This is to certify that the

dissertation entitled

Strategic Dimensions of Integrated Services Providers

presented by

Daniel L. Wardlow

has been accepted towards fulfillment
of the requirements for

Doctoral degree in Business Administration

Major professor

Date December 6, 1990

STRATEGIC DIMENSIONS OF INTEGRATED SERVICES PROVIDERS

by

Daniel L. Wardlow

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Marketing and Transportation Administration
Graduate School of Business Administration

1991

ABSTRACT

STRATEGIC DIMENSIONS OF INTEGRATED SERVICES PROVIDERS

By

Daniel L. Wardlow

Strategy development among logistics integrated services providers is examined during the introductory phase of a new domestic industry. Logistics integrated services providers are firms which build and/or operate all or part of a distribution system in a strategic alliance with a customer partner.

The research examines the relationships among the Miles and Snow (1978) strategic archetype (defender, analyzer, prospector, reactor), organizational characteristics (centralization, formalization, and complexity), market segmentation approach, and the creation of tactical services bundles and their pricing.

Strategy development is profiled in ten provider firms by case analysis. In depth interviews were conducted with senior strategists in the companies, combined with secondary data, and analyzed in a structured interpretive manner.

Principle findings include a general validation of the Miles and Snow typology using expert assessment by the researcher and the interview subject. Two alternate strategic archetype definitions were created to provide three bases for

linking archetype to market segmentation strategy approach and tactical services bundles and their pricing. Associations were found between expert assessment of archetype, adaptive problem solving focus, levels of organizational characteristics and market segmentation strategy approach for prospector, defender and reactor archetypes. Weak associations were found between adaptive problem solving focus, levels of organizational characteristics, and tactical services bundles and their pricing for prospectors, defenders, and reactors.

Managerial implications include the association of particular strategic archetype postures with different customer types. Prospectors are assessed to have the greatest opportunity for success with customers who are small in size or have no logistics infrastructure in place. Analyzers are assessed to have the greatest opportunity for success with customers entering new markets and/or introducing new products with unique logistics requirements. Defenders are assessed to have the greatest opportunity for success by specializing in an industry type and pursuing large manufacturers and retailers with highly refined systems which generate large scale economies.

Dedicated to Blue and Lene

who were my faithful companions throughout.

"Capitalism arose and took off its pajamas.

Another day, another dollar."

- Donald Barthelme

The Rise of Capitalism

ACKNOWLEDGEMENTS

A dissertation is a lonely effort, and I owe a great many thanks to these people for their support and assistance:

Dr. Donald J. Bowersox, for his unfailing leadership and guidance as the director of my dissertation committee; he is my mentor and a model academician.

Dr. Cornelia L. Dröge, for her generous counsel and advice in research methods and theory bases; she has become a good friend in the process.

Dr. Lloyd M. Rinehart, for his encouragement and confidence in my abilities; he has been a commendable committee member throughout.

Dr. Robert W. Nason, for his advice as chairperson of my department; he helped to provide a low-stress environment for me to work in.

Dr. Patricia J. Daugherty and Steven W. Kopp, for their friendship and emotional support; they listened when I needed them.

John Stryker, my close friend, for keeping mind, heart, and motivation in correct alignment throughout the experience; thanks, I needed that.

The MSU students who put up with explanations of my exciting research during classes I taught.

American President Companies and John Firman, Jon Hodge, Dan Pendleton, Dick Tierney, and Aimee Redding, who provided generous financial support in the form of a research grant that made this research effort possible.

A.T. Kearney, Inc., management consultants, for providing a post-doctoral research fellowship to pursue research directions discovered during my dissertation work.

And finally, to the corporate executives of the ten firms that were the subjects of my research: you gave of your valuable time selflessly and I sincerely thank you.

TABLE OF CONTENTS

List of Tables xii

List of Figures xiii

CHAPTER I: Introduction 1
The Logistics Integrated Service Provider:
Birth of a New Industry 5
Innovation and Development of a New Industry . 6
Conceptual Model and Hypotheses 9
Adaptive Problem Solving 10
Organizational Characteristics 11
Strategic Archetypes 12
Segmentation Strategy 12
Tactics Used 15
The Research Problem and Objectives 17
Research Questions 18
A Synopsis of Research Methodology 19
The Significance of the Research 20
Order of Dissertation Presentation 21

CHAPTER II: Literature Review and Theory Development . . 22
The Economics of Functional Spin-Off 23
Organizational Structure 27
Adaptive Problem Solving 29
Organizational Characteristics 31
Strategic Archetypes 37
Hypotheses Dealing With Structure and
Segmentation 42
Tactical Packages of Products and Services 44
Hypotheses Dealing With Tactics 56

CHAPTER III: Research Methods and Design 58
Research Methods 64
Constructs and Measurement 66
Adaptive Problem Solving 67
Organizational Characteristics 70
Strategic Archetype 72
Segmentation Strategy 73
Tactics Used 75

CHAPTER IV: Results 78
Measurement 78
Adaptive Problem Solving 78
Centralization 80
Formalization 81
Complexity 82
Strategic Archetype: Three Assessment Schemes . 83
Testing Hypotheses With Type I Assessments 88
Adaptive Problem Solving Hypotheses 88
Segmentation Strategy Hypotheses 94
Tactical Hypotheses 99
Testing Hypotheses With Type II Assessments 104
Segmentation Strategy Hypotheses 105
Tactical Hypotheses 109
Testing Hypotheses With Type III Assessments . . . 112
Segmentation Strategy Hypotheses 112
Tactical Hypotheses 115
Summary of Hypotheses Testing 119

CHAPTER V: Conclusions 120
Discussion and Conclusions on Hypotheses 120
Relationships One and Two 121
Relationship Three 130
Relationship Four 134
Theoretical Contributions 138
Miles and Snow Strategic Archetype 139
Organizational Characteristics 141
Research Methods 145
Industry Development and Stage of Life Cycle . 146
Implications for Managers 148
Strategic Posture and Customer Type 149
Services Bundling and Pricing 153
Prospects for Industry Development 155
Threat of New Entrants 157
Prospects for Survival of the Industry 159
Limitations of the Research 160
Directions for Future Research 162

APPENDIX A: Interview Guide 167

APPENDIX B: Strategic Archetype Examples 180

APPE

BIBL

GENE

APPENDIX C: Provider Case Studies 182
Provider Firm "A" 183
Provider Firm "B" 190
Provider Firm "C" 199
Provider Firm "D" 207
Provider Firm "E" 215
Provider Firm "F" 221
Provider Firm "G" 228
Provider Firm "H" 234
Provider Firm "I" 241
Provider Firm "J" 247

BIBLIOGRAPHY 253

GENERAL REFERENCES 258

LIST OF TABLES

Table 1: Logistics Integrated Services Provider Firms . 8

Table 2: Examples of Systems With Various Combinations of Integration and Modularity 53

Table 3: Contrasting Positivism and Naturalism 60

Table 4: Adaptive Problem Solving Focus 79

Table 5: Responses on Centralization 81

Table 6: Responses on Formalization 82

Table 7: Responses on Complexity 83

Table 8: Type I Strategic Archetype Assessment 85

Table 9: Type II Strategic Archetype Assessment 85

Table 10: Type III Strategic Archetype Assessment . . . 87

Table 11: Comparison of Three Archetype Assessments . . 88

Table 12: Summary of Structural Associations (Type I) . 89

Table 13: Summary of Segmentation Approaches (Type I) . 94

Table 14: Summary of Tactical Approaches (Type I) 100

Table 15: Summary of Segmentation Approaches (Type II) . 105

Table 16: Summary of Tactical Approaches (Type II) . . . 109

Table 17: Summary of Segmentation Approaches (Type III) 113

Table 18: Summary of Tactical Approaches (Type III) . . 116

Table 19: Summary of Hypotheses Testing 119

LIST OF FIGURES

Figure 1: Buyer/Seller Service Relationship 3
Figure 2: Conceptual Model 10
Figure 3: Pure Components Strategy 49
Figure 4: Pure Bundling Strategy 50
Figure 5: Mixed Bundling Strategy 51
Figure 6: The Model of the Research Cycle 62

CHAPTER I

INTRODUCTION

A popular practice in contemporary business is the creation of interfirm or interorganizational alliances. These alliances may be created for different purposes and for different lengths of time. Powerful and synergistic potential can be derived from such alliances. One dimension of interorganizational behavior that is receiving increasing attention is the interfirm alliance between logistics services providers, and the manufacturers, wholesalers, and retailers they service. Renewed focus on achieving customer satisfaction as a corporate goal has elevated logistics competency to a position of high priority within selected industry leaders (Bowersox et al. 1989, Bowersox 1990). When logistics competency is treated as a strategic resource, alliances between firms and logistics services providers can become strong a competitive weapon.

There are a number of reasons why firms are drawn to improve buyer/seller relationships: technological specialization; reduced cost of development and risk of new products, services and technologies; increased competitive pressure; the desire to create a corporate "focus" on an ess

by a

The

let

all

and

is

eff

essential core of products or services; and added credibility by a judicious choice of partners (McKenna 1985, Kanter 1989). The essential economic principle at work is specialization: let each firm excel in its area of expertise, while the alliance as a strategic group offers a joint bundle of goods and services to key customers (Bowersox 1986, 1990).

What is the nature of the strategic alliance, and what is its relationship to marketing? Evert Gummesson (1987) offers the following insight:

> Marketing can be seen as relationship management: creating, developing, and maintaining a network in which the firm thrives. (It is) interactive . multilateral supplier -- customer activities to produce and deliver goods and services, primarily (based on) person-to-person communication (as contrasted to) mass communication. (It is also) long-term, stressing that relationships need time to be built and need time to be maintained (p. 11).

Two key dimensions that help to explain the nature of interfirm or interorganizational relationships are formalization and commitment. Formalization deals with the degree to which the partners in the alliance specify the details of their relationship. Commitment deals with the degree to which the partners become interdependent. There are a number of different levels of contractual formalization and commitment that may characterize the relationships between service providers and their customers. A continuum created by Bowersox et al. (1989) offers one way to classify these relationships:

Transactional		Strategic Alliances		
Single Purchase	Repeat Purchase	Partnership Agreements	Third Party Arrangement	Integrated Service Agreements

--→
Increased Formalization/Commitment

Figure 1
Buyer/Seller Service Relationship

Transactional relationships focus only on the transaction at given point in time. Single purchase transactions are characterized by the lowest levels of contractual formalization and commitment. The parties to the transaction interact with no expectations of a future relationship. In repeat purchases, contractual formalization extends only to expected norms of business practice, and commitment only through the next transaction between the parties. Transactional relationships have been characterized as forms of discrete exchange (Dwyer, Schurr, and Oh 1987).

Of the strategic alliances, partnership agreements are the least formal. In a partnership, there is an acknowledged dependence from each of the partners, although there is not necessarily a formal written or exclusive arrangement. Typically, these agreements do not require extensive modifications of existing business structure or procedures. The principle benefit of a partnership is the achievement of joint goals with the retention of independence. Typical of a p

bec

app

scr

tra

was

det

sta

eq

fo

te

de

sp

te

a partnership agreement is the unique working relationship between a manufacturer and a motor carrier. The manufacturer agreed to perform several activities (trailer spotting, sorting, loading, and generation of all paperwork) that had traditionally been the carrier's responsibility. The carrier was given greater flexibility in scheduling, resulting in decreased costs to the carrier. These decreased costs were shared with the manufacturer in the form of dedicated equipment and lower rates (Bowersox et al. 1989).

In the third party arrangement, relationships are more formalized -- usually in writing, with the explicit agreement to a longer term commitment. Many times basic services and/or related equipment and procedures must be modified on both sides to meet requirements. Frequently, there are exclusivity clauses that may restrict both parties' range of external dealings. The benefit in the third party arrangement is one of achieving greater joint rewards through each participant modifying practices to the other organization. One motor carrier established a dedicated service that brought production coordinated component parts into a manufacturing plant on a just-in-time basis. The carrier's purchase of special equipment was justified by the manufacturer's long term commitment to guarantee backhaul traffic for the carrier (Bowersox et al. 1989).

Integrated service agreements are marked by comprehensive outsourcing and functional spinoffs. Usually, extensive cons

leve

inte

exte

bene

com

var

and

man

tec

and

app

uti

to

eco

ex

t

ex

se

o

se

consultation and negotiation are required, and a new higher level of trust and sharing of risk come into play. These integrated service agreements are facilitated through extensive sharing of real time information. The principle benefit of this intimate cooperation is to supplement internal competency with external expertise. For example, a public warehouse and a manufacturer agreed to jointly build, staff, and operate a dedicated distribution facility. The manufacturer obtained state-of-the-art materials handling technology and expertise. Both firms agreed to share benefit and risk through a negotiated formula wherein the manufacturer agreed to help cover fixed costs if and when warehouse utilization dropped below a threshold. The warehouser agreed to share productivity benefits when utilization achieved economies of scale (Bowersox et al. 1989).

THE LOGISTICS INTEGRATED SERVICE PROVIDER: BIRTH OF A NEW INDUSTRY

While service based relationships between firms have existed on both project-specific and extended contract bases for many years, a new player in logistics services began to emerge in the United States in the 1980's: the integrated service provider. These firms offer potential customers all or selected parts of a turnkey distribution system -- in a sense, they offer to function as a logistics utility (Bowersox

et
cus
inf
ben
sha
of
den
log
ev

ava
pr
ev
co
pr
or
sy
fo
fr

th

ha
th
as

et al. 1989). These firms seek to enter into an extended customer relationship, characterized by operational information exchange, joint operating controls, a sharing of benefits and burdens, joint planning, and most of all a sharing of results (Gardner and Cooper 1988). The evolution of such firms has been facilitated by domestic transportation deregulation. Increased focus on the strategic importance of logistics within American firms has also contributed to this evolution.

There are at least three major research opportunities available in studying the logistics integrated service provider industry. The first deals with the study of evolution of strategy in a new industry. The second is concerned with ways in which logistics integrated service providers negotiate and operationalize relationships with customers. The third opportunity deals with buyer market structure and purchase motivation among potential customers for integrated services. This dissertation deals with the first two of these areas.

INNOVATION AND THE DEVELOPMENT OF A NEW INDUSTRY

Firms that currently offer logistics integrated services have emerged from diverse roots. Five distinct origins of these service firms can be identified. One group began life as the distribution services departments of major

corporations, spun off as separate entities such as Caterpillar, and Kaiser. The second and third sources are firms that began as providers of specific logistics services, most notably transportation carriers and warehousers (transportation carriers such as CSX/SeaLand and Roadway, and warehousers such as Unit). The fourth source has evolved from an information technology base with firms such as TRW. The fifth source evolved from firms that began as labor contractors, such as Ogden. At the present time, integrated service provider firms handle a very small portion of all goods flowing in North America (Muller 1988). Their potential seems great in light of the growing general appeal of outsourcing, where partnershipping is integral to the way of doing business.

Industry development has thus far been volatile. Table 1 lists the firms known to be active during 1990. Five of the firms listed withdrew, or chose to focus only on providing services to internal customers. Among the most notable withdrawals were those of UP Logistics, a pioneer in the industry, and NYNEX which withdrew after only eight months of business activity.

ADS Distribution
Allied
American Airlines
American President Companies *
Burnham Service Corporation
Caterpillar Logistics Services
Consolidated Freightways
CSX/SeaLand Logistics (CSX)
CSX/AMR Logistics Services
CTI, Inc.
Exel Logistics
Federal Express (Business Logistics Services)
Grace Distribution Services
Intral (Gillette)
ITEL Distribution
KLS Logistics
LogiCorp (Rockwell International)
NYNEX Logistics Services *
NYK (Nippon Yusen KK)
Ogden
Roadway Logistics Services
C.H. Robinson, Inc.
Ryder Distribution
Sears Logistics Services **
Skyway Systems
Sony Logistics **
TLC Group
TNT Contract Logistics
Trammel Crow Distribution Corp.
TRW
UP Logistics (Union Pacific) *
Unit Distribution
United Parcel Service
USCO (Uniroyal - Goodrich)

* active, but withdrew from market during 1990.
* active, but focused on internal customers

Table 1
Logistics Integrated Services Provider Firms

The integrated services provider is positioned to offer a number of services covering a variety of logistics activities. Typical services are transportation, consolidation, inventory management and control, warehousing, and order fulfillment. Some service providers venture into logistics information services, light manufacturing, and other activities not traditionally considered as logistics value-added services. The key features of these offerings are multiple integrated services and dedicated financial and human resources. The service partner provides, in effect, an off balance-sheet asset that can help leverage logistical competency.

Integrated service provider firms have a number of similarities. Most of them operate in a consulting style, working side-by-side with teams within their client organizations. Many of them emphasize the notion of sharing risk. If their customer does not make a profit, then neither should the service provider.

CONCEPTUAL MODEL AND HYPOTHESES

Given that this industry is at an early stage in its development, what factors influence the development of strategies on the part of the service providers? This research explores a number of internal structural factors which are associated with strategy development in provider firms.

The model presented in figure 2 structures the hypothesized relationships of the research.

Adaptive Problem Solving:
Entrepreneurial
Engineering
Administrative

Organizational Characteristics:
Centralization
Formalization
Complexity

Strategic Archetype:
Defender, Prospector, Analyzer, Reactor

↓

Segmentation Strategy

↓

Tactics Used:
Product/Service Bundling, Pricing, Sales Process

Figure 2
Conceptual Model

Each of the five components of this model is explained briefly below, and in greater detail in Chapter II.

ADAPTIVE PROBLEM SOLVING

Miles and Snow (1978) find the source of all business strategy in the manner in which firms solve their "adaptive problems" (p. 13). The adaptive problems form a continuing cycle of recognizing market opportunity (the entrepreneurial problem), bringing a solution to the market (the engineering problem), and managing the resultant organization (the

administrative problem).

ORGANIZATIONAL CHARACTERISTICS

Mintzberg (1979) has suggested three structural dimensions of organizations which may affect the way in which they develop strategy. High levels of centralization, or the degree to which strategic decisions are made by an individual or very small group of managers, may lead to bold new strategies for the organization. High levels of formalization, or the degree to which an organization is rules-based, tends to cause strategies to be incremental in nature. Formalization, in the Mintzberg sense, is not to be confused with contractual formalization as used by Bowersox et al. (1989), which refers to the degree to which an interfirm alliance is formally specified. High levels of complexity in organizational structure also tend to slow down strategic response and forces incrementalism.

Miller (1982) offers a trade-off between evolutionary and revolutionary organizational change. He posits that organizations make incremental changes until dramatic environmental forces or deliberate strategic changes make the cost of revolutionary structural changes palatable.

str

org

pro

aro

pro

is

tha

ma

str

St

se

ma

STRATEGIC ARCHETYPES

As the adaptive problems are solved within the organization, firms evolve into strategic archetypes as proposed by Miles and Snow (1978). Three of the four archetypes are considered functional: the defender, the prospector, and the analyzer. The fourth type, the reactor, is dysfunctional in its response to the marketplace. Each of these strategic archetypes develops a unique response to market needs, and results in quite different approaches to strategy and tactics for a given firm.

SEGMENTATION STRATEGY

Emerging from the strategic archetype is a natural market segmentation strategy. Service provider firms attempt to maximize the impact of their product/service offering by focusing on different groupings of clients. The current principle customers for integrated logistics can be classified into four categories: the new firm start-up, the buy-out, the reorganized firm, and firms entering new markets with new products. These types of potential customers are similar in that they are all forced to reassess distribution requirements, albeit for different reasons. Each potentially faces an internal conflict when considering outsourcing logistics requirements. Senior management sees a possible

competitive disadvantage from cost-center logistics investments, whereas logistics managers fear a loss of management control. Coupled with this internal dilemma is an increasing desire on the part of senior management to innovate in logistics strategy.

When they seek innovation through an integrated service provider, many managers are confronted with service packages built around the core product of the service provider. These are sometimes seen only as product "extensions," which may seem less innovative and more similar to traditional contract services. These core based services may not seem to fit the buyers' need for a fresh approach to logistics. Furthermore, the inability of buyers to articulate their logistics requirements may cause the segmentation approaches of service providers to appear unfocused. Packages offered by the integrated services provider may be attractive for time, cost, and flexibility reasons. However, buyers' concerns may extend beyond these considerations to issues of risk, service guarantees, the quality of the service provider's information systems, and even to the provider's knowledge of the buyers' products and markets.

Preliminary research suggests there is great variance in the nature of the industry's clients' businesses -- they range from non-durable consumer goods to industrial equipment, and vertically from manufacturer to retailer. Early development of the integrated services provider industry has centered on

clients who come from the food, electronics, consumer retail, and automobile manufacturers and parts businesses (Bowersox et al. 1989). What the client firms do have in common is the desire to increase profits through cost-driven logistics management.

In this early stage in the development of integrated logistics services offerings, there have been a number of unique approaches to creating service packages. There seems to be a degree of confusion on the part of both buyers and service providers in this infant industry. Service providers have begun to offer diverse "bundles" of services, often packaged around a core strength of the firm. For example, a carrier-origin provider may bundle value-added services to transportation. For their part, potential buyers are often unable to articulate their logistics requirements and sometimes seem interested only because the popular press says "it's the thing to do." As is common in a new industry, no clear leaders have emerged. This lack of leadership complicates the decision process for buyers who desire industry standards for decision criteria. When viewed from the perspective of potential buyers, the packages of the service providers seem to be fragmented and unfocused. The buyers, in turn, are unsure what they need, and how to specify their requirements. This mismatch could inhibit the rapid development of this new industry.

TA

ser
(so
der
the
dis
the
The
de
co

se
de

TACTICS USED

Preliminary examination has identified two popular service provider strategies: total conversion and bit-by-bit (Bowersox et al. 1989). Essentially, these are bundled and debundled service packages. In the total conversion scenario, the integrated services provider develops the complete turnkey distribution capability for a significant segment of the client's distribution, and then operates the unique system for the client -- either wholly or in part as the client desires. The bit-by-bit approach focuses on making incremental improvements in a customer's logistical operations by developing portions of a firm's logistical requirements and/or operating such for clients. These integrated service providers are usually just as broad-based as their total conversion counterparts. They simply prefer to take a "foot-in-the-door" approach to business development.

Underlying these two approaches is the fundamental issue of services packaging or "bundling" as a tactic used by the provider firm. The notions of bundling and debundling of service package components provide a convenient way to study the two disparate approaches. In the area of services bundling, Guiltinan (1987) offers a framework for the development of bundles of services. Two approaches to bundling are offered: pure and mixed bundles. Pure bundles constitute groups of services which may be purchased only in bundled form; they cannot be purchased separately. Mixed bundling allows the purchaser to buy one or more services, or to purchase the entire bundle. Mixed bundling is further categorized as "mixed-leader" or "mixed-joint." In the mixed-leader condition, the price of one of the two products is discounted when the other product is purchased at regular price. In the mixed-joint condition, a single price is set when two products are purchased jointly (Guiltinan 1987). Different bundling tactics may be more effective for a given provider firm, depending on its internal abilities and resources, the stage of logistical sophistication of its target markets, and the structure of the marketing channel.

In addition to these issues of services bundling are those of pricing the packages. Questions of whether providers use a market-based pricing approach or one of "cost-plus," target return pricing, or some other asset-costing approach are unanswered.

One additional tactical area is the sales process approach used by the provider firm. Are the firms currently using a "selling" approach to move the core product, or are they truly operating in a consulting style and seeking to solve the client's problems?

Given the potentially great cost savings through increased specialization and focus, and the synergy made possible by alliances, why has the logistics integrated services industry gotten off to a slow start in the United

Sta

imp

wit

chi

sex

fra

de

wa

States?

THE RESEARCH PROBLEM AND OBJECTIVES

Integrated service providers have begun to perform an important role on the logistics scene by creating alliances with customers. The manner in which they go about developing clients, specifying the nature of their relationship, creating service packages, operating, and problem-solving is highly fragmented and has yet to be examined from an industry development point of view. A number of significant topics are waiting development:

- The origins of strategies used by the service providers.
- Customer target market segmentation criteria currently used by providers.
- The internal structural factors of the provider firms which are associated with strategy development.
- The manner in which provider firms solve their adaptive problems.
- Shared risk and its consequences.
- The breadth and depth of contractual arrangements offered by the providers.
- A range of tactical implementation problems, in particular issues of services bundling, pricing, and sales process approach.

exa

str

int

in

bi

ex

fo

Since the integrated services provider industry is just emerging, this is an opportune time to examine its competitive structure. The goals of this research are to 1) study the integrated logistics service provider industry at this point in time which is early in its development, 2) document the birth of what many believe will be a major industry, and 3) examine potential future directions for the industry.

RESEARCH QUESTIONS

This dissertation research is directed to answering the following general research questions:

1. How do the provider firms' responses to the entrepreneurial, engineering, and administrative adaptive problems direct internal structure and a resultant strategic archetype?

2. How are structural factors involving the provider firms' organizational climate associated with the development of strategy?

3. What is the role of the distinctive competency or core base of the service provider firm in influencing the development of product/service bundles?

4. How do service provider firms determine the "match" between their product/service bundles and the needs of their target customers? How do they appropriately segment their markets?

5. How do provider firms develop and implement tactical decisions in response to their overall strategy and the demands of their chosen market segment?

The conceptual model presented in figure 2 (page 9) illustrates a number of relationships, to be structured and tested as research hypotheses:

1. The manner in which a firm solves its adaptive problems will be associated with the organization's climate.

2. Each strategic archetype will approach segmentation strategies in a different way.

3. Tactics used to implement segmentation strategies will be associated with the strategic archetype of the provider firm.

The theory bases for these relationships is presented in detail in Chapter II, along with a statement of the specific hypotheses.

A SYNOPSIS OF RESEARCH METHODOLOGY

The method used was the in-depth case study. Ten case studies were conducted. Each case was developed from a personal interview with corporate strategists and supplemented with background information from secondary sources. The research was limited to North American service providers. The analysis of the case studies is interpretive. A detailed presentation of the research design is presented in Chapter III.

THE SIGNIFICANCE OF THE RESEARCH

This research contributes to the study of marketing organizations and strategy, new product/service development, services bundling and related pricing and sales process approach issues. By examining structural factors within provider organizations, additional light is shed on the role of developing strategic logistics competency in provider firms. Investigation of the strategies used by service provider firms lends understanding to competitive forces which shape a new industry.

The research has strong managerial significance. A better understanding of the strategy development process will facilitate the development of an emerging industry. In particular, the establishment of market segmentation criteria is most useful at this stage of the industry's development. The research will also enable the creation of more successful strategic alliances which should improve both customer service and system profitability. The research will provide guidelines for managers in both the creation of product/service bundles, and for the selection of an appropriate strategic partner. Managers will also gain greater understanding of their competitive arena, and gain additional insight into changes within current and prospective competitors.

the
dis
res
pre
the
of
co
pr
pr
ca
co

ORDER OF DISSERTATION PRESENTATION

Chapter II of the dissertation considers the relevant theoretical bases for the conceptual model. Chapter III discusses the differences between the case method and survey research, develops the proposed research methodology, and presents constructs and their measures. Chapter IV presents the results of testing the research hypotheses. Chapter V offers theoretical and managerial implications, discusses the conclusions of this research, examines its limitations, and proposes additional research directions. The Appendices present the interview guide, strategic archetype examples, and case studies. The Bibliography and General References conclude this dissertation.

CHAPTER II

LITERATURE REVIEW AND THEORY DEVELOPMENT

This chapter reviews the relevant literature in support of the theory implied by the conceptual model. First, a theory developing the economic rationale for the spin-off of functional areas of a firm's operations is discussed. Second, a review of research dealing with organizational determinants of strategy develops a logic for the creation of strategies by provider firms. Third, literature dealing with the creation of services component bundles, pricing, and their sales process approach is examined.

These three concepts, Functional Spin-off, Organizational Determinants of Strategy, and Product/Service Component Bundling can be related in the following ways: 1) functions of a firm may be profitably spun-off under certain conditions, either singly or in bundled groups; and 2) elements of organizational structure will guide the provider firm in the creation of market segmentation strategy and the tactical services mix.

sta

ext

pos

tec

cos

[illegible]

Wha

[illegible]

an

[illegible]

[illegible]

[illegible]

[illegible]

St

an

THE ECONOMICS OF FUNCTIONAL SPIN-OFF

In 1776, Adam Smith proposed a theory of monopoly which states that the division of labor is limited only by the extent of the market (Smith 1986, p. 121). Briefly, Smith posits that increased specialization of both labor and machine technology develops increasing returns to scale. Thus, lower costs of larger outputs will eventually dictate that a single, lowest-cost provider of those specialized outputs will exist. When prices are competitive however, entrepreneurs enter the market with new cost structures based on improvements in labor and technology. This creates a counter-balancing force to increased specialization (Schumpeter 1942). Thus, monopolies rarely occur in market-directed economic systems.

This dilemma was resolved in 1951 by George Stigler in his now classic discussion titled "The Division of Labor is Limited by the Extent of the Market." In this article, Stigler reconciles the notion of increasing returns on labor and technology with the reality of competitive markets:

> The costs of these individual functions (performed by firms) will be related by technology. The cost of one function may depend upon whether the preceding function took place immediately before or in the immediate vicinity ... (o)r the interrelationships among processes may be remote, as when the entrepreneur must neglect production in order to supervise marketing. (Thus) (w)e should expect to find many different patterns of average costs of functions: some falling continuously, some rising continuously, (and) some conventionally U-shaped.

Certain processes are subject to increasing

> returns; why does the firm not exploit them further and in the process become a monopoly? Because there are other functions subject to diminishing returns, and these are, on balance, at least so costly that average cost of the final product does not diminish with output. Then why does the firm not abandon the functions subject to increasing returns, allowing another firm to specialize in them to take advantage of increasing returns? At a given time, these functions may be too small to support a specialized firm or firms. The firm must then perform these functions for itself.
>
> But, with the expansion of the industry, the magnitude of the function subject to increasing returns may become sufficient to permit a firm to specialize in performing it. The firms will then abandon the (function), and a new firm will take it over. This new firm will be a monopoly, but it will be confronted by elastic demands: it cannot charge a price for the (function) higher than the average cost of the (function) to the firms which are abandoning it. With the continued expansion of the industry, the number of firms supplying (the function) will increase, so that the new industry becomes competitive and the new industry may, in turn, abandon parts of the (function) to a new set of specialists (Stigler 1951, p. 15-17).

Thus, functions performed by a single firm or firms within an industry may be outsourced when a critical mass of such a function exists which permits a specialized firm to undertake them profitably. As an industry expands, additional firms will enter the market for the outsourced function. Sub-specialty firms may subsequently emerge as further specialization occurs.

Stigler (1951) also offers insight as to the reasons why selected functions of one firm may be outsourced, and those of a rival may be kept internal. While functions typically outsourced are those with increasing cost structures, firms fa

en

fu

(p

wi

be

in

su

te

ve

an

re

face differential costs. Thus, firms need not abandon the entire function, but rather only the sub-components of the function which are subject to the increasing cost structure (p. 17). The sub-components without increasing marginal costs will be retained; those with increasing marginal costs will be spun-off to a specialized provider firm.

Does this economic logic not bode for the full vertical integration of firms over the long run? If a firm can develop sufficient economies of scale and scope in labor and technology, should not Smith's theory predict large, vertically integrated monopolies? Stigler (1951) again offers an integrating reconciliation of Smith's theory and the reality of competitive markets:

> If one considers the full life of industries, the dominance of vertical disintegration is surely to be expected. Young industries are often strangers to the established economic system. They require new kinds or qualities of materials and hence make their own; they must overcome technical problems in the use of their products and cannot wait for potential users to overcome them; they must persuade customers to abandon other commodities and find no specialized merchants to undertake this task. These young industries must design their specialized equipment and often manufacture it, and they must undertake to recruit skilled labor. When the industry has attained a certain size and prospects, many of these tasks are sufficiently important to be turned over to specialists. It becomes profitable for other firms to supply equipment and raw materials, to undertake the marketing of the product and the utilization of by-products, and even to train skilled labor. And, finally, when the industry begins to decline, these subsidiary, auxiliary, and complementary industries begin also to decline, and eventually the surviving firms must begin to reappropriate functions which are no longer carried on at a sufficient rate to support independent firms (p. 19).

to

is

sta

thi

whe

ass

int

fro

tha

pro

dev

man

are

of

by

ex

pe

su

an

pr

The life cycle stage of a firm or an industry thus helps to understand Smith's theory in action. Vertical integration is not the absolute consequence of specialization. It is a state dependent largely on a firm or industry's structure and life cycle stage.

Alderson (1965) hypothesized that transformations of time, space, and form utility of a product will be performed wherever scale economies can be optimized. Discrepancy of assortment is the essential Aldersonian concept that influences functional spin-off. Products are seen as coming from homogeneous sources, and requiring "assorting" to meet the heterogeneous demands of the marketplace. Through this process of moving from homogeneous supply to heterogeneous demand, marketing activities transform the product by maximizing time, space, and form utility. These utilities are maximized by whomever can generate the greatest economies of scale and scope.

The functional spin-off of logistics services described by Bowersox, et al. (1989) is consistent with Stigler's explanation of specialization, and Alderson's functionalist perspective. Logistics functions may be outsourced when sufficient critical mass exists for a specialist to take advantage of economies of scale and offer the service at a price lower than a firm's average cost of providing those functions itself. Logistics functions may be kept inside the

fir
per
pro

198
the
top
obj
be
p.
be
"L
fi
lo
an
in
re
of

wh
de
in
th

firm when insufficient economies of scale exist to make the performance of those functions profitable to a specialized provider.

The concept of a "strategic alliance" (Bowersox et al. 1989) further expands Stigler's (1951) explanation of Smith's theory. Effective vertical integration occurs when firms join together in a business relationship to achieve specific joint objectives. "The strategic alliance forms what, in effect, becomes a logistics superorganization" (Bowersox et al. 1989, p. 216). The ultimate form of such a strategic alliance may be demonstrated by firms which have been described as "logistics utilities" (Bowersox et al. 1989, p. 220). These firms are willing to perform all or part of a client's logistical requirements, and to join in an alliance of trust and cooperation to create a win/win partnership. Vertical integration synergies are thus generated through extending the reach of a firm beyond its own assets to include the economies of scale generated by specialized service providers.

ORGANIZATIONAL STRUCTURE

The first three components of the conceptual model deal with organizational structure and its influences on strategy development within a firm. It is hypothesized that the manner in which a firm goes about solving its adaptive problems and the degree to which it is centralized, formalized, and complex determine its strategic archetype.

There has long been a debate in the organizational behavior literature over the relationship between structure and strategy. Alfred Chandler (1962) clearly articulates the "structure follows strategy" principle through a lifelong research effort. Chandler believes that as the strategies of a firm evolve, organizational structures change as the previous types prove to be inadequate for the new strategic direction of the firm. During the 1980's, new empirical work lent strength to the opposing side: that structures influence strategy. Models developed by Bourgeois and Astley (1979) and Burgelman (1983) demonstrate the recursive relationship between strategy and structure. Fahey (1981) further articulates the important influence that an organization's structure has on its goal-directed, or strategic decisions. The heart of the "structure influences strategy" argument dates back to 1958, from an observation by March and Simon that a manager's cognitive abilities are limited by structure which effectively imposes a parochial character to a manager's strategic thinking.

AD

th

pr

pr

in

en

ea

in

cl

cr

cr

ta

cr

pr

en

cr

so

en

ma

of

ch

pr

ADAPTIVE PROBLEM SOLVING

Miles et al. (1977) and Miles and Snow (1978) integrate the two perspectives in the development of their model of the process of organizational adaptation. They conceptualize problems facing managers as falling into one of three highly interdependent areas: the entrepreneurial problem, the engineering problem, and the administrative problem. It is easiest to view these problems as occurring sequentially and in cycles. In reality, they may occur simultaneously or in close proximity.

The entrepreneurial problem is defined for a new organization as "develop(ing) ... a concrete definition of an organizational domain: a specific product or service and a target market or market segment" (p. 21). For a continuing organization, the potential solutions to the entrepreneurial problem must contend with historical solutions to the engineering and administrative problems and an existing organizational structure thus tailored to previous problem solutions. In either situation, the solution to the entrepreneurial problem is management's delineation of a market domain through the commitment of resources to pursuit of that domain.

The engineering problem to be solved deals with the choice of most appropriate technologies for producing the product or service, and for delivering it to customers. "The crea

appr

thos

com

of t

is c

inte

inte

Sho

stak

pro

and

ins

sup

The

bey

adm

rep

may

creation of such a system requires management to select an appropriate technology for producing and distributing the chosen products or services and to form new information, communication, and control linkages to ensure proper operation of the technology" (Miles and Snow 1978, p. 22). Technology is defined as any input-transformation-output process.

The next problem set facing managers involves the integration of the entrepreneurial and engineering decisions into an administrative organizational structure. Miles and Snow (1978) characterize this process as "rationalizing and stabilizing those activities which successfully solved problems faced by the organization during the entrepreneurial and engineering phases" (p. 22). Organizations must also insure that a climate for innovation within the firm is supported. Thus, the administrative problem has two faces:

> As a lagging variable, the administrative system must rationalize, through the development of appropriate structures and processes, the strategic decisions made at previous points in the adjustment process. As a leading variable, ... the administrative system will facilitate or restrict the organization's future capacity to adapt depending on the extent to which management articulates and reinforces paths along which such activity can proceed (p. 23).

The process becomes tightly interwoven as managers move between solving the entrepreneurial, engineering, and administrative problems of the organization. As the process repeats throughout the life of the organization, the organic nature of the process guarantees that resulting strategies will

char

char

ORGA

hea

(19

of t

coo

oth

of

cen

(19

non

env

des

bur

sta

gov

(19

of

sta

will be ever-evolving and ever-changing. How then to characterize associations of structure and strategy in a changing organization?

ORGANIZATIONAL CHARACTERISTICS

The "structure influences strategy" literature draws heavily on the seminal work of Henry Mintzberg. Mintzberg (1979) develops a taxonomy of five organizational types. Each of these types will be characterized and considered in turn.

The first type is the simple structure. The prime coordinating mechanism is direct supervision. The CEO or other leader is the "strategic apex" (Mintzberg 1979, p. 306) of the organization. Such organizations are highly centralized, typically with organic structures. Mintzberg (1979) describes such organizations as young, small, non-sophisticated technically, simple, operating in dynamic environments, with a strong top manager. Morris (1987) describes such firms as small and entrepreneurial.

Mintzberg's second organizational type is the machine bureaucracy. The prime coordinating mechanism is the standardization of work processes. Such organizations are governed by a "technostructure" (Mintzberg 1979, pgs. 315 - 316). The technostructure is a highly elaborated core group of managers who are effectively analysts who develop the standardized work processes. These organizations are characterized by vertical and horizontal job specialization, functional groupings, large operating unit sizes, vertical centralization, and limited horizontal decentralization. Typical of such organizations are old, large firms operating in stable environments.

