well documented. However, the addition of the consumer orientation variable required verification as an additional component of the construct. Further, since both established market orientation constructs (eg Narver et al 1990 and Jaworski et al 1990 & 1993) are thought to have different connotations, it was essential to test consumer orientation with the established constructs. It was also important to capture the market orientation concept from the perspective of the test sight. The items tested and the final market orientation model are shown in exhibits IX A - F

#### *Measures of Governance and Safeguards*

The role of governance was queried in the qualitative phase in interviews with the 32 executives. The use of the term “governance” to help explain the dynamics of the supply-network was unfamiliar to them. Interview conversations with a senior level leader exposed a language barrier (as to governance) between the literature and practice. While governance and

opportunism are not the language of business, when the dynamics of supply-networks are considered, the concept of protecting assets are.

Given the complexity of supply-networks and the conceptualization of governance for this dissertation, several governance mechanisms were tested for their potential in explaining the complex supply-network phenomena in combination with each other.

Building from Jap et al (2003), I modified several “joint variables” to serve as governance and safeguards. This dissertation employed: *goal congruence* ( $\alpha = .87$  adapted from Jap 1999; conceptualized as a safeguard), *achievement of joint competitive advantage* ( $\alpha = .82$  adapted from Jap 1999; conceptualized as a performance measure), *joint profit* ( $\alpha = .83$  adapted from Jap 1999; conceptualized as a performance measure), *relationship investment* ( $\alpha = .76$  adapted from Anderson and Weitz 1992, conceptualized as a safeguard) and expectations of relational continuity ( $\alpha = .84$ ) in a combined second order construct.

In summary, eight new supply network competencies were developed (two in a set, each with two components, relative to both customers and suppliers). The dependant measure (sustained competitive advantage) and the antecedent (market orientation) were modifications of well studied variables. Sustained competitive advantage referenced a successful established brand to capture its attributes in the minds of respondents as a picture for a new product. Market orientation was modified to employ a consumer orientation component and an outwardly focused business philosophy. The governance and safeguard variables were also well studied and were modified only to identify either customer or supplier.



## Chapter Ten: Results of the Quantitative Study

### Operationalizing Supply-Network Leadership Competencies:

#### A. *Relational Leadership Competency: Unidimensional Measurement and Confirmatory Factor Analysis, Validity, and Reliability:*

Results indicate that each component (cooperative persona and collaborative competency) of relational leadership competency (both customer and supplier) has content validity, construct validity, unidimensionality, and reliability. Specifics for each measure and the measurement models are discussed next:<sup>4</sup>

1. **Definition of Relational Leadership Competency:** the ability of participating units to create an environment for “leadership level” convergence of business processes and resources among partners (e.g. suppliers / customers) to create solutions through dynamic leader ↔ follower traits and interactions in a supply-network. The variable has two components.

---

<sup>4</sup> As noted earlier, a year long qualitative study was conducted to explore and develop possible items for the constructs of interest using experts. This work resulted in several items reflective of actual operations in certain business units from the viewpoint of the experts within a consumer-driven global supply-network. Therefore, confirmatory factor analysis was used to test this expert direction. However, since the study was conducted organizationally wide, some items judged for deletion may be due to a lack of knowledge of participants specific to customer (or supplier) relationships. On the other hand other items may not have had enough variance to perform well. In spite of this, it should be noted that in every case, items loaded on the targeted factor. This is attributed to the tedious case study phase of this work where face validity was established. Finally, there was also a tendency for respondents to skip questions or mark a “3” (neither agree nor disagree) when the question was outside of their area of responsibility.

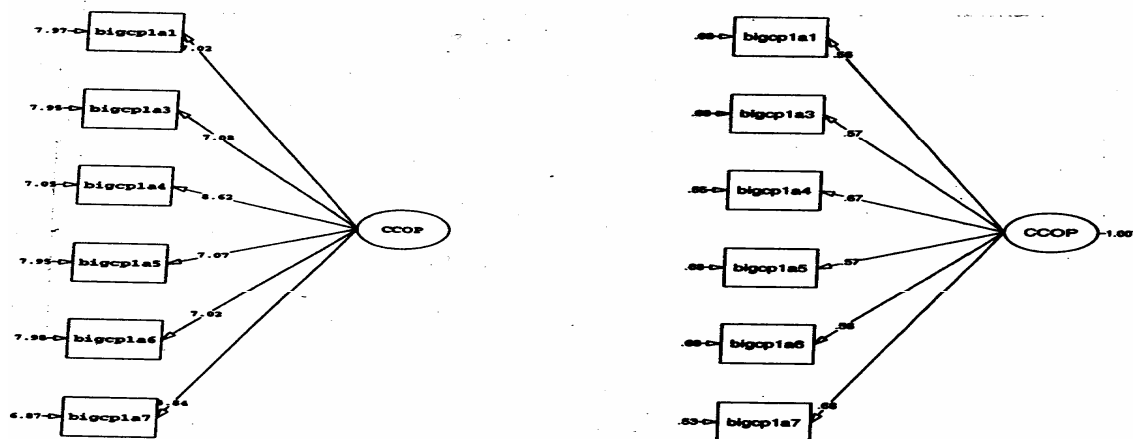
Since this was a confirmatory factor analysis, no attempt was made to explore the data for other possible factors. Therefore, items were first deleted if loadings were relatively low, then they were deleted if they did not fit the data using strict Lisrel fit statistics and best judgment as criteria after careful consideration of findings in the case study and through understanding of the strategic direction and culture of the firm. While this study was confirmatory, the data are rich for further exploration of phenomena and further practical clarification. Since this study was mapped using confidential information, correlation matrices are not provided to prevent exploration of the data before sponsors have direction and since exploration is beyond the scope of the present study. A next step study may be to expand understanding about some of the items that did not load as first instinct would suggest.

- a. **Cooperative persona:** considers leadership traits and shapes the character, principles, and values of the environment; suggests personality traits and abilities important to leadership, helps to set the stage for supply-network performance by creating a transformational leadership environment with: ability to have confidence in partners, ability to be committed to a network's partner's goals, ability to show trust, ability to listen, ability to value contributions of others, and ability to have the courage to do the right thing.

### Results

**Customer Cooperative Persona:** [see scale items, loadings, and t values indicating satisfaction of the product rule for internal consistency in APPENDIX IV A (customer)].

Customer Cooperative Persona Measurement Model with t values and factor loadings: Figure 3



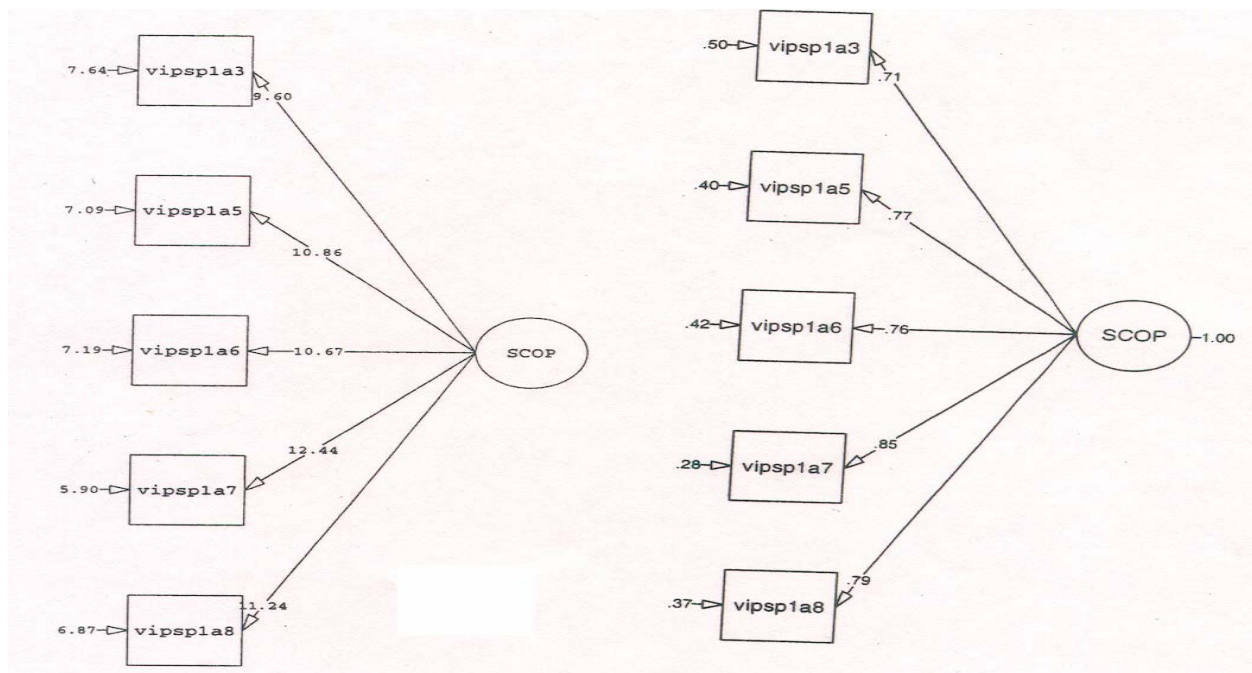
Customer Model Statistics: Chi sq. = 10.11, P = .34, RMSEA = .027, RMR = .034, GFI = .98

Customer Reliability:  $\alpha = \frac{(\sum_i \lambda_i)^2}{(\sum_i \lambda_i)^2 + \sum_i (1 - \lambda_i^2)} = \frac{(3.61)^2}{(3.61)^2 + (3.72)} = 13.03 / 16.75 = .7779$

**Supplier Cooperative Persona:** [see scale items, loadings, and t values indicating satisfaction of the product rule for internal consistency in APPENDIX V A (supplier)]

Supplier Cooperative Persona Measurement Model with t values and factor loadings:

Figure 4



Supplier Model Statistics: Chi sq. = 6.11, P = .30, RMSEA = .038, RMR = .019, GFI = .99

$$\text{Supplier Reliability: } \alpha = \frac{(\sum_i \lambda)^2}{(\sum_i \lambda)^2 + \sum_i (1 - \lambda_i^2)} =$$

$$(3.88)^2 / (3.88)^2 + (1.97) = 15.054 / 17.024 = .8842$$

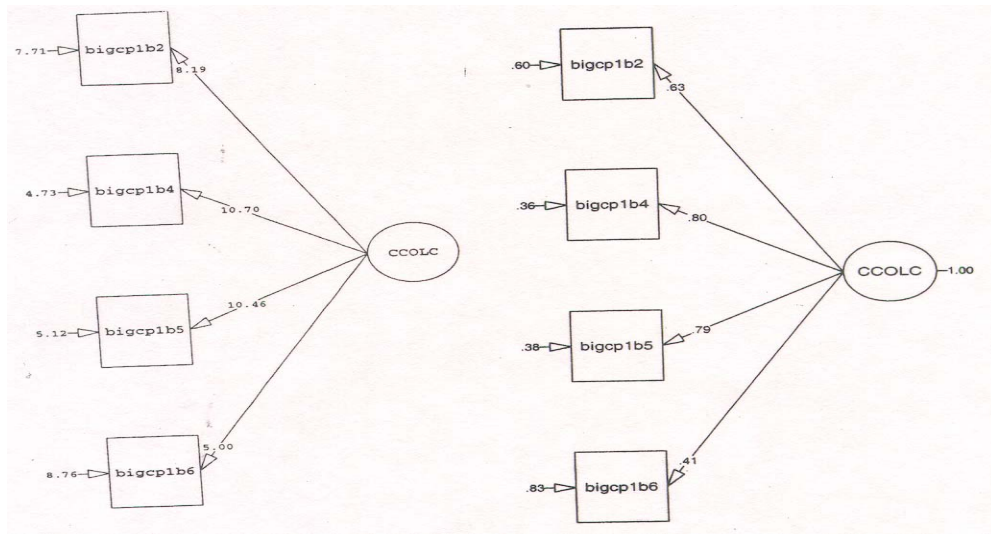
- b. ***Collaborative competency*** includes leadership skills and behaviors related to the task (vs. the trait) element of leadership; the ability of partners to dynamically collaborate with influence. This would suggest that the actors must respect a supply-network partners' conceptual and technical skills; has two-way, leader ↔ follower connotations. Variables are: insistence on knowing why a change in strategy is made, willingness to get involved in negotiations of other options, asking and questioning when options are unclear, not following blindly, arguing a point of view when there is a difference of opinion, ability to influence when a partner has a different point of view, assertiveness in offering alternate solutions and options, and open and frank communication in boundary-spanning problem solving.

## Results

**Customer Collaborative Competency:** [see scale items, loadings, and t values indicating satisfaction of the product rule for internal consistency in APPENDIX IV B (customer)].

Customer Collaborative Competency Measurement Model with t values and factor loadings follow:

Figure 5



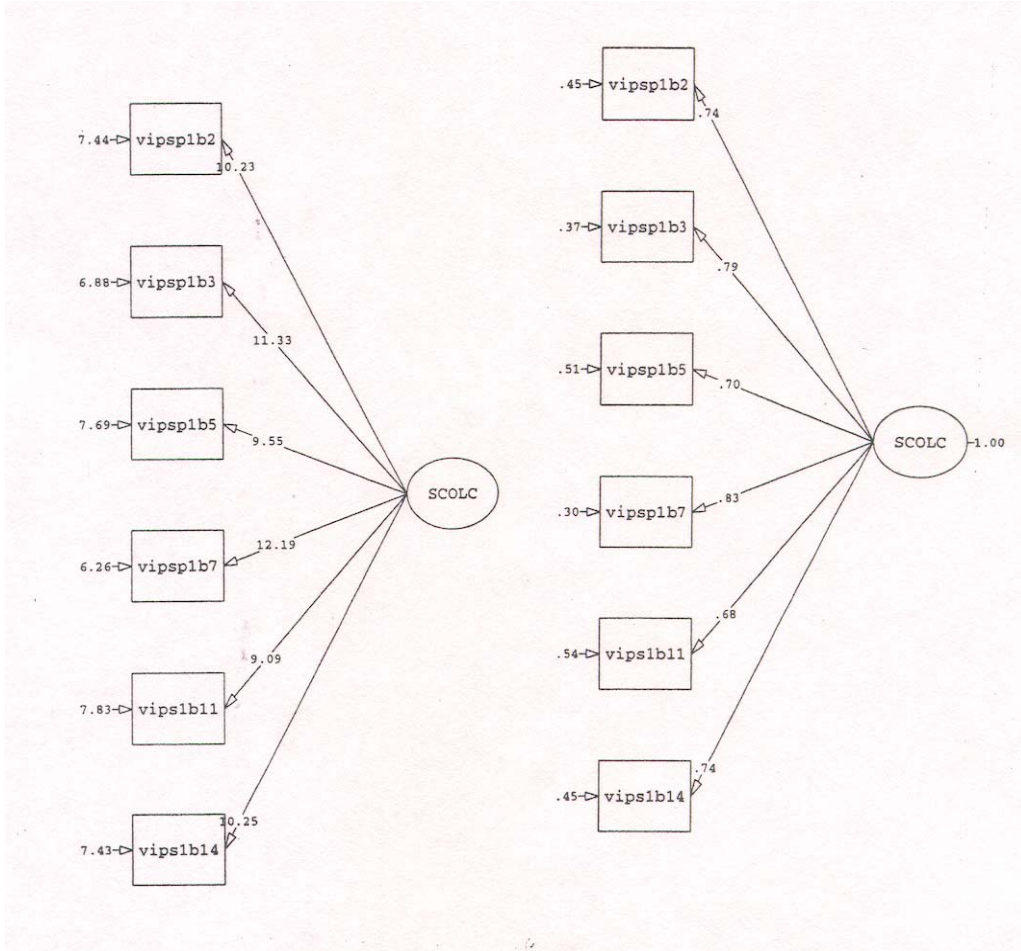
Customer Model Statistics: Chi sq. = 3.07, P = .22, RMSEA = .056, RMR = .028, GFI = .99

Customer Reliability:  $\alpha = \frac{(\sum_i \lambda_i)^2}{(\sum_i \lambda_i)^2 + \sum_i (1 - \lambda_i^2)} =$   
 $(2.63)^2 / (2.63)^2 + (2.17) = 6.92 / 9.09 = .7613$

**Supplier Collaborative Competency:** [see scale items, loadings, and t values indicating satisfaction of the product rule for internal consistency in APPENDIX V B (supplier)].

