Team-Based Marketing Organizations in the Pharmaceutical Industry: the Performance Advantage

Jennifer Kelly

A Thesis

In

The John Molson School of Business

Presented in Partial Fulfillment of the Requirements for the Degree of Master of Science at Concordia University, Montreal, Quebec, Canada

March 2002

0-612-68421-0

ABSTRACT

Team-Based Marketing Organizations in the Pharmaceutical Industry: the Performance Advantage

Jennifer Kelly

This research examines a whether a team-based marketing department impacts the positive performance of an organization. It examines whether organizations are better able understand its customers, competitors and its environment, and have the mechanisms in place to react quickly to changes in its environment. The market-orientation theory was used to examine this theory and was found to be mediate the team – performance relationship. This study was conducted in the Canadian pharmaceutical industry.

The results of this study support that product managers who perceive their marketing department's to be team oriented are also more market oriented and have better marketing department performance outcomes than product manager who do not perceive themselves to be team oriented. Our hypotheses predicted and showed team orientation is positive and significant for market orientation and marketing performance.

The research confirms that teams contribute to performance in knowledge based industries and in the product management area. It also confirms that teams are an essential component of a company striving to be more market oriented and customer-focused.

Acknowledgements

**Dedicated to my sister Barbie who got me into this in the first place.
Thank you.**

Acknowledgements:

To Angèle for editing
To Kathy for the bibliography
To Susie for keeping my confidence high
To Hughes for answering all my questions
To Sarah for trying to keep me on track
To RK for his infinite wisdom, guidance and countless days off to finish this
To Roger – ah, geez
To Cassie and Pat for their encouragement
To mom and dad for giving me the brains
To my enormous family for being such inspiration
To Paul for his faith in me. ♥♥

TABLE OF CONTENTS

List of Tables & Figures

1. Introduction

The objective of this research project is to test a framework proposing that an organization's choice of its brand management system can result in improved business and market-related outcomes and can contribute to an organization's competitive advantage. This conceptual framework was first put forth by Katsanis (1999a) as a holistic systems framework which links marketing organization design to competitive advantage. In particular, this research proposes a method to test a model and examine whether a team-based structure in the marketing department enables an organization to better understand its customers, competitors and its environment, and have the mechanisms in place to react quickly to changes in its environment. The market-orientation theory will be used within this model to examine whether team-based organizations accrue advantages over functionally aligned organizations.

An empirical study of brand managers to examine their level of "team orientation" with respect to their market orientation, marketing department performance and organizational performance is proposed. This study will be conducted in the Canadian pharmaceutical industry and will add to the growing body of research on the market orientation and marketing organization. This research will also have important practical implications for organizational design, team structure and the marketing concept.

For businesses to excel in a competitive environment, they must continuously create superior customer value. To achieve this goal, organizations must be able to collect information on customer needs and competitor capabilities and be able to intelligently make use of this information by creating innovative products, getting to market quickly and excelling in service leadership.

Organizations must adapt their organizational, marketing and brand-management systems to be in line with their competitive environment. Increasingly, team-based structures are being employed as a mechanism to effectively steer the participation of employees at various levels and in various functional areas toward enhanced information sharing, goal alignment and achievement of superior objectives.

Work teams are believed to be essential to successful organizations (Lichtenstein et al. 1997). Most organizations boast the use of teams to achieve a variety of organizational objectives. Teams have been "credited with saving hundreds of millions of dollars, achieving conceptual breakthroughs and introducing an unparalleled number of new products" (Elmuti 1996). In terms of new product development (Olson, Walker & Ruekert 1995), efficiency in manufacturing environments, innovative problem solving and faster production cycles (Majchrzak 1996) among others, teams have provided an element to performance unlike many other management techniques. Teams in organizations have proliferated to the point where they are reported by this year to be in 90 percent of all North American organizations (Elmuti 1996, Homburg, Workman & Jensen 2000).

In the literature related to teams, much of the focus is centered on several themes: how to create and develop a team and team-based organizations (Spreitzer, Cohen & Ledford 1999, Jassawall & Sashittal 1999, Maccoby 1999, Hall 1998, Katzenbach & Smith 1990); group processes and group dynamics (McComb, Green & Compton 1999); successful / unsuccessful and effective / ineffective teams (Devine 1999, Bishop 1999, Elmuti 1997, Campion 1993); and team characteristics and dimensions (Devine et al 1999), among others. A second notable feature of the teams literature is the use of case studies to demonstrate the use of teams in an organization on factors such as cross functional training, productivity enhancement and improved quality (Wisner & Feist 2001, Forrester & Drexler 1999).

Despite the work to date, some gaps exist in the literature that demonstrate, concrete measurable items, that team-based organizations contribute to an organization's performance. Further, even fewer research studies focus on marketing teams or teams in the brand or product management function and their contribution to performance (Homburg, Workman & Jensen 2000). While new organizational and departmental structures have been emerging and evolving, the literature has failed to keep pace. Katsanis and Pitta (1995) noted that although marketing teams emerged and transformed a number of major organization in the late 1980's, many attempted to keep their organizational structure changes secret for competitive reasons. While the team approach has emerged as a new form of product management system, its specific impact on organizational performance has been elusive in both the business and academic press.

Key changes to the organizational structure of marketing departments have been occurring. These changes reflect the need for companies to be more responsive to customer needs. Some evidence that companies are increasingly accomplishing their work through teams, and in particular marketing teams is emerging. In a review of changes to marketing organizations, Homburg, Workman and Jensen (2000) find the use of cross functional teams to manage key client accounts more prevalent than in the past in order to establish a closer relationship with the customer. These authors note, however, that,

> "...while marketing researchers have long argued that firms should get closer to their customers and be customer oriented, there has been little inquiry into which organizational dimensions companies are changing to be more customer oriented. ...to the best of our knowledge there are no holistic studies on major changes in marketing organization" (Homburg, Workman & Jensen 2000).

The market orientation theory, with its focus on the importance of both customers and interfunctional coordination, is the ideal construct to test the model proposed above. A market-oriented company is believed to filter and respond to external information through its cross-functional teams. A gap in the market orientation literature exists with respect to testing the impact of teams on a firm's level of market orientation and its subsequent impact on performance. It is apparent that there is a need to understand if the individuals working in teams are in fact able to develop a strong market orientation and contribute to superior performance.

The existence of teams stands at the very heart of the market-orientation theory. An organization and its departmental structure can either facilitate or thwart attempts to gather, integrate and act on customer and competitor information needed to develop and implement strategies. Although teamwork and cross-functional teams are not new, it has been challenging for organizations to make teams work effectively. Organizations have not always been able to reap the benefits of teams because they have not been able to get past initial problems in implementing and sustaining this type of work environment. Because of this challenge, firms that are able to adapt their internal structure and systems sufficiently to enable teams survive and flourish can achieve competitive advantage.

The pharmaceutical industry is a interesting context for this study. Its characteristics are ideal for this research. The environment is intensely competitive and complex, placing pressure on organizations to craft well thought out strategies. Within the companies, the product / brand management function, among other functions, plays a vital role in the success of the organization in terms of meeting its strategic and revenue objectives. Over the past few years, the marketing departments within some pharmaceutical companies have been gradually aligning themselves in team-based structures. Some companies have embraced this structure formally, while others operate less formally in teams. These aspects will be explored and examined through a combination of both qualitative and quantitative inquiry.

By drawing from a number of theoretical streams, the project will add to the literature in both the management and marketing fields. By synthesizing and integrating the market-orientation, brand management, marketing and teamwork literature, a holistic and integrated model can be investigated and demonstrated that will address challenges faced by many organizations as they strive to optimize performance. Confirming the linkages among these constructs is the natural evolution of this theory.

2. Literature Review

2.1 Evolution of Brand Management Systems

Marketing organizational structures traditionally been centered around a product or a brand with one individual responsible for managing the marketing decisions and activities regarding product / brand strategy and implementation. The brand manager's success depended greatly on his/her ability to influence others through successful interpersonal communications (Kotler 1998). However, heightened customer demands and competitive pressures are driving organizations to adapt their structures to meet the demands of external environmental changes. Some organizations are shifting toward a team-based approach in order to achieve a number of significant results including filtering market intelligence throughout the organization (Drew 1997, Slater & Narver 1994).

Many organizations are making a greater shift toward the market. In the past, firms have survived by emphasizing production capabilities and internal efficiency (Pelham 2000). Organizations are no longer insulated and free to offer products and services that do not compete effectively for their customers' dollar. Organizations must change their organizational, marketing and brand-management systems to be in line with this paradigm shift. Increasingly, team-based structures are being employed as a mechanism to effectively steer the participation of employees at various levels and in various functional areas toward enhanced information sharing, goal alignment and achievement of superior objectives. Companies are increasingly using teams as a means of adapting internally in order to compete more effectively externally (Glassop 2002, Homburg, Workman and Jensen 2000, Devine et al. 1999). Proof of the change is seen in the way organizations adapt other aspects of their organization such as their management approaches, goal-setting and reward systems to support these new structures (Drew & Coulson-Thomas 1997).

Organizational issues for marketing departments have surfaced over the past years and have caused both marketers and researchers of marketing to reexamine the marketing function and its role. In examining the future role of marketing, Day (1997) notes that organizations that want to stay aligned "with its markets must change its structures, roles and activities when customer requirements and standards change" (Day 1997). Marketing organizations are taking advantage of new organizational forms that deliver customer value by aligning the capabilities of their organization with shifting market requirements. One way in which Day (1999) outlines that companies are doing this in their marketing departments is by adopting hybrid structures that combine horizontal business processes with functional specialists. These hybrid structures in marketing rely heavily on teams centered on core processes to manage the brand, customer segments and the selling process: a customer management team, a customer process team and a supply management team

New organizational models in the marketing department have driven new forms of product and brand management systems. Historically, brand management is said to have come to existence in the 1930's with Procter & Gamble's appointment of the brand manager to be responsible for the success of the brand (Berthon, Hulbert & Pitt 1997, Lehmann & Winer 1994). Some of the more traditional structures have been aligned with either a product-focused organization, a market-focused organization (by market or geographical segment), a or functionally-focused organization (e.g. aligned by market research, advertising, etc.) (Lehmann & Winer 1994). A market-focused approach emerged as the need for different marketing strategies and tactics for different segments arose (Lehmann & Winer 1994). A functionally-oriented structure, where a number of people are responsible for the product was said to work best when the company had only one or two products.

Product and brand management structures continued to evolve into a number of different approaches in order to accomplish certain goals. Category management broadened the scope of the manager to the entire product group to improve the performance and coordination of the entire product line (Katsanis 1995, Berthon, Hulbert & Pitt 1997). A variety of team-based brand manager approaches have also emerged with an enhanced internal structure for greater product innovation, reduced speed to market and richer customer contact. Katsanis (1995) identifies several types of these teams. A technological team involves the brand manager, product engineers and R&D cooperating to bring new products with a customer focus to market more quickly. A multi-disciplinary marketing team draws on the skills of a number of individuals together and drawing on the need to persuade internal partners to contribute thereby ensuring faster marketing strategy implementation and time to market. Regional teams with representatives from each functional area can be more responsive when changes are needed in the marketing strategy at a local level. Trade management teams focus on a subset of distributors and can tailor product, pricing and promotion decision to their distinct group. A last example outlined by Katsanis (1995) are partnerships / collaborative teams where the marketing manager collaborates with customers, and even competitors, for greater external focus and boundary spanning. Alliances can be made that improve the success of both firms, be they other manufacturers, retailers or competitors.

These examples illustrate a number of ways firms are adapting their marketing and brand management systems to sustain continued success and compete effectively in the marketplace. These adaptations are touted to be critical to the continued existence of brand management systems all together. As Low and Fullerton (1994) express, brand manager systems must be heavily modified in order to better "offer companies the entrepreneurial flexibility, creativity and relationship building that are key success factors today". They encourage top managers to remove the hierarchical layers that surround brand mangers and permit them the responsibility and authority to pull together the resources needed for brand development. Teamwork and building relationships are the mechanisms Low and Fullerton (1994) recommend that make the best use of a brand manager's negotiating skills both inwardly within the company and outwardly toward customers.

With all the changes in the brand management systems, it can also be expected that the job role and function of the brand manager will undergo changes as well. A brand / product manager's job encompasses a variety of responsibilities in order to realize a number of marketing objectives. With the individual accountability resting on the product manager, yet with no direct authority over others in the company, persuasion and communication skills become critical abilities. As Lehmann and Winer (1994) express, the product manager has the responsibility to analyze the market, "including customers, competitors and the external environment" and turn "this information into marketing objectives and strategies for the product". To do so, the product manager must get the organization to "support the marketing programs recommended in the plan" (Lehmann and Winer 1994) by coordinating with other areas of the firm as well as get assistance and support from senior managers in the firm. In terms of the future, Berthon, Hulbert and Pitt (1997) feel that "future brand and marketing managers will need both the skills of the analyst and the financial aptitude of an investment banker as well as interpersonal sensitivity" (Berthon, Hulbert and Pitt 1997).

With increasing complexity from the external environment and heightened pressure on brand managers to deliver products that satisfy and increasingly sophisticated customer, team-based approaches emerge as a necessity to deal simultaneously with both internal and external demands. Information now moves at the speed of the Internet and effectively accumulating customer, competitor and market intelligence and then integrating and responding to it requires the multiple talents from a variety of individuals.

The future of brand management systems and brand managers may find it is dealing less with products and brands and more with managing the customer (Homburg, Workman and Jensen 2000). A driver of this revolutionary approach comes from information technology as well as through the ability to identify customer needs and preferences individually. Customer relationship management stresses the importance of building more profitable customer relationships by establishing one-to-one relationships (Peppers & Rogers 1999). Differentiating and customizing products and services for differing customers will retain the valuable customers in long-term and will drive the business into the future.

2.2 TEAMS – ENABLING CUSTOMER-FOCUSED ORGANIZATIONS

"In any situation requiring the real-time combination of multiple skills, experiences and judgments, a team inevitably gets better results than a collection of individuals operating within confined job roles and responsibilities. Teams are more flexible than larger organizational groupings because they can be more quickly assembled, deployed, refocused and disbanded usually in ways that enhance rather than disrupt more permanent structures and processes"

Katzenbach & Smith (1990), The Wisdom of Teams

"...we believe teams will play an increasingly essential part in first creating and then sustaining high-performance organizations" (Katzenbach & Smith 1990).

Organizations are continually seeking the optimal structure and systems that enable them to identify and pursue strategies that lead them into the future. Countless efforts are made to refine their internal workings in relentless pursuit of high-level goals. Organizations need to know whether a team structure will benefit their organization and help their managers use information from the external environment intelligently to bring value to the organization. The benefits of team structures are touted, but seldom tested vis-à-vis market performance and less often with performance outcomes such as speed to market, product innovation and service leadership.

Teams offer organizations the opportunity for individuals to share information from different disciplines and develop creative solutions which become the basis for new products and services. A constant business challenge is the effective integration of diverse functions. Organizations can encourage this collaboration by constructing integrated goals. But, as Fisher (1997) points out, "research on both information norms and integrated goals has been largely conceptual with limited empirical support".

Forman adds that "the direct link between interdepartmental interactions, cross-functional working and team work on the one hand and business and market related outcomes on the other hand, has not been subject to rigorous investigation" (Foreman 1997).

The literature on teams is diverse and extensive but fragmented (Tjosvold 1986). Relevant to this research study, is work related to team-based organizations and the effect teams may have on productivity and performance. An overview of how teams are defined and how they achieve superior performance results is presented before examining studies of teams in organizations.

2.2.1 Defining a Team - The Performance Differential

Distinguishing a real team from a working group requires a precise definition. Katzenbach and Smith (1990) define a team as "...a small number of people with complementary skills who are committed to a common purpose, performance goals and approach for which they hold themselves mutually accountable" (Katzenbach & Smith 1990). Shonk adds that "the common goal and required coordination make the team" (Shonk 1992). Both of these definitions highlight that a common commitment is the essence of a team. While work groups are prevalent in organizations and are often formed in order to share information, perspectives and insights, Katzenbach and Smith (1990) note that the focus in workgroups always remains on individual goals and accountabilities. Katzenbach (1991) adds that work groups members do have responsibility for results other than their own. Teams require both individual and mutual accountability. Teams achieve incremental performance as a result of their joint contributions. The performance level reaches beyond the simple sum of their individual contributions.

Katzenbach and Smith (1990) and Shonk (1986) outline several well-known phenomena that give insight as to why teams perform better than individuals:

- By bringing together complementary skills and experience that exceed those of any individual on the team
- By bridging the gaps among functional units by exchanging information and broadening each members understanding of other areas
- By enabling greater flexibility and pooling of customer and competitor information
- By jointly developing goals and establishing communication and information sharing that will support problem solving and decision making
- By surmounting obstacles together bringing trust and confidence in each other's capabilities to the team, and
- By sharing mutually accountable objectives, teams are prepared, motivated and supported

In organizations, teams are felt to be an effective way to organize and empower employees in a way that enables them to increase productivity (Shonk 1992). According to Katzenbach and Smith (1990), teams are needed for organizations to face the performance challenges that confront them in the market. The response needed to address competitive threats, technological change and environmental constraints is beyond the reach of individual performance.

