
**An Exploratory Study of Segmentation Models and Identifiers of
Customer Propensity For Third Party Logistics Services**

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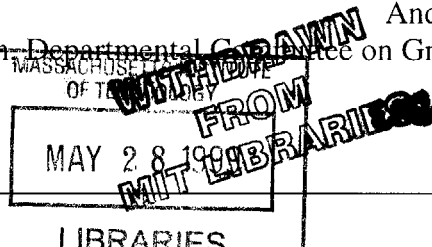
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ABSTRACT

Third party logistics services as an industry is evolving from its early stages of growth towards maturity. To develop the product concept and refine it to the needs of potential clients, benefit segmentation models and purchase behavior analysis can be helpful in unearthing hidden market opportunities. This is an exploratory study of models that

- (a) segment the customers based on needs and purchase behavior and
- (b) identify indicators of likelihood to outsource logistics.

The thesis reviews existing models of purchase behavior in industrial buying and benefit segmentation models, as applicable to the marketing of third party logistics services. A set of four interrelated models is proposed to understand the buying behavior and drivers of outsourcing logistics. These models are then tested on a sample of third party logistics providers and existing and potential purchasers of these services. The results are analyzed with respect to current practices within the industry and the applicability of proposed model parameters and conclusions drawn on the validity of the proposed models. Finally, the models are modified based on the analysis to act as a screen for potential customers based on their propensity for the usage of such services, the object being to improve the effectiveness of marketing these services.

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Dedication

The author would like to dedicate this thesis to his parents Dr. Upendranath and Sradhanjali Panda for bringing him up with values that stressed integrity, hard work and humility in the face of life's challenges. My wife Sarmistha (Meeta), daughter Lipsa and son Sourav made a tremendous sacrifice, letting me pursue a dream at MIT, and this work would not have come about without their love, support and patience.

I would like to acknowledge the wise guidance and motivation of my guide Jonathan L.S. Byrnes, without whom I would have lost my way. His was a shining light that pointed me in the right direction and I owe him a debt of gratitude.

And finally:

"My sledge and hammers lie declined
My bellows too have lost their wind
My fire's extinct, my forge decay'd
My vice is in the dust all laid
My coal is spent, my iron gone
My nails are drove, my work is done"

From the epitaph of Thomas Garner

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Chapter 1

1 Introduction

This study was born out of the author's interest in the dynamics shaping the continuing evolution of an industry i.e. of third party logistics [3PL] services. As a sometime customer of third party logistics in different parts of the world, the author had the opinion that many third parties could improve the scope and size of their market by better understanding customer needs and developing effective marketing plans to satisfy those needs. Also by identifying different dimensions of market segmentation and matching that with internal capabilities, third parties could focus on customers who have a need for the value propositions of the provider. Third party services are still at the nascent stage of growth and have the potential to grow significantly in the future. Developing models and frameworks that can improve our understanding of the nature of the marketing process in this industry can make the development of 3PL services go faster and further.

The context of third party logistics as referred to in this thesis can be best described by this author's definition of its purpose and scope: Third Party or Contract Logistics is the strategic relinquishment of the management of the whole or parts of its supply chain by an organization to an external service provider, with the objective of gaining competitive advantage through asset productivity, improved service and economies of scale and scope.

1.1 Background

1.1.1 Why segment the market for third party logistics [3PL] services?

Segmenting a market raises the following possibilities:

- a. Identify customer aggregations who can provide better revenue and profit maximization opportunities
 - b. Distinguish unique combination of needs/benefits, which if not being currently satisfied to the level expected, offers a new and attractive opportunity
-

- c. Understand customers and the strategies adopted by competitors well and therefore develop better products/services.
- d. Focus the organization's selling and marketing effort by forcing it to decide on which customers to select and which to ignore.
- e. Enable a match between the organization's capabilities, mission and strategies to the needs of the segment being addressed.

1.1.2 Existing studies and Market outline

While some work has been done on segmenting the market for third party logistics services on some bases [see Sink and Langley, 1997]¹, there is potential to approach the buying behavior process for such services and the issue of segmenting the market, with a fresh perspective. Segmentation and buyer behavior models in other industries show promise of applicability in this instance. Also the issue of account selection and how it is approached currently, needs to be examined for impact on profitability of accounts. There are few instances in literature of investigation into the relative profitability of supplying logistics services to mid sized businesses, for instance, as opposed to large corporations and the development of a structured basis for understanding and segmenting the market for third party logistics services. Most surveys of the usage of third party logistics services industry in the United States indicate that the industry focuses mainly on large American manufacturing companies, typically the Fortune 500 corporations. [For instance see Lieb and Randall, 1995]². Some research suggests that "very large" firms are more likely to be existing users of third party logistics services compared to "very small" companies. [See Murphy and Poist, 1998]³. LaLonde and Maltz found that "..Large companies use more outside warehousing than the industry average in the chemical and health care industries.."⁴

The segmentation and purchase behavior models, which are interrelated, proposed here seek to refine the potential market for third party logistics services into more specific sets based on analysis of their needs and potential. The objective through this exercise is to study current practices relating to segmentation in this industry and the potential of improving the profitability of third party logistics firms by understanding the outsourcing

process and evaluating alternative segmentation models. The above issues assume significance because:

- a. The size of the third party logistics services market continues to rise (\$34 billion in 1998), but the rate of growth is starting to decline. [see Armstrong 1998]⁵
- b. Profitability of 3PL service companies has set into a long-term static pattern hovering between 2-10% [ibid.]. Sustaining and growing profit margins, in a market where the principal selling proposition remains cost reduction, will be increasingly difficult and will impact on their ability to establish relationships and value buyers.
- c. As the population of third party logistics service providers increases and customer choices proliferate, there might be increasing replicability of the service and higher customer turnover. To counter this effect, third party logistics service providers will need to develop focused and differentiated services based on better segmentation and understanding of customer needs and their capabilities. This trend is already emerging with focus on smaller companies increasing. [See Bradley, Thomas, Gooley and Cooke 1998 for a current example]⁶.

In this thesis, apart from looking at the broad spectrum of corporations who are existing or potential clients of outsourcing, we also focus on the mid sized segment (as defined by a revenue range of \$150 mm to \$1.5 Billion), to evaluate whether this segment in particular is under addressed and whether they have needs which differ from larger corporations. A specific reason why mid-sized companies are worth investigating as a segment is the following. Fortune 500 corporations are more likely to be dependent on outsourcing for capacity than for knowledge [distinction by Fine and Whitney]⁷. On the contrary mid sized businesses would be more dependent-for-knowledge, especially when it comes to optimizing total logistics costs in businesses which have involved and global logistics requirements. Dependency for knowledge is a tighter dependency with limited alternatives. Consequently, such dependent customers may be less price sensitive and therefore offer the prospect of higher margins. The sales process should therefore be geared to identify which kind of dependency the customer has and modulate the service offering correspondingly. For instance, if dependent-for-knowledge customers can be convinced to outsource the whole suite of logistics services it would reduce their future

ability to draw back the logistics activity. This is strategically advantageous to the seller because of the tie in. Of course that does not imply lack of substitutability of the service by another supplier, but better integration can increase the switching cost of changes of supplier. This area therefore seems a promising field for investigation. It may also be said that mid sized businesses would not be able to extract the price and service concessions that large organizations can on the basis of their volume business, increasing their profitability as potential customers for third party logistics services.

As [Bonoma and Shapiro, 1983]⁸ point out, there are two basic approaches to segmentation. The first is benefit segmentation, which approaches the issue from the customer's end and bases the aggregation on common needs of subsets of the customer population. An example of this would be, for instance, cars bought for the pure utility of transportation versus cars bought as a social statement and a status symbol. Obviously the customer needs are different and segmentation on the basis of such desired benefits can help the manufacturer develop specific product features and functionalities targeted to the appropriate segment. In the case of 3PL services, an example of benefit segmentation would be classification of customers on the range of services they desire from pure transportation to integrated supply chain management.

The other approach from the supplier's end to the customer involves segmentation based on identifiability and accessibility of the segments. This implies categorizing customers on particular attributes that can compartmentalize the customer base into groups, which can be addressed with an unique marketing mix combination. An instance of such segmentation may be geographic, where sales zones are segmented for reachability or member firms in a particular cluster such as component suppliers to major auto manufacturers. The models evaluated in this thesis combine the two approaches in various ways, as we will see later.

1.2 Objectives of the Study

The questions that will be addressed in this study are:

Practices:

- a. Are all or some third party logistics companies segmenting their market on certain analytical basis and if so what might they be?
-

- b. Is this segmentation related to their account selection strategy?
- c. Are their sales and marketing initiatives linked and focused to their identified target segments?
- d. Do third party logistics firms specifically target mid-sized companies with turnover between \$50 and \$1500 million?

Models:

- a. What are some of the existing models that can be applied to describe the purchase behavior of third party logistics services?
- b. Are there models that provide fresh insight into the buying process for outsourced logistics and what might they be?
- c. Is there evidence in trade literature and business practice that support these models?

Application of Models:

- a. Can these models be applied to existing or potential customers of such services as predictors of their potential attractiveness as outsourcers of logistics activities?
- b. Can these models be used to segment the market in new ways so as to distinguish their propensity to the outsourcing of logistics?
- c. Within the broad base of customers are mid-sized businesses (revenue range \$50 million to \$1500 million) more attractive as potential clients than larger companies?
- d. Is there any difference in terms of needs between mid sized businesses and other segments?
- e. Can relationship-marketing models be applied to the marketing of logistics services?

Certain basic working assumptions that have been made in this research need to be highlighted here.

- a. That third party logistics service providers can be more efficient and quicker than most companies who retain the logistics process internally, in moving products through the supply chain. This is because of their specialized skills, focus on their core business of logistics and the leveraging effect of consolidating requirements across customers and industries.
 - b. That third party logistics firms can necessarily operate cheaper because of economies of scale.
-

- c. That third party logistics companies can leverage their assets and knowledge base across companies and industries to implement best practices for varieties of customers.
 - d. That all third parties have all the requisite capabilities and assets to provide the level and content of service alluded to during the discussions.
-

Chapter 2

2 Objectives of Outsourcing

2.1 Economic and Performance Drivers for Outsourcing

2.1.1 Why do companies outsource?

Understanding this process better will assist understanding the buying process in greater detail. Let us look at Table 1 which outlines some economic and performance drivers, which promote outsourcing and is discussed in further detail subsequently.

Table 1

<u>Environmental Impact</u>		
Recession	→	Impetus is on cost control.
Expansion	→	Outsourcing for growth
Globalization	→	Asset leveraging through outsourced suppliers
Competency shortage	→	Eliminate opportunity cost of attention to non-core activities.
Labor	→	Reduction of labor management issues in people intensive functions.
Supply Chains	→	Long supply chains with numerous partners. Centralize interface.
Market Competition	→	Squeezing out every ounce of efficiency in supply chains by scale economies of outsourcing, to retain competitiveness.

Source: Author

In recessionary times, companies seek to reduce their assets and costs in order to maximize the productivity of their capital. It is natural to look for outsourced cost advantages where available and logistics being asset heavy and a significant part of the overhead, many outsourcers prefer the flexibility of contracting out this function. On the

other hand when the business is doing well and capital is generally available, the question arises whether there are alternative investment avenues to logistics which can yield better returns. Where unavailable in a situation of prosperity, companies might tend not to outsource. However the concern of lack of flexibility during the next cyclical business downturn might deter the company from investing in high cost fixed assets and take a negative impact on the ROCE (Return on Capital Employed). Similarly in times of growth, asset requirements cannot keep up with business growth forcing companies to look elsewhere. Especially in emerging industries and startup companies who have alternative and more urgent demands on their capital, logistics outsourcing is justifiable on the basis of resource release rather than just on cost. Startup and other risky ventures also would like to minimize their long-term commitments with assets, by adopting time bound outsourcing contracts. For 3PL's these opportunities, if handled effectively, can form the basis of a continuing relationship through to the stable phase of a company/industry's expansion.

Demands of globalization raise diverse challenges such as facility requirements, complexities of multi-cultural workforce and multi-national sourcing and marketing, issues of international trade and documentation procedures etc.. These are cogent reasons for corporations expanding into international markets to outsource their logistics. Leveraging the assets of third parties provides a cost effective and hassles free, as well as rapid, capability to exploit global sourcing and marketing opportunities. As international companies look for broader markets, this becomes a significant market opportunity for logistics providers.

“Core Competencies’ and the focus of corporations have been the subject of much attention since Prahalad and Hamel’s seminal article [Prahalad & Hamel 1990]⁹. In addition to the fact that logistics does not fall within the core capabilities of many corporations (while by definition it does for third party logistics service providers), there are two other reasons why this is significant, in terms of being a driver for outsourcing. The model of a virtual corporation is emerging where the corporation concentrates only on value creation for its customers by developing products to meet its customer’s needs while outsourcing the entire operational chain from manufacturing to product delivery to consumer. This develops focus and optimizes the capabilities of different parties in the

chain. As common business wisdom goes, it is better to be the best in one thing than attempt to be best in everything. Secondly, logistics being a growing field, availability of qualified and motivated personnel is a limiting factor. Therefore outsourcing logistics becomes a necessity to improve performance.

Many companies would like to minimize the impact of consolidation of organized labor. In industries where uninterrupted customer service is critical, organized labor can make the organization vulnerable. Also wage negotiations are influenced by the higher aspirations of workers in larger companies. If a third party is able to provide labor intensive services such as logistics and the company can dispense with labor management issues, especially in a multi-cultural context, it frees up management time to focus on other issues. This acts as a performance related driver for outsourcing.

Finally the economics of severe price competition and product parity in many industries drives companies to capitalize on every opportunity to reduce cost and improve scale economies by outsourcing. Thus intensity of industry competition is a driver for logistics outsourcing.

Taken together the above dynamics are likely to propel further the decisions to outsource and with particular reference to the mid-sized segment, enable cost competitiveness and process productivity enhancement with lesser capital and organizational commitment.

2.1.2 Supply Side of Outsourcing:

Along with the demand side drivers of outsourcing which will be discussed in greater detail in Chapter 3, it is also useful to point out that another driver of outsourcing logistics is the need for strategic diversification for asset based transportation companies. Providing outsourcing services not only expands their share of the logistics pie within organizations but also provides them the efficiencies through better utilization of existing assets. Consequently there is a push from the supply side that drives the outsourcing process ahead, as evident in the logistics divisions created by such asset based companies as FedEx, UPS, Schneider etc.

2.2 Disadvantages of Outsourcing

Outsourcing is a fundamental change in the business operations within an organization. Just as it has potential to deliver considerable benefits, it also has potential to disrupt. Disruption can occur because of service related failures but also because of the dependency on the business performance of the supplier. While bidding and changing of suppliers is a possible counter strategy, the cost of switching suppliers on business performance cannot be underestimated, especially when the range of outsourcing is wider. Outsourcing decisions are therefore not trivial and need to be deliberated in detail.

The question of loss of institutional knowledge and capability is an important issue in outsourcing logistics. The strategic repercussions of not being able to retract on such a decision has to be considered carefully, especially when it is being done for the first time. The cultural match between outsourcing supplier and the customer needs to be evaluated closely as it can make or mar relationships as exemplified by some recent cases. This is especially true in outsourcing logistics compared to other functions, because with the nature of logistics, the relationship is far more intrusive and the supplier cannot be kept at arm's length.

Disadvantage of outsourcing could also include loss of information obtained through direct contact with the customer. In dealing through a third party it is possible that the direct contact and coordination may suffer. For example, Dell Computer needs direct customer knowledge for product development, refinement and service development.

2.3 Outsourcing bases

It is useful to compare the reasons for outsourcing as outlined by Charles Fine¹⁰ with the motivations for outsourcing logistics. Fine outlines reasons to outsource and reasons not to outsource. Let us see the relationship one by one:

2.3.1 Capability.

Outsourcing is resorted to by companies who do not have the capability to do a process or component in-house. While basic logistics is not a critically deficient capability in most organizations the capability requirement becomes important in cases

where long, complex, global supply chains are involved. This is especially true for smaller organizations that do not have or want to possess this capability, or where the product range complexity requires sophisticated logistics skills for optimal management. As complexity grows the lack of skills becomes a constraint in terms of the difference between actual profitability and potential profitability, because of efficiency differences.

2.3.2 Cost Competitiveness.

Economies of scale and efficiencies due to specialization and focus are reasons for outsourcing components. It also holds true for logistics where outsourcing for cost reduction is one of the biggest reasons for outsourcing. But while it has potential as a strategic justification for outsourcing where a company is starting out to outsource, the potential for significant cost reduction declines as the low hanging fruit are picked and increasing amount of effort has to be made to gain further reductions. Therefore this issue is of more import to first time outsourcers. An argument for cost competitiveness in third party logistics is possible if the supplier is able to leverage either assets or consolidate demand with other supply chains to introduce efficiencies. By just replacing corporate distribution and logistics, 3PLs will not be able to provide sustainable cost advantages for their customers.

2.3.3 Technology

When the supplier's product/service is superior through the leveraging of technology, especially information technology, it makes sense for an organization to outsource. Consequently third party logistics firms need to invest significantly in technology to build capabilities that will be difficult and costly to match by their customers. In the long run, this strategic differentiator will encourage growth of both logistics outsourcing and third party profitability. Forward thinking companies such as UPS and FedEx, show the benefits of cost competitiveness and development of unique capabilities through investments in process technology. Technology also builds an image of reliability, which is crucial to outsourcing a critical business process such as logistics.

2.4 Reasons to avoid outsourcing

Reasons cited by Fine for not seeking outsourcing could also be applied to the logistics-outsourcing framework.

Competitive Knowledge.

Outsourcing is not warranted, according to Fine, where the product/service or the skill involved in delivering it, are crucial to the product's performance. Is logistics a crucial component of the product? Unlike the manufacturing case, there is no danger of forward integration by the supplier in logistics outsourcing. Also the product and the logistics services are distinct to the consumer. Therefore the danger of releasing crucial information and control by outsourcing logistics is not a critical issue for most corporations. It could be an issue however, in some industries such as retailing, Vendor Managed Inventory in health care etc., where logistics is much more an integral part of the product/service and the loss of institutional knowledge and diffusion of special practices can have negative effects on the company's competitive ability. That explains Wal-Mart and similar companies, not outsourcing their logistics.

Customer visibility / Market Differentiation.

Fine suggests that whatever differentiates the product should be made and all others outsourced. Even here the point is totally contrary when applied to logistics outsourcing. While quick and perfect deliveries of Dell products is a critical element of the business model and supply chain plan, the higher reliability and asset leverage offered by FedEx makes it logical to outsource logistics even though it is a critical element of Dell's differentiation strategy. In addition, the economies of scale offered by FedEx and Dell's relative lack of core competence in the distribution process, encourage such a relationship. As a contrast, the customer call center is *not* outsourced because of the critical direct interface with the customer.

2.4.1 Other reasons for outsourcing

Speh and Blomquist¹¹ note that there are some "trigger events" which appeared to motivate a change in attitude towards outsourcing, in particular:

1. Space Requirements
2. Mergers and Acquisitions
3. New Markets and Products

To this list, LaLonde and Maltz add the following possibilities:

1. Change in Logistics Management
2. Customer Use of JIT or Quick Response
3. Change in Executive Management
4. Mandate from Existing Management
5. Labor Cost/Problems.
6. Instituting a Quality Improvement Program.

A recent report that supports Speh and Blomquist's second point is the case of Word Entertainment, a division of Nashville based Gaylord Entertainment.¹² This mid-sized company [1998 Revenues \$524 million] is involved in the sales and marketing of compact discs, cassettes, video and print music and has recently signed a third party contract with Menlo logistics of Redwood City, California. When Gaylord acquired Word, it did not buy its existing distribution center located at Waco, TX and instead looked to expand its delivery to retailers/distributors 30% by operating out of Menlo's Nashville facility. "Gaylord's acquisition and its decision to change distribution sites were the catalysts for turning to a third party logistics provider" according to Roland Lundy, President of Word Entertainment. Also the technological advantage of Menlo compared to Word's old facility, increased the inclination to outsource.

The Outsourcing Institute, lists the main reasons for outsourcing and the factors in selecting and developing an outsourcing relationship¹³, which reiterate and extend the points raised above.

Top 10 Reasons Companies Outsource

- 1.Reduce and control operating costs
 - 2.Improve company focus
 - 3.Gain access to world-class capabilities
 - 4.Free internal resources for other purposes
 - 5.Resources are not available internally
-

6. Accelerate reengineering benefits
7. Function difficult to manage/out of control
8. Make capital funds available
9. Share risks
10. Cash infusion

*Source: Survey of Current and Potential Outsourcing End-Users
The Outsourcing Institute Membership, 1998*

Top 10 Factors in Vendor Selection

1. Commitment to quality
2. Price
3. References/reputation
4. Flexible contract terms
5. Scope of resources
6. Additional value-added capability
7. Cultural match
8. Existing relationship
9. Location
10. Other

Top 10 Factors for Successful Outsourcing

1. Understanding company goals and objectives
 2. A strategic vision and plan
 3. Selecting the right vendor
 4. Ongoing management of the relationships
 5. A properly structured contract
 6. Open communication with affected individual/groups
 7. Senior executive support and involvement
 8. Careful attention to personnel issues
 9. Near term financial justification
 10. Use of outside expertise
-

Source: Survey of Current and Potential Outsourcing End-Users The Outsourcing Institute Membership, 1998

The above discussion therefore reiterates the validity of the outsourcing of logistics as a business proposition and hints at companies and industries which will be more likely to be receptive to the outsourcing of logistics services.

Chapter 3

3 Conceptual Models

This chapter starts of with a review of existing models of buyer behavior and the decision making process for logistics sourcing. The object here is to understand the context in which such decisions are made and the various stages and influences that determine the pattern of the decision making. The second half of this chapter then deals with the models proposed in this thesis and a description of their key assumptions and characteristics. A discussion of the connections between the logical arguments of these models i.e. The Market Characteristics Model, the Technology Adaptation Life Cycle Model, the Relationship vs. Transaction Buying Model and the Cluster or Networked Purchasing Model, and the results of the survey will be then done in Chapter 5 to test the validity of the arguments advanced.

3.1 Modeling Buyer Behavior in the Logistics Outsourcing Process

Given the scope and nature of logistics outsourcing, the exhibited buying behavior within the organization can be modeled as a typical industrial buying situation. Since the nature is of asset replacement and the scope is generally large, the decision making process would be even more involved than that of a major capital investment because of the intrusive nature of the outsourcing process. Buying behavior in organizations is generally complex and is shaped by the organization's culture, the industry in which it operates and the proclivities of the individuals in charge of the buying process. Sheth¹⁴ describes three different aspects of the buying behavior.

- a. The psychological aspects of the individuals involved in organizational buying decisions.*
- b. Conditions that precipitate joint decisions among these individuals.*
- c. The structure of the decision making process with conflict and its resolution.*

The key issues that need to be considered here are the number of different individuals and departments that are involved, their differing priorities and expectations

and the nature of the power and influence each has over the decision making process. The determinants of joint vs. autonomous decisions identified by Sheth include perceived risk, type of purchase (once, first or repetitive), time pressure, company orientation (production or market), size of company and the degree of centralization.

Comparing Sheth's model to the case of logistics outsourcing the following departments might be involved with the following likely objectives:

- a. Logistics department for efficiency, manpower reduction, lack of capabilities etc.
- b. Finance for cost reduction, asset reduction and manpower reduction.
- c. Top management for strategic leverage, matching competitive moves, increasing flexibility, postponing commitment.
- d. Marketing department for higher customer service, quicker product to market lead times, reducing product landed costs, reducing order lead times etc.
- e. Information technology for integrating crucial operational data generated in the logistics process.

3.1.1 Decision Making Unit Concept.

[Webster and Wind 1972]¹⁵ described the decision-making unit or the concept of roles in the purchase decision. [Bonoma, 1982]¹⁶ identified six buying roles present in all purchasing decisions. They are Initiator, Influencer, Decider, Purchaser, GateKeeper and Users. To understand the role of each is essential in modeling the purchase behavior. It may be relevant to add that the role of a champion of outsourcing, somewhat different from the initiator, could also be conceived as a facilitator in the buying process.

To be able to place the organization along the Technology Adaptation Life Cycle (TALC) distribution (i.e. the propensity to utilize new innovations, described in the model description in Section 3.6 later) therefore, it is essential to decipher

- a. Whether the decision for outsourcing is joint among the above constituents, or autonomous, from the characteristics identified by Sheth above

and then

- b. Determine the propensity to change among the decision-makers, especially with respect to the Initiator, Decider and Influencer among the purchasing roles.

Normally, the degree of autonomy in decision making for outsourcing would depend on the magnitude of the outsourcing decision. So operational decisions such as temporary utilization of outsourced warehousing for peaking requirements would most likely be at the functional level whereas strategic outsourcing of the supply chain would be much broader based because of the extent of impact on the organization. Also it is imperative to decode the underlying power conflicts and relate that to the marketing plan. For instance, if a third party logistics service provider intends to address the comprehensive outsourcing segment (i.e. complete supply chain management as opposed to individual services), it is more likely to be faced with a joint purchasing committee. Therefore investments in brand recognition would influence the expectations¹⁷ from the wide range of decision-makers involved in the buying process. On the contrary, where a segment of limited outsourced service is being targeted, investments in cost reduction would be more appropriate to meet the underlying objectives of the functional head autonomously responsible for the purchase decision.

3.1.2 Logistics Buying Process

Sink and Langley have identified five streams of literature, which describe the outsourced logistics buying process.

1. Strategic Decision Making in Organizations
2. Industrial Buying Behavior
3. Transportation Purchasing
4. Supplier Selection
5. Logistics relationships

Strategic decision making, in essence, investigates the process of making such decisions in organizational settings and explores the role of power, authority, influence and politics. This is a unique characteristic of industrial buying where significant commitments in terms of investments and process readjustments need to be made. The

outcome of the decision to outsource depends on the perceived significance of the decision (strategic or tactical) and the interests of the decision-maker. When decisions are strategic, CEO and interdepartmental involvement are natural and the role of politics and interdepartmental rivalries may be evident, especially when outsourcing deprives some departments of resources they were used to. Therefore in understanding the logistics buying process, the investigator should be aware of specific interests across the organization and develop value for each of the interests and project it. Also the investigator should differentiate between various levels of outsourcing from the basic transportation that is ubiquitous to the complete outsourcing of an entire supply chain network which involves a far deeper relationship between the supplier and the customer.

3.2 Market Segmentation Models

The link between the needs of the identified segment and the core value proposition of the service provider should match for an ideal fit. The importance of the segmentation process is that it provides an analytical approach to achieve that objective. Bonoma and Shapiro have identified five general segmentation bases used in industrial market segmentation, which they have organized in a nested manner so that each basis circumscribes the basis below. These are

1. Demographics
2. Operating variables
3. Purchasing Approach
4. Situational Factors and
5. Personal Characteristics.

Let us analyze third party logistics services using their framework.

3.2.1 Demographics

Since third party logistics services are marketed across a wide range of industries and company sizes, these are useful segmentation bases to focus the marketing effort. One of the constructs of this thesis is that firm size is an effective segmentation basis.

Size is not only relevant in terms of business potential but also can be used to deselect corporations who cannot be serviced by a 3PL whose capabilities are limited. Combining demographic variables can be highly effective in focusing on high potential companies. For instance location is an important variable because 3PL companies need to have physical facilities in close proximity to their customers. If location and size are combined together and used to classify potential clients, a core set in the region surrounding each 3PL location can be easily identified to serve as an initial short list for further investigation. Location criteria can also be used by a 3PL to develop its facility plans, selecting high cluster areas such as Detroit or Silicon Valley, which in turn can identify potential client clusters which fall in the target zone of companies. Many of the industry and company characteristics that make mid-sized companies more attractive targets are discussed in the market characteristic model later.

3.2.2 Operating Variables

Within demographics, operating variables is a dimension along which segmentation can be done. While [Bonoma and Shapiro]⁸, suggest the following operating variables i.e. Technology, User-nonuser status and Customer Capabilities as general examples of operating variables for segmentation, we need to modify these industrial operating variables to suit the market for 3PL services. Some operating variables in the logistics outsourcing context could be process, length of supply chain, outsourcing record, existing user vs. non-user of 3PL services, Truck Load vs. Less Than truck Load shipment trucking etc. Companies with complex multi-stage processes, all performed within the organization, need product handling and movement between the stages offering a greater set of logistical needs. Similarly long global supply chains, increasingly visible in the retail industry for instance, would be potentially attractive to a 3PL with international capabilities and a focus on speed. Using a basis such as 'existing users' can help identify clients being serviced by a weak competitor. A suitable effort could then dislodge that relationship by bringing extra value to the customer and thus lead to improved revenues. This would be especially true in logistics where the extent of current outsourcing is low enough to present minimal difficulties in switching for the client. Customer capabilities are another potentially relevant operating variable. In fact

this is probably the most important basis as it is also one of the fundamental reasons for outsourcing. Especially in international logistics where complexities are high, many organizations decide to outsource to exploit the knowledge base of the 3PL. Some of the operating variables can be analyzed from the financial ratios that are publicly available.