The third type of organization described by Mintzberg (1979) is the professional bureaucracy. The prime coordinating mechanism is the standardization of skills. An "operating core" is the coordinating mechanism. Such professional bureaucracies are characterized by specialized training, horizontal job specialization, and a great degree of horizontal and vertical decentralization. These organizations operate best in complex, yet stable environments. Typical of such organizations are government bureaucracies, universities, and large law firms.

A fourth type offered by Mintzberg is the divisionalized form. Essentially, divisionalized structures are pyramids of machine bureaucracies. There is often highly standardized work and output within each division. Middle managers are a key influence, as divisional units may operate in functional isolation from each other. Typical of such organizations are corporate conglomerates and firms serving diversified markets from separate divisions.

The fifth organizational type offered by Mintzberg (1979) is the adhocracy. The prime coordinating mechanism is mutual adjustment, coordinated through some administrative staff acti

for

hori

(sir

orga

envi

in t

as a

bure

inc

pro

to

whi

thr

the

inf

cen

to

(Fr

dep

it

(Is

of

activity. Such organizations are characterized by a high need for internal liaisons, selective decentralization, high horizontal job specialization, and a "matrix" structure (simultaneous functional and divisional approaches). These organizations operate well in complex, highly dynamic environments. Many young firms operate as adhocracies early in their organizational life cycle. The adhocracy can be seen as a more flexible and responsive variant of the professional bureaucracy.

Fredrickson (1986) collapses the divisional structure into the machine bureaucracy and the adhocracy into the professional bureaucracy as subsets. Fredrickson then turns to three distinctive characteristics of all organizations which he believes to be prime determinants of strategy. The three dimensions described by Fredrickson (1986) build upon the work of Mintzberg (1978, 1979) in describing their influence on strategy. The three dimensions are centralization, formalization, and complexity.

A centralized structure refers to "one in which the right to make decisions and evaluate activities is concentrated" (Fredrickson 1986, p. 285). In the small firm, the decisionmaker may be the entrepreneur or CEO; in a larger firm it may be some small grouping of top executives. Fredrickson (1986) offers four propositions regarding increasing levels of centralization:

> "1) the strategic decision process will be initiated only by the dominant few, and it will be

> the result of proactive, opportunity-seeking behavior; 2) the decision process will be oriented toward achieving 'positive' goals that will persist in spite of significant changes in means; 3) strategic action will be the result of intendedly rational, 'strategic choice,' and that moves will be major departures from the existing strategy; and 4) top management's cognitive limitations will be the primary constraint on the comprehensiveness of the strategic process. The integration of decisions will be relatively high" (p. 284).

Fredrickson (1986) defines formalization as "the presence of rules and procedures that influence decision-making behavior" (p. 286). Formalization ensures that strategic decisions will be reactive, as managers seek to operationalize their goals within a changing environment according to established procedures. Such change-by-increment tends to become institutionalized in highly formalized organizations (Quinn 1980). Cyert and March (1963) indicate that highly formalized organizations tend to seek solutions from successfully managed past scenarios. Fredrickson (1986) again offers four propositions regarding organizations with high levels of formalization:

> 1) the strategic decision process will be initiated only in response to problems or crises that appear in variables that are monitored by the formal (internal information) system; 2) decisions will be made to achieve precise, yet remedial goals, and that means will displace ends; 3) strategic action will be the result of standardized organizational processes, and that moves will be incremental; and 4) the level of detail that is achieved in the standardized organizational processes will be the primary constraint on the comprehensiveness of the strategic decision process" (p. 284).

Complexity in organizations is defined by Fredrickson (1986) as a response to its members' cognitive limitations. As the specialization of labor within an organization increases, the organization must necessarily become complex as a coordinating mechanism becomes necessary for survival. Both horizontal and vertical differentiation within the organization dictate complexity. "(T)he degree of complexity specifies how wide or how narrow the boundaries (of managers' cognitive abilities) ... will be (i.e., a highly complex structure has many, narrowly bounded positions). ... it is expected that members in an organization that has a complex structure will have difficulty agreeing on goals, and that the decision process will be iterative and political" (Fredrickson 1986, pgs. 288 - 289). Fredrickson offers four propositions concerning increasing organizational complexity:

> 1) members initially exposed to the decision stimulus will not recognize it as being strategic, or will ignore it because of parochial preferences; 2) a decision must satisfy a large constraint set, which decreases the likelihood that decisions will be made to achieve organization-level goals; 3) strategic action will be the result of an internal process of political bargaining, and that moves will be incremental; and 4) biases induced by members' parochial perceptions will be the primary constraint on the comprehensiveness of the strategic decision process. In general, the integration of decisions will be low" (p. 284).

Fredrickson (1986) concludes by asserting that the dominant characteristic of the organization dictates its strategic mode. While simple structure organizations are less formalized and less complex, it is the high degree of centralized decision-making which dominates their strategy making. Machine bureaucracies tend to be centralized and they are highly complex, but their highly formalized processes rule their strategy making. Professional bureaucracies are decentralized and informal, but their dominant characteristic of high complexity determines their approach to strategic decision making.

Miller (1982) offers an additional insight into the nature of strategic change and decision making. Miller argues that organizations should resist structural changes until some "critical state of incongruence with the environment is reached" (p. 133). At such a critical juncture, the change will necessarily be "revolutionary" in nature as it radically transforms the organization. Such a "quantum" view of structural change relies on five propositions developed by Miller (1982):

> 1) ... organizations must achieve harmony among their elements of structure. (S)tructural elements such as technology, the distribution of authority, differentiation and integration, the size of the administrative component, and spans of control must be functionally aligned. These elements are interdependent and must be matched appropriately to maximize organizational performance. Thus, many elements cannot change independently without causing costly imbalances.
>
> 2) The organization must adjust its structure to changes in its environment and strategy.
>
> 3) Points 1 and 2 interact to constrain the set of alternatives for constructive structural change. Two costs must be traded off -- the cost of the structure being out of kilter with the environment or strategy, and the cost of destroying or resurrecting complementarities among structural

> elements. When (the former) is less than (the latter), structure should not be changed.
>
> 4) Because of interdependencies among structural elements, costs (of changing structures) will often be high. Structural change must then be delayed until the anticipated long term cost (of an improper structure) is larger than the (structural change) cost.
>
> 5) When change comes, it may have to be of a quantum or revolutionary nature. First, the substantial lag in adaptation has created a serious mismatch with the environment or strategy, one which may require major corrective actions. Secondly, because of the tight interdependencies among many elements of structure, the number of effective structural types is restricted and differences among them can be great. Thus firms moving from one effective type to another may have to undergo many changes" (pgs. 133 - 134).

Thus, Miller (1982) and Miller and Friesen (1984) offer an additional set of criteria to explain organizational structural changes. Firms in serious misalignment with environmental influences or strategic direction are likely candidates for revolutionary structural change. Firms in harmony with environment and strategy are more likely to make incremental (evolutionary) changes in structure as an adaptive response.

STRATEGIC ARCHETYPES

Miles et al. (1977) and Miles and Snow (1978) develop four strategic "archetypes" to characterize the outcome of the adaptive process. Three of the archetypes are functional: firms may be successful within the archetypical strategy over a long term. The three functional archetypes are the Prospector, the Defender, and the Analyzer. The fourth archetype is considered dysfunctional, and is called the Reactor. Reactor firms are not thought to be successful over the long term. A firm's response to the entrepreneurial, engineering, and administrative problems will be discussed for each of the archetypes, drawing heavily on the descriptions of Miles and Snow (1978).

The Prospector

The Prospector solves the entrepreneurial problem by viewing its domain broadly, as a constantly evolving marketplace. Management engages in monitoring a wide range of environmental conditions and events. Prospector firms are often seen as industry leaders, creating change. Growth in such firms is through new product development, and typically may occur in spurts as the firm lurches from opportunity to opportunity.

The engineering problem is solved by the development of multiple, flexible technologies, and organizationally through a low degree of routinization and mechanization in work processes. The technologies of such firms are often embedded in their employees, rather than in machinery.

The solutions to the administrative problem can be quite complex and appear volatile to outsiders. Typically, marketing and research and development experts will be dominant members of the ruling coalition. The coalition may be large, diverse, and transitory, with key managers brought in from outside the organization. Planning tends to be broad, with decentralized control systems. There is often a low degree of formalization within the organization. Such an organization typically requires a complex coordination mechanism, with common use of boundary spanners.

The Defender

The Defender approaches the entrepreneurial problem by tightly defining its domain. The firm may aggressively pursue maintenance of its domain against competitors, and ignore developments outside its domain. Such firms engage in cautious, incremental growth through market penetration. Any new product development will be closely related to its current domain.

Engineering problems are solved by adherence to proven, cost-efficient technology, revolving around a single core strength. There is some tendency toward vertical integration, with an emphasis on continuous improvement in related technologies to maximize efficiency.

The administrative problems are solved by financial and production experts within the dominant coalition. The tenure of coalition members tends to be long, and promotions occur from within the organization. Planning is often intensive and cost-oriented, and is completed before actions are taken.

Such firms tend to have a functional structure, with a high degree of division of labor and high formalization. There are centralized control and information systems, and problems tend to be solved within hierarchical channels through simple coordination mechanisms.

The Analyzer

Analyzers pursue elements of both the Prospector and the Defender strategies. Their entrepreneurial problems are solved by envisioning a hybrid domain, with stable and changing elements. Such firms pursue a steady course of growth through market penetration, but also engage in new product development.

The engineering problems are solved by the development of a dual technological core: one which emphasizes cost efficiency, and one which exploits flexible, new technologies. There is often a large and influential applied research group within these organizations. Such firms achieve a moderate degree of technical efficiency.

Administrative problems are solved through intensive planning and communication between marketers, applied researchers, and production managers. Production managers may dominate decisions regarding stable core technologies, while marketers may dominate decisions dealing with flexible or new technologies. Often, a matrix organizational structure can be found in such firms. The organization must have a

moderately centralized control system, and coordination systems tend to be extremely complex.

The Reactor

Reactor firms typically have difficulty in solving all three of the problem areas in the adaptive process. The difficulties can be categorized as falling into one or more of three groups: 1) weakly articulated strategies, 2) structure improperly linked to strategy, and 3) adherence to an outmoded strategy and structure. In the case of the weakly articulated strategy, the firm pursues a vague strategic direction. It cannot decide if it wants to be a Prospector, Defender, or Analyzer. When structure is improperly linked to strategy, firms may attempt to engage in a Prospector strategy with a functional structure more appropriate to the Defender. The administrative problem is then exacerbated as management focuses on the leading aspects, while failing to understand the lagging problems. Adherence to outmoded strategies and structures can mean a failure to solve the entrepreneurial problem successfully. Reactor firms may fail to perceive shifts in the competitive environment and stubbornly resist change.

The strategic archetypes are the observable endpoints in strategy development. Organizational structure influences the development of strategy, and the strategy chosen influences the future course of structural change. As a continuous

process, strategic change is implemented at market level by the creation of tactical "packages" of products and services. These packages are created in response to market needs, as defined by a market segmentation strategy.

HYPOTHESES DEALING WITH STRUCTURE AND SEGMENTATION

From this discussion of organizational determinants of strategy, eight hypotheses are derived to explore the relationships of the conceptual model. The first group of hypotheses test the following proposition:

The manner in which a firm solves its adaptive problems will be associated with the organization's climate.

H_{1A}: Firms which focus on solving the entrepreneurial problem will be less centralized and formalized, yet more complex than other firms. These firms are characterized as "prospectors."

H_{1B}: Firms which focus on solving the engineering problem will be more centralized and formalized, yet less complex than other firms. These firms are characterized as "defenders."

H_{1C}: Firms which focus on solving the administrative problem will be less centralized and formalized, yet the most highly complex of all firms. These firms are

characterized as "analyzers."

H_{1D}: Firms which are unable to successfully match their structure to a solution for their adaptive problems will be the least effective in the marketplace. These firms are characterized as "reactors."

The second set of hypotheses test the following proposition:

Each strategic archetype will approach segmentation strategies in a different way.

H_{2A}: Prospector provider firms will create product/service bundles which are market-driven.

H_{2B}: Defender provider firms will create product/service bundles which are extensions of their core business strengths.

H_{2C}: Analyzer provider firms will pursue a dual strategy of building on core business strengths while developing new market-driven products.

H_{2D}: Reactor provider firms will fail to match their product/service bundles with the needs of the marketplace.

Organizational characteristics, the firm's strategic archetype, and its segmentation strategy are ultimately

re
ma
de

of
pa
pr
co
as
ec
Th
pu
th
th
are

ref
cor
a p
ra
su
sha
of

reflected in the tactics used to implement strategy in the marketplace. The following section explores the tactical development of service offerings.

TACTICAL PACKAGES OF PRODUCTS AND SERVICES

Bundling refers to the common marketing practice of offering for sale two or more products or services as a single package for a special price. Oxenfeldt (1966) in discussing product-line pricing, describes three forms of product complementarity which influence demand and indicate bundling as a viable pricing tactic. First are products which create economies of time and effort when purchased simultaneously. The second is some combination of products which when purchased, enhance customer satisfaction synergistically. The third is the situation where products tied together enhance the image of the seller, so all products offered by the seller are more highly valued.

In the field of logistics integrated services, bundling refers to the creation of service packages. A package consists of two or more services which are combined to create a product offering for a customer. The underlying economic rationale for bundling of services has been described by Guiltinan (1987) as 1) a means of recouping high fixed and shared costs commonly found, and 2) as an implicit recognition of the interdependency of related services on the demand side.

Bo

in

fr

pr

(1

bu

an

of

fo

bu

th

se

in

on

bu

bu

pu

bu

pa

pa

pro

for

hav

Both of these conditions hold in the area of logistics integrated services providers. High fixed costs resulting from dedicated assets are common in this industry. In practice, logistics functions are highly interdependent.

Guiltinan (1987) builds on work by Adams and Yellen (1976) in developing a normative framework for services bundling. He specifies two major approaches to bundling: pure and mixed. In the case of a pure bundle, a service provider offers a package of services which may be sold only in bundled form. These packages may not be disaggregated into smaller bundles, nor into component parts. Mixed bundling refers to the practice of allowing the customer to select one or more services or purchase the entire bundle. Typically, price incentives are used to entice customers to purchase more than one of the services or the entire bundle.

Guiltinan (1987) further categorizes two forms of mixed bundling: mixed-leader and mixed-joint. In mixed-leader bundling, the price of one service is discounted when purchased with another service at full price. In mixed-joint bundling, one price is established for the joint services package based on a discount for each service item in the package.

In economic terms, the purpose of bundling is to maximize profits by extracting maximum consumer surplus from buyers. For any particular good or service, a consumer is presumed to have a unique reservation price. Because these prices are rarely known to sellers, goods must be priced according to what the seller believes to be the average reservation price of consumers. In the process of doing so, the seller inadvertently excludes some potential buyers by setting the price above their reservation prices. The seller may also fail to capture the consumer surplus of those buyers whose reservation price is higher than the set price. By bundling products or services into packages, the seller is able to capitalize on the heterogeneity of demand for the individual components of the packages. Burstein (1960) describes consumer choice as dichotomous: either buy the package, or go without the good. If tied goods are truly complementary, additional surplus is extracted from the consumer whenever the joint reservation price of the package is closer to the selling price than the sum of the independent reservation prices (Burstein 1960).

This finding seems counterintuitive when considering that goods sold independently reap a higher unit profit margin than those sold in bundles. Burstein (1960) explains the net profitability increase of the bundled price by noting that bundling "encourages more customers to 'stay,' permitting collection of more profits from tied sales" (p. 69). Telser (1979) concludes that bundling allows for increased net returns by forming complementary packages and selling them to heterogeneous customers.

In effect, price bundling of goods and services permits a form of price discrimination through an extraction of additional consumer surplus. While buyer reservation prices for individual goods remain unknown, sellers offering diverse bundles force buyers to purchase goods at higher than average prices for the individual components of those bundles.

Price bundling has been shown to be such an effective means of extracting consumer surplus (Stigler 1963, Kenney and Klein 1983) as to have proscriptions against certain forms specified in the Clayton Act. Bundling is prohibited if used for anti-competitive purposes (Dansby and Conrad 1984). However, a series of court rulings have limited the application of the Clayton Act prohibition of bundling to cases where price restraints have been imposed in practice (Dansby and Conrad 1984). In the now historic case of United States v. Loew's Inc. [371 U.S. 38, 52 (1962)], a motion picture exhibitor was prohibited from using the popularity of film A to mandate the rental of an inferior film B. The court reasoned that "(t)he anti-trust laws do not permit a compounding of the statutorily conferred monopoly" (United States v. Loew's, Inc. 1962). Stigler (1963) criticizes the court decision by pointing out that films are necessarily substitute goods, and as such, will affect each other's sales. The seller must take into account the effect of film A on the sales of film B. The "monopoly" of the seller will thus be compounded as a matter of course.

If bundling can be used with caution under the Clayton

Ac

Da

di

it

op

an

ma

ho

ex

co

in

re

th

the

be

the

tir

pos

sho

the

lon

the

dev

off

Act, what strategic pricing implications arise from its use? Dansby and Conrad (1984) suggest that with "sufficient diversity in consumers' valuation of the bundle, relative to its component parts, market segmentation by use of a bundle options mechanism can serve the interests of both the firm and consumers" (p. 380). Identifying particular bundles and matching those to consumer needs essentially increases the homogeneity of the target group, allowing for improved extraction of consumer surplus (Schmalensee 1984). For consumers, the creation of seemingly "tailored" packages may improve perceived value, and more closely match the customer's reservation price with the selling price of the bundle.

In the creation of service packages, if a provider had the ability to develop all possible combinations and bundle them, it would have essentially created pure bundles which can be targeted to particular market segments. Pure bundling is theoretically the most profitable pricing strategy, as it minimizes buyer heterogeneity. In practice this is seldom possible, and mixed bundling strategies have been empirically shown to generate higher returns for sellers when products in the bundle are complementary (Schmalensee 1984, Jeuland 1984, Long 1984).

Adams and Yellen (1976) offer a useful visualization of the advantages of mixed bundling pricing strategy. While developed for describing the situation of a monopolist offering two complementary goods, the simplifications allow for a graphic representation of the extraction of maximum consumer surplus under mixed bundling. The following discussion and diagrams paraphrase Adams and Yellen, with this author's adaptations included parenthetically.

> The reservation price for each consumer can be represented as a point in Figure (3). If the (firm) adopts an (unbundled) strategy, and sets component prices at p1 and p2, the population is sorted into four groups: individuals with reservation prices at least equal to market prices for both (components) (area A), individuals with reservation prices less than market prices for both (components) (area C), and individuals with reservation price at least equal to market price for one but not the other (component) (areas B and D). Those in A purchase both goods, those in areas B and D purchase goods 2 and 1 respectively, and individuals in area C purchase neither good.

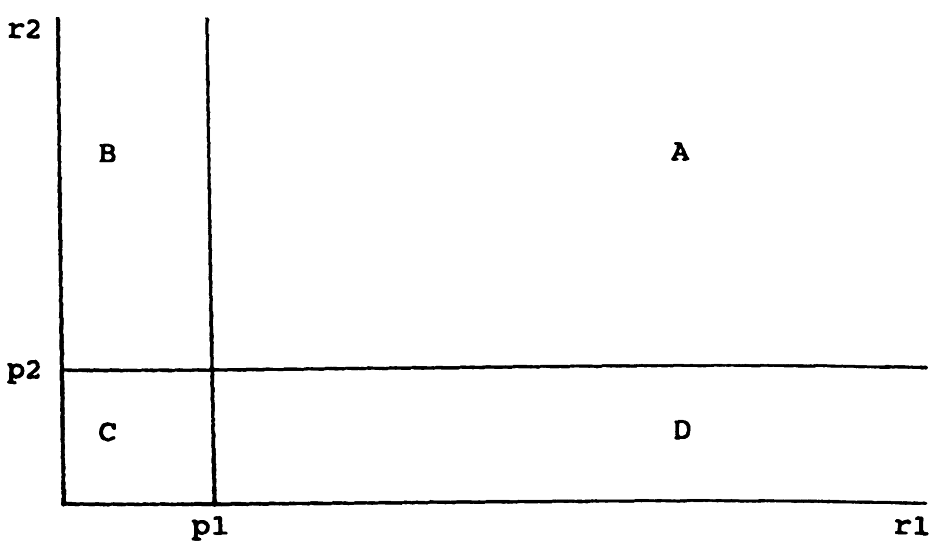

Figure 3
Pure Components Strategy

(adapted from Adams and Yellen 1976, p. 478).

If instead the (firm) adopts the pure bundling strategy, the population is sorted into only two groups: those whose reservation price for the bundle (rb = r1 + r2) is at least equal to the bundle's market price, and those for whom the opposite is true. In Figure (4), the bundle price appears in reservation price space as a straight line with both intercepts equal to the bundle price pB and hence with a slope of minus one. Those in area A buy the bundle and hence consume both goods. Those in area B do not buy the bundle and hence consume neither good.

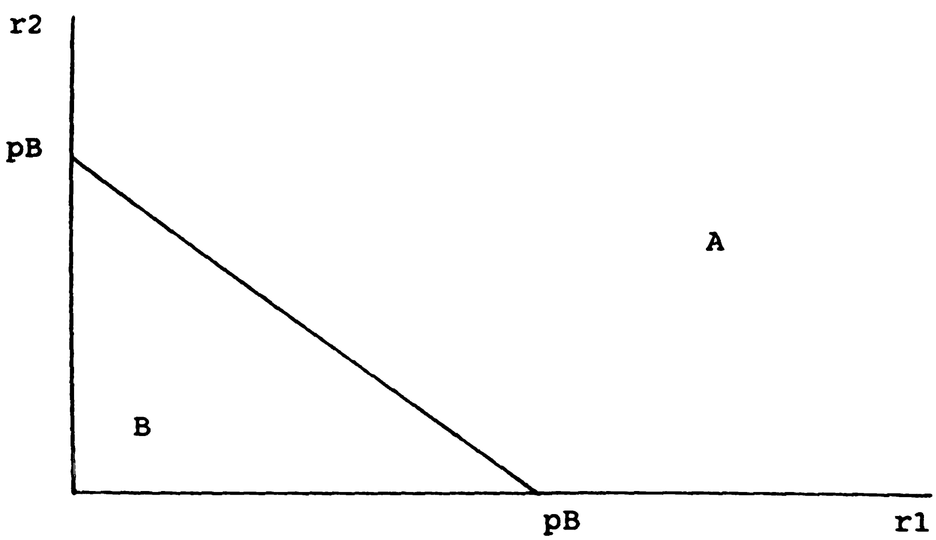

Figure 4
Pure Bundling Strategy

(adapted from Adams and Yellen 1976, p. 479).

Finally, if the (firm) adopts the mixed bundling strategy, customers are again sorted into four groups. These appear in Figure (5). Individuals in area (A) consume nothing. They are characterized by (reservation prices which exceed the selling price for all combinations). Individuals in (area D) consume only good 1. They are characterized by (a reservation price for good 1 which exceeds the selling price, but a reservation price for the bundles which is less than the bundle selling price). For similar reasons, those in (area C) consume only good 2.

The last group (area B) who consume the bundle. (Their reservation price for the bundle exceeds the selling price of the bundle, and of each of the component goods.) (T)he bundle is consumed by those who not only derive positive consumer surplus from purchase of the bundle but also derive more surplus from the bundle than they would from the purchase of each component separately (pgs. 478 - 480).

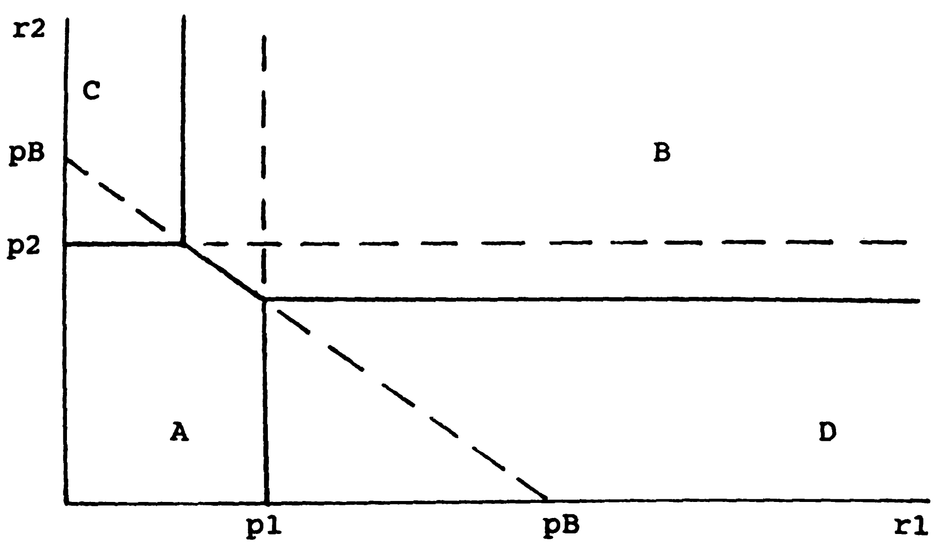

Figure 5
Mixed Bundling Strategy

(adapted from Adams and Yellen 1976, p. 480).

While greatly simplified, this analysis can be extended for n component parts by projection to n-dimensional space. Adams and Yellen (1976) recommend mixed bundling approaches in all situations, except where the strategy of pure bundling offers a sufficiently large and profitable homogeneous market for the supplier. In a rigorous evaluation of Adams and Yellen, Schmalensee (1984) concludes similarly. This observation is further confirmed by Phlips (1981).

An analytic model was developed by Wilson, Weiss, and John (1990) to explore the managerial issues implied by the work of Adams and Yellen (1976). Wilson, Weiss, and John create a scenario in which a firm has three options: "1) continue selling a bundled system, 2) unbundle and sell the system's components individually alongside the bundled system itself, and 3) to sell components only and possibly withdraw from selling one or more of those components" (p. 124). These scenarios correspond respectively to 1) pure bundling, 2) mixed bundling, and 3) unbundling as described by Adams and Yellen (1976) and Guiltinan (1987). Wilson, Weiss, and John assume a competitive market, with more than one component supplier firm.

Wilson, Weiss, and John's (1990) analysis relies on two apparently contradictory variables that describe industrial systems: integration and modularity. Integration is defined as a "system-level attribute which (describes) the degree to which the customer perceives that the multi-component system has been optimized from a systems perspective" (p. 126). Highly integrated systems are valued by customers who prefer single-sourcing and are attracted by appeals of "solution selling." Such customers have been characterized as "less sophisticated" (Wilson, Weiss, and John 1990), because they are necessarily choosing a system of "average or typical system-user profile" (p. 126). Modularity is defined as "the pe

(p

be

ve

ar

at

re

perceived degree to which a system conforms to open standards" (p. 126). Modularity is valued by customers because they are better able to interface subsystems offered by multiple vendors. More sophisticated firms or firms with unusual needs are more likely to value modularity in system design.

Both of these variables are characterized as continuous attributes. At the extremes, integration and modularity are related in the following manner:

	Integration	
Modularity	High	Low
High	Turnkey system with the benefits of open standards	Mixed and matched system from different vendors: no single-source responsibility, no one-stop shopping
Low	Turnkey system with proprietary interfaces	Mixed and matched system from one firm's components with minimal standards

Table 2
Examples of Systems With Various Combinations of Integration and Modularity

(source: Wilson, Weiss, and John 1990, p. 127)

The crucial tradeoff examined by Wilson, Weiss, and John (1990) is that of overall net profits to be realized by increased component sales versus the loss of systems sales due to increased competition from improved modularity. Their model demonstrates that "growth in the size of the market resulting from unbundling is a crucial determinant of the attractiveness of the strategy" (p. 124). This finding is consistent with observations made by Porter (1985) of growth markets: greater unbundling occurs as markets grow. Porter suggests this is due to the fact that early entrants usually develop proprietary standards, and over time, these standards diffuse and evolve toward shared standards which enhance modularity.

The outcomes of the model developed by Wilson, Weiss, and John (1990) are heuristic. Firms should unbundle except under one of two competitive scenarios: 1) when the bundled offering is clearly superior to any new systems which could be created from the components; and 2) when superior components offered by other firms enable overall market growth through adoption of open standards. A decision rule is offered by the authors: "compare the per-unit margin of the bundled system with the various unit margins of the unbundled components; unbundle if the former is smaller" (p. 134). The authors continue: " (w)hen the added systems offer increasingly greater superiority on some component or else better modularity, unbundling is increasingly favored because it results in a larger market" (p. 134).

Hanson and Martin (1990), in developing a model for optimal pricing of bundles, state the managerial problem as one of determining "the relative benefits of reducing

co

b

co

"

co

m

da

co

a

w

b

Ha

ie

co

re

th

la

re

of

se

fi

pa

sy

va

ri

component cost versus raising customers' valuations for bundles" (p. 157). The authors point out the importance of considering "subadditive" costs in bundle pricing. Bundles "often have costs which are subadditive, that is, the more complete bundles have lower marginal costs" (p. 164). The model developed by Hanson and Martin illustrates this critical decision area. There are situations where marginal production costs are subadditive, and bundling may be the only profitable alternative for a seller. This situation is often encountered when a seller bundles around a "key component," where the bundle would have little utility without the key component. Hanson and Martin (1990) take exception to the Adams and Yellen (1976) findings because the inclusion of a key component introduces strong non-linearities into the reservation price distribution of customers. They consider the utility of a basic car, which can then be bundled with a large number of options. Without the basic car, customers' reservation price distributions for the remaining components of the bundle become sharply skewed. While this finding may seem intuitively obvious, it holds managerial relevance for firms wishing to enhance the sales of a key component by packaging it with additional "options."

Nagle (1987) describes two types of market segmentation strategies based on product bundling: optional bundling and value added bundling. These are akin to Guiltinan's (1987) mixed-joint and mixed-leader categories. Nagle argues against

t

n

s

p

c

i

I

s

d

r

c

c

p

I

ex

sa

p

Sa

ex

the use of pure bundles as a segmentation strategy: "there is never any reason not to give buyers the option of purchasing separately at higher prices" (p. 171).

Finally, the manner in which the sale of services is pursued by the services provider may be of importance in the creation of a tactical mix. Two orientations may be identified: the selling approach, and the consulting approach. In the selling approach, the service provider offers its service bundles for sale as solutions to a customer's distribution problems. In the consulting approach, the seller meets with the client and negotiates extensively in the creation of a customized bundle that is tailored to the client's specific needs. The situation is analogous to the purchase of a suit off the rack, or a custom-tailored suit. In a survey of industrial buyers, Giunipiero and Zenz (1982) examined characteristics of salespersons. Outstanding salespersons were described as being thorough and willing to pursue the best interests of the buyer within the seller firm. Salesperson characteristics which alienate buyers included exhibiting little interest in meeting the buyer's real needs.

HYPOTHESES DEALING WITH TACTICS

A number of relationships can be specified which tie together organizational determinants of strategy with the ta

hy

Ta

as

te

Ch

tactics used by firms in the marketplace. The third group of hypotheses test the following proposition:

Tactics used to implement segmentation strategies will be associated with the strategic archetype of the provider firm.

H_{3A}: Prospector provider firms will develop pure and mixed bundles, will use market-based pricing, and a "consulting" approach.

H_{3B}: Defender provider firms will develop mixed bundles, will use asset-based pricing, and a "selling" approach.

H_{3C}: Analyzer provider firms will have the broadest approach to product/service bundling, will use both asset-based and market-based pricing, and a "consulting" approach.

H_{3D}: Reactor provider firms will offer pure bundles, asset-based pricing, and a "selling" approach.

The research design and measurement instrument for the testing of these three groups of hypotheses are presented in Chapter III.

CHAPTER III

RESEARCH METHODS AND DESIGN

When designing a research scheme, the researcher is faced with a number of alternative means of inquiry. Often the state of prior research limits the means of inquiry by establishing precedent. Other times, limits in the research subject itself will dictate one means over another.

Both issues are brought to bear here in the choice of a qualitative approach: the case study. Prior systematic research on the strategies used by logistics integrated service providers is limited (Daugherty 1988, LaLonde and Cooper 1989). Exploratory research is necessary at this early stage in the industry's development to delineate bodies of theory which may later be examined in an "empirical" setting. In the area of product bundling, for example, no empirical work has been done which examines "real world" strategic aspects of the phenomena. Wilson, Weiss, and John (1990), in commenting on extensions of their model of bundling state:

> (T)he circumstances surrounding the issues at hand are such that empirical work will be difficult for several reasons. For example, obtaining data on sufficient numbers of unbundling decisions as a basis for statistical testing is probably a very difficult undertaking. By definition, the decision

> is made only once for a system. Furthermore, the model is a normative one and valid data on the prospective sales and costs needed to assess the model are not readily obtained from accounting records or questionnaires. An alternative approach would be to assess whether firms practice the qualitative recommendations of the model. ...This approach is an indirect test of the model ... The difficulties suggest that it may be counterproductive to suspend judgment until systematic empirical evidence is available (p. 135).

At this introductory stage of industry development, there are relatively few logistics integrated services providers. Fewer than thirty such domestic firms have been identified. It is unlikely that all could be persuaded to participate in survey research. Furthermore, diverse origins of these firms would necessitate very small cell sizes for statistical analysis, making traditional positivist hypothesis testing impractical. In the absence of these minimal criteria for positivist inquiry, some alternative means must be adopted for this exploratory research.

In a search for a means of scientific inquiry with which to pursue this research agenda, the researcher has been influenced by the propositions of Jürgen Habermas (1989) in his development of interpretivism (hermeneutics) as a legitimate scientific alternative to logical empiricism. Habermas (1989) proposed opposing tenets to the five hallmarks of positivism: its adherence to objectivity, hypothetico-deductive theory, external lawlike structures, formalized language, and the distancing of "facts" from their interpretation. In the natural sciences, physicists were among the first to accept post-positivist means of inquiry. The measurement limitations in the field forced the acceptance of alternative means to enable continued research (Wolf 1981). A "paradigm shift" has occurred in the natural sciences, one which accepts alternatives to positivism.

What is the proposed alternative to positivism? Lincoln and Guba (1985) summarize the "naturalist" paradigm by contrast with positivism in five areas: ontology, epistemology, generalization, causality, and axiology. These differences are summarized in Table 3.

	Positivism	Naturalism
Ontology	Reality is single.	Realities are multiple.
Epistemology	Knower and known are independent.	Knower and known are are inseparable.
Generalization	Nomothetic statement is possible.	Only idiographic statement is possible.
Causality	Cause and effect can be identified.	Impossible to separate cause and effect.
Axiology	Inquiry is value free.	Inquiry is value bound.

Table 3
Contrasting Positivism and Naturalism

(adapted from Lincoln and Guba 1985, pg. 37).

In describing the work of anthropological research, Geertz (1973) implicitly criticizes positivist approaches:

> To set forth symmetrical crystals of significance, purified of the material complexity in which they were located, and then attribute their existence to autogenous principles of order, universal properties of the human mind, or vast *a priori weltanschauungen*, is to pretend a science that does not exist and imagine a reality that cannot be found (pg. 20).

For the current research questions, the researcher embraces the naturalistic paradigm for guidance in the development of a research design. The goal is to create a "thick" description in the sense used by Geertz (1973):

> It is this maneuver, usually too casually referred to as 'seeing things from the actor's point of view,' too bookishly as 'the *verstehen* approach,' or too technically as 'emic analysis,' that so often leads to the notion that anthropology is a variety of either long-distance mind reading or cannibal-isle fantasizing, and which, for someone anxious to navigate past the wrecks of a dozen sunken philosophies, must therefore be executed with care. Nothing is more necessary to comprehending what anthropological interpretation is, and the degree to which it is interpretation, than an exact understanding of what it means -- and what it does not mean -- to say that our formulations of other peoples' symbol systems must be actor-oriented (pg. 14).

Lest the previous discussion seem an unstructured departure from the rigor of scientific inquiry, the researcher accepts the orderly inquiry of science and firmly rejects the epistemological anarchy proposed by Feyerabend (1975). The research design is consistent with the model of the research cycle offered by Marshall and Rossman (1989) as presented in Figure 6.

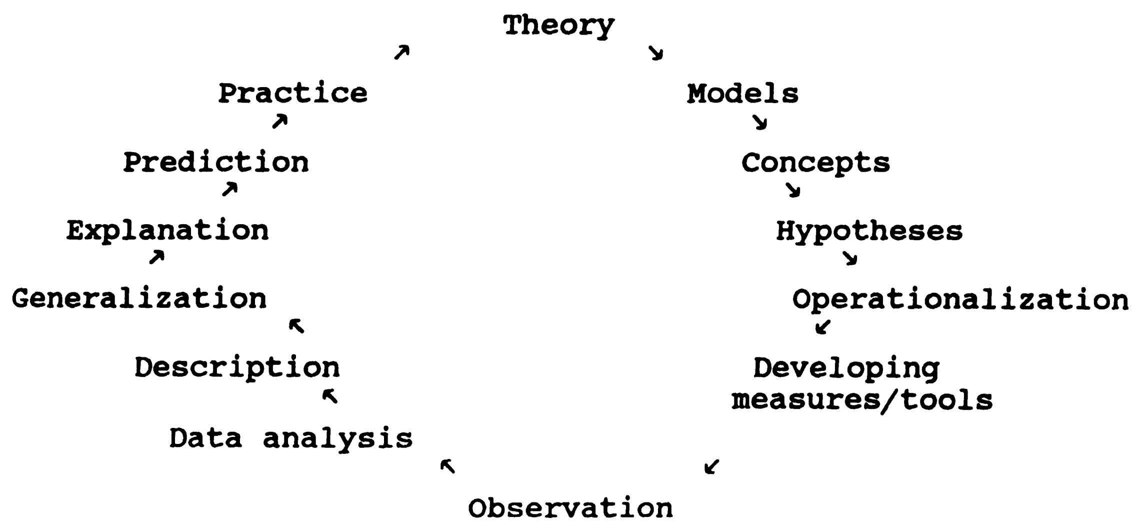

Figure 6
The Model of the Research Cycle

(adapted from Marshall and Rossman 1989, pg. 23).

Oxenfeldt (1962) describes a similar process when discussing the "science" of business management. "No one familiar with business dreams that it will become an 'exact science' which rests upon a body of proved principles analogous to what has been produced by the chemist and physicist" (p. 35). Oxenfeldt's market research process has seven steps, is recursive, and is roughly analogous to the process suggested by Marshall and Rossman (1989). The seven steps suggested by Oxenfeldt (1962) are: 1) formulate the research problem clearly, 2) gather evidence, 3) collect additional background information that aids the decision, 4) organize and analyze the information appropriately, 5)

f

a

p

R

u

v

r

d

i

e

re

ca

co

sy

formulate hypotheses, 6) test hypotheses, and 7) list alternative solutions to assist in a respecification of the problem.