Other benefits can accrue to team-based organizations. Considerable data exist that suggest that teams are an effective way to meet organizational goals and implement cost reductions. Tjosvold (1986) outlines other benefits found in organizations that work in teams. Employee competence and commitment are enhanced when employees learn from others, share their expertise, develop ideas, communicate with others and develop their abilities. These loyal and skilled employees are more motivated from contributing to a common goal. He adds that teamwork satisfies the need to feel connected and valued and facilitates feelings of self-worth and self-control (Tjosvold 1986).

Tjosvold (1986) also argues that teamwork enables greater adaptation to the environment. Organizations must continually adapt to the changing demands of customers, markets, suppliers, regulators, technologies and stockholders. Teams facilitate coordination between the organization and the environment so that employees who are listening and working with customers are able "to develop new products, discover quality-control problems and develop marketing approaches" (Tjosvold 1986). Hope & Hope (1996) agree with these findings as well, "grouped around key business process such as new product development or order fulfillment, the team-based approach places power and responsibility where it belongs – at the points of contact between the organization and the customer" (Hope & Hope 1996).

2.2.2 Study of Teams and Teamwork in Organizations

Evidence from studies on teams in organizations reveals that effective teams contribute to organizational effectiveness, productivity, efficiency and adaptiveness (Hackman 1990). Guzzo and Dickson (1996) reviewed a number of research studies on teams in organizations in terms of productivity and effectiveness and found that the introduction of teams into an organization does have a positive effect on performance. For example, they cite a meta-analysis by Macy & Izumi (1993) that examined both broad organizational changes and teams in organizations. Mazy & Izumi report that of all the large-scale organization changes made over a 30-year period, the creation of autonomous work teams and team development interventions made the greatest impact on financial performance. Guzzo and Dickson also review Applebaum & Blatt (1993) who provide a comprehensive review of research on teams, organizational systems and effectiveness. Applebaum & Blatt (1993) conclude from a review of 185 case studies that "there is clear evidence that team-based work arrangements bring about improved organizational performance, especially in measures of efficiency e.g. reduced cycle times in production and quality e.g. fewer defects in products" (Guzzo & Dickson 1996).

2.2.3 Teams & New Product Development

An area in which teams have a significant impact is on new product development. Market success and profitability of new products have a major influence on the success of an organization. Increasingly, cross-functional teams are used to develop and introduce targeted, customer-driven products. A number of researchers have examined new product development teams to gain insight on how they function and why they are able to create more innovative products usually at an alarmingly fast pace. Cooper (1996) conducted a benchmarking study of 161 businesses to determine the drivers of successful new product performance. Among the critical success factors, Cooper (1996) reported that "the use of a cross-functional teams, interfaces between departments... yield betters results than a functionally based new product effort" and that a "high quality new product project team" and "the use of cross-functional project teams" rated fifth and eighth among factors that distinguish the better performing businesses.

In new product development efforts, Cooper (1996) also reports some important characteristics of teams that contribute to success.

- A team that interacts and communicates frequently and has frequent project updates and problem resolution sessions

- A team that ensures that the entire team is always up to speed with developments
- A team that handles decisions quickly and efficiently
- A team that is able to do whatever necessary to get outsiders on-board to deliver quick decisions and results
- A team that has a defined and accountable team leader to advance the project

Getting new products to market quickly can have a significant impact on a product's success. Ittner and Larcker (1997) investigated new product development cycle time and organizational performance in the automobile and computer industries. They found that cross-functional teams can have a major impact on the product development process by drawing on the wealth of information and diverse backgrounds of their members. The result is an improved design process that is more efficient and one that encounters fewer problems down the road in terms of manufacturing difficulties and market or product portfolio mismatches. Results from Ittner and Larcker's study indicate that the use of cross-functional teams in both industries is related positively with performance and with fast cycle times for development. However, his results also show that the full benefit of teams is felt in organizations whose products are more innovative and unique. Gupta, Raj and Wilemon (1986) support the fact that the need for cross-integration increases when the firm is entering new markets, introducing products dissimilar to past products and when there is high uncertainty in the market.

An important objective regarding the use of teams in new product development is to integrate customer needs throughout the development process. In new product development efforts, integrating marketing and R&D has posed to be a great challenge for many organizations (Gupta, Raj & Wilemon 1987). However, successful companies know greater effort toward customer satisfaction paves the way toward profitability and competitiveness. Some companies employ techniques such as quality function deployment (QFD) to get marketing and R&D to engage in productive partnerships. Griffin and Hauser (1993) describe this technique as "a product development process based on interfunctional teams (marketing, manufacturing, engineering and R&D) ...to deploy customer input throughout the design, manufacturing and service delivery".

Clearly, a team-based approach is needed to overcome functional mindsets and work toward the common goal of providing customers with products and services that meet or even exceed their expectations. The key to bridging that gap and bringing groups closer together is sharing of information. In Rajesh (2000), a study was conducted to examine the effect new product development teams have on new product quality. Rajesh hypothesized that without effective integration of information from diverse sources, individuals would pull the product in different directions and adversely affect new product quality. Effective integration of functional knowledge is necessary for the team to discover better ways to satisfy customer needs, for example, "R&D can get ideas from marketing to enhance product performance and from manufacturing to make the product more reliable" (Rajesh 2000). As expected, information integration was positively related to new product quality with significant results. Information integration also had a positive effect on product innovativeness with significant results.

2.2.4 Team Structures & Team Types

A number of other examples of team in organizations are cited in the literature, in the form of individual case study. Cross functional teams in health care organizations (McKenzie 1994), in purchasing functions (Murphy & Heberling 1996, Trent 1994) and in customer management for manufacturing companies (Elmuti 1996) provide some of the evidence that teams are becoming a well entrenched part of organizations and opening organizations to new a structure and new processes. As illustrated above, teams take on many forms in many areas of the organization, each with different organizational purposes, functions, objectives, authorities, permanency and formal structure.

In the literature, however, one finds the preponderance of the research on teams focused on what Dunphy & Bryant (1996) call an "operational" focus. Researchers have focused on the advantages teams bring to organizations by reorganizing activities with measurable outputs that are easily tracked. Productivity, quality, cycle time, new products are more readily quantified than strategies or closeness with the customer. With the exception of Katzenbach's focus on top management teams, "there has been little or no research which links the introduction of teams to the attainment of strategic objectives" (Dunphy & Bryant 1996). Researchers must strive to identify measures that identify teams' impact on successful strategies for customer development, competitive positioning and market performance. Dunphy & Bryant (1996) call for new measures of team performance – "defining appropriate measures and establishing reliable measurement processes will make a significant contribution to our knowledge of the contributions teams can make to organizational performance".

In a conceptual piece based on case studies by the researchers, Dunphy and Bryant (1996) propose that team performance and a team's contribution to an organization be measured by its impact on cost, value and innovation. Dunphy and Bryant purport that different team designs (a multi-skilled team, a self-managed work team, and a self-led team) that have differing levels of responsibility in the organization and can have differing impact on any of the above proposed organizational performance dimensions.

For example, in multi-skilling, which is felt to be appropriate for teams involving low-skill complexity, the greatest impact is on cost as it leads to greater workforce flexibility which impacts organizational performance in terms of efficiency. Fewer workers can perform the same range of tasks. Quality is also impacted as raising skill levels around the full range of the task gives a broader understanding and a greater sense of ownership and pride in doing an effective job.

In the second team type, self-managed work teams, "performance is enhanced by taking decisions closer to the organization's interface with its environment" (Dunphy & Bryant 1996). These types of teams have the authority and knowledge that was once available only to management. Team members develop goal clarity and increased commitment to the task. The performance benefits are in terms of value and deliver results in "product and service quality, reliability and incremental adaptations to work processes, products and services" (Dunphy & Bryant 1996).

In the third team type, self-led teams contribute by influencing strategic processes and decision-making in terms of organizational performance. The purpose of these is to define and to solve complex problems and to "become effective vehicles for translating strategy into the core workflow" (Dunphy & Bryant 1996). Dunphy & Bryant place marketing teams within this type of team, as they are responsible for developing and implementing marketing strategies for the organization. The impact of these teams is on results as "innovation is increasingly the performance factor which provides key competitive advantage in high value-added industries (Dunphy & Bryant 1996).

As the need to study teams in today's competitive environment grows, some researchers are moving beyond traditional groups and addressing teams of "knowledge workers" and professionals. Janz, Colquitt & Noe (1997) as well as Campion, Pepper and Medsker (1996) address the effectiveness of teams of knowledge workers. Knowledge workers are defined as "high level employees who apply theoretical and analytical knowledge acquired through formal education" to develop the company's products, services and customers (Janz, Colquitt & Noe 1997). More of today's employees are involved in and required to perform knowledge work. The complexity of work performed by this group differs dramatically from production workers. Job characteristics of professional workers include self-management, participation, strong communication with others, discretion over work assignments (Campion, Pepper and Medsker 1996) which requires greater interdependence, coordination, creativity and innovativeness (Janz, Colquitt & Noe 1997).

Already higher on some of the criteria that traditionally defines an effective team, knowledge workers require team effectiveness to be judged by additional criteria. Campion, Pepper and Medsker (1996) directly address this question by replicating their 1993 study examining whether team characteristics are predictive of team effectiveness. Results from Campion, Pepper and Medsker (1996) demonstrate much similarity in the findings of both studies. Overall, they find that for teams of professional employees as well as for teams of nonexempt administrative employees, that team characteristics are predictive of a team's effectiveness. Team characteristics were items such as job design, interdependent tasks, a diverse group, organizational support, training, communication and cooperation. These results are important as they validate that similar team characteristics are predictive of effectiveness in a variety of team types.

In another study on knowledge worker team effectiveness, Janz, Colquitt and Noe (1997) remark that this segment of the workforce is one the most likely to use teams in the workplace, but that few empirical studies have been conducted on teams in professional industries. Their study delved more deeply into the variables that impact effectiveness of teams of knowledge workers. Included in their study are factors such as team design (autonomy, interdependence, maturity of the team), team process (sharing of ideas and information, helping behavior and innovating) and team context (efficiency of information transmission, feedback frequency, goal quality, time pressure). Results show that autonomy and interdependence are critical for knowledge workers. More importantly, this research validates that team process behaviors are significantly related to effectiveness, in particular when goal quality and information transmission are strong. Time pressure, as expected, has a negative impact on effectiveness. These results are important in a practical sense as they help managers of knowledge workers design and facilitate their teams effectively so that performance and satisfaction are high.

In terms of studies that refer specifically to marketing teams, very little exists. A conceptual article by Good and Schultz (1997) examined the use of teams in a marketing environment in industrial companies. They claim that marketing teams can be an efficient low cost strategy to direct expensive resources (i.e. employees) toward mutually important organizational goals. In business-to-business markets, close ties with the customer are imperative. Good and Schultz note that marketing teams can be a profitable strategy because customers will be better served. The needs of today's customers are increasingly complex requiring rapid information exchange and a versatile response. Good and Schultz suggest marketing teams take advantage of technology to exchange information and at times, bring the customer in a member of the team in order to communicate on a variety of issues such as product specifications, delivery schedules, impending events, etc. Information is the "crucial element that collectively directs marketing team activities, and as well defines the difference between high and low marketing performance" (Good and Schultz 1997) and greater interaction and exchange of information enhances the abilities of all teams members to assess and act on a variety of situations (trends, problems, etc.). Although Good and Schultz propose these ideas conceptually, intuitively, they make much sense.

2.2.5 Barriers & Resistance to Teams.

Katzenbach and Smith (1993) express that even in recent times, the impact of teams is extremely underexploited. Through their research, they learned that many businesses recognize the value of teams, but allow other factors to prevent them from taking advantage of their benefits. If teams hold the secret to a harmonious and participative work environment, improved quality and performance and a superior competitive advantage, then why are all organizations not taking advantage of this type of organizational structure. Why do many organizations, departments, managers and individuals resist working in teams? The simple answer is that implementing and sustaining effective teams is not easy and requires a number of hurdles to be overcome.

Teams fail in organizations for a number of reasons, including the simple fact that the work or the task was not appropriate for a team. Hall (1998) concludes that teams often fail because the structure and the systems of the organization are not designed to support teams, while Recardo and Jolly (1997) feel that the critical element missing to support teams in organizations is the appropriate culture. An autocratic, hierarchical culture will impede a team's ability to develop. In a 1993 survey of 4,500 teams and in a follow up survey in 2000, the Wilson Learning Corp. concluded that the reasons teams fail fall into distinct categories: organizational, individual and team-specific. Organizational barriers mentioned frequently by respondents included a reward, compensation and appraisal system focused on individual performance and ill prepared for team issues; weak commitment, support and team leadership from top management; and poor organizational alignment in terms a structure that enables people to work together. Individual and team-based barriers included the mind shift needed for individuals to let go of their personal agendas; a lack of knowledge, skills and abilities needed to work as a teams, share workload and set team-based goals; and investing the time needed for effective teams process, communication and collaboration.

Despite the benefits that a team approach could add, a number of companies fail to make the leap to a formal team structure. It is evident in some of the literature and industry case studies that functional silos persist. McDermott, Brawley and Waite (1998) present some of the difficulties teams encounter which discourage companies to create formal team structures.

- Team processes that are not given a chance to develop
- Lack of both the appropriate support and restraint from team leaders and supervisors
- Performance appraisal and compensation systems designed for individual rather than team performance
- Poor definition of team mandates and purpose
- Functional unit heads that feel threatened by the authority of the team
- Weak organizational commitment in terms of time, resources, training and personnel
- Poorly developed team member skills and team leadership skills, and
- Culture not conducive for openness and sharing of information down and across levels

With so many barriers to a team-based organization, it is a wonder why organizations bother to put themselves through such organizational stress. The advantages gained and benefits realized must some how be worthwhile enough for certain organizations to make the collective effort. This is the central question under study in this project. Any company that has undergone an organizational change exercise knows that it is not an overnight process. As Hankinson (1999) explains in an empirical study that examine organizational structure in companies with the world's top 100 brands, "...organizational change can be a lengthy process and difficult process with rather more involved than simply re-defining job roles, work processes and the composition of cross-functional teams (Hankinson 1999). A new style of management in team-based organizations requires managers and employees spend more time in meetings coordinating and reaching consensual decisions. As a result, Hankinson (1999) explains, adequate adjustment time is needed before the benefits of organizational structure change are felt.

A further argument suggests that, from a 'resource based view', a firm that is able to deploy or transform its resources well has a unique capability that can be translated into competitive advantage. Yeoh and Roth (1999) argue that a firm may not have better resources but rather makes better use of the resources that it has. This argument can be extended for teams and people within them, being one of the firm's resources and skillfully employing those teams can bring a unique competitive advantage to the company. As demonstrated earlier, teams do not just happen, but have to be carefully thought out, supported, maintained, reinforced and rewarded to maximize their benefit. This distinctive competence makes teams extremely valuable given the organizational skill required. Firms that employ teams to integrate knowledge about customers and competitors, and then use teams to develop and implement new products and marketing programs gain an enduring source of competitive advantage over other firms.

The teams literature drew frequently upon examples in manufacturing companies and the impact a team-based structure had on productivity, efficiency and customer focus. Part of the difficulty in capturing the same results when teams have been implemented into knowledge-based organizations has been identifying the output measures that can capture the impact.

2.3 MARKET-ORIENTATION

What drives the value in a professional organization differs from that in other types of organizations. In knowledge based organizations, higher sales, strong market share, persistent profitability, superior products and outstanding service result from a different set of activities than those found in manufacturing organizations. Factors such as value-added services, intellectual advice, relationships with stakeholders and suppliers, competitive positioning, customer knowledge, sales effectiveness and custom made solutions can set one organization apart from another.

A question that has arisen over the past decade is how some firms achieve success while others do not. Several researchers have addressed this question and identified that companies with certain attributes tend to fair better than others that do not possess these business traits. The market-orientation theory will be examined in detail in this next section and then used to build the case that companies, especially knowledge-based companies, that implement teams into their structure, are more likely to have an intimate and shared understanding of their customers and competitors and have effective internal company processes to communicate, integrate, analyze and respond to external market issues. As will be demonstrated, market oriented firms have proven to be more successful than firms that are not market oriented. Teams, it will be argued, are the mechanism that help firms achieve and succeed with their market oriented culture.

2.3.1 Defining Market Orientation

Kohli and Jaworski (1990) as well as other researchers, Narver and Slater (1990, 1994a, 1994b, 1995) studied market orientation theory, construct and application throughout the 1990's. Kohli and Jaworski (1990) describe market orientation as "the organization-wide generation, dissemination and responsiveness to market intelligence". Implicit in this definition are elements relating to both the external environment as well as to internal aspects such as organizational structure, culture and internal functioning. Researchers of market-orientation emphasize both the outcomes of market orientation, i.e. performance and profitability, as well as organizational factors that contribute to a company's market orientation.

Based on field interviews, Kohli and Jaworski (1990) outline what they found to be the pillars of a market oriented organization. Although their theory has since evolved, their original approached emphasized customer focus, coordinated marketing and profitability. Customer focus involves obtaining information not only on your customer's current and future needs but also on other market factors such as the competition and the regulatory environment. Coordinated marketing implies that a number of the organization's departments, not just marketing, are aware of customer needs by means of shared market intelligence. Kohli and Jaworski (1990) also see profitability as an important part of market orientation but that it is the consequence of being market oriented rather than being part of its foundation.

Slater and Narver (1990) define market orientation in a similar and complementary way to Kohli and Jaworski (1990). The three major components they identify are customer orientation, competitor focus and cross functional coordination. In order to create superior value for its customers, a "market driven business develops a comprehensive understanding of its customer's business and how customers in the immediate and downstream markets perceive value" (Slater & Narver 1990). Delivering superior value also calls for a business to continuously monitor the strengths, weaknesses, capabilities and strategies of competitors. And thirdly, all personnel, departments and resources throughout the company must be coordinated to enable the business to consistently deliver superior value to customers.