3.2.3 Purchasing approaches

This basis, adapted to the logistics instance, would identify the mechanics of bidding (explored in detail subsequently in the Relationship vs. Transactional buying model), the power equations, contracting policies, nature of the relationship of logistics to other functions within the organizations et al. Classifying firms along this basis can identify disparate purchasing styles. Depending on the strategic focus of the 3PL, it can decide whether to go for a certain type of infrequent purchaser or concentrate on customers who provide the potential of developing long term relationships.

3.3 Defining the Market Characteristics of the Product Market

3.3.1 Developing a framework for the Product Market

The heart of marketing a product effectively is to be able to identify a segment of consumers who offer a profitable opportunity, have a specific need that can be serviced by the organization and for whom an unique value proposition can be developed. Third party logistics services can increase profitability through a better understanding of the purchase behavior process leading to more effective segmentation.

The premise of the business model for third party logistics for mid-sized businesses depends critically on the following:

- a. Clear and focused identification of a target market offering sustainable growth and profit margins. This can be a specific set of firms within an industry or a segment within an industry that has clearly identifiable needs/characteristics that set them apart.
-

- b. Understanding the interrelationships between the firms within the industry to find clusters or networks that have dependencies. Cluster analysis, in this context, differs from segmentation in that it implies some relationship among the companies within the cluster.
- c. Describing a value proposition for the segment that identifies compelling benefits for that segment

Unlike the large corporations that third party logistics firms are targeting currently, the mid-sized corporations are more numerous and have more focused i.e. less diversified businesses. Generally they form part of larger inter-company supply chains, being suppliers of services and products to larger corporations. It is important therefore to have an analytical framework for firm evaluation that can measure and rate the attractiveness or potential of a firm as a customer or user of third party logistics services. This analytical framework should have bases to classify firms within an industry as well as identify suitable characteristics that increase their attractiveness as potential clients.

The advantage of such a framework would also be in increasing the productivity of the sales process. By having objective bases for selecting high potential clients while deselecting customers where the ratio of business gain to resource input, (in terms of sales force and management time) would be disproportionate, the sales process can be more focused. Such an approach can lead to high margin and high retention customer base that offsets the putatively higher costs of marketing to mid-sized businesses as compared to large corporations with big contracts.

The characteristic of such a framework should be

- a. Applicability across industries and product-markets
 - b. Ability to paint a clear picture of the potential client and classify them into groups with similar characteristics.
 - c. Have a way of determining relative attractiveness to rate the value of potential clients.
 - d. Identify migration paths across the categories that could be used to develop marketing plans that induce customers to migrate to higher potential segments.
-

3.4 A proposed framework for evaluation of potential customer attractiveness for third party logistics services.

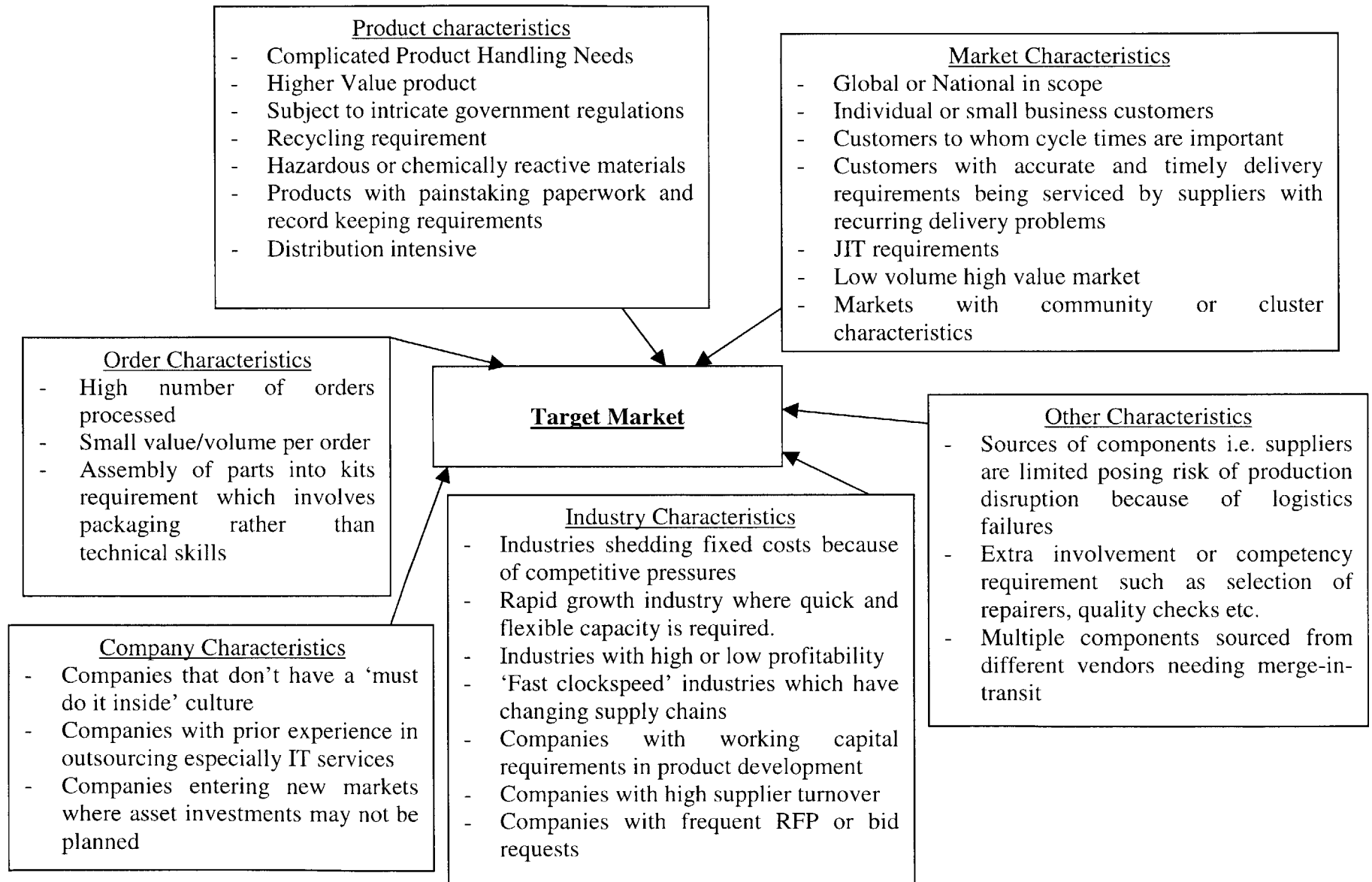
It is proposed here to have a four stage analytical framework that draws on lessons from the high technology industry, the study of industry clusters and the learnings from the outsourcing process for other functions such as information technology. The four stages are independent approaches but they have interrelationships, which will be identified as we proceed.

3.5 The Market Characteristic Model

This is our first model to understand the likely characteristics of potential and existing customers of outsourced services and develop propensity indicators to rate the likelihood of a target company becoming a potential customer of outsourced logistics. Consider the characteristics of the target market being addressed. One could analyze the potential attractions to the outsourcing proposal for logistics services from the target corporation, along the following dimensions. The intent here is to evaluate the likelihood of the company to outsourcing their logistics. Figure 3-1 outlines the questions that need to be addressed along each dimension.

Fig.3-1

Market Characteristic Model



3.5.1 Market Characteristics

In analyzing the characteristics of the market for the clients of third party logistics services, it is worthwhile noting Bonoma and Shapiro's comment i.e. "Logistics and Service are part of the marketing strategy and in some industries could be major determinants in the analysis of markets, the selection of prospects and customer, and the development of marketing approaches."¹⁸ Therefore scrutinizing the market characteristics of the clients of 3PL services can be a good tool to analyze their potential need for outsourcing logistics services and what characteristics would make them especially profitable targets.

First, it is likely that companies with certain characteristics listed below may have a higher proclivity to outsourced logistics.

1. Global markets and/or sourcing supply chains, as in industries such as garments, chemicals or retailing might have a higher likelihood of third party usage. The common reason for outsourcing logistics i.e. to avoid the asset investment in developing owned distribution infrastructure would apply here. Global logistics have some additional competency requirements such as knowledge of international trade and customs procedures, international transportation modes, multi-cultural communications, that make it more attractive to outsource specialists than develop the skills and competencies in house.

2. The second market characteristics that helps classification is the kind of market being addressed by the target customer. Do they market their products to individual consumers or small/large businesses? This is important to determine the service expectations that their customers might be placing on our third party client. In general logistics for supplying to an individual customer i.e. the retail channel or direct model, is generic but offers higher margin per unit weight or dollar value of shipment. On the contrary, with some exceptions, larger business orders i.e. wholesale orders, will generally have higher total value per shipment and less per unit value, and therefore logistics cost reduction pressures can be estimated to be higher. Wholesale distribution costs are therefore as a rule lower as a percentage of gross revenue than retail distribution offering lower value addition possibility for service providers. Margins can be improved serving customers in

this latter segment that have specialized material handling needs. Also delivery frequency, quality and timeliness differ between business and retail/individual customers. The cost of late deliveries in the latter case might just be lost sales, but in the former case it might mean losses due to production interruption.

3. This brings us to the third of the market characteristics, which is customers¹ to whom order cycle times are important. For instance, a tire manufacturer who supplies mounted tires on wheels to a car manufacturer has to deliver within a small time window to avoid stockpiling of tires, and may face enormous penalties for not delivering within that time window which might have led to holding up production. Consequently the logistics requirements of such customers are very different compared to that for delivering a standard consumer item to a retail store. The perceived risk of failure can influence the target client's tolerance to better profit margins for the third party logistics service provider, which delivers assured quality services. Or at the other end of the spectrum, the manufacturer may decide that such a risk is a strategic risk that it feels is better addressed by doing it in house and not outsource at all.

In order to help identify potentially attractive market characteristics of 3PL clients, it is useful to make a gap analysis of current expectations versus current delivery. For instance, if the client is in an industry which has market characteristics that require timely and accurate delivery and the client has persistent delivery problems in meeting expected commitments, this is a potential gap where a 3PL can add value and therefore become indispensable. While obvious, this should be done on a regular basis to update changing customer requirements, which would not happen without a structured gap analysis process.

4. The fourth characteristic is to identify clients with high performance requirements where such gaps exist, by analyzing specific industries. The kind of industries where this would be more likely would be fast changing dynamic industries where customer requirements keep getting more demanding. Supplying retail businesses in the U.S. with

¹ As usual in this section customers refers to customers of third party logistics service company clients.

high value products is an example of such a challenge where the ground keeps continually shifting under the suppliers' feet.

5. This leads to the fifth characteristics i.e. Just-in-Time requirements. JIT requirements are different from other performance requirements referred to above, in the sense that while the previous point referred to other dimensions such as control of inventory, speed of response, cost etc., JIT applies specifically to the lead time for supply. We have already discussed the case of JIT requirement for tires in car assembly. Generally JIT requirements are required where inventory reduction pressures are paramount because of the high value of inventory or where lean production is the industry norm such as the automobile industry. Computers also share the same characteristic of high value products and intense inventory reduction pressures because of the tremendous product obsolescence rate. Mid sized businesses selling computer related equipment or other electronic products therefore have a market characteristic which makes them attractive candidates for a value proposition that delivers reliable logistics services to meet their Just-in-Time goals.

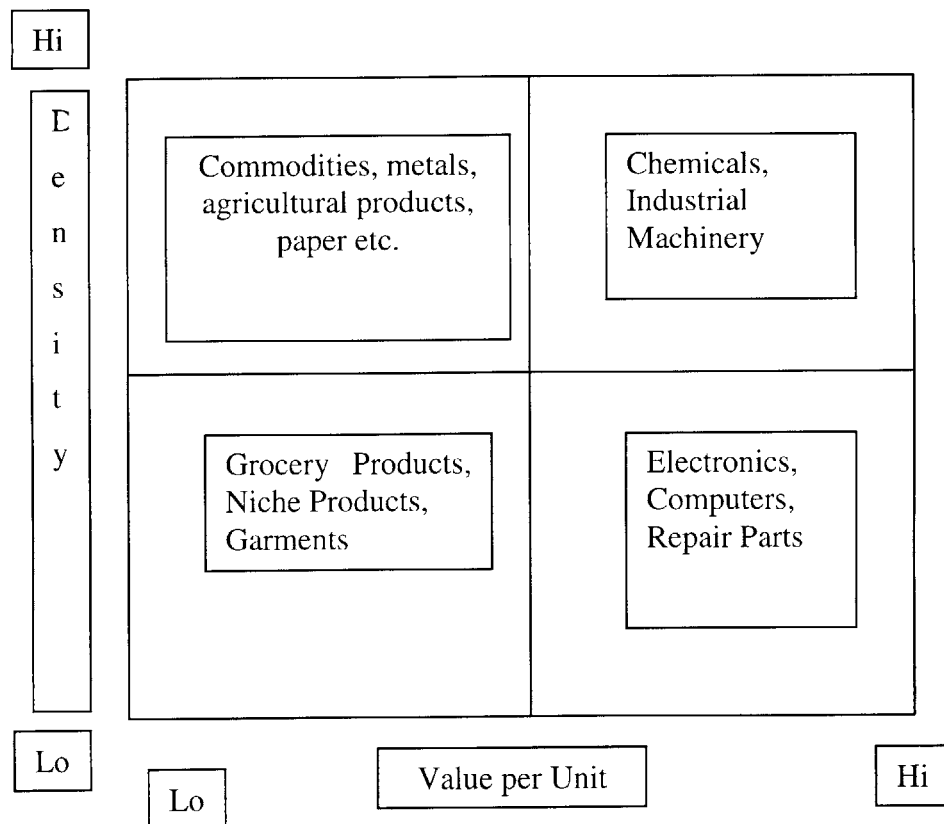


Fig. 3-2

6. A sixth characteristic of the market of the target 3PL client that should be researched is the relationship between value and volume. Consider the matrix in Fig. 3.2. The logistical requirements of each of the above categories will be different as well as the client's ability to factor higher cost logistics services. In general, it may be a fair assumption to make and test, that where product value and margins are low and the logistics component constitutes a larger part of the product cost, cost pressures will increase the customer's inclination to use the cheapest cost logistics. A 3PL which therefore segments the market for its services along this dimension and concentrates on, for instance, the lower right hand and the upper right hand boxes will have better profitability. On the other hand, arguably, the 3PL which targets clients on the left hand side of the matrix will likely have higher market share in revenues and lower profitability because of the cost control pressures faced more on the left side of the matrix than on the right. Such an analysis can help a 3PL rebalance its portfolio of clients to achieve its strategic profit and market share objectives. In addition of course, there should be a match between the capabilities of the 3PL and the target segment that is being addressed by it. This implies that 3PLs with a highly cost efficient structure for instance should be addressing the volume market whereas 3PLs with diversified service strengths should look at the value market.

7. Finally the seventh market characteristic is to identify markets with community or cluster characteristics. While this will be discussed later in greater detail in the cluster or Networked Purchasing Model with respect to the market for third party logistics services, in the context of the market characteristics of 3PL clients it is also useful to distinguish clients who service networked companies. Examples are companies in industries such as computer peripherals, auto components and other companies in industries where products need compatible material handling systems such as similar pallets, forcing a common intermediary. This can be a useful basis to differentiate the service and lock in to segments where switching costs of changing logistics suppliers can be high.

In summary, targeted logistics services based on understanding the nature of the market faced by the client can help a 3PL to assist its client to change or augment its market focus to include markets which consider effective logistics as a key purchasing criterion. The assumption, of course, is that those segments were not addressed earlier by the client because of inadequate logistics capabilities.

3.5.2 Product Characteristics

It can be postulated that certain cost vs. service characteristics of products inherently demand higher level of logistics expertise than others do and that those companies manufacturing such products might be more amenable to go outside the organization for specialized logistical skills. Also with a larger logistics component, the logistics related cost of the product would most likely be higher offering potential for cost reduction through asset leveraging of outsourcing suppliers. To have a framework for identifying such favorable product characteristics for third party logistics services, let us look at the following dimensions.

First, products requiring complicated product handling needs such as specialized storage or jigs and fixtures for handling need asset investments and close management through the supply chain. Since manufacturers doing their logistics in-house and only outsourcing transportation have to relinquish control of the product at some point along the transportation pipeline to the transporter, it might be more efficient to integrate the transportation provider and the logistics provider by outsourcing to an asset-based third party logistics service firm. This would ensure that the product is closely tracked and handled through the factory to consumer route minimizing problems due to hand offs. Such products could be industrial as well as consumer. In the consumer category products such as furniture, automobiles, sports equipment etc. might be relevant.

Secondly, while we discussed the relative differences between higher density and higher value per unit products in section 3.5.1, higher dollar value products have additional characteristics that need to be considered. Generally these have a requirement for lower inventory levels in the supply chain to minimize working capital requirements. With lower inventory, the speed to market can be an important variable encouraging customers to outsource logistics. Velocity of the product through the pipeline can be a powerful segmentation basis. Third party logistics services competing on speed of response should aim at products, which tend to have lower inventory and quicker throughput through the channel. There are two reasons for this. First with lower inventories, arguably this segment is trading off the savings in inventory holding cost with the increased logistics cost of high velocity product movement through the chain,

offering better margin potential than slower moving products. Secondly faster throughput times mean (a) that the manufacturer needs to have expert assistance and the asset flexibility to maintain the flow of products through the chain and also (b) smaller lot sizes, which makes a potential gain in terms of improved revenues and margin through consolidation.

Thirdly, some products such as liquor, drugs and advanced electronics, may be subject to intricate governmental regulations with regard to distribution. These might be changing export regulations both from exporting country (such as restrictions on sale of certain sensitive electronic products from the U.S.) and from importing country (such as differential tariffs, inspection and certification requirements from independent auditors like Bureau Veritas etc.). Arguably a global 3PL with many products/companies might be better placed to track such changing regulatory requirements and their impact on the distribution of products than the manufacturer for whom this may not be always feasible.

Fourthly, some products have recycling requirements due to environmental or business reasons. Used toner cartridges in printers and Xerox machines are recovered for reuse leading to considerable cost savings. Batteries need to be taken back by manufacturers at the end of their life spans to be disposed of in an environmentally safe and responsible way. Apart from such products, others may have high incidence of product returns, for various reasons including trial period offers by manufacturer / retailers. In all these cases, integrating the delivery and recovery process in one supplier makes logical and economic sense.

Fifth, hazardous or chemically reactive materials require specialized attention through the supply chain. This may be one of the reasons why the chemical industry reported one of the highest rates of third party logistics usage (75% of respondents), in a recent study of the third party logistics market by the Center for Logistics Research at the University of Tennessee.¹⁹ Since hazardous materials are subject to special regulations and documentation, which may be different in various parts of the world, having a 3PL monitor and handle product distribution can be a significant gain for a chemical manufacturer. In some cases, this category overlaps with the recycling characteristics, as certain chemical containers might have to be returned to manufacturer for reuse.

Sixthly, products requiring detailed paperwork and record keeping through the supply chain, (such as inspection, special customs documentation, transaction details and audit trails etc.) might be burdensome to the manufacturer increasing proclivity to outsource. Components, kits in semi or completely knocked down condition, parts, drugs with expiration or other restrictions, might have reporting requirements to meet customs and regulatory obligations that can be best performed by an outside party conversant with such process. This author had a personal experience in obtaining a EX-1/3 certificate from European authorities for assembling electronic products from semi-knocked down kits and had to resort to using a 3PL with prior experience in this area.

Finally distribution intensive products which have a short product life cycle or high component of value addition in distribution, are time sensitive because of obsolescence or perishability or require quick throughput to meet a high order fill target, are natural candidates for a focused logistics service provider, for whom such products represent an opportunity to add value through specialization. With reference to the seventh market characteristic identified on Pg.29, an example of distribution intensity in a clustered market is a multiple vendor merge-in-transit program for products such as computers and peripherals.

3.5.3 Order Characteristics

Some order characteristics increase the need for efficient logistics and therefore the potential for use of professional support from focused third parties. Companies having high number of orders processed on a daily basis need to have systems and processes to have minimal errors in handling large numbers of individual orders as well as manage order cycle times. Order picking intensity increases with increase in separate line items that need to be filled. Large wholesale distribution centers with small number of large volume orders will generally have less complexity in the picking and order satisfaction process and therefore have less potential for high margin third party services. Similarly small value or volume per order as in supplying to retail businesses implies higher order satisfaction costs and therefore offers better potential for use of outsourced logistics.

If orders need value added services such as kiting or promotional packaging then potential for logistics services improves. Many of such value adding service opportunities do not require technical skills. Rather packaging and assembly skills are more useful and such services can be outsourced by the manufacturer without loss of institutional knowledge. Third party logistics companies therefore can ferret out such opportunities to expand the envelope of services and expand the scope of the business.

Finally channel strategy also impacts the likelihood of outsourcing. The service provider should understand the channel strategy of the proposed customer. Direct channels indicate higher likelihood of outsourcing as most of the channel control is centralized. In multi-echelon distribution channels, the logistics activity is spread across participants thus indicating multiple decision points for outsourcing related decisions as well as process satisfaction customers, especially when the flows are interrelated.

3.5.4 Company Characteristics

[Corey 1978]²⁰ has highlighted the centralization of the purchasing function as a major variable in the decision making process, the point made being: 'Commonality of requirements among diverse operation sites fosters centralization; Diversity on the other hand, fosters decentralization'. The important relevance of the centralization vs. decentralization issue here is for the 3PL to be able to predict whether the client will prefer a national or global service provider to a regional one. For example, Sony Corporation is organized into more than 1000 independent subsidiary companies worldwide with distinct and widely varying requirements. Even though centralization in transportation decisions has been attempted (to limited degree of success), the logistics requirements relevant to 3PL service companies are still decided at the subsidiary level because of widely differing market requirements. Therefore even a large corporation, if decentralized in decision making involving logistics outsourcing, can be considered as a collection of mid sized businesses, each offering potential value as clients. The additional opportunity here being that addressing each subsidiary directly and building direct relationships can result in the network or cluster which after reaching a critical mass can be converted to a full fledged relationship with the parent corporation involving

standardization across more subsidiaries. Centralized purchasing decisions generally stress on price whereas decentralized decisions favor responsiveness and service.

Some companies have an internally focused culture that could be stated as 'must do it inside' culture. As a matter of orientation, they are likely to be highly skeptical of outsourcing any function unless compelled by environment or circumstances. Identifying such companies can reduce the impact of wasted time in pursuing unproductive accounts. It is considerably easier though to identify those prospects that do not have such a culture within their organization. Prior outsourcing of other functions or enthusiasm to seek potential benefits can be useful indicators along this line. Outsourcing as a business process started in IT functions earlier than logistics and the high extent of IT usage in logistics makes it follow the IT trend.

Companies entering new markets or launching new products also look at outsourcing as a viable alternative. Obviously the investment focus in the initial period is on building demand rather than infrastructure and therefore asset leverage becomes an important issue at this point. Also since at the growth phase it is difficult to estimate steady state demand, companies would like to postpone asset investment until the operations stabilize. This segment therefore is likely to be potentially responsive to the opportunity of outsourcing.

3.5.5 Industry Characteristics

There are certain industry characteristics which make companies operating within them much more likely to outsource. Industries shedding fixed costs because of high competitive pressures, for instance due to product innovation opportunities within the industry are more than likely to consider outsourcing favorably. These fixed costs may be in terms of manpower or in terms of capital blocked in fixed assets, which have urgent alternate uses. Correlating a company and the industry in which it operates with Porter's five forces analysis can help in this process of identification of companies faced with this situation.

Companies in rapid growth industries are also likely candidates for outsourcing. As described earlier rapid growth is an uncertain situation that precludes heavy asset

commitments. Flexibility is the key requirement and therefore outsourcing becomes a suitable strategic choice. Companies within industries that are generally highly profitable or have very low profitability may have a higher propensity to use third party services. This is because of diverging reasons though. Highly profitable companies might like to use the best outsourced services whereas companies with low profitability would be looking for every opportunity to reduce costs wherever possible and looking for consolidation and scale efficiencies that forms the core argument in support of outsourced services.

Another industry characteristic that influences proclivity to outsource is Fine's concept of "High Clockspeed" industries. These are industries that rotate between horizontally integrated or vertically integrated structures at faster speeds than other slowly changing industries. Changing supply chains and the structure of the supply chain can introduce a strong collaborative tendency, which induces outsourcing. To understand the impact of this we need to understand the distinction between vertical and horizontal supply chains. The essential difference between these two types of supply chains, pointed out by Fine, is that the horizontal chain involves multiple supply chain partners whose combined products assembled together make up the end product whereas in vertical chains, one company manufacturing a product/service owns and manages the entire sequence of sub-assemblies and processes involved in the creation of the product/service. He also states that companies and industries are continually moving between these two states.

The implications of concepts proposed by Fine with respect to logistics outsourcing are the following. Horizontally integrated supply chains will involve transaction management across multiple interfaces, whereas vertically integrated supply chains will need tight integration with the customer's business process from a process, technology, communication and cultural standpoint. The implication of that for third party logistics companies is that they should identify what needs to be their competency focus and develop a marketing and service bundle that develops appropriate benefits to the particular stage of the vertical-horizontal paradigm that the customer is in. Supply chain maps, which depict the product assembly process and partners, will indicate the

level of integration – vertical or horizontal – in the industry/corporation that will have an impact on the marketing plan.

Working capital pressures, visible in the statement of accounts of publicly held corporations can be another source of information to identify the propensity of outsourcing. Companies who have high working capital needs, such as those investing in product development or technology research and development, would have a higher benefit of leveraging the asset reduction effect of outsourcing. Examining the current ratio to get an idea of the cash and liquidity position of the company and combining that with the growth rate of the company can give a good insight to the likelihood of receptivity of the company to outsource services such as logistics.

Companies with high supplier turnover are likely to be having a fast changing procurement supply chain that needs to be flexible and adaptive to changing sourcing patterns. Also companies with frequent changes in logistics suppliers, if already outsourcing, might be looking for a specific level and quality of service that is not currently available to them. This would also be evident in cases of companies who frequently issue Requests for Proposals or bid requests, not necessarily only in the case of logistics services, which indicate that their propensity to outsource is greater. However, these companies may not be likely candidates to develop a long term relationship and therefore, the fundamental reason for frequent supplier turnover and the likelihood of that need being satisfied with current capabilities, must be considered carefully by the 3PL investigating such a potential client. In all these cases, third party logistics service providers have an opportunity of developing a focused solution specific to the customer's needs that would have a higher likelihood of acceptance. By focused here we mean customized in terms of cost vs. service tradeoff and the range and depth of service offered to meet the strategic and tactical objectives of the client.

3.5.6 Other Characteristics

Certain other characteristics of target clients are also good indicators of higher likelihood of usage of outsourced logistics. For instance, where logistics becomes 'mission critical' or in other words the disruption to production process or the market due

to logistics failure is extremely costly, the focus on having a dependable service level is high. This would be evident in supply chains where, for instance, the number of suppliers is limited. In these cases, by offering value added and reliable logistics service levels, 3PLs can provide a value proposition that has high relevance to the customer. Value addition is also possible through industry specific competencies or regional expertise. For instance, by virtue of being a supplier to one corporation in an industry, a 3PL may have the network and information infrastructure to identify special sources for quality components or repair services. Similarly, by operation in certain countries, an understanding of business and legal processes in that country can be leveraged for additional business. Therefore companies having need for such expertise become potential clients of the core logistics service.

Finally 'merge-in-transit' is becoming a value added service from 3PL's that shortens and simplifies the supply chain for corporations having multiple component sources and multiple vendors that need to be coordinated in an efficient manner. Studying the manufacturing flow and the supply chain simultaneously can uncover hidden opportunities that not only provide the convenience of 'merge-in-transit' but also the consolidation benefits that such services deliver.