Supplier Collaborative Competency Measurement Model with t values  
and factor loadings follow:

Figure 6



Supplier Model Statistics: Chi sq. = 7.35, P = .60, RMSEA = .00, RMR = .020, GFI = .98

Supplier Reliability:  $\alpha = \frac{(\sum \lambda)^2}{(\sum \lambda)^2 + \sum (1 - \lambda_i^2)} =$

$(4.48)^2 / (4.48)^2 + (2.62) = 20.07 / 22.69 = .8845$

B. *Executional Leadership Competency: Unidimensional Measurement and Confirmatory Factor Analysis, Validity, and Reliability:*

Results indicate that each component (information visibility / resource integration and leadership ↔ followership dynamics) of executional leadership competency (both customer and supplier) has content validity, construct validity, unidimensionality, and reliability. Specifics for each measure and the measurement models are discussed next:

1. **Definition of Executional Leadership Competency:** the ability to successfully converge processes and resources in implementing a leadership plan to deliver superior value to the market through dynamic leader ↔ follower traits and interactions. This variable is also conceptualized to be comprised of two parts.
  - a. **information visibility and resource integration** (external): considers “leadership traits of the supply-network” including: ability to share sales and volume information to plan mutual supply-chain events, ability to share people resources as needed for responsiveness, ability to understand each other’s pricing structure, open and visible order processing (to share defects before they hit the shelf), ability to share movement of goods information (to initiate claims closure upon shipment), ability to share market trend information, and ability to share procurement information.

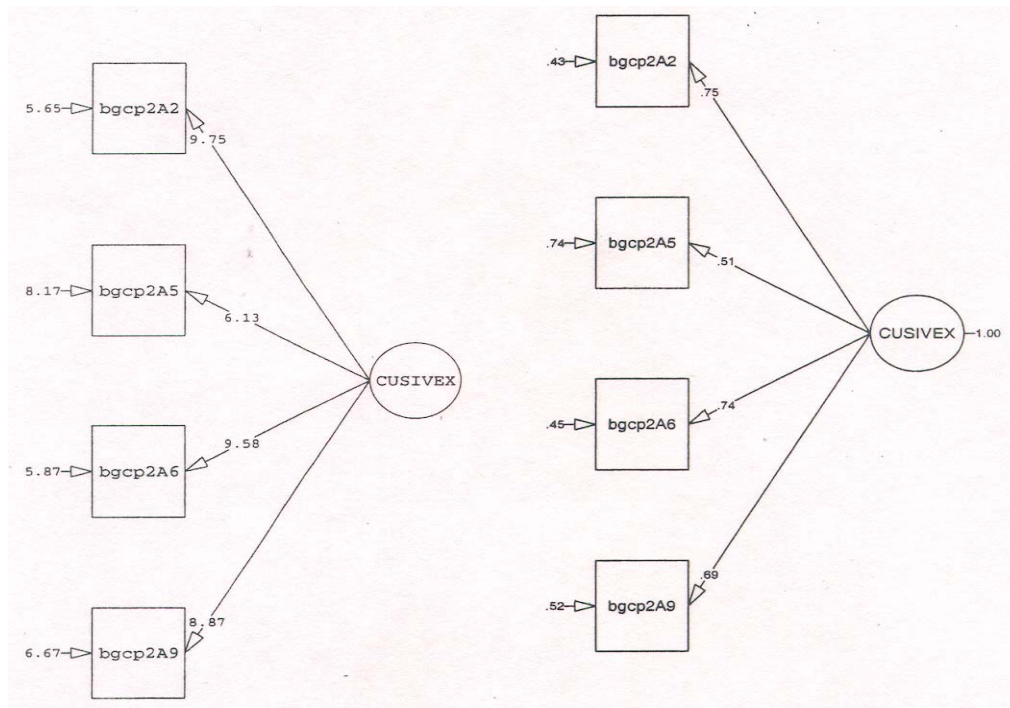
## Results

**Customer Information Visibility and Resource Integration:** [see scale items, loadings, and t values indicating satisfaction of the product rule for internal consistency in APPENDIX VI A (customer)].

Customer Information Visibility and Resource Integration

Measurement Model with t values and factor loadings:

Figure 7



Customer Model Statistics: Chi sq. = 1.06, P = .59, RMSEA = .00, RMR = .015, GFI = 1

Customer Reliability:  $\alpha = \frac{(\sum \lambda)^2}{\dots}$

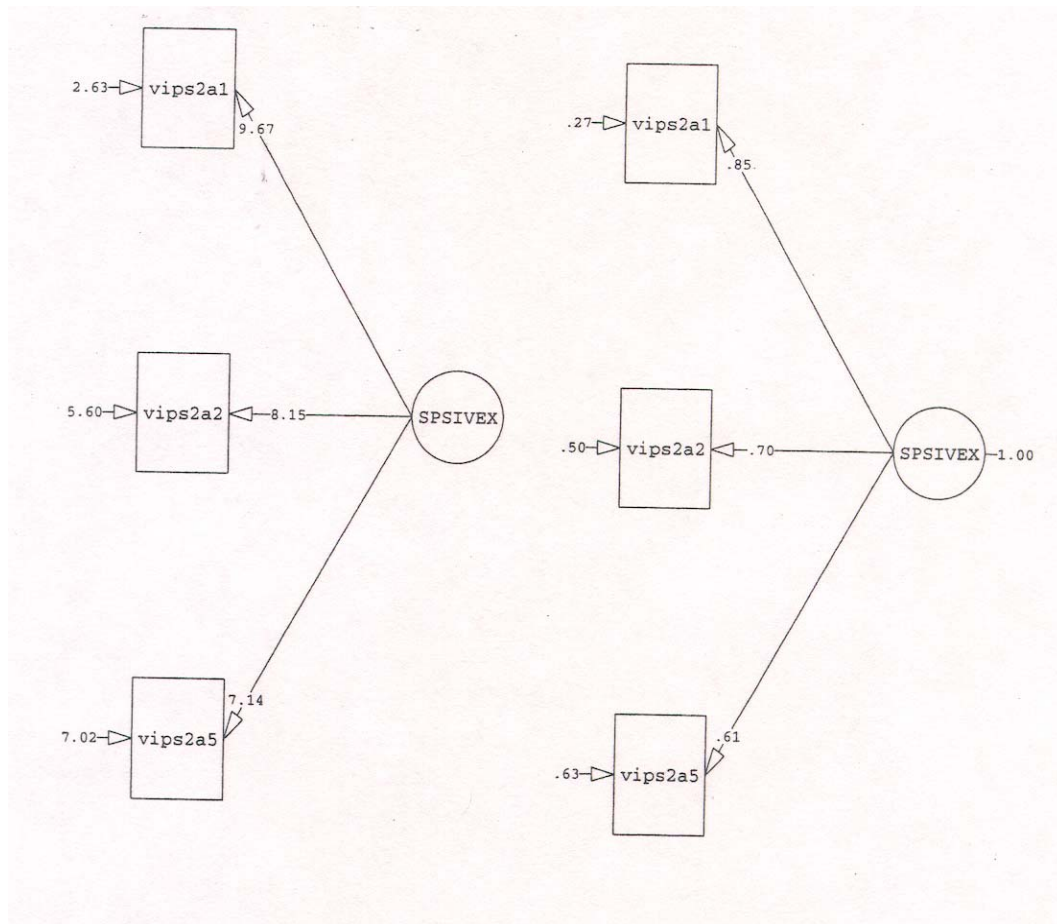


$$\frac{(\sum_i \lambda_i)^2}{(\sum_i \lambda_i)^2 + (\sum_i (1 - \lambda_i^2))} = \frac{(2.69)^2}{(2.69)^2 + (2.14)} = 7.24 / 9.38 = .7719$$

**Supplier Information Visibility and Resource Integration:** [see scale items, loadings, and t values indicating satisfaction of the product rule for internal consistency in APPENDIX VII A (supplier)]

Supplier Information Visibility and Resource Integration Measurement Model with t values and factor loadings

Figure 8



Supplier Model Statistics: Chi sq. = 0.0, P = 1.00, The Model is Saturated, Fit is Perfect (only 3 items)

$$\text{Supplier Reliability: } \alpha = \frac{(\sum_i \lambda)^2}{(\sum_i \lambda)^2 + \sum_i (1 - \lambda_i^2)} = \frac{(2.16)^2}{(2.16)^2 + (1.40)} = 4.666 / 6.066 = .7692$$

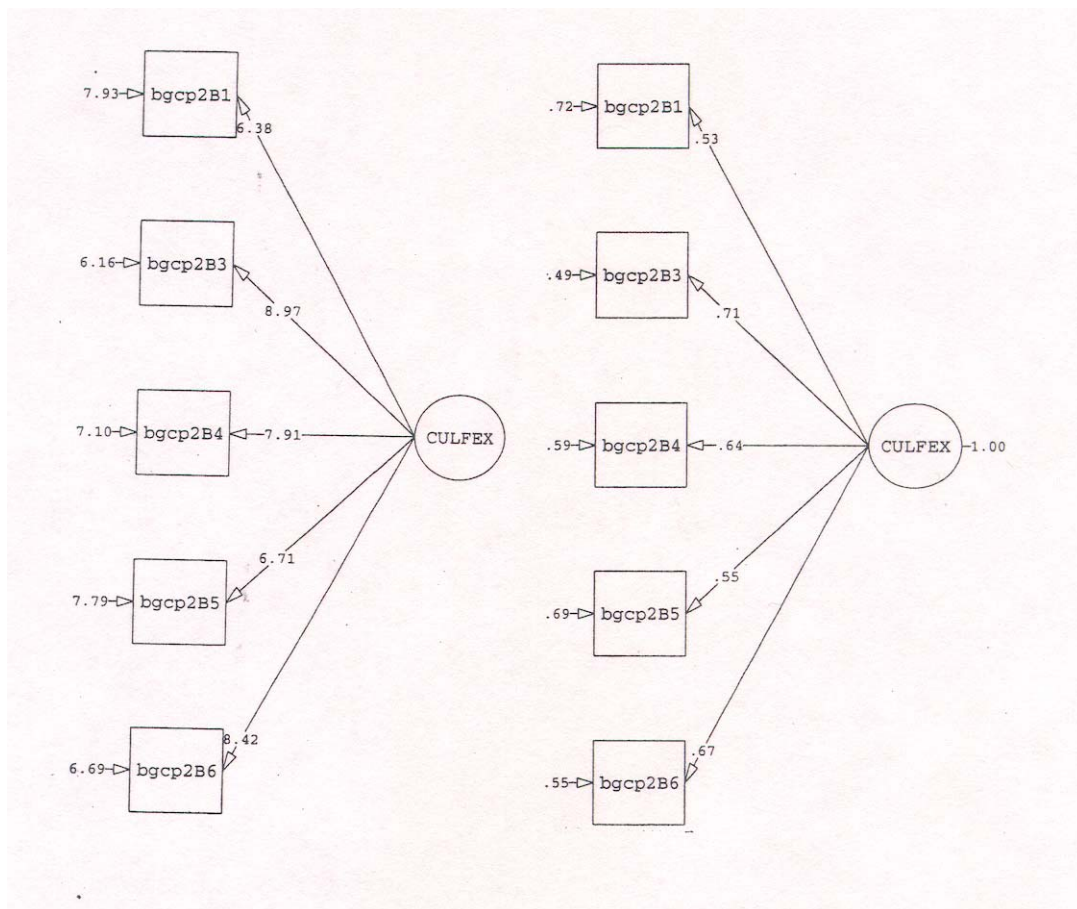
- b. **Leadership ↔ followership dynamics:** the ability to adapt unique capabilities of dynamic business processes / network goals alternating who takes the lead and who is to follow based on capabilities. It suggests that the actors must respect a supply-network partner's conceptual and technical skill. Specific competencies are: consumption volume forecasting information for market demand planning, ability to be proactive in addressing problems that mutually affect the businesses, proactive in initiating of planning sessions to address potential problems, ability to become a follower when the other partner makes good suggestions about your business operation, ability to feel a sense of co-ownership when the other partner is leading the implementation of a market strategy, ability to take suggestions from a supply-network partner that could influence how you run your operation.

### Results

**Customer Leadership ↔ Followership Dynamics:** [see scale items, loadings, and t values indicating satisfaction of the product rule for internal consistency in APPENDIX VI B (customer)].

## Customer Leadership ↔ Followership Dynamics Measurement Model

with t values and factor loadings follow: Figure 9



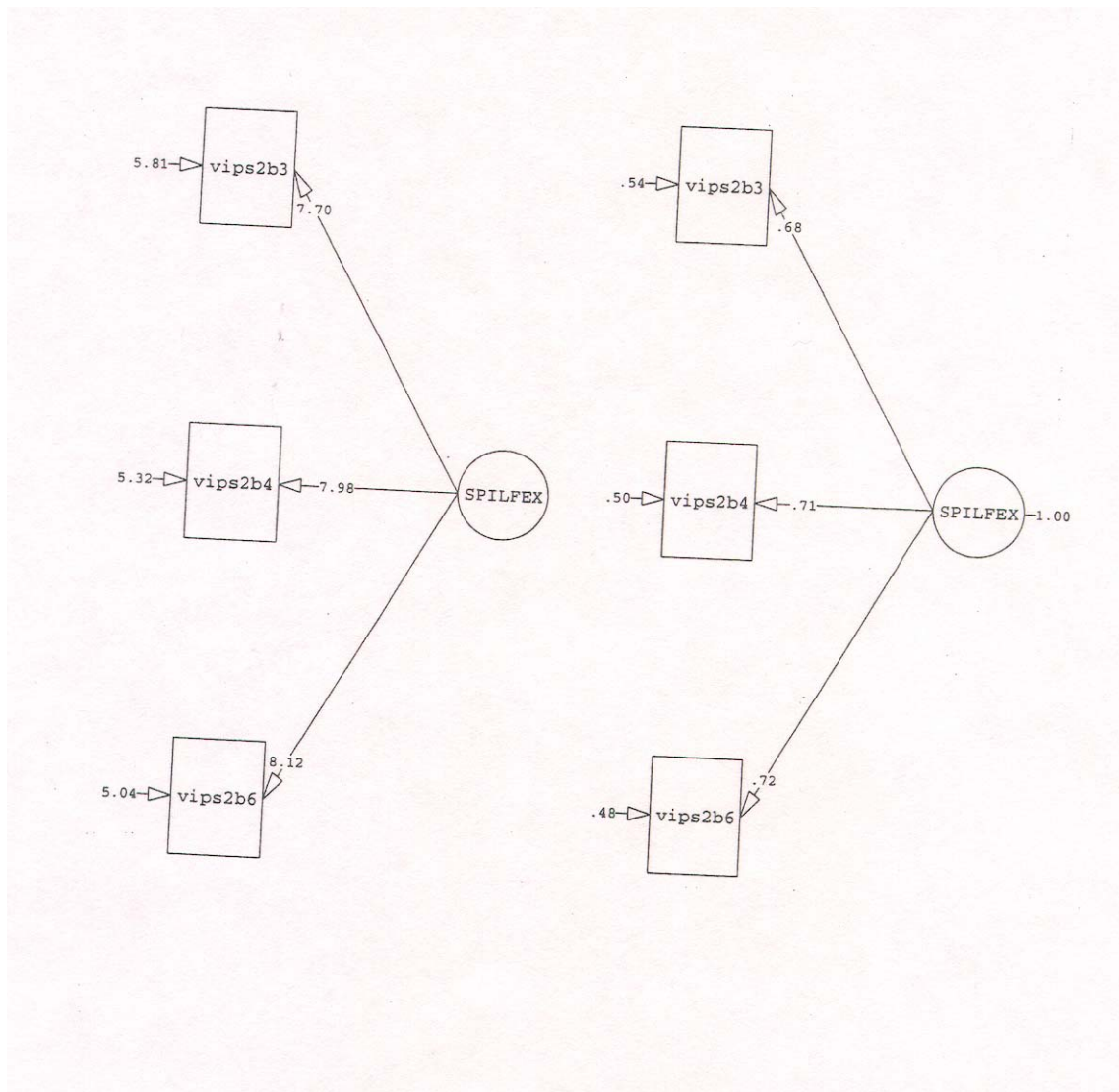
Customer Model Statistics: Chi sq. = 7.45, P = .19, RMSEA = .055, RMR = .034, GFI = .98

Customer Reliability:  $\alpha = \frac{(\sum_i \lambda)^2}{(\sum_i \lambda)^2 + \sum_i (1 - \lambda_i^2)} = \frac{(3.10)^2}{(3.10)^2 + (3.01)} = 9.61 / 12.65 = .7600$

**Supplier Leadership ↔ Followership Dynamics:** [see scale items, loadings, and t values indicating satisfaction of the product rule for internal consistency in APPENDIX VII B (supplier)].