The market orientation concept can be seen to be both a business philosophy and a management practice. As explained by these researchers, organizations must embrace a customer orientation / marketing concept where the "purpose of the organization is to respond to the customer rather than attempt to change the customer to fit the organization's purposes" (Ruekert 1992). In addition to the philosophy, market orientation also has a behavioral component with certain actions the organization must pursue to implement this philosophy. Ruekert (1992) emphasizes that organizations must actively develop and maintain a focus on their customer and the markets they serve. Their actions must be guided by the information they receive from the market. These actions must be present in all functions and divisions across the organization.

One of the activities that defines a market oriented company is the generation of market intelligence (Kohli & Jaworski 1990). Effective market intelligence includes a number of components. Companies must understand their customer's needs and preferences of today but also have a keen understanding of the needs and preferences of tomorrow's customers. Companies must also have a very thorough understanding of their competitors and their actions so they can understand why customers choose or switch to an alternative. Aside from customers and competitors, other external factors must also be included in a company's collective market intelligence, such as government laws and regulations, technological developments, economic trends, and market forces.

Keeping up with market intelligence requires monitoring a broad range of factors that can influence customers. Collecting market intelligence is accomplished through a variety of both informal and formal means. These techniques include a combination of market research, customer surveys, customer databases, conferences, meetings, informal gatherings and social events among other needed in order to gather information. Further, gathering information must not be left as the sole responsibility of the marketing department (Kohli and Jaworski 1990). As should be an important part of an organization's culture, the generation of market intelligence must intelligence must be done by departments throughout the organization. Market oriented companies take many steps in order to be able to accurately anticipate customer needs.

Through their research, Kohli and Jaworski (1990) identified a second component of a market oriented company – intelligence dissemination. Customer and competitor information can only be useful if shared and understood by "virtually all departments in an organization – R&D to design and develop a new product, manufacturing to gear up and produce it, purchasing to develop new vendors for new parts/materials, finance to fund activities, and so on" (Kohli & Jaworski, 1990). It is important that different departments have a shared understanding so that they can each act in a coordinated fashion to attain organizational objectives. Market intelligence is disseminated effectively when everyone in the organization has access to and knowledge of customer, competitor and market information. Horizontal communication within and between departments has an important role in disseminating market intelligence. Aside from formal communication methods, it is the informal methods that serve as a powerful tool to help awareness of customer needs permeate the organization.

The third element of a market oriented company is responsiveness. Unless an organization turns the knowledge it has into plans, actions, programs and outcomes, it will not be serving its customers nor maintaining profitability. According to Kohli, Jaworski and Kumar (1993), in a market oriented firm, marketplace needs will "play a prominent role in the assessment of market segments and development of marketing programs". A firm's responsiveness also involves the speed to which marketing programs are coordinated and implemented as a company must be able to act swiftly once it has acquired insight on its customers' needs or competitors' actions.

2.3.2 Market Orientation and Interdepartmental Dynamics

While there are many components and elements of a market orientation, one of its core aspects is inter-departmental dynamics / inter-functional coordination. Interaction and coordination among people and departments is believed to be an important antecedent to market orientation (Jaworski & Kohli, 1993).

In Kohli and Jaworski's (1990) conceptual framework of a market orientation, they identify several antecedents that either foster or impede the development of a market orientation that are important to this discussion. While most important are interdepartmental dynamics, other components such as senior management factors and organizational systems will also be discussed as they are important to the culture of the organization and are related to the discussion of effective teams. An important prerequisite of a market orientation is the commitment and leadership of top management in fostering customer oriented values and beliefs. A market oriented company must be responsive to changing market needs and so must introduce innovative products and services. Top managers must send clear signals that the company has a willingness to takes risks and to incur occasional failures of innovative programs.

A second component is the organizational systems that can encourage market oriented behavior. Such things as strong departmentalization, formalization and centralization can negatively impact innovative behavior in so much that intelligence generation, dissemination and response design may be impeded. Conversely though, departmentalization, formalization and centralization are likely to positively impact implementation and the carrying out of decisions.

Interdepartmental dynamics play a significant role in a company's ability to develop a market orientation. Among the formal and informal interactions among departments in an organization, Kohli and Jaworski (1990) identify conflict as one of the most important dynamics that can impact ability to pursue a market orientation. Interdepartmental conflict and power struggles are detrimental to communication across departments, to implementation of the marketing concept and to the organization's concerted response to market needs. Kohli and Jaworski (1990, 1993) also cite interdepartmental connectedness as a positive contributor to market orientation. Connectedness involves both the formal and informal mechanisms to increase contact among employees across departments. This connectedness, as it is referred to, facilitates the exchange and utilization of information. Jaworski and Kohli (1993) claim that the greater extent to which individuals are networked, the more likely they are to exchange market intelligence information and be able to respond to it. Whether it is formal periodic review meetings or informal social gatherings, any opportunity to improve communication channels across departments will facilitate dissemination of and responsiveness to market intelligence.

Several other researchers have also examined the relationship between market orientation and organizational systems. Ruekert (1992) proposed that the processes used by an organization can facilitate accomplishing organizational goals, one in particular being market orientation. Ruekert examined three organizational systems that could support market oriented behaviors. The first organizational system he examined was the recruiting and selection system. Through empirical investigation, he found "correlations between the use of customer information, the development of a market oriented strategy and execution of that strategy were positively correlated with the recruiting, training and reward / compensation practices of the business unit" (Ruekert p.238 1992). In a similar fashion, he found that training can also support a market oriented strategy if training programs emphasized skills that improve customer service and increase sensitivity to customer needs. The third system Reukert (1992) found to have an impact on employee attitudes and behaviors is the method of reward and compensation. By reinforcing the importance of satisfying customer needs, individuals will work toward meeting this goal. One of the major findings of this study is that the long term shift toward market orientation is positively related to the organizations processes that are implemented to support the shift.

Slater and Narver (1995) also investigated the market orientation culture and suggested that it can only achieve maximum effectiveness if the structures, processes and incentives are present to operationalize the appropriate cultural values. Slater and Narver (1995) highlight that structure, in terms of interfunctional coordination, are critical to information dissemination and organizational learning. The value of the information in an organization can increase when it is shared by a number of players within the organization. By sharing the information across the organization, more individuals can question it, amplify it, modify it and provide new insights. This exchange along with multifunctional discussions are critical in a responsive market oriented organization, "when organizations remove the functional barriers that impede the flow of information everywhere from the development to manufacturing to sales and marketing, they improve the organization's ability to make rapid decisions and execute them effectively" (Slater & Narver 1995).

Other researchers have emphasized the importance of organizational structures and processes in achieving organizational outcomes such as creating superior value for customers. Fisher, Maltz and Jaworski (1997) found that information sharing among functions improve when integrated goals require interfunctional collaboration. Managers that identify very strongly with their function, be it marketing or engineering, rather than identifying strongly with the organization as a whole responded better to formally integrated goals rather than information sharing norms that encourage communication. Since greater functional identification can lead to disharmony and coercive type behaviors, Fisher, Maltz and Jaworski (1997) suggest that in cross functional teams, project teams and matrixed organizations, individual managers should be rewarded for team play, not functional isolation.

The implications of organizational structure in a market oriented organization with respect to product quality has been another area of study for Menon and Jaworski (1997). The importance of interfunctional interactions and cross functional demands on product development processes were examined to investigate whether product quality goals are affected by the interdepartmental interactions with a sample of close to 500 organizations (Menon & Jaworski 1997). More specifically, the quality of the interdepartmental interactions were hypothesized to facilitate responsiveness to customers including with the marketing mix as well as with the product and service offering. Interdepartmental connectedness or the extent of interaction among individuals across departments fosters "greater esprit de corps and allows for quick and early exchange of customer and market information" (Menon & Jaworski 1997). This connectedness leads to superior product quality because key project members can discuss and solve project related issues, outline clear product quality requirements and deliver innovative solutions to customer problems. Interdepartmental conflict, on the other hand, is a barrier and can misalign functional unit goals and objectives. Infrequent and weak communication can result from conflict seriously compromising the organization's ability to deliver superior quality. As expected, Menon and Jaworski's findings supported quality products in organizations with strong interdepartmental linkages and interdepartmental conflict decreasing the level of product quality.

From the preceding arguments found in the market orientation literature, it would seem that closer ties and increased communication might be the answer to breaking down the barriers with other departments. Marketing has a strong interest in doing so as a means of sharing the responsibility for customers throughout the organization. The research suggests that better departmental interactions will affect business performance in terms of customer relationships, product quality, time to market and innovation. Despite some of the apparent connections, rigorous investigation on "the direct link between interdepartmental interactions, cross-functional working and team work on the one hand, and business and market related outcomes on the other hand" (Foreman 1997) has yet to be completed. A worthwhile endeavor would be to explore team-based structures with market orientation and performance outcomes.

2.3.3 Market Orientation and Performance

A key relationship in the market orientation theory is its effect on performance. The market orientation theory states that positive organizational and business consequences will result when it is implemented into an organization. A strong body of research has illustrated the market orientation → performance relationship (Kumar *et al.* 1998, Pelham 1997, Slater & Narver 1994a, 1994b, Kohli & Jaworski 1993, Narver & Slater 1990). The main purpose of most empirical market orientation studies has been to investigate and confirm the assertion that business performance is improved through a number of factors on which a market oriented strategy, culture and philosophy impacts. The academic research has centered on identifying the outcomes and factors that define success of businesses to evaluate whether market oriented business have advantages over non-market oriented businesses. Slater and Narver (1994) conceived that adopting a market orientation would result in several key outcomes that would translate into superior customer value: service and customer satisfaction, market driven quality and innovation / new product development. These, and other relationships with performance are detailed below.

Jaworski and Kohli (1993) investigated overall business performance of market oriented companies in a variety of environmental contexts. In a series of two empirical studies on business units from top companies, they examined business performance using a subjective measure. They also examined how a company's performance is related to market orientation in markets that are turbulent and competitive. They hypothesized that organizations that operate in environments where customers' preferences change frequently, where competition is intense and where technology is changing slowly, that the link between market orientation and performance will be stronger because of the greater need to track and respond to evolving customer needs, to offer superior choices compared with competitor offerings and to gain competitive advantage through avenues other than technology. This hypothesis, however, was not supported through the empirical study. Rather, market orientation and performance are supported in a variety of environmental contexts. Narver and Slater (1994) also concluded that competitive the environment does not moderate the market orientation performance relationship. They assert that market orientation is equally important in both high and low turbulent and high and low competitive markets.

The market orientation performance relationship has also been examined in a number a specific contexts in order to test its robustness. In the hospital industry, Raju et al (1995) assessed a hospital's market orientation and determined that it had a significant effect on several performance dimensions.

- Financial performance was closely linked with the market orientation variables of responsiveness to competition and responsiveness to customers.
- Market/product development, which represents innovativeness, was found to be related to intelligence generation and responsiveness to competition. This implies that how hospitals monitor and respond to competition will lead to improved customer satisfaction.
- Internal quality, which relates to how employees feel about their work and was found to depend on how well the hospital collects information and disseminates it to its employees.

In another study, also set in the healthcare industry, Kumar et al. (1998) examined five subjective performance criteria to test growth in revenue, return on capital, success of new products / services, success in retaining patients and success in controlling expenses. Market orientation was found to be a predictor of all five performance variables, while the hypothesized moderator variables of competitive hostility, market turbulence and weak supplier power have a positive moderating effect.

The market orientation performance relationship has also been tested for small business as opposed to mostly large firms of past studies. Appiah-Adu (1997) used new product success, sales growth and ROI as performance measures for market oriented small firms and concluded that the relationships found for large firms holds for small firms. These conclusions lend more support for the argument that small firms must also stay close to their customer, employ resources to understand and satisfy customers, monitor competitors and develop new products.

Pelham (1997), in a market orientation study proposed testing performance as a multi-dimensional construct, defined as firm effectiveness, consisting of new product success, customer retention and relative product quality in small industrial firms. Pelham (1997) argued that market oriented firms are able to tap into sources that provide sustainable competitive advantage over non-market oriented firms due to goals of maximizing customer value for present and future buyers. Pelham also examined specifically which elements of market orientation influence elements of performance and therefore lead to profitability. He concluded that firm effectiveness moderates the market orientation profitability relationship. In this, he determined that firms with a high level of market orientation are more likely to command premium pricing for better quality products, reduce development costs due to fewer failure rates, attain a higher market share because of higher perceived product quality and value and achieve a economies of scale from a larger market.

Avlonitis and Gounaris (1997) investigated market orientation in industrial versus consumer goods companies to evaluate impact on performance. Industrial goods companies grow due to their engineering and technical skills, but their success can be furthered should they be able to combine these skills with marketing skills and market knowledge. Performance criteria consisted of a subjective measures of profits, annual turn over, ROI and market share. The data from this survey suggest that consumer goods companies are, on average, more market oriented than industrial goods companies. Further, in both cases of industrial and consumer companies, the more market oriented, the better the performance, market orientation, however, has greater impact on performance for industrial good companies than for consumer goods companies. This insight is important for firms who focus their energies and resources solely on production, product or sales orientation. These companies have a huge opportunity to improve business performance substantially by concentrating on adapting their products to the specific needs and wants of their customers.

Another body of research has examined market orientation's impact on strategy formulation and strategy implementation (Heiens 2000, Tadepalli & Avila 1999, Pelham 2000, Pelham 1996, Ruekert 1992). Some researchers have proposed that the degree of market orientation and the choice of competitive strategy ought to be examined (Kumar et al. 1998) in order to better understand the determinants of the market orientation-performance relationship. Other researchers argue that the strong link between market orientation and performance is based on the concept of sustainable competitive advantage because it is

1) rare
2) difficult to instill and maintain

3) hard for some to understand that there is a causal link between these market oriented norms and behavior (i.e. performance outcomes) and
4) the ability to understand what the customer values takes much effort (Pelham 2000).

Pelham (2000) argues that a market oriented culture can improve strategy implementation because it positively influences the degree of focus and the interfunctional coordination within the firm.

While the market orientation performance relationship has been established in both industrial and consumer markets, Appiah-Adu (1998) sought to test this relationship in emerging, rapidly expanding high technology markets. Using the biotechnology sector, four areas of performance were measured: introduction of new products, market share growth, profit margin, and overall performance. The data from this study show that market orientation had a significant association with all performance dimensions with the exception of new product success. New product success in the biotechnology sector was concluded to be dependent on more variables than just market orientation. On the whole, market oriented biotechnology firms performed better than those with lower levels of market orientation "owing to the increasing emphasis placed by biotechnology companies on the importance of realizing and understanding markets: (Appiah-Adu 1997).

As illustrated, a number of studies using a variety of samples have found unequivocal support for a positive relationship between market orientation and performance. Performance measures in these studies have ranged from objective measures such as market share, number of new products and return on assets to more subjective measures of performance including perceived performance relative to competitors, customer satisfaction and employee commitment. It also appears that the market orientation theory applies rather well in a number of industries and organizational contexts lending support that a market orientation is a strong predictor of organizational performance.

Market orientation has also been associated with other theories such as a "learning orientation" (Baker 1999) and the learning organization (Slater & Narver 1995, Hurley & Hult 1998) in which the organization's culture provides strong norms for learning from customers and competitors if complemented by the necessary structures, processes and incentives. Organizational learning is characterized by a process that includes information acquisition, information dissemination and shared interpretation. A major component of information acquisition comes from learning from others through networking, benchmarking common practices, strategic alliances and working with key customers. Slater and Narver (1995) emphasize that more successful organizations ensure that their networks include people with different perspectives in order to draw in a variety experiences into the organization. Organizational learning is also distinguished by the dissemination and shared (organizational) interpretation of the information. The value of the information increases when it is seen in a broader context by all organizational players. These functional interfaces are critical in everything from the product development process to product launch to sales and marketing activities. Removal of barriers improves the flow of information and improves the organization's ability to make rapid decisions and execute them effectively. Narver and Slater argue that for information sharing to be effective in a learning organization, "systematic and structural constraints on information flows must be dismantled".

For organizational learning to occur, there must be agreement on what the information means for the organization and it impact on the business. In a complex and dynamic market, an organization with a learning culture will be able to take in information from the market, share it and respond to it much like a market orientation culture. For both a market orientation culture and a learning culture to develop and sustain, the organization must have the structure, systems and process in place. Salter and Narver (1995) state that market orientation is the principle cultural foundation of the learning organization and argue that it provides the organization an overall value system, strong norms for sharing information and reaching a consensus on its meaning. They also add that the marketing function has a key role in the creation of a learning organization, "because of its external focus...market oriented, and entrepreneurial values that constitute the culture of a learning organization" (Narver & Slater 1995).

In terms of performance, another positive impact market orientation makes is on innovation. Ham, Kim and Srivastava (1998) set out to investigate the relationship innovation has on performance in market oriented organizations. These researchers hypothesized a causal relationship where innovativeness mediates the market orientation performance link. An organization that is customer and competitor oriented will place its customers first, strive for customer satisfaction, proactively anticipate competitor strategies and therefore have continuous innovation. Another part of this explanation rests on the argument that interfunctional integration and openness in communication relate to organizational innovativeness in that it provides the "bridgework in mitigating distrust and conflicts among the separate functional units" (Han, Kim & Srivastava 1998 p.38). Further, with cross-functional integration, problem solving capabilities are enhanced by employees working toward a common goal.