3.6 Technology Adaptation Life Cycle Model

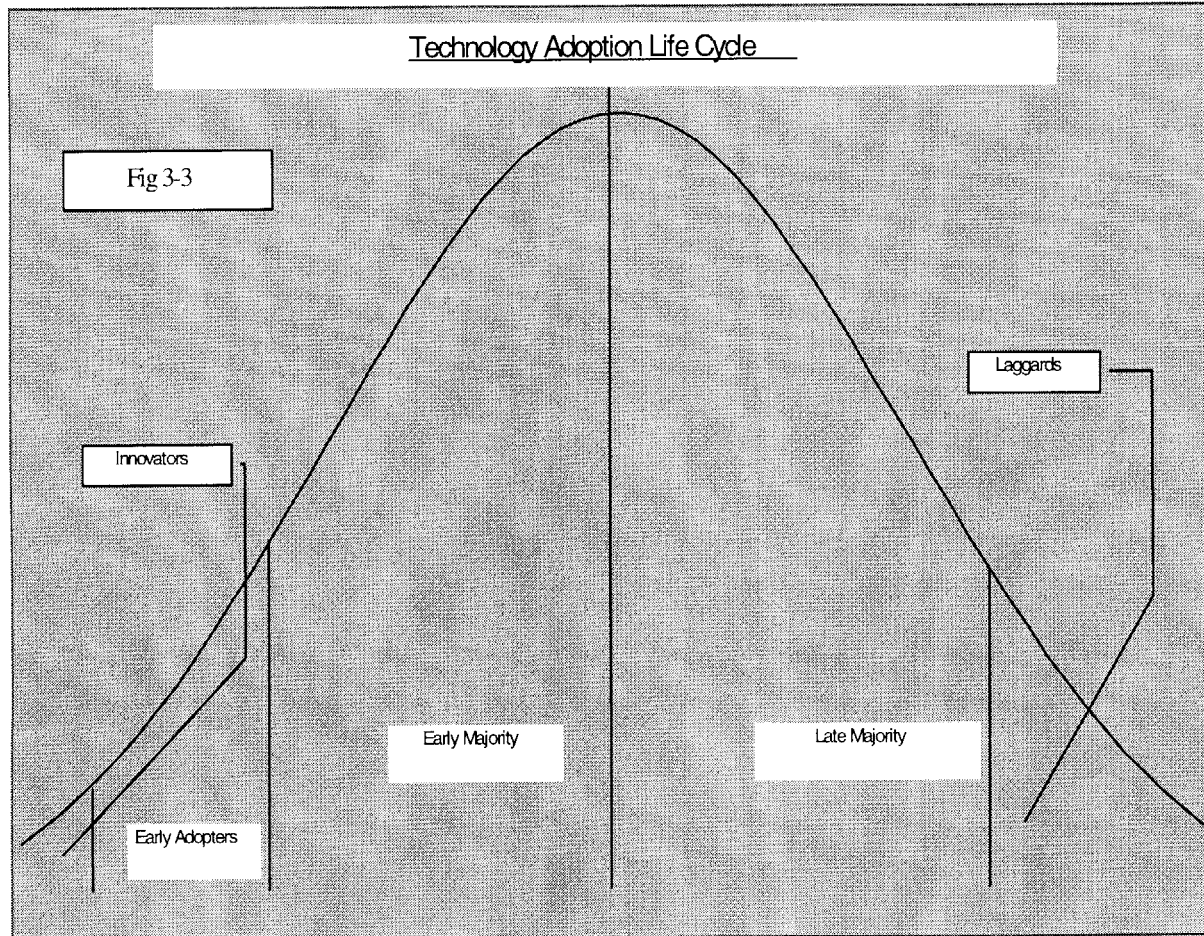
A seminal description of customer attitudes and buyer behavior of high technology products that clearly distinguishes customers along a distribution of adaptability to new innovations is by Moore²¹. The Technology Adoption Life Cycle [TALC] model has substantial similarities between the product market for discontinuous innovations and the market for third party logistics services. Discontinuous innovations involve change in customer behavior and processes as opposed to continuous innovation which are normal upgrading of products that do not require change in the operational processes of the customer in the utilization of the product/service. An example of this difference would be a newer version of an existing software with addition of increased functionalities such as an upgraded version of Microsoft Word. A discontinuous innovation example, on the contrary, would be change from a DOS based line interface to a GUI based Windows interface which may require substantial reorientation and

retraining for effective utilization. Third party logistics services fall into the latter category because they entail considerable change in the structural processes in the customer and building of new relationships and operational procedures. It is proposed therefore that the characteristics of marketing discontinuous innovations in the high tech industry may have corresponding similarities with the service adoption cycle in 3PL services. This model seems more relevant as the third party logistics services industry seems to be still in the initial phases of its growth with a high growth path ahead in the future. Having a framework for growth would therefore need a structured categorization of customers similar to that for new and innovative products in the introduction and growth phase.

The TALC model classifies customers on their propensity to adopt discontinuous innovations in a psychographic continuum ranging from the aggressive pursuer of new technology and processes classified as an innovator, through to the laggards at the other end of the spectrum who are skeptical of changes for a variety of reasons. Within these groups lie the 'early adopters' or 'visionaries' whose motivation comes from a vision of potential benefits of the concept; the 'early majority' who are pragmatic towards the adoption of new ideas, committing themselves only when they see a clearly quantifiable benefit proposition; and the 'late majority' who are much more conservative in their approach to new products preferring to use only branded product and services from well known and reputed companies. Both the early and late majority constitute about one third each of the population and represent the segments where the real sales and profits come from. It is also important to realize that there are interrelationships across the groups, which reference prior groups in the adoption cycle and within the group before making their buy decisions. Each of the groupings therefore represents a different challenge to the marketer of discontinuous innovations.

In the discussion on buyer behavior, the effect of the psychographic profile of the decision-makers on the decision making process was discussed. The TALC model supports the conclusion that each of the above segments is composed of individuals with unique psychographic profiles. For instance consider the innovators. Supply chain competency, as Fine suggests, is a Meta competency. This means that it is the competency that enables companies to decide which competencies to outsource and

which to retain. Using this framework it may be said that the key factors in supply chain management is to manage the process rather than the assets. Owning assets is therefore



not the key imperative for forward thinking organizations. They see value in utilizing readily available competencies instead of building those up internally and leverage the best-in-class capabilities available from specialized vendors. Since innovators are willing to risk trying out unproven products and services, they should be targeted in order to develop successful introductions that can serve as reference points for other companies to seriously consider logistics outsourcing. Relationship marketing would be more suited to this kind of customer.

Unlike Innovators, Early Adopters will require rational justification for accepting outsourcing. This segment should be relatively easy to convince, as they are open to new

ideas and can understand and appreciate the benefits of positive innovations in business practices which can lead to first mover competitive advantages. However they need to be sold on the potential benefits of the outsourcing of logistics activities. This group would be more influenced by logical justification than referenced instances of successful implementations, as they rely on their own reasoning to justify their decisions and are willing to adopt provided the value proposition is interesting to them. They are the real 'change agents' who establish a product in the market.

The Early Majority are more concerned with the practical benefits and difficulties of outsourcing. They are more likely to use products and services, which have established their utility by successful implementations elsewhere. For them, references are important indicators of the viability of reorganizing their processes to accommodate third party service providers. As Moore describes them, 'they want to buy a productivity improvement for existing operations'.

The Late Majority, besides being practical, are more likely to use products and services, which have become so standard that not using them would be dysfunctional or incompatible with partners. Their intent is guided more by acceptance of change than willingness or keenness for change. The chances of snaring this segment increases with the wider adoption of third party logistics services across, say a particular industry in which the company operates. Thus a late majority chemical producer would wait to see a major chunk of its industry competitors adopt outsourcing in order for it to embrace it. Therefore continuous cultivation of these clients are essential to win their business.

At the end of the spectrum are the laggards or skeptics, who are unlikely to adopt outsourcing because of various reasons such as confidence in the superiority of internal processes, consideration of logistics as either a central benefit of the product or the skills available as core competitive advantages, prior setback with outsourcing of other functions, extreme conservatism about seeking external help etc.. As with high tech products, marketing of logistics outsourcing services to these distinct segments will also have to progress from Innovators towards Laggards because of the referencing and wider penetration required by the segments on the later end of the distribution compared to the early end of the adopters.

There are other parallels between high technology product acceptance and attitudes towards logistics outsourcing. Let us, for instance compare the entrenched position built up by Lotus 1-2-3 during the 1980's (and by Microsoft Excel now), and the concept of time definite delivery by FedEx during the same period. Both products were revolutionary and discontinuous innovations in their respective industries. Just as 1-2-3 became the industry standard in spreadsheets by developing acceptance, to the point where spreadsheet compatibility necessitated the use of the product, FedEx was able to develop its product through extensive networking infrastructure to the point where sending a package by air meant 'FedExing' it, introducing a new verb in the American lexicon. In both cases the usage of the product was represented by an upwardly sloping curve, with the rate of growth increasing as the population of users increased and the network mushroomed to the point that businesses had to 'FedEx' to interact with other businesses.

The relevance of the TALC model to the logistics buying process is to enable the segmentation of the market along the dimension of proclivity toward logistics outsourcing. The consequence of this characterization is to understand what influences on the decision-makers could be most effective in enabling a positive decision in favor of outsourcing. For instance when marketing to innovators, it is important to downplay pricing because the innovators are required as customers to establish credibility of the product. While addressing large multi-divisional corporations, it may be productive to identify an innovator group within the corporation and have a successful outsourcing relationship with them, and use that as a base to launch a bid for outsourcing the entire logistics network of the corporation. This involves looking at an organization with a wider perspective than the localized business relationship that is present initially.

3.7 Relationship vs. Transactional Buying Model.

Gronroos²⁶ defines relationship marketing as "...to establish, maintain and enhance relationships with customers and other partners, at a profit, so that the objectives of the parties involved are met. This is achieved by a mutual exchange and fulfillment of promises" ([16, p. 138]). Such relationships are usually but not necessarily always long term. Establishing a relationship, for example with a customer, can be divided into two

parts: to attract the customer and to build the relationship with that customer so that the economic goals of that relationship are achieved." [Tzokas and Saren 1997]²² propose that relationship marketing is "the process of planning developing and nurturing a relationship climate that will promote a dialogue between a firm and its customers which aims to imbue an understanding, confidence and respect of each others' capabilities and concerns when enacting their role in the market place and society". Also [Alexander 1997]'s²³ comment on relationship management viz. "it is not simply about gathering more information, but about shaping needs and behaviors to develop mutual advantage" reiterates the interactive nature of the relationship building and maintenance process. This is particularly so in industrial marketing.

The general purchasing policy in companies varies from pricing agreements based on supplier's stated costs, cost equivalent of the customer's processes being outsourced, market based prices to competitive bidding. Transactional buying behavior is exhibited by companies which frequently resort to bidding to arrive at cheapest supplier and then assign the outsourcing for a specific period to the bid winner. This is most evident in the transportation industry, such as trucking and ocean freight, where complicated RFQs lead to very complicated bidding processes. The consequence of this is frequent supplier turnover and relatively little longer-term investments from the suppliers in the service, unless compelled by the requirements of the RFQ. Therefore the drive to innovation and service development in these cases normally comes from the customer rather than the supplier. The opposite paradigm is one of long term relationships, which barter short term cost savings to longer-term service improvements and supplier commitment. In component outsourcing, the superiority of this model was proved by the Japanese car manufacturers [described comprehensively by Womack, Jones and Roos, 1990]²⁴. A relationship based approach shifts the competitive paradigm away from using price as the overwhelming variable in service marketing to the benefits and economies possible from long-term ties with the customer and the extension of the service product beyond its basic core features. In addition, it gives economies of scale in the selling process by reducing the effort needed to expand business. The increase in density of a relationship is easier once trust is established compared to increasing the business through addition of customers where the trust building process has to start afresh.

In contemporary marketing literature too there is a shift from the old marketing mix paradigm of four P's (i.e. Product, Price, Place and Promotion) to the relationship marketing approach which emphasizes the economies of a customer retention strategy. This concept of relationship marketing has been otherwise described by Sheth²⁵ et al as the concept of *repeated* market transactions around which marketing analysis should be based. Focusing on a continued relationship between the buyer and seller involves adding a time dimension to the analysis of the transactions according to them.

In addition, building relationships involves developing trust that accumulates with time and repetition of problem free transactions over along period. Development of this trust level increases the switching cost for the purchaser of exiting a relationship and having to go through the entire process anew with a new supplier. Consequently establishing a relationship acts as an entry barrier for new entrants to get over the existing equity of trust built up between the purchaser and current supplier.

[Gronroos 1993]²⁶ argues compellingly on the superiority of a relationship-based paradigm especially as relates to industrial product marketing and in the marketing of services, over the traditional marketing paradigm. He explains the interactive nature of relationship marketing thus. "Between the parties in a network various interactions take place, where exchanges and adaptations to each other occur. A flow of goods and information as well as financial and social exchanges takes place in the network. In such a network the role and forms of marketing are not very clear. All exchanges, all sorts of interactions have an impact on the position of the parties in the network. The interactions are not necessarily initiated by the seller - the marketer according to the marketing mix management paradigm - and they may continue over a long period of time, for example, for several years. " Gronroos also extends Gummesson's²⁷ concept of 'part-time-marketers' to highlight the effect of non-marketing personnel within an organization in developing long term relationships. This interactive nature of the marketing of services, where the customer interacts with systems, physical resources and employees of the service provider, is highly relevant to the context of third party logistics services, as opposed to the marketing of physical goods where the seller may not in many instances come in contact regularly with the ultimate consumer. The result according to him is the customer relationship life-cycle model managing which is the role of relationship

marketing and internal marketers. An important point made by him on relationship economics is that “ Long-term relationships where both parties over time learn how to best interact with each other lead to decreasing relationship costs for the customer as well as for the supplier or service provider. Segmentation based on customer relationship profitability analysis is a prerequisite for customer retention decisions. The relationship between customer loyalty and account profitability is evidenced by an example given by Reichheld²⁸ where ‘MBNA in the credit card business finds that a 5% increase in retention grows the company’s profit by 60% by the fifth year’. Finally Gronroos distinguishes relationship marketing as an interactive process whereas the traditional 4P based approach makes the seller the active part and the consumer the passive part.

Some studies have tried to investigate the importance of service levels vs. competitive sales pressures, in the retention of customers as applied to the market for transportation services. [Cunningham and Kettlewood 1975]²⁹ identified that among other factors, service deterioration or increases in rates charged by current supplier was an important factor in change of supplier whereas sales pressure of competing suppliers was not. Similar results indicating the primacy of service factors in supplier switching behavior have also been reported by [Stock and LaLonde, 1977]³⁰. Consequently the element of meeting and exceeding service expectations is a critical determinant in developing and maintaining long-term customer relationships.

Other studies have inquired about the specific reasons that encourage the development of long term relationships. [Cooper and Gardner, 1993]³¹ identified successful characteristics of long term relationships as the following:

- i. Sharing of benefits and joint acceptance of business risks
- ii. Extendedness – building trust and long term loyalty
- iii. Operating controls – allowing each firm some oversight over the other party to ensure optimal efficiency
- iv. Corporate culture bridge building – establishing common agendas and goals.

Segmenting the market on benefits to the customer i.e. the reasons for outsourcing, as an analysis is different from the segmentation based on company and industry behavior. While the two have linkages, they are not necessarily the same. For

instance, a company may be interested in better service as a benefit but its behavior may be transactional in the form of bidding. The distinction is important because the separation of the predominant characteristic is important to make the segmentation accurate.

Some evidence of a trend towards relationship based sourcing can be gauged in the following report. Consider the following report from the Hackett Group's Benchmarking study of procurement best practices.

“On average, a billion-dollar company contracts with 12,200 suppliers. But the spending distribution among them is far from balanced. Some 90 percent of dollars are directed to only 18 percent of suppliers. The remaining 10 percent are disbursed as small-dollar transactions among the other 10,000-plus providers. First-quartile companies in the study are about 28 percent more concentrated in spending their purchase dollars. A trend toward reducing the total number of suppliers is under way, according to the study. The average company presently has 10 percent fewer suppliers than one year ago, as rationalization and strategic alliance efforts take hold. While the total number of suppliers is slowly being reduced, single sourcing still remains beyond the reach of most procurement organizations. Some 76 percent of companies report low or low-medium utilization of single sourcing. Only three percent claim high usage.”

Relationship buying behavior implies relationship selling. In this model we explore how relationship buying can be encouraged. It naturally is in the interest of the supplier of third party logistics services to do that in order to develop its service and get long term tie in with some customers.

3.8 Cluster or Networked Purchasing Model.

The hypothesis in this model is that there exist networks of companies in certain industries that have common purchase behavior and sometimes gravitate towards a single supplier of external services. This helps minimize the transaction costs and errors, gives information visibility across the chain and enables a partnering approach to solving common problems faced by the industry group. This is likely to be observed in industries such as automotive components where the supply chain is multi-tiered. This means that cars are made out of sub-assemblies, which are themselves, assembled by the supplier

from further sub-assemblies provided by a tier 2 supplier. To make the logistics interface across the tiers smooth, companies tend to make joint decisions on the selection of service providers. This tendency would be evident in industries which are horizontally integrated (described earlier) and multiple partners have to work together to make the end product.

The hypothesis of this model is that such networked companies offer a better and more profitable market segment compared to unrelated companies. This is because the standardization of supplier interfaces ties in companies in the network to long term relationship with the supplier and increases the switching costs of changing the supplier. It is therefore advantageous to the provider of services, to customize and integrate its service offering to the special needs of this group to be able not only to serve the segment better but also build entry barriers for potential competitors.

One approach to discover such networks and clusters is to use the technique of supply chain mapping described by Fine. By taking the a corporation and depicting its supply chain, from raw material to end consumer, along the three dimensions of supplier organizations, technology and business capability, clusters with inter-dependencies can be highlighted that can be marketed to as a group.

Another example of such networked clusters is in the case of SAP R/3, integrated enterprise resource planning software. A recent Benchmarking Partners survey³² shows that 'in some industries, one of the factors in choosing SAP R/3 over the alternatives is that it has become a standard in that industry.' Similarly the cumulative effect of the dominance of the Microsoft operating system in enforcing customer choice, is clearly evident compared to the reach of the MAC operating system. It is possible therefore to hypothesize the extrapolation of such an effect to the third party logistics services context. By focusing on one industry, a service provider could develop intimate knowledge of the requirements of that industry and develop the critical mass in terms of a network to set industry standards in logistics. This can lead to preferred supplier status further improving the reach into that industry.

Chapter 4

4 Research Approach

This research was conducted in the short span of 4 months. Due to limitations of time, it does not purport to be a scientific empirical study of buyer behavior and market segmentation of the third party logistics market. However, through an exploratory research approach, this author feels that the salient issues have been unearthed for investigation and further discussion and that strong evidence of directionality on many key points was discovered. Given the still nascent state of this industry's growth, the potential of looking at modeling the purchase process and classifying customers can not only be academically useful, but also have a rather strong practical relevance. As discussed earlier, better segmentation models and better predictors of customer propensity identified by this thesis, can have a significant impact in improving the focus and thereby developing the business of third party logistics services. Expanding the envelope and rethinking the design of the selling process and organization can have a beneficial effect on the entire 3PL-value proposition. The research therefore tries to bridge the theoretical underpinnings of segmentation, buying behavior and relationship models with an understanding of current practices, with a view to linking them together to gain a fresh perspective on the value proposition of 3PL services.

4.1 Design and Methodology

Since the research hypotheses needed validation through exploratory information collection, a questionnaire had to be developed and administered. Due to the paucity of time, the questionnaire was either faxed or e-mailed to respondents with follow-up calls followed by about half to three quarters hour telephonic interviews to administer the questionnaire.

For validating the market characteristics and segmentation models as well as relating it to current practices, two separate questionnaires directed at customers, current and prospective, of 3PL services and existing 3PL providers were developed. The information source for the 3PL providers was Armstrong's Guide 1998 of the main third

party logistics service providers in the United States. For customers, the data source was the membership roster of the Council of Logistics Management. The level contacted in 3PL's was VP or Head of Marketing, while among customer's organization, it was generally at Director of Logistics / Distribution or Logistics Manager levels. The respondent levels were chosen to include those most likely to be familiar with the outsourcing decision making processes and the companies selected were a random selection of North American companies to reflect the broad population of potential 3PL users. However, it should be noted that there is a possibility of a potential bias in that the members of the Council of Logistics Management generally tend to be a sophisticated group.

The list of 3PL's was taken from Armstrong's guide to 3PL Service Providers, which lists all the major national and international 3PL's operating in the US. For the purpose of this initial exploratory study, the regional and smaller third party logistics providers (i.e. revenues less than \$10 million) were excluded from the study with the focus being on national and international 3PL's. Because of the limited time only the major ones limited to the top 60 were addressed. One could contend that the list is not comprehensive, but it is representative of the 3PL firms in the US with a mixture of the largest as well as smaller players, some global and some only domestic. It must be said though that the sample sizes were not large enough to be sufficiently confident about the accuracy of the responses, although strong directional evidence was found.

Sample questionnaires are appended for reference.

4.2 Questionnaire to 3PL's

1. What percentage of your customers have revenues in the range \$150-\$1500 million?
 2. How did you get your last 5 new customers?
 3. How do you select customers?
 4. What percentage of your customers are obtained through
 - (a.) Cold calling selected customers
 - (b.) Referrals from existing customers
 - (c.) Social Meetings such as in conferences, social interactions etc.?
 5. How is your salesforce organized?
-

- Geographic? Business size? Industry group? Service category? No salesforce?
 - 6. How is your salesforce compensated?
 - 7. Do you classify customers into groups?
 - 8. Do you prioritize groups?
 - 9. If so, on what basis? Sales/Industry/Geography/Type of Service/Extent of 3PL usage?
 - 10. Is your grouping linked to your marketing/selling effort?
 - 11. How long, on average, does it take for your customers to decide on your outsourcing proposal?
 - 12. How long, on average, does it take to implement?
 - 13. How much percentage of your customer would fall into each of the following categories?
 - Enthusiastic?
 - Interested?
 - Cautious?
 - Wary?
 - Skeptical?
 - 14. Are references requested for?
 - 15. Do you see 'Champion's of Outsourcing Logistics' in your customer's organization who facilitate the process of selling your services? What characteristics do they share?
 - 16. What percentage of your customers has been with you for 2 years or more?
 - 17. What percentage of your customers request bids?
 - 18. What is the percentage of customer turnover in your company?
 - 19. What is your customer retention strategy?
 - 20. How do you differentiate your services from your competition?
 - 21. Do some of your customers take joint decisions on 3PL selection? (i.e. are there groups of customers and their suppliers / business affiliates / business partners who decide to have a common third party for ease of transactions?)
 - 22. Do you have clusters or groups of customers that share your services? (i.e. are there industry or other category specific customers who purchase a common set of services developed by you?)
-

23. Has acquiring some customers resulted in additional customers who deal with your initial customer? (i.e. is there any linkage effect?)
 24. Is outsourcing by your customer a joint or an individual decision?
 25. In the outsourcing decision of your customers
 - a. How many departments/divisions are involved?
 - b. Which levels of management are involved?
 - c. How many individuals jointly take the decision?
 - d. Which department was your most prominent contact?
 26. What were some of the reasons given by your customers as to why they chose outsourcing their logistics to you?
 27. What is the most common characteristic among your customers?
-

4.3 Questionnaire to companies

1. Does your company's revenues fall between \$150-\$1500 million?
 2. Is your company divisionalized (by product/geography/affiliates)?
 3. Is logistics centralized or decentralized?
 4. Does your company outsource or plan to outsource logistics?
 5. If you do not outsource, do you outsource (comprehensive) other functions, such as IT?
 6. Who would be involved in outsourcing decisions? Does it depend on the size of the outsourcing decision?
 7. Are logistics outsourcing decisions centralized or decentralized?
 8. What were your principal reasons to outsource?
Cost, Productivity, Global reach, better customer service, labor problems, lack of competencies, none core to business?
 9. How much time did the decision take?
 10. What were the criteria for choosing outsourcing?
 11. What were the criteria for choosing outsourcing partner?
 12. Is your business global or domestic?
 13. Do you market to business or consumers?
 14. Are your customers lead-time sensitive?
 15. Do they require JIT delivery?
 16. Are your customers processes contingent to timely delivery of your products?
 17. Would you classify your main products as high or low value?
 18. And would you classify them as high or low in physical volume?
 19. Would you say that your products have complicated product-handling needs?
 20. Do your products have to satisfy detailed government regulations?
 21. Do your products have to be recycled?
 22. Would you say that your products are distribution intensive (i.e. is there a lot of value added in the distribution process, #of SKUs and order fill rates are critical)?
 23. What is the average number of orders processed by your facility/company per month?
-

24. Would you say that your company is keen on controlling processes or is it open to involving outside suppliers wherever possible?
25. Is your company entering new markets in terms of products or geography?
26. What is the growth rate of your industry?
27. What is your growth rate?
28. Do you take outsourcing decisions individually or with together with your business partners viz. suppliers and channel partners?
29. Do you share outsourced providers with your business partners or industry competitors?
30. Do you seek extra services from your logistics suppliers such as quality checks on receipt, selection of vendors, freight negotiations, product assortments or kit preparation etc.?
31. Do you source related components (i.e. part of one subassembly) from different suppliers?
32. Do you bid for contracts?
33. How frequently are the bids repeated?
34. Do you frequently change suppliers?
35. What percentage of your contracts are multi-year, rolling contracts?
36. Did your logistics service provider deliver on the promises made?
37. Are you satisfied with your relationship with your third party logistics service provider? (Scale 1(min) to 5(max))
38. Please rate the following in terms of importance to you (1-5)
 - a. Cost of outsourced service
 - b. Relationship and Commitment
 - c. Range of Service
 - d. Reputation of Supplier
 - e. Capability of supplier
39. Any other relevant information about
 - a. decision to outsource

Expectations from service providers.

4.3.1 List of Respondents

Companies:

1. Sequent
2. Hallmark Cards
3. Welchs
4. Calcomp
5. Sealedair
6. BellAtlantic
7. CVS
8. SAIC
9. Xomed
10. LaFarge, Canada
11. Netonecom
12. Lance
13. HP
14. Cummins
15. Topco
16. TrekBike
17. MobileComm
18. Master Building Products
19. Starbucks Coffee
20. ECC (English China Clays plc)

Third Party Logistics Service Providers:

1. New England Logistics
 2. Rollins Logistics
 3. Skyway
 4. APL Business Logistics
 5. Hellman International
 6. CH Robinson
 7. Penske Logistics
-

8. UPS World Wide Logistics
 9. DSC Logistics
 10. Exel Logistics
 11. Total Logistics Control
 12. USF Logistics
 13. Menlo Logistics
 14. Insite Logistics
 15. GATX Logistics
 16. Power Logistics
 17. M.S. Logistics
 18. NFI Interactive Logistics
-

Chapter 5

5 Analysis of Results

The responses from third party logistics service providers and companies were analyzed separately to understand the status of the third party marketing process and the needs of the customers. The objective in the analysis was to identify current practices with respect to the providers. On the other hand, the analysis of responses by companies was aimed at identifying the underlying relationships between their outsourcing status and the possible indicators of their propensity to outsource. While a larger sample might have allowed for a multiple regression analysis of the effect of potential indicators on the actual current status of logistics outsourcing, the analysis in this case had to be restricted to cross-tabulated responses along various individual predictors.

5.1 Discussion Of Responses Of Third Party Logistics Service Providers

5.1.1 Current Segmentation practices

An effective marketing strategy should proceed from segment identification, matching with own capabilities, strategic prioritization of certain segments, selection of customers within segment leading to a marketing and sales effort that is focused and linked to the prioritized segment. This would ideally make the marketing process more effective. Is this happening among 3PL's?

As Fig 5-1 depicts, a large majority of the respondents (78%) said that they do group their customers. However most of this grouping was based on either industry or geography. There were no groupings that could be linked to the propensity to utilization of third party services. The segmentation was based more on the convenience of the service provider rather than on any key benefit dimension to the customer. There were two respondents who did mention that the focus on industries such as automotive / retail had helped them develop specific services for their clients. The fact that almost a quarter of the respondents have no segmentation approach at all indicates that many 3PL providers do not distinguish between their customers in any significant manner.

And is the segmentation coordinated with the sales and marketing strategy of the company? The grouping and segmentation effort made by providers would be useful only when the marketing and selling effort is linked to it. The picture changes though as seen in Fig 5-2 with a majority (53%) of respondents stating that there is no link between their marketing / selling effort and the segmentation they use. Therefore the second question in the objectives of our study (Section 1.2 Practices. B.) is being answered in the negative by the respondents with no evident link between segmentation and selling effort. However industry focus in account selection was reported by some respondents indicating that some 3PL's are leveraging competencies in certain areas.

Some respondents deselect certain segments where they do not have special competencies. Industries in this category for some included, hazardous materials and home delivery or those requiring special capabilities such as a high IT focus. Others focused on certain shipper profiles like those having complicated logistics tasks, those having multiple sites or global markets, untapped inbound freight management needs, high technology products, etc. This tallies with the predictions of the Market characteristic model.