Supplier Leadership ↔ Followership Dynamics Measurement Model  
with t values and factor loadings follow:

Figure 10



Supplier Model Statistics: Chi sq. = 0.0, P = 1.00, The Model is Saturated, Fit is Perfect (only 3 items)

$$\text{Supplier Reliability: } \alpha = \frac{(\sum_i \lambda)^2}{(\sum_i \lambda)^2 + \sum_i (1 - \lambda_i^2)} =$$

$$(4.45)^2 / (4.45)^2 + (1.52) = 19.08 / 21.32 = .8949$$

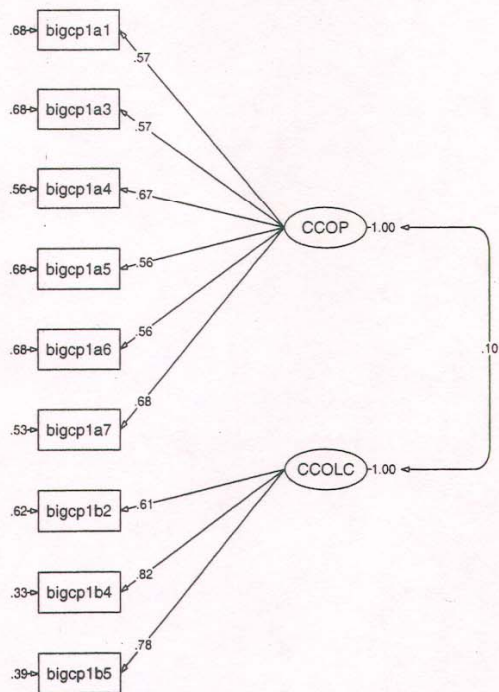
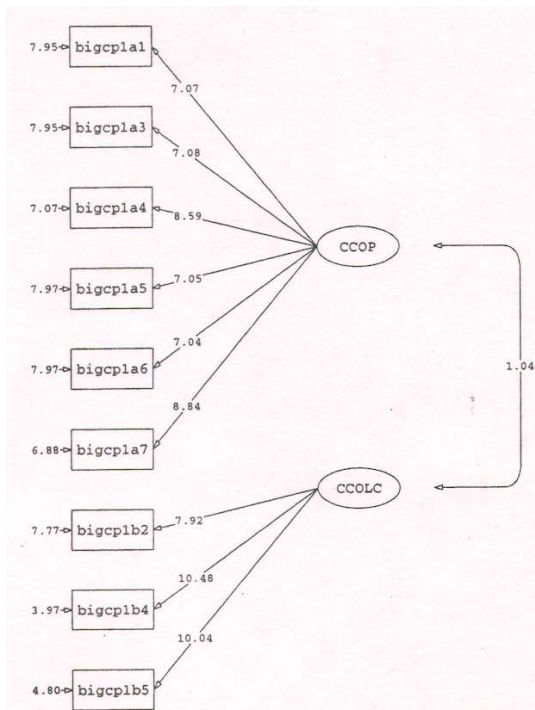
### Test of Hypotheses

It was postulated a priori that:

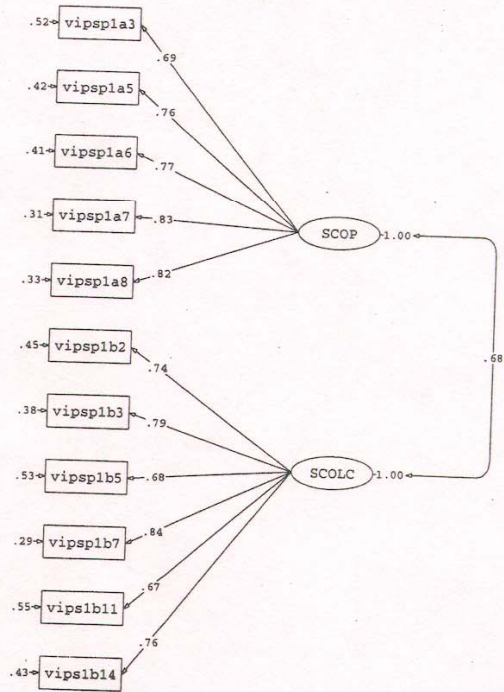
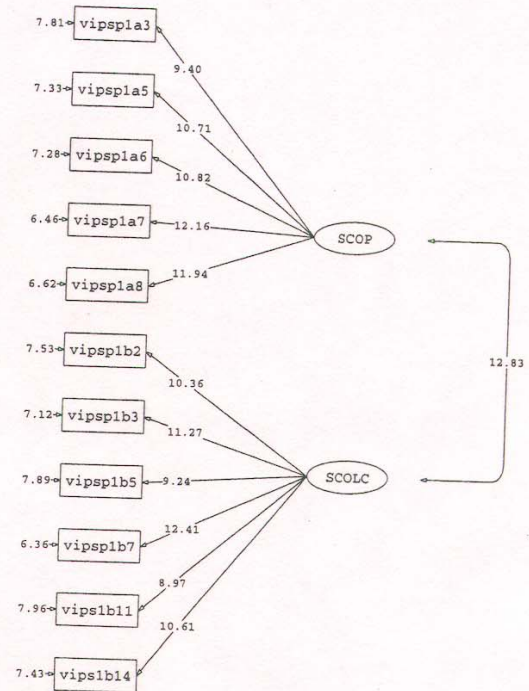
H1: Relational Leadership Competency is a two factor structure composed of cooperative persona and collaborative competency.

To test hypothesis H1, the two constructs were operationalized [see APPENDIXES IV A and B (customer) and V A and B (supplier)] and then put into the same model to determine (using confirmatory factor analysis) if each observed value would load on only one factor. In both cases (suppliers and customers), results indicated target loading and a zero loading on the non targeted factor. However, results for customer relational leadership competency indicated that the cooperative persona and collaborative competency are not correlated at  $\alpha = .05$  ( $\lambda = .10$ ,  $t = 1.04$ ) indicating that they may not be part of the same factor. On the other hand, the factors were correlated in the case of supplier relational leadership competency ( $\lambda = .68$ ,  $t = 12.83$ ) rendering partial support for hypothesis 1. The models with t values and factor loadings are shown on the next page. See Table 4 for full names of the abbreviated variables:

Customer Figure 11



Supplier Figure 12



**Table 4**

<b>FULL NAME OF CUSTOMER AND SUPPLIER VARIABLES</b>	<b>SYMBOL NAME OF VARIABLES</b>
<b>Customer Relational Leadership Competency</b>	<b>CRLCOP</b>
Customer Cooperative Persona	CCOP
Customer Collaborative Competency	CCOLC
<b>Supplier Relational Leadership Competency</b>	<b>SRLCOP</b>
Supplier Cooperative Persona	SCOP
Supplier Collaborative Competency	SCOLC
<b>Customer Executional Leadership Competency</b>	<b>CEXLC</b>
Customer Information Visibility / Resource Sharing	CUSIEX
Customer Leadership ↔ Followership Dynamics	CULFEX
<b>Supplier Executional Leadership Competency</b>	<b>SEXLC</b>
Supplier Information Visibility / Resource Sharing	SUSIEX
Supplier Leadership ↔ Followership Dynamics	SULFEX

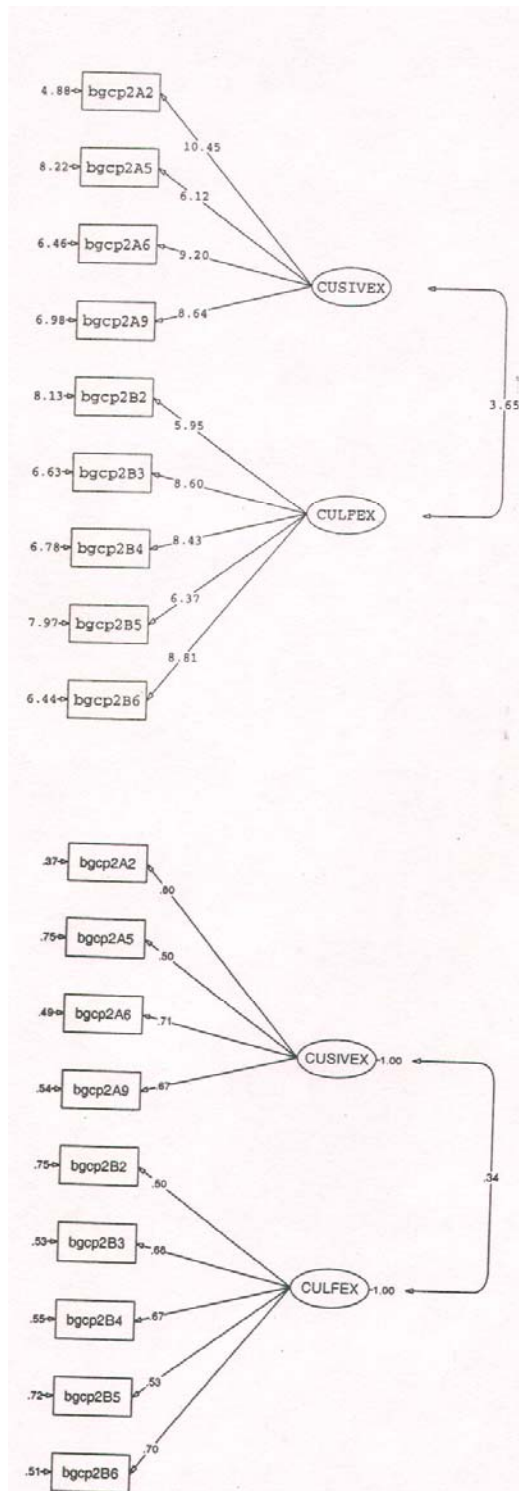
Similarly, it was postulated a priori that:

H2: Executional Leadership Competency is a two factor structure composed of  
a) information visibility and resource integration; and b) leader-follower  
dynamics.

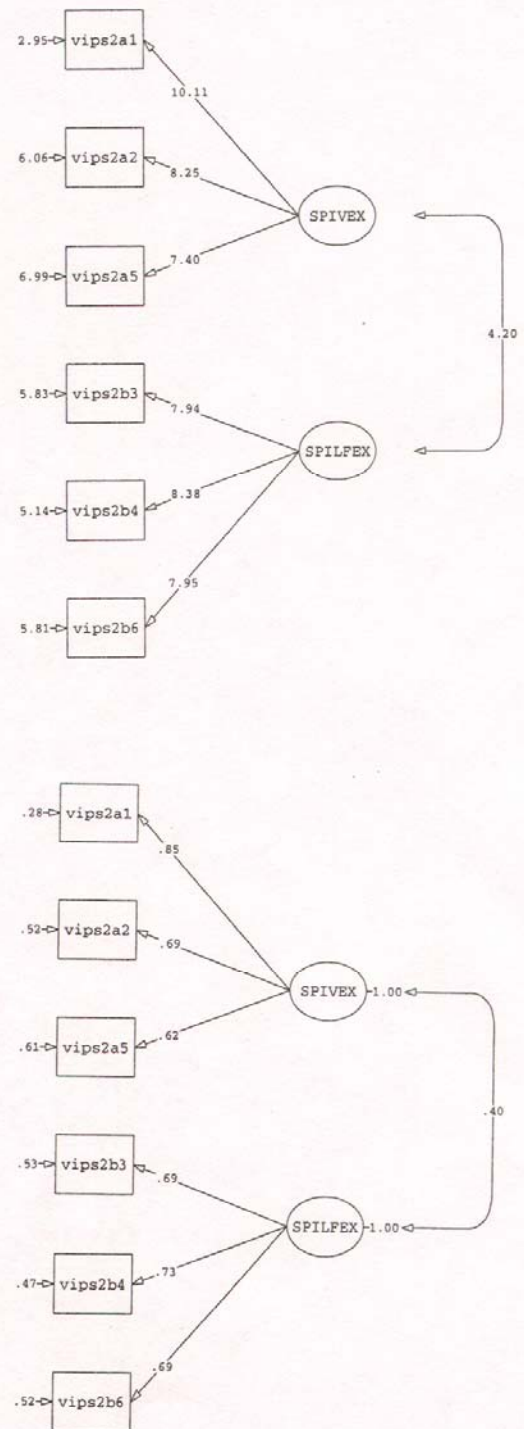
Again, to test hypothesis H2, the two constructs were operationalized [see APPENDIXES VI A and B (customer) and VII A and B (supplier)] and then put into the same model to determine if each observed value would load on only one factor. In the case of both supplier and customers, results indicated target loading and a zero loading on the non targeted factor. Results for executional leadership competency indicated that the information visibility / resource sharing and customer leadership ↔ followership dynamics factors are correlated for both customers ( $\lambda = .34$ ,  $t = 3.65$ ) and supplier ( $\lambda = .40$ ,  $t = 4.20$ ) indicating that they are likely part of the same factor rendering support for hypothesis 2. The models with t values and factor loadings are shown on the next page.



Customer Figure 13



Supplier Figure 14





It was postulated a priori that:

H3: Consumer Orientation is a component of the Market Orientation construct.

H4: Outward Focused Business Philosophy Orientation is a component of the Market Orientation construct.