In discussing exploratory research design, Marshall and Rossman (1989) state the purposes as 1) investigate little understood phenomena, 2) identify and/or discover important variables, and 3) generate hypotheses for further research. Their recommended research strategy is the case study, with data collection through participant observation and in-depth interviews.

Boulton (1985) also supports the use of case studies for exploratory research:

> Case research can readily be applied to new areas which require systems thinking. In the earliest periods of research, long before you have developed any theory, data must be gathered in an attempt to describe the territory and raise basic questions about its interrelationships and processes ... (I)n fact, one might argue that statistical techniques are seldom used to improve theory, only to accept or reject hypotheses (pg 9).

Bonoma (1985) defends the use of cases in marketing research by noting that "many issues of interest to marketers cannot be studied outside the context in which they naturally occur" (pg. 202). Bonoma (1985) states the goals of case study research as

> (N)ot quantification or enumeration, but rather 1) description, 2) classification, 3) theory development, and 4) limited theory testing. In a word, the goal is understanding (pg. 206).

t

i

c

r

s

a

s

t

c

th

in

de

a

to

While the case method of research does not permit the testing of hypotheses in the positivist sense, the investigation is ordered, structured, and operates within the constraints of a conceptual model. The goals of the current research are consistent with the naturalistic mode of inquiry.

RESEARCH METHODS

The research is set in the context of ten integrated services provider firms, selected for in-depth interviewing and case study presentation. As the interviews were conducted sequentially, the interview guide continued to develop over the course of the interviews. Follow-up interviews were conducted with early participants to assure consistency of the data, and to attempt to validate and cross-correct for interpretive error. This was suggested by Sieber (1976) who describes an intertwining of analysis and data collection.

The in-depth interview has strengths and limitations as a data collection method in qualitative research. According to Marshall and Rossman (1989),

> An interview is a useful way to get large amounts of data quickly. When more than one person is used as an informant, the interview process allows for a wide variety of information and a large number of subjects. It also allows for immediate follow-up questions and, if necessary for clarification, follow-up interviews may be scheduled at a later date. Combined with observation, interviews allow the researcher to check description against fact.
>
> However, ... (i)nterviews must involve personal interaction; cooperation is essential.

> Interviewees may not be willing to share all the information that is needed with the interviewer. The interviewer may not ask appropriate questions because of a lack of expertise or familiarity with technical jargon; conversely, the answers to the questions may not be properly comprehended by the interviewer -- or worse, interviewees may not always be truthful. Interviewers must have good listening skills, and must be skillful at personal interaction and question framing. In addition, they must cope with concerns about data quality. When interviews are used alone, distortions in data are more likely, as interviewers may interject personal biases. Finally, volumes of data may be obtained through interviewing, but such data may be difficult to manipulate (pgs. 82 - 83).

In an attempt to combat the weaknesses of the in-depth interview, the research used two means for insuring the quality of the data. First, extensive background research was conducted on each of the interview firms to ascertain the congruency of the interview response with the reality of observed corporate behavior. Second, the researcher used a structured interview guide as a basis for each interview (see Appendix A). The interview guide aided in limiting the interference of interviewer bias and maintaining consistency across interview settings.

After the data was collected, the method of analysis followed the recommendations of Sieber (1976). He offers a three step analytic process:

> 1) Formulating classes of phenomena. This is essentially a categorization process, subsuming observations under 'progressively more abstract concepts.'
>
> 2) Identifying themes. Here the process is one of making linkages between concepts, noting regularities which have aroused the researcher's curiosity, and perhaps specifying if-then

hypotheses.

> 3) Provisional testing of hypotheses. Here, as with quantitative data, the analyst looks for concomitant variation, tries to rule out spurious or confounding factors, assesses conditions making for greater or lesser concomitant variation, looks for intervening variables, and so on (pg. 2).

The interview data was examined in a structured manner to generate description, generalizations, explanations, make predictions, and guide practice. The process was consistent with the model of the research cycle presented in Figure 7 (above).

CONSTRUCTS AND MEASUREMENT

In this section, hypotheses are presented and associated with the conceptual model (Figure 2, p. 10). The constructs involved with these hypotheses are discussed, and measures appropriate to each construct are specified in the form of interview questions.

The first set of hypotheses relate structural determinants of strategy:

> H_{1A}: Firms which focus on solving the entrepreneurial problem will be less centralized and formalized, yet more complex than other firms. These firms are characterized as "prospectors."

> H_{1B}: Firms which focus on solving the engineering problem

will be more centralized and formalized, yet less complex than other firms. These firms are characterized as "defenders."

H_{1C}: Firms which focus on solving the administrative problem will be less centralized and formalized, yet the most highly complex of all firms. These firms are characterized as "analyzers."

H_{1D}: Firms which are unable to successfully match their structure to a solution for its adaptive problems will be the least effective in the marketplace. These firms are characterized as "reactors."

ADAPTIVE PROBLEM SOLVING

The first group of constructs considered are those concerned with the adaptive problem solving process. As detailed by Miles and Snow (1978), adaptive problem solving occurs in three distinct areas: entrepreneurial, engineering, and administrative.

The entrepreneurial problem is defined as one of a firm establishing its market domain (Miles and Snow 1978, p. 98). Domain is considered from four perspectives: perceived, enacted, desired, and objective. A firm's perceived domain is management's description of its current market segments, customers, or other market-oriented attributes. The enacted domain is the degree to which management believes its perceptions have been actualized. Desired domain is an indicator of where the firm intends to move in targeting customers in the future. Finally, the firm's objective domain is an assessment by the researcher as to the feasibility of a firm's continued success in exploiting a given market domain.

Interview questions to collect this information included the following:

What do you view as the scope of your target market?

How successful have you been in pursuing this target?

Do you think this target is appropriate for your firm?

Responses were considered in conjunction with secondary information to ascertain the viability of the objective domain.

The engineering problem deals with the firm's technological approach to meeting customer and market needs. The essential question offered by Miles and Snow (1978, p. 99) is "can the firm deliver?" to its customers. The issue is one of ascertaining the firm's approach to selecting an appropriate technical means, and insuring the continued congruency of this technology with customer needs.

Questions dealing with the engineering problem included:

When you have decided on a market to pursue, how does your firm go about allocating internal resources to solve market needs?

When solving customer problems, to what extent does your firm rely on its core business strengths?

To what extent would your firm be willing to adopt a new technology, beyond your core strengths, to solve a customer's problems?

The administrative problem deals with an organization's structural responsiveness to implementing the solutions to the entrepreneurial and engineering problems. This construct is concerned with two aspects of administrative problem-solving: lagging and leading. Lagging aspects are those which describe a firm's direct organizational response to the solutions to the entrepreneurial and engineering problems. Leading aspects deal with the degree to which an organization's structure facilitates future adaptation.

Questions dealing with the solution to the administrative problem included:

How consistent is your firm's organization and structure with the expressed needs of your customers?

How consistent is your firm's organization and structure with providing an internal response to your customers?

How flexible is your firm's organization and structure to accommodating changes in the marketplace?

t

a

T

r

a

u

CR

cha

Fre

> How flexible is your firm's organization and structure in accommodating new developments in technology?

Finally, Miles and Snow (1978) suggested that firms tend to focus on one of the three adaptive problem solving areas, and that this focus helps to define its strategic archetype. To this end, a summarizing question was required to allow a respondent an opportunity to prioritize these three areas of adaptive problem solving in strategic planning. The question used to gather this was as follows:

> We have just discussed three different categories of problems that firms consider when developing strategy. The first was the selection of an appropriate market domain. The second was the way in which your firm solves customer problems technically. The third area was the way in which your organization adapts and changes to implement domain and technology solutions and still remain flexible. Which of these three areas tends to dominate strategic problem solving in your firm? Why do you think that is the case?

ORGANIZATIONAL CHARACTERISTICS

The second group of constructs deal with organizational characteristics suggested by Mintzberg (1978, 1979) and Fredrickson (1986). The three constructs considered here are organizational centralization, formalization, and complexity.

Centralization is the degree to which "the right to make decisions and evaluate activities is concentrated" (Fredrickson 1986, p. 285). Questions used to ascertain degree of centralization included:

Who in your organization initiates the strategic decision process?

To what degree is direction in strategy decided by a single executive or a small group at the top of the organization?

To what extent would you say that changes in strategy are major departures from previous strategies?

Formalization is extent to which an organization is rules-based, or dominated by procedural concerns. Questions asked to ascertain the degree of formalization included:

How often is strategy developed in your firm in response to problems that appear in variables that you monitor regularly?

Are strategic decisions typically precise in their specifications for achieving goals?

Is the strategic development process within your firm a standardized process? What is that process like?

Would you categorize your firm's strategic decisions as evolutionary or revolutionary in nature? Why?

(
A
n
o
S
ca
a
as
I
h
re
th
Re
w

Complexity in organizations is defined by Fredrickson (1986) as a response to its members' cognitive limitations. As specialization of labor increases, organizations necessarily become more complex. Questions used to ascertain organizational complexity included:

> To what extent do strategic decisions made in your firm have to satisfy a large number of internally imposed constraints?
>
> How likely is it that middle managers in your organization will spot changes in market or environment that have strategic implications?
>
> To what extent is the development of strategy a process of internal bargaining?

STRATEGIC ARCHETYPE

While answers to these questions made possible the categorization of respondent firms into the strategic archetypes proposed by Miles and Snow (1978), questions were asked which allowed respondents to self-categorize. Interviewees were given a series of four short profiles of hypothetical firms, and asked which firm most closely resembled their own. The four short profiles corresponded to the strategic archetypes: Prospector, Defender, Analyzer, and Reactor. Each respondent's answer was compared for congruency with the previously developed measures. These hypothetical profiles are presented in Appendix B.

The second group of hypotheses deal with approaches to market segmentation strategies conducted by each of the strategic archetypes:

H_{2A}: Prospector provider firms will create product/service bundles which are market-driven.

H_{2B}: Defender provider firms will create product/service bundles which are extensions of their core business strengths.

H_{2C}: Analyzer provider firms will pursue a dual strategy of building on core business strengths while developing new market-driven products.

H_{2D}: Reactor provider firms will fail to match their product/service bundles with the needs of the marketplace.

SEGMENTATION STRATEGY

There are two approaches to segmentation strategy development which have been characterized as _a priori_ and _post hoc_ (Green 1977). _A priori_ segmentation strategies examine

market-based conditions and attempt to develop tactics to match a firm's strengths with desired segments. Post hoc segmentation strategies attempt to create segments based on the firm's ability to cluster customers on some set of relevant variables. These are fundamentally opposite approaches to the development of a segmentation strategy.

This research posits a series of hypotheses which link organizational constructs to the choice of a segmentation strategy. Questions to ascertain segmentation strategy approach are:

How does your firm go about developing a market segmentation strategy?

To what extent are your segmentation strategies driven by clustering potential customers by their needs?

To what extent are your segmentation strategies driven by clustering potential customers by your ability to meet their needs with your core business strengths?

How well do you think your segmentation strategies match the reality of the marketplace?

Do you think your segmentation strategies have been effective in matching customer groups to your product offerings?

The third set of hypotheses deal with the creation of product/service packages, their pricing, and sales process approach used by each strategic archetype:

H_{3A}: Prospector provider firms will develop pure and mixed bundles, will use market-based pricing, and a "consulting" approach.

H_{3B}: Defender provider firms will develop mixed bundles, will use asset-based pricing, and a "selling" approach.

H_{3C}: Analyzer provider firms will have the broadest approach to product/service bundling, will use both asset-based and market-based pricing, and a "consulting" approach.

H_{3D}: Reactor provider firms will offer pure bundles, asset-based pricing, and a "selling" approach.

TACTICS USED

The measures in this section of the conceptual model are descriptive in nature. Respondents were asked to describe the tactics used to implement the previously described market segmentation strategies. Three components of these tactical mixes are of concern: bundling, pricing, and sales process.

In the area of bundling, respondents were asked to describe the manner in which product bundles are assembled. Questions to ascertain this include:

How does your firm go about creating a package of services which meet your client's needs?

Do you create a variety of packages which will meet a client's needs and allow them to choose?

Do you allow the client to pick and choose from a menu of services available?

To what extent is your firm concerned with issues of standardization and compatibility of your services with those offered by other providers?

In the area of pricing, respondents were asked how the described bundles of services are priced, using the Guiltinan (1987) typology. Questions used to ascertain pricing strategy included:

When bundling services into a package, how often do you price the package based on a customer paying full price for a core service, with discounts based on additional (non-core) services in the package?

When bundling services into a package, how often do you price the package based on a discount for all services in the package?

Overall, how would you describe your pricing strategy?

Finally, the manner in which a provider firm approaches a potential client, and conducts its sales efforts was considered. Respondents were asked to characterize their selling efforts as either a "selling approach" or a "consulting approach:"

How does your firm approach a potential client for integrated services?

What type of background research is typically done on a client before the sales effort begins?

Does your firm present off-the-shelf solutions to client problems in its sales effort?

How much focus does your firm put on custom-tailored solutions to a potential client's problems?

Does your firm use a team-selling approach in dealing with potential clients?

Chapter IV compares and contrasts the results of this case study inquiry with respect to the conceptual model and hypotheses tested.

CHAPTER IV

RESULTS

This chapter details the analysis of the interview data and testing of the research hypotheses. Each of the twelve hypotheses is discussed in turn, and support for or against each of the hypotheses presented. Anecdotal information which addresses these hypotheses is also offered.

MEASUREMENT

Detailed notes taken during the interview sessions were combined with secondary source data to create the ten case studies used in this analysis. The case studies are presented in Appendix C. Information in the case studies sequentially follows the structured interview guide presented in Appendix A.

ADAPTIVE PROBLEM SOLVING

The interviews began with a series of questions to determine the adaptive problem solving (hereafter referred to

a

a

t

a

s

a

t

t

i

i

E

A
B
C
D
E
F
G
H
I
J

de

ea

co

Th

Fy

as APS) focus of the firm. The information is descriptive, allowing a categorization of firms by adaptive problem solving type. The adaptive problem solving focus was determined by asking each interviewee to assess which problem area dominated strategic thinking in the organization. The respondent's answer was compared by the researcher with the responses given to questions dealing with the three APS areas. In all cases, the researcher's assessment of APS focus matched that of the interviewees. The results of this assessment are contained in Table 4.

Firm	Subject APS	Researcher APS
A	Administrative	Administrative
B	Engineering	Engineering
C	Domain	Domain
D	Administrative	Administrative
E	Engineering	Engineering
F	Engineering	Engineering
G	Domain	Domain
H	Engineering	Engineering
I	Administrative	Administrative
J	Engineering	Engineering

Table 4
Adaptive Problem Solving Focus

Next, a series of questions was asked to determine the degree of centralization, formalization, and complexity in each organization. The relative level of each of these constructs was assessed through the use of multiple measures. The measures used for each variable are consistent with Fredrickson's (1986) propositions.

CENTRALIZATION

The level of centralization was determined by examining responses in three areas. First, responses on who initiates strategic decisions were categorized into three groups: one or two people, a small group, and a large group. These categories were determined by examining the range of responses. Categories were respectively coded as indicative of high, medium, and low centralization. Second, strategy as an evolutionary or revolutionary progression within the firm was coded as indicative of low or high centralization respectively. Third, responses on the degree to which regularly monitored variables influence strategy development were coded at one of four levels: never, rarely, often, or usually. These were assumed to be indicative of high to low centralization. Arbitrary numeric values were attached to these responses to indicate directionality from high to low centralization. These values were summed, and the range of responses examined and categorized as high, medium, and low centralization. The results of this analysis are contained in Table 5.

E

A
B
C
D
E
F
G
H
I
J

F

P

o

o

t

p

S

o

n

c

f

t

s

f

Firm	Initiates	Nature	Monitors	Centralization
A	1 person	evolutionary	rarely	High
B	small group	evolutionary	usually	Low
C	small group	revolutionary	rarely	High
D	large group	evolutionary	never	Medium
E	2 people	evolutionary	often	Medium
F	1 person	evolutionary	often	Medium
G	small group	revolutionary	often	Medium
H	1 person	revolutionary	rarely	High
I	1 person	revolutionary	usually	Medium
J	small group	evolutionary	usually	Low

Table 5
Responses on Centralization

FORMALIZATION

Formalization was measured on three points. First, the precision of strategy statements was categorized as precise or broad. Precise specification of strategies is an indicator of a high degree of formalization (Fredrickson 1986). Second, the degree to which strategy development is a standardized process was evaluated as standardized or informal. Standardized strategy development is typical of formalized organizations. Third, the evolutionary or revolutionary nature of the firm's strategic changes was assessed categorically. Evolutionary development is symptomatic of formalized organizations (Fredrickson 1986). Responses on these three measures were given arbitrary numeric values, summed, then categorized as low, medium, or high degree of formalization. The results of this categorization are

P

E

A
B
C
D
E
F
G
H
I
J

C

q

c

s

d

S

c

i

s

(

s

presented in Table 6.

Firm	Formulate	Process	Nature	Formalization
A	broad	informal	evolutionary	Low
B	broad	standardized	evolutionary	Medium
C	precise	standardized	revolutionary	Medium
D	precise	standardized	evolutionary	Medium
E	precise	standardized	evolutionary	High
F	precise	standardized	evolutionary	High
G	precise	standardized	revolutionary	Medium
H	precise	informal	revolutionary	Low
I	broad	informal	revolutionary	Low
J	precise	informal	evolutionary	Medium

Table 6
Responses on Formalization

COMPLEXITY

Complexity of the organization was measured by three questions. First, responses on the number of internal constraints to strategy development were categorized as many, some, or none. Many constraints are symptomatic of a high degree of organizational complexity (Fredrickson 1986). Second, the degree to which middle managers in the organization spot environmental changes with strategic implications was assessed. Responses were coded as rarely, sometimes, and usually. In complex organizations, middle managers rarely see environmental changes in strategic term (Fredrickson 1986). Third, responses on the degree to which strategy development is a result of internal bargaining were

C

s

h

a

a

t

E

A
B
C
D
E
F
G
H
I
J

S

b

th

S

o

f

F

categorized as sometimes or rarely. In complex organizations, strategy development may involve a process of internal bargaining. Response categories for these three measures were assigned arbitrary numeric values, summed, and then assigned a rating of high, medium, or low complexity. The results of this analysis are presented in Table 7.

Firm	Constraint	Middle	Bargain	Complexity
A	none	often	no	Low
B	some	often	yes	Medium
C	some	rarely	no	High
D	some	sometimes	no	Medium
E	many	rarely	no	High
F	some	sometimes	no	Medium
G	some	often	yes	Medium
H	none	rarely	no	Medium
I	none	rarely	no	Medium
J	some	rarely	yes	High

Table 7
Responses on Complexity

STRATEGIC ARCHETYPE: THREE ASSESSMENT SCHEMES

The strategic archetype of the firm is hypothesized to be associated with the market strategies and tactics used by the firm. Four strategic archetypes are proposed by Miles and Snow (1978). Prospector firms are those companies which focus on the development of flexible, new technologies. Defender firms staunchly protect well defined niches by developing proven technologies and creating economies of scale. Analyzer

f
d
F
a
i

i
t
S
I
w

b
d
i
a
w
c
d
c
I
s
c
w
T
as

firms pursue a dual approach: they operate from a highly defended positional strength and also pursue new technologies. Reactor firms are dysfunctional; they fail to match strategy and structure, use outmoded strategies and structure, or inadequately articulate and implement strategies.

Assessment of each firm's strategic archetype was done in three different ways. The three assessments were necessary to test hypotheses under different aspects of the Miles and Snow (1978) typology. The three assessments are termed Types I, II, and III. Each of the assessment schemes resulted in variation in categorization for each firm.

The Type I strategic archetype assessment was determined by the researcher rendering an expert opinion at a pause during the interview process. The pause occurred when the interview subject was asked to examine profiles of four archetypical firms (see Appendix B), and to choose the one which most closely profiled his company. This assessment was completed at the midpoint of the interview, after questions dealing with domain, engineering, administrative structure, centralization, formalization, and complexity had been asked. In nine out of the ten cases, the researcher and the interview subject concurred in their assessment. In the exceptional case, the executive characterized his firm as a prospector, while the researcher characterized the firm as a defender. This case will be evaluated along with other Type I assessments as a defender, except where otherwise noted. The

r

E

A
B
C
D
E
F
G
H
I
J

b

A

i

t

i

E

A
B
C
D
E
F
G
H
I
J

results of this assessment are contained in Table 8.

Firm	Subject	Researcher	
A	Analyzer	Analyzer	
B	Prospector	Prospector	
C	Reactor	Reactor	
D	Analyzer	Analyzer	
E	Prospector	Defender	(Decision: Defender)
F	Defender	Defender	
G	Prospector	Prospector	
H	Prospector	Prospector	
I	Prospector	Prospector	
J	Analyzer	Analyzer	

Table 8
Type I Strategic Archetype Assessment

Type II strategic archetype assessments were developed by examining the adaptive problem solving focus of the firm. According to Miles and Snow (1978), the dominance of one area in the adaptive problem solving process is one indicator of the firm's strategic archetype. This assessment is presented in Table 9.

Firm	Dominant APS	Type II Assessment
A	Administrative	Analyzer
B	Engineering	Defender
C	Domain	Prospector
D	Administrative	Analyzer
E	Engineering	Defender
F	Engineering	Defender
G	Domain	Prospector
H	Engineering	Defender
I	Administrative	Analyzer
J	Engineering	Defender

Table 9
Type II Strategic Archetype Assessment

Type III strategic archetype assessments were determined by examining the levels of centralization, formalization, and complexity in the firm's organization. Consistent with Miles and Snow (1978), the firms were categorized as follows: 1) low or medium centralization and formalization with medium or high complexity organizations are prospectors; 2) medium or high centralization and formalization with low or medium complexity are defenders; 3) low or medium centralization and formalization with high complexity are analyzers. According to the Miles and Snow typology, centralization and formalization vary in similar directions, while complexity varies inversely. To resolve cases where assessments on these three variables did not lead to a clear categorization, arbitrary numeric values were attached to high, medium, and low measures. The values attached to centralization and formalization were summed, and compared to a doubled value attached to complexity. The resultant balance determined which Type III assessment was assigned. If categorization remained unclear, the following decision rule was used: if the firm was high in complexity, it was categorized as an analyzer; otherwise, it was categorized as a defender. The results of this categorization are presented in Table 10.

F

A
B
C
D
E
F
G
H
I
J

b

h

p

I

o

s

p

Firm	Central	Formal	Complex	Type III Assessment
A	High	Low	Low	Defender
B	Low	Medium	Medium	Prospector
C	High	Medium	High	Analyzer
D	Medium	Medium	Medium	Defender
E	Medium	High	High	Analyzer
F	Medium	High	Medium	Defender
G	Medium	Medium	Medium	Defender
H	High	Low	Medium	Defender
I	Medium	Low	Medium	Prospector
J	Low	Medium	High	Analyzer

Table 10
Type III Strategic Archetype Assessment

All of the hypotheses tested in this research will first be examined under the Type I assessment. The first group of hypotheses deal with validating the Miles and Snow (1978) presentation of strategic archetype characteristics. The Type II and III assessments will then be used in additional testing of the second and third groups of hypotheses, dealing with segmentation and tactical approaches respectively. Table 11 presents a comparison of the three archetype assessments.

F

A
B
C
D
E
F
G
H
I
J

c

o

c

A

i

c

a

Firm	Type I (assumed by researcher and subject)	Type II (based on APS)	Type III (based on organizational characteristics)
A	Analyzer	Analyzer	Defender
B	Prospector	Defender	Prospector
C	Reactor	Prospector	Analyzer
D	Analyzer	Analyzer	Defender
E	Defender	Defender	Analyzer
F	Defender	Defender	Defender
G	Prospector	Prospector	Defender
H	Prospector	Defender	Defender
I	Prospector	Analyzer	Prospector
J	Analyzer	Defender	Analyzer

Table 11
Comparison of Three Archetype Assessments

TESTING HYPOTHESES WITH TYPE I ASSESSMENTS

To review, the Type I assessments are based on the expert opinions of the researcher and the interview subject. Each of the hypotheses in this section is tested under this condition.

ADAPTIVE PROBLEM SOLVING HYPOTHESES

The first group of hypotheses deal with the interrelationship among the adaptive problem-solving focus, centralization, formalization, complexity and the Type I assessment. These four groups of variables are summarized in Table 12.

Firm	Type I	Focus	Central	Formal	Complex
A	Analyzer	Admin	High	Low	Low
B	Prospector	Engr	Low	Medium	Medium
C	Reactor	Domain	High	Medium	High
D	Analyzer	Admin	Medium	Medium	Medium
E	Defender	Engr	Medium	High	High
F	Defender	Engr	Medium	High	Medium
G	Prospector	Domain	Medium	Medium	Medium
H	Prospector	Engr	High	Low	Medium
I	Prospector	Admin	Medium	Low	Medium
J	Analyzer	Engr	Low	Medium	High

Table 12
Summary of Structural Associations (Type I Assessment)

The first hypothesis dealt with prospector type firms:

H_{1A}: Firms which focus on solving the entrepreneurial problem will be less centralized and formalized, yet more complex than other firms. These firms are characterized as "prospectors."

This hypothesis was not supported. Four firms (B, G, H, and I) were Type I assessed as prospectors. Firm B, while focused on engineering problems, was less centralized and had medium degrees of formalization and complexity. Firms H and I exhibited higher degrees of centralization, low formalization, and medium complexity. This was the reverse of the hypothesized relationship. Firm G, while domain focused, exhibited medium centralization, formalization, and complexity and thus failed to convincingly support the hypothesis.

The prospector firms viewed each of the three adaptive problem solving areas as significant. If centralization was not considered, both Firms H and I exhibited low formalization and complexity. Centralization in Firms H and I was indicated by each having a single strategist. Both subjects, however, agreed that others on the staff gave input to the strategy process though not in a significant way. If formalization was not considered, the case remained unclear. As all four firms exhibit medium levels of complexity, elimination of this variable did not clarify these results.

The Type I assessment of prospector as a strategic archetype was inconsistent with the indicators proposed by Miles and Snow (1978). Firms expertly assessed as prospectors did not have a similar adaptive problem solving focus, nor did they share common levels of centralization, formalization, and complexity. Thus, the Miles and Snow definition of prospector was not consistent with expert assessments.

The second hypothesis dealt with defender type firms:

H_{1B}: Firms which focus on solving the engineering problem will be more centralized and formalized, yet less complex than other firms. These firms are characterized as "defenders."

a
s
e
c
c
c
w

d
o
m
s
w
i
v
w
p
o
i
w
S

This hypothesis was partially supported. Both firms (E and F) assessed as Type I defenders were concerned with solving engineering adaptive problems. Both of these firms exhibited a high degree of formalization, and a medium degree of centralization. Neither of the firms was a "simple" organization; one is high in complexity, the other of medium complexity. If complexity is not considered, the hypothesis was supported.

Given the early state of industry development, it was difficult to apply the "defender" label to a firm in anything other than a relative sense. Compared to some firms, others may be called defenders. As markets have not yet been substantially developed, the Type I assessed defender firms were more similar to the analyzer type. While the defenders in this study have clearly defined niches which they vigorously defend, each of the two defenders expressed a willingness to move outside its domain if opportunity was present. The two defender firms (E and F) were also among the oldest in this study. Both were well entrenched in the same industry domain. The expert assessment of strategic archetype was generally consistent with the propositions of Miles and Snow (1978) in the cases of the defenders.

The third hypothesis dealt with analyzer type firms:

H_{1C}: Firms which focus on solving the administrative problem will be less centralized and formalized, yet the most highly complex of all firms. These firms are characterized as "analyzers."

This hypothesis was partially supported. Two of the three firms (A and D) assessed as analyzers focused on administrative problem solving. Each of these firms exhibited a low or medium degree of formalization. While Firm A was ranked high in centralization due to having a single strategy decision-maker, its managers have wide operating authority. Firm D was somewhat decentralized due to its divisional structure, which had evolved as a result of acquisitions. Firm J also offered partial support to this hypothesis. It exhibited a high degree of complexity, and low or medium levels of centralization and formalization. Firm J was focused on engineering adaptive problems; however, this was due to its desire to create "replicable" systems that span market segments. Firm J operated within a greater corporate structure, and many of its administrative problems may have been solved by adopting strategies from its corporate parent.

The fourth hypothesis dealt with reactor type firms:

H_{1D}: Firms which are unable to successfully match their structure to a solution for its adaptive problems will be the least effective in the marketplace. These firms are characterized as "reactors."

This hypothesis was supported. Firm C was categorized as a reactor. The firm had recently been preoccupied with adaptive problem solving in the administrative area. Firm C was a company that had pursued a growth-through-acquisition strategy. The firm's original strategy was no longer appropriately linked to its structure. While the executive interviewed for this research was aware of this mismatch, he viewed his own organization as currently in the disarray of a reorganization. Firm C was moving from a highly centralized strategic center to a decentralized approach in which field management are more involved in strategy setting.

Firm C also suffered from a weakly articulated strategy. The executive interviewed said that Firm C might be moving toward an analyzer type, though he felt that a defender or prospector may be more appropriate considering its chosen domain and the current state of industry development. Competitors of Firm C recognized both the weakly articulated strategy and a structure improperly linked to that strategy. An executive at a competing firm said of Firm C: "It's widely believed that their situation is a mess. But with their placement of assets, if they ever get their act together internally, they'll be a power to be reckoned with in this industry."

SEGMENTATION STRATEGY HYPOTHESES

The second group of hypotheses examined dealt with approaches to market segmentation strategy conducted by each of the Type I assessed firms. Subjects were asked to describe segmentation criteria, their approach to clustering customers (by market needs or core business strengths), and the perceived effectiveness of such segmentation approaches. Responses to these issues are summarized in Table 13.

Firm	Type I	Segmentation Approach	Effective
A	Analyzer	market driven	Yes
B	Prospector	market-driven	Unsure
C	Reactor	core strength-driven	Unsure
D	Analyzer	core strength-driven	Unsure
E	Defender	core strength-driven	Yes
F	Defender	core strength-driven	Yes
G	Prospector	core strength-driven	Yes
H	Prospector	core strength-driven	Unsure
I	Prospector	dual approach	Yes
J	Analyzer	core strength-driven	Yes

Table 13
Summary of Segmentation Approaches (Type I Assessment)

The first of these four hypotheses dealt with prospector type firms:

H_{2A}: Prospector provider firms will create product/service bundles which are market-driven.

This hypothesis was not supported. Four firms (B, G, H, and I) were identified as prospectors. Only Firm B pursued a market-driven segmentation approach, and this firm was unsure of its effectiveness. Firm I pursued a dual approach, and was convinced that such approach was a key success factor in its market development. Firms G and H pursued core strength-driven approaches to segmentation. Firm G, while fitting the descriptive criteria of a prospector, expressed the following attitude toward market-driven segmentation strategies: "We can't be all things to all people, and we can't continue to build unique systems (due to the costs involved)." The subject at Firm G was satisfied with his approach to segmentation. At Firm H, the subject was unsure of the appropriateness of such a core strength-driven approach, but was encouraged by a year of rapid growth in sales. While sales increases and profitability were good, he was concerned that some 30% of his sales came opportunistically from outside his desired domain. This lead to his uncertainty in assessing the segmentation strategy's appropriateness.

At this early stage of industry development, many firms have taken an opportunistic approach to business development. Many segmentation strategies studied have been weakly articulated. Many of the interview subjects expressed perceptions of "more business than we can deal with," permitting a fair degree of success with weakly articulated segmentation strategies. If additional information regarding the number and types of criteria used in segmenting markets were included, the analysis was clarified slightly. Firm B used an extended list of segmentation criteria beyond its domain definition including industry type, geography, and the synergistic fit between industry and geography. Firm G had restricted its business to a tightly defended niche, and actually was dominant in a single industry type. Firm H professed to have "only the vaguest notions" of what segments exist. Thus, the more elaborately detailed segmentation strategies, the more likely a firm was to have a market-driven approach.

The second hypothesis dealt with defender type firms:

H_{2B}: Defender provider firms will create product/service bundles which are extensions of their core business strengths.

This hypothesis was supported. Defender firms (E and F) both used core strength-driven approaches to market segmentation. Firm E was a spin-off of a major capital equipment manufacturer. It had very tightly defined its domain, and felt its segmentation approach had been successful: "We're especially well matched in some segments we've defined, particularly leveraged buyouts and new startups." Firm F was a wholly-owned subsidiary of a major transportation carrier. It also had tightly limited its domain to automobile assembly operations. This narrow domain definition and resultant segmentation strategy was believed by the interview subject to have created barriers to entry for potential competitors. This is a classic example of a defender "niche" approach.

The third hypothesis dealt with analyzer type firms:

H_{2C}: Analyzer provider firms will pursue a dual strategy of building on core business strengths while developing new market-driven products.

This hypothesis was not supported. Analyzer firms (A, D, and J) have each pursued singular approaches to segmentation strategy. Firm A used a market driven approach, segmenting by size, industry type, and product type. The subject at Firm A said that he felt it was too early in the industry's development to segment more narrowly. Firm A had few major clients, and felt it important to remain market driven to follow opportunities. In segmentation strategy, Firm A behaved more like a prospector than an analyzer.

Firms D and J used core strength-driven approaches to segmentation. Firm D had segmented fairly tightly by industry type, attempting to match segments to its core operating strengths. Firm D also had examined and undertaken opportunities tangential to its desired segments. This behavior was expected of analyzer firms. Firm J professed to have no segmentation strategy beyond its domain definition. While expressing some desired firm size criteria for clients, the subject from Firm J believed that at this early stage of industry development, a formal segmentation strategy was unnecessary. He stated that Firm J has never lost a proposed contract to a competitor. Potential clients which have declined have made the decision to keep logistics functions internal to the firm. Both firms D and J approached segmentation more like defender firms. This is consistent with the dual approach of analyzers. Their early approaches have focused on matching customers to core strengths.

The fourth hypothesis dealt with reactor type firms:

H_{2D}: Reactor provider firms will fail to match their product/service bundles with the needs of the marketplace.

This hypothesis was supported. Firm C (the sole reactor in this research) has used a core strength-driven approach to segmentation strategy. Firm C has grown dramatically through acquisitions. "Our acquisitions have put us into certain industries, and we're still sorting that out -- deciding which skills and resources are most transferrable." The subject expressed the belief that Firm C must become more specialized and focused around an industry type. He saw Firm C in a transition from a market-driven approach to a core strength-driven approach; such a transition was believed to be important to survival. "Our weakest link has been our ability to match our capabilities to our customers," he said. He expressed the opinion that his firm's poorly focused segmentation strategy had stymied market development.

TACTICAL HYPOTHESES

The final group of hypotheses examined dealt with the creation of service packages, their pricing, and sales process approaches used by each Type I assessed firm. Two bundling types were discovered in this research; all firms used either pure bundles, mixed-joint bundling, or a combination of these two approaches. No mixed-leader or debundled approaches were found. Firms used both market and asset-based pricing strategies, and three firms were found to use a combination of these two approaches. In the area of sales process approach, all ten firms were found to have used a consulting approach focusing on problem solving, rather than a "selling approach." The results for all ten firms are summarized in Table 14. As all ten firms used a consulting approach, this information is not included in the table.

Firm	Type I	Bundling	Pricing
A	Analyzer	Pure	Market
B	Prospector	Pure/Mixed	Market
C	Reactor	Pure	Market/Asset
D	Analyzer	Pure/Mixed	Asset
E	Defender	Pure	Market/Asset
F	Defender	Pure/Mixed	Asset
G	Prospector	Pure/Mixed	Market
H	Prospector	Mixed	Market/Asset
I	Prospector	Mixed	Market
J	Analyzer	Mixed	Market

Table 14
Summary of Tactical Approaches (Type I Assessment)

The first hypothesis dealt with prospector type firms:

H_{3A}: Prospector provider firms will develop pure and mixed bundles, will use market-based pricing, and a "consulting" approach.

This hypothesis was partially supported. All four of the prospector firms (B, G, H, and I) used a consulting approach in sales. Two of the firms (B and G) used both pure and mixed-joint bundling approaches in creating product/service packages. Two of the firms (H and I) used mixed-joint bundling. Each of these firms presented two or three possible solution packages to the client to choose from. However, subjects at both of these firms stated that they always had a preferred solution in mind, and would attempt to persuade the client in that direction. Three of the prospector firms used market-based approaches to pricing (Firms B, G, and I). Firm H used a dual approach that was opportunistic, and based on system capacity. As the subject from Firm H explained: "If we're full, the prices will be based on achieving target margins. If we're empty, we'll price by comparing our costs to market prices." The undisciplined and "entrepreneurial" nature of Firm H's approach to the industry was consistent with this opportunism in pricing.

The second hypothesis dealt with defender type firms:

H_{3B}: Defender provider firms will develop mixed bundles, will use asset-based pricing, and a "selling" approach.

This hypothesis was not supported. The defender firms (E and F) each used predominantly pure bundle approaches. Firm F strongly preferred to pure bundle, but created mixed bundle alternatives if the client was perceived to want such. From a bundling perspective, both of these firms were predominantly pure bundlers. Firm E used both market and asset-based approaches to pricing. The subject from Firm E said that prices tend to be based on perceived value, although cost-based concerns were the prime determinants of price. Firm F used a "cost-plus" approach to pricing; however prices did not exceed what were believed to be current market prices.

Both Firms E and F used consulting approaches. This may have been due to the "conceptual" nature of the sales effort. Early in industry development, sales approaches focus on primary demand stimulation. In the logistics integrated services industry, a great deal of effort has gone into selling the concept of outsourcing. This, combined with the highly technical nature of the services sold, seems to have dictated a consulting approach to sales.

The third hypothesis dealt with analyzer type firms:

H_{3C}: Analyzer provider firms will have the broadest approach to product/service bundling, will use both asset-based and market-based pricing, and a "selling" approach.

This hypothesis was not supported. The analyzer firms (A, D, and J) offered all three approaches to bundling. Firm A offered pure bundles, Firm J mixed-joint bundles, and Firm D a combination of pure and mixed-joint bundles. While there was diversity across firms, it was expected that within a single firm a dual approach to bundling would be the most common. It is possible that the early stage of industry development and the perception that most providers hold that "there's more business than we can handle" lead to these seemingly disparate approaches. Firms have been content to opportunistically repeat prior successful sales approaches. In the area of bundling, Firm A has been successful focusing on pure bundles. While the subject expressed reluctance to offer mixed bundles, he may be inclined to do so as the industry evolves and growth dictates differentiation through selective demand stimulation. A similar case may be made for the disparate approaches to pricing found among analyzer firms. Pricing tactics may be dictated simply by prior successes. All analyzer firms used a consulting approach.

The fourth hypothesis dealt with reactor type firms:

H_{3D}: Reactor provider firms will offer pure bundles, asset-based pricing, and a "selling" approach.