Five respondents listed size of client's business as a parameter for customer selection. One respondent focused by revenue potential targeting those potential clients offering revenue potential of not less than \$1 million p.a.. This respondent also deselects clients who have lower complexity or those who have to give up a larger portion of their spend by outsourcing. The latter ostensibly because they offered lower revenue potential but more likely because it would be a tougher sell with lower 'bang for the buck' in terms of sales efforts. Though this is consistent with a selective marketing approach to improve marketing effectiveness, revenue potential is a restrictive basis for segmentation. As the Market Characteristic model proposes, there could be various other parameters to determine potential. Also the assumption that lower revenue potential makes a client less attractive, ignores the possibility that margins could be higher because of lower volume leverage of the client.

History of outsourcing was also a factor mentioned by one respondent, which again tallies with the market characteristic model. Financial stability of customer,

matching of corporate management styles, aligning of interests and customers looking for long term relationships were also factors listed by respondents which support the hypothesis that relationship selling in third party logistics is an important strategic marketing style. Respondents realize the value of using such techniques and means to develop long term stability in customer relationships. Four respondents aim for segments where they can add value in terms of their service and skill sets. However in terms of industry focus, clearly automotive, chemical, retail, grocery, consumer goods, pharmaceuticals, food and beverages and electronics were most frequently quoted. This was also in line with the type of industries that the Market Characteristic model would consider ideally suited to 3PL services but it was surprising to note the relative lack of variety in terms of industries that 3PLs target.

On the other extreme, some respondents stated that they treat 'all customers equally' and do not target market intentionally because they prefer a 'wide gamut of industries'. This was generally true of 3PL's who have emerged from asset based parents and have a ready set of customers and have not faced the pressure of expanding their business by identifying new customers of their services. Interestingly only one respondent mentioned the strategic opportunities in electronic commerce where the products go to the customer instead of the customer coming to the product, though it might be a strategic issue for most 3PLs.

Where 3PL's group their customers what is the basis of the groupings? How do the 3PL's look at current and potential customers? Fig 5-3 shows the basis for the prioritization of groups. Just as with marketing and sales effort, a majority (61%) indicated no link between grouping customers and prioritizing groups. Those who did indicated industry (22%) combination of factors (11%) and extent of 3PL usage (6%) as the main basis for prioritization. Sales, geography or types of service were not independently considered as bases for prioritization by any respondent. Again this indicates that 3PL marketing needs to be more analytical, focused on groups which have benefit needs that can be supplied by appropriate service offerings. Only one 3PL stated that type of service, i.e. whether a specific individual component such as warehousing, transportation or the full suite of integrated supply chain management, is a factor in

prioritization of groups. This indicates that linking of service capabilities of the provider to selected customers is not a common analytical practice among the 3PL's surveyed.

5.1.2 Salesforce Organization and Compensation Basis

How is the segmentation linked to salesforce direction? Fig 5-4 shows the compensation structure and basis of commission where applicable. 11% of respondents do not pay any incentives to salesforce. Of the rest, 65% include commission and another 6% add a bonus on top of that whereas 11% pay no commission but do provide bonus. 6% declined response. The incentive structure does show a disinclination to use commissions as an aggressive sales motivation tool with a total of 28% of respondents having no commission payments. This is further evidenced by the fact that of the 65% paying commission, 17% have no stated basis for it, while 17% link it to new business, 11% to profitability of existing business and 21% on a combination of both. The lack of strong performance related incentivization in 3PL could indicate that the asset based nature of some of the 3PL's, for whom logistics is a small fraction of the business, does not motivate management to 'grow for growth' strategy.

The basis of sales force organization in Fig 5-5, shows geographic sales force organization, rather than service or benefit linked organization as the main basis with 47% of respondents having such an organization. This can be understood in the context that many of the 3PL's interviewed were national in scope and felt territorial sales focus as the most convenient way of managing. However service led salesforce organization, where specialists in comprehensive outsourcing project management are categorized separately from salesforce for smaller / simpler packages such as transportation, is a service differentiation strategy that has not been explored by the 3PL respondents, with only 6% stating this as a basis. 35% of respondents said that a combination of factors was taken into account. While industry was one of the important bases for customer segmentation, only an eighth of respondents organize sales force by industry showing a missing linkage.

5.1.3 Length Of The Sales Cycle and Size Of The Decision Making Unit

As fig 5-6 shows, responses ranged from a low of 1 month to a high of 18 months with the average falling around 9 months. This was clarified to respondents as the time from the initial sales contact to the decision to outsource. Though the average was 9 months as evidenced in the figure, the responses were distributed widely with a high standard deviation from the mean, implying that logistics outsourcing is either an easy or a difficult sell. This could be related to the size of the outsourcing contract and the responsiveness of the company to the idea of outsourcing.

The length of the decision making time (DMT) has important influences on the marketing process. [Dholakia et al]³³ point out “..longer DMT offers many more suppliers to influence the decision process. It could weaken the position of established or “in” suppliers and change the size and composition of the decision-making unit as well as the evoked set considered for a purchase decision. In addition, the longer the DMT, the greater the chance of internal change and external turbulence which could alter the purchase decision drastically”. Therefore it is imperative that in the instance of 3PL services, an effort is made to shorten the sales cycle. An example mentioned by one respondent was a special incentive in terms of reduced rates if signing up within a specified period, but it was specifically with respect to only transportation services. Comprehensive outsourcing might need other ways to reduce the decision time. Anticipating information needs and using a multi-point approach from the beginning could help. It is relevant to note that smaller firms have lower DMT than larger ones, which might also be considered during segmentation and focusing on relevant customers can improve the risk portfolio of a 3PL-service provider.

The size of the decision-making unit (DMU) is fairly small with most respondents giving a figure of five decision-makers or less having general representation from functional heads and top management. This supports the findings of [Johnston and Bonoma 1981]³⁴ that service acquisition decisions involved smaller DMU's than did equipment decisions. Smaller DMU's facilitate the decision making process and reduce bureaucratic complexity. Also as Dholakia et al have found smaller DMU's need lesser

information detail, which reduces the DMT. This supports the idea that better information and anticipation can reduce the DMT improving the sales prospect.

5.1.4 Implementation Time

There was a wide range in terms of implementation time for contracts, as shown in Fig 5-7, possibly given the nature of contracts and the wide variety of clients. In general as is to be expected comprehensive logistics outsourcing with a high level of integration took much longer than the simpler transportation based contracts. The distribution of the means is as in figure below. The average time taken by the respondents to set the outsourcing in place was 3.8 months. In terms of effectiveness, the length of implementation is dependent on many variables apart from the size and complexity of the contract. The extent of information gathering and preparation during the initial sales cycle can be a useful means to shorten the time span but anything less than 1.5 months may probably lead to unexpected problems.

5.1.5 Relationship Building

Responses that indicate the types of long term relationships being built are shown in the three charts in Figs 5-8, 5-9 and 5-10. As Fig 5-8 shows, most providers stated that long term customers, as represented by the percentage of customers who have had a relationship of 2 years or more, formed a significant part of their customer base. A majority of the respondents stated that all their customers have been with them longer than 2 years. This data is evidently suspect because it does not account for the customers taken on board in the past 2 years. While it may be possible that asset based customers might have taken on customers, who had earlier relationships in terms of utilizing other related services, this high percentage of customers does seem too sanguine and suspect, especially in an industry that is experiencing fast growth.

Fig 5-9 shows percentage of customer base that stopped an outsourcing relationship due to any of several reasons in the past year. Again there were a wide diversity of opinions with 7 respondents stating a confident figure of 2% or less while one indicated a figure of 30%. Since the average attrition rate was below 5%, it could be

inferred that building relationships is a strategic objective of most 3PLs. This is further evidenced by the responses to the issue of retention strategy. More than half, i.e. 11 respondents, mentioned that they have regular review exercises with their customers to determine achievement on mutually agreed performance parameters.

Fig 5-10 shows percentage of customer using the bid process. This question was originally intended to obtain responses of what percentage of customers used bidding on an annual basis as opposed to signing a long-term contract. The figure shows that most (about 40%) use regular bidding, while some (about a quarter) prefer to go on a long-term contract without any bidding at all. However, this response needs to be viewed with caution, as the question might have turned out to be ambiguous to some respondents who probably included customers obtained through an initial bidding process in the former category. Generally long-term relationships do not have market testing of contracts on a regular basis. One respondent mentioned that while "market testing was used earlier, lately customers have found that the incremental savings through market testing are smaller than the transition costs of changing suppliers" and therefore rely less on this method of keeping service costs in line. This trend would undoubtedly encourage long term relationships to emerge. One respondent mentioned that "3PL outsourcing is a marriage as opposed to transportation booking which is like dating". 3PL's need to encourage such transitions as that will enable to do longer term strategic planning of facility and business development.

How do the respondents approach the process of developing long term relationships and retaining customers? First, as stated earlier more than half of the respondents have clear identification of expectations of customer and a regular and structured process of reviewing performance on a scheduled basis. They attempt to add value by providing some types of information that was not available earlier for instance on specific cost tradeoffs. Second, they develop relationships between employees and customers by dedicating specific employees/teams to specific customers. Third they focus on quality and deliver on promises and try to exceed expectations, and permeate this attitude within their organization. Fourth they focus on getting quality people to maintain and enhance relationships. Some proactive respondents make it a practice to listen to their customers with focus groups. Some develop customer intimacy to increase

switching costs. Finally many develop gain-sharing programs to incentivize improvements in processes and deliver beyond customer expectations. Essentially focusing on the customer service requirements is the main aim of 3PL's who value relationship marketing. A very pertinent comment made by one respondent was that "we do not manage next month's service on last month's P and L".

Service differentiation is always a difficult goal in service industries, and especially so in an industry which delivers repetitive processes which are affected by so many variables. Differentiation of services is attempted by aiming for high quality and also broad spectrum of services. Global capabilities were often quoted as well as process orientation. Some use six sigma quality targets to improve their processes above competition. Others use a problem-solving attitude with a constant quest to refresh relationships with new ideas as a differentiating strategy. Developing specific capabilities such as helping reengineer customer networks, using information technology capabilities and leveraging financial resources of asset based parent are other differentiating strategies adopted. Good execution was also mentioned as a differentiating mechanism.

5.1.6 Clustering and Linkages

Effect of clusters and joint 3PL decisions are shown in Figs 5-11, 5-12 and 5-13. Two thirds (67%) of respondents in Fig 5-11 did not find joint 3PL decisions as prevalent. They did not notice customers deciding to share a single 3PL for transactional convenience across the value chain. This may be a market opportunity for certain sectors such as retail, garments or auto industry where the value chain is long and transactional convenience adds value to the outsourcing proposition. With reference to the discussion on horizontal supply chains described by Fine, companies with horizontal relationships with many component suppliers would seem logical candidates for extending such joint offers. Some respondents look at this as a trend that is coming in the future and this is evidenced by the balance third (i.e.33%) that see this happening.

A majority of respondents (61%) in Fig 5-12 did see clusters who share a similar service offering though. This is mainly organized on industry basis with competence of serving a set of customers with similar needs being leveraged by the service provider to

expand their client base in that industry or cluster. Chemical industries and retail / grocery industries seem prime candidates for such value addition. Bundling service as a repeatable service offering and reusable by competitors within an industry with similar requirements was stated as evidence by one respondent. "Multi-client solution for OEM's is a great opportunity for the future" according to one respondent.

Finally the linkage effect of getting additional customers by acquiring a particular customer was an effect noticed by 56% of the respondents in fig. 5-13. An excellent example was the one quoted by one respondent where acquiring a large contract with a computer manufacturer enabled the service provider to also acquire an associate of the manufacturer in an unrelated business, who had a transportation capacity sharing arrangement with the manufacturer. This kind of linkage was also noticed in cases where customer referrals because of good service brought in additional customers. People moving across companies and using the services of a provider and a service offering that they are familiar with also create linkages. One respondent acquired tier 1 and tier 2 suppliers and noticed the effect of cascading. He noticed that a JIT fulfillment center for a health care provider had vendors consign inventory to his company and they would supply as per need managing a longer supply chain.

Relationships and clusters are two facets of a long-term strategy that can strategically position a service provider as a market leader. From a system dynamics perspective, while exploiting these clusters and building on relationships would be slow initially, the exponential nature of word of mouth publicity and the successful growth of existing relationships can result in stronger penetration as well as wider dispersion of 3PL services.

5.1.7 Analysis of the Decision Making Unit

The composition of the decision-making unit (DMU) can give some indications of the purchase behavior that will be exhibited. Fig 5-14 shows the composition of the DMU as reported by the respondents.

While the majority of respondents had a joint committee based decision making process, it was interesting to find that 39% reported that the buy decision was either

solely or at some stage in the hand of one individual. This implies that the identification of the key decision maker forms an important part of the development of the value proposition and the ability to understand the individual's motivation for outsourcing can improve the delivered product.

Similarly the dynamics of relating to groups and to influence them to accept outsourcing, especially in cases where interests of some member's of the DMU may be affected, should be carefully considered in the 3PL marketing process.

5.1.8 Response to Third Party Logistics Outsourcing Idea

The primary method of obtaining 3PL customers among the respondents was divided between own effort and approaches by the customer (Fig 5-15), with a majority not coming through outward effort on the part of the 3PL but rather on the initiative of the customer. Many reported, though, that a combination of own effort and customer's approach was involved in the customer acquisition process. The high incidence of customer led interaction, shows that the selling of logistics services could benefit from better identification of target customers and approaches to them. It should expand the business faster and this tallies with the one of the central objectives of the thesis i.e. to develop a screen to identify potential clients of 3PL services. Referrals, either of customers, sister companies or through networks, were most often quoted as the basis of obtaining customers. A mention was also made of customers coming in through web site information search. Only very few mentioned a proactive strategy, either of a market driven salesforce or advertisement led awareness, as significant factors in obtaining customers. Those who did advertised in professional journals of industries that they targeted and a couple used direct mailers as an adjunct method, followed by telephonic follow-up.

In line with referrals every respondent mentioned references as an absolutely critical information need of customers. Usually telephonic contact was made but many respondents noted that site visits, sometimes multiple sites, was also an integral part of the decision process. Relationships with exiting customers and impact on decision time

are two important variables impacting on and impacted by referrals and site visits. Developing customer intimacy can assist this process further.

The validity of the technology adaptation life cycle model was tested with a series of surrogate adjectives designed to measure the reaction of customers to the outsourcing idea itself. A graphical representation of the response of individual respondents is shown in Fig. 5-16 where a smoothed line for each respondent represents the spread of customers in various categories. The typical bell shaped normal curve is strongly evident in the chart confirming the basic validity of the idea and its relevance to customer buyer behavior in 3PL marketing. While there are some cases where the majority of customers are either enthusiastic or interested, as evidenced by the shift in the peak of the curve to the left, the overall picture shows a clear spread of customers in the various categories. The low percentage of skeptics maybe because the industry, being in early growth stage still, is able to obtain customers without meeting much skepticism. Correlating this with the previous figure, since many of the respondents pointed out that customer led interaction was the primary vehicle of customer acquisition, it is a natural corollary to see high enthusiasm and interest with low skepticism. Therefore these responses support each other.

Most respondents agreed that a champion of outsourcing was evident in customer's organization and facilitated the process. Characteristics identified of such individuals were

Risk taking, open to change, highly enthusiastic, visionary, able to value the economics of outsourcing, having passion and charisma, creative, having high effectiveness and communication skills, having a keen understanding of strategic direction of their companies, proactive, see the added value for their internal customer, having a drive to excel, managing their business and not their career, willing to share and benchmark, having focus on ultimate consumer etc.

These characteristics again support the propositions in the Technology Adaptation Life Cycle. By identifying such individuals in the target organization, early in the sales cycle, the decision making time can be reduced and the process of facilitating the selling of the outsourcing idea can be improved. Most of these individuals are generally at Vice-

President level or above and come from most operations areas like Procurement, Logistics Materials etc. but also sometimes from the Finance and IT areas too. However traditional transportation executives are rarely likely to have such visionary ideas according to some respondents. This is because transportation executives look at outsourcing as a threat to the rationale for their existence and are challenged by the justification of their own value addition when an external party can do the process more efficiently. To assume therefore that change towards outsourcing logistics activities can be initiated by the transportation function is not in line with exhibited behavior.

5.1.9 Mid Size Segment Focus

Finally the responses of 3PLs on the percentage of their customers who were in the mid sized segment is graphically represented in Fig 5-17. A majority of customers reported that the mid-sized segment accounted for less than 60% of their customers. Many mentioned that they do not rely on smaller customers at all, because their revenue potential is not very attractive. Therefore our hypothesis that the mid-sized segment is under addressed is still true, though the assumption of higher profitability and revenue potential is not confirmed yet.

5.1.10 Customer Characteristics

While some respondents did not see anything unique among their customers, many gave further evidence of the market characteristic model. They found that many customers had high value, short life cycle products, that their environments were in a constant state of flux, face a dramatic change in paradigm, have acquired new companies or been recently acquired or have a change in supply chain strategy. One respondent put it very aptly, almost as if reconfirming the validity of the argument advanced in the Market Characteristics Model discussed earlier. He said, “ every customer that outsources, has something happening with his company. Either his company is growing fast, losing market share, not hitting financial targets, is buying or selling companies or has some reason for urgency”. Most of 3PL customers have a need for flexibility because of their chaotic environment. Many have new products, are entering new markets, setting up new channels or addressing new geographic areas. Some of their logistics

requirements are uniquely different even with competitors within the same industry. Most have a desire to tightly manage and focus on logistics and do not have or are disinclined to have the capital and intellectual resources to achieve that.

5.1.11 Drivers of outsourcing

Apart from the general reasons given by their customers for seeking outsourcing, of reducing costs and capital requirements, improving customer service and reliability, reducing inefficiencies, cycle times and inventory requirements, some other reasons for outsourcing as per their customers were also put forth by respondents. These were: to obtain currently unavailable expertise and skill sets within the enterprise to meet competitive pressures from competitors in the industry, to avail of a wide range of solutions, respond to the pressures of globalization, obtain accurate and better information, improve flexibility and focus on core business and improve market presence and delivery process

Stephen Shaw³⁵ points out that identifying which customers to value most is as important as the traditional marketing driver of understanding what customers value most. We could expand Shaw's observation at the preliminary market identification stage by determining which prospective customers would be most valuable as third party logistics services clients. This was the *raison d'être* of the market characteristic model described in Section 3.5. The object was to develop a screen to better identify potentially more valuable clients. In terms of a simple Pareto structure, to identify the prospective (or existing) customers who comprise only 10%-20% of the customer base while accounting for 75%-80% of the business, makes the segmentation model and marketing effort much more focused. This is relatively easy with the existing customer base. However to expand it to include 'potential' customers needs deeper understanding of the drivers of the outsourcing process. This understanding can help in developing relevant value propositions for different market segments. These issues are explored in the next section, which analyzes the responses of prospective and existing customers of 3PL services, to the questionnaire.

5.2 Responses by corporations

The questions to corporations were essentially directed at identifying the characteristics of companies that outsource and those that do not. Analysis is based on cross tabulations of the responses correlating current outsourcing status with each indicator separately.

5.2.1 Revenue range and outsourcing status

Interestingly as Fig 5-18 shows, mid sized businesses are more likely to be outsourcing than their larger counterparts. Non mid sized companies are equally divided at 15% each, between existing or potential outsourcers vs. non-out-sourcers. On the contrary among mid sized companies, who responded, 45% either currently outsource or plan to outsource vs. 25% who do not. This indicates that segmenting the market on size of revenues of the target customer, is certainly a valid basis for segmentation that can uncover hidden opportunities. From Section 5.1.1 and 5.1.9, it is evident that 3PLs are not aware of the higher likelihood of outsourcing among mid size businesses, as according to some they consciously deselect this category. This shows a mismatch between customer profiles and segmentation strategies of 3PL's. Midsize businesses should be an easier sell since they lack asset investments, and the evidence here supports this.

5.2.2 Outsourcing Other functions vs. Outsourcing Logistics

Is outsourcing other functions an indicator of higher propensity to outsource logistics? It was hypothesized in the market characteristic model that outsourcing other functions would be a key indicator to whether a company is or would be likely to outsource logistics. From Fig 5-19, we can draw the following conclusions:

- a. An overall majority i.e. 80%, outsource at least one function implying that outsourcing is increasingly taking root in the business environment as an option to doing it in-house. The openness to outsource augurs well as a positive indicator for future growth of 3PL services.
-

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- b. If a company outsources or plans to outsource only one function, then logistics is much more likely (35%) than others (20%) to be the case. This indicates that the potential for outsourcing business processes is more in logistics than in others. Why should this be so? Possibly because transportation was mostly outsourced earlier and the possibility of extending that to logistics is easier than taking an entire function like IT out to external suppliers.
 - c. Among those who outsource, a majority i.e. 60% outsources logistics.
 - d. A significant portion i.e. 25% outsource more than one function, opening the possibility of 3PL's to expand into integrative outsourcing that provides physical as well as informational support to the business processes in an organization. What this implies is that 3PL's need to 'think outside the box' and expand their range of services to include allied functions such as information management. The Council of Logistics Management definition of logistics³⁶ alludes to the flow of goods as well as information, and if 3PL manage the flow of goods, then the information flow should be a logical extension. Special niches that could also be addressed maybe supply chain optimization through software that address it; Electronic Data Interchange integrated with Distribution Resource Planning and Manufacturing Resource Planning. Undoubtedly there is enormous potential for growth here.

5.2.3 Distribution intensity of products and Logistics Outsourcing

As was hypothesized, distribution intensity of the product (implying that there is a significant amount of value added in the distribution process, number of SKU's are large, order fill rates are critical etc.), turns out to be a significant indicator of logistics outsourcing. Generally industries like apparel, beverages etc. are examples of highly distribution intensive product-markets. In the responses in fig. 5-20, exactly half of the respondents fell in the category of products having high distribution intensity and who outsource logistics, while on the contrary, a quarter of the respondents do not outsource logistics in spite of their products being highly distribution intensive. Though the magnitude of difference is sizeable to say with confidence that products with high distribution intensity will more than likely be outsourced, the high figure of non-

outsourcers indicates that the core competency argument i.e. do not outsource a process that is critical, seems to be an important factor playing here. Products that are low on distribution intensity did not indicate significantly (15% to 10%), an extra propensity to outsource, as was evident in products scoring high on this category.

5.2.4 Product Weight and Dimensional Characteristics as Propensity Indicators

The argument advanced in Chapter 3 was that products having a very high value to volume ratio or very low, would be better candidates for outsourcing because of product handling reasons. [see section 3.5.1]. As evidenced in fig. 5-21, both high value and high volume products have a much higher incidence of outsourcing. However while the difference between high volume products and low volume products is clearly visible, the difference between high value and low value products is not so significant with both having equally higher likelihood of being outsourced. The data therefore seems to suggest that volume is a better indicator for propensity of outsourcing than value.

5.2.5 Centralization of Logistics and its relationship to Outsourcing Logistics

Fig. 5-22, though a little cluttered, does highlight the following:

- (a.) That generally unlike other support functions, there is a significant amount of cases where logistics is both centralized and decentralized (36%), indicating that a distinction between the operational / tactical and the strategic is made by many companies when it comes to logistics. A possible conclusion that can be made is that some aspects of logistics that relate to operational flexibility are generally delegated forward in the organization, while decisions that impact on the strategy of the company involving decision makers at higher levels are retained at head quarters. This could be an indicator of where 3PL marketing/sales activities should be directed on the nature of the proposed service and its relationship to the client.
 - (b.) That companies with centralized logistics are much less likely to outsource (36% do not vs. 7% who do), than the contra.
-

(c.) That, decentralized companies are much more likely candidates for outsourcing (21% do vs. 0% who don't). Decentralization effectively means that with smaller components of the operations, the strategic risk in outsourcing is minimal and therefore the openness to outsource is higher. It is fair to conclude therefore that 3PL's need to be a lot more careful and sensitive when selling to companies who have centralized their logistics vis-à-vis those that have not.

5.2.6 Divisionalization and Outsourcing

Consistent with decentralization, divisionalized companies have much more incidence of outsourcing (55%) compared to doing it in house (25%), as shown in Fig. 5-23. This difference is much more sizeable than the difference between outsourcers and non-outsourcers among non-divisionalized companies (i.e. 15% and 5% respectively). This shows that the difficulty of satisfying different constituencies in a non-divisionalized company makes it difficult for outsourcing logistics. Also the potential for outsourcing among divisionalized companies is still large with a quarter of the respondents not yet outsourcers though divisionalized.

5.2.7 Entry Into New Markets as a Propensity Indicator

Respondents were asked whether their companies were entering new geographic markets or launching new products in the market. As espoused in the model, the hypothesis was that growth needs resources, which companies would like to conserve at the initial stages and that flexibility would be paramount in the early stages of expansion. Consequently it was proposed that companies in such a stage would be more likely to outsource their logistics. This is strongly reinforced by the data in Fig. 5-24. A large majority i.e. 60% of the respondents who have new product-markets outsource their logistics vis-à-vis 5% who do not. This supports the conclusion that entering new product-markets brings challenges in logistical support that are best obtained through external service providers.

5.2.8 Need for Control of Processes and Outsourcing

Fig 5-25 shows an interesting counter intuitive result. The original hypothesis was that companies who do not have a 'must-do-it--inside' culture, who are not inclined to have complete control over every aspect of their logistics, are more likely to outsource vis-à-vis the contra. However from the responses, it is evident that while companies that have a need to control their processes are more inclined *to outsource* than do it themselves, there is no difference in outsourcing between companies that have a more open attitude towards control over their processes.

A possible reason for this could be that companies find controlling external service providers and getting them to meet target objectives is easier than doing it in-house. Also the focus in outsourcing would be more in controlling the process itself, which might be an additional reason for this observation.

5.2.9 Consumer Markets versus Business Markets

As Fig. 5-26 shows, outsourcing is more prevalent among companies who service businesses rather than those who serve only consumers. In fact the latter are less likely to outsource, which is again contrary to what would be expected. However this tallies with the general magnitude difference between logistics among businesses as compared to logistics to consumers. This is supported by estimates of online e-commerce where business to business deliveries are tens of times the volume of business to consumer though the latter is growing pretty fast. Consequently there seems larger potential to outsource logistics in the business-to-business market compared to business-to-consumer market at the moment.

5.2.10 Factors of Importance to Companies

Respondents were asked to rate the following factors in importance for them while evaluating a logistics service provider viz.

Cost, Relationship and Commitment, Range of Services, Reputation and Capability.

Since the responses were on a rating scale of 1 (least important) to 5 (most important), and not ranking in order of importance, Fig. 5-27 shows a majority of responses on the right side of the chart i.e. skewed toward the most important. This indicates the perceived importance of all the five factors. However cost and relationship scored the most in terms of most important criteria. While cost was an expected parameter, it is interesting to note that respondents rate relationship higher than capability, reputation and range. This should energize 3PL's to focus on relationship marketing as much as possible. This also supports the projections stated in Chapter 3. A possible mechanism could be to develop the role, advocated by Gronroos of part-time marketers in the company where every employee in the organization who interfaces with the customers has a role to play in developing the relationship further.

5.2.11 Outsourcing and Growth Rate

Fig. 5-28 contradicts a proposal made on the market characteristic model, which was that companies growing faster are more likely to outsource logistics. In fact the sample responses averaged on growth rate indicates the very opposite. While the average annual growth rate of outsourcers was 6%, the average annual growth rate of non-outsourcers was higher at 11%. It is therefore fair to conclude that the rate at which a company is growing is unlikely to be a significant indicator of the outsourcing status or proclivity of the company. In this case, there is a distinction between growth rate and the introduction of new products or the entry into new geographic markets. In Sec. 5.2.7, we saw that those parameters are positive predictors of outsourcing unlike the growth rate.

5.2.12 Globalization and Outsourcing

As predicted in our hypothesis, globalized businesses, with their special needs of geographic network and international competencies, are more likely outsourcers than companies addressing the domestic market only. Exactly half the respondents in Fig. 5-29 had global businesses and also outsourced compared to 30% who had global markets but do not outsource. Compared to that domestic businesses were equally split at 10% each between those who outsource and those that do not. While the evidence supports the

conclusion, it is interesting to note that 30% of the companies do not outsource even though they have global businesses. Global businesses are useful targets in 3PL-customer selection.

5.2.13 Lead Time Sensitivity, Just-in-Time requirement and Contingency of Customer's Processes as Indicators of Outsourcing

The three figures viz. 5-30, 5-31 and 5-32 prove the basic rationale of outsourcing logistics i.e. to gain competitive advantage through the leveraging of the core competency of focused logistics service providers, to meet demanding customer needs. As evident in Fig.5-30 more companies (i.e. 60%), who have customers that are lead-time sensitive, outsource than not (i.e. 35%). Also as a contra indicator, companies who do not have lead-time sensitive customers are more likely not to outsource (5%), than to outsource (nil).

Similarly in Fig. 5-31, where at least some customers of the surveyed companies need Just-in-Time delivery, 45% outsource logistics compared to 15% who do not. Again reinforcing the previous chart, where JIT is not required by their customers, companies are more likely not to outsource (25%) than to outsource (15%).