To test hypothesis H3 and hypothesis H4, the two constructs were operationalized [see APPENDIXES IX A (consumer) and IX D (Outward Focused Business Philosophy)] and then put into the MO model with customer orientation (APPENDIX IX B) and competitor orientation (APPENDIX IX C) to determine if each observed value would load on only one factor.

In all cases the target loading converged and a zero loading was noted on the non-targeted factor. Results further indicated that all variables were significantly correlated, suggesting that they are part of the same factor. The full information model showing the loadings and t values are shown in Figure 16. Table 5 provides the full names of the variables and the symbol names.

Figure 15

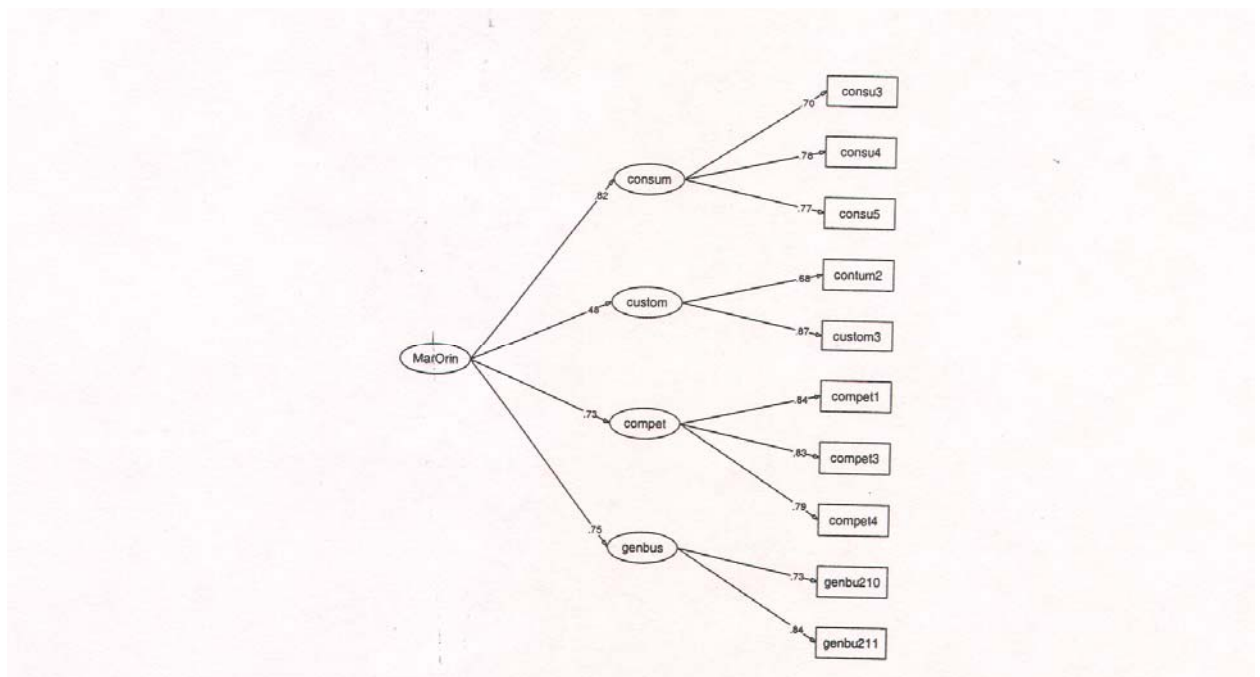
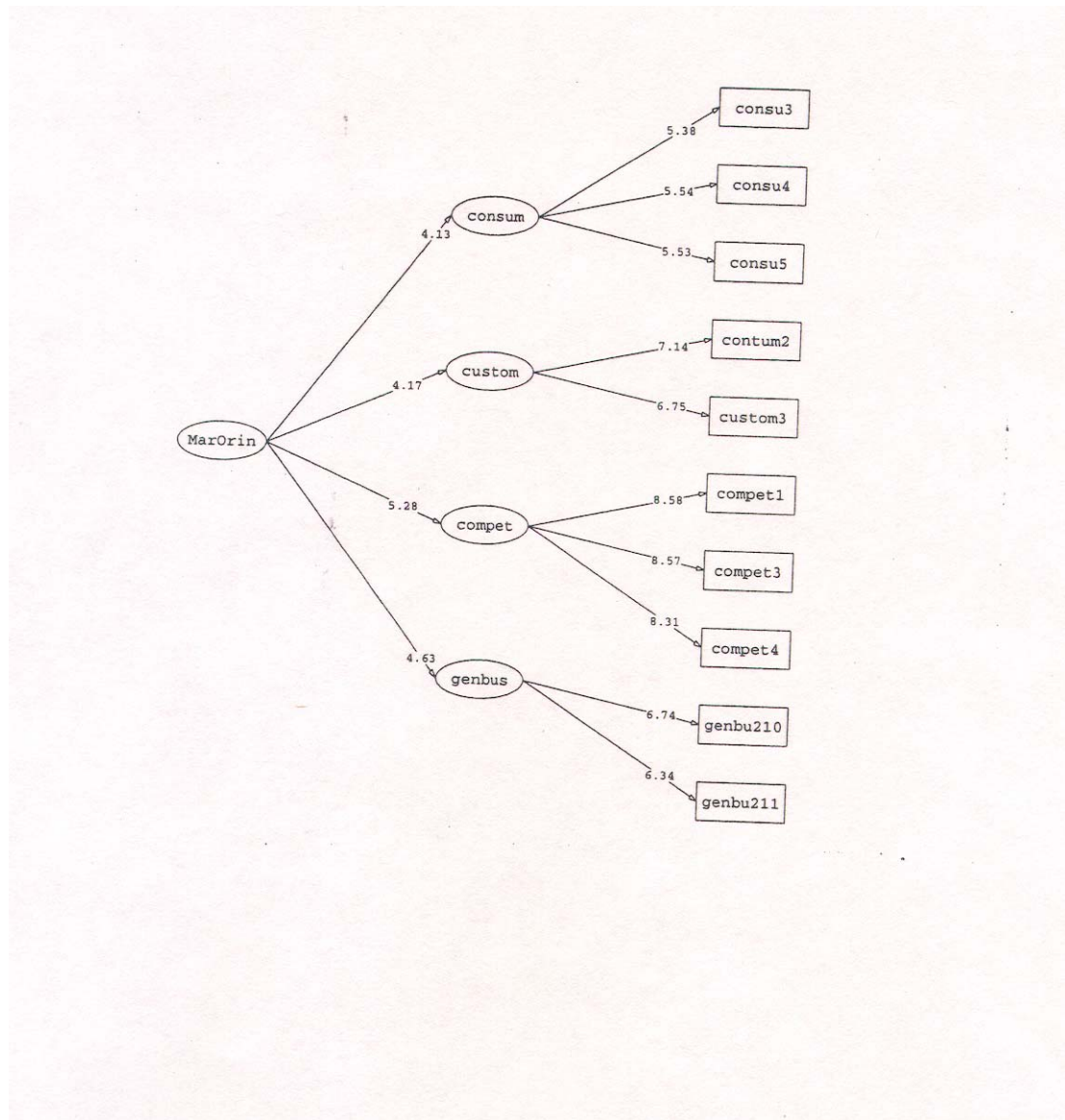


Figure 16



**Table 5**

<b>FULL NAME OF MARKET ORIENTATION VARIABLES</b>	<b>SYMBOL NAME OF VARIABLES</b>
<b>Out ward Focused Market Orientation</b>	MarOrin
Consumer Orientation	Consum
Customer Orientation	Custom
Competitor Orientation	Compet
Business Philosophy Orientation	Genbus
<b>Sustained Competitive Advantage</b>	SCOMPAV

It was postulated a priori that:

H5: Market Orientation can be modeled as the antecedent in a consumer driven supply network toward sustained competitive advantage.

Hypothesis H5 was confirmed by placing the MO components in regression models as predictors of SCOMPAV. The following models were significant using step wise regression:

Coefficients

Model 1: df = 1 F= 24.018, p = .000

Compet:  $\beta = .377$ , t = 4.90, p = .000,  $\alpha = .05$

Model 2: df = 2 F= 20.464, p = .000

COMPET:  $\beta = .308$ , t = 4.064, p = .000,  $\alpha = .05$

CUSTOM:  $\beta = .290$ , t = 3.827, p = .000,  $\alpha = .05$

Model 3: df = 3 F= 15.957, p = .000

COMPET:  $\beta = .229$ , t = 2.804, p = .006,  $\alpha = .05$

CUSTOM:  $\beta = .251$ , t = 3.283, p = .001,  $\alpha = .05$

GENBUS:  $\beta = .197$ , t = 2.372, p = .019,  $\alpha = .05$

Market Orientation as an antecedent was also confirmed when employed as the exogenous variable in the final structural equation model (see Figure 19).

**Table 6**

<b>Customer Governance and Safeguards</b>	<b>CGOVER</b>
Customer Continuity Governance	CCON1GOV
Customer Profit Governance	CPRO1GOV
Customer Relationship Competitive Advantage Governance	CRGOV
Customer Goal Congruency Governance	CGOC1GOV
<b>Supplier Governance and Safeguards</b>	<b>SGOVER</b>
Supplier Continuity Governance	SCON1GOV
Supplier Profit Governance	SPRO1GOV
Supplier Relationship Competitive Advantage Governance	SRGOV
Supplier Goal Congruency Governance	SGOC1GOV

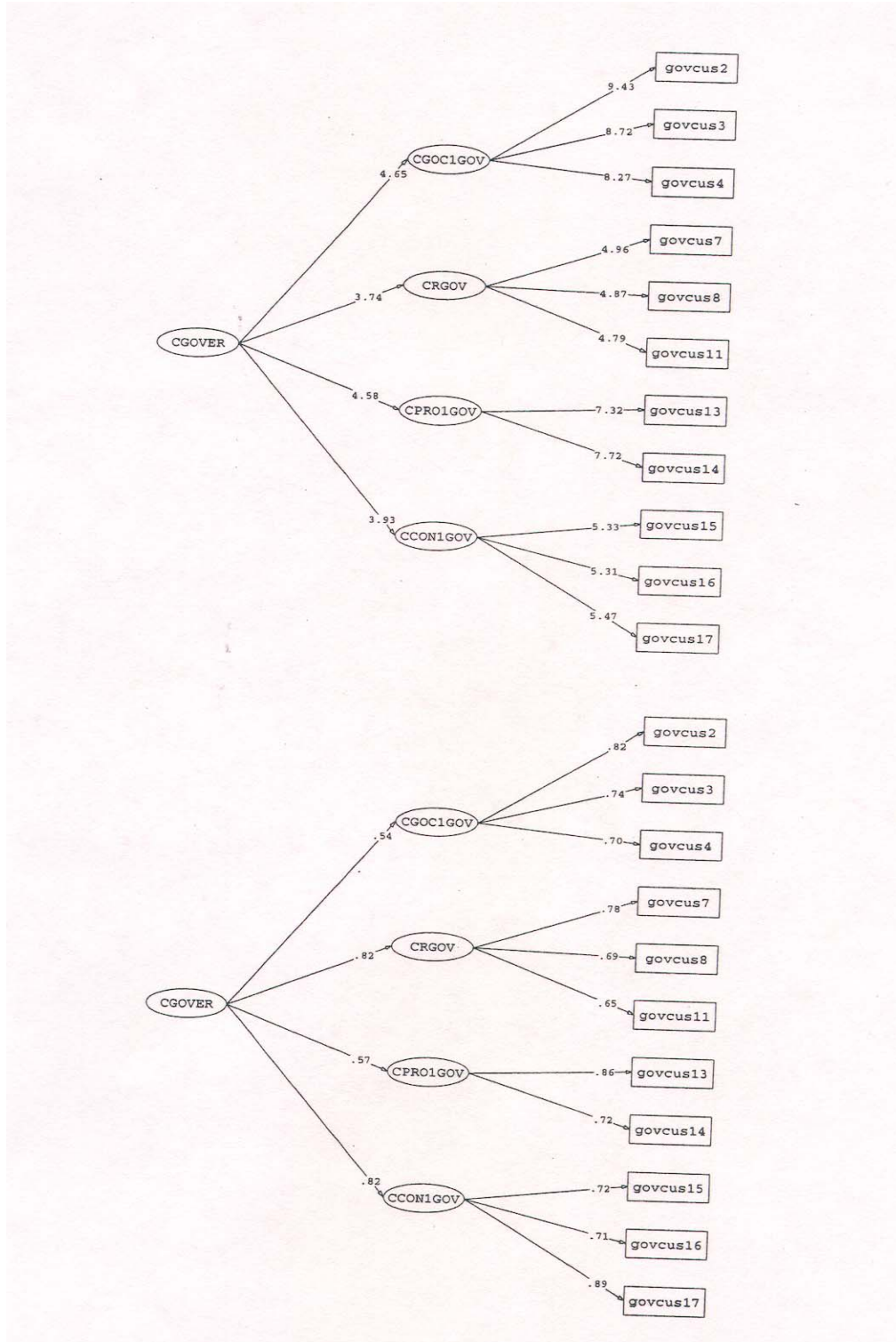
Another *a priori* prediction was:

H6: That governance can be modeled as a multi variable construct with different functions per entity (customer vs. supplier) in a supply network.

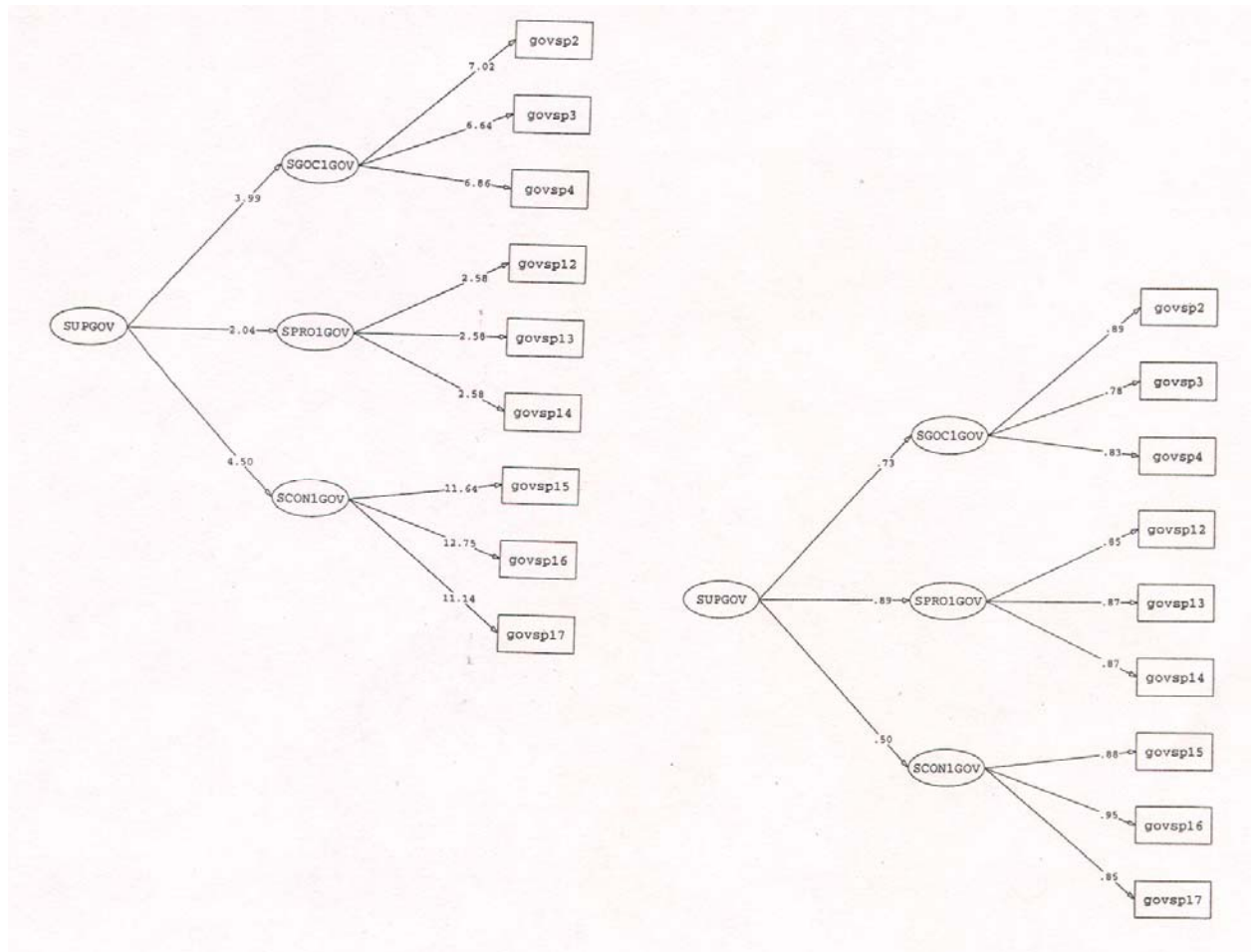
H6, was tested first using confirmatory factor analysis for each factor (see Table 6) for customer and supplier respectively. In all cases for both customer (see APPENDIX X A - F) and supplier (see APPENDIX XI A - F) governance mechanisms, the target loading converged and a zero loading was noted on the non targeted factor. Results further indicated that all customer governance variables were significantly correlated, suggesting that they are part of the same factor. On the other hand, supplier relational governance was not significantly correlated to the 2<sup>nd</sup> order factor or the other first order factors indicating that this construct was probably measuring something different. Hypothesis six (that governance can be modeled as a multi variable construct) was supported.