2.4 ORGANIZATIONAL CHANGES IN THE PHARMACEUTICAL INDUSTRY

The following section reviews the existing literature relating to product management, marketing and teams in the pharmaceutical industry. This work is then complemented by the results of 16 personal interviews with product managers in the Canadian pharmaceutical industry in Section 3.

2.4.1 Trends in the Pharmaceutical Industry

The Canadian pharmaceutical industry has been selected for study because, much like in many other industries, product management is fundamental to the success of the pharmaceutical organization. And as in many other industries, product management systems are adapting to meet the needs of an increasingly competitive and complex environment. The external environmental forces impacting this industry are some of the drivers of change within pharmaceutical companies. These trends are reviewed below and show why product management systems need to become more integrated with other functions in the company.

As we head into a new millennium, a number of issues and trends that impact pharmaceutical industry emerge. According to Flynn (1998) who reviews the 1998 Deloite & Touche Pharmaceutical Report, the most apparent trend over the past years is globalization. As reported, executives claim to be "searching for ways to launch their products worldwide, spread R&D costs and gain access to a wider and more diverse patient population" (Flynn 1998). The need to offer the same therapeutic choices in every country and to have consistent messages across the globe is vital to market dominance. Given this, research and development initiatives are often planned at the global level with a more integrated approach. R&D planning is also less silo-driven than in the past. Many R&D strategies are now planned in concert with multiple departments to include not only scientists but sales and marketing staff as well (Flynn 1998), impling a greater need for coordination among these departments. A rich and innovative product pipeline is a necessity to sustain the exceptional and persistent profitability witnessed in past decades in this industry. According to Koberstein (1998), many companies will look to research partnerships and licensing agreements to supplement research and fuel product growth.

Another major trend is the continued number of mergers and acquisitions. Every country is seeing fewer companies in the marketplace. As a result, a few big players will dominate. The stakes get higher and the competition becomes more intense. Pressures within merged companies are high with the integration or change in culture, structure and processes. The adjustment periods can be lengthy all while the company is expected to perform at exceptional levels.

New regulations and advancing technology also impact marketing techniques for prescription products. Although technically not approved in Canada yet, direct to consumer (DTC) advertising has had an impact on product promotion strategies and expands the audiences to include a new and unfamiliar group to the traditional market. With the onslaught of new technologies, pharmaceutical marketers have new channel to reach their customers. The Internet provides a new interactive medium to convey health and product information to both physicians and consumers. The ability to provide drug / product information to physicians electronically by means of an e-detail (electronic versions of sales representative visits to a physician) also adds a new technique to the marketing mix. New technologies permit marketers to more deeply segment their customers and understand the behaviors driving their choices more deeply (Lehmann & Winer 1994). The merging of multiple databases, not possible in the past permits more effective deployment of the pharmaceutical sales force. These advanced techniques not only require more skill but place higher demands on the product manager to coordinate the multiple internal players required to market the drug.

One of the biggest challenges pharmaceutical companies face is market access. If the complex regulatory drug approval process were not challenging enough, gaining access to the provincial formulary list (whereby a province agrees to cover the cost of the drug for people covered under provincial drug plans) is daunting. Pharmaceutical companies must employ specialists in market access to address the needs of the public and private payer audience. Their work is so critical that it can make or break sales and a first to market position.

As outlined above, a number of challenges face the pharmaceutical industry. In order to operate in this environment, marketing departments need to lead the customer-oriented approach. According to Flynn (1998) reporting on the 1998 Deloitte and Touche Pharmaceutical Report, across the many countries, pharmaceutical executives feel that their current marketing departments need to develop the level of sophistication of their market and customer research abilities. Customers, physicians and consumers alike, are demanding more education, information, customized customer support and greater pre-sales service. Old marketing and sales approaches will be insufficient to sustain companies that are complacent in their approach to the customer.

2.4.2 Team-based Product Management in the Pharmaceutical Industry

The product manager and the product management system in the pharmaceutical industry has rarely been addressed in the academic literature but has received attention from the popular press. From training to communication to authority to workload, the product manager's job and responsibility has always drawn attention. Given the importance to ensure the success of the product, organizational structures, systems and processes need to aligned to support these objectives. Changing the marketing and product management system be more responsive and more effective has been an initiative within some pharmaceutical companies for some time. For close to ten years, the team approach to marketing and product management has been suggested (Larkin 1991, Anon. 1993) to alleviate internal boundary spanning, integrate multiple functions and place greater emphasis on customer-oriented strategies.

Increasing use of teams in the pharmaceutical industry is the trend that brand / product managers have eagerly anticipated. Increased interaction among the brand manager and the various other disciplines has always been desired. A formal team-based approach provides the mechanism that can ensure that the needed control and responsibility are in place. Larkin (1991) quotes a Product Director at Sanofi in the U.S., "The era of the individual brand manager trying to push all the elements through is drawing to an end", rather "a multi-disciplinary task force will be responsible for seeing a project through". The move toward shared decision-making and shared responsibilities with members of other disciplines in the company marks the beginning of a different way to design work in pharmaceutical companies. In the past, informal teams sprang up out of necessity to overcome several hurdles and inefficiencies and meet the greater demands placed on the product manager. In 1993, *Medical Marketing and Media* pointed out that product management had changed significantly and that the marketing team is the new mechanism to face difficult new trends and develop a sound marketing plan. In the early nineties, product managers in both Canada and the U.S. began to feel pressures from a number of environmental forces: pricing and profitability control; new guidelines and heightened scrutiny over advertising and promotion; growing complexity of government regulations; complicated new product approval procedures; critical first-to-market positions; restricted access to provincial formularies (Canada); and explosive growth of managed care (U.S.). *Medical Marketing and Media* (1993) predicted at that time that the marketing team would develop and implement the marketing plan and that the role of the product manager would shift to knowing who the experts are rather than be an expert at all of the various support functions.

A product marketing team in pharmaceutical companies addresses an important factor with respect to the product manager – skills and expertise. The skill set and competencies of product managers has frequently come under scrutiny. Pharmaceutical product managers carry an enormous responsibility for the success of the product and are required to ensure that all elements work in tandem. They must understand the past, present and future of the product, the indications, the side effects, the clinical studies, the market research, the sales force, the physicians, the pharmacists, the selected target market, its preferences, its behavior, and so on. Product mangers must display expertise in both strategic and tactical thinking, planning, analysis, forecasting, communicating, influencing, and creativity (Berek, 1998). A number of product managers coming up through the sales force and as a result, are found to have gaps in the skill set required for role of the product manager (Ross 1999). It has been noted that product managers feel ill-equipped to handle the task effectively. Frustration is frequently experienced with interdepartmental communications, getting cooperation from others, juggling priorities and heavy workloads. According to Ronald Lynch, Director of Pharmaceutical Development at the American Management Association, the product manager is the person accountable during the most critical time period of getting the product to market. This requires not only product management, but project management, time management and matrix management of the team. "No wonder, given all the complexities", according to Lynch, "the people with that responsibility are not equipped to handle it". Further, with a greater emphasis on extending product life cycles and sustaining competitive advantage, "there is a burning need for product managers to have a much higher level of understanding of the nuances of marketing, according to Lynch (Ross 1999).

The model of the product manager as the sole person responsible for the marketing plan is still persistent in many companies. The shift to teams, however, which began several years ago is becoming more common. Teams provide the solution to some of the problems mentioned earlier. Sal Guerriero of AstraZeneca (Ross 1999) expresses that "there is no way for any one person to be expert in every aspect of marketing, a team brings together al the people from the various different disciplines so that, collectively, the team has the experience to make the best decision". Further, a team with shared objectives is less likely to have conflicting workload priorities ensuring that the product manager is not left to complete a task alone. With greater opportunities to learn from others surrounding the product manager, all members will be more knowledgeable and the skill level will be collectively higher.

In terms of team-based pharmaceutical companies, Pfizer shines through as one of the most well known examples. For years, Pfizer has used a cross-functional approach in everything from R&D to marketing. McDermott, Brawley and Waite (1998) explain that Pfizer formed teams as a strategic response to address several business questions: to maximize efficiency, work more creatively, leverage existing resources, enhance product performance, become a more unified company, and meet the demands of the changing healthcare marketplace. Pfizer employs the team concept on a global basis where product teams from various countries meet to "cross-pollinate ideas and leverage ideas across borders" (McDermott, Brawley and Waite 1998).

Like many companies, Pfizer operated with informal teams and but found that these working groups had not reached their full potential. Concerted efforts were made to formally structure teams as they realized that "groups were falling short of operating at high potential – not because of our people, but because they were not structured to be high-performing teams" (McDermott, Brawley and Waite 1998). Pfizer Canada was reported to have restructured their marketing-driven product teams into therapeutic class teams several years ago and feel that "teams have been the key driver of strong and sustained growth" (McDermott, Brawley and Waite 1998). What may be lacking in other pharmaceutical companies that can be found in Pfizer is the degree of formalization of teams and the support from the organization in terms of authority, shared goals and a formal team-based appraisal system. In the past, "the product managers from marketing, and not the team...had been bearing full responsibility and accountability for the product teams' results, but without having the authority to secure the resources required for the teams' success" (McDermott, Brawley and Waite 1998). These features have made the difference and set it well ahead from its competitors.

A number of other pharmaceutical companies have transformed their structure and their strategies to facilitate a team-based approach. One of the greatest advantages companies gain is the improved exchange of information from cross discipline interactions. Higher quality decision-making results from this new mindset and more strategic approach to organizational structure. For example, at Roche, a variety of people share responsibility for medical marketing, including "clinical liaisons, product service mangers, clinical investigators and medical scientists" (Sterman 1998). It is felt that this more interdisciplinary approach will improve the overall marketing function because of the richer interface among marketing and clinical development and regulatory affairs among other departments. Sterman (1998) also cites some further advantages that accrue to an interdisciplinary team-based marketing organization such as: optimizing critical time for clinical regulatory review, marketing goals integrated into pharmaceutical development, "an advanced warning system to identify potential medical and regulatory issues and opportunities" and "a marketing organization positioned nationally with a reputation for scientific and medical excellence" (Sterman 1998).

Sustaining double-digit growth in the coming decade with the rising costs of R&D will place enormous strain on most pharmaceutical companies. Also, if the merger-frenzy continues in the pharmaceutical marketplace, successful integration will depend on strong leadership and strong values that emphasize the needs of customers.

3. QUALITATIVE STUDY – INTERVIEWS WITH PRODUCT MANAGERS IN THE PHARMACEUTICAL INDUSTRY

3.1 Objectives of Qualitative Interviews

The qualitative portion of the research served several purposes. The main objective was to validate the concept of team-based structures in knowledge-based organizations and their impact on performance. Specifically, we attempted to identify marketing department performance variables that should be included in the model. These variables were gleaned from responses to a structured interview with product managers within the pharmaceutical industry. The environment in which the pharmaceutical industry operates is both complex and at times, unique. The interviews permitted in-depth responses to complex issues. Clarification and elaboration on points of interest produced rich results.

3.2 Description of Sample and Methodology

The convenience sample consisted of sixteen product managers from the pharmaceutical industry in both the Montreal and Toronto areas. A cross-section of pharmaceutical companies is represented in the sample, including respondents from large, medium and small companies in terms of revenues and numbers of employees.

Product managers were recruited via telephone and where possible, references to identify potential participants were used in order to improve the likelihood of participation. Participants were assured that their results would remain confidential and that none of the questions would reveal anything confidential about their company, marketing strategies or plans. The structured interviews followed an interview guide consisting of five questions. The questions covered the following:

- Type of structure in their department

- Whether they work with others on projects / activities
- The results of working in teams and elements that would missing without teams
- Whether structure affects performance
- Sources of competitive advantage in the pharmaceutical industry

Interviews lasted 15 to 30 minutes. A copy of the interview questions is included in Appendix 1.

3.3 Results of Interviews

The interviews provided rich results and valuable input into model and questionnaire refinement. As will be seen, the results are not solely pharmaceutical industry specific but conclusions can be generalized across other industries with knowledge workers. In general, the results reveal that while product managers frequently do work with others, their position is still very independent for much of the work they must produce. Few express that it is the group or team's responsibility for results but rather they are accountable themselves. They recognize that the work they do is superior than what might be produced without the input from others, however.

Qualitative results should always be interpreted with caution. Because the sample size is small, it is not possible to verify if conclusions are representative of the larger population. Qualitative interviews do however permit in-depth responses to complex issues and enable the interviewer to clarify unclear answers and ask for elaboration on points of interest.

TABLE 1

SUMMARY OF RESULTS FROM INTERVIEWS

Type of structure in their department

- 31% Team-based
- 69% Functionally aligned

Whether they work with others on projects / activities

- Always, but not always formally in teams
- For larger projects (e.g. new product launches)

The results of working in teams

- Reality check and risk assessment for ideas
- Larger pool of skills and experience
- Accountability & Buy-in
- Sharing of knowledge
- Better understanding of customers and competitive environment
- Risk of failure lowered
- Time saved
- Strategic issues and messages captured

Whether structure affects performance

- Impacts ability to work effectively
- Can be a source of competitive advantage

Sources of competitive advantage in the pharmaceutical industry

- Relationships with opinion leaders and external stakeholders
- Market intelligence and understanding of customers
- Communication, coordination and integration among functional units (teams)
- Culture, people
- Drug / product
- Resources / Sales force
- Marketing
- First to market
- Market access

Marketing Department Performance Variables

- Risk Reduction
- Buy-in
- Speed to implement marketing plans and programs
- Relationship with key stakeholders and opinion leaders
- Superior marketing plan
- Understanding the regulatory environment and gaining market access

3.3.1 Type of Structure

Respondents were asked about the type of structure that best described their department and their organization. Of the sixteen respondents, only five described their organization as a team-based organization. Of the remaining respondents, eleven indicated that they have a hierarchical structure that is functionally aligned. Several product managers described their structure as either traditional or typical. Depending on the size, a typical structure might include: Vice President Marketing (or Sales & Marketing), Marketing Directors or Marketing Managers, Senior Product Manager, Product Manager, Associate Product Manager, Promotion Manager and Market Research. Product managers are usually separated into therapeutic classes with each product manager responsible for a line of products.

3.3.2 Working With Others

Generally, the consensus is that no product manager in the pharmaceutical industry can work alone and must call upon others to effectively do his / her job. The bigger the project, the more help needed and the closer people work together. Product launches usually require a team while existing products may not. One product manager described two types of teams that he was involved with: 1) a team to bring new products / drugs to the market and 2) a team to market existing products and implement marketing strategies. In both cases, the product manager was the champion of the team. In a product launch, the team might start working together two years before the product actually comes to market. This team might include members from clinical, regulatory affairs, pricing and market access. On-going teams for current products might consist of sales representatives, sales managers, sales training, market research, market access and medical communications. Some additional cross functional members might include part time or full time members from continuing health education, medical and clinical research, scientific affairs and health economics.

While these therapeutic area / product teams have similarity from one pharmaceutical company to the next, some other key differences emerged. Respondents differed greatly in how formal the team was and in how much commitment and resources they receive from other functional areas. Some other differences included whether the team was cross-functional or consisted only of marketing people. One of the most important differences was whether the product manager had goals that were tied in with other individuals.

Generally, the larger the company, the larger the team, as there are more functional specialists available. However, a larger multi-functional company did not imply a team-based structure. Some product managers felt that it was too time consuming to work in a team and that the difficulties of teams are not worth the effort. As one product manager stated,

- *"That might work in a small company, but not mine. Everybody does not always see eye to eye and doesn't want to help out because their goals and their focus are not the same as mine".*

Some pharmaceutical companies are closer to the team concept than others. For example, some product managers recognize the importance of working with clinical research or R&D in order to understand key product issues, while others retain the silos among these functions. As a result, in some pharmaceutical companies, other members become involved only when specific assistance is needed.

On the other end of the continuum, some pharmaceutical companies support the team effort by providing the team with everything they need to work together from the start.

Companies that work in teams recognize the value that is derived from the extra effort needed to develop good team processes. For example, one product manager explained that he has a new team forming and that they begin with a team charter to establish norms and responsibilities and a team culture. They also take about a week away to get to know each other and learn how the team works.

Working in a team in pharmaceuticals isn't a luxury but a necessity in order to simultaneously deal with the external environment and align internal strategies and tactics. One product manager explained the depth of this issue,

- *"When you are in the pharma business, the issues are very complex in terms of marketing these products and you need the help of clinical people, regulatory people and market access people. All these strategies have to work together. When I started years ago, you simply marketed your product. But now the issue of generics, formularies, reference based pricing in BC, provincial requirements for selling arguments, PAAB... The list is endless and the issues very complex. You can't just give sales reps a drug and say 'go sell'. It has to be approved or you can't sell it. You just can't market something without having a team (at least in the pharma business). Pharma is definitely a team-based industry."*

Several product managers also commented on his/her role as a product manager within a team-based structure. Whereas product managers have been working with "all of the responsibility and none of the authority for years", formal team-based structures are giving them the means to ensure that product and marketing goals are tied into others objectives. For example, the following product manager described her organization as one where objectives are contributed to by others, but she is still responsible for the end result.