Finally as evident in Fig. 5-32, where the processes in their customer's organization are contingent on timely and accurate delivery from the respondent company, a majority 55% outsource logistics compared to 25% who do not. For those without contingent processes, the same conclusion is reiterated as the previous two figures, with a majority not outsourcing 15% compared to 5% that do.

These three charts strongly support the conclusion, mutually reinforcing each other, that the outsourcing of logistics is strongly influenced by the requirements of the customer. This generates two ideas for the benefit of 3PL service providers. First is to improve the customer selection process, they should focus on suppliers to industries who have a critical need for JIT delivery, are Lead Time sensitive and have contingent processes. A typical example is a tire manufacturer who mounts tires on rims and delivers to car assemblers within a 2 hours time span. The second conclusion is that 3PL providers

should actively encourage, through advertising and communication, lead time sensitivity among end customers to create a pull for their services among their direct customers.

Chapter 6

6 Summary

This exploratory research has identified some clear characteristics of the marketing and market segmentation strategies of a sample of third party logistics service providers, and made an initial attempt to develop a matrix of characteristics to determine the likelihood of the usage of 3PL services by target customers.

From this exploratory research the following conclusions can be derived

- (1) That there is a need for better segmentation techniques by 3PL providers to make their sales and marketing process more effective and for future product development.
- (2) That there is a wide variety among 3PL providers, some of whom have an analytical and logical approach to selection of accounts and some who do not.
- (3) That there are certain parameters that help indicate the likelihood of a particular customer becoming a client for third party logistics services.
- (4) That relationship marketing is a significant area for future growth of third party relationships, and organizational design elements need to be considered to implement such an approach across the service providers organization.
- (5) That networked purchasing model, while not widely prevalent in the 3PL industry now, is a potential way to expand the intensity of usage of such services in an industry or market group.

6.1 Comparison with Models Proposed in Chapter 3

In Chapter 3 we reviewed existing models for understanding the purchase behavior in logistics outsourcing and proposed some new ones adapted from other industries and buying situations. In Chapter 5 we analyzed the situation among 3PLs and among potential clients of these services, to see the relevance and validity of the models proposed earlier. In the light of the findings, we now need to review our model to determine the changes that we need to make to improve its utility as a tool for predicting logistics outsourcing propensity.

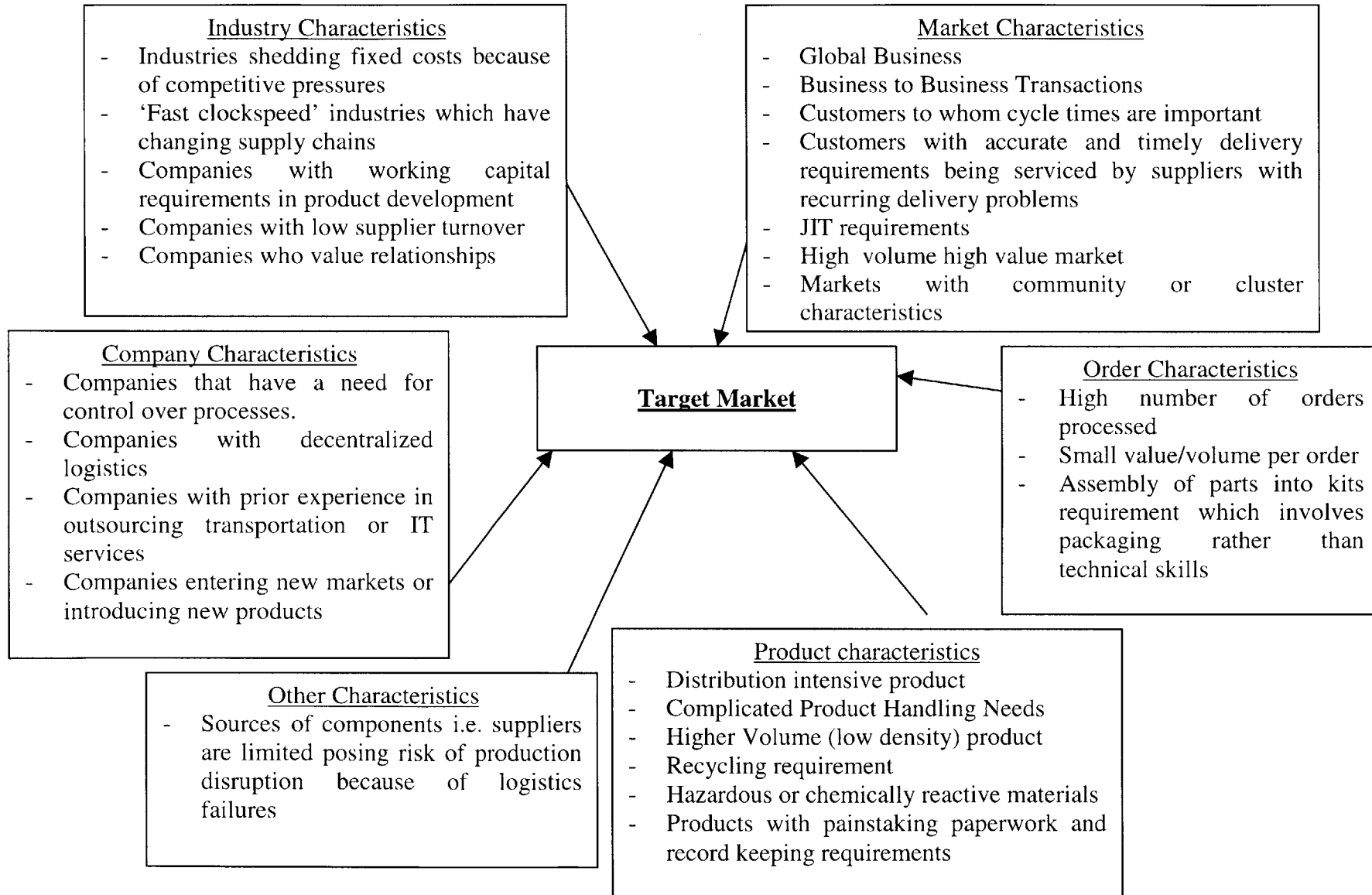
Looking back at Sec. 3.3.1, some of the characteristics of a proposed framework that was suggested were applicability across industries and product-markets, and a means of determining relative attractiveness to rate the value of potential clients. We see from the responses that there is a consistency across different industries and company sizes in the responses. Most of the characteristics tested elicited a clear direction be it positive or negative. We can say therefore that the framework that was developed is fairly applicable across industries, product-markets and business size. Similarly through the cross-tabulations, we were able to identify significant positive and negative characteristics that can help identify potential 3PL customers. If percentage of responses can be used as a gauge, a number of the characteristics were relatively stronger indicators than others showing their relative importance as predictors of outsourcing behavior. For instance, factors which were strongly indicative of outsourcing propensity were distribution intensive products, high volume (i.e. low density) products, client entering new product or geographic markets, companies having more business to business transactions, global businesses and businesses with high lead time sensitivity. Weaker characteristics were high value product and companies with need for controlling processes. Consequent to the analysis the Market Characteristics model proposed has to be modified slightly in view of the findings. A modified version is depicted in Fig.6-1.

Our analysis of the benefit segmentation models as related to current practices also identified ways to address customer's needs and induce them to migrate from non-user to outsourcer status. We found evidence of a pattern similar to the Technology Adaptation Life Cycle model among clients of 3PL services. While some 3PLs had more enthusiastic clients than skeptical ones skewing the distribution from the bell shape, a majority of 3PL's reported a spread along a typical Gaussian distribution. This insight should induce 3PL's to fine tune their sales and marketing efforts at innovators and early adapters to build up a base of successful references, which as we also discovered is a *sine qua non* for selling logistics outsourcing. In addition, the characteristics of 'outsourcing champions' that was identified should be used in conjunction with the above insight to develop effective 3PL sales pitch.

Evidence was also found of relationships in logistics outsourcing. The difference between developing business through an existing relationship than by canvassing new

Fig.6-1

Revised Market Characteristic Model



accounts was clearly evident among 3PL responses. This was reinforced by companies whose responses indicated that building relationships with their providers was only second in importance to cost. These facts suggest that 3PL's need to refocus on developing customer relationships by expanding on the concept of part-time-marketers discussed earlier [Section 3.7 pg.48].

Clustering or networked purchasing, while not completely surfacing yet, is a possible trend for the future. Developing industry specific solutions and marketing them across tiered suppliers is a potential opportunity. While the evidence in practice is absent, a logical case for its utility as a value addition and marketing tool can be made.

6.2 The 3PL Conundrum

Some of the important findings from the supplier's side that were found were a lack of segmentation based on customer needs and a lack of integration between the segmentation and the selling effort. While this industry needs to be highly customer focused as a service industry, the understanding of customers drivers does not seem to be linked to the sales and marketing approach very strongly, except in cases where the company has a strong industry focus. Where there was an industry focus, there was a relative lack of diversity in the industries addressed with some industries such as automotive, grocery and food being high on the list. Related to the above there was limited prioritization of groups which indicates that the sales and marketing process for 3PL services has scope for improvement in effectiveness and productivity by narrowing the focus. These findings were reinforced with the response indicating that a majority of 3PL customers initiated contact with the provider than the vice versa showing a reactive selling process than an outwardly focused process. Referrals were a key basis for obtaining customers. Essentially these facts imply that the industry has to revisit the sales and marketing practices and improve their effectiveness.

Sales force incentives could be used more as a tool to create growth opportunities among 3PLs. Current practice does not indicate a strong linkage between incentivization and strategic thrust, which again induces inefficiencies in the selling process. Efforts to reduce the sales cycle could also help improve the selling process by reducing the

chances of competitive turbulence and 'Dutch auction' type price gouging that reduces industry profitability. Sales cycle time reduction depends on understanding the information needs of the members of the decision making unit and working in advance to have the information ready along with an understanding of the motivations and drivers of individual members of the DMU.

Unlike segmentation practices, 3PL's do have a consistent and detailed customer retention strategy that seems to keep customer turnover at a very low average figure of below 5%. This includes clear specification of performance objectives and regular reviews of achievement levels among a host of other enablers detailed in Sec.5.1.5. While we did not expect a large percentage of customers to have had a relationship with the 3PL for longer than 2 years given the growing nature of the business, the survey data indicated that around 70% of the 3PL's had 80% or more of their customers in the longer than 2 years range. This was inconsistent with the accepted industry growth figure of 20% p.a. (which implies that at least 30% of the customer base should be older than 2 years) unless most of the growth came from existing accounts. If the latter is true than the potential for 3PL growth is possible even more than currently suggested.

The survey also found that the role of one individual in the decision making process is very critical with 39% of responses indicating that at one stage the outsourcing decision rested on one individual. Identification of the key decision-maker is therefore a critical success factor in the sales of 3PL services. Also there were some key characteristics of the 'outsourcing champion' in organizations listed in Sec 5.1.8 that should help 3PL's better identify facilitators within client organizations who can drive the idea. This finding was an echo of the innovator and early adopter class of individuals proposed in the TALC model. 3PL respondents unanimously agreed that references were an unavoidable part of the sales process. Tying it in with the above, the value of identifying an 'outsourcing champion' could extend beyond the client organization to facilitate the process of obtaining new clients too.

The final aspect of the 3PL sales process is the contrast between the potential clients identified by 3PL's and the actual ratio of outsourcing in different business sizes. While a majority of 3PL indicated that mid-sized companies accounted for less than 60% of their

customers, the companies responding to the survey indicated that among mid sized companies the likelihood of outsourcing is almost double to that of not outsourcing while this difference did not exist among larger companies.

Apart from the normal issues of reducing costs, inefficiencies and improving customer service, a few other drivers of outsourcing were identified by 3PLs. Reviewing section 5.1.11 shows a clear linkage between some of these drivers of outsourcing. The obvious pressures of competition and globalization drives companies to obtain specialized skill sets and expertise from outside providers. The lesson from this is that if 3PL's replace the logistics function within an organization, it is not enough. It is essential for them to do it better in a measurable way that creates additional value in terms of service advantages, scope of services, cost and increased flexibility that could not have been achieved internally within the organization.

Overall, it is evident from this study that there are certain gaps between how 3PL's perceive their market and its needs and the characteristics of this market as evident from the responses of customers and non-customers of these services. The opportunity for 3PL's to study this gap and fine tune their sales and marketing process can yield hidden and yet unrealized gains that can facilitate further growth.

6.3 Suggestions for Future Research

The first suggestion is that this research should be expanded to a full-scale project covering all major third party logistics providers, all regional and niche players and new entrants. It should also cover a wider variety of industries and companies to validate the conclusions derived from the present sample. Secondly, separate focus groups should be organized with representatives from customers of such services and the suppliers to get qualitative inputs on the needs. Such an exercise would define the current envelope of performance and identify areas where the possibility of expansion is available. Also some quantitative measures should be used in subsequent research to validate conclusions with regression analysis. This would help determine relative importance of contributing propensity indicators among various parameters identified.

Other areas that should be investigated further are the effect of relationships on the transaction economies in outsourcing to see whether there is a quantifiable positive spin-off from developing closer relationships as was postulated here. One respondent had stated that many of his customers have stopped taking bids for market testing rates periodically, because over time they have realized that the switching costs of changing suppliers is significantly higher than the incremental savings in rates. Is this assertion valid? It might have an impact on bidding practices as related to relationships and is worth investigating. There are also economies through 'repetitive transactions' due to the learning curve effect which could be investigated for quantifying the benefits of relationships.

Each of the four models can be explored in detail through a separate study. Questions that can be raised for networked or clustered purchasing behavior as applicable to logistics outsourcing could be: How are clusters formed? What encourages clustered purchasing? How can 3PL's take advantage of this approach? Similarly research could also address issues such as: What encourages relationships to develop in 3PL outsourcing? What prevents relationships from developing? Outsourcing failure stories can be investigated in detail for this.

Another tack could be to turn the argument of this thesis on its head and try to identify indicators that indicate propensity *not to* outsource logistics. For instance, we have not investigated cultural barriers or the effect of the problems of IT integration as a barrier to outsourcing. Are there other indicators that determine whether there will be a negative reaction to the outsourcing idea?

Segmentation practices in logistics outsourcing could be compared to those in other similar service industries to identify implementable best practices. And also the 3PL industry could benefit by studying the linkages between segmentation and sales promotion techniques in other service industries.

Finally the decision making unit (DMU), with specific reference to logistics outsourcing decisions, could be investigated in detail to understand the influences which aid and abet the process of successful outsourcing decisions. How is the consensus generated? What information needs are explored? Investigating this can help identify ways in which the information collection and dissemination process can be speeded up which will reduce the decision making time (DMT). As we have discussed earlier in Sec. 5.1.3, the short decision time can make a significant impact on the competitive dynamics in 3PL selling. It would be interesting to investigate this and see the effect on reducing decision-making time on the decision to outsource.

6.4 The Final Knot

So what does one make of it all? It is rare chance to find a fairly large industry in its growth phase where an opportunity of developing the value proposition by improving the selling and marketing process clearly exists. Through this research the author believes, that the initial contours of a redefinition of the process of taking 3PL services to market has been shaped. Further research should help clarify this and enable this industry which has great potential in the future to grow with the advent of e-commerce and the making of virtual corporations. It will be interesting to see how the specialized skill sets of third party logistics service providers is leveraged to stimulate the continued growth of this industry and how they are linked to customer segmentation strategies.

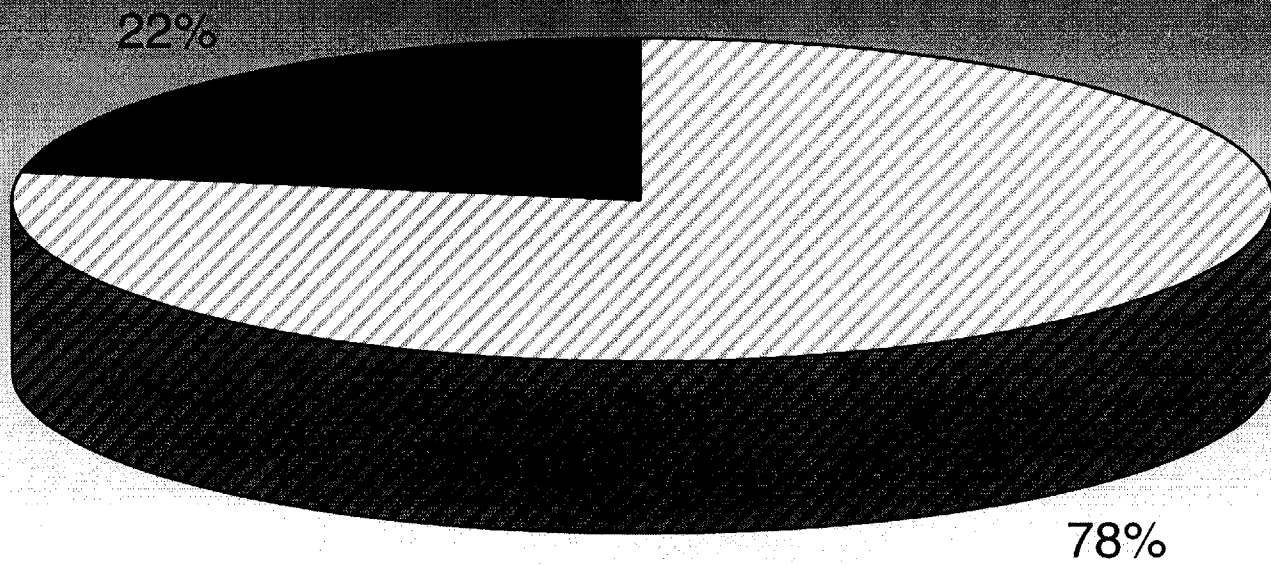
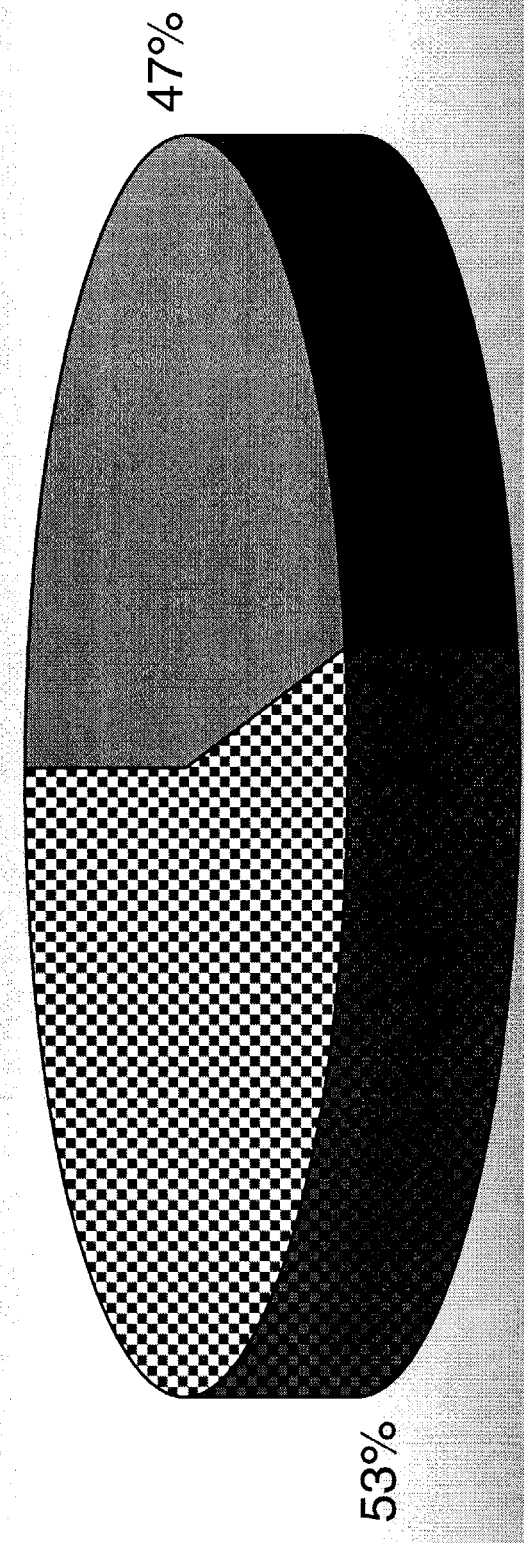


Fig.5-1

▣ Yes ■ No

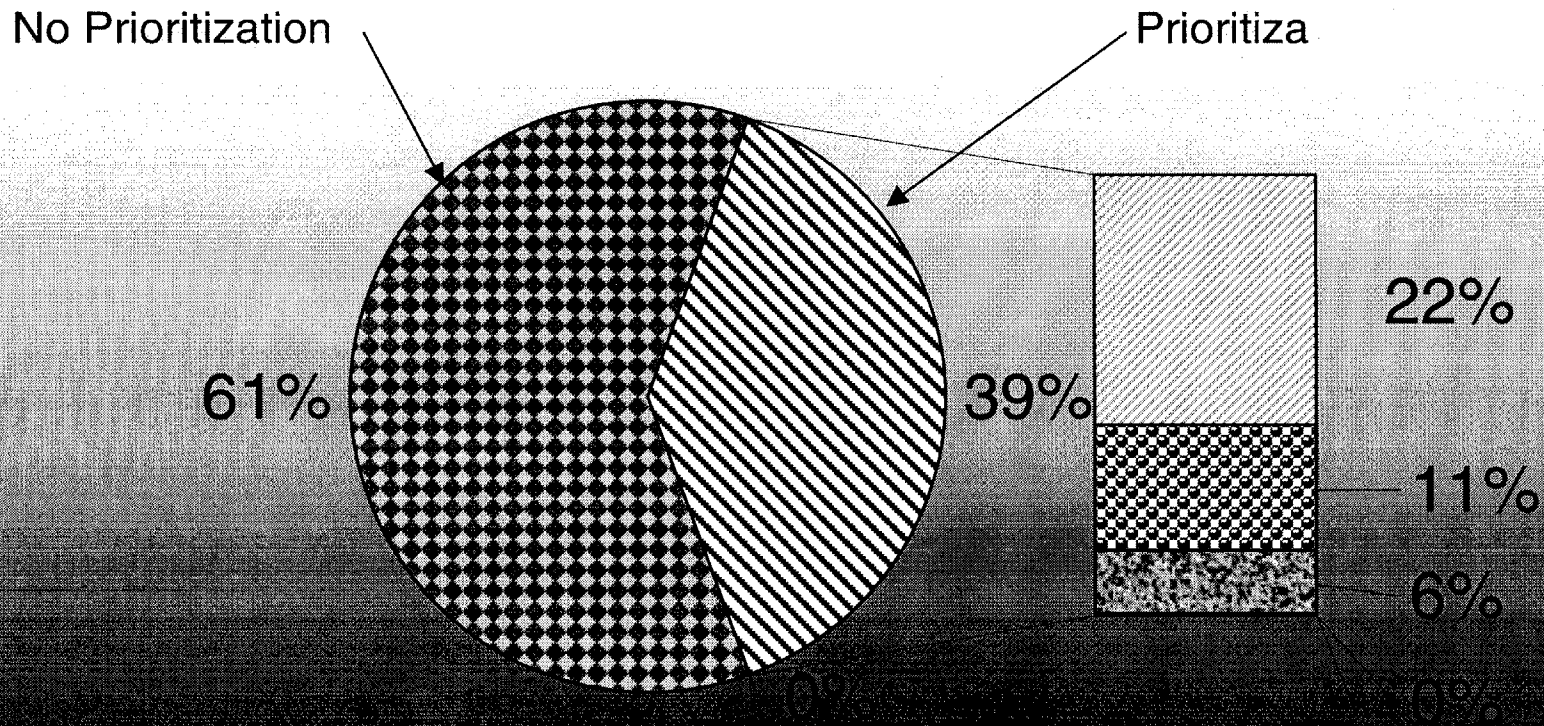
MARKETING & SALES EFFORTS Marketing & Sales Effort?



■ Yes ■ No

Fig 5.2

Basis for Prioritization of Groups



Industry
 Combination
 Extent of 3PL usage
 Sales
 Geography
 Type of Service
 other
 No Prioritization