The full information models showing the loadings and t values follow.

Customer Governance Measurement Model Figure



Supplier Governance Measurement Model: Figure 18



To test the role of governance in the supply network, each of the governance factors was entered into the conceptualized model and tested for its effect. Relationship governance was not effective in the model for customers or suppliers. The effect of governance in the hypothesized model is discussed with the final hypothesis.

Again, the main purpose of this work was the development of the leadership competencies as market based assets for the aggregate supply-network. The interacting variables were tested to either validate previous studies or to ensure that modification were not adverse.

The final deliverable is an explanatory model that demonstrates a possible rendition of a consumer driven supply network incorporating the leadership competencies and the interacting variables. The hypothesis was:

H8: Sustaining competitive advantage in a supply network is a function of MO, governance and supply network leadership competencies.

The path models are shown as Figure 19 and 20 and the functions in Table 8 support hypothesis H8. The model indicates that sustained competitive advantage as operationalized in this dissertation is a function of Consumer Orientation, Customer Orientation, Competitive Orientation, and Customer Continuity Governance. The path model has excellent fit statistics: (Chi sq. 133.39,  $P = .45$ , RMSEA = .0085, RMR = .067, GFI = .92, CN 192.63)

Further, the path model demonstrates that supplier executional leadership competency is a function of sustained competitive advantage. This is an important finding that would suggest that this competency can be employed to continue the cycle. The variable names are shown in the Table 8 with other direct paths identified.

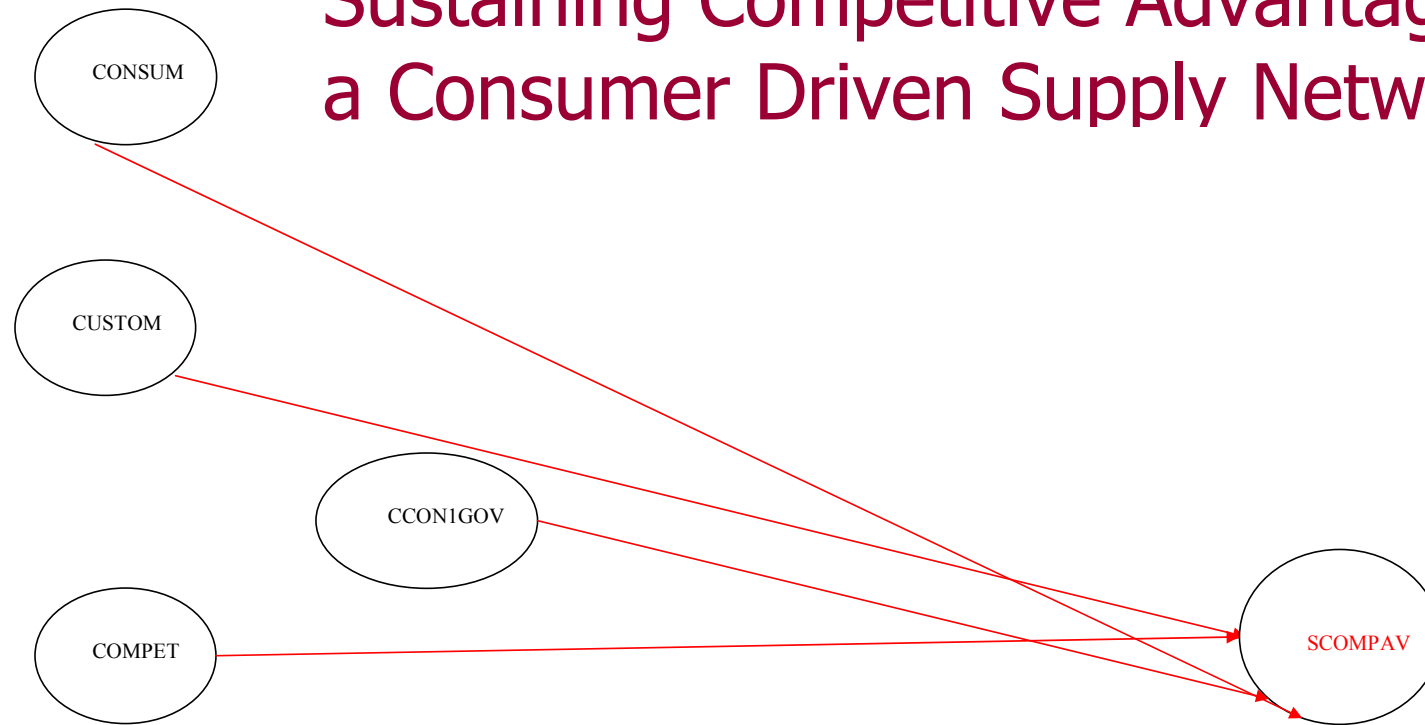
## Variables in the Model

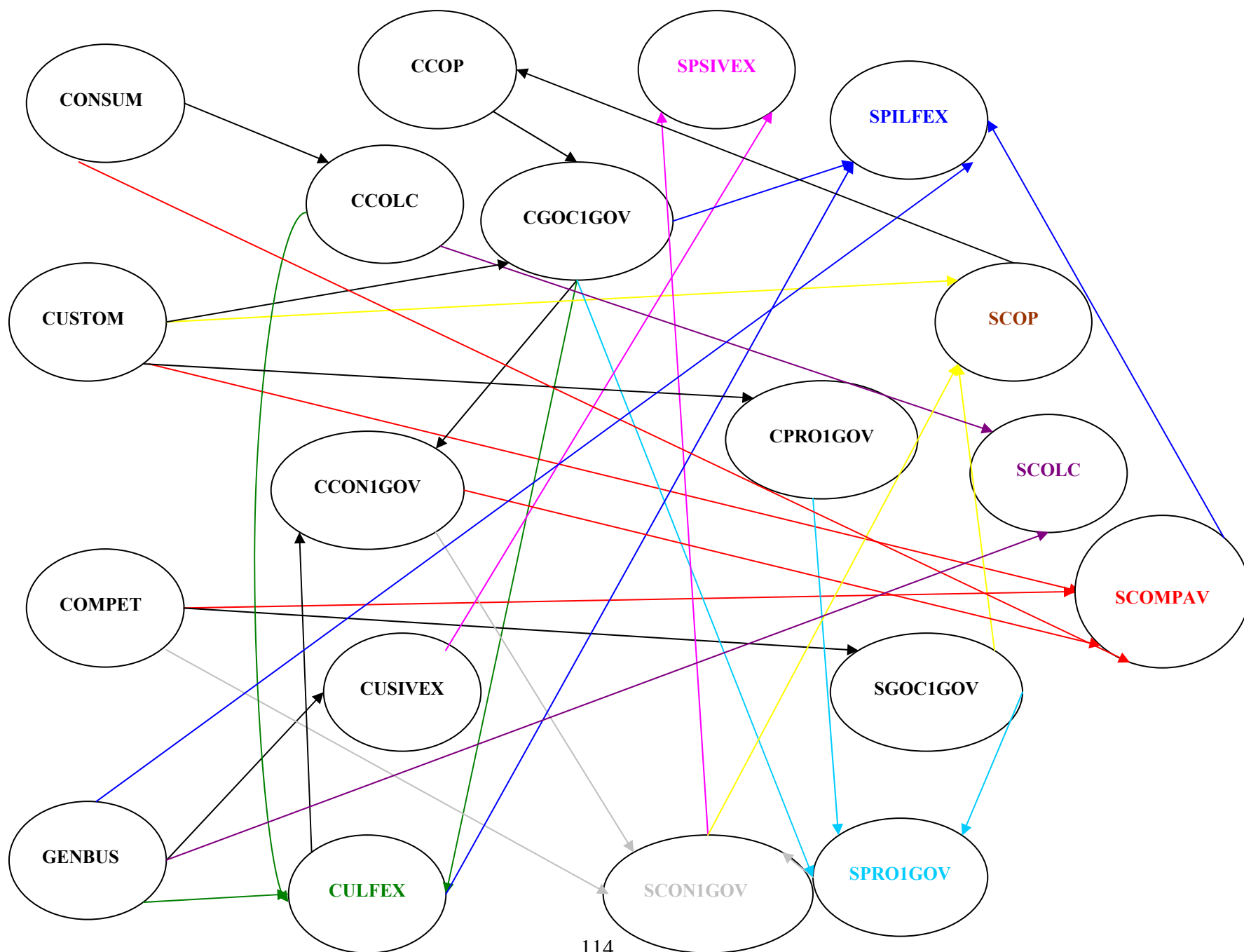
**Table 7**

<b>VARIABLE</b>	<b>NAME</b>	<b>FUNCTION</b>
	<b>Market Orientation</b>	
CONSUM	Consumer Orientation	
CUSTUM	Customer Orientation	
COMPET	Competitive Orientation	
GENBUS	Outward Focused Cross Boundary Orientation	
	<b>Endogenous Variables</b>	
SCOMPAV	Sustained Competitive Advantage	CONSUM, CUSTOM, COMPET, CCON1GOV
CCON1GOV	Customer Expectations of Continuity	CGOC1GOV, CULFEX
CULFEX	Customer Leader ↔ Follower Dynamics	CCOLC, CGOC1GOV, GENBUS
CCOLC	Customer Collaborative Competency	CONSUM
CGOC1GOV	Customer Goal Congruity	CCOP, CUSTUM
CCOP	Customer Cooperative Competency	SCOP
SCOP	Supplier Cooperative Competency	SGOC1GOV, SCON1GOV, CUSTOM
SGOC1GOV,	Supplier Goal Congruity	COMPET
SCON1GOV	Supplier Expectations of Continuity	SPRO1GOV, CON1GOV, COMPET
SPRO1GOV	Supplier Joint Profits	SGOC1GOV, CGOC1GOV, CPRO1GOV
CPRO1GOV	Customer Joint Profits	CUSTOM
CUISEX	Customer Information Visibility / Sharing	GENBUS
SUIVSEX	Supplier Information Visibility / Sharing	SCON1GOV, CUISEX
SPILEX	Supplier Leader ↔ Follower Dynamics	CULFEX, CGOC1GOV, SCOMPAV
SCOLC	Supplier Collaborative Competency	CCOLC, GENBUS



## Sustaining Competitive Advantage in a Consumer Driven Supply Network:





## **Chapter Eleven: Discussion and Implications**

### Discussion

This research penetrated the boundaries of a multibillion dollar supply-network to explore the supply-network phenomenon and understand how consumer-driven supply-networks relate to their markets. Specifically, I joined the argument that the firm has evolved to a supply-network unit of competition. First, I positioned the supply-network as the unit of competition by tracing the origin from the channel of distribution. Then I cited other scholars who have come before me to argue that considering just the atomistic firm in market questions of sustaining competitive advantage is no longer relevant. Anticipating the question of: if the firm has evolved to a network level of competition, then what is the theory of the firm? I shed light by proactively reviewing the usefulness of well-studied theories of the firm to reflect reality in major corporations. Juxtaposing transaction cost theory and the network perspective and reviewing the resource based theory, I offered an integrated perspective to help address the question.

The dissertation next explained that if the firm has evolved to a network unit of competition then (like in the firm) network level competencies are needed to obtain a competitive advantage. It also argued that governance mechanisms were necessary to help sustain the advantage. Competence and governance are regarded by some scholars as competing theory so the competence vs. governance argument advanced by Williamson (1999) was integrated to develop boundary spanning competence and governance to justify having core competence (resource based theory) and governance (transaction cost theory) in the same model.

A conceptual model was developed and then supply-network leadership competencies were operationalized and tested in a model with a modified version of market orientation as the

antecedent and sustained competitive advantage as the outcome variable of interest. I found that supplier executional leadership competency, specifically leader-follower dynamics, may be the key to sustaining competitive advantage. In a continuous circle, customer leader-follower dynamics was found to be a function of sustained competitive advantage. Specifically, the findings suggest that network level competencies can be developed and deployed in the continuous work of sustaining stakeholder value in supply networks.

### Implications

#### *Cross-Disciplinary Scholarship*

This research weaves its theoretical framework from a multi-disciplinary array of perspectives and makes contributions to several fields of study by extending and integrating cross-disciplinary literature streams. First it operationalizes competency, answering a dilemma posed by Williamson (1999 p. 1093) who stated that “a relentless commitment to operationalization of competence is needed” so that the competence perspective would not have to rely just on “success stories”. Specifically, it defines leadership competency using Jago’s (1982) theory of leadership and then tests the concept uncovering support for the theory that leadership is a property and a process. I found no evidence that this theory had been tested previously. Indeed, operationalization of the perspective at the aggregate level of the network as a means of building leadership into a supply-network is new to the study of leadership.

Integrating existing theory to find an explanation for the evolution of the firm to a network unit of competition is a contribution to management theory. Further, integrating competence and governance and studying the perspectives in the same model is a contribution to

both management and economic theory and supports the argument posed by Williamson (1999) that both are needed in the study of “complex economic phenomena”.

### *Marketing Scholarship*

This work joins in to answer the challenge presented by several scholars who indicate that marketing has a role to play in the evolution to a network governance structure.

Specifically, it extends the idea of non-tangible market-based assets posed by Srivastava et al (1998) by developing and testing leadership competencies as potential non-tangible market-based assets and then linking them to traditional marketing concepts.

Further, there is no empirical work in marketing that links the supply-network phenomenon to market orientation, governance, and a competitive advantage. Demonstrating the effect of the competencies from the perspectives of both suppliers and customers creates new knowledge.