This hypothesis was partially supported. The reactor Firm C did develop only pure bundled service packages. The firm used a dual pricing strategy that utilized both market and asset-based components. The pricing strategy at Firm C was one of setting a target return-on-investment, and pricing accordingly. If, however, it was believed that market-based pricing would deliver a client with potential for future development, Firm C accepted a lower than target return. The predominant emphasis in such a strategy was asset-based, though concessions were made in pricing to market development. As discussed earlier, all firms used a consulting approach o

s

a

e

h

c

a

a

c

g

s

T

a

a

a

t

a

i

over a selling approach.

TESTING HYPOTHESES WITH TYPE II ASSESSMENTS

As the previous discussion indicates, the Type I strategic archetype assessments provided somewhat inconsistent associations with theoretically related constructs. Perhaps expert assessment of strategic archetype, regardless of the high degree of inter-assessor reliability, is a flawed operationalization of the Miles and Snow (1978) strategic archetype typology. It is possible to define the strategic archetype based on the adaptive problem solving focus of the organization. How would the results of testing hypotheses groups two and three vary under the two assessments? This section re-analyzes groups two and three hypotheses under the Type II assessments. Recall that according to the Type II assessments, a domain APS focus defined a prospector archetype, an engineering APS focus defined a defender archetype, and an administrative APS focus defined an analyzer type. Reactor archetypes suffer from a mismatch of strategy and structure, outmoded strategy and/or structure, or an imperfectly articulated strategy.

SEGMENTATION STRATEGY HYPOTHESES

The second group of hypotheses dealt with approaches to market segmentation strategy conducted by each of the Type II assessed firms. Subjects were asked to describe segmentation criteria, their approach to clustering customers (by market needs or core business strengths), and the perceived effectiveness of such segmentation approaches. Responses to these issues are summarized in Table 15.

Firm	Type II	Segmentation	Effective
A	Analyzer	market driven	Yes
B	Defender	market-driven	Unsure
C	Prospector	core strength-driven	Unsure
D	Analyzer	core strength-driven	Unsure
E	Defender	core strength-driven	Yes
F	Defender	core strength-driven	Yes
G	Prospector	core strength-driven	Yes
H	Defender	core strength-driven	Unsure
I	Analyzer	dual approach	Yes
J	Defender	core strength-driven	Yes

Table 15
Summary of Segmentation Approaches (Type II Assessment)

The first of these four hypotheses dealt with prospector type firms:

H_{2A}: Prospector provider firms will create product/service bundles which are market-driven.

This hypothesis was not supported. Prospector firms defined under the Type II assessment (C and G) both used core strength-driven approaches to segmentation strategy. Both of these firms used industry type as their primary segmentation criteria. Use of industry type as a segmentation criteria indicated a desire on the part of these firms to deeply penetrate their chosen markets, a characteristic more similar to the defender than to the prospector. As the one firm undergoing significant internal turmoil, Firm C expressed a desire to move from core strength-driven to a market-driven segmentation approach, though was unsure how this might be implemented or benefit the firm. In the case of Firm C, the subject felt that the choice of domain was inappropriate given recent structural changes in the organization due to acquisitions. He said "Our successes (in this domain) have been limited, and I'm not sure if our (original) definition (of domain) remains valid." This unusual focus on domain masked the true character of Firm C. When Firm C was removed from consideration due to a possibly dysfunctional type, the hypothesis remained unsupported by the evidence from Firm G.

The second hypothesis dealt with defender type firms:

H_{2B}: Defender provider firms will create product/service bundles which are extensions of their core business strengths.

i
B
s
o
c

c
a
s
m
c
p
j
c
a
j

This hypothesis was generally supported. Five firms were identified as defenders under the Type II assessment (firms B, E, F, H, and J). All but one of these firms used core strength-driven approaches to segmentation strategy, and three of the five were generally convinced of the appropriateness of their approaches.

While the executive interviewed at Firm B was quite convincing in his expressed desire to use market-driven approaches to segmentation, his assessment of his firm's success with its segmentation approach was less certain. The market-driven approach was considered successful based on the overall profitability of Firm B. The executive viewed market potential as virtually unlimited, and did not see other integrated services providers as direct competitors. As the competition in the market develops, Firm B may change its approach to segmentation strategy; thus, Firm B may be inappropriately classified under the Type II assessment.

The third hypothesis dealt with analyzer type firms:

H_{2c}: Analyzer provider firms will pursue a dual strategy of building on core business strengths while developing new market-driven products.

This hypothesis was partially supported. Three firms (A, D, and I) were assessed as analyzers under the Type II criteria. One of these firms pursued a dual approach to segmentation strategy. Firm A used a market-driven approach and was convinced of the appropriateness of this approach under current market conditions. Firm D used a core strength-driven approach, but was unsure of its appropriateness. Firm D had taken this approach because it believed the market was still underdeveloped, and because "we don't know what else to do." Firm D focused on a single industry type, matched to its core operating strengths. The executive interviewed at Firm D indicated a willingness to change this approach should markets evolve and his firm broaden its segmentation criteria.

The fourth hypothesis dealt with reactor type firms:

H_{2D}: Reactor provider firms will fail to match their product/service bundles with the needs of the marketplace.

No reactor firms were identified under the Type II assessment; thus, it was not possible to test this hypothesis.

TACTICAL HYPOTHESES

The third group of hypotheses dealt with the creation of service packages, their pricing, and sales process approaches used by each Type II assessed firm. As discussed earlier, only two bundling types were discovered in this research. All firms used either pure bundles, mixed-joint bundling, or a combination of these two approaches. Firms used both market and asset-based pricing strategies, and three firms were found to use a combination of these two approaches. In the area of sales process approach, all ten firms were found to have used a consulting approach. This rendered analysis based on sales process approach moot. The results for all ten firms are summarized in Table 16.

Firm	Type II	Bundling	Pricing
A	Analyzer	Pure	Market
B	Defender	Pure/Mixed	Market
C	Prospector	Pure	Market/Asset
D	Analyzer	Pure/Mixed	Asset
E	Defender	Pure	Market/Asset
F	Defender	Pure/Mixed	Asset
G	Prospector	Pure/Mixed	Market
H	Defender	Mixed	Market/Asset
I	Analyzer	Mixed	Market
J	Defender	Mixed	Market

Table 16
Summary of Tactical Approaches (Type II Assessment)

The first hypothesis dealt with prospector type firms:

H_{3A}: Prospector provider firms will develop pure and mixed bundles, will use market-based pricing, and a "consulting" approach.

This hypothesis was generally supported. Two firms were identified as prospectors under the Type II assessment (firms C and G). Firm C created only pure bundles and took both market and asset-based approaches to pricing, partially supporting the hypothesis. Firm G created both pure and mixed-joint bundles, and used market-based pricing. Both firms used a consulting approach in sales efforts.

The second hypothesis dealt with defender type firms:

H_{3B}: Defender provider firms will develop mixed bundles, will use asset-based pricing, and a "selling" approach.

This hypothesis was partially supported. Five firms were identified under the Type II assessment as defenders (firms B, E, F, H, and J). Three of the five firms created both pure and mixed-joint bundles, while two of the firms created mixed-joint bundles only. While only two of the firms used exclusively asset-based pricing, Firm E used a combination of market and asset-based pricing. Two of the firms used market-based pricing exclusively. All of the firms used a consulting approach in sales efforts.

The third hypothesis dealt with analyzer type firms:

H_{3C}: Analyzer provider firms will have the broadest approach to product/service bundling, will use both asset-based and market-based pricing, and a "selling" approach.

This hypothesis was not supported. Three firms (A, D, and I) were identified as analyzers using the Type II assessment. Firm A created only pure bundles and used market-based pricing exclusively. Firm D created both pure and mixed-joint bundles, but used only asset-based pricing. Firm I created mixed-joint bundles, and used only market-based pricing. All of the firms used a consulting approach in their sales efforts.

The fourth hypothesis dealt with reactor type firms:

H_{3D}: Reactor provider firms will offer pure bundles, asset-based pricing, and a "selling" approach.

No reactor firms were identified under the Type II assessment; thus, it was not possible to test this hypothesis.

TESTING HYPOTHESES WITH TYPE III ASSESSMENTS

Both Type I and Type II strategic archetype assessments provided somewhat inconsistent associations with theoretically related constructs. It is possible to reassess the strategic archetype based on a firm's degree of centralization, formalization, and complexity. How would such a new assessment change the outcomes of testing groups two and three hypotheses? This section re-analyzes groups two and three hypotheses under the Type III assessment.

SEGMENTATION STRATEGY HYPOTHESES

The second group of hypotheses dealt with approaches to market segmentation strategy conducted by each of the Type III assessed firms. Subjects were asked to describe segmentation criteria, their approach to clustering customers, and the perceived effectiveness of such segmentation approaches. Responses to these issues are summarized in Table 17.

E

A
B
C
D
E
F
G
H
I
J

t

a

a

s

a

(

u

e

a

Firm	Type III	Segmentation	Effective
A	Defender	market driven	Yes
B	Prospector	market-driven	Unsure
C	Analyzer	core strength-driven	Unsure
D	Defender	core strength-driven	Unsure
E	Analyzer	core strength-driven	Yes
F	Defender	core strength-driven	Yes
G	Defender	core strength-driven	Yes
H	Defender	core strength-driven	Unsure
I	Prospector	dual approach	Yes
J	Analyzer	core strength-driven	Yes

Table 17
Summary of Segmentation Approaches (Type III Assessment)

The first of these four hypotheses dealt with prospector type firms:

H_{2A}: Prospector provider firms will create product/service bundles which are market-driven.

This hypothesis was generally supported. Two firms (B and I) were identified as prospectors under the Type III assessment. Firm B used a market-driven approach to segmentation. While unsure of the appropriateness of such an approach, the firm was satisfied with its results. Firm I deliberately chose to pursue a dual approach to segmentation, using both market and core strength-driven strategies. The executive interviewed at Firm I believed that the dual approach "gives us the best of both worlds."

The second hypothesis dealt with defender type firms:

H_{2B}: Defender provider firms will create product/service bundles which are extensions of their core business strengths.

This hypothesis was generally supported. Five firms (A, D, F, G, and H) were identified under the Type III assessment as defenders. Only one firm used a market-driven approach to segmentation strategy. The remaining four firms all used core strength-driven approaches to segmentation. Three of these firms used industry type as a primary segmentation criteria, attempting to match customers to a core operating strength developed in service to a single industry. These are classic market penetration strategies, typical of the defender type.

The third hypothesis dealt with analyzer type firms:

H_{2C}: Analyzer provider firms will pursue a dual strategy of building on core business strengths while developing new market-driven products.

This hypothesis was not supported. Three firms (C, E, and J) were identified as analyzers under the Type III assessment. All used core strength-driven approaches to market segmentation, and two of the firms were quite pleased with the results they obtained from those strategies. Only Firm C was unsure of the appropriateness of its segmentation approach. The executive interviewed at Firm C said his firm was attempting to move toward more market-based approaches to segmentation. He believed that market-based approaches were more appropriate for Firm C under its new reorganization. He did not feel a dual approach was appropriate.

The fourth hypothesis dealt with reactor type firms:

> H_{2D}: Reactor provider firms will fail to match their product/service bundles with the needs of the marketplace.

No reactor firms were identified under the Type III assessment; thus, it was not possible to test this hypothesis.

TACTICAL HYPOTHESES

The third group of hypotheses examined dealt with the creation of service packages, their pricing, and sales process approaches used by each Type III assessed firm. All firms used either pure bundles, mixed-joint bundling, or a combination of these two approaches. Firms used both market and asset-based pricing strategies, and three firms were found to use a combination of these two approaches. In the area of sales process approach, all ten firms were found to have used a consulting approach. This rendered analysis on sales process approach moot. The results for all ten firms are summarized in Table 18.

Firm	Type III	Bundling	Pricing
A	Defender	Pure	Market
B	Prospector	Pure/Mixed	Market
C	Analyzer	Pure	Market/Asset
D	Defender	Pure/Mixed	Asset
E	Analyzer	Pure	Market/Asset
F	Defender	Pure/Mixed	Asset
G	Defender	Pure/Mixed	Market
H	Defender	Mixed	Market/Asset
I	Prospector	Mixed	Market
J	Analyzer	Mixed	Market

Table 18
Summary of Tactical Approaches (Type III Assessment)

The first hypothesis dealt with prospector type firms:

H_{3A}: Prospector provider firms will develop pure and mixed bundles, will use market-based pricing, and a "consulting" approach.

This hypothesis was generally supported. Two firms (B and I) were identified as prospectors under the Type III assessment. Firm B created both pure and mixed-joint bundles, and used market-based pricing. Firm I created mixed-joint bundles. However, in presentation of these bundles to the client, the sales effort focused on a preferred solution. This was effectively a push for the sale of a pure bundle. Firm I also used market-based pricing. Both firms used a consulting approach in their sales efforts.

The second hypothesis dealt with defender type firms:

H_{3B}: Defender provider firms will develop mixed bundles, will use asset-based pricing, and a "selling" approach.

This hypothesis was partially supported. Five firms (A, D, F, G, and H) were identified as defenders under the Type III assessment. Four of the five firms used mixed-joint bundling, though only one of them exclusively. Firm A created only pure bundles. Three of the five firms used asset-based or dual approaches to pricing, while firms A and G used market-based pricing exclusively. All of the firms used a consulting approach in their sales efforts.

The third hypothesis dealt with analyzer type firms:

H_{3C}: Analyzer provider firms will have the broadest approach to product/service bundling, will use both asset-based and market-based pricing, and a "selling" approach.

This hypothesis was not supported. Three firms (C, E, and J) were identified as analyzers using the Type III assessment. None of these firms pursued a dual approach to bundling. Two firms (C and E) created only pure bundles, and

Firm J created only mixed-joint bundles. Two of the firms (C and E) used both market and asset-based pricing tactics, and Firm J used only market-based pricing. All three of the firms used a consulting approach in their sales efforts.

The fourth hypothesis dealt with reactor type firms:

H_{3D}: Reactor provider firms will offer pure bundles, asset-based pricing, and a "selling" approach.

No reactor firms were identified under the Type III assessment; thus, it was not possible to test this hypothesis.

SUMMARY OF HYPOTHESES TESTING

The twelve hypotheses were tested under three different strategic archetype assessments. Type I assessments were arrived at by an expert opinion rendered during the interview period by the researcher and the person being interviewed. Type II assessments were based on the adaptive problem solving focus of the firm. Type III assessments were based on measures of the organizational characteristics of centralization, formalization, and complexity. The results of this hypotheses testing are summarized in Table 19.

Hypothesis	Assessments: Type I	Type II	Type III
H_{1A}	not supported	*	*
H_{1B}	partial support	*	*
H_{1C}	partial support	*	*
H_{1D}	supported	*	*
H_{2A}	not supported	not supported	supported
H_{2B}	supported	supported	supported
H_{2C}	not supported	partial support	not supported
H_{2D}	supported	**	**
H_{3A}	partial support	supported	supported
H_{3B}	not supported	partial support	partial support
H_{3C}	not supported	not supported	not supported
H_{3D}	partial support	**	**

* Hypothesis not tested under this archetype.
** No reactor examples found.

Table 19
Summary of Hypotheses Testing

The conclusions and limitations of this research are discussed in Chapter V, as well as recommendations for future research.

CHAPTER V

CONCLUSIONS

This final chapter begins with discussion and conclusions based on the hypotheses testing, then turns to the theoretical and managerial implications. The chapter concludes with a discussion of research limitations, and suggestions for future development.

DISCUSSION AND CONCLUSIONS ON HYPOTHESES

The conceptual model for this research (see page 9) posits the following of relationships:

1) the adaptive problem solving focus of a firm is associated with strategic archetype.

2) organizational characteristics of centralization, formalization, and complexity are associated with a firm's strategic archetype.

3) the strategic archetype of a firm is associated with segmentation strategy.

4) the strategic archetype of a firm is associated with tactical components including bundling, pricing, and sales process approach.

RELATIONSHIPS ONE AND TWO

> The adaptive problem solving focus of a firm is associated with strategic archetype.
>
> Organizational characteristics of centralization, formalization, and complexity are associated with a firm's strategic archetype.

The first two relationships were examined in the group one hypotheses. This first group of hypotheses dealt with the interrelationship among adaptive problem solving focus, centralization, formalization, complexity, and the Type I assessment of strategic archetype. The Type I assessment was subjectively determined by the researcher and the interview subject. The first group of hypotheses was designed to examine the logical validity of the Miles and Snow (1978) typology. For three of the strategic archetypes (defender, analyzer, and reactor), hypothesis testing partially supported the relationship between adaptive problem solving focus and the resultant Type I archetype.

Defenders

Both of the Type I assessed defender firms interviewed focused on engineering adaptive problem solving. Consistent with the theory proposed by Miles and Snow (1978), the preoccupation with engineering was symptomatic of the defender's desire to fully implement a single core technology.

Th
pe
a
fa
ac
wh
te
or
er
ar
a

hi
in
pr
er

tw
te
de
or
ma
in

me
re

The focus on such a core technological strength permits deep penetration of a relatively narrow market domain which offers a high degree of competitive protection. The domain decisions faced by the two defender firms were relatively simple. The administrative structural problem solutions were dictated whatever level of support was necessary to facilitate technology development. Administrative structures in defender organizations are created to maintain a stable and efficient environment. This ensures that the maximum economies of scale are generated through a full deployment of core technology in a narrow domain.

It is notable that both of the Type I defender firms were highly formalized. The presence of rules and specified roles in this type of an organization enhances the administrative process. Thus, a continuing focus on maintaining engineering efficiency is sustained.

The medium to high degree of centralization found in the two defender organizations is expected for firms with stable technologies. Management is responsible for restricting deviation from planned activity. In a centralized organization, this is easy to accomplish with a top-down management style. Not surprisingly, strategic decision-making in the defender firms was accomplished by one or two people.

Complexity in the Type I defender firms was found to be medium to high. This was opposite the hypothesized relationship. According to Miles and Snow (1978), "Defenders

ar
fo
be
45
wa
cu
st
ex
ha
in
se
ac
cu

ex
in
in
re
cu
st
re
or
in

ma
Sn

are able to manage ... with uncomplicated and inexpensive forms of coordination. These types of coordination can only be used in situations which are stable and repetitive ..." (p. 45). It is speculated that complexity in these defender firms was found to be medium to high for two reasons. First, the customized nature of the service being sold dictates standardization only at a lower, system component level. For example, a product-oriented firm may be able to standardize handling of order entry information, or how it tracks inventory data. However, the way in which the integrated service provider combines and interfaces these operations to accommodate a customer's system results in an inherently customized product.

The second reason that complexity may be higher than expected in these defender firms is the early stage of industry development. Lack of maturity created a situation in which customers have disparate requirements and different reasons for outsourcing logistics requirements. Such varied customer demand requirements create a complex internal structure in a defender firm to accommodate customers responsively. The traditional definition of complexity in organizations may simply not be applicable in a service industry at this stage of industry and market development.

In summary, for defender firms pursuing narrowly defined market domains with a single core technology, the Miles and Snow (1978) archetype is generally applicable. In this

r

ex

Sr

Bo

hy

A

an

ac

tw

si

st

pl

re

Ma

st

si

de

de

so

an

de

en

ma

research, the two firms categorized as Type I defenders exhibited most of the characteristics specified by Miles and Snow. The notable exception was organizational complexity. Both firms studied had medium to high instead of the hypothesized low level of complexity.

Analyzers

Three of the interview firms were assessed as Type I analyzers. Two analyzer firms exhibited administrative adaptive problem solving focus in strategy formation. These two firms focused on building core strength while simultaneously developing new technologies. These two strategic approaches required intensive and comprehensive planning systems. This dual concentration of planning resources causes a clear split in the organization's focus. Managers are required to create differential processes and structures to permit continued use of core technology while simultaneously introducing new technologies. The inherent demands of managing such a split are substantial. These demands are addressed by focusing on administrative problem solving in strategy formulation.

Centralization and formalization in Type I assessed analyzer firms was medium or low. This is consistent with the demand placed on managers simultaneously operating in a split environment. Senior management expressed some difficulty in managing different control systems required within the analyzer organization. Routinized decision-making was fairly decentralized with middle managers being given broad operating authority. This decentralization reduces senior management requirements to deal with minutiae. Minimizing the organization's rules base contributes to flexibility in each of the strategic approaches.

Two of the three Type I assessed analyzers had medium to high levels of organizational complexity. This is consistent with the Miles and Snow (1978) archetype. Managing a split approach necessitates complex organizational interaction. Within the core focus of the business, control mechanisms are simple. Control mechanisms become more complex as new technologies are pursued in less stable areas. A high level of organizational complexity is needed to successfully manage both simple and complex control systems.

For analyzer firms pursuing a dual market development approach, the Miles and Snow (1978) archetype is applicable. Most of the analyzer characteristics specified by Miles and Snow were identified.

Reactor

The Miles and Snow typology was useful (in a diagnostic sense) to describe the single Type I assessed reactor firm. The reactor firm is an organization in transition. The executive interviewed categorized his firm as currently a reactor, which he felt was trying to become an analyzer.

H

a

s

r

h

o

i

d

f

o

r

(

r

o

t

P

as

be

ch

ar

co

However, he felt the firm should be trying to position itself as a prospector or a defender.

This specific firm had a mismatched strategy and structure. This mismatch resulted from a recent reorganization that changed senior management. The firm also had a weakly articulated strategy. As a result, organizational centralization, formalization, and complexity in the firm were in flux. While the expressed desired direction of the new management is decentralization and less formalization, which is characteristic of the analyzer, the organization has become inherently complex in an effort to remain an effective competitor.

For three of the strategic archetypes, the Miles and Snow (1978) typology provided a useful way to examine the relationship between strategy development process and organizational characteristics. For defenders, analyzers, and the reactor, the Type I assessment was generally supported.

Prospectors

The applicability of the Miles and Snow typology was not as clear for Type I assessed prospector firms. The links between adaptive problem solving focus, organizational characteristics, and the resultant strategy were not supported and remain elusive.

According to Miles and Snow (1978), the primary competitive capability of the prospector is "finding and exploiting new product and market opportunities" (p. 55). While the Type I prospectors clearly were pursuing such a course, they did not share the hypothesized domain adaptive problem solving focus. For organizations which thrive on perceived or manipulated changes, one would expect to find a domain focus. Examples of each of the three adaptive problem solving focuses were identified in the Type I assessed prospectors.

One possibility is that prospector firms involved in a new industry may not have developed a coherent approach to strategy development. The Type I prospector firms were entrepreneurial. These prospector firms have grown from small services providers through the acquisition of other businesses while retaining the singular strategic mindset of an entrepreneur. Two of the prospector firms have parent organizations which have directed that their management focus remain flexible and opportunistic. Two of the Type I prospector firms were among the youngest organizations studied in this new industry. In contrast, the defenders, analyzers, and reactors were all firms with more established track records, albeit some had less than two years operating experience with key clients.

The relationship of organizational centralization, formalization, and complexity for Type I prospector firms is not clear. Complexity for prospector firms was medium in intensity. Formalization was low to medium, which was expected in flexible entrepreneurial firms. Low, medium, and high levels of centralization were identified in the three prospectors. The organizational and structural associations of strategy with complexity presented the greatest difficulty in assessment for Type I prospectors.

Conclusions -- Relationships One and Two

The Miles and Snow (1978) adaptive problem solving process and the strategic Type I archetypes proved most descriptive and predictive for defenders, analyzers, and reactors. While the defenders and analyzers did not precisely fit the hypothesized relationships, the general level of agreement found for the Type I assessment was supportive of the Miles and Snow typology. For the sole dysfunctional reactor archetype, the Type I assessed firm was consistent with Miles and Snow.

The variables of centralization, formalization, and complexity developed by Mintzberg and elaborated by Fredrickson proved useful in describing defenders, analyzers, and reactors. Defender firms which focus on engineering adaptive problem solving tend to be more formalized and centralized than other organizations. Complexity was not a useful criteria for examining defenders. Analyzer firms were less formalized and treated administrative adaptive problem solving as a strategic focus. Centralization in such organizations was less visible and complexity higher than among other firms studied. The complexity of organizations with split focuses has long standing been recognition in the literature. Such firms typically resort to unorthodox methods to link disparate parts of their organizations. One means observed was the use of internal information systems and electronic mail. The services provided by these firms tend to be "high-tech," and the management follows a similar technology-intense strategy internally.

In the case of the prospector however, the Type I assessment was quite poor. For reasons stated previously, the Type I prospector is inconsistent with Miles and Snow's description. This inconsistency introduced problems in applying the Miles and Snow strategic archetypes to a new industry involving a number of Type I prospector firms. Other means of describing and predicting the strategic behavior of Type I prospectors are required. Two alternate means of assessing the strategic archetype of the firm were considered. Type II assessments were based on the firm's adaptive problem solving focus. Type III assessments were based on levels of organizational centralization, formalization, and complexity as hypothesized by Miles and Snow. These results are presented in the next two sections.

R

h
a
W
c
a
s
m
g
p
l
t
a

D

s
s
I
c
a

RELATIONSHIP THREE

> The strategic archetype of a firm is associated with segmentation strategy.

The third of the posited relationships and the group two hypotheses dealt with the association between strategic archetype and approaches to market segmentation strategy. While the Type I archetype assessments were generally consistent with the relationships posited by Miles and Snow, attempts to link these assessments with approaches to segmentation strategy were less successful. Two additional means of assessing strategic archetype were used to test the group two hypotheses: 1) Type II archetypes based on adaptive problem solving focus; and 2) Type III archetypes based on levels of centralization, formalization and complexity. Thus, the third relationship was tested using three different assessments of archetype.

Defenders

All three of the archetype assessments led to general support of the hypothesis linking archetype and approach to segmentation strategy. For defenders, expert assessment (Type I), adaptive problem solving focus (Type II), and levels of centralization, formalization, and complexity (Type III) were all associated with a consistent approach to segmentation strategy. While different firms were categorized as defenders under the three assessments, the common characteristic was a focus on core strength approach to segmentation strategy. This focus on a core strength is linked to expert assessment, an engineering adaptive problem solving focus, relatively high levels of centralization, moderate levels of formalization, and generally lower levels of complexity.

Analyzers

Harmonious agreement across assessments was not the case for analyzers. The Type I expert assessment of archetype was not associated with the hypothesized approach to segmentation strategy. The Type III assessment based on organizational characteristics was similarly not associated with the hypothesized expressed approach to segmentation strategy. Only Type II assessment based on adaptive problem solving identified a link between strategic archetype and approach to segmentation strategy. Firms which focus on administrative adaptive problem solving tend to pursue dual approaches to segmentation strategy. Such a dual approach to segmentation is theoretically consistent with the approach these firms follow in overall strategy. A firm's speculative market development is hedged by also developing core strengths. This is reflected in the marketplace by both market-based and core-strength approaches to segmentation.

Reactors

For the dysfunctional reactor, clear associations were found to support the hypothesized relationship under the Type I archetype assessment. Again, the Miles and Snow typology proved useful in a diagnostic sense with reactor firms. The failure to link product/service bundles with the needs of the marketplace results from the inability to define domain, create engineering solutions, structure an appropriate organization, and match these to market needs. This was clearly the case for firm identified as a reactor.

The Type II and Type III assessments failed to identify any reactor firms. Defining a firm by its stated adaptive problem solving focus or by the observed levels of centralization, formalization, and complexity failed to identify a reactor category. Thus, the segmentation strategy hypothesis for reactor firms was not tested for Type II and Type III archetypes.

Prospectors

For prospectors the association between the three archetype typologies and approaches to segmentation strategy was not consistent. Expert assessment (Type I) failed to be associated with approach to segmentation strategy. The adaptive problem solving focus (Type II) was also not consistently associated with one segmentation strategy approach. When the organizational characteristics (Type III) w

i

c

c

s

c

c

r

r

c

w

C

f

s

w

r

u

s

a

s

s

f

s

were considered, an association with segmentation approach was identified.

Using the Type III assessment, low to medium levels of centralization and formalization and medium to high levels of complexity are associated with market-based approaches to segmentation strategy. This is consistent with the creation of an organization which is flexible and responsive to market changes. Successful prospector firms must organize responsively to pursue the market-based segmentation. If a mismatch were to occur between levels of organizational characteristics and segmentation strategy approach, a firm would be more accurately categorized a reactor.

Conclusions -- Relationship Three

No single archetype assessment is adequate to relate a firm's archetype with a specific approach to segmentation strategy. Expert assessment (Type I) is generally associated with a specific segmentation strategy for defenders and reactors. The adaptive problem solving focus (Type II) is useful in linking defenders to a specific segmentation strategy. Levels of organizational characteristics (Type III) are useful in linking both prospectors and defenders to segmentation approaches. The link between analyzers and segmentation was the weakest. The adaptive problem solving focus (Type II) provides some tenuous links to segmentation strategy approaches.

RELATIONSHIP FOUR

> The strategic archetype of a firm is associated with tactical components including bundling, pricing, and sales process approach.

The fourth of the posited relationships and the group three hypotheses dealt with the association between strategic archetype and tactical approaches for creating service bundles, pricing, and sales process. All three archetype assessments were evaluated.

All firms studied used a consultation sales approach rendering comparative analyses of this variable moot. The fact that all ten firms studied use a consulting approach is explained by three factors. First is the complex nature of the service package being sold. Second, consultative effort is required to sell a "concept" as well as a specific service package. Third cross-discipline diagnostic problem-solving is required by service providers as part of the sales process. Since all firms used the same sales approach, no further analysis of this variable was warranted.

Defenders

The association between strategic archetype and tactical approach was not clear for defender firms. The Type I assessment was not linked to tactical approach. The Type II and Type III assessments were only partially associated with tactics. Firms having an engineering adaptive problem solving focus generally create mixed-joint service bundles and use asset-based pricing. Firms with medium to high levels of centralization and formalization, and relatively low levels of complexity, also create mixed-joint service bundles and use asset-based pricing. However, exceptions were found under both the Type II and Type III assessments. Thus, the links between archetype and tactical approach are less clear for defenders than for reactors or prospectors.

Analyzers

No clear associations for analyzers were found for any of the archetype typologies and tactical approaches. The Type I assessment was associated with all three approaches to services bundling, and with both pricing alternatives. The Type II assessment was also associated with both pure and mixed-joint approaches to services bundling and with singular approaches to pricing. The Type III assessment was not consistently associated with tactics. Firms with low to medium levels of centralization and formalization and relatively high levels of complexity were not observed using broad approaches to services bundling nor did they pursue alternative pricing approaches. All three methods of determining strategic archetype among analyzers failed to be associated with tactical approach.

E

s

a

p

c

m

s

d

c

a

f

E

b

a

e

T

p

a

w

b

p

s

Reactors

For the reactor, some associations were isolated to support the hypothesized relationship under the Type I archetype assessment. Again, the Miles and Snow typology proved useful for reactor firms. The deliberate creation of only pure bundles indicates some managerial isolation from marketplace demands. The single Type I reactor studied sometimes utilizes a dual approach to pricing. However, its dominant strategy is target return pricing modified by competitive conditions.

The Type II and Type III assessments failed to identify any reactor firms. Thus, the tactical hypothesis for reactor firms was not tested for Type II and Type III archetypes.

Prospectors

In the case of prospectors, good associations were found between all three archetype typologies and the tactical approaches. Expert assessment (Type I) was only partially effective in associating archetype and tactical approach. The Type II assessment, based on adaptive problem solving focus, proved useful for associating archetype with a tactical approach. The domain adaptive problem solving focus of a firm was associated with the creation of both pure and mixed-joint bundles of services coupled with a market-based approach to pricing. This relationship is logical because firms strategically focused on domain issues should be more sensitive to market requirements.

Levels of organizational characteristics (Type III) were also associated with specific tactical approaches. Firms relatively low in centralization and formalization and relatively high in complexity produce both pure and mixed-joint service bundles coupled with market-based pricing. These levels of organizational characteristics are consistent with firms desiring to be responsive to changing market needs.

Conclusions -- Relationship Four

There is a weak association between the strategic archetype under all three assessments and the tactical approach used to create service bundles and pricing. For the prospector archetype, both the Type II and Type III assessments have good associations with tactics. The Type I assessment did not provide a good association. For defenders, the Type II and Type III assessments provide some weak levels of association with the tactics. However, the Type I assessment had no association. For the reactor archetype, the Type I assessment offered limited association with tactics. For the analyzer type, none of the archetype assessments were clearly associated with tactical approach.

THEORETICAL CONTRIBUTIONS

The contributions to understanding business behavior are in four areas: 1) the Miles and Snow strategic archetype typology; 2) organizational characteristics; 3) research methods; and 4) industry development and stage of life cycle.

THE MILES AND SNOW STRATEGIC ARCHETYPE

Under conditions of expert assessment, the Miles and Snow (1978) strategic archetype typology is generally supported by the findings. For the reactor, the Miles and Snow typology is descriptive and can be used diagnostically to understand a firm's inability to link strategy and structure to the marketplace. For the functional defender and analyzer types, the Miles and Snow typology was consistently descriptive. The Miles and Snow typology was not a good fit for describing prospector firms.

Using the expert assessment to associate archetype and segmentation approach was less effective. Defenders and reactors exhibited clear associations, while prospectors and analyzers showed no association. Using the expert assessment to associate archetype with tactical approaches was even less successful. Prospectors and reactors had limited association with tactics. No association was found for defenders and analyzers.

a
r
c
c
c
r

f
a
a
t
b
a
d
e
a
I
c
s

a
a
c
a
T

In an attempt to eliminate the problems related to expert assessment of the archetype, two additional assessments were made. Type II was based on the adaptive problem solving focus of the firm and Type III was based on levels of organizational characteristics of centralization, formalization, and complexity. The segmentation and tactics hypotheses were reexamined under each of the supplemental assessments.

For segmentation approach, much clearer associations were found by using the Type III assessments. Both the prospector and defender firms showed associations with segmentation approach. While analyzer firms showed no association with the Type III assessment, there was a limited association between the Type II assessment and market segmentation approach. The Type II assessment was useful in associating defenders with approach to segmentation. Thus, with the exception of the reactor, the strongest associations between archetype and segmentation approach were found under the Type III assessment. In short, levels of organizational characteristics were associated with approaches to market segmentation strategy.

For tactical approaches, both the Type II and Type III assessments had low levels of association. The Type I expert assessment was weakly linked to tactical approach. In the case of prospector firms, both Type II and Type III assessments were good in associating archetype with tactics. The fit was limited for defender firms under the Type II and

Type III assessments. None of the assessments was valuable in associating analyzer firms and tactics.

Expert assessment is useful in associating strategic posture of an organization with adaptive problem solving focus and levels of centralization, formalization, and complexity. With the exception of reactors, the expert assessment is less useful in association with approaches to segmentation and tactics. Levels of organizational characteristics are associated with approaches to segmentation. Neither the adaptive problem solving focus of the firm or expert assessment is strongly associated with segmentation approach. Both the adaptive problem solving focus and levels of organizational characteristics are more useful in associating archetype and tactical approach than is an expert assessment.

The Miles and Snow (1978) strategic archetype typology was used to frame the strategy development process with specific market implementations. These "expressions" of strategy were market segmentation approach and the tactics used in services bundling and pricing. Two archetypes that demonstrated the clearest links between strategy development and market implementation were the prospector and the defender. Analyzers can be considered a hybrid of prospector and defender, and thus more vague in specification. It was not surprising that the strongest associations were found with the most "pure" archetypes.

While it is undeniable that firms pursue dual strategy

approaches and can be categorized as analyzers, the vagaries of this hybrid category are not useful in associating market behavior. A further refinement of the typology to clarify the role of dual strategic approaches in analyzer firms would be useful in drawing associations to market phenomena. Firms examined here were seldom perfectly archetypical. Assessment was most difficult for analyzers. The Miles and Snow typology could be refined to subdivide the analyzer type into "defending analyzers" and "prospecting analyzers." The discriminating characteristic in this subdivision could be the preeminence of either core strength or new technology. The "analyzer" component acknowledges the importance to corporate strategy of the dual approach.

As prior research with the Miles and Snow archetypes has been primarily descriptive, a further refinement and elaboration of the typology is called for. Later in this chapter, future research to accomplish these goals will be proposed.

ORGANIZATIONAL CHARACTERISTICS

Centralization, Formalization, and Complexity

Organizational centralization and formalization were found to be positively associated. Such associations are supported in the literature and were hypothesized. Organizational complexity, however, was neither positively nor negatively associated with centralization and/or formalization in any consistent manner. The hypothesized relationships involving organizational complexity and other variables were unsupported.

The measures employed classified all but three out of ten firms as low or medium in complexity. The impact of highly sophisticated internal management information systems on levels of organizational complexity was not measured. All firms examined have sophisticated information systems. There is reason to believe that the presence of sophisticated information systems may cause traditional measures of complexity to be low. In practice, technology may be substituted for human effort in boundary spanning within such organizations. New definitions of organizational complexity which accommodate such technology are necessary to facilitate accurate measurement.

Clear associations between market segmentation approach and levels of organizational characteristics point toward continuing research in that area. Miles and Snow's archetypes consider many factors. Of those examined here, levels of centralization, formalization, and complexity provided the strongest links to market level phenomena. These variables have also been discussed extensively in organizational behavior literature, providing additional theory bases on which to draw. Additional research is proposed in this area later in this chapter.

Links Between Strategy and Structure

This research identifies clear association between the development of strategy and organizational structure. Each of the strategic archetypes examined in this research show ties to different organizational characteristics. Recursively and without implication of causality, the organizational characteristics of centralization and formalization, and to a lesser extent complexity, are all associated with the development of a particular strategic archetype. Without specification of a cause, is the process so described "organic," unpredictable, and uncontrollable? The current research indicates otherwise.

Managers can directly control the strategic posture of their organization. In the process of doing so, they are involved in adaptive problem solving. Solutions are created to resolve problems in entrepreneurial domain, product/service engineering, and administrative and structural areas. Different levels of centralization, formalization, and complexity are necessary byproducts of the adaptive problem solving process. Managers create organizations which facilitate this process.

The degree to which an organization is successful in repeatedly going through the adaptive problem solving process is directly related to market success. Firms which go astray or abandon the adaptive problem solving process fail to control their strategic posture. This suggests that successful firms are those which proactively manage the strategy process. Such firms understand the interrelated nature of adaptive problem solving and levels of centralization, formalization, and complexity. Neither aspect can be managed in isolation in a successful organization.

The interplay of the adaptive problem solving process and resulting levels of the organizational characteristics appear to be the ideal focus for understanding strategic management. The success or failure of any single organization is less dependent on its adopted strategic posture than on the degree to which it harmoniously matches the adaptive problem solving process with its organizational characteristics. Any of the three functional strategic archetypes may be successful in the long term. Each appropriately manages the interplay between the adaptive problem solving process and different levels of organizational characteristics.