Compensation Structure and Commission Basis

Compensation Basis

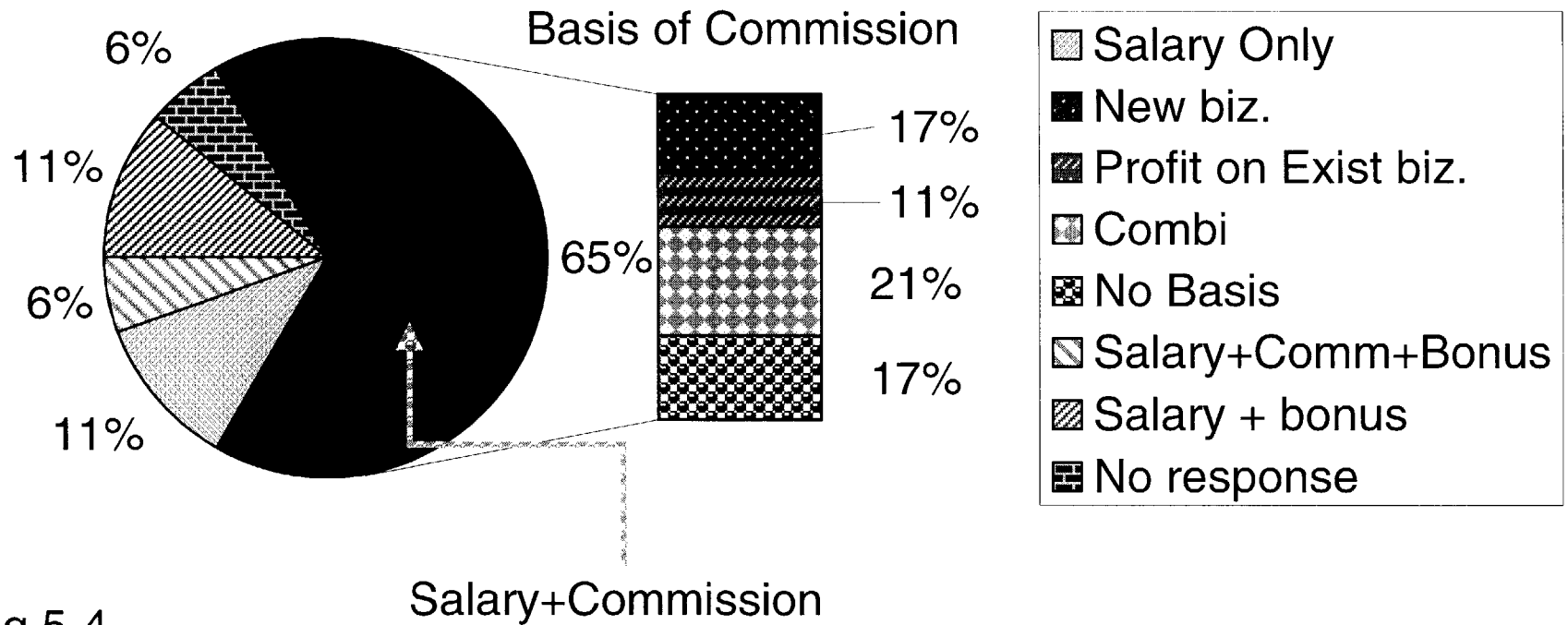


Fig.5-4

Bases of sales force organization

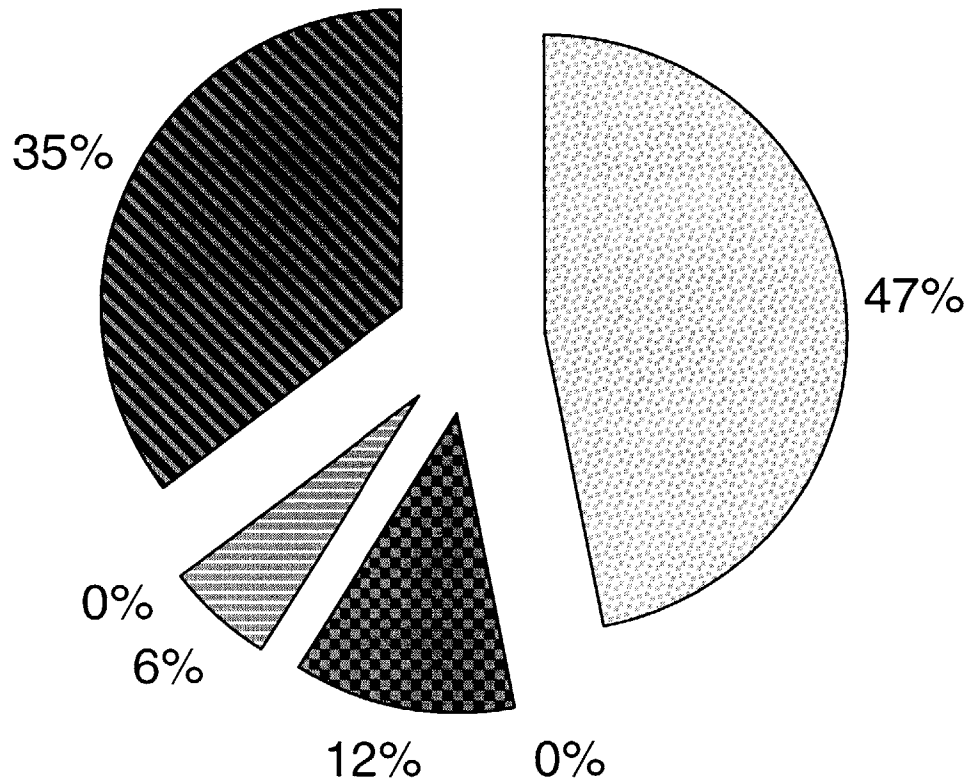


Fig.5-5



Length of Sales Cycle

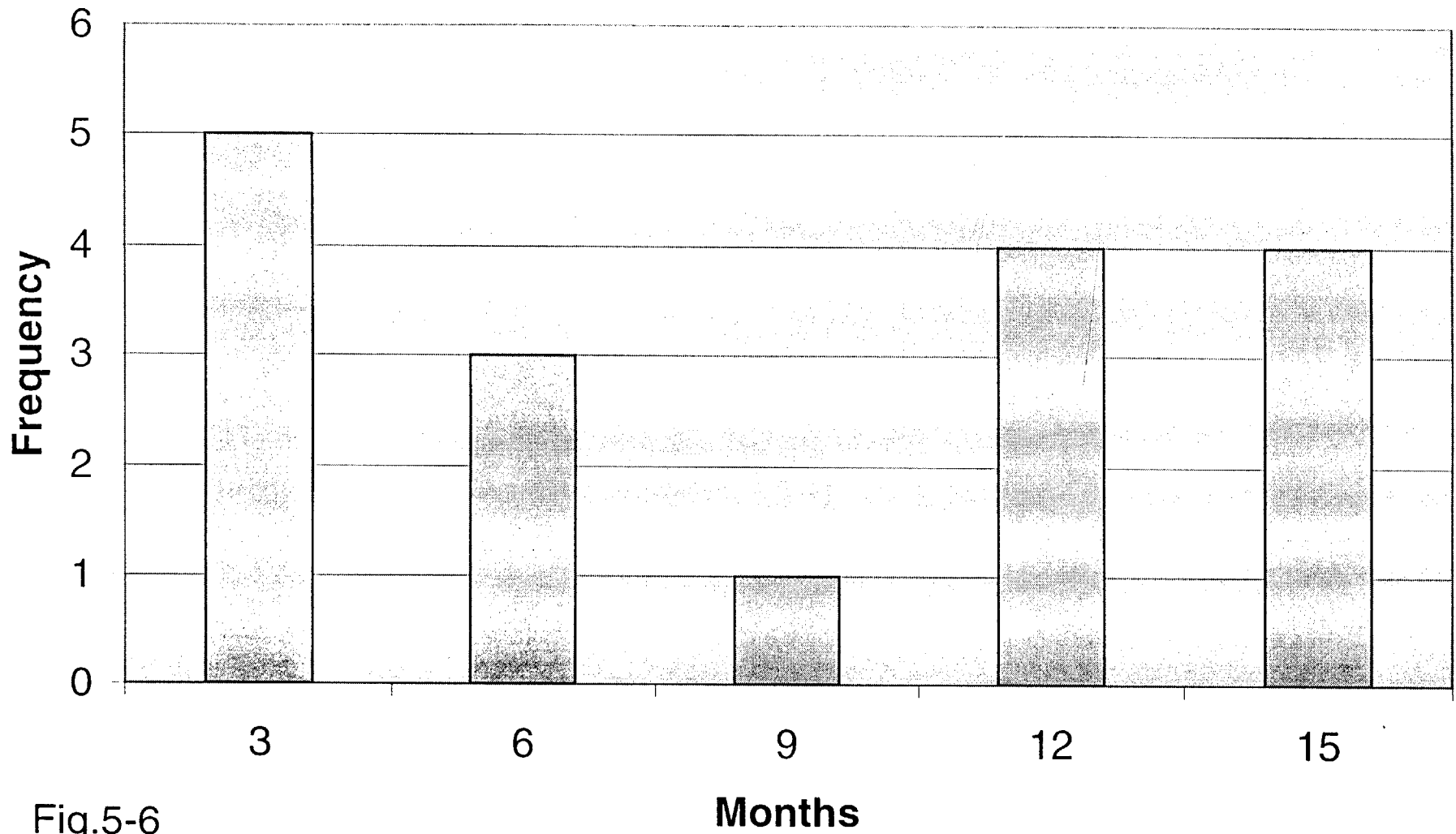


Fig.5-6

Implementation Time

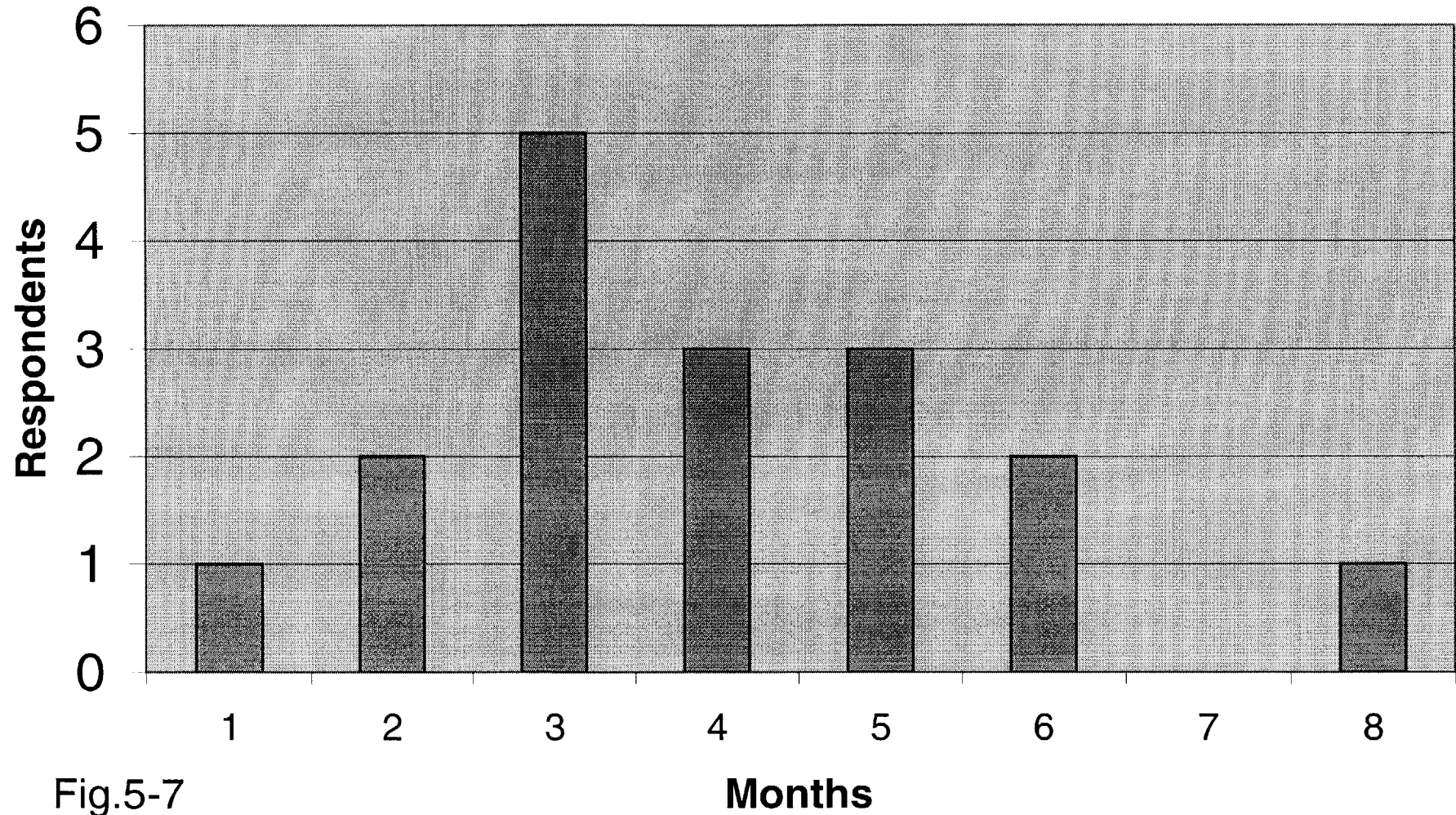
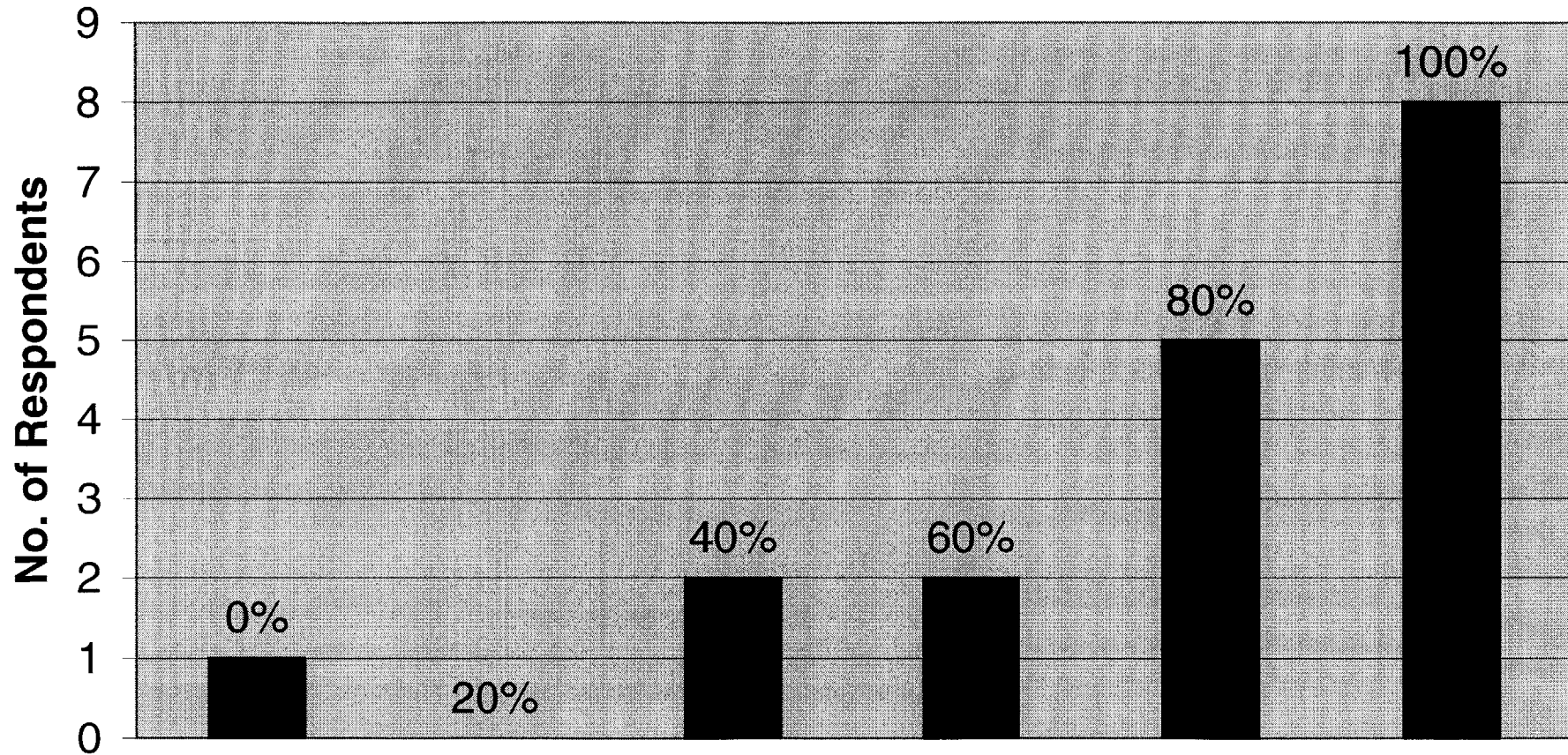