Market orientation is a well studied concept. However, consumer orientation has not been tested as a component. This research makes a contribution to the field of marketing by testing and supporting that consumer orientation is a component that needs to be considered in market orientation theory. This finding concerning a new “consumer orientation” component, especially needed in consumer products firms, extends this well studied concept.

### *Marketing and Business Practice*

A major contribution of this work is that it links a strategy (consumer orientation) to sustaining competitive advantage and then demonstrates the role of several governance mechanisms, showing that there are differences between customers and suppliers.

Along with the qualitative phase of the work, this study offers a better understanding of how “leadership” operates in cross-functional and cross-boundary supply-network relationships. Further, it develops the strategic goal of sustaining a competitive advantage using network level “core-competency” or non-tangible market-based assets.

This work embraces the idea that the firm has evolved to a supply-network level of competition and proposes network level “core-competencies”. Specifically, both supply-network relational leadership competency and supply-network executional leadership competency demonstrate the leadership skills and traits needed to create an environment for “successful convergence” and then converge in sustaining a competitive advantage in supply networks considering both customers and suppliers.

The work also demonstrates to managers the importance of the dynamics of leadership ↔ followership (i.e. it is not just about best man / woman or best systems but also the dynamics of the process) in the continuous goal of sustaining a competitive advantage. Specifically, it shows that an environment of relational leadership competency needs to be created that reflects a “cooperative persona” (which includes the ability to show trust, integrity, commitment, and courage to do the right thing) to work in conjunction with the dynamic leader ↔ follower process of collaboration. In addition, it demonstrates that the environment alone is a great start but execution is the ultimate measure. While relational leadership competency is needed at the human capacity level, executional leadership competency or the superior ability to converge with partners to implement value is also need at the systems level. Executional leadership competency (operationalized with “information sharing / visibility and resource integration” and the leader ↔ follower dynamics between the partners) is a most important element in the process of sustaining a competitive advantage.

The study further demonstrated that not only is the environment and dynamics important in the continuous process on sustaining competitive advantage, it may be different for customers and suppliers as to governance. This finding offers an opportunity to target the governance mechanisms for suppliers and customers based on a particular strategic focus.

### Limitations

Traditional thinking would catalogue the “single site” used in this study as a limitation. Indeed, there were findings suggesting a dominant organizational-wide culture reflecting aspects of transformational leadership. However, this site afforded the involvement of seven global business units that housed billion dollar brands, a learning situation that may not have been improved if several firms were involved. The size of the business units rivaled fortune 500 companies. The units had their own leadership, strategies, and cross-functional teams. While traditionally viewed as a “limitation”, the single site afforded an extended year long case study that helped in the operationalization of measures for a phenomenon that has not been closely studied in marketing.

Self report is also traditionally classified as a limitation. This limitation was somewhat masked in the design by employing cross-functional responses and responses from several levels of leadership and management. This strategy addressed the possibility of management level or function biases. On the other hand, although suppliers and customers were studied in the qualitative study, they were not polled in the quantitative study and this could be viewed as a limitation. A follow-up study with customers and suppliers would be an interesting addition.

While longitudinal studies vs. cross-sectional research is typically sited as ideal, this may not be a real limitation with the current research since the relationships studied in this work were

long term with expectations of continuity. What we do not have the benefit of knowing is how the relational fiber was built over time, however, this question was not of interest.

Since the study was conducted organizational wide, some items may have been deleted due to a lack of knowledge by a particular respondent (e.g. marketing brand managers) about suppliers or customers. While this is a limitation from scholarly lens, it is an opportunity for management. Indeed, the firm will be able to better understand which items are of concern for customers and suppliers by level and by business unit and work to make a strategic change if warranted. An interesting concern was the tendency of participants not to respond when the question was outside of their arena. While this could have resulted in better data, it is difficult to determine because there is no way of knowing how respondents made their decisions.

### Directions for Future Research

The opportunities for future research to explore and explain how supply networks relate to their markets is broad. The most glaring need is the understanding of relationships that have become so dependent from an infrastructure stand point such that a business disruption in one firm can meaningfully disrupt the business of the other. These typically are service relationships like information service providers to multi nationals.

The idea of non-tangible market assets was advanced by other scholars, however I agree that there is vast opportunity for marketing study just in this arena. For example, focused work to identify candidates to associate with competitive advantage is needed. I see further study of core competency at the network level as a non-tangible market asset as an interesting focus.

Finally, I reference the Journal of Marketing's special edition (1999) for a comprehensive view of directions for marketing and the fundamental issues that need to be further addressed.



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## APPENDIX I

### Discussion Guide for Qualitative Interviews and Rationale for the Questions\*

<p><b>1: What makes a good <u>follower</u>?</b></p>	<p>This question was asked to focus the leader on the dynamics of leadership as a process (and away from leadership as a property that he or she possessed). Most leaders reacted to the question with surprise.</p> <p>This question (1) Considered the primary role of the leader when strategic direction is set, is strategy implementation and strategic oversight for successful execution; and (2) Provided insight as to the "gaps in thinking" as to the dynamics of the dual roles as leaders and followers in a given situation.</p>
<p><b>2: Now I would like you to think about the <u>worst leader</u> you know / have known/ can imagine. What are the <u>attributes</u> of that person?</b></p>	<p>This question was asked to focus the leader away from the "canned" answers anticipated if the question was asked with the reverse wording. It gave a "back door" view of what attributes may be important (from the perspective of the individual) to the dynamic process.</p> <p>This question also enabled an understanding of characteristics or traits that are not seen as productive. It was also insightful since most managers openly related it to personal experiences.</p>
<p><b>3: What are some of the <u>skills</u> of an ideal leader?</b></p>	<p>This question was asked to focus the leader on actions and ability. Further, it was used to surface words that would help to understand the leader's inventory of skills he / she felt were needed for successful leadership.</p> <p>It was also asked to understand how leaders differentiated between skills, behaviors, style, and attributes of leadership. This and the above question were helpful in creating a culture or environment to converge across boundaries, functions, and firms (suppliers, customers, etc).</p>



**APPENDIX I**  
**Continued**

<p><b>4: In your opinion is there a <u>relationship between leadership and competitive advantage</u>? If so explain.</b></p>	<p>This question was asked to understand the current reality about "competitive advantage." That is, do ----- leaders relate from an efficiency perspective or a customer and consumer / "business" related aspect of considering "the strategy".</p> <p>To open the possibility to a leadership competency that can be directly related to consumer driven output that offers a competitive advantage.</p>
<p><b>5: What <u>leadership role</u> should a <u>firm</u> play in regard to its suppliers?</b></p>	<p>This question was asked to determine if interactive leadership was happening.</p>
<p><b>6: In <u>your role</u> as a leader, tell me of a situation that required you to change your preferred leadership style?</b></p>	<p>This question gave insight into current leadership styles while also offered indication about flexibility in style. It should be noted that research on styles has not adequately shown how leaders' styles are associated with performance (Bryman 1992; Yukl 1994). However, an integrative framework (Nahavandi and Malekzadeh) for testing the effects of style on both strategy formulation and strategy implementation showed great promise.</p> <p>The question recognizes that "certain situations require different leadership styles" (Northouse 2003)</p>
<p><b>7: Given the mission of ----- , what <u>new skills</u> will be needed by the people at the (level) just below your (level)?</b></p>	<p>This question was asked to cause the leaders to focus on the mission while thinking about the current skills inventory among the people just below them. Asked this way, the focus was taken away from the manager / leader in the interview and caused reflection on the "gaps" (since the question was asked at each of five levels of management).</p>
<p><b>8: You are the leader charged with communicating the mission! How would you explain the relationship between ----- and ----- to your followers?*</b></p>	<p>* information confidential to the test site is left blank.</p>

## APPENDIX II

<b>SCHOLAR</b> <b>TRAIT</b>	<b>Stogdill 1948</b>	<b>Mann 1959</b>	<b>Stogdill 1974</b>	<b>Jago* 1982</b>	<b>Lord et. al. 1986</b>	<b>Kirkpatrick 1991</b>	<b>Maxwell 1999</b>
<b>Intelligence</b> / Cognitive ability/ Competence	X	X		X	X	X	X
Masculinity		X			X		
Self-confidence / Confidence	X (SC)		X (SC)	X (C )		X (C)	
Dominance		X		X	X		
Sociability	X		X	X			
Responsibility	X		X	X			X
Insight	X		X				
Initiative	X		X				X
Persistence	X		X	X			
Cooperativeness			X	X			
Extroversion		X		X			
Adaptability				X			
Adjustment		X		X			
Alertness	X			X			
Conservatism		X					
Influence			X				
Tolerance			X	X			
Achievement			X	X			
Drive				X		X	
Motivation						X	
Authenticity				X			
Emotional Balance				X			
Enthusiasm				X			
Objectivity				X			
Sense of humor				X			
Originality				X			
Tact				X			
Activity / energy				X			
<b>Judgment</b>				X			
<b>Verbal fluency</b>				X			
Integrity/ Character				X (I)		X (I)	X (C)
(Task) <b>Knowledge</b>				X		X	
Discernment							X
Focus							X
Generosity							X
Listening							X
Passion							X
Positive Attitude							X
Problem Solving							X
Relationships							X
Self-Discipline							X
Servanthood							X
Vision							X
Security							X
Charisma							X
Commitment							X
Communication							X
Courage							X
Appearance, grooming				X			
Height , Weight				X			
Interpersonal skills, sensitivity				X			
Socioeconomic position				X			
Talkativeness				X			
Popularity, prestige				X			
Objective				X			
Originality				X			
<b>Administrative ability</b>							

\*Summarizing Bird (1940), Gibb (1947), Jenkins (1947), Man (1959) and Stogdill (1974); Over all Source = Northouse 2004 page 18; **Bold** = also considered skills

### APPENDIX III

(“Thick” answers to questions relevant to the current thesis on leadership competencies).

#### 1) **WHAT MAKES A GOOD FOLLOWER?**

The idea of the dynamics of leadership was not intuitive to the vast majority of leaders interviewed. That is, when thinking about leadership they considered leader properties vs. including the process of leadership.

Further, the concept of “followership” as a part of the leadership process (which was introduced during the interviews) intrigued the leaders interviewed. The leaders seemed unaccustomed to looking at leadership from the follower’s perspective with one leader declaring, “There is no such thing as a good follower.” However, after considering the concept of followership, the value of viewing leadership from a follower’s perspective was quickly articulated.

- NOT FOLLOWING BLINDLY
- ALIGNED WITH THE VISION
- INTERPERSONAL
- ABILITY TO LEAD
- MASTERY AND SKILLS
- COLLABORATION / INFLUENCE
- COMMUNICATION
- UNDERSTANDS / “GETS IT”
- FLEXIBILITY
- GETS RESULTS / ACHIEVEMENT
- LISTENING
- ABLE TO EXECUTE
- OWNERSHIP
- HUMBLE
- UNDERSTANDS THE IMPACT OF FOLLOWING THE “WRONG” SITUATION
- FOLLOWERS ARE NOT NEEDED HERE (1 RESPONDENT’S ANSWER)

### **APPENDIX III (CONTINUED)**

#### **2) NOW I WOULD LIKE YOU TO THINK ABOUT THE WORST LEADER YOU KNOW / HAVE KNOWN / CAN IMAGINE. WHAT ARE THE ATTRIBUTES OF THAT PERSON?**

Stated in reverse, this question uncovered attributes that when violated could affect the process of leadership. These attributes in order of the number of mentions are:

- SELFISHNESS
- QUESTIONABLE LEADER TALENT INVENTORY
- “SELF-SUFFICIENT” – DOES NOT RESPECT THE ABILITIES OF OTHERS
- QUESTIONABLE VALUES
- RULES WITH FEAR
- OUT OF TOUCH ON HUMAN DIMENSIONS
- DOES NOT “GET IT”
- UNWILLING TO TAKE RISK
- NO FOLLOWERS

#### **3) WHAT ARE SOME OF THE SKILLS OF A GOOD LEADER?**

The most voiced ability resonated as interpersonal abilities. Key themes are shown below:

- THE XYZ MODEL (IN HOUSE LEADERSHIP MODEL LANGUAGE)
- ABILITY TO BE CARING / INTERPERSONAL ABILITY
- ABILITY TO BE STRATEGIC / DEFINE TASK / PROBLEM SOLVE
- ABILITY TO BE A VISIONARY
- ABILITY TO EXCITE PEOPLE
- ABILITY TO COLLABORATE
- ABILITY TO BE RECOGNIZED FOR HIGH VALUES
- ABILITY TO BUILD RELATIONSHIPS
- INTEGRATION / SYNTHESIZING SKILLS
- ABILITY TO COMMUNICATE
- ABILITY TO SELF-SCAN / EMOTIONALLY COMPETENT
- TECHNICAL ABILITY
- ABILITY TO PUT THE ORGANIZATION ABOVE SELF
- ABILITY TO GET PEOPLE TO FOLLOW
- ABILITY TO PENETRATE
- ABILITY TO BE PASSIONATE ABOUT WORK

### APPENDIX III (CONTINUED)

- ABILITY TO EMPOWER
- ABILITY TO BE A CHANGE AGENT / BENCHMARKING
- ABILITY TO TELL STORIES
- ABILITY TO ESTABLISH OWNERSHIP

#### **4) IN YOUR OPINION IS THERE A RELATIONSHIP BETWEEN LEADERSHIP AND COMPETITIVE ADVANTAGE? IF SO, EXPLAIN.**

The purpose of the question was to understand specific examples of what the leaders considered a competitive advantage.

**Note:** all leaders answered absolutely, definitely, without a doubt, or yes to the question of if there is a relationship between leadership and competitive advantage.

Lower levels were more likely to speak of typical symbols like product, people, and technology in isolation. On the other hand, upper level managers integrated symbols with ideas, purposes, credibility and other non-tangibles; this may also suggest an opportunity for Director College. Major teams by level (from lowest to highest) were:

#### **LEVELS 1 AND 2:**

- PEOPLE
- PRODUCT
- TECHNOLOGY
- 24-7 DISTRIBUTION
- KNOWLEDGE BASE AND STRUCTURE
- WILLINGNESS TO CHANGE
- WE GET THERE FIRST
- MARKET SHARE AND BRAND EQUITY
- REALLY PROFOUND KNOWLEDGE
- STRONG COMPETITIVE SELLING ORGANIZATION – DELIVERY OF THE
- PRODUCT
- STEP CHANGE IN CAPABILITY VS. OTHER FIRMS
- COST
- MARKETING
- PRODUCT DESIGN

## **APPENDIX III (CONTINUED)**

### **LEVEL 3:**

- PEOPLE
- TECHNOLOGY
- SUPPLY-CHAINS
- 4CS: COST - CASH - CONSUMER QUALITY - AND CUSTOMER SERVICE
- WINING OVER COMPETITION – VOLUME SHARE AND PROFIT SHARE
- PRODUCTS
- DELIVERING VALUE
- RECRUITMENT AND BASE SKILLS
- CAN OUT-PERFORM COMPETITION WITH SINGULAR PRODUCTION COST – QUALITY PERFORMANCE
- SHARE
- ABILITY TO RESPOND TO THE CHANGING NEEDS AND UN-MET NEEDS OF THE CONSUMER
- LEADERSHIP
- COST / MARKETING / PRODUCT DESIGN (THINGS THAT) HELP OUR PRODUCT WIN WITH THE CONSUMER

### **BAND LEVELS 4 AND 5**

- BRANDING
- INNOVATION
- SUPPLY NETWORK
- INTEGRATION OF A SET OF CHOICES
- CAPABILITIES AND ACTIVITIES THAT PRODUCE SUSTAINED COMPETITIVE ADVANTAGE
- BREADTH OF PORTFOLIO
- LEADING EDGE RESEARCH AND CONSUMER UNDERSTANDING
- QUALITY OF EXECUTION
- OJT
- INTEGRATION OF XYZ
- ABILITY TO GIVE TO THE CONSUMER A SUPERIOR PERFORMING PRODUCT AT A PRICE THEY VALUE
- PROTECTING OUR PURPOSE BETTER THAN COMPETITION
- CREDIBILITY AND INFLUENCE
- ABILITY TO INFLUENCE BROADLY
- PRODUCT POSITION ON THE SHELF
- WORK PROCESSES
- GROWING VALUE AND SHARE – NET OUTSIDE SALES

## APPENDIX IV A.

### *Customer Relational Leadership Competency Scale*

#### **1. Customer Cooperative Persona Directions:**

Please think about a "big customer" in your business unit's supply-chain (large volume / critical in reaching the consumer: end user of your product).