Failure of the firm is associated with one or more of three conditions: 1) a weakly articulated strategy; 2) an inability to link strategy and structure; or 3) adherence to an outmoded strategy and structure. In the first condition, a weakly articulated strategy may be linked to an incomplete or inexhaustive adaptive problem solving process. In addition, associations with any particular levels of organizational characteristics may be obscure. In the second condition, the interplay is mismanaged or simply overlooked by managers. In the third case, external factors have somehow changed the balance required for adequate interplay. Failured strategy is the result of not proactively managing the interplay between the adaptive problem solving process and the structural characteristics of the organization.

RESEARCH METHODS

The research methods used in this research have revealed an intricate set of relationships -- some strong, some weak. The interpretive research goals of description, classification, theory development, and limited theory testing have all been met and a structured understanding of strategy development for this infant industry provided .

In particular, the use of a structured approach to interpretivism permitted an orderly and expeditious research process. In this study, theories were related through a conceptual model, which was used to generate hypotheses. Hypothetical constructs were operationalized, and measures developed according to relevant literature. Observation of phenomena was conducted in the form of field interviews, and this observation data analyzed under decision rules grounded in theory. From the analysis came description, classification of phenomena, and generalization. Explanations were offered, and hypotheses generated which were compared to observed practice. Where consistent, the underlying theory is bolstered; where inconsistent, the theory is questioned and further research is proposed.

Given the fact that the overall research was exploratory, relationships discovered must be elaborated upon and measures developed for their constructs. Links have been identified between the strategic archetype assessments based on organizational characteristics and market segmentation strategy. In particular, a quantification of the Miles and Snow archetype characteristics would be useful for conducting broader based empirical work. The archetypes have many descriptive characteristics. To expand the predictive ability of the archetypes, quantitative measures must be developed and examined for validity and reliability. A quantification of the Miles and Snow archetype characteristics would permit factor analytic analyses which may clarify interrelationships of these characteristics.

INDUSTRY DEVELOPMENT AND STAGE OF LIFE CYCLE

The firms studied are operating in an industry which is clearly in the introductory phase of its life cycle. Is the early adoption of a clear strategic posture related to survival of the firm during the growth phase of the industry life cycle? Does such an early adoption affect the course of industry development?

It is likely that firms with reactor postures will be "shaken out" during the introductory phase. Consolidation through acquisitions and mergers represent likely possibilities. Survivability may be linked to early adoption and proactive management of a functional and viable strategic posture.

The course of industry development may be affected by the degree to which surviving firms adopt different strategic postures. If a predominance of prospector firms survives the shakeout, the result could be a period of slow industry growth. These firms may simply "cherry pick" clients as they opportunistically go about business development. Such an opportunistic approach could also slow industry development through a failure to proliferate industry-wide standards. In contrast, a predominance of defender firms surviving the shakeout could lead to fast industry growth as they deeply penetrate lucrative markets. In the long term, however, such focused market development may place a cap on industry potential as the defenders fail to translate their successes from one market niche to another.

To develop an industry to its maximum potential requires the predominance of analyzers remain following introductory shakeout. Only the analyzer maintains the dual technological core necessary to simultaneously pursue a combination of prospector and defender strategic postures. In the long term, the analyzer is most likely to survive and prosper due flexible marketing strategy. Paradoxically, it is the analyzer which is expected to have the greatest difficulty surviving the introductory shakeout. The costs of developing such an organization are high, both in terms of money and risk. Analyzer firms may be perceived as lacking strategic direction during the introductory phase of the industry life cycle as they alternate from prospector to defender. Adherence to the analyzer posture requires a commitment to long term development. Surviving analyzers will be positioned to dominate the future industry.

IMPLICATIONS FOR MANAGERS

These research results offer a number of managerial implications in the following areas: 1) relating strategic posture to customer types, 2) services bundling and pricing, 3) prospects for industry development, 4) the threat of new entrants, and 5) prospects for industry survival. Each is discussed.

For review, the four strategic archetypes examined in this research may be profiled as follows. Prospector firms are those companies which focus on the development of flexible, new technologies. Defender firms staunchly protect well defined market niches by exploiting proven technologies and creating economies of scale. Analyzer firms pursue a dual strategy, operating from a highly defended positional strength while pursuing new technologies. Reactor firms are dysfunctional. They fail to match strategy and structure, use outmoded strategies and/or structures, or inadequately articulate and implement strategies.

STRATEGIC POSTURE AND CUSTOMER TYPE

There was general agreement among firms studied that the sale of integrated services was easiest to smaller firms who have no logistics capability in place. Such companies were viewed as "naturals" for buying services. Market penetration has proceeded rapidly among this type of company. However, opportunistic development of individual logistical systems is sometimes pursued without regard to potential synergies resulting from a specific industry focus. This limits the long term potential of servicing this niche. In addition, the small scale of such service solutions is often viewed by larger potential customers with skepticism. From what is known of prospector firms, pursuit of firms with no logistics capability offers a natural form of market development. Prospector firms are ideally positioned to spot and respond to market changes and are sufficiently flexible as a result of engineering competency to accommodate both customer types. Service firms desiring to serve these customer types would be well advised to adopt the characteristics of the prospector strategic archetype.

Firms entering new geographic markets and/or introducing new products having unique logistics requirements also presents fertile grounds for industry development. The difficulty in attracting such prospective customers is in selling the service concept. Integration of outsourced logistical activities with native systems is difficult. Senior executives typically are advocates of logistics outsourcing in such situations. However, resistance is often found among middle-management logistics executives.

The politics of the customer organization are an important factor. Service provider firms which offer single-function services through closely held subsidiaries may be at a disadvantage in approaching such customers. If the conceptual sell is unsuccessful at the senior level, the potential exists for retribution by logistics line managers whose fiefdoms have been threatened. This reaction factor makes the defender archetype particularly vulnerable to the politically sensitive customer. Both non-asset based providers studied believed that their type of firm have a distinct advantage because they had no fears in approaching senior management due to having no current business at risk.

The dual approach of the analyzer archetype may be most successful in a politically sensitive realm. Pursuit of a dual engineering approach consisting of core strength and new technology development facilitates the incremental development necessary with this customer type. Furthermore, the organizational sophistication of the analyzer may better accommodate multiple approaches to managers at different levels within the prospect organization. It is likely the analyzer type will have systems which generate economies of scale, yet have maximum flexibility in application to accommodate this type of customer.

A significant opportunity for all service providers are large manufacturers and retailers of consumer products. The automobile industry has embraced the concept quite wholly. However, it is widely accepted that unique off-shore and import competitive pressures stimulated radical reactive strategic thinking on the part of senior automobile manufacturing executives. Thus, the automobile industry stands as an exception. Logistics integrated services firm executives are uniform in their expression of the difficulty in penetrating large manufacturers and retailers. These potential customers typically have highly developed and sophisticated logistics systems in place. Frequently, the expertise found inside the customer organization equals or surpasses that offered by the service provider.

Thus far, providers have tackled large sophisticated organizations by seeking "special projects." Such projects often involve providing value-added services such as special repackaging, new product introductions, or new sales territory development. While service providers have been successful in such special applications, these projects do not offer desirable long term penetration, nor the stability of managing a transaction based service.

Broad based outsourcing of logistics systems by major manufacturers and retailers remains an elusive goal of the integrated service providers. Defender firms may be most successful at penetrating this difficult customer type. If a defender firm is willing to adopt a specific industry focus and invest in highly specialized systems which generate tremendous scale economies, it would be well positioned to service these large customers. Defender firms have been most successful in the automobile industry where such attributes are highly regarded. The defender must walk a fine line in pursuit of such customers. Expertise in the defender organization must be closely matched with the existing systems and logistical needs of the customer. When the match is good, the defender is likely to be highly successful in creating an easily defended niche. This niche can be developed and exploited over the long term.

Essential during the early stage of industry development is proactive strategic development. Linking strategy development to a supportive organizational structure is equally important. For this reason, the reactor type firms will probably not survive the industry shakeout. The degree to which a single firm survives the shakeout will depend on how well its management can match strategy and structure. As discussed previously, there are important roles for prospectors, analyzers, and defenders in the logistics integrated services industry. Senior managers would do well to adopt a singular strategic archetype and associated organization type. Tightly managing the interplay between strategy and structure offers the most likely chance of success.

SERVICES BUNDLING AND PRICING

It was expected that all four bundling schemes described by Guiltinan (1987) would be encountered. In fact, only pure bundles and mixed-joint bundles were found. Pure bundles are those service packages which are sold only as complete "systems." Mixed-joint bundles are services sold by combining functions into different systems. In mixed-joint bundles, prices are determined by discounts applied to each service. Mixed-leader bundles are those sold by aggregating functions into different systems. Prices are determined by the inclusion of a "loss leader" function and profits are reaped from any additional functions bundled.

Debundled services to the level of a single logistics function were not found among the participants. By definition, integrated services providers create synergies by bundling logistics functions. Hence, the absence of debundled services was not surprising. However, that mixed-leader bundles were not found in this research was somewhat surprising. One possible explanation focuses on the tendency for pricing to be closed-book. Provider firms are unwilling to reveal their cost structures, and typically very unwilling to reveal prices and costs during negotiations. System packages created as pure bundles are the preferred alternative, and mixed-joint bundles are an acceptable alternative. The reason for this combination appears to be based on a desire to disguise cost structures. It may be easier to offer price incentives in mixed bundles by appearing to offer discounts on all components.

Pricing in this industry at this time is predominantly market-based. The two firms engaging in asset-based pricing were a defender and an analyzer. The predominant market-based pricing approach may be due to the early stage of industry development, and/or to the desire to rapidly penetrate the market. There is a high degree of sensitivity to pricing, and a number of unknowns to managers in this industry. One comment often heard was "pricing is tough." No one wants to appear to be using a price-leader strategy when one of the unique sales appeals of the industry is that they offer service improvement. Traditional single-function service providers in the logistics industry have long operated on thin margins. The desire to improve those margins by adding valued services is a basic goal of this industry. This market based pricing approach contradicts the desire to develop and penetrate markets and creates the concern over revealing costs and prices of bundle components.

PROSPECTS FOR INDUSTRY DEVELOPMENT

To supplement the basic ten case study interviews, two industry consultants were interviewed. One consultant has over thirty years experience in the domestic logistics industry, both as a service provider and buyer. The other consultant has extensive experience with European freight forwarders and with the development of global logistics systems. Their comments and those of the ten provider firm executives interviewed contribute to this discussion.

Strategy development in the logistics integrated services industry appears to the outsider as incoherent and opportunistic. This research has revealed that among early entrants and those pursuing tightly defined market niches, strategy development is remarkably coherent and successful in implementation. These firms, typically assessed as analyzers or defenders, have pursued singular strategies and thus far have become respected market leaders.

As is expected in any new industry, executives interviewed foresee a period of volatility and consolidation. While all agreed on the upcoming period of volatility, their industry and asset-based perspectives were quite telling. Firms with origins in transportation tended to believe that warehousers would fall out during industry consolidation. Warehouse based service firms expressed the opinion that because they managed the most difficult aspects of the chain (inventory control), they would be the survivors. Asset-based companies believed that they would survive over non-asset based providers because they offered greater control precision for their customers and because they create greater internal financial leverage. Non-asset based providers believed they would survive because of the enhanced flexibility they offered and because of the lack of a core transportation or warehouse service requiring continuous "feeding."

Several interviewees believe that the period of consolidation will involve many mergers and strategic alliances taking place within the industry. One president summed up this perspective best by saying that he believes his only competition is the client's internal logistics organization. He sees all other integrated services providers as allies in the struggle for primary demand stimulation. He also sees other providers as potential strategic partners in building joint systems for large customers.

Since these interviews were completed in mid-1990, one of the interviewed firms has discontinued offering integrated services. Several executives at the time interviewed believed that the fate of this key firm could be a barometer for the industry. During the same period, two potentially powerful competitors have announced entry into the industry. Both of these firms were mentioned during interviews as potential prime competitors. Each of the new entrants was considered a formidable competitor. The context was generally one of "we're alone in this segment, unless Firm X decides to enter. Then we've got some serious competition." Continued entry and exit of major players bodes an uncertain course of industry development.

THE THREAT OF NEW ENTRANTS

Two executives believe that firms would enter this industry from strong information and systems perspectives outside the traditional logistics industry. These subjects mentioned the regional telephone companies and major computer hardware and software companies as possible entrants. They believe that the core logistics management skills can be seen as a subset of information management. When the logistics integrated services industry grows large enough to merit the attention of such companies, these two executives believe that the structure of the industry will change.

It was also widely believed that a number of European firms are well positioned to enter the United States market. Integrated services in logistics is a well established concept in Europe. Freight forwarders in Europe have long provided comprehensive, extended, and integrated service packages to their customers. Such systems evolved to overcome the vagaries of national regulations among small countries. None of these countries is large enough to generate internal logistical economies of scale, and the freight forwarders were quick to capitalize on this fact. The concepts being sold in the United States market are "old hat" to European providers. Only the geography and the cultural context are different. If these barriers are overcome, the European firms will be potent forces to be reckoned with.

Logistics services brokers are also competitive threats to the integrated services provider industry. Many of these brokers provide only the economic benefit of group purchases for their customers. For many customer firms with simple logistics requirements, such brokers are quite capable of reducing costs and implementing "systems." The industry impact of such brokering arrangements is difficult to grasp at this point, but bears future consideration.

One additional source of new entrants requires a broader definition of the competitive arena. Increasingly, shipper groups have banded together to negotiate and operate joint distribution systems. These systems have been operated both separately, and in conjunction with integrated services providers. If this trend continues, it can be both opportunity and threat to existing service providers. Shipper groups represent an opportunity for providers who can uniquely meet their requirements, and bear consideration as an additional market segment. Shipper groups are a threat to established providers in that they may broker for or provide competitive logistics services.

PROSPECTS FOR SURVIVAL OF THE INDUSTRY

The executives interviewed all discussed the prospects for the survival of the logistics integrated services industry. Several expressed dismay at the recent failure of the NYNEX integrated services subsidiary. They believe that the industry is at a juncture where successes need to be publicized, and failures downplayed. Most executives interviewed believe that whole outsourcing of logistics systems is not a fad. None would, however, speculate on the speed with which the industry would develop in the United States. Several expressed the belief that key successes in major industries would cause the "dam to break," and initiate a period of rapid growth. Such was the experience in the domestic automobile assembly industry where logistics integrated services providers have had their greatest successes. Many executives were pursuing the electronic, computer, or other high-tech domestic industries. They believed that the complexity of the logistical requirements of that industry were similar to those encountered and solved in the automobile industry, and thus offered fertile potential markets.

Many of the executives interviewed believe that a true, operating global network is essential to the development of the industry. Many provider companies are engaged in

negotiations with foreign firms to create alliances to implement global capability. It is believed that the creation of a North American "common market," combined with Europe 1992, the opening of the eastern-bloc countries, and the rapid development of the Pacific-rim countries will make domestic-only providers obsolete or small niche players at best. Interview subjects fully expect major players to develop from such partnerships, and that these global firms will become the dominant survivors.

LIMITATIONS OF THE RESEARCH

As case study and interpretive research, it is difficult to generalize to the entire industry. While the research is accurate in description, it represents an examination of less than one-third of the companies currently active in the industry.

The application of the Miles and Snow typology in developing industries is problematic. When demand for services exceeds industry capacity, many firms become opportunists in market development. While they may exhibit many of the organizational characteristics of the four archetypes, it becomes more difficult to relate those to specific marketing strategies.

It was suggested that computer and communications technology be considered an intervening or modifying influence on organizational centralization, formalization, and complexity. The organizations studied are typically sophisticated in their internal applications of technology. In one firm, the interviewee was repeatedly interrupted during the interview by messages arriving for him on the corporate electronic mail system. He was awaiting a key piece of intelligence from a field-level employee to allow him to complete a presentation for a potential client. Such systems provide all employees access to the strategic development process. They also create some problems in applying traditional definitions of centralization, formalization, and complexity to high-tech organizations.

The concepts of centralization, formalization, and complexity are also difficult to place in the context of a small organization. The companies examined range from 40 to 250 employees. By any standard, these are small businesses. Many have only emerging organizational structures. As opportunists, many firms deliberately keep organizational structures loose. As one executive said, when asked about structure, "Let me find this week's organization chart."

Finally, many of the companies studied are wholly-owned subsidiaries of larger companies that operate more or less independently of the parent company. Many of them have inherited command and control structures which they are now modifying to meet their circumstances. Part of the organizational flux seen can be attributed to this fact. In addition, flux may be the result of the "growth by acquisition" strategy which seeks to meld alien organizations.

DIRECTIONS FOR FUTURE RESEARCH

In the application of the Miles and Snow (1978) typology to a developing industry and to small businesses, several problems were apparent. At this stage, it would be valuable to examine the antecedents of the adaptive problem solving components within each organization. Each of the three areas was treated as an "origin point" in this research. Insight into the specific nature of each problem solving area would be insightful. Such research may be best explored by selecting an example of each strategic archetype for detailed study and analysis. Critical success and failure factors for each problem area could be isolated. Such analysis within one industry could then be extended across industry types. Generalization and expansion of the typology would result.

A refinement of the Miles and Snow (1978) strategic archetype typology appears appropriate. Prospectors and defenders may be seen as ends of a continuum, with analyzers falling somewhere between as a hybrid archetype. This hybrid type proved to be an unsatisfactory fit in the current research. It is proposed to subdivide the analyzer into "defending analyzer" and "prospecting analyzer" archetypes. Elaboration and definition of the continuum between prospector and defender would contribute to a refinement of the Miles and Snow typology.

The stage of industry and organization life cycle also appears to be associated with the adoption of a particular strategic posture and different levels of centralization, formalization, and complexity. It would be valuable to document the effect the adoption of a predominant strategic posture has both on industry development and on the differing survival likelihoods of specific types of firms.

As the industry grows, it would be valuable to document its development. From a macro-industry perspective, the predicted volatility and consolidation provides a vital arena for the study of survivability factors. From a firm-specific level, continued study of this new industry would allow insight into critical organizational, structural and strategic factors which contribute to the survival or demise of a single firm. Longitudinal studies in both of these areas are appropriate and feasible.

Given the speculation on the entry of European services providers into the United States market, a comparative systems study of the European experience contrasted to the later development of the domestic industry would be useful. Given the longer history of the industry in Europe, the application of the conceptual model presented in this research may encounter fewer of the "new industry" implementation problems as observed in the current effort.

To date, there has been no macro level description of the industry's competitive set. In any industry, the dangers of too narrow a construal of competition are well documented. The threat of new entrants to the logistics integrated services industry is high. Several sources outside the industry itself have been identified. Competitive mapping may be carried out on both customer perceptions and share of services volume.

The impact of information technology on the organizational variables of centralization, formalization, and complexity cannot be denied. This is worthy of continued examination. The logistics integrated services provider industry provides an ideal place to study new organizational forms and mechanisms which will change the implications of these variables on organizations. Further study is necessary on the degree to which managers can control both the adaptive problem solving process and simultaneously match their strategic posture to an appropriate organizational structure.

The industry is largely built on information systems expertise, and most of the firms encountered in this study are quite sophisticated in their implementation of such systems. The implementation of information systems is but one way that managers can proactively manage the interplay between adaptive problem solving and organizational structure.

All ten of the interviewed firms utilized a consulting sales approach. Some additional study of this area is indicated to determine different types of consulting approaches. Further study of the make-up of the consulting team, and the levels approached in the client organization may shed light on the sales process approach broadly called "consulting."

One additional issue that arose during the research is the relative importance of asset-based to non-asset based services providers in the development of the industry. It is perhaps too early to predict how each will survive. The researcher speculates each will form specialized types of services packages which will have different market appeals. Tracking firms of each type would provide insight into their continued development and an understanding of the role of dedicated physical assets in outsourcing.

Finally, this study has focused on just one side of the business equation. No comprehensive examination of industry development would be complete without looking at customer perceptions of and use of services from the logistics integrated services industry. As the industry is currently engaged in primary demand stimulation activity, the dissemination of a management innovation in the client organization is an interesting challenge for research. Understanding the perceptions and varying degrees of acceptance and resistance at different levels in the client organization is vital to the continued development of the logistics integrated services provider.

Potential research questions to be pursued on the customer side of the equation include:

- What business needs do customers seek to address by outsourcing?
- What are the primary motives behind outsourcing?
- When considering an outsourcing supplier, what key attributes of the supplier are most important?
- Are there differences in perceptions of asset-based versus non-asset based services providers?
- What are the rewards and drawbacks to the customer for outsourcing as a business strategy?
- How are decisions to outsource made within the customer firm?
- How are logistics services providers evaluated by customers?

An understanding of these issues would contribute to a balanced perspective on the expected course of industry development. It would also lend guidance to managers on both sides of the equation on appropriate firm strategies. Documentation of the customer side issues would give insights into the success or failure of both individual provider firms and the industry as a whole.

This dissertation concludes with appendices containing the research interview guide, the strategic archetype examples, and the ten provider firm case studies. Following the appendices are bibliography and general references sections.

APPENDIX A

INTERVIEW GUIDE

FIRM:________________________________

DATE:________________________________

LOCATION:____________________________

SUBJECT:_____________________________

____

OPENER:

What logistics services are currently offered by your firm?

I'd like to discuss three different categories of problems that firms consider when developing strategy. The first is the selection of a target market, the second is the way in which your firm solves customer problems technically, and the third is the way in which your organization adapts to changes in strategy. First, let's talk about selecting a target market.

TARGET/DOMAIN:

What do you view as the scope of your target market?

How successful have you been in pursuing this target?

Do you think this target is appropriate for your firm?

TECHNOLOGY SOLUTIONS:

When you have decided on a market to pursue, how does your firm go about allocating internal resources to solve market needs?

When solving customer problems, to what extent does your firm rely on its core business strengths?

To what extent would your firm be willing to adopt a new technology (beyond your core strengths) to solve a customer's problems?

Probe:

[Is the primary technical direction of your firm one of building on core business strengths, or one of developing new technologies to solve customer problems?]

<u>ADMINISTRATIVE</u>:

How consistent is your firm's organization and structure with the expressed needs of your customers?

How consistent is your firm's organization and structure with providing an internal response to your customers?

How flexible is your firm's organization and structure to accommodating changes in the marketplace?

How flexible is your firm's organization and structure in accommodating new developments in technology?

Of the three different categories of strategy development problems that we've discussed, which of these three areas tends to dominate strategic problem solving in your firm? Why do you think that is the case?

CENTRALIZATION:

Who in your organization initiates the strategic decision process?

To what degree is direction in strategy decided by a single executive or a small group at the top of the organization?

To what extent would you say that changes in strategy are major departures from previous strategies?

How often is strategy developed in your firm in response to problems that appear in variables that you monitor regularly?

<u>FORMALIZATION</u>:

Are strategic decisions typically precise in their specifications for achieving goals?

Is the strategic development process within your firm a standardized process? What is that process like?

Would you categorize your firm's strategic decisions as evolutionary or revolutionary in nature? Why?

COMPLEXITY:

To what extent do strategic decisions made in your firm have to satisfy a large number of internally imposed constraints?

How likely is it that middle managers in your organization will spot changes in market or environment that have strategic implications?

P

I
h
r
t
a

S

To what extent is the development of strategy a process of internal bargaining?

Probe:

[To what extent is the personal bias of a manager in representing his internal constituency an influence on strategy development?]

Interviewees will be read a series of four short profiles of hypothetical firms, and asked which firm most closely resembles their own. The four short profiles will correspond to the strategic archetypes: Prospector, Defender, Analyzer, and Reactor. These profiles are contained in Appendix B.

<u>SEGMENTATION STRATEGY</u>:

How does your firm go about developing a market segmentation strategy?

To what extent are your segmentation strategies driven by clustering potential customers by their needs?

To what extent are your segmentation strategies driven by clustering potential customers by your ability to meet their needs with your core business strengths?

What criteria does your firm use to segment markets?

How well do you think your segmentation strategies match the reality of the marketplace?

Probe:

[Do you think your segmentation strategies have been effective in matching customer groups to your product offerings?]

BUNDLING:

How does your firm go about creating a package of services which meet your client's needs?

Do you create a variety of packages which will meet a client's needs and allow them to choose?

Do you allow the client to pick and choose from a menu of services available?

To what extent is your firm concerned with issues of standardization and compatibility of your services with those offered by other providers?

PRICING:

When bundling services into a package, how often do you price the package based on a customer paying full price for a core service, with discounts based on additional (non-core) services in the package?

When bundling services into a package, how often do you price the package based on a discount for all services in the package?

Overall, how would you describe your pricing strategy?

Probe:

[Does your firm focus on market-based pricing strategies, or some asset-based means for determining price?]

What is the nature of the sales agreement? Is it contractual? What are the bases for the contract?

SALES PROMOTION:

How does your firm approach a potential client for integrated services?

What type of background research is typically done on a client before the sales effort begins?

Does your firm present off-the-shelf solutions to client problems in its sales effort?

How much focus does your firm put on custom-tailored solutions to a potential client's problems?

Does your firm use a team-selling approach in dealing with potential clients?

OVERALL/SUMMARY:

What do you view as your firm's unique competitive strengths?

What do you see as your principle weaknesses?

Who are your strongest competitors, and why?

What changes do you anticipate in the future in the logistics integrated services business?

t
a
t
A

T

d
m
o
i
d
m

d
b
T
b
m
b
b

Th

de
o
de
in
de

pr
a
ve
in

APPENDIX B

STRATEGIC ARCHETYPE EXAMPLES

These examples were shown to interviewees who were asked to compare their own organizations to one of the four archetypes. The examples shown to interviewees were missing the Miles and Snow (1978) labels, and were indicated as Firms A through D (respectively).

The Prospector

Firm A solves its entrepreneurial problem by viewing its domain as broadly as possible -- as a constantly evolving marketplace. Management engages in monitoring a wide range of environmental conditions and events. Firm A is seen as an industry leader. Growth in Firm A is through new product development and typically may occur in spurts as the firm moves from opportunity to opportunity.

Firm A's engineering problem is solved by the development of multiple, flexible technologies. Firm A believes its greatest technological strength is its employees. Typically, marketing and research and development experts will be dominant members of the ruling coalition. The coalition may be large, diverse, and transitory, with key managers brought in from outside the organization. Planning tends to be broad, with decentralized control systems.

The Defender

Firm B approaches its entrepreneurial problem by tightly defining its domain. Firm B aggressively pursues maintenance of its domain against competitors, and pays less attention to developments outside its domain. Firm B engages in cautious, incremental growth through market penetration. New product development is closely related to its current domain.

Engineering problems are solved by Firm B by adhering to proven, cost-efficient technology, typically revolving around a single core strength. There may be a tendency toward vertical integration, with an emphasis on continuous improvement in related technologies to maximize efficiency.

The administrative problems of Firm B are solved by financial and production experts within the dominant coalition. The tenure of coalition members tends to be long, and promotions occur from within the organization. Planning is often intensive and cost-oriented, and is completed before actions are taken. Firm B has centralized control and information systems, and problems tend to be solved within hierarchical channels and simple coordination mechanisms.

The Analyzer

Firm C solves its entrepreneurial problems by envisioning a hybrid domain, with stable elements, and changing elements. Firm C pursues a steady course of growth through market penetration, but also engages in new product development.

The engineering problems of Firm C are solved by the development of a dual technological core: one which emphasizes cost efficiency, and one which exploits flexible, new technologies.

The administrative problems are solved through intensive planning and communication between marketers, applied researchers, and production managers. Production managers may dominate decisions regarding stable core technologies, while marketers may dominate decisions dealing with flexible or new technologies. The organization has a moderately centralized control system, and coordination systems may be extremely complex.

The Reactor

Firm D typically has difficulty in solving all three of the problem areas in the adaptive process. The difficulties can be categorized as falling into one or more of three groups: weakly articulated strategies, structure improperly linked to strategy, and adherence to an outmoded strategy and structure. In the case of the weakly articulated strategy, Firm D pursues a vague strategic direction. It cannot decide if it wants to be like Firm A, B, or C. When Firm D's structure is weakly linked to strategy, it may attempt to engage in a Firm A strategy with a Firm B type structure. Adherence to outmoded strategies and/or structures can mean a failure to solve its entrepreneurial problem successfully. Firm D may stubbornly resist change, or fail to perceive shifts in the competitive environment.

APPENDIX C

PROVIDER FIRM CASES

Following are the summaries of interviews conducted with key executives at ten integrated service provider firms. Firms were assured anonymity in their responses. Some firm-specific information presented here has been disguised to protect the anonymity of the respondents and their firms, and to assure maximum honesty in participation in this research. Firms are referred to as Firm A, Firm B, and so on through Firm J. Each case follows the interview guide presented in Appendix A.

Provider Case "A"

Firm A is an integrated services provider that evolved from a major transportation carrier. This carrier had evolved to a significant market force in multi-modal transportation by the mid-1980's, and recently has added an integrated logistics division. The division has been in operation less than three years. The executive interviewed for this research was the corporate vice-president in charge of the integrated services division.

When asked to describe what logistics services were currently being offered, the interviewee discussed services in terms of "programs" or product offerings, rather than a listing of traditional logistics functions. The three current "programs" are: 1) private fleet conversion, 2) total transportation management, and 3) full logistics management. Private fleet conversion involves the provision of a fleet, personnel, information interface and management, route design, and other fleet-related services. Total transportation management takes Program 1 a step further by taking a particular client's plant or facility and managing all inbound and outbound transportation requirements. This often involves a complete redesign of a logistics network, and can also require an assessment of inventory and warehousing cost tradeoffs. The third Program takes Program 2 a step further, where the services provider takes over all logistics functions for its client. This can involve order entry, fulfillment, even sales and inventory forecasting should the client desire.

When discussing these three Programs, the interviewee said that Programs 1 and 2 were the most successful. He believed this was in part due to the relative lack of internal threat that these programs represented to a client's internal logistics organization. He believed that Program 3 was successful only in organizations that were small, or had weakly implemented logistics programs.

DOMAIN

In describing the selection of a market domain, the interviewee offered three criteria: first -- a minimum firm or contract size. The provider felt that contracts below $2 to $3 million in size would not be profitable to his firm. To justify a design effort, it was felt that potential customers should have a minimum of $400 to $500 million in annual sales. Second, the product must be viable in dry shipment, and preferably high in unit value. This eliminated all products requiring special handling (e.g. refrigerated, bulk commodity) which would intensify capital costs. Third, executive contacts between the provider firm and a potential customer were considered important. The provider explored good contacts generated internally, responded to general public inquiries, and also used an industry-based consultant to scout leads. Firms thus generated became the target domain.

The provider has had few difficulties in identifying opportunities and in generating interest in its programs. It has, however, experienced difficulty in getting programs worked through the client organizations. They have found many clients to be bureaucratic, and the process very time consuming. The interviewee related an anecdote about one potential client who had decided 18 months ago that one particular program was ideally suited to his organization. Even after rejecting competing service providers, this potential client has yet to sign a contract with Firm A. The interviewee believes that this selection of a target domain has been appropriate and largely successful, though he felt there was opportunity abounding in clients at the lower end of the domain ($400 million annual sales) that had yet to be developed adequately. He believed that development of these "smaller" firms would be forthcoming.

TECHNOLOGY

In terms of allocating resources, Firm A has found this to be "fun and challenging." While the firm uses no set formula for allocating internal resources, it has never failed to identify efficiencies to be implemented. The firm begins its problem solving by assigning a creative logistics professional and a systems modeler. These two individuals design the rudiments of the solution, then add other staff as needed. The goal is always to identify potential new efficiencies which form the source of funds to cover direct costs and provide a reasonable return to the provider.

Firm A appears to rely very little on the transportation core strengths of the business. The interviewee said that "free thinking" was the guiding directive. Firm A's solutions frequently include transportation offered by outside carriers. The firm is willing to adopt any new technology, as long as the new capability is a part of a package where Firm A's strengths may be utilized, either for the customer's benefit or for internal development.

ADMINISTRATIVE

When asked about the match of structure to customer needs, the interviewee said the firm had been structured to fulfill needs of customers from its target domain. The programs offered by Firm A are total solutions. The firm is ill-equipped to handle the selected outsourcing of single logistics functions. When approached by a customer for such single services, Firm A declines or refers them elsewhere. Thus, as regards its domain, Firm A appears to be structured appropriately.

The interviewee emphasized the flexibility of middle management in Firm A. On-client-site managers have responsibility for profitable performance: "their job is to be flexible." He stressed the need for corporate management to resist structured "patterns" to remain responsive, changing, and flexible. In part, this has directed Firm A's decision to stay away from asset investment.

As far as accommodating changes in technology, it was felt that Firm A is still to young to make an adequate assessment. The firm perceives itself as a market leader, and very innovative. When a new path to a solution is discovered, it is typically used if it improves on old solutions.

When asked to comment on the balance between solving domain, technological, and administrative strategic problems, the interviewee said he felt there was a balance. All three areas must be successfully resolved to have a viable strategy. He could cite problems faced by Firm A in all three areas. He felt that deciding the domain was perhaps easiest. The administrative problem of creating adequate scale economies was the most challenging.

CENTRALIZATION

In Firm A, the vice-president (director of the logistics division) was the person who initiated strategic decision making. Typically, he senses some market disarray, and then initiates changes in strategy. The interviewee views himself as the top strategist. Frequently, he has decided a course of action before presenting it to his associates. He believes that strategy changes at Firm A have been evolutionary in nature. There have been no drastic mid-course changes in strategy.

When asked about how changes in strategy relate to changes in variables monitored by the firm, the interviewee felt that few changes resulted from such monitoring. He felt that most strategic change was prompted by some interaction in the marketplace, be it between Firm A and a client, or between a rival and its client.

FORMALIZATION

Strategic decisions at Firm A are very "broad understandings." They are not typically goal-oriented, but directed at achieving organizational understanding and coherence. The process follows no formal route. The interviewee stated that in previous positions, he had been involved with formalized strategy development, and felt it was not applicable to his current position. Strategy appears to evolve organically through a process of creative thinking, and sharing with an inside group of top management. The executive said he usually waits for an "a-ha," preferring to ruminate until a breakthrough happens and a clear direction emerges. As a result, the firm's changes in strategy seem to be evolutionary in nature.

COMPLEXITY

When asked to comment on the role of internal constraints in strategy development, the interviewee said that corporate management (above him) was remarkably free handed in its dealings with the logistics division. He felt little or no pressure, as long as his strategy had been clearly articulated to upper management. He felt that he was free to create with no a priori constraints. However, he works hard to be sure that his decisions are not questioned after the fact by keeping top management informed of changes in strategy.

Middle managers are very likely to spot and report changes in the market or environment which they believe may impact division strategy. The interviewee said that sometimes he gets "too much" of this information and has some difficulty "sorting the wheat from the chaff." But he prefers to hear any input from middle managers which may impact strategy.

When asked about the strategy development process as an outcome of internal bargaining, he didn't believe such was the case at Firm A. He believed this was in part due to his command knowledge of logistics, and the fact that many subordinates did not have the same broad perspective of the field as he did. The interviewee was asked to examine the archetypical firm profiles and compare Firm A. He said his firm was probably most like the Analyzer, though tending toward the Prospector. It is the assessment of the researcher that Firm A most closely resembles the Analyzer.

SEGMENTATION STRATEGY

Firm A uses the domain-decision criteria for segmentation as well, but adds the dimension of industry type. The interviewee believes it is extremely important to understand a company's business. While there are differences between firms in the same industry, a detailed understanding of the industry's general problems helps to segment markets. He used the example of the domestic automobile manufacturer -- all firms are facing similar JIT implementations and outsourcing requirements. In a similar way, all retailers may have fundamental logistics similarities. He believed that it was still too early in the development of the integrated services provider industry to have comprehensive segmentation criteria. Currently, Firm A seems to take a firm-specific approach rather than an industry approach (with the exception of its dealings with the automobile industry).

Existing segmentation strategies are very market-driven, responding to perceived customer needs. There seems to be little clustering around Firm A's core strengths. This is consistent with Firm A's commitment to flexibility. The interviewee believes that Firm A's segmentation strategy is matched as well to market needs as possible. He stated that "we're guiding our customers at times ... they come to us and say 'what do we need?'" In this sense, the customers are unclear on their own logistics requirements, and have difficulty in articulating these needs to the provider.

BUNDLING

When creating a service package for a potential client, Firm A begins by requesting data sufficient to model the existing logistics system. This information can include transportation movements, costs, warehousing, inventory, and administrative information. Firm A responds after its analysis with a program that solves the customer's problem, either as expressed by the client or as discovered by Firm A's analysis. Firm A typically responds with only one solution. This solution may be modified through negotiation and discussion with the client. Only rarely would Firm A offer two distinct solutions to a client. In this sense, the firm offers only pure bundled products. Clients are not permitted to pick and choose from a menu of services.

Firm A is very concerned with issues of standardization and compatibility. It makes all efforts to ensure its solutions interface properly with the client's systems, and with the systems of any other service provider involved with either client or Firm A. This is consistent with Firm A's flexible stance and focus on customer solutions.

PRICING

Firm A's pricing strategy is two-fold. First, if Firm A believes the client is outsourcing principally to reduce costs, it will attempt to ascertain the client's internal costs, and price its package below the client's internal cost. Second, if it believes the decision to outsource is based on performance improvements to a client's system, it will price its package slightly above the client's costs. Both of these pricing strategies are market-driven. Firm A's internal costs are not the driving factor in pricing decisions. The firm appeared prepared to price below cost if it thought costs could be recouped through furthering the new alliance in the future. If the opportunity is attractive given the risk involved, Firm A will price to get the client. The interviewee felt this pricing strategy was important internally, as it forced new creative thinking on identifying potential efficiencies, which frequently are the profitable "key to success in this business."

Sales agreements are contractual, typically covering requirements for continuous improvement, performance and service level standards, and demonstrating proof of compliance. Firm A will not negotiate any form of compensation for failure to perform.

SALES PROMOTION

Firm A approaches a client mainly through personal contact. The Firm uses mutual interests to arrange an introduction, generated both internally and through external contacts. The interviewee has used his Council of Logistics Management contacts, as well as contacts in the financial community both domestically and internationally.

Firm A heavily researches potential clients before the sales approach. It seeks to define the client's internal corporate environment to identify decision-makers, understand programs already in place, identify new products or regions served by the client, and to know personal characteristics of the corporate decision-makers. Firm A uses a team-selling approach, with the team consisting of specialists from operations, marketing, and systems.

When approaching the potential client, if Firm A knows of a particular problem the client faces, they focus on potential solutions to the problem. If the client's specific problems are unknown or weakly articulated, Firm A focuses on a discussion of its strengths in solving other customer's problems.