Fig.5-7

Percentage of Long-Term Customers



%age of total customer population of respondent with relationship over 2 yrs

Fig.5-8

Customer Turnover

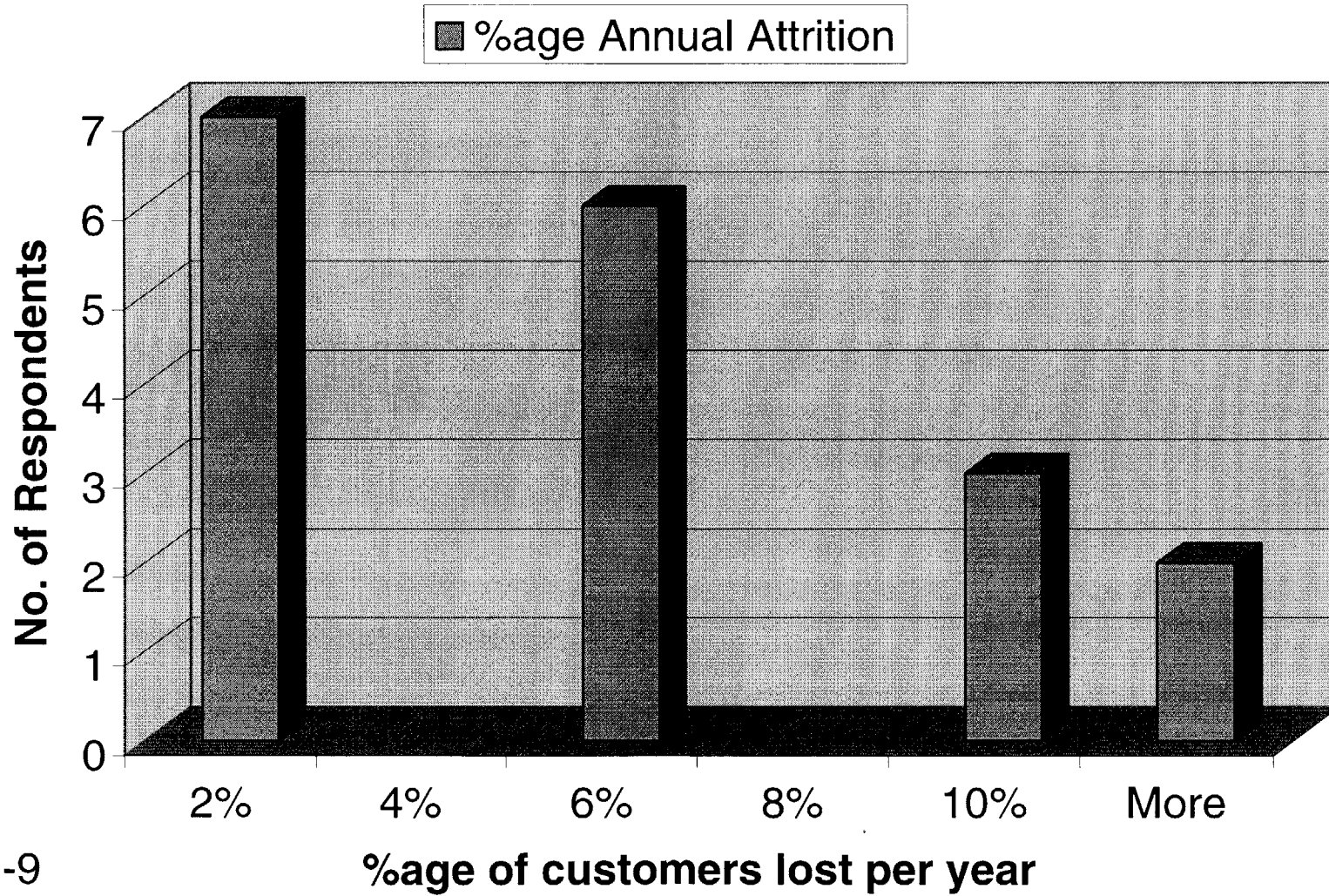


Fig.5-9

Percentage of customers using bidding

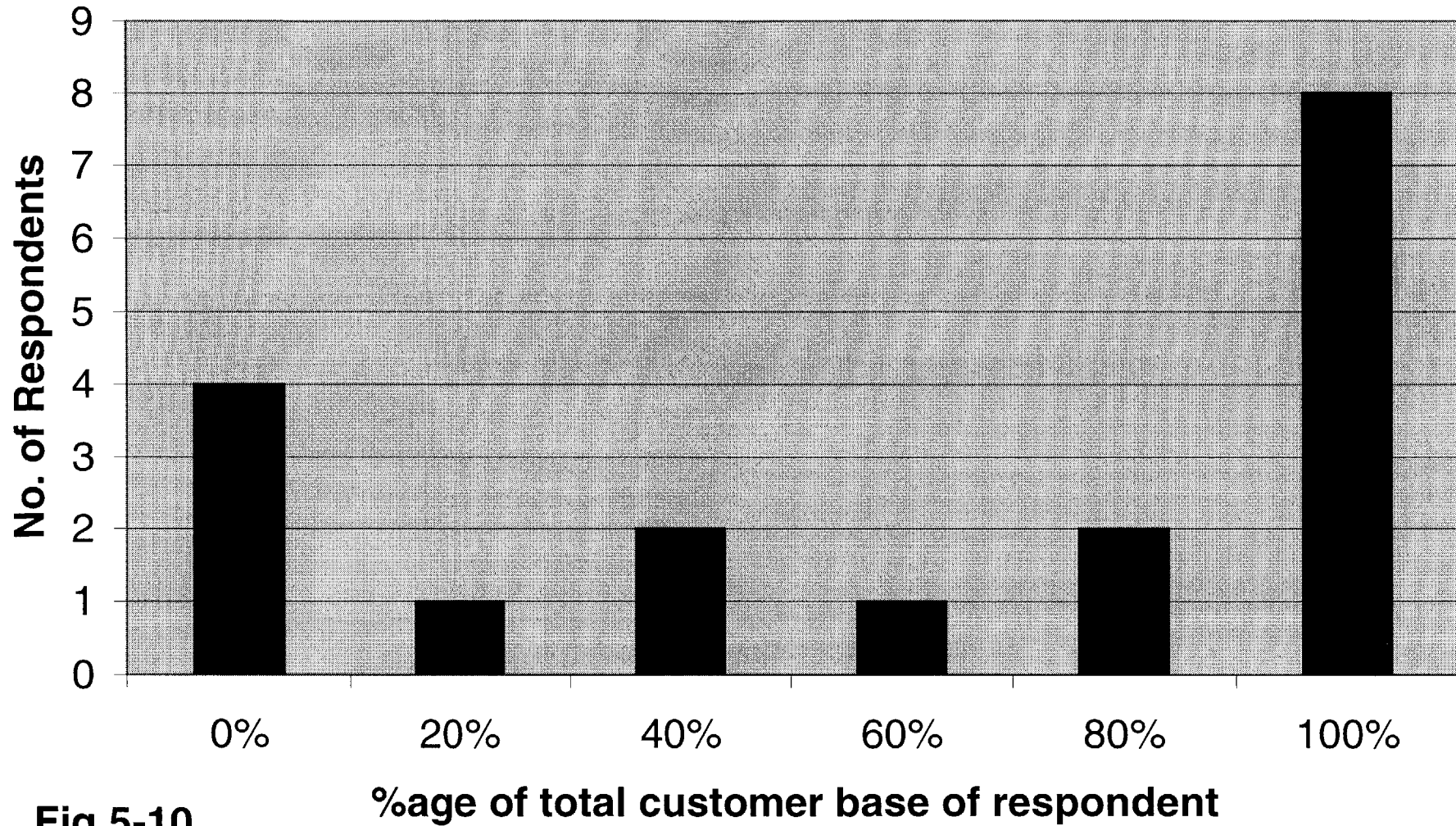


Fig.5-10

Joint 3PL Decisions

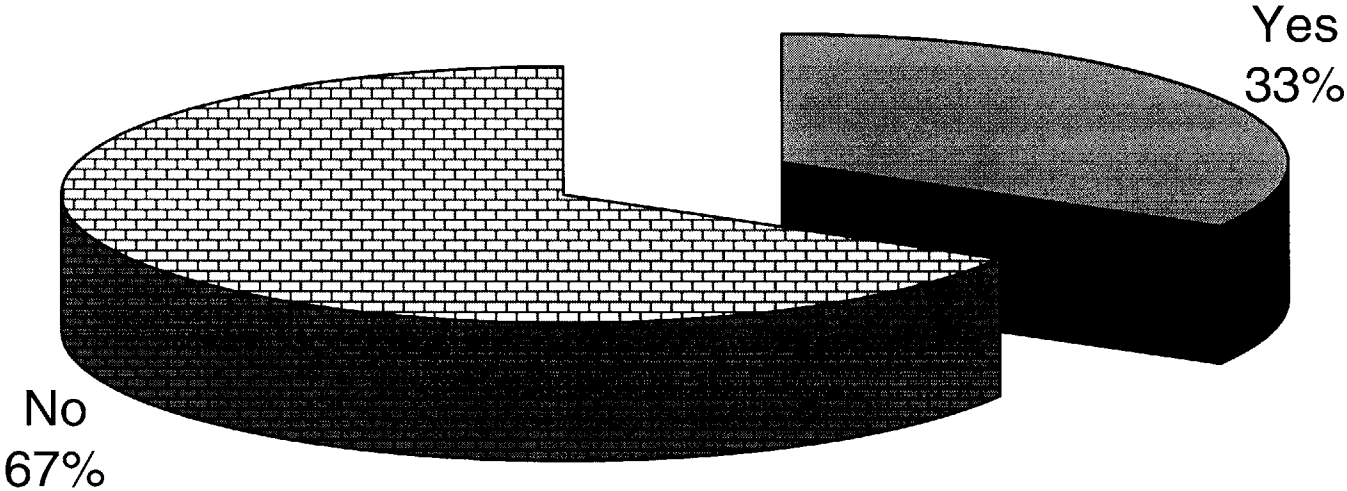


Fig.5-11

Clustering of customers

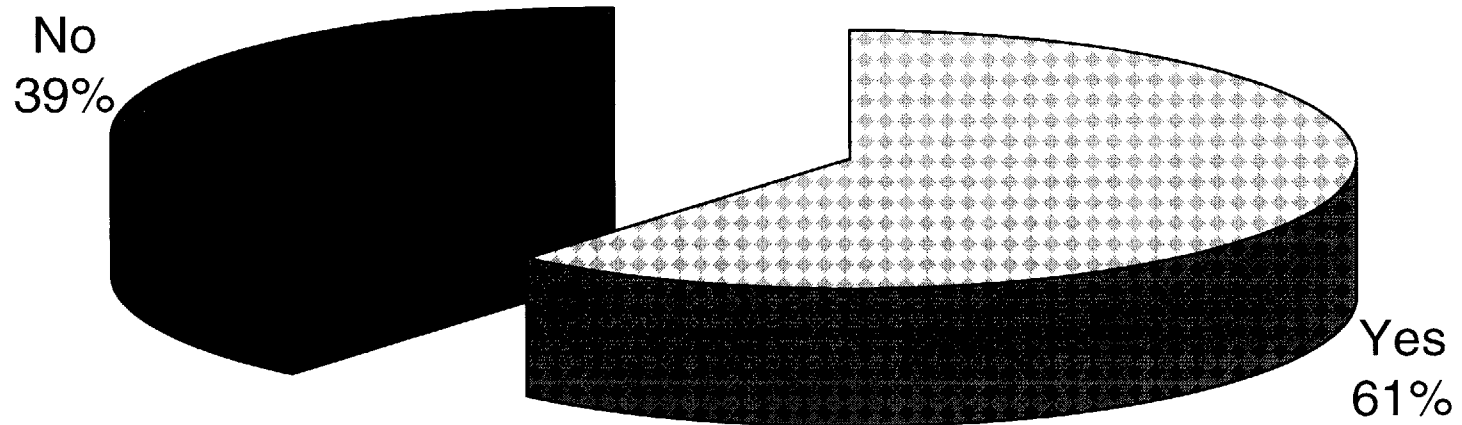


Fig. 5-12

Linkage effect

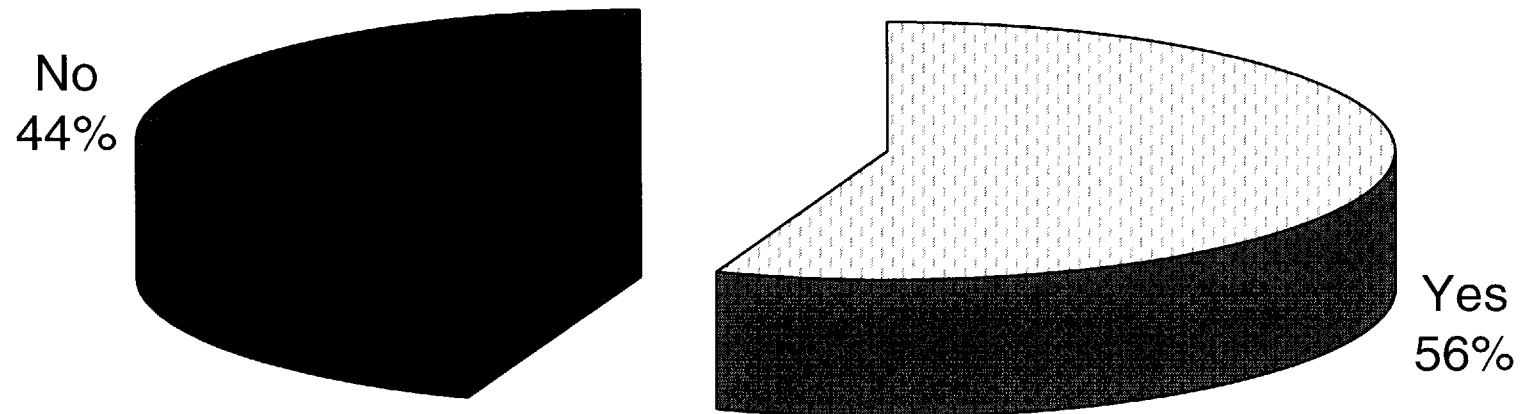


Fig. 5-13

Composition of Decision Making Unit

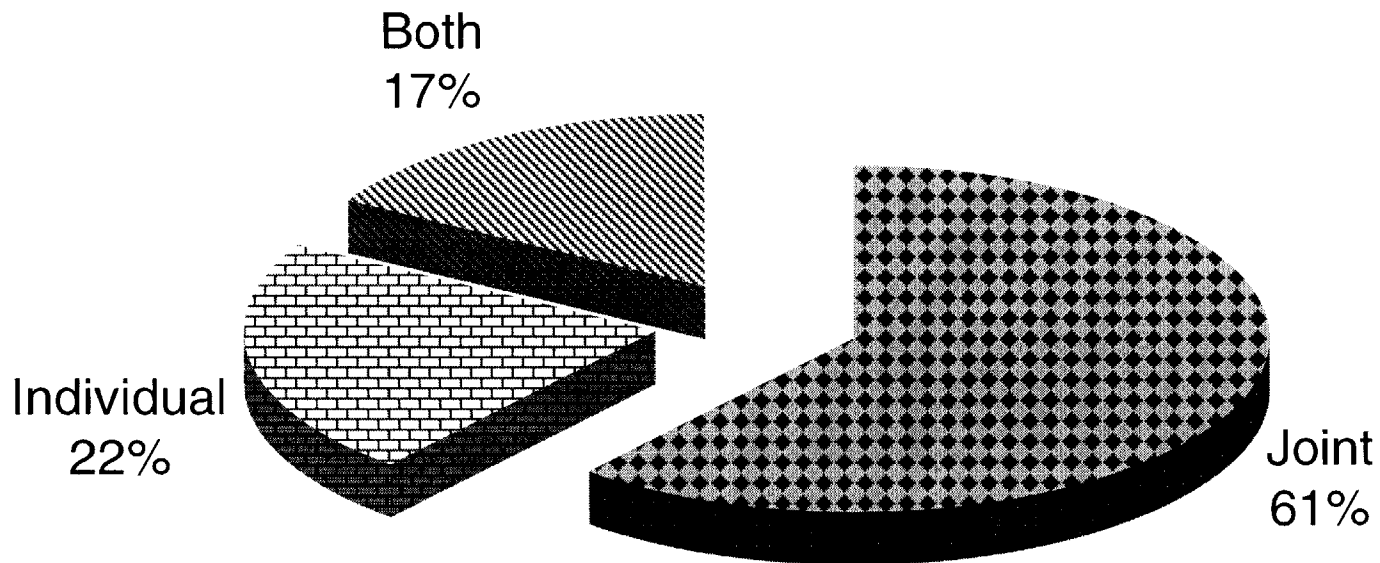


Fig. 5-14

Source of Obtaining New Customers

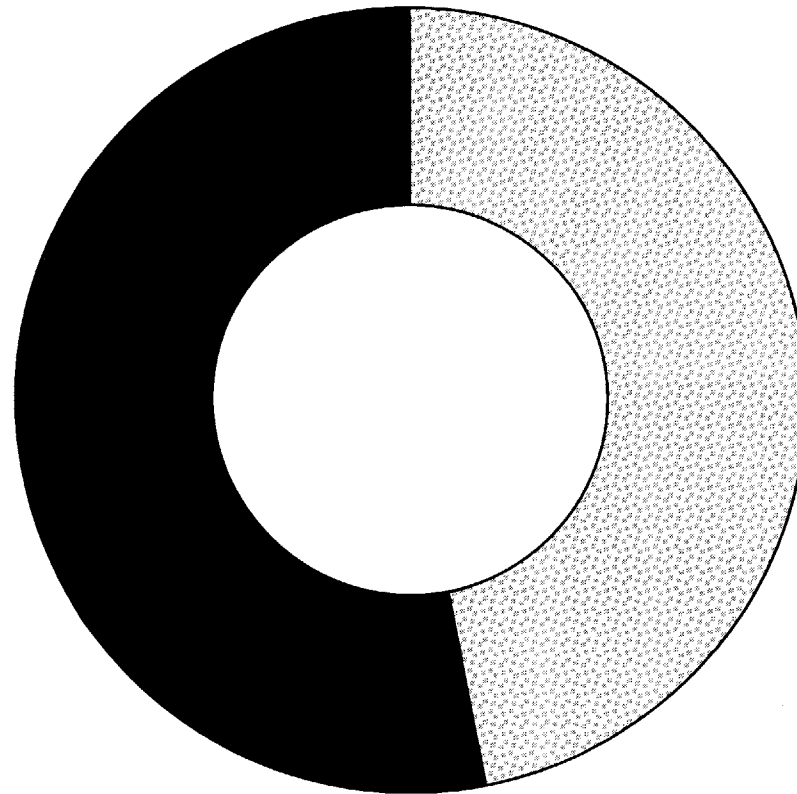


Fig.5-15

■ Own Effort ■ Cust.Query

Response to 3PL Outsourcing Idea

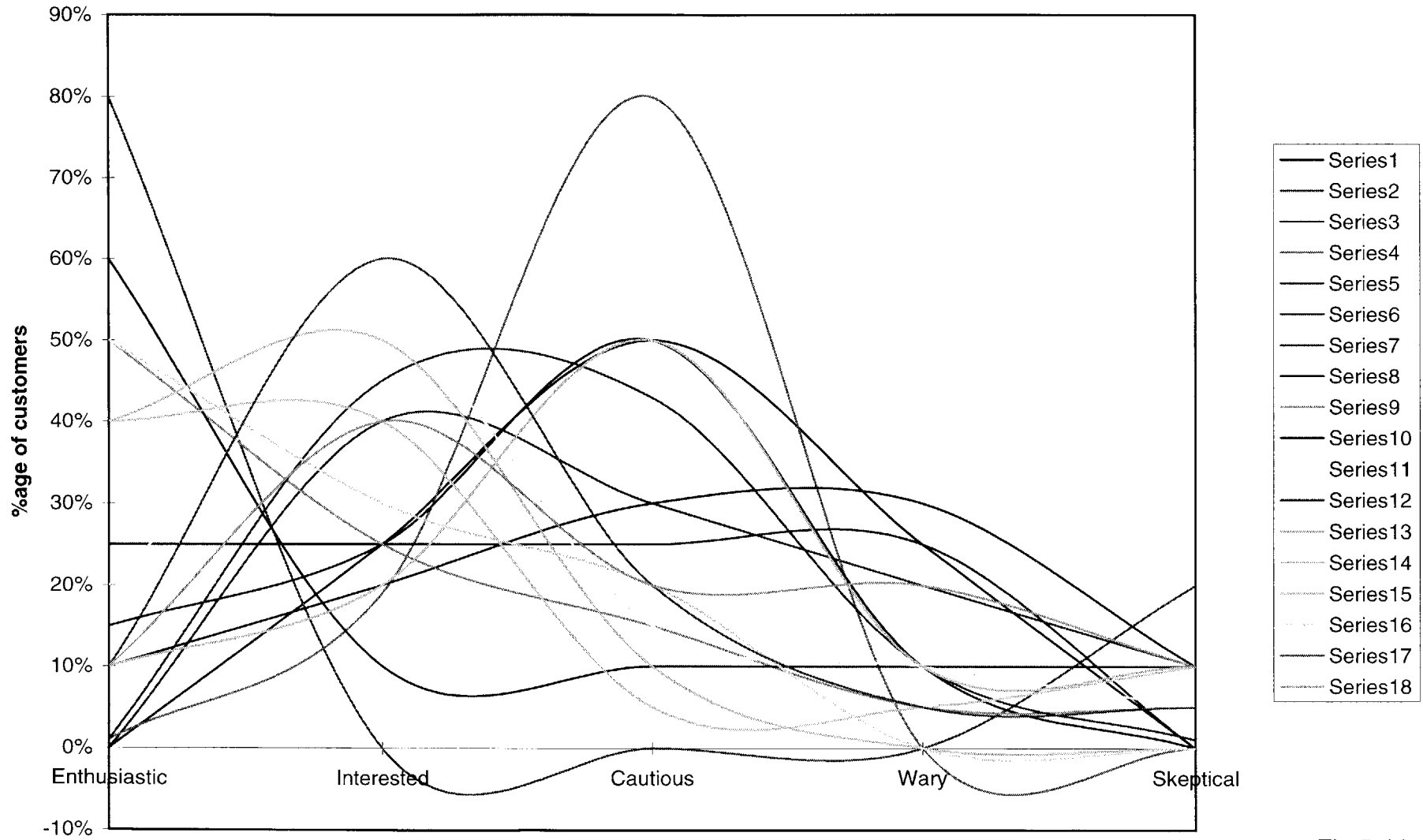


Fig.5-16

Histogram of Responses to %age of customers in mid-size segment

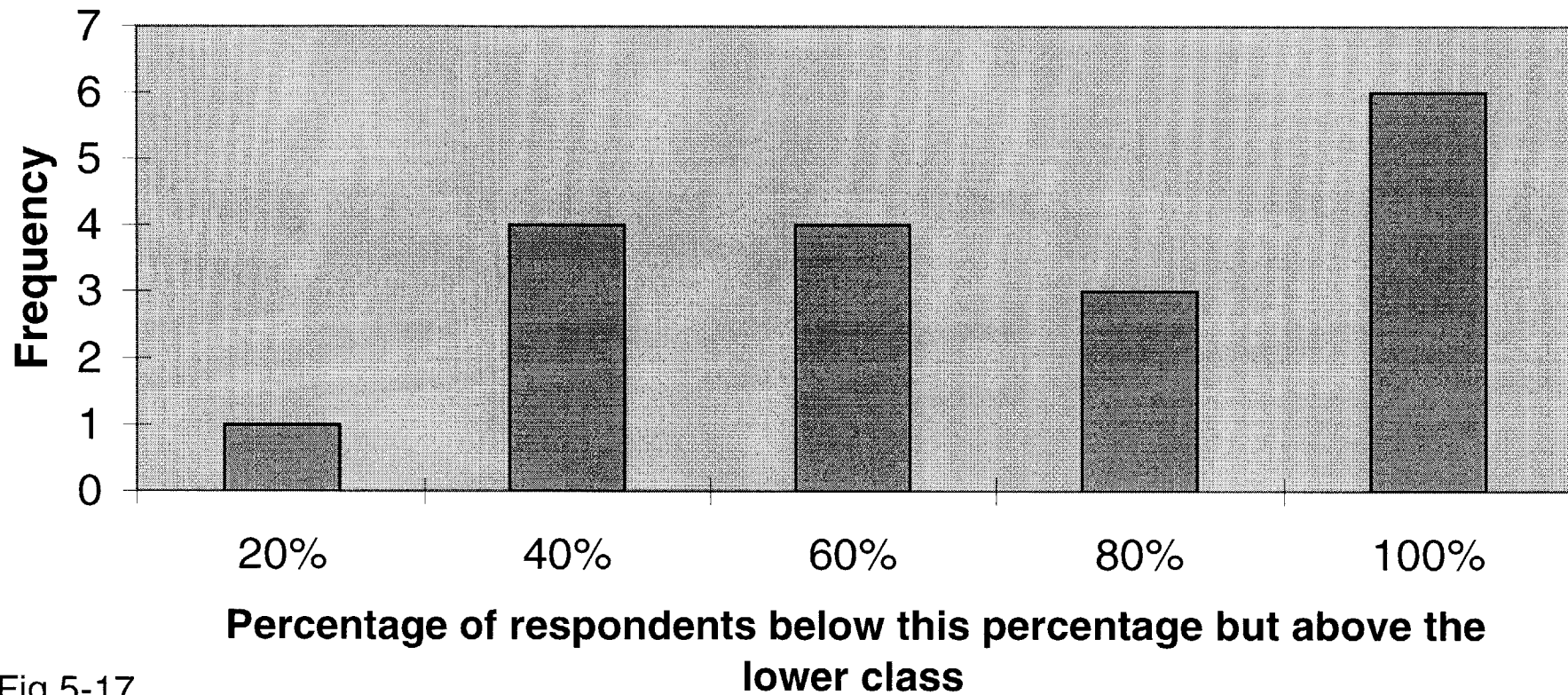


Fig 5-17

Company Revenue Range and Outsourcing Status

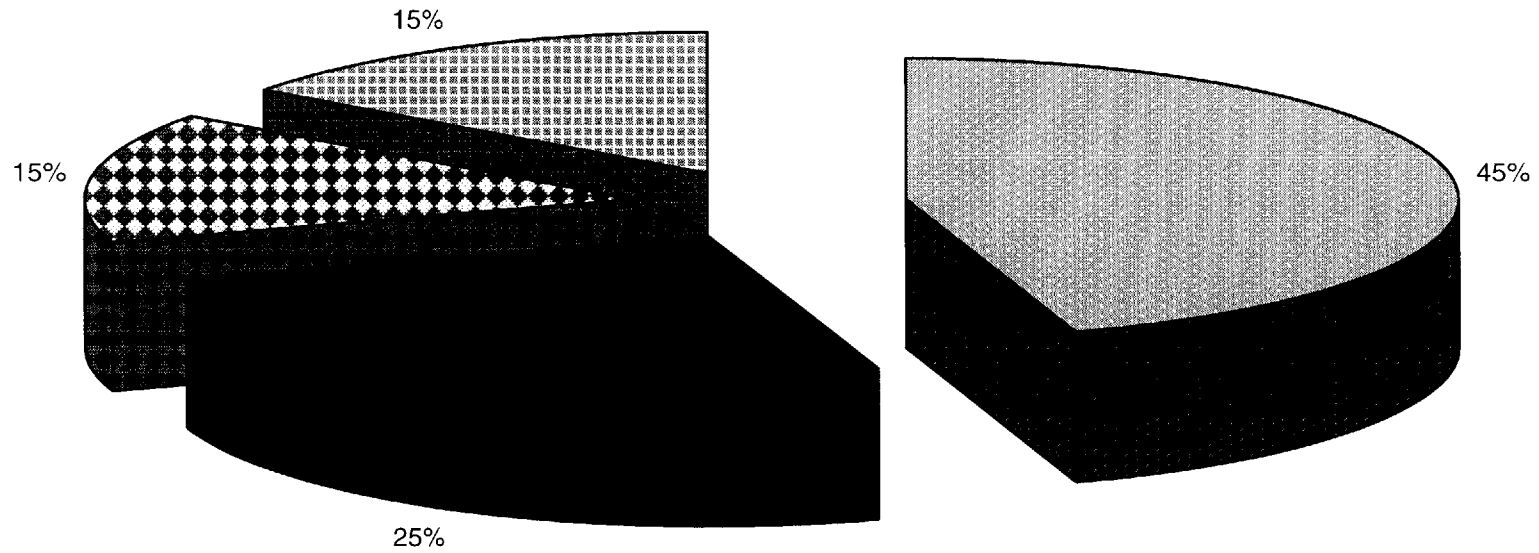


Fig 5-18

Mid Range and Outsource
 Mid Range Don't Outsource
 Not Mid Range & Outsource
 Not Mid range do not outsource

Outsourcing Logistics vs. Other functions

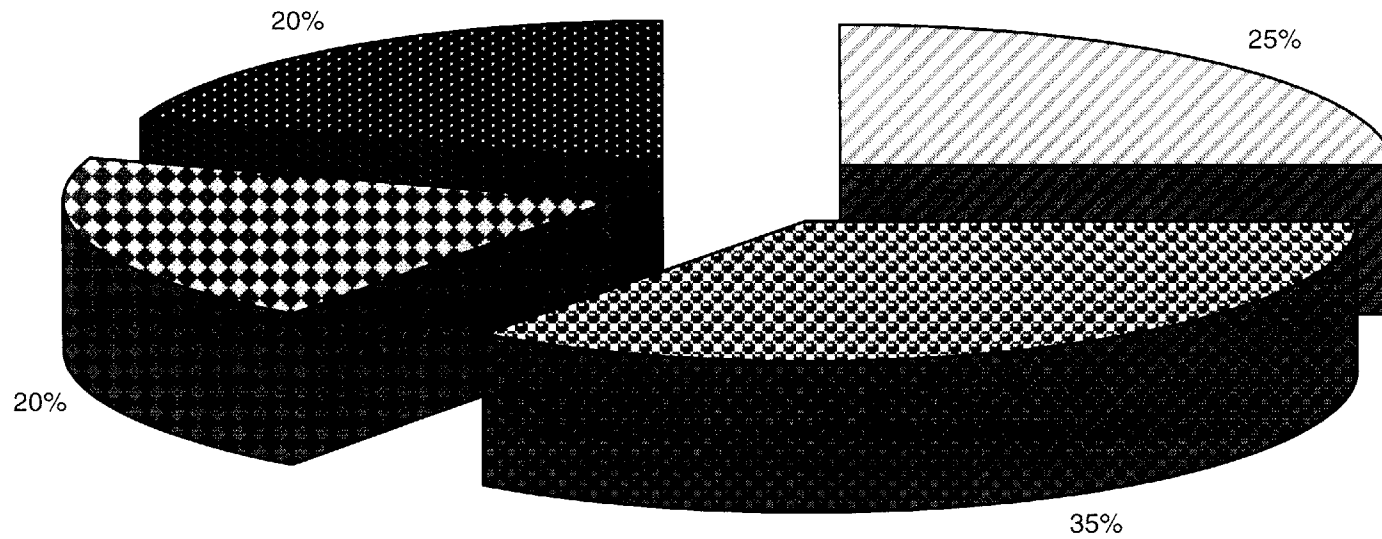
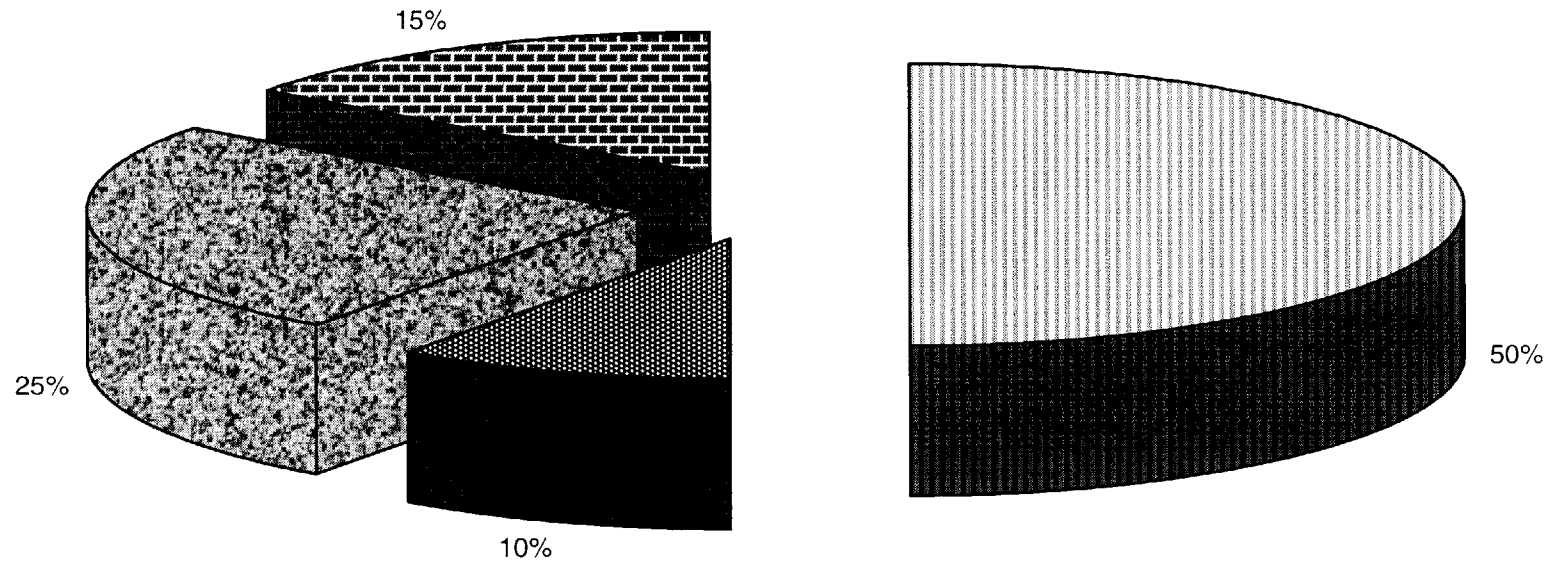


Fig.5-19

Outsource Log. & Others
 Outsource Log. Not Others
 Not Logistics, Outsource others
 Outsource neither

Linking Distribution Intensity and Outsourcing of Logistics



Outsource Log., Hi Dist. Intensity

 Outsource Log. Lo Dist Intensity

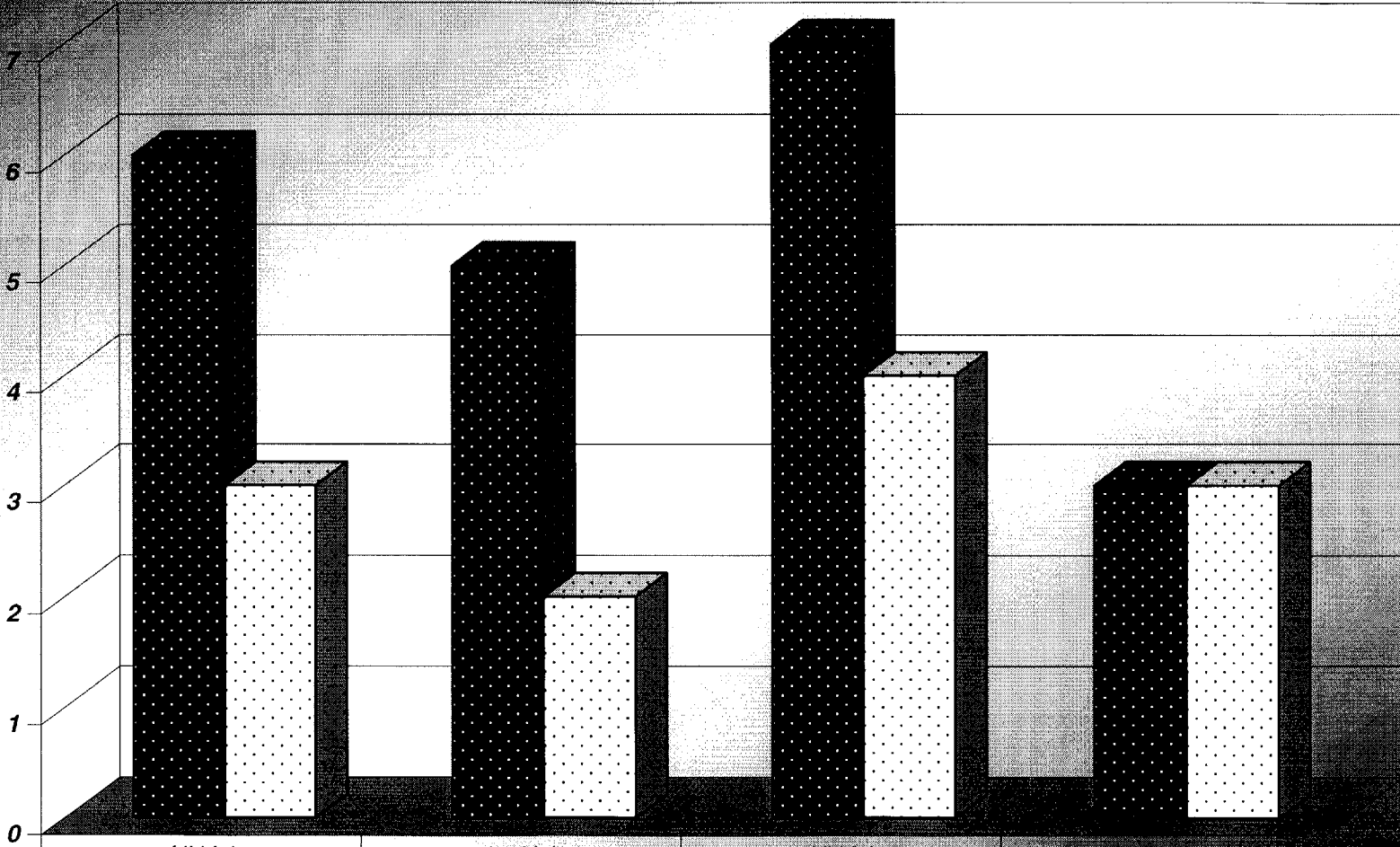
 Do not outsource, Hi Dist. Intensity

 Do not outsource, Lo Dist. Intensity

Fig.5-20

Product Characteristics and Outsourcing Likelihood

Fig 5-21



■ <i>Outsource</i>	6	5	7	
▣ <i>Do not Outsource</i>	3	2	4	

Relationship between Outsourcing and Centralization of Logistics

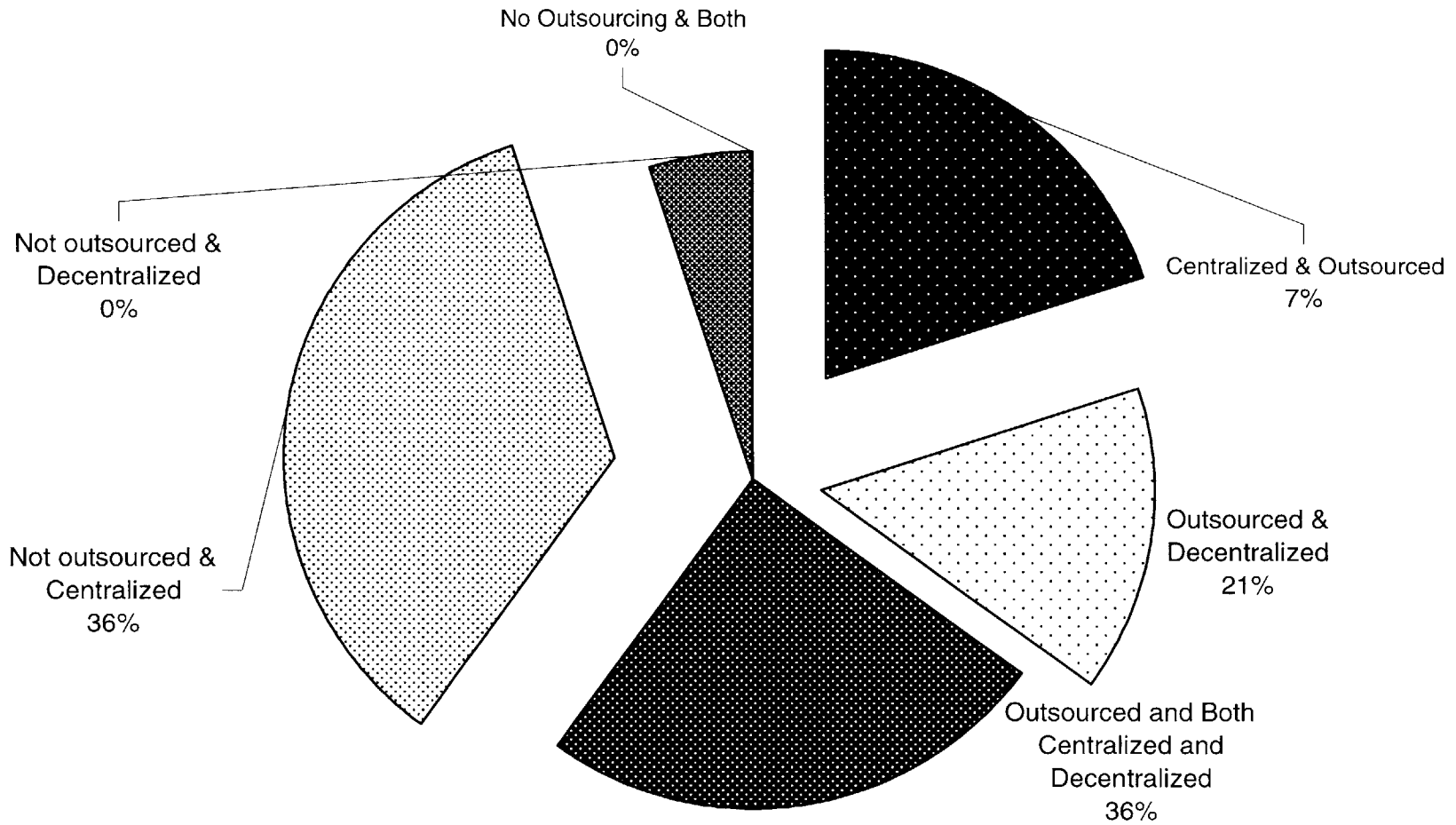
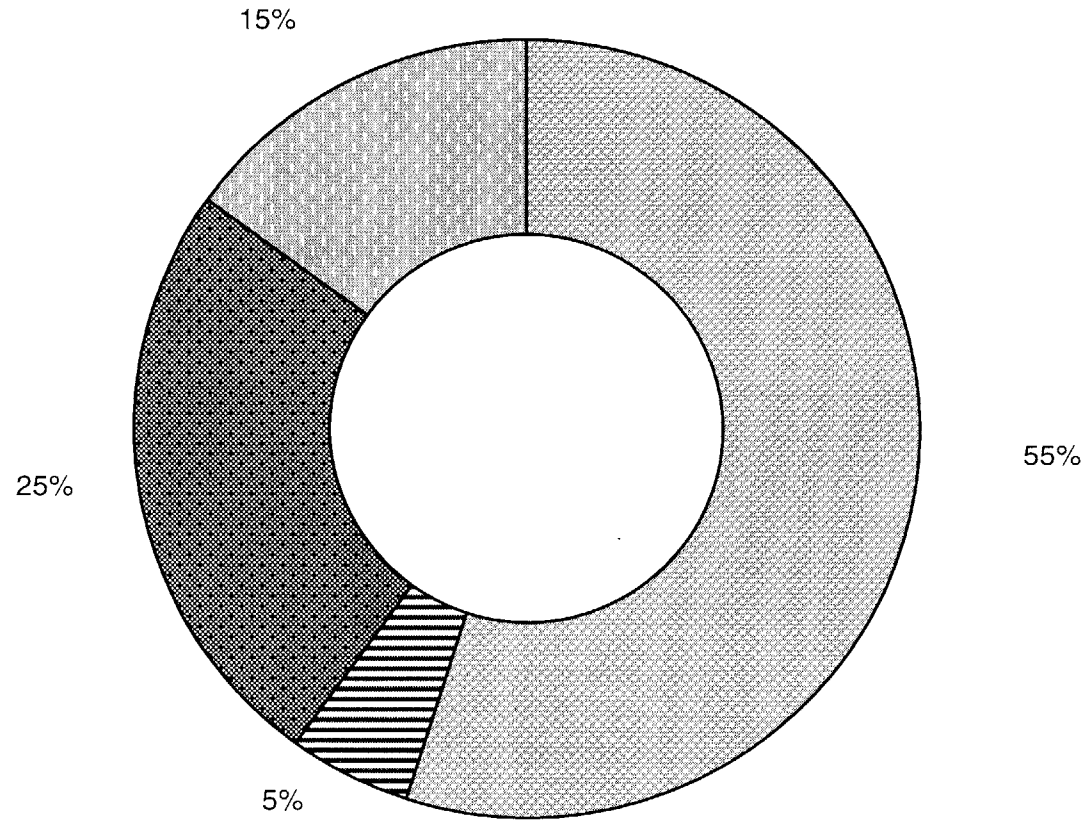