- *"I <u>have</u> to work with others to obtain my goals. Though I am the brand manager, I rely on others in the organization to help me achieve my objectives for my brand. If I'm going to launch a new product, my sales department or my customer marketing department are all integral in making it happen because I am not an expert in any of those areas. The critical difference from years past is the* *team work ethic that we now promote. I still orchestrate everybody's role within the product and provide the strategy but everyone is aware of how their contribution contributes to the end result which helps them align their objectives."*

3.3.3 Results of Teams

The next question asked respondents about some of the results they get from working with others and working in a team. They were then asked what they felt would be missing they were not working in a team. There was resounding agreement that teams contribute to the end result through a number ways that bring about positive outcomes. Most of these product managers felt that teams contribute by adding to their capabilities. When asked what the team adds, a number of value-added benefits are mentioned. When asked, however, what might be missing, more concrete examples on the potential for failure, poor planning and mis-information surfaced. It became clear that teams contribute to both soft and hard outcomes in product management.

The following quote from a product manager with many years of industry experience illustrates the necessity of teams given the complexity of the environment:

- "I think in the pharma business you can't function with your team because your strategies have so many folds. You are not just walking straight out and selling to the doctors as there are so many variables that have to be coherent to ensure that you are attacking the problem from the same angle. You can not have these people working in isolation. It is critical they are working to the same end."

Benefits of Teams

Reality check and risk assessment: One of the first benefits mentioned was often that a team or others in the group provided a reality check and risk assessment opportunity for new ideas. Group discussions are important to bring in a number of different viewpoints and help differentiate the good ideas from the bad ones. Failure is less likely as well when you have input from others who know if an idea can be implemented well. In a group setting having others there to help make the right decisions gives tremendous value over the individual approach.

Skills and experience: Respondents also indicated that working with others gives them access to an extended set of skills and experience. Leveraging the insights and experience of other team members can save time and increase the likelihood of the idea being successful. Team members from diverse functional areas and different perspective are likely to challenge the ideas raised in the group, thus ensuring the ideas are better developed.

Accountability and buy-in: A number of product managers reported that when a group works together on projects, there is a high level of accountability shared among the team members. A strong sense of responsibility to the team and its objectives permeate the group. As one product manager expressed, *"everyone is accountable for input and for putting the product out".* As a result, time is saved by getting people's input and contribution at the onset. Less time is required to sequentially bring people into a project, explain the objectives and convince them to participate. The following example given by a product manager in a large pharmaceutical firm illustrates this importance:

- *"In a non-team-based company, if marketing came up with a plan, they would then have to go to each functional department and sell them on the process. With the team format, everyone is sold upfront. When we go upper management, we are unified knowing that all of the different functional managers have already bought into the plan because we have got representation from every unit. It is a little bit more labour intensive and time consuming, but in the end, I believe, it ends up saving us time and effort".*

- *"I think that people that work together work better. I think that your end result is better because you have the input from a lot of people and the acceptance from* *a marketing level is higher because you have people from all levels who were involved with the new product, the new promotional tool or the new plan"*

Sharing of knowledge: The marketing of products in a complex environment requires much knowledge in many areas. Product managers must work closely with others functional units in order to a successful plan. One product manager explained, *"there are so many variables that have to be coherent – everyone has to approach the target from the same angle"*, while another added, *"when you share information, you can make sure there are no holes in the plan"*.

If everyone is works in isolation or in silos, the information exchange is inadequate. Understanding what issues and initiatives are being undertaken in other parts of the company are vital to the product strategy. Learning how other areas function as well as how and why things happen are simple yet crucial elements. There was a strong need expressed for formal arrangements for teams for the purpose of ensuring this – "*as a product manager, you can't do anything unless you speak to certain people [functional areas] – because of this, it helps when your objectives are tied together*".

Better understanding of customers and competitive environment: One of the most beneficial outcomes of working in teams is the improved market intelligence that is derived by sharing key learnings about customers and competitors. One of the most important objectives of team-based structures is to bring about concrete improvements in sales, revenues and market share. This is accomplished by having a superior understanding of your customer's needs, issues, concerns, preferences, and behavior. In most organizations, there will be certain key individuals who have greater contact and thus greater exposure to those customer needs. Further, competitive actions are also more apparent for those closer to the field or have greater opportunities to observe industry activities. Teams provide the formalized opportunities to share that timely insight with others who are devising strategies and action plans. Reacting expeditiously gives companies first mover advantage and leave the followers with a weaker market presence. As illustrated by the following quotes, product managers find tremendous value in the market intelligence in terms of customer and competitor insight they get from other team members.

- *"I think the bottom line with teams is that you have programs that meet both our internal needs and meet our customers' needs. The thing with the various programs, for example government access programs or regulatory programs that you need to devise is that the government access person can help identify the key actions and approaches that will successful in getting your product listed on the provincial formulary as quickly as possible. This is tremendously important and without working together on this front, company sales are at great risk."*

- *"You get sharing of knowledge so that you are not working in silos. For example, if someone in commercial does work with a key opinion leader in Canada, at least the medical people will know about it and have input into that activity and be able to help choose the opinion leader so that we are spending our time targeting the right person. You work together as a group and share information and make sure that you don't have any holes and that we don't miss the mark."*

- *"R&D often gets the greatest expertise because they work with the product a lot sooner and for a longer period. We often need to come to them for fundamental information. Much of this knowledge they have developed comes from their work early on in the products life. They have been able to get know the users of the drugs and been able to get to know the physicians who are doing the trials. They have come to know how physicians view the product, its benefits and potential obstacles that must be overcome to convince a physician to choose this therapy. We need this information if we are to make a coherent and effective product and communication strategy."*

- *"If marketing could not to consult with the clinical research people, they wouldn't be able to market the drug properly. We would miss out on the clinical relevance of the studies. We would miss out on getting the right message to the physicians. If a particular study is working well or the drug is working well, we have to know that because that is what we have to sell. Our interaction with sales would also suffer. Once the drug is being marketed, physicians who used the drugs early on are the best targets for usage. We have to know who those physicians are and what they felt during this investigational phase."*

- *Without a team, I wouldn't have market intelligence. For example, without the sales reps on the team, I wouldn't understand what was happening in the market, what the physicians are saying, what their concerns are, and what the issues that we need to handle. I may be coming out with the best strategies but they may have no relation to the reality of the market if I am not getting that feedback and if the reps are not contributing to the decision making and influencing the strategies..*

Without teams... (or not working in teams)...

Risk of Failure: Most product managers agreed that some serious problems would arise if they had to work individually and independently from other functional areas. Failure might be high if ideas are developed in isolation. Product managers expressed that they *"might go off in the wrong direction"* and it would be *"more likely to make a mistake if we couldn't consult"* with others. Without a broader understanding of the activities of others, *"no one would know what is happening or what activities were going on in other areas"* and *"there would be disharmony – people would be working in different directions".* The insight that others can provide often contributes in such a way that it makes a plan feasible – "*What might be missing is that there would be less assurance that you are making the correct decision. The loss would be significant.*"

The critical issue is that it takes more than the product manager to design and implement a successful marketing strategy and plan. When others have significant portions to contribute, or when others are working with the end result, they must feel it is a well planned, coherent approach. For example, one product manager indicated that the representative who must take the messages to the field, needs to be convinced not only that they will be effective messages, but that they do not contradict messages delivered in the past. One product manager explained,

- "*For example, we design a lot of programs for sales reps. If you don't have input from sales or that sales member that is an integral part of the decision making* *process, you might design a program that has been done in a vacuum which might not be rolled out effectively to sales reps.*

Time would be lost: Another critical feature that would be missing if product managers were unable to work in teams is the amount of time that would be required to complete the activities if he/she were working individually - *"what might take a year, would take three".* Quite simply, more people working together toward the same goal will be able to complete it less time. As expressed by some product managers, *it would take more coordination time to get the missing expertise"* and *"we wouldn't be able to pull all the pieces together to launch the product".*

Another time saving aspect is that activities are better coordinated and the end result, in turn, is superior as illustrated with the following quote,

- *"For any specific project, it would take a lot more coordination time to get the expertise you need to accomplish the task in a better way. I think the fact that you assemble the experts in a particular area, allows you to get to the bottom line faster that you would otherwise."*

Miss key strategic issues and messages: Without the benefit of working in teams, product managers would miss out on many critical pieces of information that are essential in creating a superior product plan - *"access to information would be missing".* In isolation, product managers *"would not get strategic initiatives passed throughout", "would not get clinical relevance of the studies"* and *"would miss getting the right messages to physicians".* Product managers explained that the *"strategies have too many folds"* which require alignment with several functional areas to operate effectively - *"the work we do would not be the best although acceptable". "We could not market the drug properly",* one product manager explained, *"people would be out of sync with the* *issues of the market and the competitive positioning".* The following product manager summed up the importance is this benefit of teams:

> *"You are more likely to miss something and more likely to possible go in a direction that might not be the best one. As a marketing person, you can't be an expert in everything, so we rely on the expertise on the different functional areas to feed us the day-to-day information that we need to make those decisions. We would be more likely to make a mistake if we didn't consult our functional experts."*

3.3.4 Company's Structure & Its Affect on Performance

Product managers expressed strong opinions about their company's structure and whether they felt it was the best one to compete effectively in the marketplace. Most felt that the way their company was structured did have an impact on their ability to work effectively and compete with other pharmaceutical companies. An interesting point to note was that no matter what type of structure was represented, most felt it was right. For example, product managers from smaller organizations were comfortable with their open and flexible structure that permitted them to work closely, although informally with others in their organization. Product managers in both medium-sized and large-sized companies that were not formally team-based, also expressed that their structure was suitable, because they do get opportunities to work informally in teams on product launches but less frequently in teams for in-line products that have already been launched.

Product managers in well-established team-based companies expressed that they were satisfied with how their organization and department are structured, but added some additional insight given their transformation from a non-team-based company to a formal team-based company. With the benefit of hindsight, these product managers expressed a strong preference toward a formal team structure, with goals and reward systems link together formally. In addition to its effect of performance, as described in the quote below, this product manager indicated that people in her company were happier about how work is organized in teams rather than before when it was not.

- *"I would think that our structure will have an effect on our performance. We've been team-based for several years. I believe it affects us because everyone has input and everyone works toward a common goal. What happens in the beginning of the year is that each of the teams set team goals so that you all agree on the goal and that you are all working towards that goal. It is not as if someone from marketing is doing one thing and someone from medical is doing something else. It should be a consistent message or package that goes out. Because everything is consistent, you are more effective."*

Other product managers also commented on the benefits team-based structures had on a company and could impact on performance. The majority of the responses were favorable with only a few skeptics, as illustrated below.

- *"We've changed our structure to become team-based and are getting a good response. Before, we were not aligned and lacked synergy among departments. We could not share ideas, information and learning. We are now stronger and act like one unit"*
- *"I believe teams are the wave of the future"*
- *"Our structure [team-based] provides a strong focus on key business areas. It allows input at the beginning and you get a better understanding of strategic issues. We've been like this for two years and we are successful"*
- *"Structure affects performance because everyone has input and works toward the same goal"*
- *"It facilitates performance through better information gathering and through process"*
- *"A company must change to meet the changing environment"*

In contrast, other product managers did not feel that a team-based structure in its departments was important. The following statements reflect these views.

- *"Structure doesn't matter. We work together informally when we need to. We get best of everything because we are flexible enough to work in a team but we don't have all of the problems associated with teams"*
- *"I believe that the individual within the structure can have and impact and that its not just the structure"*

- *"Teams are too complex in a big company. A lot depends on the leadership, the product, the company and the people. There really is no 'one best way' "*
- *"It is too difficult to implement a team concept in a large organization. Maybe it works in small organizations but the group dynamics and the team issues are complex problems"*

3.3.5 Sources of Competitive Advantage in the Pharmaceutical Industry

The last question that product managers were asked to elaborate on was sources of competitive advantage in the pharmaceutical industry. The purpose was for product managers to identify the most important factors that contribute to a company's success. As expected, a number of factors simultaneously contribute to a firm's success and giving it an advantage over its competitors. A dual purpose was to validate some of the relationships regarding proposed dependant variables.

Relationships with opinion leaders and external stakeholders: Product managers described that competitive advantage comes through relationships built with opinion leaders. It makes a difference if you can get key people and position your product well and be dialed in to the key opinion leaders in certain therapeutic areas. As explained, it is important to be close to them and know their opinions. It is the product manager that builds that relationship with the key opinion leader but they do not do it alone, rather in combination with our medical communications department and sales department.

Market intelligence and understanding of customers: Several product managers agreed that achieving competitive superiority requires developing the right product for the right market which comes from understanding your market well. It is important to satisfy the unmet needs that have great market potential because it so costly to do development. It's long-term planning not short term. Even niche players recognized that it is critical to keep up with the changing environment and anticipate change before it happens. An important comment that also emerged in this discussion is that competitive advantage comes from having market intelligence, acquired through your team of sales reps, regulatory department, market research people, etc.

Interfunctional Communication & Coordination: A number of product managers emphasized the importance of getting input from a variety of sources with their organization. The competitive edge comes when companies pool their resources and have people who are accountable and not working in silos. A company that has the ability to communicate its wealth of knowledge throughout the organization can use intelligence in its decision making. This type of company allows key information to circulate to the right people and enables it into the strategic decision making process.

Culture: Product managers also agreed that competitive advantage comes from the culture and people within the organization. A company with strong people that have good ideas and work hard, in all areas of the company, have energy that transfers to everybody.

- *"A company where all employees and all functions contribute to achieving success through dedication with create superior value to their customers."*

Products: Needless to say, product managers agreed that if the company has good products that are innovative and even blockbuster, competitive advantage will follow. The key, several added, is the product / molecule quality and the clinical benefits of the product.

Marketing: Even though great products give advantage, many product mangers agree that a good product still needs to be marketed properly to be successful. A unique selling proposition that meets customer needs makes an important impact. The voice on the market must be saying the right thing, there must be meaningful positioning of the product and there must be a meaningful marketing message. Marketing is critical when compounds are similar and so competitive advantage comes when a company is successful in differentiating the product from what is already out there. Smaller pharmaceutical companies must carve out a niche for themselves and be recognized for that hence good marketing is important here too.

Resources: Even with good products and skilled marketing, a number of product managers mentioned resources that a company puts behind a product in terms of promotional spending, the size of the sales force, and educational events, can maximize getting the message out to the audience. Financial resources and capital help companies get a leg up on their competition by spending more on clinical studies, marketing and rep detailing.

Speed to Market: The timing of entry onto the market is obviously critical. Competitive advantage can come from being the first to market and first to launch, "*not necessarily the one with the best product or drug*"

Market Access: Product managers expressed a crucial issue they face in terms of ensuring the product passes through approval by regulatory bodies and that it is accepted onto formularies by each province in Canada. Companies who are successful in this process will have a strong advantage over companies who are not. "*Market access is a huge issue. We spend a lot of time to make sure we are on the formularies.*"

3.3.6 Marketing Department Performance Variables

From the above discussion, a number of marketing department performance variables were identified. They were then used as constructs and items to test them were identified. These items are explained in Section 7.3.2.

4. Contributions to the Literature

This research will make substantial contributions to both the management and marketing literature in a number of ways. The central question addresses whether product marketing teams affect the performance of an organization. The answer to this questions lies in an area that has yet to be investigated. Some research on teams in other areas has been undertaken and provides some evidence that this contention may be supported. For example, as discussed in the literature review, the team concept has been shown to positive impact performance in areas of small group research with tasks, manufacturing settings with productivity, and new product development with new and innovative products. Although a popular topic, scant empirical evidence exists that links a team-based structure with organizational-wide performance variables.

No empirical studies were uncovered relating to marketing teams and performance or knowledge-based teams and performance. Comprised of 'knowledge workers', the nature of the work and the performance demanded of a product or brand manager does not compare with the requirements of a production worker and so leaves little room for generalizability of other findings. A product marketing team, if in place, exists for an indefinite time and faces long-term challenges and organizational requirements not seen in other types of teams. The issues product marketing teams face has not been addressed in the literature.

Recent research on changes in marketing organizations highlights the move toward a customer focused organizational structure. Homburg, Workman and Jensen (2000) conclude that "the rise of teamwork and decline of functional boundaries has been attributed to the need to create new knowledge in the firm, share information across functional boundaries and respond rapidly to changes in the market". They recognize, however, that "there are no holistic studies on major changes in marketing organization" and in their call for future research they state that "there is a clear need for large-scale empirical research to identify ... specific organizational forms... [and] ... performance outcomes of various organizational structures" (Homburg, Workman and Jensen 2000). The research in this study does address the suggestions of the previous authors by drawing out performance outcomes from marketing personnel and testing the outcomes in team-based and non-team-based marketing organizations.

This research will use both qualitative and quantitative techniques to identify and test measures of marketing department performance. This study will also attempt to include both objective and subjective measure of performance. No study to date has attempted to correlate the existence of teams to overall organizational variables such as sales, market-share or market orientation.

Another contribution through this research is found in the innovative application of a pre-existing scale, "Market-Orientation". In most studies, this scale has been used as the independent variable successfully predicting organization performance in terms of profitability and innovation. Given its robust predictive qualities, this scale will now be used as the dependent variable with inferences drawn on organizational performance. We will also attempt to show that not only is it a useful dependent variable but that it also mediates the team → performance relationship. Further, the market-orientation scale has yet to been used in team or organizational design research which adds to the unique nature of this research.

As the first of many empirical studies in which this model will be tested, the study will focus on a singular industry. This research will stimulate further research as it can be utilized across multiple industries. These research findings would be most interesting should they give an indication to organizations that have the wrong design, e.g. companies using teams when it is not beneficial and others who should do so to gain competitive advantage.