SUMMARY

Firm A believes its unique competitive strengths to be three. The first is its non-asset base combined with strong contractual links to capable operating partners. This allows

Firm A to be both flexible and reliable. Second is Firm A's commitment to information systems development. Firm A's parent corporation spends some $70 million annually on developing information technology. Third is the analytical strength of Firm A's employees. The interviewee believes that fresh thinking is a hidden strength of Firm A, and one which is difficult for competitors to duplicate.

Firm A's principle competitive weakness is the lack of long-run, proven operations with clients. "We're still new. Our operating partners have reputations, but few have heard of Firm A. We believe this will change over time as we make progress our clients can see."

Firm A believes its strongest competitors to be Caterpillar Logistics Services and Roadway Logistics Services. Caterpillar is perceived as a strong niche player with a good handle on the automobile industry. This is a prime target for Firm A. Caterpillar is believed to have a strong infrastructure and proven client base. "We seem to come up against them a lot." Roadway is seen as an aggressive competitor based on pricing, seen to be buying clients.

When asked to speculate on market changes in the future, the interviewee said the biggest question is whether the integrated services industry will survive. With the recent withdrawal of NYNEX, there is speculation on the viability of the industry. Should a major player in the industry withdraw, it is likely to severely shake the foundations at Firm A. "It may just be a fad, except for niche players like Caterpillar," he said. However, if there continue to be successes (such have been demonstrated in the automobile industry), the industry is likely to expand and benefit all players. The interviewee honestly assessed the situation by saying "I honestly don't know what will happen. Do you?"

Provider Case "B"

Firm B is an integrated services provider that is a subsidiary of a major capital-equipment manufacturer. The subsidiary has been in business almost four years. Firm B is not asset-based. The subsidiary has kept a rather low profile in the integrated services industry by choice, preferring a strategy of controlled growth. Firm B's executives were recruited primarily from the ranks of shipper organizations, not service providers. The interview was conducted at the subsidiary's headquarters with the president of the firm.

In describing the logistics services offered by Firm B, the interviewee categorized them as "surrogates for internal transportation organizations." In effect, Firm B seeks to replace, or sometimes co-exist with internal logistics organizations. Firm B sells only "total transportation systems," which it defines as any logistics services involved with the inventory/freight tradeoff. Services which cannot be provided internally are themselves outsourced to other service providers, carriers, or other logistics specialty firms.

DOMAIN

When asked to describe the scope of the firm's target markets, the interviewee described three criteria which were used to establish the initial operating domain. The first criterion was industry type. Firm B has thus far targeted only manufacturers and bulk (commodity) shippers. It believes that generating economies of scale are essential, and has pursued clients whose needs it believes to be complementary in some fashion. Firm B believes that retailers also hold significant potential, but has delayed pursuing this segment. The second important criterion is geography. Firm B wishes to develop clients whose geographical distribution requirements are similar in some fashion. The principle reason for this is again to generate economies of scope and scale in its own outsourcing of transportation services. The third criterion is a positive synergy between industry type and geography. Firm B examines how industry type and geography interact to generate both managerial and financial economies of scale. Firm B seeks to combine clients service systems wherever possible, again to generate profitable economies. One criterion not used by Firm B is the size of the customer. Firm B feels it is necessary to have a mix of big, medium, and small companies. "There's very hungry small guys who are very cooperative, and as a group, these small companies are very beneficial to us." Firm B also sees the development of small clients as essential to future growth; as the clients grow, so does their business with Firm B.

In assessing the success of their efforts within this domain, the interviewee felt that Firm B had been highly successful. "We've done all projects we've approached, though we've been selective in our approaches. By the time we decide to do a project for a client, we are sure of success before we implement. We won't accept a project that may be marginal." When asked to assess the appropriateness of this domain, the interviewee couldn't think of another reasonable approach Firm B could have taken at "this early stage in the industry development. Any other way seems like it would have been too narrow."

TECHNOLOGY

Firm B uses a group approach to generating technical solutions to a client's problems. Firm B has no internal engineering department per se. The firm assigns a team which consists of a marketing specialist, a systems designer, and frequently an executive from some functional area of logistics to a client team. Firm B has an internal technical support group which assists the client team in solving problems. The interviewee believes that technological solutions come from being market-focused, rather than technology focused. He believes that this broader approach to problem solving allows for greater creativity, and ensures a greater likelihood of implementation success (as solutions are designed by multi-disciplinary teams).

The interviewee expressed the opinion that Firm B relies heavily on its own staff's creativity. He felt that the staff origins in shipper organizations forces an effective market-based perspective for designing solutions. When asked about Firm B's willingness to adopt a new technology (outside its own organizational strengths), the interviewee showed no hesitation in drawing upon outside expertise or technologies. "Make love, not war is our theme. If someone else has the solution, we'll go to them and form an alliance immediately. We believe in partnershipping ourselves, and as a non-asset based company we must form partnerships to thrive." When asked to elaborate, the interviewee said "we want to be the eyes and ears for our clients. We will do anything to improve a customer's well being. We'd use a competitor as a partner if it benefitted our customers."

ADMINISTRATIVE

Firm B has a matrix structure which is designed for effective client communications. Client teams are multi-disciplinary in an effort to provide maximum flexibility to the client on first approach, and on a continuing operating basis. The interviewee felt that this organization type was highly compatible with responding to the needs of customers, and at the same time remaining flexible and open to new solutions. When asked to assess the responsiveness of his organization to customer needs, the interviewee said "as long as the customer is clear and concise in expressing his needs, we respond. We have had some problems in dealing with client organizations which give us conflicting feedback. This is typically a problem in the client organization -- some disarray or internal politics. We have also had some problems with the quality of information given to us by clients."

When asked how flexible Firm B is in dealing with changes in the marketplace, the interviewee said "perhaps, too loose." He explained that the firm tends to explore all new developments, and decide rather informally on how to address them. For example, Firm B believes that the entry of new competitors actually assists Firm B by validating the concept of third-party integrated logistics. The interviewee said their feelings on this issue may change as time goes on, or as something negative happens with the entry of a competitor. The administrative structure of Firm B appears to be very flexible on the adoption of new technologies. "We recently adopted a new technology for system modeling. The staff was divided, but eventually people coalesced around a new system. The customer-focus is what eventually persuaded the holdouts -- we could more flexibly model customer environments with the adoption of a new technology. So, we did it." The interviewee speculated that Firm B's hiring of people who are "change-oriented" helps to retain flexibility administratively.

When asked to comment on the balance between solving domain, technological, and administrative strategic problems, the interviewee said he felt Firm B focused on solving engineering problems. "We have a lack of people and resources in this area -- we see more opportunities for design than there are people to work on them. We need more staff in this area -- our posse is travelling at the speed of the slowest horse. Perhaps our problem is that our standards in this regard are too high, and we're impatient and demanding with our technical solutions."

CENTRALIZATION

The strategic decision process in Firm B is initiated by a regularly-meeting group of executives. The strategic planning group includes a representative from sales, engineering, operations, purchasing, systems, and the president of the company. Each functional representative is responsible for developing a strategic direction that is consistent with the corporate plan. The president articulates the corporate plan, and serves as a coordinator of the functional areas. The interviewee said that group cohesion was paramount. He believes that he doesn't possess the total strategic vision necessary for success. The strategic group must be solidly behind any strategy that the firm decides to pursue.

The interviewee categorized the changes in strategic direction in Firm B as evolutionary in nature. "We make minor course corrections. We've turned down potential clients because they would cause too radical a change in our strategic direction."

Firm B monitors activity in the marketplace extensively through a corporate information system. "Ninety percent of the changes we make in strategy are based on changes in variables that we monitor regularly. We will frequently go right down to operations people -- the user level -- to find out what is happening."

FORMALIZATION

The strategic decisions of Firm B tend to be very broad. "We want to stay loose; being too specific is very dangerous." The interviewee felt that too rigorous specification of strategic goals could preclude opportunities which may present themselves to the firm.

The strategic decision-making process of Firm B was characterized by the interviewee as being standardized. "We approach strategy across disciplines and customers. We take the same matrix approach as our organization structure in an attempt to understand how things interrelate." Each client team carries financial responsibility as well as strategy development responsibility. The strategy group meets regularly, and follows a specified agenda for reviewing current activities, ensuring compliance with previously set goals, and exploring new opportunities for new and existing clients.

COMPLEXITY

It appears that there are few internal constraints in Firm B in developing strategy. The only constraint cited by the interviewee was "Never own an asset. We'll turn clients over to a competitor before we own an asset, and we won't modify this very basic aspect of our approach."

Middle managers in the organization appear to be highly involved in gathering information which impacts strategy development. Firm B uses a sophisticated computer network to gather field data. All employees of the company have access to the system, whose purpose was specifically that of improved communication and intelligence-gathering. Middle managers in Firm B carry a high level of financial responsibility and thus are forced to engage in environmental monitoring.

When asked to describe the extent to which strategy development is a result of internal bargaining, the interviewee said "Each problem tends to have an advocate and an opponent. When our internal politics get in the way, we lean toward what the customer would think. When we do that, we usually achieve internal harmony. What the customer thinks really affects our strategy much more than our internal politics."

When asked to examine the archetypical firm profiles and compare them to Firm B, the interviewee chose the Prospector type without hesitation. It is the assessment of the researcher that Firm B most closely resembles the Prospector.

SEGMENTATION STRATEGY

Firm B's segmentation strategy seems very market-based. The firm attempts to cluster customers based on their needs, and the degree to which synergies can be created by jointly solving their needs. The domain-based segmentation criteria have been successful for this firm thus far. When asked to comment on clustering potential clients based on Firm B's ability to solve their problems, the interviewee disagreed with this approach. "Our flexibility allows us to make rapid changes to meet customer needs. We group customers based on their geographic and industry types, and the synergies created when customer solutions are created jointly."

When asked to assess the success of this approach to segmentation, the interviewee deferred the question. "We've been profitable since year one. This industry is still too new, and growth appears unlimited to us. I honestly don't know how successful we would have been pursuing a different approach to segmentation, and I don't really know how we'll change in the future."

BUNDLING

Proposed service packages are based on a client team assessment of needs and solutions. Each functional area has input into the proposed solution. Existing customer systems are extensively modelled and examined for inefficiencies and possible linkages to existing Firm B systems.

Firm B typically creates a variety of packages designed to solve customer problems, and allows the potential client to choose a solution. Firm B almost always has a preferred solution in mind, and strongly recommends the adoption of that solution. Potential clients are given a trade-off analysis that explains the strong and weak points of each solution. The interviewee cited the example of a recent system designed for a client: "We presented about twenty different options to the client. It may have been a case of overkill -- I honestly don't believe the client understood exactly what we were doing in our system modelling." Firm B usually offers a menu of services available as a part of each proposed solution. The exact services to be performed by Firm B are specified in the negotiation process, though certain key services must be present for Firm B to accept the client.

Firm B believes that its solutions to customer problems must interface easily with the client's internal systems as well as those of other services providers. "We have a group of basic services that we provide in a similar way to all our clients, and we have additional services that are customized for different systems interfacing. We strongly believe in open links, and we're very concerned with creating a seamless interface."

PRICING

Firm B is currently undergoing a change in thinking on pricing tactics. The interviewee said there is a great deal of internal debate on pricing. He believes that Firm B must remain flexible and variable in its approaches to pricing. The initial approach to pricing was one of charging a basic management fee based on the size and complexity of each project. Prices were not tied directly to the savings generated for the client, nor to any performance specifications. The interviewee felt this approach to pricing had not been successful, and that ties to both cost savings and improvements in service quality were necessary. Firm B is in the process of renegotiating its earliest contracts, and is now attempting to make them more performance based. The interviewee also felt that Firm B was now getting a better handle on its own internal management costs, and that it could be more "realistic and competitive" in future pricing decisions.

When asked to characterize pricing decisions as asset or market based, the interviewee said "As our people are our assets, our pricing has been very asset-based. But we're moving away from that to a more market-based approach." Sales agreements for Firm B are now time and performance related, with recent attempts to add improvements in service quality to cost savings. All contracts negotiated by the firm include penalty clauses for failure to perform: "If we don't produce, we don't charge for our services." However, Firm B is also careful to specify customer compliance criteria in each contract.

SALES PROMOTION

Firm B makes its initial approach to a client through the client's existing transportation or logistics department. If the head of the internal logistics department is assessed to be a "progressive thinker," Firm B works through that department. If resistance is encountered at this level in the client organization, there is no hesitation on the part of Firm B to go higher up in the client organization. "This is the benefit to us of not being asset-based. We don't fear repercussions or punishments due to our going over some guy's head." Firm B always uses a team selling approach, calling in representatives of all functional areas of logistics as required to match customer needs. Firm B emphasizes a "primary demand stimulation" approach to selling: "We don't sell our company -- we put the emphasis on the strategic importance of integrated logistics to our clients. Then we offer solutions, and that directs the client to our firm."

In terms of background research, Firm B prefers to know the corporate culture and the key decision-makers within a client organization before its approach. "We try to go in with an open slate, otherwise. But if they're not 'entrepreneurial' enough, forget it. We try to avoid the big bureaucracies." Firm B prefers client organizations that are progressive and flexible, and thus make a good fit to its own corporate culture. If a potential client is within Firm B's defined domain, the only pre-approach research performed is examining the culture and personalities of the organization. This is typically done through informal contacts or personal referrals.

Firm B does not offer off-the-shelf solutions, preferring to tailor make any system solution to a client's logistics problems.

SUMMARY

Firm B views its unique competitive strengths as two. First come its people. "Our people are good and come from diverse backgrounds in shipper organizations. We look for people who are assertive, tenacious." Second, the firm relies on its systems technology. "Without the technology, you're dead in the water." Firm B focuses on the development and improvement in its proprietary relational databases in its attempts to remain flexible and customer oriented.

The principle competitive weakness of Firm B is its chaotic environment. "We need to run a tighter ship." The interviewee believes that the early rapid growth of Firm B lead to this internal chaos, though he believes the firm is getting better in its internal controls. He feels that it is important to retain some degree of "chaos" to keep his organization flexible to customer demands and his people creative and stimulated by their environment. "Managing the chaos is a challenge," he concluded.

Firm B does not view other integrated service providers as its principle competitors. "Our biggest competitor is the internal traffic manager in the client organization. He's got turf to defend, and he may not understand the synergies to be created. He's a political creature." The interviewee believes that other integrated services providers should be viewed as allies at this early stage of industry development. This is reflected in practice by Firm B's sales approach focusing on the strategic possibilities of creative outsourcing, rather than on Firm B's unique strengths.

When asked to comment on changes in the integrated services provider industry, the interviewee cited six trends. First, he believes that the industry is "not a fad. We'll make it as businesses continue to focus on their core strengths and relax a bit about the concept of third parties providing world-class logistics. Firms will get used to the idea and even be afraid not to do it. There are synergies that can only be created across shippers." Second, he sees a further consolidation of transportation carriers which may fuel a consolidation of shipper groups as well. He feels this bodes well for integrated services providers as they are ideally situated to present synergies to shipper groups. Third, he feels there is great potential for approaching foreign firms with weak understandings of domestic logistics requirements who which to enter the North American market. Fourth, the interviewee feels there will be a quick consolidation within the integrated services provider industry itself. "We've already seen some shakeout. We need to get married inside this industry ... we all have some little piece of the pie. We've been approached on this." Fifth, he sees quicker marriages with technology partners who have traditionally been outside the traditional logistics domain. He cited examples of computer software and hardware companies, and communications carriers as potential partners. Finally, the interviewee sees the opening of Eastern Europe as having great potential. "There's a big education effort involved ... they haven't the slightest understanding of strategic logistics. But this is also an opportunity, as they also don't have the internal corporate biases that we encounter domestically." He called for joint participation by other firms in the integrated services industry to educate Eastern European counterparts.

Provider Case "C"

Firm C is an integrated services provider that has evolved from a series of acquisitions done by a diversified corporate parent. Firm C has built a core strength through warehousing and other fixed-location facilities. The firm has a network of strategically located distribution centers, and has developed additional skills as demanded by customers, and to provide a full range of logistics services. Firm C has been offering integrated services for about two years. The executive interviewed for this research is a senior vice president whose primary concern is corporate development.

When asked to describe the current services offering, the interviewee said "we do what it takes, whatever that entails. We provide whatever the customer asks for." In giving examples, the interviewee cited all traditional logistics functional areas, and added light manufacturing, repackaging, final assembly, and other extended service functions. "We built a special facility for one of our consumer products clients who sells to a major wholesale club chain. We take their standard packs and customize for wholesale club sales. We do all of their repacking for the entire U.S. in one facility." In reviewing the sales literature for this firm, it is the assessment of the researcher that the firm truly offers packages which are "solutions" to the most complex logistical problems.

DOMAIN

In describing the selection of a market domain, the executive stated "the entire private warehousing industry" is the primary domain in which his firm seeks to compete. Secondarily, the existing public and contract warehousing industry is also viewed as a competitive arena in which Firm C can operate effectively. "We attacked the private warehousing as 'you'll be better off' -- better service. We approach public and contract warehousing by saying 'you'll have lower costs.'" The interviewee was not sure that this original domain selection was still valid.

When asked to assess Firm C's success in pursuing this domain, the interviewee characterized it as "modest." "I'm not so sure third-party warehousing and logistics will be a big thing -- it's still a relationship sell." By this, the interviewee meant that most of Firm C's existing clients have been developed through internal contacts rather than more traditional sales approaches. "Our biggest struggle is developing new business; it's a tough sell." Firm C has had difficulty in differentiating the needs of private and public warehousers using its original domain criteria. The interviewee no longer believes these domain definitions are specific enough after mining the relationship sells. "We need to refocus on industries and develop skills and knowledge geared to a particular industry." He also believed that development of specialized services would enhance Firm C's reputation, and extend them beyond "simply being warehousers. We need specific skills that we can sell."

TECHNOLOGY

In terms of allocating resources, Firm C has operated primarily through acquisitions. The corporate parent has provided a virtually unlimited capital stock for such acquisitions and for other internal expansion. The parent firm is very interested in developing a major national player in the integrated services industry. "We've never felt limits; the direction was always growth." If anything, the interviewer felt such a growth strategy may have caused them to overlook internal synergies due to a lack of corporate focus within Firm C. Overall, the firm seems to allocate resources opportunistically.

When asked to what extent Firm C relies on core strengths, the executive gave an example outside of warehousing. "In local delivery, we've taken three routes. We've developed expertise in-house, we've acquired, and we've sub-contracted. We needed to develop a program, but we didn't need to own it all." The firm appears to focus around a core, but doesn't hesitate to go outside for expertise if needed. When asked to what extent Firm C would go outside to adopt a new technology, the executive said "always." He felt that Firm C's acquisitions had been weak, and that caused a constant internal development of new systems and a constant quest for new approaches to solving a customer's problems.

ADMINISTRATIVE

The interviewee felt there were problems in ensuring Firm C's consistency of organization and structure with customer needs. "There are problems with our acquisitions and resulting multi-division approach. We're not yet at an even, consistent level of performance. One firm we acquired has a good, high customer service level, another has old facilities and no systems support. Our best acquisitions have been those where there was a strong, personal, entrepreneurial commitment to customers that survived our takeover. That's where management has a consistent understanding of performance levels." Firm C is divisionally structured by geographic region. Its divisions roughly correspond to the old acquired firms. The interviewee felt this was an impediment to providing consistent quality customer service to national clients.

In assessing internal response to customer needs, the interviewee felt that field personnel still had too much of a "local" view. "Some of our acquisitions are pretty loosely structured, have inconsistent management, and virtually no performance standards." Firm C has taken steps to correct this by reorganizing geographically, and giving each regional manager profit-line responsibility for his "SBU." There remain concerns that corporate will have a difficult time coordinating strategy across regions for national clients, but that putting a bottom-line responsibility will force up service levels and mandate a customer focus.

The executive felt that Firm C was organizationally flexible in meeting market changes. He cited the previously mentioned repack facility for supply a client's merchandise to warehouse clubs. "We need to be the flexible link for our customers. That's why we're here." At the same time, he cautioned that any structures Firm C puts into place must be flexible to avoid locking in human and physical assets in a way "we can't get out of if it's not profitable."

In adopting new technologies, the interviewee felt that his organization remained flexible. "We're still so new that we're still open minded enough to question what we are capable of doing." He cited the area of management information systems: "we're attempting to identify what central important capabilities we must have and which 'beyond' functions can be delayed or outsourced in turn. Some MIS capabilities are too futuristic and clients haven't had much of a need for them yet."

When asked which of the three adaptive problem solving areas dominated strategy development, the executive said "domain. It's the most unknown at this stage of industry development. We can manipulate and control technology and administration. We can't 'control' the domain. We're not yet sure how to develop and grow new businesses."

CENTRALIZATION

The strategic decision process at Firm C is accomplished within a small group at the top of the organization. There have been some recent changes to the membership of this group, based on the previously mentioned divisional reorganization. The group now includes the regional managers, the corporate president, the chief financial officer, and Firm C's top marketing executive. The corporate president wields significant power in these meetings, though the group operates by consensus.

When asked to assess previous changes in corporate strategy, the interviewee characterized them as "revolutionary." The most recent strategy change was as a result of a management shakeup within the organization. The parent corporate management had been dissatisfied with the previous strategic direction, and replaced the former president of Firm C with one of the regional management executives. The goal of the shakeup was reorganization of Firm C to "make things more entrepreneurial, and more responsive to the market."

The interviewee had a difficult time in answering a question about how strategy is linked to monitored variables. "The most recent change was management and administrative, and of course, we monitor that closely." Other than the one revolutionary change, the firm may be too young to have significantly altered its strategic course in response to monitored variables.

FORMALIZATION

The interviewee described the formulation of strategy goals in the following way: "we try to quantify our goals, get precise with market share and other measurables, but we don't match up with these yet. We're still new, and we haven't held to a strategy long enough to assess how well we're doing." Firm C appears to state strategy goals in precise terms, and does so using a standardized process. On an annual basis, Firm C engages in a planning process that parallels that of its parent corporation. Planning consists of setting goals and objectives and assessing resources, market conditions, and competitors. Corporate planning specialists are utilized by Firm C to assist executives in developing a plan which meets corporate requirements. When completed, it is presented to the corporate parent's senior executives, critiqued, and either accepted or changed.

COMPLEXITY

Internally imposed constraints do not play a significant factor for Firm C. "There are no constraints above us, and few below. We are constrained only by our capabilities in the short term. In the long term, everything is negotiable."

Middle managers in Firm C tend to not spot change in the marketplace which have strategic importance. The interviewee feels that this is due to the legacy of growth by acquisition.

He feels that the situation will improve as managers become more "entrepreneurial." "We've been too passive in this area, and we're trying to change this. Our field managers have too much a local orientation -- and we need to have those people think more strategically." When asked to assess the degree to which strategy development is a process of internal bargaining, the executive said "not much. A few people really guide the strategy development, and the remainder of the strategic group just rides along." At the same time, the interviewee did not feel there was much turf-protecting going on in Firm C: "Maybe we're just too new at this, and we'll begin to see this with our new regionalized organization."

When asked to compare Firm C to the strategic archetype examples, the interviewee said "we're a D (reactor) right now, but we'd like to be a C (analyzer). But really, an A (prospector) or B (defender) might be better." It is the assessment of the researcher that Firm C is indeed a reactor.

SEGMENTATION STRATEGY

Within its specified domain, Firm C uses industry type as its primary segmentation criterion. The interviewee believes that a specialization is necessary in the integrated services industry and that specialized skills can most easily be developed around an industry type. Firm C has chosen to specialize in a type of consumer non-durables, though it has also offered services in bulk manufacturing commodities and hazardous materials. "Our acquisitions have put us into certain industries, and we're still sorting that out -- deciding which skills and resources are most transferrable." At the present time, Firm C is in a transition from clustering customers by their needs to clustering customers by a match to Firm C's core business strengths. "We need to do more of the latter and less of the former to create better matches between ourselves and our customers."

The executive believes that it's still too soon to evaluate the success of the segmentation strategies in place. "We're still new at this, and we have changed our approach. Our weakest link has been our ability to match our capabilities to our customers." The interviewee believes that the poorly focused segmentation strategy has stymied market development.

BUNDLING

In creating a package of services to fit a customer's situation, Firm C is "always looking for the hook. How do we get them interested in us?" The typical approach involves identifying the desired end result, and designing backward from there. "We gather data from the customer, consider the assets required, model the situation, add services we feel enhance the system effectiveness, and then present a packaged solution to the client." Firm C uses a pricing model to determine its own costs of operating a customer's system. The pricing model output also assists in determining the bases for future price increases or decreases.

Firm C typically presents only one packaged solution to the client. "We may give alternatives if appropriate, but we will strongly recommend the system we want to build and operate." Firm C does permit clients to pick and choose from a menu of services available, but only if the resultant system has economies which "make sense" to Firm C.

When asked about compatibility of Firm C's systems with those of other services providers, the interviewee said "very concerned, though the driving force is compatibility with the customer's systems. I'm not sure we care specifically about another third-party provider except as we would interface through the customer's systems."

PRICING

In addition to the cost model data, Firm C uses a "rate" structure for pricing. "We started out doing 'cost-plus' arrangements, but I'm not sure those make us responsive enough to customer needs." Firm C desires a 15% rate of return on its investment, and pricing decisions are made with that target. When pressed on the issue, the interviewee candidly agreed that competitive pricing situations made this difficult at times. He said Firm C would enter into a service agreement with less than a 15% return if there were possibilities for expansion with the client and if incremental returns on the base system were justifiable.

The executive felt that no coherent "pricing attitude" had yet emerged in Firm C, and that had been problematic, creating a very uneven approach. He felt that overall, Firm C had a market-based approach to pricing: "we'd take on a new client at a very low margin if we felt the potential was there for growth in order to protect ourselves from competition."

Sales agreements at Firm C are contractual, and preferably long term. Firm C does not include penalty for non-performance clauses in its contracts, but would not object to including such if a client desired. "That could be a good selling point." Contracts tend to be price oriented, service levels are specified, and attempts are made to protect Firm C's interests.

SALES PROMOTION

Firm C has engaged in some trade press advertising. "I like it, and I think it enhances our relationship building efforts." Firm C stresses relationship building in its sales approach. The approach is typically to top decision makers in the client organization. The field sales force tries to make contacts through referrals, though some cold-calling is done. Background research prior to the sales effort consists of trying to understand how the logistics process is currently handled within the potential client, how Firm C can contribute to enhancing the client's performance, and how the client's planning process works. "We want to become a part of their strategy development. We want to participate in where they're going."

Firm C doesn't present off-the-shelf solutions in its sales approaches. "We may use examples from some of our successful implementations if they're applicable to the potential client's business. We really are listening for clues that will help us develop customized solutions." Firm C uses both an individual and a team selling approach, depending in part on the size of the client and the types of contacts within the client organization. If using a team approach, the teams typically consist of representatives from sales, operations, systems, and finance.

SUMMARY

In assessing Firm C's strengths, the interviewee cited two. "First, we have a true nationwide network of assets in place. Second, we have management people who are the tops in our industry." The principle weakness cited was the lack of a comprehensive management information system to unify the organization. Steps are being taken to implement such a system at Firm C.

The executive cited four major competitors; 1) USCO for its well established nationwide system, strong customer relations, and tight industry focus; 2) Exel Logistics because of its strong acquisitions, global expertise, and rapid expansion capabilities; 3) GATX/Unit and 4) Trammel Crow Distribution because they are frequently included in the customer's mindset as competitors.

In discussing the future of the logistics integrated services business, the theme seemed to be "dampened expectations." The executive felt that there would be a rapid industry shake-out as providers consolidate. While the market continues to hold great potential due to the continued emphasis on "focusing on core strengths, the short term focus of most businesses causes a preoccupation with price. "I thought improvements in service would be more important than price, but I was wrong. This may cause us to look more at less logistically sophisticated companies as clients. Our approach may change to one of 'we want to be your entire distribution department.'" The executive felt that customer unpredictability may be due to a failure on their part to buy into the notion of quality service. "Not everyone is enlightened in this area, and we do a lot of educating."

Finally, the executive felt that thinking globally is more important than ever. Deregulation within the U.S. and recent trade agreements with Canada and Mexico are creating a North American market. "Some providers are uniquely positioned globally -- look at Federal Express -- well situated to offer services to both domestic firms and to global customers, and capable of understanding markets globally."

Provider Case D

Firm D is an integrated services provider that offers a sophisticated and comprehensive product. It has approached the development of the firm through a series of acquisitions in different functional areas of logistics. Firm D creates and operates systems which "manage the total supply chain," both inbound and outbound for its customers. Firm D has grown rapidly through its strategy of acquisitions, and now is positioned to offer true nationwide services to its clients. The executive interviewed for this research was the president of the company.

DOMAIN

Firm D approached the domain decision by examining a skills base that it had access to due to prior experiences in foreign markets. The managers of Firm D were able to draw upon this experience base in evaluating the U.S. market and in seeking a viable operating domain. Convinced that the skills could be transferred, Firm D approached the domain by looking for market consolidations. "We looked for industries where things were changing -- consolidations, mergers, acquisitions, new products or territories emerging." In each potential industry domain, Firm D further delimited the domain by seeking opportunities where it could synergistically apply skills in logistics management, transportation, and local delivery (its core strengths). Firm D had developed a sophisticated product which utilized these three skill areas. It took the following approach: while the firm had a product, it perceived that the market may not yet be ready. It proceeded with its acquisition strategy to build an operating base in the three skill areas with the goal of understanding market conditions. Within the last two years, Firm D has begun to sell and implement its systems product, building on its diverse (acquired) bases. The process of deciding domain was decidedly evolutionary, with Firm D now focusing on offering custom tailored logistics solutions.

When asked to evaluate the success of this approach, the interviewee said "we're just starting to see some successes. We just acquired our first big national client for integrated logistics, and they are very visible in their industry." Within its domain, Firm D feels it is important to be a sole source for is customers. "We're not big on partnershipping with other providers; we're interested in providing the whole chain. In some ways this has limited our domain." He cited the example of servicing general merchandise retailers: "we're missing some pieces of this puzzle, and we're only now starting to think beyond our original domain. We are encouraged by the operational problems retailers seem to be having, and hopeful the problems will cause progressive retailers to sharpen their own focus and see the value in outsourcing."

In assessing the appropriateness of this domain, the executive was more optimistic than one year ago. "We're more confident now that we see market inefficiencies which can be corrected with our systems. I think that domestic manufacturers and retailers are also beginning to understand their own chain inefficiencies. We're the natural link between them, and we can correct those inefficiencies." Generally speaking, he felt that the market had begun to open up to the concept of integrated logistics outsourcing, and that their early domain decision continued to be appropriate.

TECHNOLOGY

Firm D's general approach to solving engineering problems has been to purchase the necessary assets and skills from established firms. Operating from a strong resource base, Firm D chose potential acquisitions in its three skill areas by using the following criteria. First, the potential acquisition had to have quality management that would stay following the takeover. Second, the firm must have an established quality image in the marketplace. Third, the firm must be of sufficient size to afford operating economies, but not so large that "if it went sour would sink us!" After acquisition, Firm D went about changing the acquired firms in the following ways: expanding regional players to national scope, developing their people as management resources by broadening their understanding of integrated logistics, and integrating established facilities and customer bases into a unified system. "We've done a good job on the latter. Next year, we plan to unify all our 'divisions' under one 'brand name.' We feel that recognition is important in the marketplace."

When solving customer problems, Firm D relies heavily on its core systems which it now feels to be complete for operating within its domain. When asked about adopting technology from outside the firm, the interviewee responded with a qualified yes. "In certain key areas, we do understand our limitations. But we must never lose sight of the fact that we are not the customer. We provide solutions to customers, and firms working with us must understand the importance of the end user."

Firm D appears to build upon core strengths. The executive felt that it was not a leading-edge technology firm, but one step behind that. "As a service provider, you can't lead the marketplace -- we're there to serve the needs of customers, we can't create demand. There is some reconciliation needed between these two." Firm D appears to try to walk the middle ground.

ADMINISTRATIVE

When asked to assess the degree to which the organization and structure of Firm D was consistent with customer needs, the executive responded "somewhat inconsistent." The firm had some difficulties in melding different skills and organizations it acquired in building its operations base. The interviewee felt that there continued to be problems in reconciling formerly regional outlooks with a new national scope. Furthermore, some problems existed with different operating divisions having more or less different knowledge bases for industry types. "We recognize this problem, and are working on better integration of these acquisitions -- we're still moving down the learning curve organizationally."

The interviewee continued: "we view our management structure as dynamic. We're getting away from our own roots, and trying to understand our customers' roots. That's the key." He saw his management team as flexible and responsive to changes in both marketplace and technology. Opportunities in both of these areas constantly arise due to management's open approach.

When asked to pick one category of adaptive problems that presented the largest obstacle, the interviewee chose administrative. "First, the domain encompasses a changing marketplace and we simply follow by positioning. Second, engineering is always resolvable. These two problem areas are testable, and we feel we have a vision in those two areas. But the administrative structure has to change to implement these, and we're still putting together pieces of the puzzle and trying at the same time to remain customer focused."

CENTRALIZATION

The strategic decision process is initiated at the operating division level. While decisions are made either by the president or the local managing director, Firm D has deliberately chosen this decentralized approach. "Why? Those people are the closest to the customer!" In clarifying Firm D's approach to strategy development, the executive stated that "vision comes from the top, while strategy is circular. The field 'bubbles up," is filtered through the corporate vision, and then goes back down to the field. We go to any level in the organization for strategic thinking." The executive believes that strategy changes have been evolutionary in nature.

When asked how frequently changes in strategy were responses to variables regularly monitored, the interviewee said "never. Such changes could be in our tactics, but not in strategy -- otherwise we'd be changing strategies every six months. Strategy is for the long haul, and is guided by our vision."

FORMALIZATION

In describing the development of precise strategies, the executive said that all strategic formulations begin broadly, then are refined to specifics. "We try to understand the broad ones, but we actually work from the tightly defined ones. These, however, tend to be more changeable." The interviewee believes these changeable "strategies fall into a mid-ground between grand strategy and tactics. The guiding light for defining these mid-strategies is making them "manageable and measurable."

The strategy development process at Firm D is standardized. There are monthly strategy "president's meetings," and quarterly strategy reviews. Every six months there is a major strategic review which serves as a precursor to the annual process. Firm D operates on an annual planning basis, within a broader three year plan. Each of these strategy sessions covers the same ground: reviews of quality and customer service issues, finance, and discussing problems related to the three areas of adaptive problem solving. Lately, the strategy meetings have tended to focus on administrative problems dealing with melding the acquisitions into a coherent whole.

COMPLEXITY

When asked about the degree to which strategy decisions are internally constrained, the executive responded: "about a third to a half. Our self-imposed objectives create constraints. But usually these wind up being constraints on our tactics rather than on our strategy." Middle level managers in the organization are thought to spot changes in market conditions with strategic implications reasonably well. "They may see the changes, but often don't understand the full implications. They remain an important source of information. Mechanisms exist for such reporting, and we encourage it."

Strategy development does not appear to be a process of internal bargaining, nor subject to excessive personal biases on the part of managers. "These were problems early on, but as we better integrate our acquisitions, it's fading fast. We tend to bargain more over tactics once we've agreed on a strategy."

The interviewee was asked to compare Firm D to the strategic archetypes. He chose the analyzer type, and the researcher concurs with that assessment.

SEGMENTATION STRATEGY

The basic approach to segmentation used by Firm D is matching its resources and capabilities to opportunities it sees in the marketplace. Segments and targeted client firms are arrived at by consensus. Firm D tends to cluster potential clients by their ability to match Firm D's core strengths. "It can come down to a matter of resources and risk. We won't stray too far afield if we perceive the risks to be too high." The executive said that criteria used to segment markets was rapidly changing within Firm D. "We prefer food over non-food retail, Fortune 500 companies, and situations where we can synergistically add something to a company." He admitted that the last criterion was highly subjective, then added "we have to be able to bring something to the party. We are not interested in single function outsourcing."

In discussing the match of Firm D's segmentation strategy to the reality of the marketplace, the interviewee said "the market is not well developed. At this point, we have a hard time deciding what else to do. The U.S. market for integrated logistics is still too new, and the concept is still too undeveloped."

BUNDLING

Discussing the way in which Firm D approaches development of service bundles, the executive outlined the following procedure. First, Firm D analyzes the customer situation to define their needs. Often, the client organization cannot articulate its logistics needs, it simply knows of problematic symptoms. Once diagnosed, Firm D presents a restatement of those needs to the client. Second, a period of negotiation ensues where Firm D and the client discuss needs, potential solutions, and internal constraints. Third, a solution is modelled that matches needs and constraints with Firm D's resources and capabilities. Finally, negotiation begins again, this time with cost often the central issue. "Nobody really means it when they say we're more concerned with quality over cost."

Firm D typically presents a single solution to a client's core problem, but may offer three or four options which may solve other client needs as well. "We're the experts, and we'll present what we believe to be the best solution. But we will negotiate the package, informing the client of the pros and cons." At this stage in the negotiations, Firm D does not permit the client to pick and choose from a menu of services, although such choosing may take place earlier as the client assesses internal constraints. Firm D is not at all concerned with the compatibility of its systems to those of other services providers. "We have top priority to interfacing with the customer, and none to other providers except through the customer system."

PRICING

When pricing, Firm D uses both mixed-leader and mixed-joint bundling. Each can be used when pricing becomes a critical issue for the client, and when the client requests a detailed price breakdown. Overall, the pricing strategy was described as: "trying to be sure our costs are right, and making a reasonable return on our investment. We prefer 'closed book' pricing. We don't like so-called cost-plus arrangements where the client has access to our cost structure."

The executive believes that his firm uses an asset-based means for determining price. "We have to earn a reasonable return, but we're willing to accept a lower return if it gets us market penetration or a new customer. We will not take a deal at a loss, though. There is a danger in setting prices too low. Competition may settle around a low price, and that hurts us all."

Sales agreements with Firm D are contractual, and performance based. Typically, there are arrangements for costs saved over time to be shared by both parties. The criteria specified sometimes cause prices to be variable; this may be due to Firm D's desire to protect itself from bad data or performance on the part of its client. Typical contracts also include both failure-to-perform penalties, and "divorce" terms to end the operating agreement.

SALES PROMOTION

Firm D uses many different approaches to potential clients. If it's possible to use some sort of personal reference or introduction, the sales force always prefers this route. If such "networking" possibilities aren't available, the sales force will do cold calling. Approaches may be made at two different levels in the client organization. If the client is sophisticated in logistics, the approach may often be made to the senior logistics executive. If it is felt the client may not understand the concept of outsourcing, approaches are done higher up in the client organization.

Before any approach, Firm D's sales people have attempted to profile the potential client through any publicly available information. Insider information is appreciated, but the interviewee admitted the sales force often "goes in cold, and learns on the way. We try to bond to one person in the client organization, establish one contact to be an advocate or champion in the client organization.