Picture this "big customer" in your "mind's eye" --- Then, using your best judgment, answer to what extent you disagree (1) / agree (5) with the following statements:

Strongly Disagree	Disagree	Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

**Model Statistics: Chi sq. = 10.11, P = .34, RMSEA = .027, RMR = .034, GFI = .98**

Even when this customer gives a rather unlikely explanation, we are confident that this customer is telling us the truth.	bigcp1a1 .56, t = 7.02
<del>We believe that this customer often provides us with information that is inaccurate.</del>	bigcp1a2
We are confident that this customer keeps the promises that it makes to us.	bigcp1a3 .57, t = 7.08
Whenever this customer gives us advice, we are certain that they are sharing their best judgment.	bigcp1a4 .67, t = 8.62
We can count on this customer to be committed to our goals for reaching the consumer.	bigcp1a5 .57, t = 7.07
We have no doubt that this customer listens to our ideas.	bigcp1a6 .56, t = 7.02
We trust that this customer will do the right thing when making business decisions that involve us.	bigcp1a7 .68, t = 8.84
<del>We value this customer's contributions to our consumer sales goals.</del>	bigcp1a8

**Items Tested / ~~Items Dropped~~**

## APPENDIX IV B.

### 2. Customer Collaborative Competency Directions:

Please think about the same "big customer" in your business unit's supply-chain (large volume / critical in reaching the consumer: end user of your product).

Picture this "big customer" in your "mind's eye" again --- Then, using your best judgment, answer to what extent you disagree (1) / agree (5) with the following statements:

Strongly Disagree	Disagree	Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

**Model Statistics: Chi sq. = 3.07, P = .22, RMSEA = .056, RMR = .028, GFI = .99**

When we tell this customer that they should be doing something that doesn't seem to fit the strategy we've agreed to, they insist on knowing why.	bigcp1b1
This customer gets involved in negotiating other options with us when they think it is needed.	bigcp1b2 .63, t = 8.19
When we use a term this customer doesn't understand, usually they will ask what it means.	bigcp1b3
This customer argues their point of view with us when conflicting views arise.	bigcp1b4 .80, t = 10.70
This customer is able to influence decisions that reflect their specific area of knowledge, even if we have an opposite opinion.	bigcp1b5 .79, t = 10.46
Often this customer will offer alternative solutions when we've considered a specific solution.	bigcp1b6 .41, t = 5.00 *
This customer participates in "give and take" decision making with us.	bigcp1b7
This customer tends to avoid offering suggestions to us about options.	bigcp1b8
This customer feels free to make suggestions to us.	bigcp1b9
This customer does not ask us about alternative solutions.	bigcp1b10
Usually this customer speaks frankly to us about how they feel about our ideas.	bigcp1b11
If this customer does not understand all the options, they keep quiet in meetings.	bigcp1b12
This customer has influence when they disagree with us.	bigcp1b13
This customer communicates their ideas freely when we meet with them.	bigcp1b14

\* Item had to be dropped in 2 component model.



## APPENDIX V A.

### *Supplier Relational Leadership Competency Scale*

#### **1. Supplier Cooperative Persona Directions:**

Now please think of a supplier in your supply-chain that is "very important" (critical raw material, large volume supplier, key ingredient, etc.) to your business unit's success in meeting customer requirements.

Picture this "very important" supplier in your "mind's eye" --- Then, using your best judgment, answer to what extent you disagree / agree with the following statements:

Strongly Disagree	Disagree	Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

**Model Statistics: Chi sq. = 6.11, P = .30, RMSEA = .038, RMR = .019, GFI = .99**

<del>Even when this supplier gives us a rather unlikely explanation, we are confident that this supplier is telling us the truth.</del>	vipspl a1
<del>We believe that this supplier often provides us with inaccurate information.</del>	vipspl a2
We are confident that this supplier keeps the promises that it makes to us.	vipspl a3 .71, t = 9.60
<del>Whenever this supplier gives us advice, we are certain that they are sharing their best judgment.</del>	vipspl a4
We can count on this supplier to be committed to our goals for meeting customer requirements.	vipspl a5 .77, t =10.86
We have no doubt that this supplier listens to our ideas.	vipspl a6 .76, t = 10.67
We trust that this supplier will do the right thing when making business decisions that involve us.	vipspl a7 .85, t = 12.44
We value this supplier's commitment to meeting our customers' requirements.	vipspl a8 .79, t = 11.24

## APPENDIX V B.

### 2. *Supplier Collaborative Competency Directions:*

Please think about the same "very important" supplier in your business unit's supply-chain (critical raw material, large volume supplier, key ingredient, etc.).

Picture this "very important" supplier in your "mind's eye" again --- Then, using your best judgment, answer to what extent you disagree / agree with the following statements:

Strongly Disagree	Disagree	Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

**Model Statistics: Chi sq. = 7.35, P = .60, RMSEA = .00, RMR = .020, GFI = .98**

When we tell this supplier that they should be doing something that doesn't seem to fit the strategy we've agreed to, they insist on knowing why.	vipsp1b1
This supplier gets involved in negotiating other options with us when they think it is needed.	vipsp1b2 .74, t = 10.23
When we use a term this supplier doesn't understand, usually they ask what it means.	vipsp1b3 .79, t = 11.33
This supplier argues their point of view with us when conflicting views arise.	vipsp1b4
This supplier is able to influence decisions that reflect their specific area of knowledge, even if we have an opposite opinion.	vipsp1b5 .70, t = 9.55
Often this supplier will offer alternative solutions when we've considered a specific solution.	vipsp1b6
This supplier participates in "give and take" decision-making with us.	vipsp1b7 .83, t = 12.19
This supplier tends to avoid offering suggestions to us about options.	vipsp1b8
This supplier feels free to make suggestions to us.	vipsp1b9
This supplier does not ask us about alternative solutions.	vips1b10
Usually this supplier speaks frankly to us about how they feel about our ideas.	vips1b11 .68, t = 9.09
If this supplier does not understand all the options, they keep quiet in meetings.	vips1b12
This supplier has influence when they disagree with us.	vips1b13
This supplier communicates their ideas freely when we meet with them.	vips1b14 .74, t = 10.25

## APPENDIX VI A.

### *Customer Executional Leadership Competency Scale*

#### **1. Customer Information Visibility / Resource Sharing:**

Considering the same "big customer", please indicate to what extent you disagree / agree with the following statements:

Strongly Disagree	Disagree	Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

**Model Statistics: Chi sq. = 1.06, P = .59, RMSEA = .00, RMR = .015, GFI = 1**

<del>This customer is linked (e.g. electronically, person-to-person, mail) with us to share sales and volume information for planning consumer sales events.</del>	bcp2a1
Our order-processing status is visible to this customer for timely sharing of information (e.g. shelf needs, product size, price info, UPC codes) to prevent consumer out of stocks.	bcp2a2 .75, t = 9.75
<del>We share people resources with this customer as needed for responsiveness to consumer market demand.</del>	bcp2a3
<del>We share the composition of our pricing structure with this customer when developing the consumer shelf price.</del>	bcp2a4
Our order processing is open and visible to this customer to share all defects before products with defects hit the shelves to be sold to the consumer	bcp2a5 .51, t = 6.13
This customer is linked (e.g. electronically, person-to-person, mail) to our warehousing system to share movement of goods to meet consumer demand.	bcp2a6 .74, t = 9.58
<del>This customer is linked to our warehousing system to share movement of goods to initiate claims closure upon shipment of product to meet consumer demand.</del>	bcp2a7
<del>We share market trend information with this customer to improve in stocks for the consumer.</del>	bcp2a8
Our procurement information is shared with this customer via a continuous supply system to reduce replenishment times in meeting consumer demand.	bcp2a9 .69, t = 8.87
<del>This customer's payment system is open and visible to us to share the status of payment for product we ship to them.</del>	bcp2a10

## APPENDIX VI B.

### 2. *Customer Leader ↔ Follower Dynamics:*

Considering the same "big customer", please indicate to what extent you disagree / agree with the following statements:

Strongly Disagree	Disagree	Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

**Model Statistics: Chi sq. = 7.45, P = .19, RMSEA = .055, RMR = .034, GFI = .98**

Sometimes this customer takes the lead and at other times we lead the way in providing demand information for sales and volume forecasting.	bgcp2b1 .53, t = 6.38
<del>This customer waits to follow our direction before addressing problems that mutually affect our businesses.</del>	bgcp2b2
This customer sometimes takes the lead and initiates a session with us to communicate about merchandising plans.	bgcp2b3 .71, t = 8.97
We are willing to follow this customer's lead when they make good suggestions about reducing out-of-stocks.	bgcp2b4 .64, t = 7.91
This customer feels a sense of co-ownership with us when we are leading the execution of a strategy that involves them in the implementation.	bgcp2b5 .55, t = 6.71
This customer sometimes takes the lead and makes suggestions that could influence replenishment and distribution of our products.	bgcp2b6 .67, t = 8.42
<del>This customer sometimes follows our lead and we sometimes follow their lead to improve in stocks.</del>	bgcp2b7
<del>This customer has unique capabilities (i.e. resources, technology, reach) that sometimes influence who take the lead in the execution of our joint strategies.</del>	bgcp2b8

## APPENDIX VII A.

### *Supplier Executional Leadership Competency Scale*

#### **1. Supplier Information Visibility / Resource Sharing:**

Considering the same “very important” supplier, please indicate to what extent you disagree / agree with the following statements:

Strongly Disagree	Disagree	Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Perfect Fit only three items

This supplier is linked (e.g. electronically, person-to-person) with us to share information related to consumption of the materials / items they provide.	vips2a1 .85, t = 9.67
Our order-processing status is visible to this supplier for timely sharing of information (e.g. shelf needs, product size, UPC codes).	vips2a2 .70, t = 8.15
<del>We share people resources with this supplier as needed for responsiveness.</del>	vips2a3
<del>We share information with this supplier on how their costs affect the pricing of our goods.</del>	vips2a4
We share our order processing information with this supplier when they have a need to know.	vips2a5 .61, t = .61, t = 7.14
<del>This supplier is linked (e.g. electronically, person-to-person) to our warehousing system to share information concerning when the next increment of demand is required.</del>	vips2a6
<del>We share market trend information with this supplier to help prevent out of stocks.</del>	vips2a7
<del>Some of our procurement information is shared with this supplier via a continuous supply system so no purchase order is needed.</del>	vips2a8
<del>Our payment system is open and visible to this supplier to share the status of pay requests.</del>	vips2a9

## APPENDIX VII B.

### 2. *Supplier Leader ↔ Follower Dynamics:*

Considering the same "big customer", please indicate to what extent you disagree / agree with the following statements:

Strongly Disagree	Disagree	Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Perfect Fit only three items

<del>Sometimes this supplier takes the lead and at other times we lead the way in providing consumption volume forecasting information for planning.</del>	vips2b1
<del>This supplier waits to follow our direction before addressing problems that mutually affect our businesses.</del>	vips2b2
This supplier will sometimes take the lead and initiate a planning session with us to address potential problems.	vips2b3 .69, t = 7.94
<del>We are willing to follow this supplier's lead when they make good suggestions about our business operations.</del>	vips2b4
This supplier feels a sense of co-ownership with us when we are leading the execution of a market strategy that involves them in the implementation.	vips2b5 .73, t = 8.38
This supplier sometimes takes the lead and makes suggestions that could influence the way we run our operations.	vips2b6 .69, t = 7.95
<del>This supplier sometimes follows our lead and we sometimes follow their lead in executing day-to-day routine activities that impact the implementation of our plans.</del>	vips2b7
<del>This supplier has unique capabilities (i.e. space, resources) that sometimes influence the execution of our product supply strategies.</del>	vips2b8

## APPENDIX VIII

### Sustained Competitive Advantage (SCADV):

Identify a successful brand in your business unit, and then answer the following.

Please indicate your degree of disagreement or agreement with the following statements about the product you are thinking of:

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

**Model Statistics: Chi sq: = 9.33; P = .41; RMSEA = .015; RMR = .019; GFI = .98; CN = 360.96**

We win with customers when we offer consumer products like this with unique features or attributes over competitive products.	brscv1 = .86 Modified  note the modifications in each case were to use in-house language (e.g. "win" and to make the respondent think for the customer)
Our customers benefit when we offer products like this, which is clearly superior to competing products in terms of meeting consumers' needs.	brscv2 = .88 Modified
Our customers are more likely to want products like this that permits the consumer to do a job or do something he / she could not presently do with what is available.	brscv3 = .83 Modified
We win with customers when our products, like this one, offer a noticeable consumer advantage (e.g. stronger, lasted longer, more reliable, and more functional).	brscv4 = .84 Modified
<del>Our customers prefer consumer products like this one that has superior technical performance.</del>	Modified
<del>We work to be first to market with unique products like this for our customers to sell to consumers.</del>	Modified
Our customers prefer products like this that add value at a competitive price for the consumer.	brscv7 = .73 New
<del>We design consumer products like this because they have consumer appeal for a long time.</del>	New
We create and deliver products like this that build winning brand equities.	brscv9 = .74 New

## APPENDIX IX A.

### Consumer Orientation (New)

Please indicate to what extent or degree the following statements are descriptive of "the current reality" in your business unit. In our business unit:

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5
<b>Model Statistics: Chi sq: = .94; P = .62; RMSEA = .00; RMR = .013; GFI = 1.00; CN = 1683.06</b>				
<del>We interact directly with consumers to see how we can serve them better.</del>		consu1 = Modified; Jaworski and Kohli 1993		
<del>We do a lot of marketing research to assess consumer perceptions of our products and services.</del>		In each case the modification was changing customer to consumer		
<del>We do a lot of marketing research to assess consumer perceptions of our products and services.</del>		consu2 = Modified; Jaworski and Kohli 1993		
Our marketing people regularly discuss consumer needs / wants with other business functions.		consu3 = .73, t = 9.94 Modified; Jaworski and Kohli 1993		
Our strategy for competitive advantage is based on our understanding of the consumer.		consu4 = .77, t = 10.57 New		
We review the likely effects of changes in our market environment (trends, economy) on our consumer.		consu5 = .74, t = 10.06 Modified; Jaworski and Kohli 1993		
<del>We have routine measures or regular measures of consumer satisfaction.</del>		consu6 = Modified; Narver and Slater 1990		
We discuss consumer trends with our suppliers.		consu7 = .50, t = 6.31		
<del>Our product supply personnel include the consumer in supply strategies.</del>		consu8 = New		
<del>Our R&amp;D personnel are motivated by consumer preferences in package design.</del>		consu9 = New		
<del>Our R&amp;D / product development personnel "listen" to consumer feedback when developing / improving products.</del>		consu10 = New		
<del>Our MDO personnel consider consumer input when designing customer strategies.</del>		consu11 = New		
<del>Our IT personnel are involved in consumer focused solutions.</del>		consu12 = New		



## APPENDIX IX B.

### Customer Orientation

Again, please indicate to what extent or degree the following statements are descriptive of your business unit. In our business unit:

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model Statistics: Chi sq: = .94; P = .62; RMSEA = .00; RMR = .013; GFI = 1.00; CN = 1683.06

We encourage customer comments and complaints because they help us do a better job.	custom1 = .69, t = 9.49	Deng and Dart, 1994; Narver and Slater, 1990
We have a strong commitment to our customers.	custom2 = .79, t = 10.81	Deng and Dart, 1994; Narver and Slater, 1990
We are always looking for ways to create customer value in our products.	custom3 = .75, t = 10.70	Deng and Dart, 1994; Narver and Slater, 1990
We measure customer satisfaction on a regular basis.	custom4 = .65, t = 8.87	Deng and Dart, 1994; Narver and Slater, 1990
We freely communicate information about customers across all business functions.	custom5 = .66, t = 9.06	Modified Jaworski and Kohli 1993

## APPENDIX IX C.

### Competitor Orientation

Think about firms that are competitive to your business unit, and then answer the following.