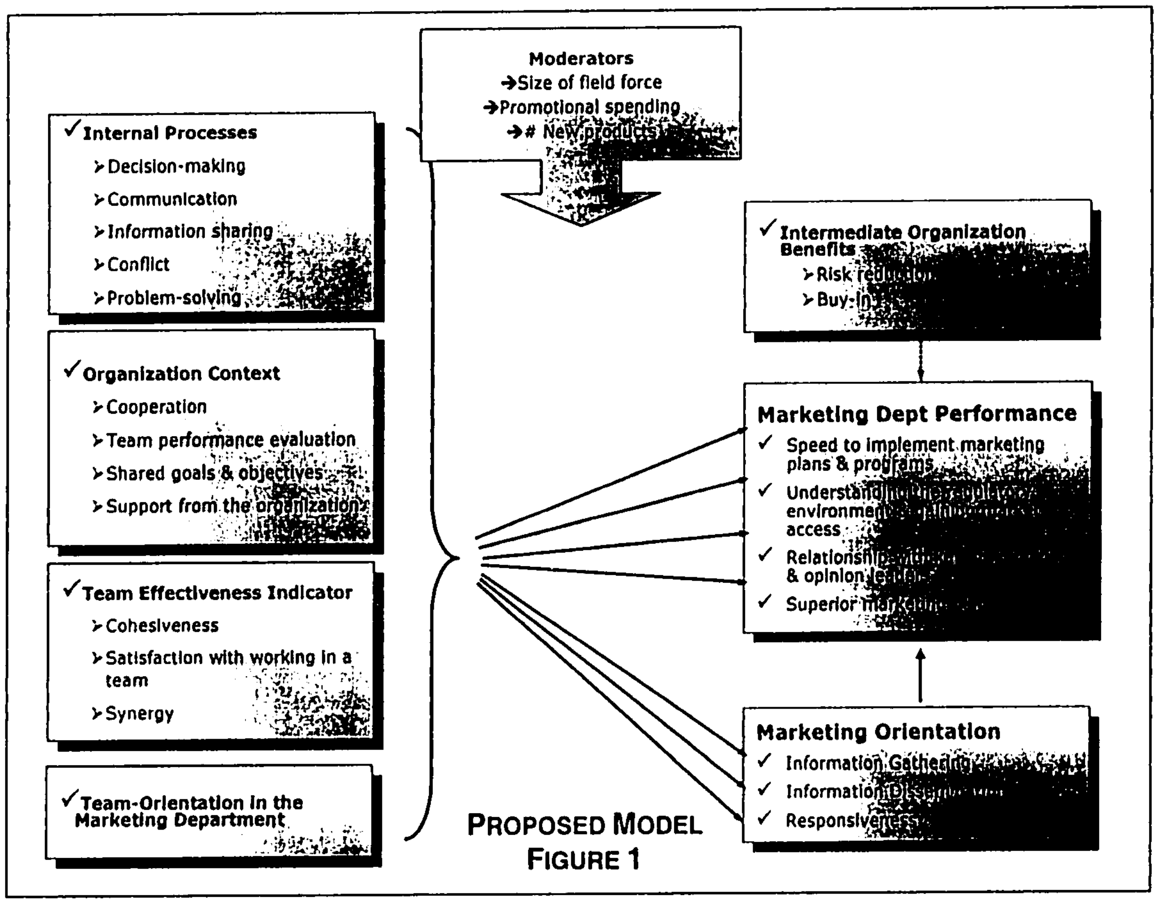
In sum, this research advances the theory surrounding teams, product management teams and team-based organizational performance as it challenges existing research to be able to adequately answer whether team-based structures have an impact on performance.

5. THE MODEL

The Katsanis model "attempts to identify levels of interdependence in the brand management system to then identify a hypothesized relationship between variables" (1999). Heavy emphasis is placed on the ability to receive information from both internal and external sources and be able to then develop strategies that can lead to competitive advantage. By its very nature, this system must be open and adaptive. An important aspect of this research project is to identify theories and constructs that can provide greater explanation to the relationships proposed in the model.

The major thrust of the model is that different approaches to the brand management system, organized in a variety of team and non-team structures, have different implications in terms of performance and competitive advantage. Performance is captured by customer response, presumably in terms of sales, customer satisfaction levels and brand loyalty. Competitive advantage can be seen in terms of service leadership, speed to market and product innovation.

In order to facilitate testing of this model, an alternate model was developed as seen in Figure 1. In its very simplest form, the model suggests that a team structure versus a non-team structure will lead to higher performance in terms of overall performance, marketing department performance and market orientation. While company factors such as size and promotional dollar spending may moderate this relationship, it is expected that team-based structures improve the information and task sharing, closeness to customers and ability to implement strategies and programs.



PROPOSED MODEL
FIGURE 1

6. Hypotheses

H1: Organizations that are perceived to be more team-based are more market oriented compared with those that are perceived to be less team-based.

H2: Organizations that are perceived to be more team-based have higher levels of information gathering than those that are perceived to be less team-based.

H3: Organizations that are perceived to be more team-based have higher levels of information disseminating than those that are perceived to be less team-based.

H4: Organizations that are perceived to be more team-based have higher levels of responsiveness than those that are perceived to be less team-based.

H5: Organizations that are perceived to be more team-based also perceive themselves to have better marketing department performance than those that are perceived to be less team-based.

H6: Organizations that are perceived to be more team-based have enhanced relationships with key stakeholders and opinion leaders versus those that are perceived to be less team-based.

H7: Organizations that are perceived to be more team-based can implement marketing plans more quickly than those that are perceived to be less team-based.

H8: Organizations that are perceived to be more team-based have a superior understanding of the regulatory environment versus those that are perceived to be less team-based.

H9: Organizations that are perceived to be more team-based create superior marketing plans versus those that are perceived to be less team-based.

H10: Market orientation mediates the relationship between team orientation and marketing department performance.

7. METHODOLOGY

7.1 Sample Design

The population consisted of 330 product managers from 55 pharmaceutical companies in Canada (see list in Appendix 2). The size of these companies ranged from roughly 53 employees to 3000 employees with revenues that ranged from $4 million to $890 million. Included in the sample were both generic and branded manufacturers. The pharmaceutical industry was selected because it is a highly complex and competitive environment where pressure to sustain continued growth has mounted in recent years. With a complex regulatory environment, complex health issues, long development cycles, high investment costs, intricate sales, marketing and advertising rules, and a customer base that may be difficult to get access to but is not the final end-user of the product, pharmaceuticals can be described as a highly knowledge-based industry. It is important to test this theory in a knowledge-based industry where team-based structures would have a strong impact on organizational performance.

Product managers in marketing departments were selected because they have the responsibility of plans that are devised to ensure revenue objectives are met. These target individuals were identified through a proprietary pharmaceutical contact database maintained by IMS Health, Canada. A total of 330 questionnaires were mailed directly to product managers with a cover letter explaining the nature of the research and ensuring complete confidentiality with responses. Two mailings were completed with follow up calls directly to product managers to encourage returning the questionnaire. An interim letter was sent to marketing directors requesting support for the project and encouragement for product managers to return the questionnaires. A total of 91 completed questionnaires were completed with 31 returned as undeliverable for a response rate of 30%.

7.2 Survey Instrument

The survey instrument was designed to capture the main themes of the research: team orientation, market-orientation and marketing performance variables. The independent variables in this study comprised the behaviors associated with a team orientation and team effectiveness such as collaboration, strong communication, information sharing, shared goals and responsibilities, cohesiveness, organizational support and reinforcement of teams, etc. in order to assess the behaviors observed in a team environment. The dependant variables are drawn from two sources: a pre-existing scale (MARKOR) developed by Kohli, Jaworski and Kumar (1993), and from variables identified through interviews with product managers. Moderator variables include size of company, number of sales representatives and dollars spent on promotional activities.

Where available, preexisting scales for these constructs were identified. Items have been adapted slightly where necessary in order to make them more relevant to the pharmaceutical industry. The pool of items was then narrowed with the help of academic experts and then tested for clarity on four subjects. The questionnaire was pre-tested with five industry experts

7.3 Measures

7.3.1 Independent Variables

In Hackman's (1990) work on groups and group effectiveness, he notes that group performance can be measured simply in a laboratory setting but not so easily in organizational research. Measures to tell the whole story of effectiveness are elusive. Tjosvold (1986), through much of his work on groups and teams concurs that "the bottom line impact of coordination has not been documented" (Tjosvold 1986).

In order to measure whether teams are functioning and functioning effectively within the organization, constructs were identified that assess how strongly the organization is team-oriented. These constructs were grouped into three categories: internal processes, organizational context and team effectiveness. An overall measure of team orientation was also developed. Each of these constructs were first defined according to explanations found in the literature. Items to measure each construct were then derived from the definition of the construct.

Internal processes comprised of six constructs: decision-making, communication, information sharing, conflict resolution, problem solving and cooperation. With respect to teams, Campion (1993) describes process as "those things that go on in the group that influence effectiveness ... and willingness to work hard for the group".

- *Decision making* is defined by Johns (1987) as the "process of developing a commitment to some course of action". This involves choice among alternatives. Parker (1990) adds the following for teams "most decisions are reached by consensus in which it is clear that everybody is in general agreement and willing to go along". Two items were used to assess this construct.
- *Communication* is defined by Johns (1987) as the "process by which information is exchanged". Effective communications involves the right people with the right information at the right time. Even unfavorable news is communicated. Parker (1990) adds for teams that "there is a lot of discussion in which everyone participates, but it remains pertinent to the task of the group". Three items were used to assess this construct.

- *Information sharing* in a team setting is defined by Olson, Walker and Ruekert (1995) as "people free in expressing their feelings as well as their ideas on both the problem and the group's orientation". Team members must be capable of and successful at sharing key pieces of information in a timely manner. Four items were used to assess this construct.
- *Conflict resolution*, explained first by defining *conflict* by Johns (1993) as the "process of antagonism that occurs when one person or organizational frustrates the goals attainment of another. Involves a joint occurrence, blocked goals, seen in both attitudes and behaviors" but *conflict resolution*, however, is explained by Parker (1990) by the following "There is disagreement. The group is comfortable with this and shows no signs of having to avoid conflict or to keep everything on a plane of sweetness and light... reasons for the disagreements are examined and the group seeks to resolve them". Three items were used to assess this construct.
- *Problem solving* is defined by Johns (1987) as the "perceived gap between some existing state and some desired state" and taking steps to resolve the problem. Team problem solving is characterized by Parker (1990) with the following process "agree on problem statement, problem analysis, participative approach, alternate solutions identified, increased involvement and increased commitment." Three items were used to assess this construct.
- *Cooperation* as explained by Carless & De Paola (2000) involves "sharing the workload to achieve group goals". Three items were used to assess this construct.

Organization context is the situation found in the organization that can support and promote teams versus failing to provide the adequate resources and culture neccessary. Campion (1993) explains that "organizational level resources, such as training (on group decision making, team philosophy, interpersonal skills & technical knowledge) can be an important determinant of group performance". Campion (1993) also adds that "managerial support and organizational culture are other critical components for effective group functioning". Three constructs were identified for organizational context: team performance evaluation, shared goals and objectives and support from the organization.

- *Team performance evaluation* is defined by Devine et al. (1999) as one of the most important efforts an organization can make to reinforce team behaviors. Few companies have been successful in implementing a team-based compensation and performance system and "even fewer provided material incentives for achieving team goals" (Devine et al. 1999). Yancy (1998) adds that "interdependence is one of the most crucial elements for teams to exist and to be effective. One form of this is task interdependence, which involves members of the team depending on one another to accomplish goals. Goal interdependence refers not only to a group having a goal, but also to the fact that a group member's goals should be linked". Three items were used to assess this construct.
- *Shared goals and objectives* in a team is characterized by Parker (1990) as "a group of people with a high degree of interdependence geared toward the achievement of a goal or completion of a task", "the task or the objective of the group is well understood and accepted by the members", and "each member accepts willingly the goals and expectations that the group establishes for themselves". Yancy (1998) also adds that "Interdependence is one of the most crucial elements for teams to exist and to be effective. One form of this is task interdependence, which involves members of the team depending on one another to accomplish goals. Goal interdependence refers not only to a group having a goal, but also to the fact that a

group member's goals should be linked". Three items were used to assess this construct.

- *Support from the organization* can establish whether teams are effective for their organizations. As described by Parker, "effective teams get the resources they need when they need them". Katzenbach & Smith (1993) add that organizations must help teams by ensuring that organizational goals are translated to teams goals by their leaders, "real teams are much more likely to flourish if leaders aim their sights on performance results that balance the needs of customers, employees and shareholders. Clarity of purpose and goals have tremendous power in our ever more change driven world". Janz (1997) adds to this with "managers who are concerned with enhancing the level of information exchange, helping and innovating behaviors among teams members should help the team increase its maturity through facilitating mission clarity, organization and cohesiveness". Five items were used to assess this construct.

Team effectiveness indicators are comprised of three constructs: cohesiveness, satisfaction with working in a team and synergy.

- *Cohesiveness* is defined by Parker (1990) when the "members of the group are attracted to it and are loyal to its members". Carless & De Paola add that it involves the "forces which act on members to remain in the group...how much they like one another or how long they wanted to stay in the group... interpersonal attraction and commitment to the task". Three items were used to assess this construct.
- *Satisfaction with working in a team,* as explained by Campion (1993) is an important characteristic where "employees who prefer to work in groups may be more satisfied and effective in groups". Three items were used to assess this construct.

- *Synergy*, as explained by Katzenbach & Smith (1993) occurs when "a team inevitably gets better results than a collection of individuals operating within confined job roles and responsibilities". Katzenbach (1998) adds that "Teams produce discrete work products through the joint contributions of their members. This is what makes possible performance levels greater than the sum of all the individual bests of team members". Four items were used to assess this construct.

Overall team orientation was comprised of four items. Respondents were asked to rate their organization and then their marketing department in terms of being team oriented. They were then asked to rate how formal the use of teams is within their marketing department.

7.3.2 Dependant Variables

Intermediate organization benefits

- *Reduction of risk* Two items were used to assess this construct. Through personal interviews, product managers indicated that teams produced benefits that reduced the risks taken in many business decisions. With the benefit of multiple perspectives and cumulative knowledge, problems and failures could be avoided by testing ideas, pruning tactics and developing plans further than what might have possible on one's own. This intermediate organizational benefit comes in focusing organizational resources on programs that have a higher likelihood of success. Items that were used to assess this construct included
- *Buy-in* Three items were used to assess this construct. This intermediate organizational benefit was raised by product managers who must deal with a number of organizational partners. While all organizational have multiple objectives, attaining the commitment of many parties can be laborious. Product managers indicated that

an organization that is team-based encounters fewer difficulties in gaining support from managers because often they have been involved in marketing plans from the on-set.

Marketing department performance

- *Speed to implement marketing plans and programs* Five items were used to assess this construct. As was indicted by product managers, turning plans into action is critical. In particular in the pharmaceutical industry, maintaining and increasing market share is vital, and a well-coordinated team is prepared to react quickly to all circumstances. The cooperation of other departments is important in the implementation of marketing activities. Sales people must be sold on marketing plans in order to carry them out effectively. The items used assess the degree of interfunctional cooperation in implementing marketing activities and plans.
- *Understanding the regulatory environment and gaining market access* Four items were used to assess this construct. Product managers mentioned in interviews that it is critical to get a drug approved for distribution by the government in order to assure timely market access. This process is lengthy and arduous. Failing to reach the market before a competitor can mean millions of dollars in lost revenues and market share need to recoup drug development costs. A company that coordinates these submissions across multiple departments can save time and speed through the process more efficiently. These questionnaire items assessed organization and knowledge of the process. Team-based organizations are believed to have wider knowledge base and are able to better coordinate resources toward this end.
- *Relationship with key stakeholders and opinion leaders* Three items were used to assess this construct. The pharmaceutical industry is one where influence can be an important factor. In the business of drugs, safety and efficacy reign. The onus is on

the industry to prove to the medical community that a therapy will benefit the patient. Developing a relationship with key physician and opinion leaders who can influence acceptance of the product is essential. Market and customer intelligence are extremely important in tapping in to the leaders in each therapeutic area. The greater this knowledge is shared with team members, the better results within the marketing department.

- *Superior marketing plan* Five items were used to assess this construct. One of the main responsibilities of the product manager is the marketing plan. Targeting, product positioning, sales forecasting, physician behavior and marketing communications among other elements provide the roadmap. A well-defined and articulated marketing strategy will have support and acceptance at all levels of management.

Market orientation

- *Intelligence gathering*
- *Intelligence dissemination*
- *Responsiveness*

A pre-existing scale for market orientation, MARKOR, developed by Kohli, Jaworski and Kumar (1993) was used in this study. Developed first through a series of personal interviews, then tested through quantitative research, the scale has been used successfully by many researchers (Jaworski & Kohli 1993, Raju, Lonial & Gupta 1995, Pelham 1997, Baker & Sinkula 1999). The three major components of the scale include intelligence generation, intelligence dissemination and responsiveness and studies have used both the sub-scales and the global scale, MARKOR equally well. In most studies, MARKOR has been used as the independent variable while in this study, it is being used as a dependent variable and will be tested as a mediator.

The scale contains 32 items, ten of which pertain to market intelligence gathering, eight to intelligence dissemination and fourteen to responsiveness. When necessary, these items were adapted slightly in order to make them more appropriate for the pharmaceutical industry. The reliability for this scale and each of the three sub-scales has always been reported to be high measured with the Cronbach's alpha coefficient.