Fig. 5-22

Divisionalization & Outsourcing



■ Outsourced and Divisionalized ■ Outsourced, Not Divisionalized ■ Not Outsourced but Divisionalized ■ Not Outsourced, Not Divisionalized

Fig. 5-23

Entry into New markets as a predictor of Outsourcing

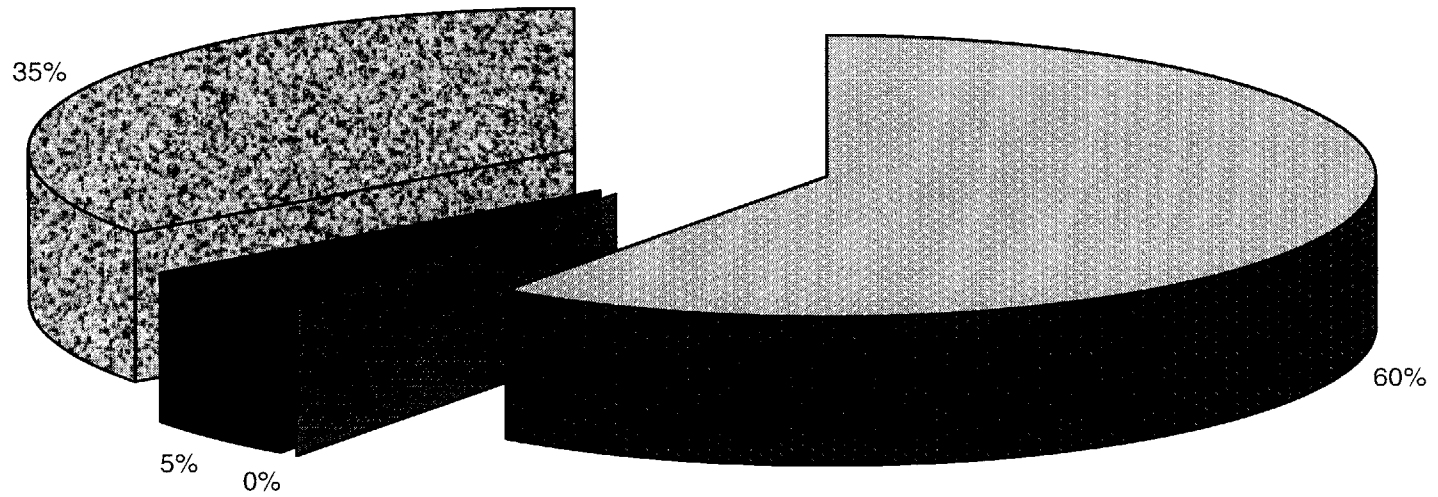


Fig.5-24

■ Out. & New Mkt. □ Out & No New Mkt ■ Not Out. & New Mkt. ■ Not out. & Not new

Need for Control of Processes and Outsourcing Logistics

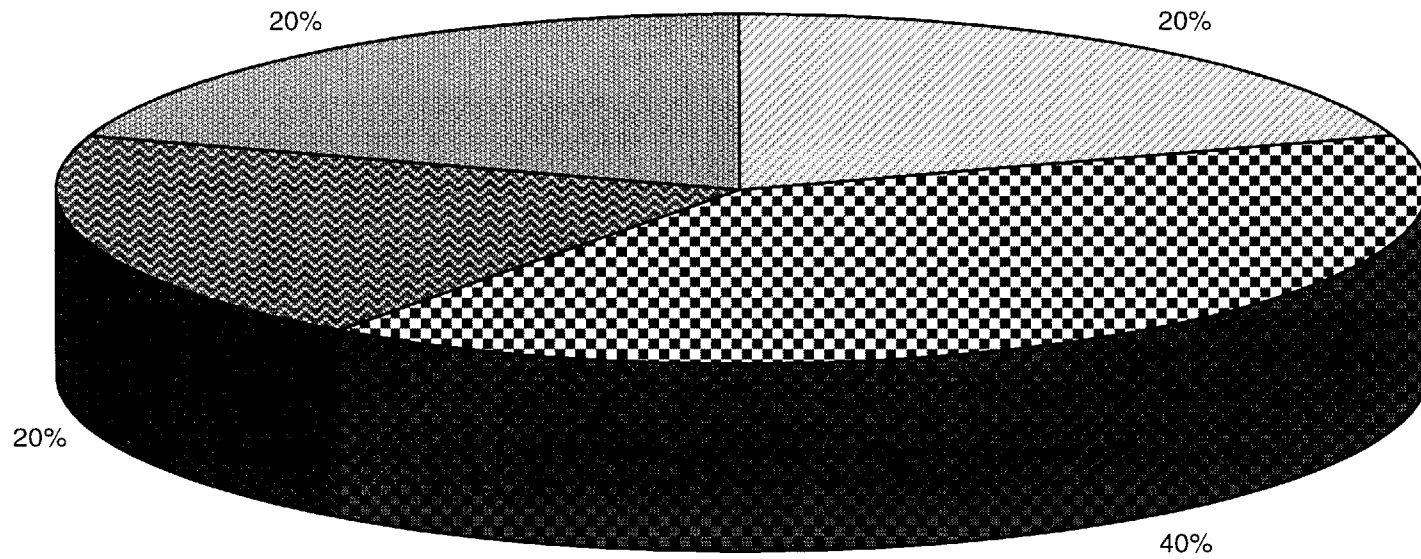


Fig. 5-25

Out. & Open Out & Cont. Not Out. & Open Not out. & Cont.

Outsourcing in Consumer Markets vs. Business Markets

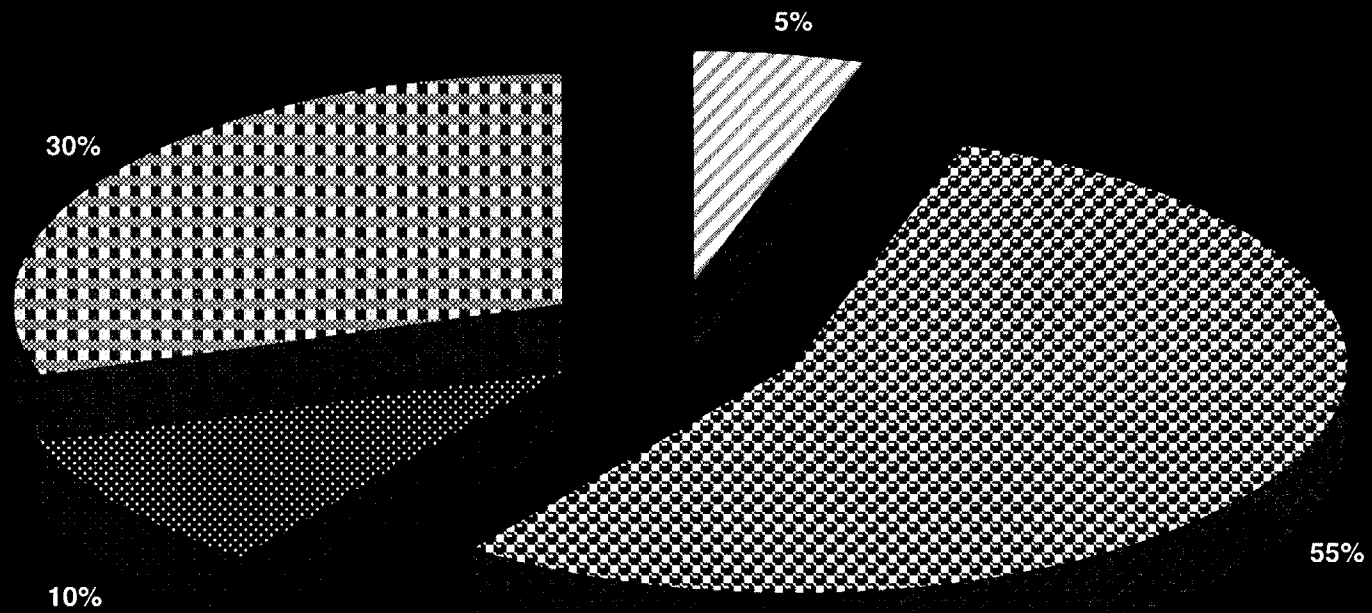


Fig. 5-26

Out.&Cons Out & Biz Not Out. Cons Not out. & Biz.

Factors That are of Importance to Companies

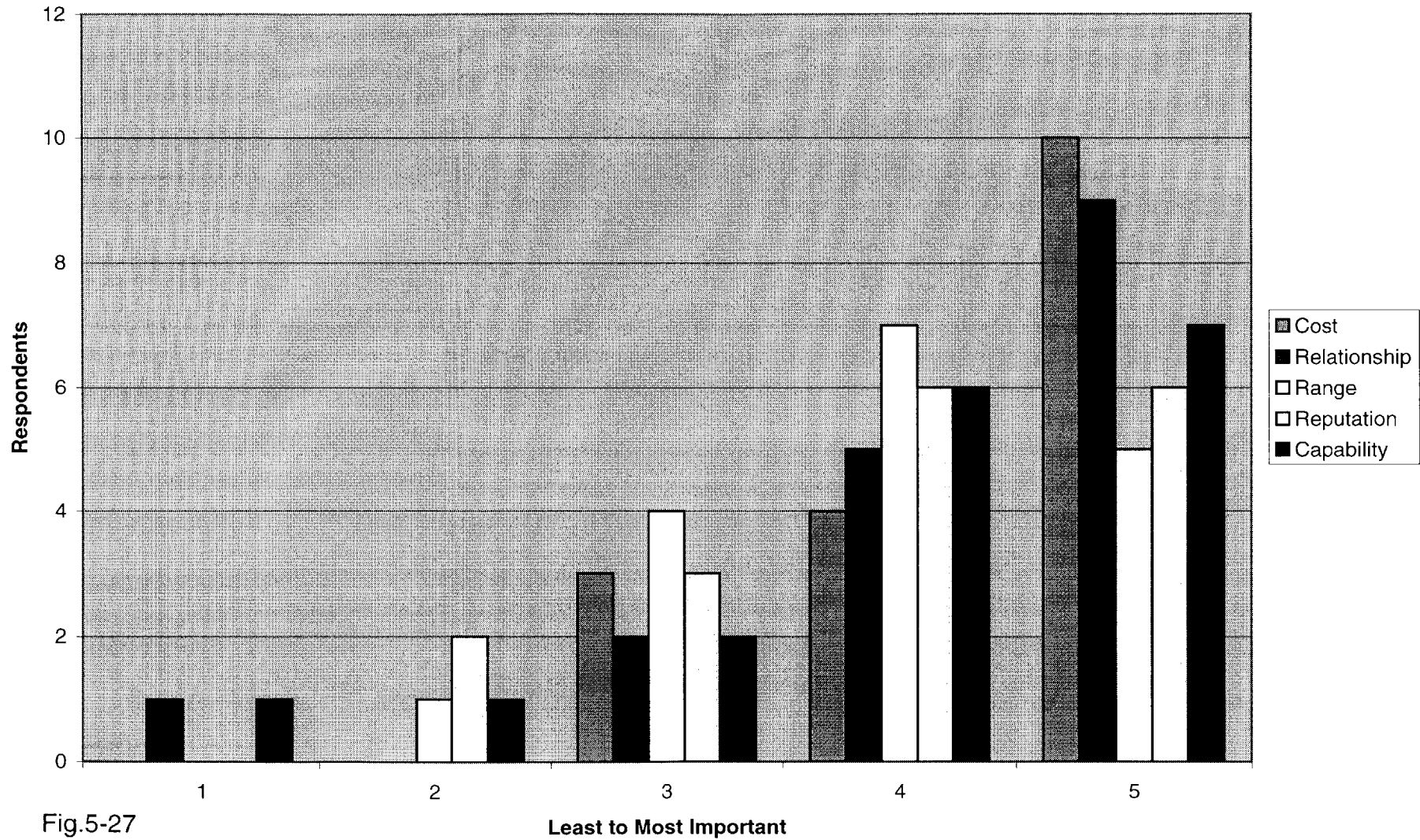


Fig.5-27

Avg. Growth Rate Correlated to Outsourcing Status

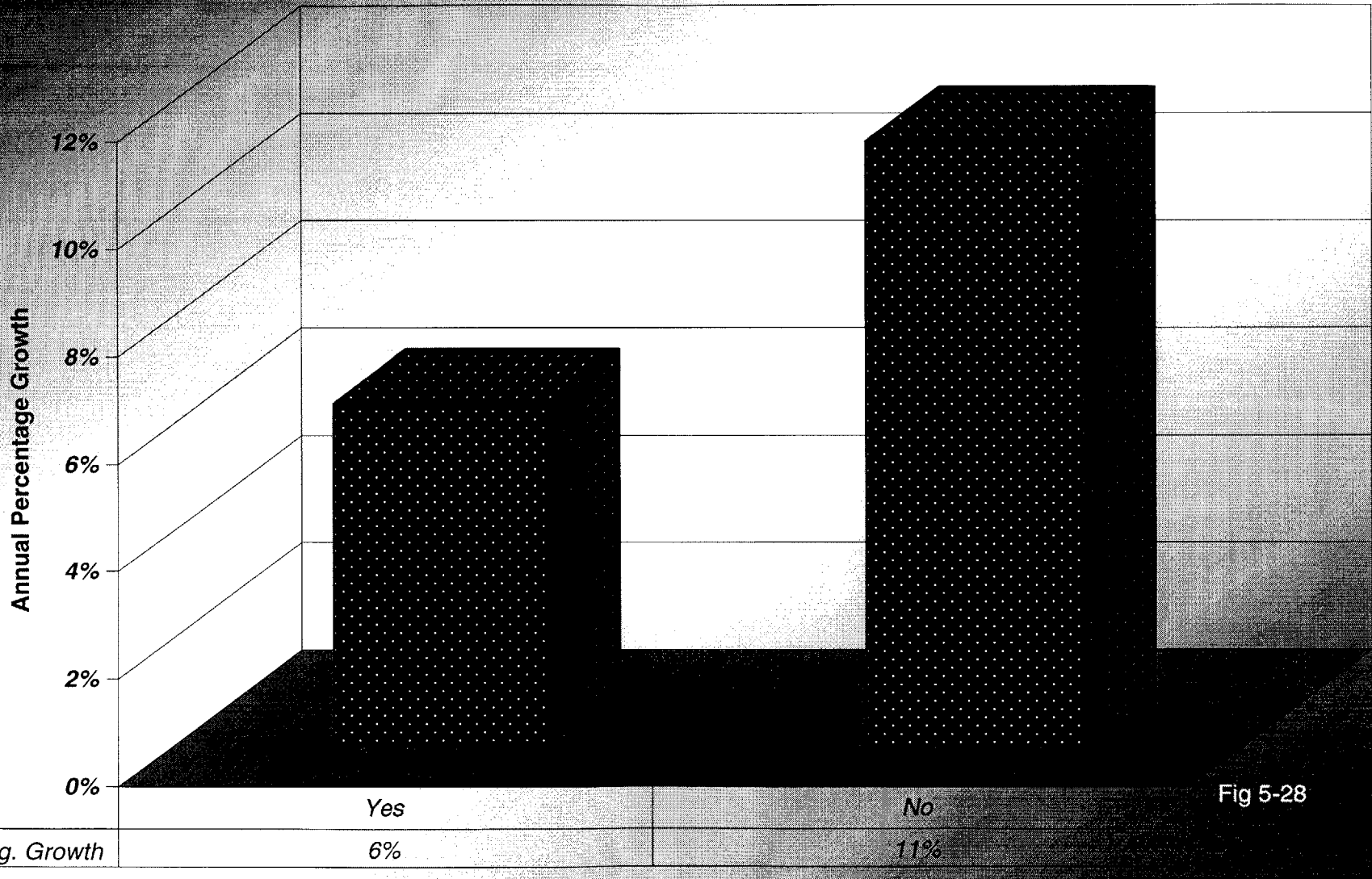


Fig 5-28

Globalization as a Predictor of Outsourcing

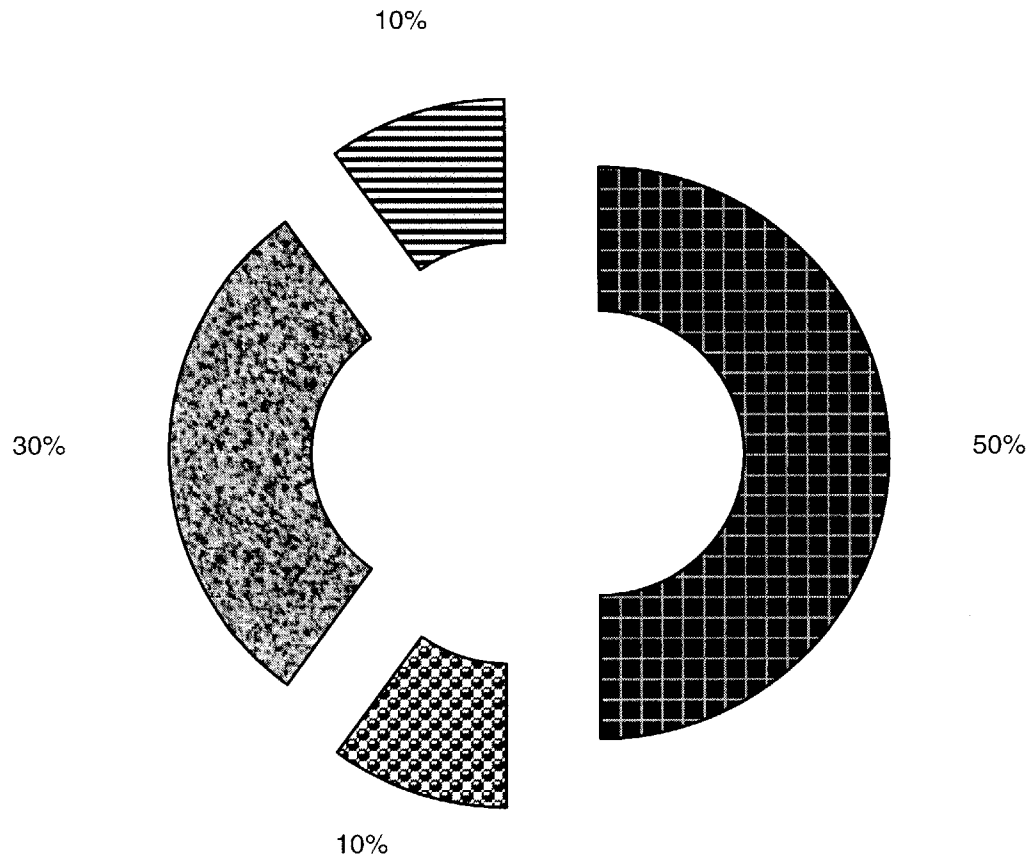


Fig 5-29

■ Outsource & Global ■ Outsource & Domestic ■ Don't Outsource & Global ■ Don't outsource & Domestic

Lead Time Sensitivity & Outsourcing

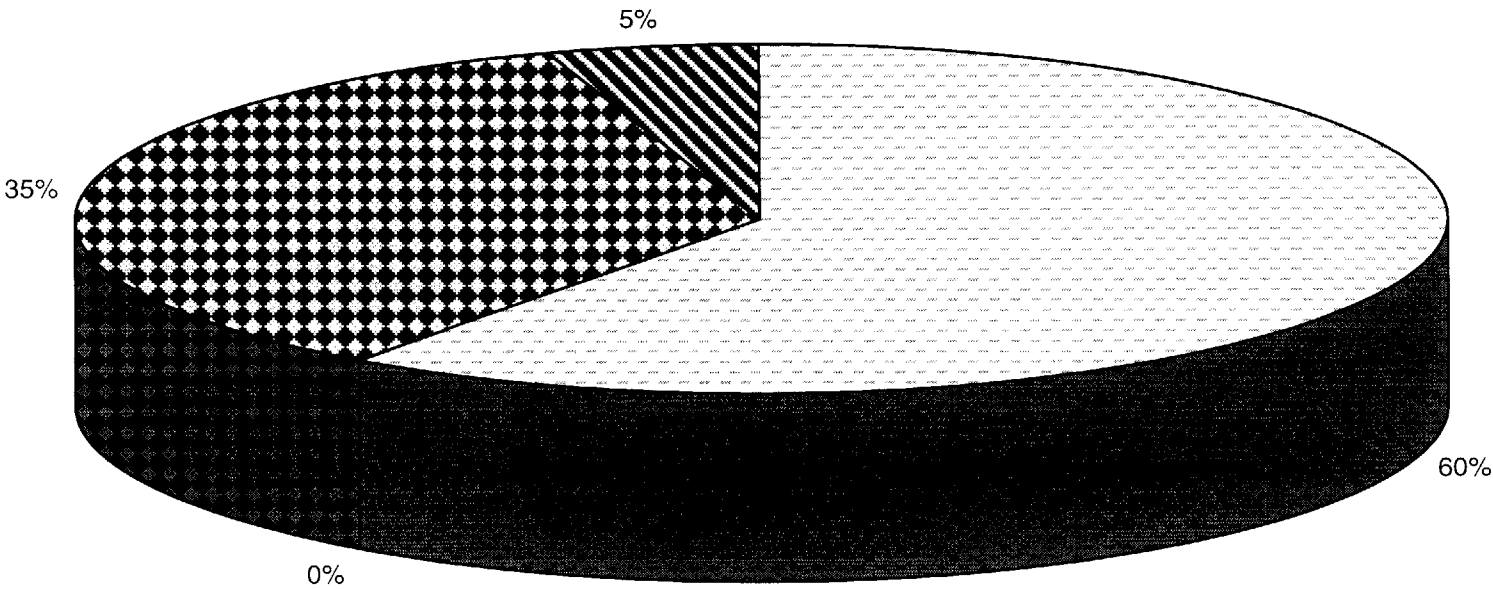


Fig. 5-30

□ Outsource & LT Sensitive ■ Outsource & Not LT Sensitive ▣ Don't outsource & LT Sensitive ▤ Don't outsource & not LT Sensitive

JIT Requirement & Outsourcing

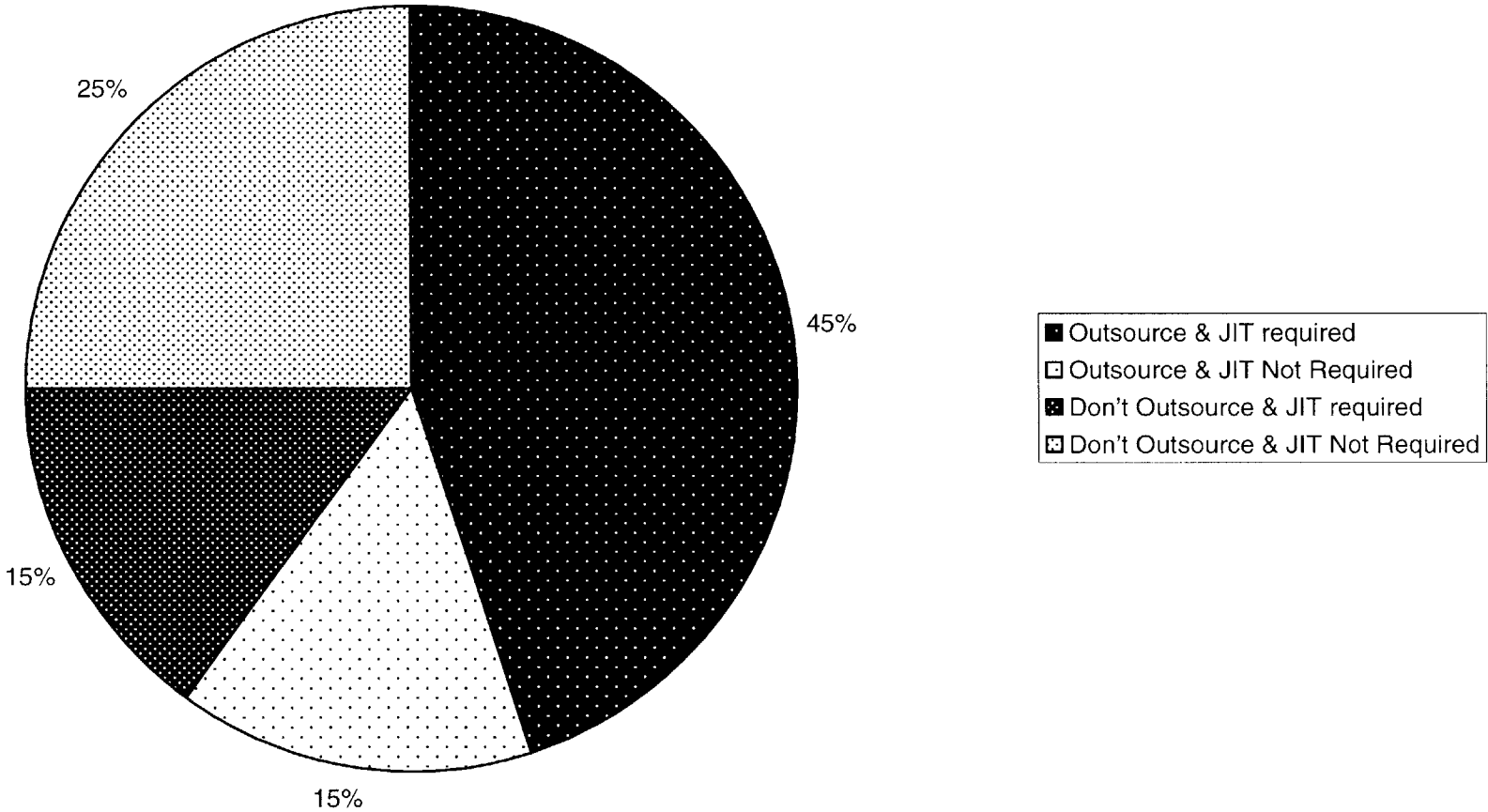


Fig.5-31

Contingency of Customer's Processes & Outsourcing

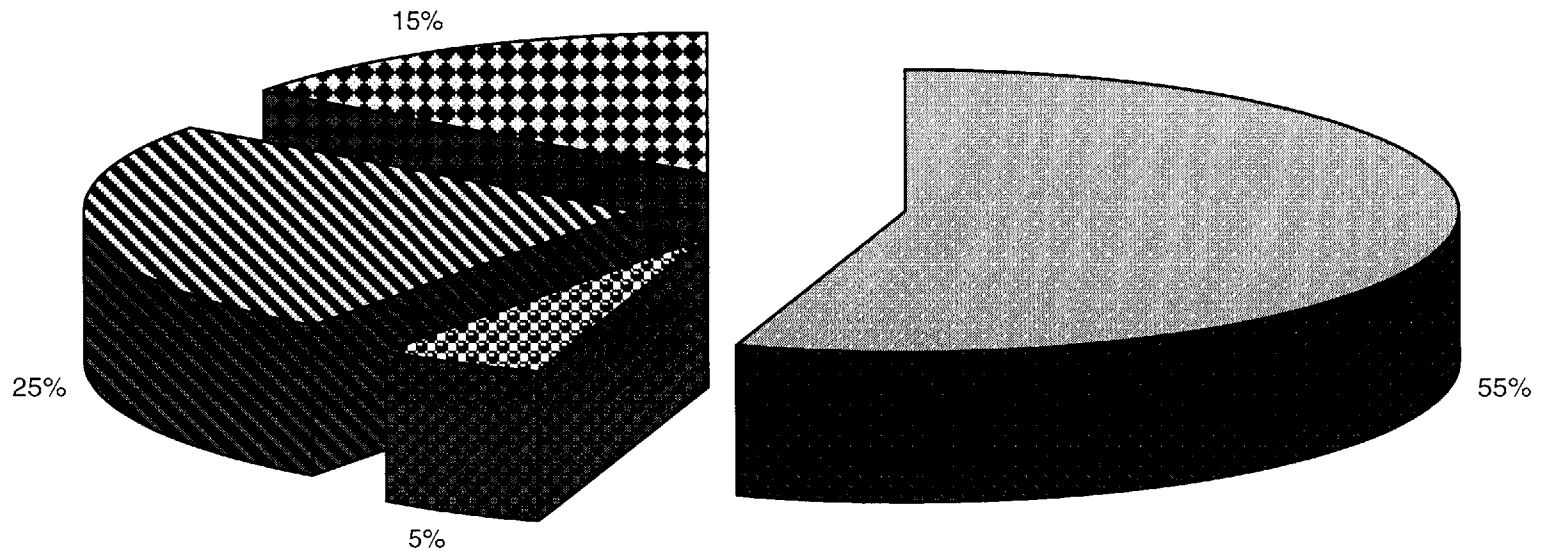


Fig.5-32

- Outsource+Contingent Process
- ▨ Outsource+Not Contingent Process
- ▩ Don't Outsource+Contingent Process
- Don't Outsource+Not Contingent Process

Appendix A

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