Firm D always presents itself very broadly, discussing the concept of logistics outsourcing and the capabilities of the firm. Off-the-shelf solutions are not presented to prospective clients; the focus is on customized solutions to problems. Firm D may occasionally present case studies of its own success stories if it feels the client's situation is somehow related. Generally speaking, Firm D's sales staff try to listen more than sell, seeking opportunity by understanding the client's situation.

Firm D uses a single person in the sales effort on the initial approach. If there seems to be potential in the client for additional sales effort, a team is assigned that may include experts from functional areas including sales, MIS, operations, human resources, finance, logistics systems modelling, and industry-specific specialists.

SUMMARY

The executive cited two unique competitive strengths. First, Firm D is largely employee owned. "All employees have a share in the action, and that gives us a big boost in morale and performance." Second, Firm D has a proven track record. the executive believes that ongoing operations are a major plus in sales efforts because they lend credibility.

The interviewee cited a lack of geographical dispersion as a major weakness. Firm D has only recently acquired a nationwide capability, and has yet to fully integrate its systems. He also felt that the firm did not yet have a strong national image, though plans are underway to develop just such an image. Finally, he felt there were gaps in knowledge and expertise among younger management at Firm D. "We need to beef them up for the future."

In discussing competitors, the executive divided them by their core strengths. "In warehousing, it's Unit, USCO, and Itel. Information providers are not there yet, although as information truly trades against inventory, they may become powerful as systems managers. I don't see the in-house operations such as Caterpillar and NYNEX as competitors.

They've got too many axes to grind internally -- when push comes to shove, you know where there loyalties are. The transportation companies have financial muscle, good market knowledge, and excellent long term relationships with their customers. But they'll fail if all they do is feed freight into their systems."

The executive offered a number of insights on the future of the integrated services industry. He sees a period of great market volatility, with firms entering and exiting rapidly. He believes about four or five industry leaders will appear in the next three years, and that the majority of them will come from a warehousing background. "We've managed the most difficult parts of the logistics system, and we have a history of managing outside suppliers." If the domestic economy were to go into a recession, he believes that transportation carriers will be hardest hit and most likely to cut back their efforts in integrated services. The interviewee also believes that a number of foreign providers are well positioned to enter the U.S. market, operating from an experience base in European operations. Finally, he sees the U.S. market as evolving: "we'll go through a number of metamorphoses along the way, but I wish I could judge the pace of those changes!"

Provider Case "E"

Firm E is a provider of logistics integrated services. It is a wholly owned subsidiary of a domestic manufacturer. Several years ago, the division was created with a mandate to bring to market internally developed logistics expertise. The parent corporation is a multi-billion dollar corporation, with global product sales. The logistics services division is able to draw upon parent corporate resources and reputation, while preserving a high degree of operating autonomy. The interview was conducted with two division vice presidents. Along with the division president, the three make up the division's strategic development team. For the purposes of analysis, individual responses by the two interviewees have been consolidated. Both individuals were present at the same interview session.

DOMAIN

In describing the firm's domain, the executives said "we're a product driven company, and our domain is industrial goods and consumer durables." They felt this domain had resulted from Firm E's history, evolving from the management of a replacement parts network. "We felt the concepts transferred well into that domain. We're attempting to stay focused in this domain, though we are feeling our way along in a few projects in other areas."

When asked to assess Firm E's success in this domain, the executives responded "very good in industrial products. Right now, demand for our services exceeds our resource ability to deal with it. We feel we have to sharpen up and start picking our clients, not the other way around." The interviewee described four conditions which create the "ideal client." First, the firm may be undergoing some organizational change such as a buyout, or internal reorganization. Second, it may be expanding to some new geographic area. Third, it may perceive some new competitive threat which can be countered through improved customer service. Fourth, a firm which recognizes the need to focus on core strengths and spinoff tangential activities.

When asked to assess how appropriate this domain is for Firm E, the executive said "at this stage of our development, it's very appropriate. Our resources constrain us -- we have to pursue both profitability and growth."

TECHNOLOGY

Firm E's initial approach to clients is often an offer to consult on logistics strategy. In addition to selling consulting services, this gives Firm E comprehensive inside information on the client for the subsequent sales of actual logistics services. The initial approach is typically an interview with the potential client to determine the client's needs. A team is then developed for analyzing the client's situation, and this team remains with the client as a project development team. When the proposal is developed, the account manager will present it to the client. The client organization then decides to go, no go, or renegotiate.

The executives do not feel bound to their parent firm's substantial logistics asset base. "Our parent is a supplier of assets and experience. But we're not beholden to them, we'll go to the marketplace for services as we need them. As time has gone on, we've developed a lot of in-house expertise. We've also deliberately chosen not to handle the products of our parent corporation. We feel this could dilute our client business, and there could be problems with perceptions of our customers. We simply won't dilute our services for the parent's products." In that regard, Firm E builds on core strengths, but is not adverse to seeking expertise outside the organization if it cannot be found in-house. The executives both stated that they feel it is most appropriate to build on their current strengths as implementers of logistics networks.

ADMINISTRATIVE

Firm E began with a functional organization type. It has changed to a "pyramid" style organization. There are account and project managers who are specific to each project. These key personnel draw upon experts from functional areas. Teams are developed for each client during the design and implementation phases. After projects are implemented, the account and project managers stay with the client, while functional specialists are re-assigned to other teams for development. The executives feel this organizational approach (perhaps best described as a modified functional organization) best suits their operating capabilities.

The executives believe that their organization must remain flexible to meet changing customer needs. "We have to be flexible in bringing human resources to bear for our customers. And that has been somewhat of a problem in that we feel we don't have enough experienced 'middle managers' to handle the demand. We need to find and develop more project leaders."

When asked to assess organizational flexibility to market changes, the executives pointed to the recent establishment of a European office to handle business developing there in anticipation of pan-European consolidations in 1992. "We knew we couldn't do it from here, and we opened a European office to be closer and more responsive to our global customers." The executives expressed no reservations about changing the organization to keep it responsive to changing markets.

In adopting new technologies, the executives felt the organization had no problem in absorbing change. But they cautioned that new technologies must pay for themselves, and are evaluated internally by a cost/benefit analysis. Also, they feel that leading edge technologies are simply not applicable to most customer situations, and that their task is packaging existing technologies. They agreed that Firm E does not do a lot of research, but focuses on applications.

When asked which area of adaptive problem solving dominated strategy development, they responded "engineering." They attributed this to the complexity of the situations modelled, admitting that some proposed solutions made customer systems more complex. "Sometimes we wind up going over the heads of our clients." They added that the typical client is most concerned with costs, and that it's hard to precisely quantify the value of improved service.

CENTRALIZATION

The strategic decision making process in Firm E is initiated by two vice presidents. Strategy is developed by a small team at the top of the organization consisting of two vice presidents and the president of the division. The strategy development group has also used the services of an outside consultant in developing strategy.

The strategy development process is standardized and quite structured. Firm E began its existence with strategy developed through "brainstorming." It has now adopted a structured approach which consists of identifying own and competitive strengths and weaknesses, product line considerations, market factors, and other components. This is a "cookbook" approach to developing strategy. The process is continuous, culminating in a presentation to the board in November for implementation the following year. The executives felt that the adoption of a more structured approach to strategy development was logical, considering their organization is maturing, and that growth in the industry tends to be incremental rather than continuous. The executives categorized their strategic decisions as evolutionary, building upon core strengths.

COMPLEXITY

The executives felt that they were significantly constrained in strategy development by internal factors. "We're driven by financial results: growth with profitability. Growth may still be more important -- we'll take some short term hits to get growth." They did not feel that there were organizational constraints to strategy development.

The executives did not believe that middle managers spotted changes in market or environment that had strategic implications. "We haven't seen much occur to have this really be important." Strategy development does not appear to be influenced by internal bargaining at Firm E. "The focus is on the market, and we operate by consensus. Because our strategy group is small, biases don't seem to enter into the process. Also, because we are customer-focused, internal turf issues don't seem to enter strategy development."

When asked to compare Firm E to the strategic archetypes, the executives compared themselves to the prospector profile. They seemed to zero in on the "strength in people" aspects of the profile. The researcher believes Firm E may be closer to a defender archetype.

SEGMENTATION STRATEGY

Within its domain, Firm E has identified additional segmentation criteria. Four segments have emerged: 1) firms already doing outsourcing, 2) firms with no logistics infrastructure in place, 3) companies with a logistics infrastructure in place, and 4) existing clients. Within each segment, Firm E further examines clients by industry type. In assessing their success with this approach, the executives said they had been most successful in existing clients, firms already outsourcing (though the segment was small), and firms with no logistics infrastructure. In the subdivision of those segments, Firm E has been very successful in pursuing consumer products companies. "We see lots of opportunity here. Many consumer products companies are doing outsourcing already, and we're a natural progression."

The executives felt that Firm E's approaches to segmentation were driven by clustering customers based on Firm E's strengths. They saw benefit to clustering customers by needs, across industries. "As we learn more about industries, we understand better how to transfer the skills." They believe that their segmentation strategies have been a good match to the marketplace, "especially in reaching leveraged buyouts and new startups."

BUNDLING

Firm E's approach to developing service packages is as follows: a project team interviews the client, requests data, and analyzes in an attempt to better understand the customer's business. "We try to get an intimate understanding of a client -- often we'll know their logistics system better than they do when we're done." System packages are designed jointly by Firm E's project team and by the client organization. Typically, several solutions may be developed and considered, but the top management of the client organization will ultimately be presented only one package. This package will then be compared to the client's existing situation.

Clients do not choose from a menu of services available. However, Firm E's project team examines a client's assets and expertise to determine what the client does well in-house. This assessment becomes part of the solution presented to top management. Firm E did not seem concerned with standardization and compatibility with other provider systems except as it would relate to serving a customer. The interviewees felt that they key is "what's best for the customer" in such situations.

PRICING

Firm E prices based on the perceived value to the client. "We try to understand the client's internal cost structure because we know that upper management buys by cost. We show a savings to the client, subtract our costs, and then look at the remaining margin. Does it make sense? If so, we do the deal. We also look at competitive pricing. We'll go after a client at break-even if they have growth potential, anticipating forward." The executives felt that their pricing was market-based; however, they were concerned with typical cost-plus issues of internal rates of return and return on investment.

Sales contracts typically span three to eight years, and are renewable. "The exit barriers in a successful implementation are high, and they tend to renew." The contracts are performance based, state the operating responsibilities of each party, present the fee structure, and state penalties for failure to perform.

SALES PROMOTION

The initial approach by Firm E is by an account manager attempting to arrange a meeting as high in the client organization as possible. "We arrange an introduction and a first meeting to explain the concepts of integrated logistics and outsourcing. We try to go above the existing logistics functional level in the client organization. We try to identify two people in the client organization: someone with the political power to be our champion, and someone who can implement -- a boundary spanner. And, there is sometimes risk for these people inside their own organizations."

Background research on the client typically includes understanding their organizational structure, knowing key players, and understanding how the key players will present concepts inside the organization. "Sometimes this is the hardest part -- finding a 'coach' to walk us through their organization. When we do, it's a done deal, and we're getting good at identifying such people."

Firm E presents only tailored, individual solutions. It does not present off-the-shelf packages to clients. "We don't use a cookie cutter approach, but we try to use our experience to leverage savings for our clients."

SUMMARY

Firm E's unique competitive strengths were identified as 1) its people, 2) strong MIS capabilities, and 3) strong inventory management expertise and experience. The principle competitive weakness was seen as a scarcity of good middle management. "We're trying to develop this layer because without them, implementations have been difficult." Strongest competitors seen were the client's internal logistics organization due to the politics of change involved. Logistics consulting firms that assist clients in better integrating and augmenting existing logistics systems were also seen as a competitive threat. Only one firm was cited as a direct competitor: the European firm Unipart.

When asked to discuss changes they anticipated in the integrated services business, the executives cited four. First, the legitimization of the industry itself. "We've been growing 30% a year. If the industry is seen as a viable, value added service, we'll all win. But every time a NYNEX fails, it hurts the credibility of all of us." Second, they feel a consolidation will occur as parent companies may lose patience with their integrated services spinoffs. Third, they believe that transportation carriers will largely leave the industry. "They seem to simply be repackaging, and customers can see through this. Where's the value added?" Fourth, they believe the 1990's will be seen as the decade where service becomes the primary differentiator in the marketplace. They feel logistics service will be a key component.

Provider Case "F"

Firm F is an integrated services provider that is a wholly owned subsidiary of a major transportation carrier. The parent corporation has annual sales of $3 billion. The integrated services division is a new division, operating for just two years. The corporate mission is to satisfy customers by meeting their requirements for value-added transportation and logistics services through quality and customer focus. The integrated services division operates autonomously from the parent corporation. It draws upon the expertise and assets of the parent, but has a large internal staff covering all functional areas of logistics services. Firm F is capable of providing complete integrated systems to its clients. The interview was conducted with the vice president of sales and marketing.

DOMAIN

Firm F views the scope of its domain as the automobile industry. It chose to use an industry type because of the volatility in one particular industry. "We saw lots of changes in this market and moves toward outsourcing. The automobile industry also happens to be the largest single industry served by our parent corporation. The opportunity was there for us to be proactive and grow, rather than reactive. We have broadened this domain a bit by straying into other areas, but are now refocusing exclusively on the automobile industry. We have a bond to these clients, and we prefer to sharply focus."

The interviewee feels that Firm F has been very successful in this domain, given the short operational life of the division. "We've sold ourselves to the Big Three, analyzed their situations, and implemented -- all in bid situations. We now have operating projects, and that's essential to convincing a client. Reputation is everything. We've lost a few bids because our competitors have more experience. But as we build our experience base, we also build a wall to protect us from competition." He believes the domain is appropriate for his firm: "the automobile companies will continue to sharpen their focus due to costs and competitive pressures. That's great for us."

TECHNOLOGY

Internal resources within Firm F are allocated on a project-specific basis. Human resources are allocated according to project objectives. As the firm uses management-by-objective, the project objectives become criteria by which managers are evaluated. The executive feels that Firm F draws heavily on its core strengths of transportation and logistics management. "If an opportunity arises that requires extensive warehousing, we'll partner with a specialist. But we'll be responsible for the entire system. It helps to say to the client 'we won't try to be something we're not.' We'll bring in specialists as needed." Firm F also draws upon specialists in the parent corporation as needed. The executive very much agreed with the concept of building on core strengths rather than developing new technologies.

ADMINISTRATIVE

The interviewee feels that Firm F's organization and structure are reasonably appropriate for customer needs. "We're coming along in this area. We have some shortfalls due to a lack of people as our organization is rapidly growing. We see what we need, but we've had problems finding the right people. But, we think the clients are reasonably comfortable in this area." Firm F has a matrix structure. At the senior management level, the firm is organized by functions. At the field or account level, the firm is organized by client, and has employees dedicated to specific clients.

The executive believes the organization structure to be flexible in accommodating both market and technological changes. He cited several examples of restructuring field operations quickly in response to changes in market conditions. In the area of technological accommodation, he also believes that customer demands drive these changes "upward" in Firm F, and that the firm responds well to these types of demands.

When asked which area of adaptive problem solving dominated strategic decision making, the executive cited two engineering areas: MIS and accounting. "These are our toughest challenges to keeping our programs on track, especially creatively managing information systems.

CENTRALIZATION

The strategic decision process in Firm F is initiated by the vice president for sales and marketing. Top division officers contribute to the development of strategy. Typically included in this group are the vice president of sales and marketing, the vice president for operations, and the president of the division.

When asked to assess changes in strategic direction, the executive characterized them as evolutionary. "Each project is different, even though all are pretty much within the same industry. As a new firm, we've chosen to focus on a single industry first, and then apply and broaden our skills." Strategy is often developed in response to information that rises through the organization from the field operations in variables that are regularly monitored.

FORMALIZATION

Strategic decisions are typically precise in their formulation, and goal specific. The strategy development process is highly standardized. Though some details are proprietary, the process generally follows a market-driven formula. Evaluated are the number and types of proposals recently received, the success ratios for proposals and projects, and other market-oriented information. From the marketing information, a budget is proposed for the following period. Strategy development also draws on the firm's limited experience base, which is expected to increase in importance as the firm develops over time. Strategies arise from consideration of marketing, budget, and experience information. Strategy is reviewed monthly, and revised annually. Firm F uses a five year budgeting plan. Changes in the strategic plan have been evolutionary.

COMPLEXITY

The primary internal constraint on strategy development has been "does it fit the core business?" If changes in strategy move away from the core, then time and resources can become constraints. There appear to be few organizational constraints to developing strategy.

Middle managers do sometimes report information that has strategic implications. "We're still too new to tell much in this area. Our field people tend to get wrapped up in details. Sometimes they don't understand the strategic implications." He related the example of Firm F operating a DRP system for a client. The client began to ask for additional data from a model output in order to feed an internal MRP system. Both systems were driven by production schedules. The opportunity for Firm F to also provide MRP systems operation as an outsourced function was very good; however, the manager did not see this as opportunity but rather as just keeping the local client happy by offering a "freebie."

Strategy development operates by consensus. The interviewee felt there was good balance on the strategy team. "I tend to be very optimistic; we can do anything and everything. The VP of operations tends to be realistic in assessing our capabilities. The president provides the needed balance so we don't get overextended." Personal biases of managers on the strategy team appear to play little role in strategy development.

When asked to compare Firm F to the strategic archetypes, the interviewee chose the analyzer type. "I'd say we're an (analyzer) tending toward the (defender)." It is the assessment of the researcher that Firm F is a defender.

SEGMENTATION STRATEGY

While Firm F has chosen the automobile industry as its domain, it has a narrower segment within the domain definition. Firm F has targeted assembly operations. "We chose this area because assembly is the driving force in the client organization. It also has the best match for the system pieces we sell." Firm F handles logistics requirements on both inbound and outbound sides of the assembly process. Firm F is also a sub-assembler itself, feeding the main assembly process.

The firm's segmentation strategy has very much been driven by clustering customers by their match to core business strengths. "We saw some possibilities, and we polled our (parent firm's) customers. They asked us to tie our services together, and an integrated package seemed right for their expressed needs." Firm F has achieved economies of scale and scope by extending these service packages across an industry with relatively few, but large competitors facing similar logistical problems.

The executive believes this approach well matches the needs of his customers. "What we offer is a system that is intense, complicated, and high-tech, and we believe this positions us well to meet needs outside the target market when we look there. If you can manage auto assembly logistics, you can do anything." For example, he stated his belief that managing retailer logistics is fairly simply compared to managing a complex JIT system for manufacturing.

BUNDLING

In creating a service package, Firm F first interviews a prospective client, using a "checklist" of problems and services developed internally. "They tell us what they believe they want, we supplement with things we think they want, then ask for six months to a year's worth of data. We analyze, match with service needs, then develop a package to present to the client."

When presenting the package to the client, Firm F prefers to present only the "best" solution. Clients may be given alternatives on request, with cost/benefit tradeoffs explained to support Firm F's choice of a "best" solution. Customers are permitted to pick and choose elements for their service packages, though the impact on price and service levels are always pointed out in detail.

Firm F is not at all concerned with standardization or compatibility of its systems with those of other service providers.

PRICING

Firm F prices its systems based on a mixed-joint package price. "We prefer to use this as the pieces of the puzzle may constantly keep changing. Pricing of components can lead you to short-change yourself, or to hurt your client." Overall, prices are determined by estimating the total package costs , then marking up the package by a margin acceptable to the market. "We prefer the client not understand or even consider the costs of each piece of the puzzle. We're usually not the lowest cost bidder, and we will not take operations at a loss." Pricing strategies seem to be primarily cost based, though the marked up margins are based on market conditions.

Sales agreements are contractual in nature, with time and performance specifications, the responsibilities of both parties, and guarantees of continuous improvement over the term of the contract. Contracts always include a failure to perform penalty.

SALES PROMOTION

Firm F typically approaches a potential customer with a single sales staffer. "This may be someone from our sales organization, or someone from our parent corporation." The preferred approach is high in the client organization, to senior executives. Whenever possible, Firm F uses insider contacts. If the client is receptive to the concept of logistics outsourcing, Firm F responds with a team follow-up. Team members are drawn from all functional areas within Firm F, and are brought in to diagnose, solve, and negotiate the sale. At present, Firm F has many more opportunities than it can pursue with its resources. The initial contact with the client serves to "screen" out clients with marginal interests, or with needs which to not match the domain or segments pursued by Firm F.

Firm F desires a fair amount of background information on the client before the sales approach. "We look for opportunity-specific information, and what their general understanding of contract logistics is. We also want to know where our contact is positioned inside the organization, what their motive is for outsourcing, and who inside the organization is pushing this. We also want to know if the company is financially secure."

Firm F focuses exclusively on custom-tailored solutions in its sales approaches. While an off-the-shelf solution may exist for a client, the emphasis is always on understanding the specifics of the client's problems, and designing a system for them.

SUMMARY

The executive felt that Firm F has six unique competitive strengths:

1) The firm's "brand name" has very high credibility and a good reputation.

2) The parent corporation has a long history base: over fifty years in operation.

3) Firm F has a strong focused specialization in one type of transportation services.

4) Firm F has access to a large, comprehensive asset base.

5) The parent corporation, and Firm F have no debt.

6) As an ICC licensed property broker, Firm F has the capability of blending internal and external resources to create ideal systems.

In assessing weaknesses, the executive cited two. First, the parent corporation doesn't own a truckload carrier line. Second, he feels the firm may not have the ability to respond to opportunity. "There's more business than we can deal with right now. We've decided to go for controlled growth to preserve our high quality reputation."

The strongest competitors to Firm F were perceived to be CTI and Ryder Distribution Resources. "Both were in the market before we were, and both are very good at what they do." The executive expressed confidence that Firm F had "the right formula" and would be a strong competitor.

The executive noted four areas of change for the integrated services industry.

1) "It's unlimited. Outsourcing logistics functions can work for everybody."

2) He believes that there will be development of more physical facilities that will be dedicated to customer operations.

3) "There will be more 'whole system' outsourcing as firms decide to get rid of fleet assets, people, and property."

4) He believes that success stories spread rapidly in the logistics business, and that this has caused much interest and re-evaluation on the part of potential customers. He believes that the push to outsource will increasingly come from senior management in customer organizations.

Provider Case "G"

Firm G is an integrated services provider wholly owned subsidiary of a major transportation carrier. The subsidiary is a relatively new organization, although the parent firm is a well established leader in its transportation mode. The parent corporation has sales in excess of $4 billion per year. Firm G is capable of offering the full range of logistics services required to establish and operate systems or "networks" for its customers. Services are principally accomplished in-house, or through the facilities of its corporate parent. The interview was conducted with the president of the subsidiary.

DOMAIN

The domain of Firm G is defined in product-oriented terms. "We view ourselves as the creators of logistics networks, and our domain includes firms with products that lend themselves to networked distribution solutions." When asked to expand on the "network" characteristic, the executive responded "firms that can benefit from the network we have in place, which is global in scope. We look for products and firms which benefit from multiple logistics functions which we have to offer, and which lend themselves well to channel skipping." Due to the nature of the established network, Firm G seeks products which are high in value, time sensitive, and which involve complex distribution problems.

When asked to assess Firm G's success in this domain, the executive said "based on sales and profits, we've been moderate to highly successful." He believes the domain continues to be appropriate for Firm G: "we've not even fully developed all of our networking systems, especially in the area of information systems. We want to get to the point where we standard applications that can be installed and then repeated for other customers." The executive felt that there was substantial room for growth within the specified domain.

TECHNOLOGY

Given the chosen domain, Firm G allocate resources internally based on the degree to which activities can be "leveraged." "We look for the activities which will lend themselves most to our inherent capabilities, and we begin at the top to organize them to accomplish tasks in the marketplace." The executive said this approach had to be balanced against customers who come to you with opportunities which may be outside your engineering scope. The balance is achieved intuitively. One resource issue facing the company is in the area of personnel. "We are challenged to find the right people. We need to attract multi-disciplined employees, broader than those with specific technical skills. We've not got a big pool of these people."

When solving customer problems, Firm G relies heavily on its core strengths. "We won't do anything where we don't have previous experience or expertise. Internally, we can account for 90% of the skills our parent company has, and we prefer to build on our internal skills. We feel we have a broad skills base, though we are limited at times in certain areas -- in the manufacturing sector for example." He expressed a willingness to outsource for technology not in use at Firm G, though he cautioned that people at Firm G must have a good understanding and a fair degree of proficiency in that area to be fully comfortable with a partner.

ADMINISTRATIVE

The executive had a difficult time assessing the appropriateness of Firm G's organization and structure with customer needs. "The ideal organizational design remains elusive." Firm G uses a hybrid approach at present: a functional organization with a consulting-type (or product-oriented) sales approach. "We're somewhat similar to a large law firm in that senior people decide which 'cases' to take on and junior people do the implementations." Continuing service is done by field teams which are client specific.

The executive believes that Firm G does have some work to do to ensure its organization is consistent with providing a response to customers. "We need to be more unified in this area. There are problems in this area in reconciling strategy and tactics." Firm G is attacking these problems in two ways. First, through organizational communications improvements, Firm G is trying to draw together "partners meetings" of senior strategists and field tacticians. Second, Firm G is putting in place information systems which allow all internal organizations to have access to a common customer database.

The executive felt that Firm G's organizational structure was very responsive to market and technology changes. "We structure ourselves in a flexible manner by design so that we can be responsive to opportunities we see. We consider that a critical success factor. As far as our response to changes in technology: we're fortunate not to be burdened with old technology and 'old people.' We have our own IS group, for example, and they're exploring all kinds of developments in expert systems and fourth generation languages. We're constantly developing 'quick tools' to make our systems work easier and faster. I'd say our organizational structure is very flexible in this area."

When asked to specify which of the adaptive problem solving areas dominates strategy development, the executive said "we spend about 80% of our time on domain issues, where we see tactics generating changes in the way we see our domain. I'll change domains quickly based on tactical things we develop."

CENTRALIZATION

The strategic decision process in Firm G is initiated by the president and a small strategy group. The executive separated grand strategy from mid-level strategies. Grand strategy has been developed by the president of the division in consultation with one or two top executives of the parent corporation. Mid-level strategy sessions are initiated by the division president, who draws upon executives one or two levels down from himself in Firm G. "It's generally the same group; representatives from the functional areas." Decisions within this group tend to be made by consensus.

Grand strategy in Firm G has tended to be evolutionary in nature. The executive said that mid-level strategy changes have generally been more revolutionary in nature. "With the age of our organization, we've made some rapid changes within the broader guidelines of the (grand) strategy." Strategy is developed about 70% of the time in response to variables that are monitored regularly by Firm G.

FORMALIZATION

Grand strategy is broad in formulation: "more of a roadmap." The strategy development process is considered "very ad-hoc" at the grand level, and more standardized and formal at the mid-level. Firm G has quarterly reviews of mid-level strategies to ensure compliance with six critical success factors. Those factors are: 1) providing worldwide inventory visibility, 2) delighting the customer with quality service backed with measurable results, 3) high value added with a repeatable product design, 4) increasing points of presence to be closer to the customer, 5) world class training and recruiting, and 6) world class marketing programs.

COMPLEXITY

Firm G has only two internal constraints that strategy must conform to. First is a resource constraint: "projects must be do-able." Second are financial constraints. "In this area, we may have had too much of a short-term orientation. It was self-imposed, but we're opening up on this."

The interviewee feels that middle managers are pretty well attuned to environmental or market changes which have strategic implications. "Our field managers are responsible for managing a 'business,' and that person is responsible for passing up any information on that account which could affect our strategy."

When asked about the extent to which strategy development is a process of internal bargaining, the executive responded with "everybody has their own ox to gore. Sure ... personalities." Functional leaders tends to represent their own constituency. However, the executive understands this potential problem, and expresses little tolerance for "self-aggrandizement" in his organization. The strategic group operates by consensus. Personal biases are pointed out.

When asked to compare Firm G to the strategic archetypes, the executive chose the prospector type. It is the assessment of the researcher that Firm G is a prospector type.

SEGMENTATION STRATEGY

Firm G segments markets by industry type. The firm has targeted industries in which it expends considerable effort in development. "We understand the (specialized electronics) industry as well as the manufacturers within that industry. We develop an approach or solution, market, sell, build, then operate. We approach incrementally and develop repeatable systems." Firm G is also beginning to spot opportunities across industries, generalizing expertise gained in one industry and applying it to allied industry types.

Firm G clusters potential customers by their ability to meet customer needs with core business strengths. The executive believes that the current segmentation strategy is appropriate to the state of current market development. "We're not all things to all people. We can't afford to continually build unique applications -- the management problem is horrendous. We can afford to uniquely engineer only ten to twenty percent of a deal, and an industry focus allows us to do this."

BUNDLING

When approaching a client for selling integrated services, Firm G presents a basic platform of services, consulting with the customer on what problems they are attempting to solve. "We then design a solution. We can demonstrate the portions we already have on board, and we build the rest. We try very much to be solution oriented, though we may try to keep the customer out of the actual design of the system."

Firm G typically returns to the customer with a primary and an alternate solution. "We let the customer choose, but we try to stick to only one design. In part this may depend on the complexity of the system we design. If we're doing location modelling, we may give multiple designs for systems and then present the service versus cost tradeoffs to the client." As part of the system design, clients may be given a menu of services available and asked for choices to input to the solution. Firm G is not at all concerned with standardization and compatibility issues with other third party providers.

PRICING

"In general, we offer only bundled pricing. We don't like to split hairs with accountants." Firm G presents a system price, and does not specify components costs to the client. The only exception to this practice may come when Firm G is required to make a unique asset purchase which will be dedicated to a single client. Those costs will be revealed separately from the system price.

The executive described the pricing strategy by saying "we prefer to do it all on a unit basis. That way, budget variances aren't an issue for the client. Pricing is on a per-transaction basis. The executive characterized this approach as very market-based. "We try to understand how difficult this system would be for the customer to duplicate on his own. We compare our costs to the customer costs and to prices of competitors."

Sales agreements include specified performance criteria, and guaranteed performance. The agreements are contractual, and provide for review and evaluation on a quarterly basis.

SALES PROMOTION

The initial approach of Firm G is done by a single individual (typically a sales executive). As the philosophical hurdles" are passed, a multidisciplinary team is called into play to begin to study the client's needs. Before the first sales approach, Firm G attempts to ascertain a great deal of information about the potential client. Client cost structures, their market position, product information, channel structure, unique competitive strengths, age, and management style are all of importance. Firm G also attempts to identify key decision makers within the client organization. Firm G prefers to makes its approach at high levels in the client organization: "customer service, marketing, finance, the CEO, anyone but the logistics people." This is due to a perceived reticence on the part of operations-oriented logistics executives to consider outsourcing.

SUMMARY

Firm G believes it has four unique competitive strengths. First, it has developed a skill set to engineer a true integrated logistics system -- "one stop shopping." Second, the firm has in place a large physical and logical network asset bases on which to draw. Third, Firm G has high market credibility due to its shared use of the parent corporation's name. Fourth, Firm G has a quality people orientation: "whatever we do it's world class."

The executive cited three weaknesses. First, the amount of time it takes to generate solutions for clients. Second, the large barriers to selling. "The service is a conceptual sell, and we have to get through a number of client layers. We're in the business of managing change for our clients, and that's intense." Third, the firm is not yet fully developed organizationally, "though we're getting closer." The executive believes Firm G has no significant competition nationally or globally which is capable of "attacking our general thrust. There may be some 'cherry pickers' though."

In discussing the future of the integrated services industry, the executive believes the conceptual sell will get easier. "People may have missed the signal on purchasing. The notion of single sourcing caused a change in buy versus make decisions. This will remain in senior executives' minds: 'Do I need this function for a living?'" The interviewee also believes that the industry is here to stay, not a fad. But he also believes that the industry needs to provide real value to its customers -- bad implementations will hurt the entire industry, not just specific firms.

Provider Case "H"

Firm H is an integrated services provider that has evolved from a warehousing and transportation background. Firm H has experienced dramatic growth, averaging over 40% annually for the past three years. The firm has a very strong entrepreneurial orientation, and the founders of the firm are still active in the management of the business. Firm H is capable of offering complete integrated systems, and has in-house capabilities in all key logistics functional areas. The firm operates from a large asset base in warehousing and transportation. The interview was conducted with the executive vice president for corporate development, who is the senior corporate strategist.

DOMAIN

Until one year ago, Firm H engaged in no strategic planning. The firm always viewed its domain opportunistically, literally following from one prospect to another and developing its network exclusively in response to customer demands. One year ago, Firm H developed its first strategic plan, along with a five year business plan. In the strategic plan, Firm H defined five "domains" in which it will operate. They are:

1) real estate: building and operating warehouses, either for its own system or for clients. Domain: "anyone who's interested."

2) transportation: Firm H operates a trucking fleet in service of both dedicated and contract services. Domain: "anything other than highly specialized equipment requirements like hazardous materials or refrigerated."

3) assembly support: Firm H has chosen to work on the inbound side of manufacturing, providing subassembly, parts control, and related services in a JIT environment. Domain: automobile industry or other heavy manufacturing operating in complex goods flow environments.

4) contract warehousing. Domain: anyone.

5) public warehousing. Domain: anyone.

The executive felt that Firm H had been fairly successful in pursuing these domains. "We're undisciplined, but we're growing. We're operating ten to twelve million square feet of warehouses." The executive felt that one of the purposes of the new effort at strategic planning was to bring organization and discipline to a previously very opportunistic and entrepreneurial business. When asked if these domains were appropriate for the firm, he said "not really. Some of these businesses are too broad, others are too focused. We want to grow and enhance our margins. We want to focus on target markets (within the domains), yet remain opportunistic when necessary. A focus would allow us to select areas with better margins, develop our people, and provide more value-added services.

TECHNOLOGY

Internal resources are now being allocated based on a priority of "target markets." Firm H has targeted health care products, electronics, footwear, food, chemicals, and heavy industry as priorities for integrated services sales efforts. "Sometimes it seems day-to-day needs will redirect our resources. For example, we may have excess space in a given geographic area. We'll try to fill that anyway we can. But we try to return to the plan, to our targeted markets."

In solving customer problems, Firm H relies heavily on its core strengths. "The vast majority of systems we implement are done with proven technologies. We've got higher technology than our customers do; we've gotten burned by developing new technology that our customers can't use yet." He indicated that low margins in the core businesses dictated caution in this area. If, however, a customer expressed a need for a new technological solution, Firm H would gladly develop it. "Then we have it in our arsenal; it becomes a sales tool."

ADMINISTRATIVE

With the rapid growth at Firm H, the organizational structure has been rapidly changing. Recently, Firm H has made a conscious effort to overstaff its marketing, planning, and sales areas. "We're looking three year forward now, and investing in our future by changing our structure." Firm H's field organization is structured by client and is done in consultation with the client. "We try to relate structure to service levels to keep us responsive to the client and flexible."

When asked about responsiveness of the organization to customers, the interviewee said there have been few problems. One problem area has to do with a customer's failure to understand their own business. The executive felt that their multidisciplinary team approach had been successful in combatting these situations.

In assessing the organization's flexibility in responding to changing market conditions, the interviewee said "we've probably been too flexible. We may not get settled in enough to let people max out their learning curves. People around here are pressed; they work a lot of hours."

When asked which adaptive problem solving area posed the greatest challenge in developing strategy, the executive replied "engineering. The limited resources and time force us to spend less effort on domain issues. Engineering is difficult because it rapidly becomes tactical and implementation oriented."

CENTRALIZATION

The strategic decision process in Firm H is initiated by the executive vice president for corporate development and his assistant. Direction in strategy is also decided by the executive vice president for corporate development, albeit with a lot of input from other executives. "I'm the catalyst for strategy development, but I talk to lots of people: 'where are we going? How are we getting there?'" The executive characterized the most recent changes in strategy as revolutionary. "We've gone from an opportunistic, very entrepreneurial company to a focused and thoughtful approach to the marketplace."

When asked how often strategy is developed in response to changes in regularly monitored variables, the executive responded "rarely. It's really more inspirational, but this is because we've never effectively engaged in monitoring before. Hopefully, his will shift over time as we get faith in our numbers."

FORMALIZATION

The new strategic approach has precisely stated goals for growth, margins, target markets, market share, and specific marketing strategy plans. The process used to develop strategy is highly intuitive. "Our first approach was one guy using his experience. Now in our first revision of that strategy, we can ask questions like 'is this what we really want to do?'"

COMPLEXITY

Internally imposed constraints do not appear to affect strategy development in Firm H. "We're driven by two goals:

growth and margins. Everything else is fully negotiable." The executive felt it was unlikely that middle managers in the organization would spot changes that had strategic implications. "We've never asked them to do it; we don't think like that. Middle managers have a very tactical focus. The sales force will occasionally report back what they hear from customers." It appears that middle managers in Firm H tend to be parochial in their outlooks.

Internal bargaining does not appear to be a significant impediment at Firm H. "We've not yet challenged their territoriality; if they believe that we'll positively affect growth and margins, it helps their bonuses."

When asked to compare Firm H to the strategic archetypes, the executive chose the prospector type. "We're most like the (prospector), though perhaps moving toward the (analyzer). But I don't want to lose that first type." The researcher concurs with this assessment.

SEGMENTATION STRATEGY

Firm H has not developed segmentation strategies within the five domains outlined earlier. "We've got only the vaguest notions of what's out these, and we're now probing each of the five domains. We've always operated with the mindset of 'there's lots here, we can't go wrong.' We've just gone in and seen who responded." Firm H does do some advertising in both general business and trade press periodicals, and responds to inquiries generated by such advertising. When asked if he felt that the absence of a segmentation strategy hurt Firm H, the executive responded with "No, at least not so far."

In matching customers with core strengths, Firm H tries to take advantage of its competitive strengths. "We do choose customers based on their fit to what we do. Also, we look for the close fit to create higher exit barriers and higher margins. The more sophisticated their needs, the better we like it."

In assessing the match of this strategy with the reality of the marketplace, the executive believes that time will tell. "This year, over 70% of our business is within our target domains. We haven't been entirely effective because we don't understand the market structures -- but we're learning fast."

BUNDLING

When creating a service package for clients, Firm H "refuses to let a customer put us in a box. What've you got to sell?" Firm H engages in a process of analyzing customer problems and selling solutions. "We brainstorm a solution -- what can we bring to the party that's unique?" The firm then uses its resources as appropriate. Firm H is also willing to itself outsource to gain additional expertise or facilities. There appear to be no barriers to these types of solutions.

Firm H typically presents two or three solutions to a customer's problems, and presents cost/benefit tradeoffs associated with each alternative. "We've always got a preferred solution, but do want to give the client alternatives." Clients are effectively permitted to choose from a menu of services available, and treats such choices as constraints in the design of a solution. Firm H does not concern itself with issues of standardization and compatibility with other service providers.