Please indicate the degree to which the following describes your business unit.

In our business unit:		Neither		
Strongly Disagree	Disagree	Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model Statistics: Chi sq: = 1.47; P = .48; RMSEA = .00; RMR = .012; GFI = 1.00; CN = 1079.06

We regularly monitor our competitors' marketing efforts.	compet1 = .83, t = 12.74	Deng and Dart, 1994; Narver and Slater, 1990
We discuss competitive advantages across business functions.	compet2 = .70, t = 10.00	
We frequently collect marketing data on our competitors to help direct our marketing strategies.	compet3 = .83, t = 12.54	Deng and Dart, 1994; Narver and Slater, 1990
We monitor and report on competitor activity.	compet4 = .80, t = 12.08	Deng and Dart, 1994; Narver and Slater, 1990
<del>We respond rapidly to competitors' actions that threaten us.</del>	compet5 New	
<del>Our top managers often discuss competitors' actions that threaten us.</del>	compet6 Modified	Deng and Dart, 1994; Narver and Slater, 1990
<del>We consider opportunities based on competitive advantage.</del>	comprt7 New	
<del>We discuss competitive advantage strategies with our key suppliers.</del>	compet8 New	

## APPENDIX IX D.

### General Business Philosophy

Again, thinking about your business unit, please indicate your answers using the scale provided.

In our business unit:		Neither		
Strongly Disagree	Disagree	Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model Statistics: Chi sq: = 2.01; P = .37; RMSEA = .0066; RMR = .022; GFI = .99; CN = 787.35

New product launches in our business unit are well coordinated.	genbu211 .54, t = 6.44 New
We benchmark our performance vs. the very best to improve our competitive advantage.	genbu212 .68, t = 8.20 New
We place great value on big new consumer innovations.	genbu213 .56, t = 6.68 New
We reinvent the way we do business to better win in the market place.	genbu214 .70, t = 8.46 New

## APPENDIX IX E.

### OUTWARD FOCUSED MARKET ORIENTATION COMPONENTS 2<sup>ND</sup> ORDER MODEL

Model Statistics: Chi sq: = 20.51; P = .92; RMSEA = .00; RMR = .054; GFI = .93; CN = 438.67

#### Consumer Orientation (New)

Our marketing people regularly discuss consumer needs / wants with other business functions.	consu3 = .70, t = 5.38 Modified; Jaworski and Kohli 1993
Our strategy for competitive advantage is based on our understanding of the consumer.	consu4 = .78, t = 5.54 New
We review the likely effects of changes in our market environment (trends, economy) on our consumer.	consu5 = .77, t = 5.53 Modified; Jaworski and Kohli 1993

#### Customer Orientation

We have a strong commitment to our customers.	custom2 = .68, t = 7.14 Deng and Dart, 1994; Narver and Slater, 1990
We are always looking for ways to create customer value in our products.	custom3 = .87, t = 6.75 Deng and Dart, 1994; Narver and Slater, 1990

#### Competitor Orientation

We regularly monitor our competitors' marketing efforts.	compet1 = .84, t = 8.58 Deng and Dart, 1994; Narver and Slater, 1990
We frequently collect marketing data on our competitors to help direct our marketing strategies.	compet3 = .83, t = 8.57 Deng and Dart, 1994; Narver and Slater, 1990
We monitor and report on competitor activity.	compet4 = .79, t = 8.31 Deng and Dart, 1994; Narver and Slater, 1990

#### Outward focused / Boundary Spanning New

Consumer promotion activities in our business unit are well coordinated.	Genbu210 = .73, t = 6.74 New
We benchmark our performance vs. the very best to improve our competitive advantage.	genbu212 = .84, t = 6.34 New

## APPENDIX IX F.

### OUT WARD FOCUSED MARKET ORIENTATION 2<sup>ND</sup> ORDER MODEL

Model Statistics: Chi sq: = 20.51; P = .92; RMSEA = .00; RMR = .054; GFI = .93; CN = 438.67

#### MARORIN

CONSUMER ORIENTATION	CONSUM = .82, t = 4.13
CUSTOMER ORIENTATION	CUSTOM = .48, t = 4.17
COMPETITOR ORIENTATION	COMPET = .73, t = 5.28
BOUNDARY SPANNING ORIENTATION	GENBUS = .75, t = 4.63

Convergent validity is established  
Discriminate validity is established

## APPENDIX X A CUSTOMER GOVERNANCE AND SAFEGUARDS

Think again about the big customer you previously considered and answer the following.

Indicate the extent to which you disagree or agree with the following statements:

### Goal Congruity

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model Statistics: Chi sq: = 2.18; P = .34; RMSEA = .023; RMR = .019; GFI = .99; CN = 694.69

<del>This customer and XYZ share the same goals in the relationship.</del>	govcus1 = .59, t = 7.62*	Modified Jap 1999
We have compatible goals with this customer.	govcus2 = .81, t = 11.09	Modified Jap 1999
We support each others' goals.	govcus3 = .75, t = 10.08	Modified Jap 1999
Our goals are complementary.	govcus4 = .70, t = 9.24	New

\* Item dropped from the final model

## APPENDIX X B

### CUSTOMER GOVERNANCE AND SAFEGUARDS

#### Relationship Investment Governance

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model Statistics: Chi sq: = 3.87; P = .57; RMSEA = 0.0; RMR = .025; GFI = .99; CN = 639.63

<del>If the relationship with this customer were to end, we would be wasting a lot of knowledge that's tailored to our relationship.</del>	govcus5	Modified Anderson and Weitz 1992 Jap and Anderson 2003
We have invested a great deal in building up the relationship with this customer.	govcus6 = .47, t = 5.73	Anderson and Weitz 1992 Modified Jap and Anderson 2003
The relationship with this customer has resulted in a strategic advantage for XYZ.	govcus7 = .82, t = 11.01	Anderson and Weitz 1992 Modified Jap and Anderson 2003
The relationship with XYZ has resulted in a strategic advantage for this customer.	govcus8 = .69, t = 8.95	Anderson and Weitz 1992 Modified Jap and Anderson 2004
<del>This customer has gained benefits from our relationship that allow them to compete more effectively in the market place.</del>	govcus9	Modified Jap 1999
The relationship has not resulted in strategically important outcomes. r	govcus10 = .54, t = 6.70	Jap 1999
We have gained a benefit from this customer, which allows us to compete more effectively in the market place.	govcus11 = .61, t = 7.68	New

# **APPENDIX X C** **CUSTOMER GOVERNANCE AND SAFEGUARDS**

## **Joint Profit Safeguard**

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model is saturated, the fit is perfect

We have achieved a high level of joint profits between us.	govcus12 = .16, t = 1.82 *
We have generated a lot of profits together.	govcus13 = .92, t = 3.50
We have increased the joint profits shared between us.	govcus14 = .67, t = 3.38

\* Item dropped from the final model



# **APPENDIX X D** **CUSTOMER GOVERNANCE AND SAFEGUARDS**

## **Expectations of Continuity**

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model is saturated, the fit is perfect

Our relationship with this customer will last far into the future.	govcus15 = .77, t = 10.58
We expect to continue working with this customer on a long term basis.	govcus16 = .77, t = 10.58
We have a strategic relationship with this customer	govcus17 = .80, t = 10.99

**APPENDIX X E**  
**CUSTOMER SUPPLY NETWORK GOVERNANCE AND SAFEGUARDS**  
**2<sup>ND</sup> ORDER MODEL**

Model Statistics: Chi sq: = 53.46; P = .08; RMSEA = .045; RMR = .054; GFI = .98; CN = 196.36

**Goal Congruity**

We have compatible goals with this customer.	govcus2 = .82, t = 9.43	Modified Jap 1999
We support each others' goals.	govcus3 = .74, t = 8.72	Modified Jap 1999
Our goals are complementary.	govcus4 = .70, t = 8.27	New

**Relationship Investment Governance**

The relationship with this customer has resulted in a strategic advantage for XYZ.	govcus7 = .78, t = 4.96	Anderson and Weitz 1992 Modified Jap and Anderson 2003
The relationship with XYZ has resulted in a strategic advantage for this customer.	govcus8 = .69, t = 4.87	Anderson and Weitz 1992 Modified Jap and Anderson 2004
We have gained a benefit from this customer, which allows us to compete more effectively in the market place.	govcus11 = .65, t = 4.79	New

**Joint Profit Safeguard**

We have generated a lot of profits together.	govcus13 = .86, t = 7.32
We have increased the joint profits shared between us.	govcus14 = .72, t = 7.72

**Expectations of Continuity**

Our relationship with this customer will last far into the future.	govcus15 = .72, t = 5.33
We expect to continue working with this customer on a long term basis.	govcus16 = .71, t = 5.31
We have a strategic relationship with this customer	govcus17 = .89, t = 5.47

## APPENDIX X F.

### CUSTOMER SUPPLY NETWORK GOVERNANCE AND SAFEGUARDS 2<sup>ND</sup> ORDER MODEL

Model Statistics: Chi sq: = 53.46; P = .08; RMSEA = .045; RMR = .054; GFI = .98; CN = 196.36

#### CGOVER

GOAL CONGRUITY	CGO1GOV = .54, t = 4.65
RELATIONSHIP INVESTMENT GOVERNANCE	CRGOV = .82, t = 3.74
JOINT PROFIT SAFEGUARD	CPR01GOV = .57, t = 4.58
EXPECTATIONS OF CONTINUITY	CON1GOV = .82, t = 3.93

Convergent validity is established  
Discriminate validity is established

## APPENDIX XI A SUPPLIER GOVERNANCE AND SAFEGUARDS

Think again about the very important supplier you previously considered and answer the following.

Indicate the extent to which you disagree or agree with the following statements:

### Goal Congruity

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model is saturated, fit is perfect

<del>This supplier and XYZ share the same goals in the relationship.</del>	govsp1	Modified Jap 1999
We have compatible goals with this supplier.	govsp2 = .87, t = 12.36	Modified Jap 1999
We support each others' goals.	govsp3 = .78, t = 10.64	Modified Jap 1999
Our goals are complementary.	govsp4 = .86, t = 12.11	New

## APPENDIX XI B SUPPLIER GOVERNANCE AND SAFEGUARDS

### Relationship Investment Governance

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model Statistics: Chi sq: = 6.39; P = .23; RMSEA = 0.052; RMR = .028; GFI = .98; CN = 316.86

If the relationship with this supplier were to end, we would be wasting a lot of knowledge that's tailored to our relationship.	govsp5	Modified Anderson and Weitz 1992 Jap and Anderson 2003
We have invested a great deal in building up the relationship with this supplier.	govsp6 = .67, t = 8.41	Anderson and Weitz 1992 Modified Jap and Anderson 2003
The relationship with this supplier has resulted in a strategic advantage for XYZ.	govsp7 = .82, t = 11.01	Anderson and Weitz 1992 Modified Jap and Anderson 2003
The relationship with XYZ has resulted in a strategic advantage for this supplier.	govsp8 = .81, t = 10.76	Anderson and Weitz 1992 Modified Jap and Anderson 2004
This supplier has gained benefits from our relationship that allow them to compete more effectively in the market place.	govsp9 = .70, t = 8.96	Modified Jap 1999
The relationship has not resulted in strategically important outcomes. r	govcus10 = .62, t = 7.56	Jap 1999
We have gained a benefit from this supplier, which allows us to compete more effectively in the market place.	govcus11 = .68, t = 8.64	New

# **APPENDIX XI C** **SUPPLIER GOVERNANCE AND SAFEGUARDS**

## **Joint Profit Safeguard**

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model is saturated, the fit is perfect

We have achieved a high level of joint profits between us.	govsp12 = .86, t = 12.44
We have generated a lot of profits together.	govsp13 = .86, t = 12.44
We have increased the joint profits shared between us.	govsp14 = .87, t = 12.68

# **APPENDIX XI D** **SUPPLIER GOVERNANCE AND SAFEGUARDS**

## **Expectations of Continuity**

Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1	2	3	4	5

Model is saturated, the fit is perfect

Our relationship with this supplier will last far into the future.	govsp15 = .88, t = 13.04
We expect to continue working with this supplier on a long term basis.	govsp16 = .95, t = 14.77
We have a strategic relationship with this supplier	govsp17 = .84, t = 12.34

## APPENDIX XI E

### SUPPLIER SUPPLY NETWORK GOVERNANCE AND SAFEGUARDS 2<sup>ND</sup> ORDER MODEL

Model Statistics: Chi sq: = 30.14; P = .18; RMSEA = .042; RMR = .046; GFI = .94; CN = 207.74

#### Goal Congruity

We have compatible goals with this supplier.	govsp2 = .89, t = 7.02	Modified Jap 1999
We support each others' goals.	govsp3 = .78, t = 6.64	Modified Jap 1999
Our goals are complementary.	govsp4 = .83, t = 6.86	New

#### Relationship Investment Governance

Factor was eliminated from the model t = less than 1.93 for the factor and all items (however loadings were good)

#### Joint Profit Safeguard

We have achieved a high level of joint profits between us.	govsp12 = .85, t = 2.58
We have generated a lot of profits together.	govsp13 = .87, t = 2.58
We have increased the joint profits shared between us.	govsp14 = .87, t = 2.58

#### Expectations of Continuity

Our relationship with this supplier will last far into the future.	govsp15 = .88, t = 11.64
We expect to continue working with this supplier on a long term basis.	govsp16 = .95, t = 12.75
We have a strategic relationship with this supplier	govsp17 = .85, t = 11.14



## APPENDIX XI F.

### SUPPLIER SUPPLY NETWORK GOVERNANCE AND SAFEGUARDS 2<sup>ND</sup> ORDER MODEL

Model Statistics: Chi sq: = 30.14; P = .18; RMSEA = .042; RMR = .046; GFI = .94; CN = 207.74

#### SGOVER

GOAL CONGRUITY	SGO1GOV = .73, t = 3.99
JOINT PROFIT SAFEGUARD	SPRO1GOV = .89, t = 2,04
EXPECTATIONS OF CONTINUITY	SON1GOV = .50, t = 4.50

Convergent validity is established  
Discriminate validity is established