7.3.3 Objective Measures of Organizational Performance

In order to test the hypothesis that team-oriented organizations have superior performance over non-team-oriented firms, some objective measures were identified to complement the subjective measures.

- *Growth* – Using objective sales figures obtained from IMS Health, Canada for the years 1998, 1999 and 2000, average growth from 1998 to 2000 was calculated.
- *Number of new products over past three years* – The actual number of new products launched over the period of 1998 to year ending 2000 was calculated.

7.3.4 Moderator Variables

- *Company Size* – Size of sales force data collected by IMS Health, Canada is used to approximate company size
- *Promotional spending* – Actual dollars spent on journal advertising and sales force activities.

7.4 Level of Analysis

All variables in this study were measured at the individual product manager level. With the population of pharmaceutical companies in the sample being small, statistical power would be lost if analyses were performed at the company level. Product managers are therefore responding on behalf of their experiences with teams in their organization. Product managers were given the following instructions on the survey: "identify a team that you have been a member of recently and respond to the items with respect to that team" (a copy of the questionnaire can be found in Appendix 3).

8. DATA ANALYSIS

8.1 Factor Analysis

8.1.1 Independent Variables

As noted in the introduction, this study aims to relate team orientation to market orientation among other marketing department performance variables. The first task was to analyze and confirm that the constructs for the team variables proposed in the model were consistent with the literature. A factor analysis was performed on all 49 variables with five factors emerging most strongly. Following an orthogonal (varimax) rotation, a number of variables were found not to load highly onto any factor. While the proposed model suggested that thirteen factors were need to identify team orientation, the scale was revised to include just five factors, in addition to the overall "Team-orientation in the marketing department" items. As seen in the revised model in Figure 2 below, the fewer constructs were needed to proceed to model testing. The items that comprise the factors can be found in Table 2 below.

An explanation of the differences found in the data can be found by revisiting the literature on team effectiveness. The literature in which Campion (1993) reviews the team effectiveness provides support for these factors being relevant to this study. Campion (1993) reviewed the literature on effective work groups and identified five common themes then related these characteristics to effectiveness. This configuration is based on five themes including job design, interdependence, composition, context and process. Effectiveness criteria included productivity, employee satisfaction and manager judgments. Campion (1993) reviews some of the most influential researchers Cummings (1978), DeMeuse & Liebowitz (1981), Gladstein (1984), Goodman et al. (1988), Guzzo & Shea (1992), Hackman (1987), Hackman & Oldman (1980),

TABLE 2 - INDEPENDENT VARIABLES FACTOR ANALYSIS

	Team Rotated Component Matrix – Orthogonal, Varimax
	INFORMATION SHARING / COMMUNICATION $\alpha = .82$
.608	My team members share with me key pieces of information in a timely manner
.585	We always take the time to communicate the reasons behind our decisions
.642	I receive highly valuable information from members of my team
.713	The team discusses possible obstacles before they arise
.781	The real cause of a problem is always identified before solutions are proposed
.455	I have a good understanding of the other team members' goals and roles
	TEAM PERFORMANCE EVALUATION $\alpha = .79$
.591	All team members are accountable for group results
.781	Teams are formally appraised for team performance
.693	Rewards for the whole team are given when the team performs well
.736	Although I am evaluated on my individual performance, I am also evaluated on the group's performance
.688	Each person in the team takes equal ownership of the team's outcomes and performance
	SHARED GOALS AND OBJECTIVES ALIGNED WITH ORG $\alpha = .86$
.412	Each person in the team understands what he / she must do to achieve the goals
.520	Each person in the team is clear on the expectations that others have of them
.799	Team / project leaders help ensure clarity of the team's purpose
.852	Team / project leaders help align team goals to the organization's goal
	SATISFACTION WITH WORKING IN A TEAM $\alpha = .59$
.833	Being part of the team matters to me
.642	The outcomes that are produced by the team reflect more than the simple sum of our individual talents
.833	Working in teams is an effective way to integrate skills and collaborate on projects
.743	My experience with teams has been positive
.908	I enjoy being part of a team
	CONFLICT RESOLUTION, COOPERATION $\alpha = .85$
.602	Even though we have differing points of view, we respect each other
.704	I would not hesitate to disagree with any one of the team members
.714	Without the cooperation of others in the team, most objectives could not be reached
.346	The team has had some conflicts, but we have worked them through

(1987), Tannenbaum, Beard and Salas (1992), McGrath (1984), Pasmore (1982) and Pritchard et al. (1988) to name a few.

Information Sharing / Communication

In job design, Campion (1993) emphasizes self-management, autonomy and participation in decision-making. Self-management, autonomy were not assessed and decision-making did not emerge as a significant factor. However, Campion stresses that decision quality in teams is dependant on team members exchanging relevant information, a factor that was significant. In the model, within the grouping of team constructs known as "Internal Processes", a factor that emerged is *Team Information Sharing* combined with *Team Communication.* Six items comprised this factor with an internal consistency, illustrated by Cronbach's alpha (α) of 0.82. It would seem that a team's ability to share key pieces of information in a timely manner, to communicate the reasons for decisions, to discuss potential problems, and take the time to communicate each members goals an roles is an important aspect of the team's ability to function well. Within the team, this is an important internal process.

Team Performance Evaluation & Shared Goals / Objectives

Campion (1993) next describes task interdependence in which group members depend on each other to accomplish the work. In the model, within the grouping known as "Organizational Context", two constructs were found to be significant: *Team Performance Evaluation* and *Shared Goals and Objectives.* Campion (1993) refers to this as goal interdependence, where a mutually defined mission and purpose may be related to effectiveness. For teams to function effectively with the organization, individual goals must be related to group goals (Campion, 1993) in order to maximally effective. As illustrated by the factor *Shared Goals and Objectives*, four items loaded strongly with an internal consistency rating of $\alpha = 0.86$. Results show that it is important for each person on a team to understand what s/he needs to do to achieve the group's goals, that each must be aware of the expectations the team places, and that the team leader helps ensure that the team's purpose is clear and well aligned with the organization's goals.

Also found within Campion's (1993) description of interdependence is interdependent feedback and rewards that should be linked to the group's performance to motivated group-oriented behavior. This factor, called *Team Performance Evaluation* was found to be significant and is grouped within "Organizational Context" in the model. Five items loaded onto this factor with an internal consistency rating of $\alpha = 0.79$. A distinguishing factor in team-based organizations versus non team-based organizations is a formal team performance system. As we saw in Katsanis and Pitta (1999), fewer that 20% of pharmaceutical companies in Canada have team-based performance appraisal systems. Results of this study show it important for team members to be mutually accountable for group results, to be appraised for team performance, to deliver rewards to the whole team, to complete both individual and group evaluations and for team members to take ownership of team outcomes.

Conflict Resolution / Cooperation

In terms of the Campion (1993) framework, context, which is organizational level resources, such as training (on group decision making, team philosophy, interpersonal skills & technical knowledge), managerial support and organizational culture are other critical components for effective group functioning. *Communication and cooperation* between groups can also be included here. While items addressing support from the organization were included in the survey, none were found to load onto a significant factor. This is perhaps the importance of this aspect is not perceived clearly by respondents in the sample. Neither training nor culture was addressed in this survey.

Satisfaction with Working in a Team

The final element in Campion's (1993) framework is what he calls process, referring to those things that go on in the group that influence effectiveness. In the proposed model, this is referred to as "Team Effectiveness Indicators". He describes potency or team-spirit and belief that the group can be effective that influences commitment and willingness to work hard for the group. The fifth factor in the model that was significant is *Satisfaction with Working in a Team.* Five items loaded onto this factor with an internal consistency measure of $\alpha = 0.65$. It appears that an important aspect is a positive team experience. As a result, team members are more productive and contribute more. This positive experience is reflected in the belief that being part of the team matters, that teams are an effective way to integrate skills, and that it is enjoyable way to work.

As can be seen from the comparison of the proposed model and the framework presented by Campion (1993), many of the same elements are found that demonstrate work group / team effectives and team orientation in a company. The most critical factors in the model did emerge.

8.1.2 Dependent Variables

Several dependent variables were identified for this study. One of the dependent variables is Market Orientation, while another set of dependent variables, identified through the qualitative research, is related to Pharmaceutical Marketing Department Performance. Each are described below.

8.1.2.1 Market Orientation

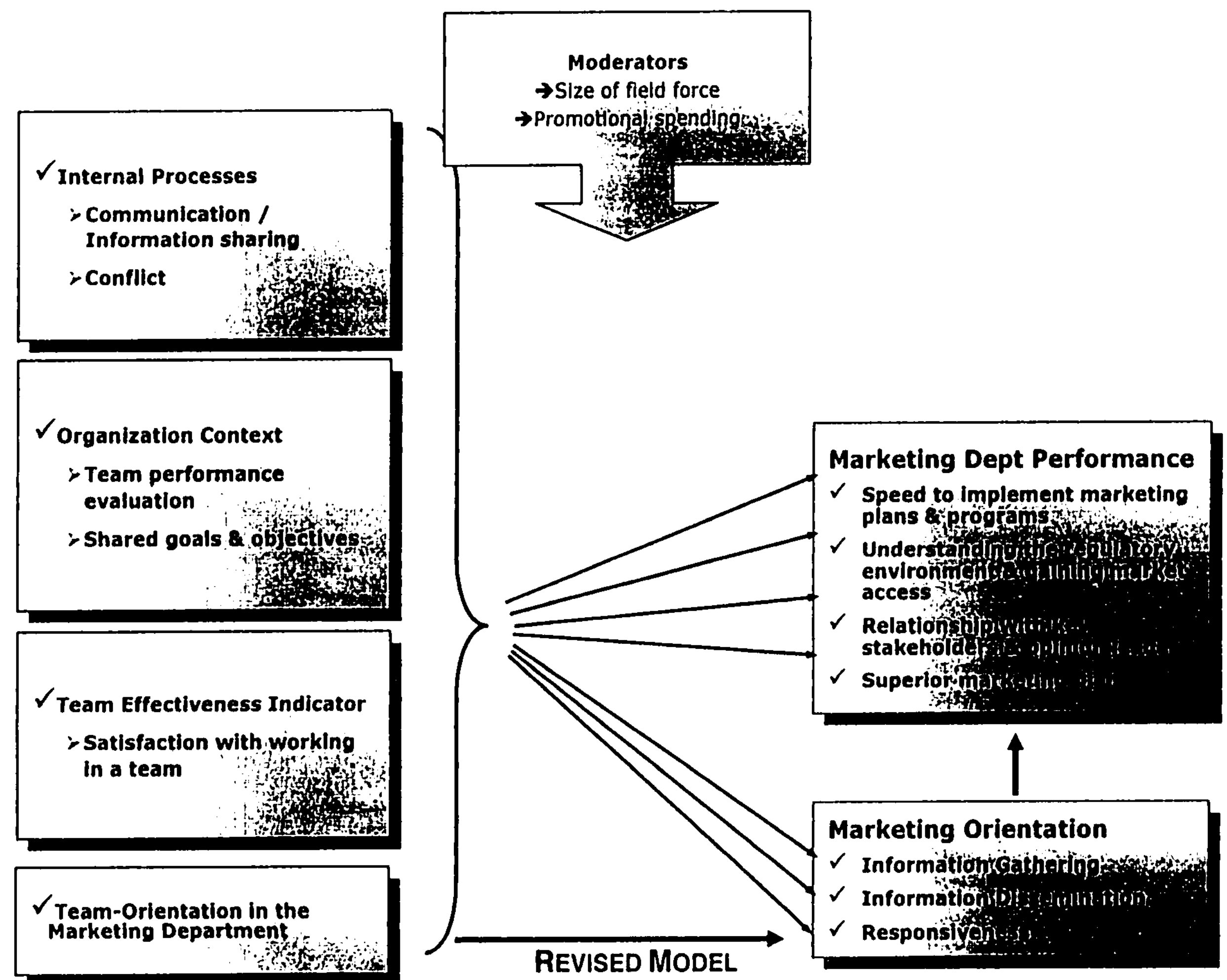
A factor analysis was conducted on the items associated with the MARKOR scale to verify that the three sub-scales of *information generation*, *information dissemination* and *responsiveness* emerged as predicted. Some differences in the scale were found. A five-factor solution was found, rather than three as the scale prescribes. While most of the items loaded on the predicted sub-scale, some items related to responsiveness and information dissemination were found to load together. These results can be found in Appendix 4. The MARKOR scale, however, was used as set out by Kohli, Jaworski and Kumar (1993) in all further analyses.

8.1.2.2 Marketing Department Performance

A factor analysis was conducted on the remaining items that were related to marketing department performance. In both team and non-team organizations, these variables are expected to differ depending on the product manager's ability to develop a superior plan based on a solid understanding of the market, of physician behavior and needs and of competitive product positioning. The marketing plan that is supported by other key departments as it draws knowledge and insight from cross-functional members, is also more likely to have acceptance when presented to senior management.

TABLE 3 - DEPENDENT VARIABLES FACTOR ANALYSIS

	Marketing Department Performance
	RELATIONSHIP WITH KEY STAKEHOLDERS & OPINION LEADERS $\alpha = .810$
.968	We can obtain vital information from key opinion leaders in each therapeutic area
.870	We have a good relationship with key opinion leaders who influence product acceptance
.563	We conduct market research with physicians regularly to determine their satisfaction with our products
	SPEED TO IMPLEMENT MARKETING PLANS AND PROGRAMS $\alpha = .725$
.666	If we were to lose market share on a product, our sales force would act quickly to regain it
.629	Other departments act quickly to implement activities related to marketing
.663	Marketing plans are always executed without delays from any departments
.616	Several programs have not been rolled out effectively because sales reps have had problems with the programs
.772	While marketing plans for our products are good, much time is spent selling our ideas to other departments
	UNDERSTANDING THE REGLATORY ENVIRONMENT & GAINING MARKET ACCESS $\alpha = .718$
.536	Product approval submissions are always well organized
.813	Often we must re-submit a product for approval because there were many elements missing from the submission
.772	We do not fully understand the complex regulatory environment
	SUPERIOR MARKETING PLAN $\alpha = .626$
.739	Plans in our marketing department would be better developed if we had greater insight from opinion leaders
.447	Compared with our competitors, our product positioning has been successful
.288	Once a product has obtained approval, it is brought to market quickly
.404	We know what makes physicians tick and what will make them listen
.205	By the time we present the marketing plan to senior management, we have support from other key departments



REVISED MODEL
FIGURE 2

8.2 Results of Regressions

The potential effects of team-based organizations on market-orientation and marketing department performance were investigated with a stepwise (forward) multiple regression analysis to examine Hypotheses 1 to 9. A separate analysis was prepared to examine Hypothesis 10.

The results of the regression analyses are presented in Table 4. In most cases, the models are significant. Significant independent variables are noted. It can be seen from Table 4 that the R-squares for the regressions range from a low of .130 to a high of .365. In most cases, we found both positive and significant effects. The R-squares may seem low, however, one must consider the dependent variables in question. We attempt to explain performance and market orientation with the predictor of team orientation. We recognize that team orientation is not the only factor that contributes to performance or to market orientation. We did not attempt to include all factors as it was not the purpose of the study. We can conclude, however, that team orientation is among the factors that contribute to performance. Given that roughly 30% of the variance in performance can be explained by virtue of a team oriented structure is supportive of our model.

A review of the literature identified a number of studies, with similar R-square results (Atuahene-Gima 1996, Appiah-Adu & Ranchho 1998, Kumar, Subramanian & Yauger 1998, Baker & Sinkula 1999). Atuahene-Gima (1996) found R-square results from 0.20 to 0.27 while measuring market orientation and performance while Appiah-Adu & Ranchho (1998) found an R-square of 0.28 in a similar market orientation study. While measuring market orientation and learning orientation among several performance variables, Baker & Sinkula (1999) found adjusted R-squares of 0.17 to 0.37. In another example, Kumar, Subramanian & Yauger (1998), measured market orientation with growth and ROI among other performance variables and found adjusted R-squares that ranged from 0.09 to 0.24. In each of these studies, these models were reported as significant. Other researchers recognize that a number of factors contribute to performance, with one of them being market orientation. While market orientation does not explain all of the variance, it is, however, a significant contributor to performance. This same argument is relevant with respect to organizations perceived as team based. Although team orientation does explain all of the variance in performance of these pharmaceutical firms, we have determined that it is a significant contributor.

Detailed results for each hypothesis are found immediately below with a discussion that follows.