PRICING

When bundling services into a package, Firm H prices the package based on a discount for all services provided. Not unexpectedly, Firm H has used an opportunistic approach to pricing. "Are you full or empty? If we're full, the prices will be based on achieving target margins. If we're empty, we'll price by comparing our costs to market prices. We'll add a slim margin, then go for it" (incremental revenue). Firm H uses a cost-driven approach to pricing when business conditions are good. When conditions are poor, Firm H uses a market driven approach to pricing.

In setting prices, the executive did not believe comparing his firm's costs to those of the client was useful. "It's not easy to compare; either they won't tell or we can't accurately estimate their costs." Firm H usually does not consider the client's internal cost structure.

Sales agreements with Firm H are contractual, time based, and include performance specifications, the rights and responsibilities of both parties, and service levels. "We don't include penalty clauses for poor performance. I believe the long-term relationship with the client governs and controls how we will deal with each other on shortcomings." The attitude expressed was one of customer focus. If a customer continues to be happy with us, we will continue to be a supplier of services.

SALES PROMOTION

Firm H uses several approaches to a potential client. First, the firm attempts to follow up inquiries with a sales call, usually to "qualify" the client as one truly interested in integrated services. Second, the firm develops contacts internally through referrals. Third, the firm attempts additional sales of integrated services by maintaining close contact with existing customers of Firm H. Once a sales lead is qualified, Firm H uses a team selling approach. The teams are multi-disciplinary, and consist of both functional area and industry specialists. There is a great deal of attention paid to what level the sales effort targets within the client organization. There is sensitivity attached to going too high within the client organization without insuring the cooperation of the logistics executive. "He may not be the idea man, but he'll be the implementor. If you bypass him entirely, you risk you'll never do business with him again." The sales force typically uses their best judgment in this regard, and judges each client individually.

Before each sales call, Firm H attempts to "stay loose." The sales force desires information on the size of the client, and anything that can be discovered on that client's special logistics requirements. The broad term "qualification" included assessing what the client currently has in place to handle distribution requirements. "We've found that we get our best information in continued discussions with the client, once they have accepted the concept of third-party logistics.

Firm H always attempts to sell custom-tailored systems to its customers. "If we think there's a chance, we'll customize it. But some clients aren't interested. They want to know what we have in place, and if we can simply replicate it."

SUMMARY

Firm H views its unique competitive strengths as four. First, its quality reputation in the marketplace. "The relationship is what we sell. He's got to feel comfortable, and this comes from reputation. This is a close-knit industry, and networking is important. Second, Firm H is strong in management information systems. Third, Firm H's nationwide infrastructure allows customer flexibility and growth. Fourth, the firm is financially stable.

Principle weaknesses cited by the executive were three. First, while the executive views Firm H as price competitive, "we're never the cheapest." he believes this is due to strong local and regional competitions without high corporate overhead costs. Second, as Firm H has grown, it has been more difficult to retain a strong personal relationship with clients. The interviewee felt this was extremely important, and regretted de-emphasizing the relationship aspects due to the sheer volume of business. Third, he felt there were problems in controlling quality service levels as the firm has grown rapidly.

The executive mentioned a number of competitors. "USCO has a good reputation, decent financial position, and adequate MIS capabilities. DCI is considered a quality operation. Itel is thought to be struggling, "but if they ever get their act together, watch out!" The executive also felt Trammel Crow was a competitor, though with a mixed reputation in the industry. Strong regional and local players were competitors as well, due to their generally lower overheads, closeness to the marketplace, longstanding ties for networking, and good basic services packages.

In discussing the prospects for the integrated services industry, the executive made the following observations. First, development of the industry depends on a continuing shift from private to contract distribution. If this trend changes direction, it's all over. Second, the industry is developing more slowly than he anticipated. "There's lots of interest, but no waterfall yet." Third, there are continuing personnel problems. "We have problems finding good operations people." The interviewee blamed a bad educational system, substantial language barriers, a failure to fully integrate women into the workforce, and high levels of drug use among young people. Fourth, true integrated systems don't seem to be getting off the ground. Full interfaces are not selling, though there is "lots of sell pressure from the functional areas."

Provider Case "I"

Firm I is an integrated services provider that has about $1 billion in annual sales. One hundred million dollars of that comes from the sale of integrated services, and the balance from other operations in transportation. The firm is essentially non-asset based; it neither owns nor operates its own fleet. The firm was built from a core operation in a narrow area of service to the food industry, and has been in operation over eighty years. The integrated services operations have been developed since 1984. Firm I is entirely employee-owned, and is considered highly profitable. The mission of Firm I was described as "being the premier provider of logistics services." The firm has unusually strong skills in information management and intermodal transportation services. "We believe our position as a non-asset provider has given us the ability to offer the best service at the best price in cooperation with our many asset-based partners." The executive interviewed for this research was the vice president of logistics.

DOMAIN

Firm I defines its domain in terms of its capabilities. "Our strengths are in systems operations -- the actual physical movement of goods." The firm has sought much of its integrated services business from within its existing customer base of primarily food manufacturers. With the thrust toward globalism, Firm I has focused increasingly on Fortune 500 food companies which operate globally. Firm I seems to define its market based on its experience base.

"We've been extremely successful in these areas" the executive said. "Because we have no asset-bases, we are able to proceed along a conceptual line -- does it fit our 'concept' and can we add value for the customer? If the answers are yes, they we'll take the project. In that way, we do exactly what the customer wants. If it doesn't fit concept or we can't add value, we won't take the project." He believes that this domain definition is appropriate for Firm I. "We're changing with industry needs -- and our flexibility makes this possible." He cited an example of the creation of a new multi-modal transportation system for one client that involved the complex interchange of goods, pallets, and guaranteed deliveries, all provided "transparently" to the customer. "We created real value in response to a need in the marketplace."

TECHNOLOGY

The process for allocating internal resources to solve customer problems is informal at Firm I. "I meet with our senior people to examine the opportunity for both the customer and us. Often we simply take a chance that a given project is the right thing to do. On an annual basis, we examine each of our functional areas' goals and then we allocate financial resources. I present the proposals to the board along with a balanced justification, and then we determine the investment required." The vice president of logistics sits on Firm I's board of directors.

While the executive characterized Firm I's core business strength as MIS skills, he emphasized the importance of Firm I's people. "People are everything, and they are the foundation of our MIS strengths. Many of our employees have been with us for a long time and really understand our business. Most of my MIS people know more about logistics than a lot of logistics operations people." As Firm I is non-asset based, it has no obstacles to seeking new technologies to solve a customer's problems. "We're always looking for new technologies outside -- looking for a partner with expertise and technology." The only restrictions in adopting new technologies at Firm I would be in the area of asset acquisition. "We've deliberately said 'we will remain asset free.' That's the only limit on adopting new technologies. We recognize that we don't have all the answers internally. If they can do it better, we'll contract it out."

ADMINISTRATIVE

Firm I has a very flat organizational structure. Senior management is small in number, and operates from a single headquarters. Firm I has 70 field offices, each directed by a field manager with profit responsibility. Below the field manager are Firm I's sales force. The executive believes that this structure is very responsive to customer needs. "The decentralized approach gets us closest to our customers. The more levels you have, the more empires can be built. We're very flat so that field people have direct access to top management." He believes internal response to customers is excellent.

The interviewee also believes that this flat structure better positions Firm I to respond to changes in the marketplace. "Because we can flexibly deploy assets, it's people that form our real strength. When we see opportunity, we're free to react." He cited some problems in the decentralized structure with response to technological change. "There's an internal challenge here. In our company, lifetime employment is the norm. We have field managers who have been with us for a long time who resist changes in technology. I think upper management can change on a dime on this issue, but it's different with the field people. We have begun to work on educating our people in this area. We've had explosive growth in the past five years, and it takes time to bring new and old people through that process. We don't force technological changes downward, but our people are becoming much more responsive recently."

When asked which of the adaptive problem solving areas presented the greatest strategic challenges inside Firm I, the executive responded "administrative. We've had such rapid growth that molding the structure has been a challenge. There are lots of old-timers working through the system. Our people are quick to spot changes, but it's hard to get the organization to follow through."

CENTRALIZATION

The strategic decision process in Firm I is initiated by the vice president of logistics. There is input from division heads within the firm. Direction in strategy is very much decided by a small group at the top of the organization. Strategy changes at Firm I were characterized as dramatic. "We've gone from basically being a limited service broker to a full service firm in six years -- zero to $100 million in sales." The executive also pointed to a radical course shift two years ago when Firm I introduced a new service concept to the marketplace. The executive believes that most of the strategy developed at Firm I is in response to variables monitored in the environment on a regular basis. "We look for trends and changes in the industry to give us direction."

FORMALIZATION

Strategic decisions are typically broadly formulated and stated by Firm I. The strategy development process is very informal. Managers do meet on a quarterly basis, "but it's more of an informal information exchange. We're opportunity oriented, and ad hoc strategy develops around those opportunities." He characterized Firm I's strategic decisions as revolutionary in nature.

COMPLEXITY

The executive could cite no internal barriers or constraints to strategy development. "As long as we meet the needs of the customer, add value, and make a return for the company, there are no constraints." He indicated that there was no board or bureaucracy to be satisfied by strategy decisions. Middle managers or operational personnel were not thought likely to spot changes in their environments which had strategic implications. These employees are focused tactically: "we encourage that local, customer focus because it keeps them close to the implementation." The executive felt that there was very little "turf protecting" going on inside Firm I. "Our corporate culture doesn't allow this to happen. We always go to the customer point of view -- what best serves the customer -- and that's how we make strategy decisions."

When asked to compare Firm I to the strategic archetype examples, the executive chose the prospector type. It is also the assessment of the researcher that Firm I is a prospector.

SEGMENTATION STRATEGY

Within its specified domain (food, Fortune 500 firms with global needs), Firm I segments the market by customer type. "Smaller, or regional firms are pursued by people in the regional offices. The corporate office pursues the national or international customers." The firm also uses product type to a lesser extent: "we have some sensitivity to high weight over high cube products due to flexibility in transportation requirements. But that's a secondary criteria." Firm I pursues a dual approach to segmentation: the corporate staff tend to cluster their national customers by needs, while local staff tend to cluster customers by Firm I's ability to meet needs with core strengths. The executive believes this is due to the local and operational focus of the regional personnel.

In assessing the appropriateness of such a segmentation strategy to market reality, the executive felt that this dual approach "gives us the best of both worlds." He felt that the regional personnel were becoming more knowledgeable with experience, and that they too would come to segment based on customer needs.

BUNDLING

Firm I follows a consulting approach in developing service packages for its customers. "After the initial meeting with the client, we ask ourselves 'does it make sense to us? Is it pie-in-the-sky? Is it do-able?' We pull together a meeting of our division heads to explore the problem conceptually, and look at what the end product should be. Then we back up and say 'how do we do this?' Then we determine if we can price it to make money. We go back to the customer with a broad vision, gather data from them, analyze, and create a test program to see if the system will work. We monitor, correct, and then expand or scrap it."

Firm I typically presents a client with two or three package solutions. "We recommend one option, but we will do it another way based on a customer preference." Wherever possible, the client will be presented with a menu of services from which it can pick and choose.

The executive is not at all concerned with standardization or compatibility of Firm I's services with those offered by another provider. "We wind up customizing almost everything anyway. In the area of EDI for example, the so-called standards are a sham. Everything is customer driven. We simply don't worry about other providers' situations."

PRICING

Firm I pursues a system pricing approach. "We devise a service, add value, and then we have to make a return on it" was how the executive described pricing. Firm I is not usually the lowest cost provider. "We emphasize quality over cost." However, Firm I does not ignore market price conditions. "We look at market prices, and we try to be at the high end of the market. Our sell is bringing value to the system, not in price competition. We make a profit in part on leveraging economies of scale."

Sales agreements at Firm I are contractual in nature, typically specifying performance standards, service guarantees, profit sharing, open book arrangements, and continuous improvement. Contracts typically do not include penalties.

SALES PROMOTION

Firm I attempts to approach the client organization at the highest level possible. "We try for the highest logistics executive, or someone in marketing or finance. You have to get to the people with financial responsibility, someone not threatened by change." Top management in Firm I frequently does the initial approach themselves. Discussions begin broadly, emphasizing the concept of integrated services and outsourcing as a strategy for the customer.

Often, executives from Firm I know the potential client personally. The client may come from previous business done by Firm I, or through networking contacts. Occasionally, a cold call is done by senior management at Firm I. Such cold calls are accompanied by information generated by field level employees regarding the client organization.

Firm I does not present potential clients with off-the-shelf solutions. While it may use existing working systems of other customers as examples, the focus is on creating custom tailored solutions to a potential client's problems. Firm I uses a team selling approach during the problem-solving stage. The firm will occasionally use a team selling approach on the first contact if it seems appropriate to the customer requirements. "We bring out internal resources as needed, especially on a potentially large project."

SUMMARY

The executive views Firm I's unique competitive strengths as 1) its flexible, non-asset approach; 2) the fact that it is employee-owned; 3) a customer driven approach to doing business; and 4) its high degree of profitability ensures adequate funds for future investment.

Firm I's principle competitive weakness is its difficulty in finding enough qualified personnel at middle manager levels. "It's especially hard to find people with a broad conceptual understanding of integrated logistics. This has restricted our growth. I can't find good people."

The interviewee believes that its strongest competitors are "APC, CSX/SeaLand, Federal Express, UPS -- the top two firms in each mode or industry. Because we span the industry, we have to compete with all of them. We also have to fight the customer perception that asset-based means strength. We know that some asset-based providers have lost touch with the marketplace."

The executive saw three changes in the future of the integrated services industry. First, he believes there will be consolidation within the industry. "The small to medium players can't compete. Everyone wants more services and small guys can't provide them." Second, he believes the industry is poised for great growth. "The recession may be good for us. Firms will want to focus, get back to basics. I think outsourcing will be more acceptable in the future as senior management sees this as a way of focusing." Third, he believes that services provider firms themselves will engage in strategic alliances. "We've just entered into an operating agreement with a competitor on a particular project. I see more of that."

Provider Case "J"

Firm J is the integrated services division of a major U.S.-based, multi-modal transportation carrier. The firm has annual sales of several billion dollars, and owns transportation assets in all major modes. The integrated services division was formed three years ago in an attempt to leverage the diverse asset bases of this large organization against each other. The integrated services division operates autonomously from the functional operating divisions of the parent company. The interview was conducted with the senior vice president and managing director of the integrated services division.

DOMAIN

The executive began describing the domain by explaining the manner in which domain had shifted since the firm's inception in 1987. Originally, Firm J had identified (through research), categories of customer firms which it thought might be amenable to outsourcing. These categories included firms whose logistics requirements were in flux: any company experiencing change as a result of new start-up, acquisition or buyout, and/or a new product introduction that had distribution requirements different from its in-house capabilities. Firm J began with this domain set, and restricted itself to pursuing customers in three industries: automobile manufacturing, packaged food, and consumer products. The firm chose these three industries due to prior experience and extensive customer contacts through its major operating divisions. Since inception, this definition of domain has shifted somewhat; Firm J has backed away from packaged food products as early attempts in this industry proved unsuccessful. "Food just wasn't a good enough match to our asset bases. But we've added electronic goods and high-tech products -- they're two industries with lots of change and their logistics to date haven't been too sophisticated."

Firm J is geographically focused on the North American market, though has considered extensions to both Asia and Europe. "With the trend toward globalism, our domain may get broader geographically, but not in terms of industries we pursue."

In assessing Firm J's successes in this domain, the executive said "We didn't do well in food -- we didn't have a name people recognized in that industry. We have done very well in automobiles and we've had some early successes in the electronics industry. We've also ventured out into chemicals and paper. We will do some projects outside the domain if they fit and complement our asset base." He felt that the domain was a limited match for his firm. "Many of our contracts have only taken partial advantage of our divisional strengths." He felt that this was due to the unsophisticated nature of the logistics requirements for many goods shipped on Firm J's carriers. "Some goods, particularly bulk or commodity, it's hard for us to add value through extended services. As a result, we have tended to do more deals with one of our carrier groups whose customers are pretty sophisticated."

TECHNOLOGY

Internal resources are allocated for projects according three groups of criteria. First, each project goes through a "screen." Salesforce in the operating divisions act as Firm J's "eyes and ears." Opportunities are brought to the senior management of Firm J for evaluation, and to qualify prospects for integrated or extended logistics services. Second, each potential opportunity is evaluated for its potential to bring business to one of the core group transportation carriers. "Each one of our jobs has to potentially be a win for one of our carriers." Third, an evaluation is made on how likely the customer is to seriously consider outsourcing. "There's a lot of talk and interest, but before we begin a lengthy study and analytic process, we want to know how serious they are." Part of this stage of evaluation involves identifying a "champion" inside the customer organization, and understanding the customer's decision process. "It's so expensive to prepare these studies, we may start charging for them." The executive felt that the complexity of the selling job dictated a careful approach before resources were allocated to designing a customer system. He stated Firm J's success rate (proposals accepted to proposals offered) at 30%.

Firm J appears to rely quite heavily on its core businesses when designing systems for its customers. The executive stated that solutions must bring freight to the transportation carriers to be a "win" situation. When asked to what extent Firm J would adopt new technologies beyond core strengths, he stated "as the projects get more complex, you can charge more and thus afford to develop (or buy) new technologies. We don't make enough in logistics services to cover the cost of developing new technology. The only reason we do this is to feed the freight systems. We try to do replicable projects."

ADMINISTRATIVE

Firm J has a very small number of employees: fewer than 50. The firm has a flexible structure that focuses on operations. The firm's four managing directors engage in the primary sales activity. A small development and administrative group operate in support of the field operations personnel and in designing new systems. The executive feels that this informal structure is very responsive to customer needs.

The executive also believes his firm is responsive to market changes. "We have enough diversity in the background of our employees to cover changes we've had. Our people come from the customer side, consulting, and transportation businesses, and they all have an entrepreneurial bent. We think we're pretty tightly tailored to our domain." Firm J is somewhat less flexible in accommodating changes in technology: "we don't design facilities -- we do concepts and information systems. If something came up that we couldn't do ourselves, we'd outsource it to another internal or external provider." The executive believed that the firm was fairly well balanced in the adaptive problem solving process, though admitted that engineering seemed to take up the most time in strategy development.

CENTRALIZATION

The strategic decision process in Firm J is initiated by a group of four managing directors. One of these directors typically serves as the lead. Strategy is decided exclusively by these four executives.

The interviewee characterized strategy development as evolutionary, though said he saw a "dampening of the oscillations" as the firm was striving to become more balanced in terms of internal and external development. He firmly believes that strategy evolves from changes in variables monitored regularly. "The bigger conceptual shifts are a result of watching the gradual changes in the market."

FORMALIZATION

Firm J takes a middle ground in the precision of their strategy statements. "We try to be precise enough to measure our results, but broad enough to remain flexible. You can set objectives that are too precise and unreachable as a result. You have to be careful not to defeat yourself."

The strategy development process at Firm J is informal. "We meet twice a year to plot strategy with the managing directors. An ad hoc group gets together every three weeks to review our progress and fine tune. We have an annual planning cycle for financial purposes, but we try to stay customer responsive within that."

COMPLEXITY

Strategic decisions within Firm J seem to have to satisfy some internal constraints. The executive gave an example of the operating rules that one carrier division follows as a member of an industry trade group. He felt that these rules directly inhibited customer development for Firm J, though because of the size of the logistics group, he was forced to respect those restrictions. This situation has come up from other power centers inside the parent organization.

The executive felt that communication with middle managers in the organization was good, though he was not sure that the information they passed up the chain had strategic implications. He admitted to some internal bargaining in the development of strategy. "Differences of opinion can be a factor, and there can be jealousy or concerns over areas of responsibility. This may be strongest with our internal operating partners, though."

When asked to compare Firm J to the strategic archetypes, the executive said he believed his firm was most similar to the analyzer type. It is also the assessment of the researcher that Firm J is an analyzer.

SEGMENTATION STRATEGY

Firm J does not appear to have a formally developed segmentation strategy. As discussed in the domain section, the firm has restricted its activities to three industry types though will opportunistically take on other customers if they are close fits to the asset bases of the parent company. "We do consider the quantity of goods they move. We won't take anyone that's too small. We prefer to deal with larger, more stable and mature companies. Other than that, we look for firms in transition and seek out a change-oriented manager within the client firm." The executive believes this approach has remained viable in the marketplace thus far.

BUNDLING

To create a package of services to solve a customer problem, Firm J undertakes an analysis of the existing customer logistics systems and identifies areas where it can bring improvement. This analysis relies heavily on data from the client organization. The output of such an analysis is a recommendation to the client. Usually, Firm J will present a series of alternatives to the client. "They're usually going in the same direction -- in other words, we let them decide how far we'll go in the implementation. 'How for and how fast do you want us to go?' But we also carefully monitor our own commitment so we don't overextend ourselves." Clients are allowed in this sense to pick and choose from services made available by Firm J. Firm J is unconcerned with issues of standardization and compatibility of its services with those offered by other services providers. "We of course want to be compatible with the customer's systems, and also with our provider partners in alliance projects."

PRICING

Firm J presents packages with a single price, typically based on discounts for all included services. However, "customers always want to debundle the price and figure out what we're charging for each service." The executive described Firm J's pricing strategy as "competitive. We don't do business on price alone, but we rarely lose to our competitors." Firm J uses market-based pricing approaches which do not consider returns on assets or investment. Sales agreements are contractual, typically specifying performance standards, penalty clauses, productivity improvements, and incentives: "we have some which specify a decreasing price based on our continuous improvement."

SALES PROMOTION

The approach to a potential client is usually done by one of the four managing directors, sometimes in conjunction with a member of an internal partner's sales organization. The firm does not usually use a team-selling approach. Often, Firm J's managing directors know personally the individual they are approaching. Firm J emphasizes the development of custom-tailored systems, though it may present examples to a client of systems in place as examples. "We always address their problems, and tell them how to fit these concepts to the solution to their problem."

SUMMARY

The executive cited five unique competitive strengths of Firm J. "First, we are now global in reach. Second, we have strong analytic capability in our people. Third, we deliver a better product both from the systems and implementation perspectives. Fourth, we have financial strength and stability. And fifth, we share the name of our internal operating partners and benefit from their good reputation."

The interviewee believes that Firm J's competitive weaknesses are few. "If anything, we're leading the market, and market development is going slowly. We lose most frequently to the client's internal organization."

Principal competitors include Ryder Distribution Services, and TNT. "TNT has a strong presence in Europe, but are just getting started here. The European world-class freight forwarders are also big competitors." He believes the Federal Express competes effectively by tightly defending its own niche (which overlaps the Firm J domain). "I don't see much competition in any of the warehousing-based companies, nor in Roadway." The executive restated that the biggest competition faced by Firm J is the customer internal logistics organization.

The executive cited several developments he sees affecting the integrated services industry. "There will be attrition and volatility in this industry. Ninety percent of the companies in it now really don't have the understanding on how to provide integrated services. Some of the big European carriers will enter the domestic market in North America. The European carriers are much more advanced than we are, and it's only a matter of time before they come here. I do believe the market for integrated services will grow, especially as our industry success rate improves."

BIBLIOGRAPHY

Adams, William James and Janet L. Yellen (1976), "Commodity Bundling and the Burden of Monopoly," Quarterly Journal of Economics, 90 (August), 475 - 498.

Alderson, Wroe (1965), Dynamic Marketing Behavior: A Functionalist Theory of Marketing, Homewood, IL: Irwin.

Bonoma, Thomas V. (1985), "Case Research in Marketing: Opportunities, Problems, and a Process," Journal of Marketing Research, 22 (2), 199 - 208.

Boulton, William R. (1985), "Case Study as a Research Methodology," Case Research Journal, 2 (1), 3 - 14.

Bourgeois, L.J. and W.G. Astley (1979), "A Strategic Model of Organizational Conduct and Performance," International Studies of Management and Organization, 6 (3), 40 - 66.

Bowersox, Donald J. (1986), "A Third Party Partner -- A Timely Concept," Warehousing Forum, 1 (11), 1 - 3.

Bowersox, Donald J., Patricia J. Daugherty, Cornelia L. Dröge, Dale S. Rogers, and Daniel L. Wardlow (1989), Leading Edge Logistics: Competitive Positioning for the 1990's, Oak Brook, IL: Council of Logistics Management.

Bowersox, Donald J. (1990), "The Strategic Benefits of Logistics Alliances," Harvard Business Review, 68 (4), 36 - 47.

Burgelman, R.A. (1983), "A Model of the Interaction of Strategic Behavior, Corporate Context, and the Concept of Strategy," Academy of Management Review, 8, 61 - 70.

Burstein, M.L. (1960), "The Economics of Tie-In Sales," Review of Economics and Statistics, 42 (February), 68 - 73.

Chandler, Alfred D. (1962), Strategy and Structure: Chapters in the History of the American Industrial Enterprise, Cambridge, MA: MIT Press.

Cyert, R.M. and J.G. March (1963), A Behavioral Theory of the Firm, Englewood CLiffs, NJ: Prentice-Hall.

Dansby, Robert E. and Cecilia Conrad (1984), "Commodity Bundling," American Economic Review, 84 (May), 377 - 381.

Daugherty, Patricia J. (1988), "Outsourcing Logistical Services: Firm-Specific Usage Patterns," Ph.D. diss, Michigan State University.

Dwyer, F. Robert, Paul H. Schurr, and Sejo Oh (1987), "Developing Buyer-Seller Relationships," Journal of Marketing, 51 (2), 11 - 27.

Fahey, L. (1981), "On Strategic Management Decision Processes," Strategic Management Journal, 2, 43 - 60.

Feyerabend, Paul (1975), Against Method, New York, NY: Verso.

Fredrickson, James W. (1986), "The Strategic Decision Process and Organizational Structure," Academy of Management Review, 11 (2), 280 - 297.

Gardner, J. and M. Cooper (1988), "Elements of Strategic Partnership," Proceedings of the 1988 Logistics Resource Forum, Columbus, OH: Logistics Resource Inc. (a subsidiary of Leaseway Transportation Corp.) and The Ohio State University, 19 - 32.

Geertz, Clifford (1973), The Interpretation of Cultures, New York, NY: Basic Books.

Giunipiero, Larry and Gary Zenz (1982), "Impact of Purchasing Trends on Industrial Marketers," Industrial Marketing Management, 11 (February), 17 - 23.

Green, Paul E. (1977), "A New Approach to Market Segmentation," Business Horizons, 20 (February), 61 - 73.

Guiltinan, Joseph P. (1987), "The Price Bundling of Services: A Normative Framework," Journal of Marketing, 51, April, 74 - 85.

Gummesson, E. (1987), "The New Marketing -- Developing Long -term Interactive Relationships," Long Range Planning, 20 (4), 10 - 20.

Habermas, Jürgen (1989), "The Concept of the Lifeworld and the Hermeneutic Idealism of Interpretive Sociology," in Jürgen Habermas on Society and Politics: A Reader, Steven Seidman (ed.), 165 - 187, Boston, MA: Beacon Press.

Hanson, Ward and R. Kipp Martin (1990), "Optimal Price Bundling," Management Science, 36 (2), 155 - 174.

Jeuland, Abel (1984), "Comments on 'Gaussian Demand and Commodity Bundling,'" Journal of Business, 57 (1), S231 - S234.

Kanter, R.M. (1989), "Becoming PALs: Pooling, Allying, and Linking Across Companies," Academy of Management EXECUTIVE, 3 (3), 183 - 193.

Kenney, Roy W. and Benjamin Klein (1983), "The Economics of Block Booking," Journal of Law and Economics, 26 (3), 497 - 540.

LaLonde, Bernard J. and Martha C. Cooper (1989), Partnershipping in Providing Customer Service: A Third-Party Perspective, Oak Borrk, IL: Council of Logistics Management.

Lincoln, Yvonna S. and Egon G. Guba (1985), Naturalistic Inquiry, Beverly Hills, CA: Sage Publications, Inc.

Long, John B. Jr. (1984), "Comments on 'Gaussian Demand and Commodity Bundling,'" Journal of Business, 57 (1), S235 - S246.

March, J.G. and H.A. Simon (1958), Organizations, New York, NY: Wiley.

Marshall, Catherine and Gretchen B. Rossman (1989), Designing Qualitative Research, Beverly Hills, CA: Sage Publications, Inc.

McKenna, R. (1985), The Regis Touch, Reading, MA: Addison Wesley.

Miles, Raymond E., Charles C. Snow, Alan D. Meyer, and Henry J. Coleman, Jr. (1977), "Organizational Strategy, Structure, and Process," Academy of Management Review, 3 (3), 546 - 562.

Miles, Raymond E. and Charles C. Snow (1978), Organizational Strategy, Structure, and Process, New York, NY: McGraw-Hill.

Miller, Danny (1982), "Evolution and Revolution: A Quantum View of Structural Change in Organizations," Journal of Management Studies, 19 (2), 131 - 151.

Miller, Danny and Peter H. Friesen (1984), Organizations: A Quantum View, Englewood Cliffs, NJ: Prentice-Hall.

Mintzberg, Henry (1978), "Patterns in Strategy Formation," Management Science, 24 (9), 934 - 948.

Mintzberg, Henry (1979), The Structuring of Organizations, Englewood Cliffs, NJ: Prentice-Hall, Inc.

Morris, Timothy (1987), "Management Update: Strategy and Organization," Journal of General Management, 12 (3), 75 - 82.

Muller, E.J. (1988), "3rd Party Logistics: Super Ally or Weak Link?," Distribution, January, 1988, 28 - 36.

Nagle, Thomas T. (1987), The Strategy and Tactics of Pricing, Englewood Cliffs, NJ: Prentice Hall.

Oxenfeldt, Alfred (1962), "The Formulation of a Market Strategy," in Managerial Marketing: Perspectives and Viewpoints, William Lazer and Eugene J. Kelley (eds.), Homewood, IL: Richard D. Irwin, 34 - 44.

Oxenfeldt, Alfred (1966), "Product Line Pricing," Harvard Business Review, 44 (July/August), 135 - 143.

Phlips, Louis (1981), The Economics of Price Discrimination, Cambridge: Cambridge University Press.

Porter, Michael E. (1985), Competitive Advantage, New York, NY: The Free Press.

Quinn, J.B. (1980), Strategies for Change: Logical Incrementalism, Homewood, IL: Irwin.

Schmalensee, Richard (1984), "Gaussian Demand and Commodity Bundling," Journal of Business, 57 (1), S211 - S230.

Schumpeter, Joseph (1942), Capitalism, Socialism, and Democracy, New York: Harper & Row.

Sieber, Sam D. (1976), Project on Social Architecture in Education, New York, NY: Center for Policy Research.

Smith, Adam (1776), The Wealth of Nations, London: Penguin Books (1986 reprint).

Stigler, George J. (1951), "The Division of Labor Is Limited by the Extent of the Market," Journal of Political Economy, 59 (3), as reprinted in The Essence of Stigler, Kurt R. Leube and Thomas Gale Moore (eds.), 1986, Stanford, CA: Hoover Institution Press, 13 - 24.

Stigler, George J. (1963), "United States v. Loew's Inc.: A Note on Block Booking," Supreme Court Review, 152 - 157.

Telser, L.G. (1979), "A Theory of Monopoly of Complementary Goods," Journal of Business, 52 (2), 211 - 230.

United States v. Loew's Inc. (1962), 371 U.S. 38, 52.

Wilson, Lynn O., Allen M. Weiss, and George John (1990), "Unbundling of Industrial Systems," Journal of Marketing Research, 27 (May), 123 - 138.

Wolf, Fred A. (1981), Taking The Quantum Leap, San Francisco, CA: Harper & Row.

GENERAL REFERENCES

Anderson, Paul F. and Terry M. Chambers (1985), "A Reward/Measurement Model of Organizational Buying Behavior," Journal of Marketing, 49 (Spring), 7 - 23.

Ayers, Allan F. (1990), "Function vs. Form: The Logistics Dilemma," Transportation and Distribution (Presidential Issue), 31 (11), 10 - 14.

Bargar, Robert R. and James K. Duncan (1982), "Cultivating Creative Endeavor in Doctoral Research," Journal of Higher Education, 53 (1), 1 - 31.

Becker, Howard S. and Blanche Geer (1969), "Participant Observation and Interviewing: A Comparison," in Issues in Participant Observation: A Text and Reader, George J. McCall and J.L. Simmons (eds.), Reading, MA: Addison-Wesley Puyblishing Company, 322 - 341.

Brewer, John and Albert Hunter (1989), Multimethod Research: A Synthesis of Styles, Beverly Hills, CA: Sage Publications, Inc.

Davis, Murray S. (1971), "That's Interesting! Towards a Phenomenology of Sociology and a Sociology of Phenomenology," Philosophy of the Social Sciences, 1 (4), 309 - 344.

Dexter, Lewis A. (1959), "Interviewing Business Leaders," Political Research: Organization and Design, 2 (3), 25 - 28.

Dexter, Lewis A. (1964), "The Good Will of Important People: More on the Jeopardy of the Interview," Public Opinion Quarterly, 28 (4), 556 - 563.

Dixon, Donald F. and I.F. Wilkinson (1982), The Marketing System, Melbourne: Longman Cheshire Pty. Ltd.

Fichter, Joseph H. and William L. Kolb (1953), "Ethical Limitations on Sociological Reporting," American Sociological Review, 18 (5), 544 - 550.

Foster, Thomas A. and E.J. Muller (1990), "Third Parties: Your Passport to Profits," Distribution, (October), 30 - 45.

Foucault, Michel (1972), The Archaeology of Knowledge, (A.M. Sheridan Smith, trans.), New York, NY: Pantheon Books.

Fredrickson, James W. (1985), "Effects of Decision Motive and Organizational Performance Level on Strategic Decision Processes," Academy of Management Journal, 28 (4), 821 - 843.

Goldman, Arieh and J.K. Johansson (1978), "Determinants of Search for Lower Prices: An Empirical Assessment of the Economics of Information Theory," Journal of Consumer Research, 5 (December), 176 - 186.

Greiner, Larry E. (1972), "Evolution and Revolution as Organizations Grow," Harvard Business Review, 50 (July/August), 37 - 46.

Heron, John (1988), "Validity in Co-operative Inquiry," in Human Inquiry in Action, Peter Reason (ed,), Beverly Hills, CA: Sage Publications, Inc., 40 - 59.

Jacob, Evelyn (1987), "Qualitative Research Traditions: A Review," Review od Educational Research, 57 (1), 1 - 50.

Jacob, Evelyn (1988), "Clarifying Qualitative Research: A Focus on Traditions," Educational Researcher, 17 (1), 16 - 24.

Jick, Todd D. (1979), "Mixing Qualitative and Quantitative Methods: Triangulation in Action," Administrative Sciences Quarterly, 24 (December) 602 - 611.

John, George and John Martin (1984), "Effects of Organizational Structure of Marketing Planning on Credibility and Utilization of Plan Output," Journal of Marketing Research, 21 (2), 170 - 183.

Koot, Willem (1983), "Organizational Dependence: An Exploration of External Power Relationships of Companies," Organization Studies, 4 (1), 19 - 38.

Lovelock, Christopher H. (1983), "Classifying Service to Gain Strategic Marketing Insights," Journal of Marketing, 47 (Summer), 9 - 20.

McCabe, Joseph V. (1990), "Outside Managers Offer Packaged Export Expertise," Journal of Business Strategy, 15 (2), 20 - 23.

Miles, Matthew B. (1979), "Qualitative Data as an Attractive Nuisance: The Problem of Analysis," Administrative Sciences Quarterly, 24 (December), 590 - 601.

Miles, Matthew B. and A. Michael Huberman (1984), Qualitative Data Analysis: A Sourcebook of New Methods, Beverly Hills, CA: Sage Publications, Inc.

Miller, Danny (1979), "Strategy, Structure and Environment: Context Influences Upon Some Bivariate Associations," Journal of Management Studies, 16 (3), 294 - 316.

Mintzberg, Henry (1979), "An Emerging Strategy of 'Direct' Research," Administrative Science Quarterly, 24 (4), 582 - 589.

Mintzberg, Henry (1984), "Power and Organization Life Cycles," Academy of Management Review, 9 (2), 207 - 224.

Mintzberg, Henry (1987a), "Crafting Strategy," Harvard Business Review, 65 (July/August), 66 - 75.

Mintzberg, Henry (1987b), "The Strategy Concept I: Five Ps for Strategy," California Management Review, 30 (1), 11 - 24.

Mintzberg, Henry (1987c), "The Strategy Concept II: Another Look at Why Organizations Need Strategies," California Management Review, 30 (1), 25 - 32.

Mintzberg, Henry and James A. Waters (1982), "Tracking Strategy in an Entrepreneurial Firm," Academy of Management Journal, 25 (3), 465 - 499.

Mintzberg, Henry and James A. Waters (1985), "Of Strategies, Deliberate and Emergent," Strategic Management Journal, 6, 257 - 272.

Montgomery, David B. (1990), "Understanding the Japanese as Customers, Competitors, and Collaborators," Japan and the World Economy: A Journal of Theory and Policy, forthcoming.

Morris, Timothy (1988), "Management Update: Strategy and Organization," Journal of General Management, 13 (3), 87 - 93.

Nelson, Phillip (1970), "Information and Consumer Behavior," Journal of Political Economy, 78 (March/April), 311 - 329.

Nystrom, H. (1979), Creativity and Innovation, Chichester, England: John Wiley & Sons, Ltd.

Page, Albert L. and Michael Siemplenski (1983), "Product Systems Marketing," Industrial Marketing Management, 12, 89 - 99.

Parasuraman, A., Valarie A. Zeithaml, and Leonard L. Berry (1985), "A Conceptual Model of Service Quality and Its Implications for Future Research," Journal of Marketing, 49 (Fall), 41 - 50.

Porter, Michael E. (1979), "How Competitive Forces Shape Strategy," Harvard Business Review, 57 (2), 137 - 144.

Snow, Charles C. and Lawrence G. Hrebiniak (1980), "Strategy, Distinctive Competence, and Organizational Performance," Administrative Science Quarterly, 25 (2), 317 - 336.

Stigler, George J. and Robert A. Sherwin (1985), "The Extent of the Market," Journal of Law and Economics, 28 (3), 555 - 585.

Thomas, Dan R.E. (1978), "Strategy Is Different In Service Businesses," Harvard Business Review, 56 (July/August), 158 - 165.

Traffic Management (1988), "The Progress and Potential of Third-Party Logistics," October, 1988, 41 - 49.

van der Hoop, J. Hans (1990), "The Lure of the European Market," Distribution, (October), 48 - 52.

Weber, Robert Philip (1985), Basic Content Analysis, Beverly Hills, CA: Sage Publications.

Zeithaml, Valarie A., A. Parasuraman, and Leonard L. Berry (1985), "Problems and Strategies in Services Marketing," Journal of Marketing, 49 (Spring), 33 - 46.

Zelditch, Morris Jr. (1962), "Some Methodological Problems of Field Studies," The American Journal of Sociology, 67 (5), 566 - 576.