Hypothesis 1

H1: Organizations that are perceived to be more team-based are more market oriented compared with those that are perceived to be less team-based. SUPPORTED

As a dependent variable, market orientation was shown to be positive and significant when regressed against the set of predictor variables (R^2 = .341, F = 15.7). Approximately 34% of the variance in market orientation can be explained by *team orientation in the marketing department* (b = .299, p < .000), *information sharing / communication* (b = .174, p = .08) and S*hared goals and objectives* (b = .200, p < .05). *Conflict resolution*, t*eam performance evaluation, satisfaction with working in a team* were not significant in this model along with the moderators of company size and p*romotional spending.*

TABLE 4 – REGRESSION ANALYSES

Dependent Variables → ↓ Independent Variables	H1 √ Market Orienta-tion	H2 √ Informa-tion Generation	H3 √ Information Dissemi-nation	H4 √ Resp-onsive-ness	H5 √ Overall Marketing Dept Perfor-mance	H6 √ Relation-ship key stakeholders & opinion leaders	H7 √ Speed to implement marketing plans & programs	H8 x Regula-tory enviro & market access	H9 √ Superior Marketing Plan
Team Orientation in Mkt Dept	.404	.416	.336	.407	.427	.297	.445	.265	.232
p-value	*.000*	*.000*	*.002*	*.000*	*.000*	*.005*	*.000*	*.015*	*.046*
Communication / Information Sharing	.174	ns	.177	.174	.216	ns	.308	ns	.199
p-value	*0.08*		*0.100*	*0.078*	*.022*		*.001*		*.065*
Conflict Resolution	ns	ns	ns	ns	ns	-0.214	ns	ns	ns
p-value						*.021*			
Team Performance Evaluation	ns	ns	ns	ns	ns	ns	ns	ns	ns
p-value									
Shared Goals and Objectives	.200	.205	.240	.197	ns	ns	ns	-.243	.231
p-value	*.049*	*.031*	*.035*	*.053*				*.028*	*.042*
Satisfaction With Working in a Team	ns	ns	ns	ns	ns	.176	ns	.192	ns
p-value						*.071*		*.091*	
Company size X Team Orientation	ns	ns	ns	ns	ns	.171	ns	ns	.175
p-value						*.075*			*.088*
Promo Spend X Team Orientation	ns	ns	ns						
p-value									
R Squared	[illegible]	.253	.247	.249	.285	.338	.312	.160	.242
F	[illegible]	16.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.5	5.7
p-value	[illegible]	[illegible]	.000	.000	.000	.000	.000	.005	.000
ns = not significant									

Hypothesis 2

H2: Organizations that are perceived to be more team-based have higher levels of information gathering than those that are perceived to be less team-based. SUPPORTED

Although market orientation can be considered one construct, its components also have merit as separate dependent variables. *Information generation* was shown to be positive and significant when regressed against the set of predictor variables (R^2 = .263, F = 16.5). *Team orientation in the marketing department* (b = .416, p < .001) and s*hared goals and objectives* (b = .205, p = .031) significantly influence *information generation.* None of the other team effectiveness variables nor moderator variables, however, were found to be significant in this model.

Hypothesis 3

H3: Organizations that are perceived to be more team-based have higher levels of information disseminating than those that are perceived to be less team-based. SUPPORTED

When levels of team orientation in the marketing department are higher, a positive and significant relationship is found with *information dissemination* (R^2 = .237, F = 6.9). In this model, three independent variables were found to be significant: *team orientation in the marketing department* (b = .336, p = .002), *communication/information sharing* (b = .177, p = .1), and s*hared goals and objectives (b* = .336, p = .002) while none of the other predictor or moderator variables were significant.

Hypothesis 4

H4: Organizations that are perceived to be more team-based have higher levels of responsiveness than those that are perceived to be less team-based. SUPPORTED

Responsiveness also showed positive and significant results (R^2 = .343, F = 15.8) against the predictors of *team orientation in the marketing department*, (b = .407, $p <$ .001), *communication/information sharing* (b = .174, p = .078) and *shared goals and objectives* (b = .197, p = .053) while none of the other predictor variables were significant.

Hypothesis 5

H5: Organizations that are perceived to be more team-based also perceive themselves to have better marketing department performance than those that are perceived to be less team-based. SUPPORTED

The overall measure of marketing department performance was positive and significant (R^2 = .365, F = 17.4) when regressed against the set of predictor variables. This model had the highest R-square of all other models thus explaining the most variance. *Team orientation in the marketing department* (b = .427, $p <$ .001), and *information sharing/communication* (b =.216, $p <$ .05) while none of the other predictors were significant.

Hypothesis 6

H6: Organizations that are perceived to be more team-based have enhanced relationships with key stakeholders and opinion leaders versus those that are perceived to be less team-based. SUPPORTED

The results of this analysis show that the *relationship with key stakeholders and opinion leaders* is positive and significant (R^2 = .338, F = 11.5) when *team orientation in the marketing department* (b = .297, p = .005), and *satisfaction with working in a team* (b = .176, p = .071) are high, when *conflict resolution* (b = .-.21 p = .021) is low, and is moderated by the *company size* (b = .171, p = .075). The interaction effect of company size indicates that the main effect of the predictor variables depends on whether company size is large or small.

Hypothesis 7

H7: Organizations that are perceived to be more team-based can implement marketing plans more quickly than those that are perceived to be less team-based. SUPPORTED

When *team orientation in the marketing department* (b = .445, p < .001) and *communication/information sharing* (b = .308, p < .001) are regressed against *speed to implement marketing plans*, (R^2 = .312, F = 13.8) the result is positive and significant while the remaining independent variables show no significance.

Hypothesis 8

H8: Organizations that are perceived to be more team-based have a superior understanding of the regulatory environment versus those that are perceived to be less team-based. NOT SUPPORTED

While a weaker R-squared is found with this model, results are still positive and significant. When the set of predictor variables is regressed against *understanding the regulatory environment* less variance is explained in this model than in others (R^2 = .130, F = 4.5). In this model, the predictor variables that are significant are *team orientation* (b = .265, p = .015), *shared goals and objectives* (b = -.243, p = .028), and *satisfaction with working in a team* (b = .268, p < .01).

Hypothesis 9

H9: Organizations that are perceived to be more team-based create superior marketing plans versus those that are perceived to be less team-based. SUPPORTED

The results of this analysis show *team orientation* (b = .232, p < .05) and *communication/information sharing* (b = .199, p = .065), *shared goals and objectives* (b = .231, p = .042) are predictors of developing a *superior marketing plan* (R^2 = .242, F = 5.7) while being moderated by the size of the *company size* (b = .175, p = .088).

Hypothesis 10

H10: Market orientation mediates the relationship between team orientation and marketing department performance. SUPPORTED

Several conditions must be met in order to conclude a mediating relationship. According to Baron and Kenny (1986), the following criteria are laid out in order to make the following conclusion:

X	→	Z	→	Y
Team	→	M.O.	→	MDP

Three regression equations must be estimated. The first regresses the mediator variable on the independent variable, i.e. *market orientation* on *team orientation*. The second requires regressing the dependent variable on the independent variable, i.e. *marketing department performance* on *team orientation*. The third requires regressing the dependent variable on both the independent variable and on the mediator, i.e. *marketing department performance* on *team orientation* and *market orientation* together. Several conditions must then be met. In all three regressions, the models must be significant in the predicted direction and "the effect of the independent variable must be less in the third equation than in the second" (Baron & Kenny, 1986).

Condition 1)
Z $= a + \beta_1 X + \varepsilon$ (Does X effect Z?)
M.O. $= a + \beta_1$ Team $+ \varepsilon$
M.O. $= 79.3 + 2.21$ Team ($p < .000$) $R^2 = .246$, $F = 30.3$, $p < .000$ ✓

Condition 2)
Y $= a + \beta_1 X + \varepsilon$ (Does X effect Y?)
MDP $= a + \beta_1$ Team $+ \varepsilon$
MDP $= 48.3 + 1.26$ Team ($p < .000$) $R^2 = .278$, $F = 35.8$, $p < .000$ ✓

Condition 3)
Y $= a + \beta_1 X + \beta_2 Z + \varepsilon$ (Does Z effect Y? Effect must be less than in condition 2)
MDP $= a + \beta_1$ Team $+ \beta_2$ M.O. $+ \varepsilon$
MDP $= 20.78 + .5$ Team ($p = .008$) $+ .35$ M.O. ($p < .000$) $R^2 = .590$, $F = 66.2$, $p < .000$ ✓

As can be seen, all of the equations are significant and that the coefficients in condition 3 are less than in condition 1 and 2 thus we may conclude a mediating effect supporting hypothesis 10.

9. DISCUSSION OF RESULTS

The results of this study lend support that product managers who define themselves as team oriented have organizations that are more market oriented and have better marketing department performance outcomes. The hypotheses indicated that important predictors of effective teams show positive and significant results for market orientation and for marketing performance. Our unexpected findings were that several of the predictors did not come out significant in the final analysis in all regression equations, especially *team performance evaluation*. There is a mediating relationship between *market orientation* with *team orientation* and *marketing department performance*. This demonstrates that firms pursuing intangible organizational pursuits can provide the basis for sustainable competitive advantage and enable the firm to more effectively focus on its market offering and value to the customer. This research demonstrates that organizational structure can encourage the mechanisms and culture needed to facilitate cross-functional sharing of information and workload.

Effects of Team Orientation on Market Orientation

Market orientation was regressed as one construct and also separately with its components of information generation, information dissemination and responsiveness. All the models were significant with responsiveness explaining the most variance. These results are discussed below.

Market Orientation In pharmaceutical companies where product managers rated themselves highly on team orientation within their marketing departments, they also rated themselves more highly on being market oriented. Additional factors that contribute to this market orientation are the ability to share information and communicate effectively with team members. Also when team members have commonly based goals and commonly shared expectations within their group, market orientation is impacted. This reveals two very important components to market orientation with respect to teams. The first is the communication aspect. As was found in the literature, communication was an important factor for market intelligence dissemination (Kohli & Jaworski 1990). Information is also key for actions (i.e. responsiveness) as found by Ruekert (1990) that actions must be guided by information received by the market and the actions must be present in all functions and divisions of the company. Secondly, goals that team members have in common encourage them to align themselves to team goals and to the organization's goals. Fisher, Maltz and Jaworski (1997) emphasized that integrated goals improve interfunctional collaboration and information sharing as in seen in the case to be true.

These results confirm Kohli and Jaworski's (1990) assertion that interfunctional coordination, which includes interaction and coordination among people and departments, is an important antecedent to market orientation. Jaworski and Kohli (1993) found some concluding evidence that interdepartmental connectedness was related to a market orientation and these results concur with those conclusions. No study has empirically tested a team orientation with a market orientation making this research an important contribution to the literature. Slater and Narver (1995) also heavily emphasized that an interfunctional structure, (team structure), is critical to information exchange and organizational learning. These results show support for this component of the market orientation theory.

Some predictor variables were not found to be significant: *conflict resolution, team performance evaluation, satisfaction in a team, company size size* and *promotional spending*. Kohli and Jaworski (1990) stated that conflict was a factor that could negatively impact the ability to develop a market orientation within a firm. The results, however, indicate that factor among the other non-significant factors, are less crucial in determining a market oriented firm.

Additionally, *team performance evaluation*, which was expected to be a distinguishing feature in team versus non-team-based companies was not significant in any of the models. Upon further examination, some evidence exists that may explain why this was not significant. Katsansis, Laurin and Pitta (1996) evaluated the performance appraisal systems in the Canadian pharmaceutical industry and no instances where teams were formally evaluated and compensated on a team base. Our results indicate that this same population base has not made shifts toward this type of performance system over the past five years. While it was kept in the model, its non-impact will not be discussed in further models. Future research should include this variable, as it is still believed to be an important construct. Future research may need to adapt this variable, however, based of the reality of the industry. Qualitative research, with specific questions to address this issue, are recommended.

Information Generation In discussing the separate components of market orientation, it can be seen that many of the same team variables had a similar impact on the components. With respect to information generation, only *shared goals* was a significant factor. Responses from product managers indicate that when they feel their marketing department and their organization are team oriented, they also feel that they are able to generate information on their industry, market and customers. Additionally, when teams have goals and objectives that are aligned, they are successful in getting the information they need from their environment. This positive relationship suggests that clear expectations of the team's purpose must contribute to a firm's efforts for the coordinated generation of customer information. This research would agrees with Homburg, Workman & Jensen (2000) who assert that team based structures in the marketing department help them to understand customers, competitors and the environment.

Variables that were not significant in this model that differ from the first hypothesis include *communication/information sharing.* We can conclude that this aspect is less critical to the information gathering portion to market orientation. This activity can be conducted by individuals in the company without a heavy reliance on understanding what information their peers are collecting. Success may be dependent on the strength and number of external contacts and secondary data tools and techniques.

Information Dissemination With respect to information dissemination, a positive relationship was found regarding *team orientation, communication* and *shared goals* . This indicates that the team-based organization is successful in infusing market trends, future customer needs and competitor strategies throughout the marketing department. Good and Schultz (1997) argue that marketing teams are a good strategy to develop close ties with customers and exchange complex information rapidly. As seen in this model, *communication/ information sharing* is significant as it is crucial in the dissemination of customer and market information.

As with the other market orientation variables, it is seen that a *team orientation, communication/information sharing* and *shared goals and objectives* are high when product managers perceive themselves to be effective in terms of disseminating information. When relating customer and market information drawn from the environment and from the field, an emphasis on teams and communication is very important to transferring this critical knowledge

Jaworski and Kohli (1993) found conflicting results with respect to interdepartmental connectedness and dissemination. In one sample, they found a relationship and concluded that connectedness among departments promotes a market orientation and facilitates the dissemination of intelligence. In another sample, however, they did not find a similar relationship and called for additional research to examine this linkage. The current study responds to this need and contributes to the literature by confirming this linkage.

Responsiveness With respect to responsiveness, product managers in the pharmaceutical industry perceive the performance of their department to be better when team orientation is higher. As with the other market orientation variables, it is seen that a *team orientation*, *communication/information sharing* and *shared goals and objectives* are high when product managers perceive themselves to be responsive in terms of market orientation. Belief in action is key, as is illustrated by *shared goals and objectives* being significant in that all members are aligned to carry out their responsibilities. It would seem that in these team based companies, other departments are also aware of marketing's goals and are contributing the plans that created. These results support the conclusion that Kohli and Jaworski (1990) draw that plans, actions, programs and outcomes are based on market information are more successful.

Effects of Team Orientation on Marketing Department Performance Outcomes

When teams are used more frequently and more formally, performance is improved in terms of understanding and building relationships with key customers, quickly implementing plans and programs, getting the product accepted by the correct regulatory bodies and developing a superior marketing plan that will build market share and profitability. In the overall regression *marketing department performance variables*, variables only *team orientation* and *communication/ information sharing* were significant. None of the other predictor variables were significant in this model. However, the results show that when *marketing department performance* variables are regressed separately, different predictor variables are significant. These are discussed below following the overall discussion of market department performance.

Marketing Department Performance The results of this study indicate that a company's choice of brand management system can lead to improved performance. Overall, organizations seem to be adapting their structures to meet external needs. Team based structures are being used to steer the participation of employees to share information, align goals, achieve superior objectives, be adaptable, be flexible and build relationships. These results show that product managers perceive their marketing departments to be better performers when they are team based suggesting that the structure enables them to tap into the knowledge, experience and skills of critical players.

Relationships With Key Stakeholders & Opinion Leaders With respect to some of the specific performance outcomes found in the marketing department, establishing a good relationship with key opinion leaders is a critical function. The interaction effect, seen in the significant variable the company size moderator, indicates that the effect of team orientation depends on the size of the company. In larger companies, being team oriented is more important when it comes to establishing a relationship with key stakeholders. With the larger size, also comes a larger sales force, hence more people available to make contacts in the external environment. In larger companies, establishing relationships with key opinion leaders is facilitated with more sales people in the field to uncover these contacts and relay this intelligence in-house. Better relationships with opinion leaders and external stakeholders (key physicians, early adopters, influencers, etc.) lead to a better understanding of customers. Team orientation is more important in larger companies. This makes sense as functional silos tend to build up in larger organizations and the need for a more formal team based structure becomes more critical to effectiveness. These results concur with Menon and Jaworski (1997) who assert that a greater number of departments can accentuate differences among groups and that better interdepartmental interactions can improve the quality of the output produced. In smaller organizations, the bureaucracy that interferes is less present lowering the need for formal team structures. Smaller companies may not have the need to have teams put in place as they may already work so closely together. Also, smaller companies may be niche companies who already have a long-standing relationship with their limited client base.

The other variables that were significant in this model indicate that in the larger organization, when team members are satisfied with the team experience, relationship building is positive. However, conflict resolution was found to be negatively related, perhaps because this is an internal process, which requires cooperation and has little impact on external relationship building process.

The relationship pharmaceutical companies develop with their key customers and influencers is critical to the success of any product. With intense competition, pharmaceutical companies must strive to get the eyes and ears of their customers. They must get to right ones, with the right message that will persuade them to choose their product. This research demonstrates the importance of teams in larger organizations to be able to do so.

Speed To Implement The Marketing Plan Another critical component of success for pharmaceutical companies is executing the marketing plan and ensuring that it is rolled out effectively. As hypothesized, this is more effective when team orientation is high and team discussions are open and able to anticipate possible problems before they are encountered. This is illustrated by the significant predictor variables in this model of *team orientation* and *communication.* These factors indicate that programs and plans are better accepted and carried out when communication and teamwork are high.

As noted in the literature, product management systems are becoming more integrated with other functions in the company. This research confirms Larkin (1991) in that marketing and product management systems are changing to be more responsive and effective. As demonstrated by the study, product managers rated themselves high on team orientation and high on implementation. This implies greater coordination among product planning, sales, clinical, production, promotion, IT, market access and regulatory among other departments to ensure that plans are implemented with the least delay. In a market where it is crucial to establish a product and market share to recoup high development costs, time is precious.

Regulatory Environment & Market Access Results of this analysis are very weak given that the amount of variance explained was very low (approximately 13%). We hesitate to draw conclusions from this analysis with respect to product managers and their team orientation and this marketing department performance outcome.

We had hoped to confirm that understanding the regulatory environment and gaining market access for the company's product would require a team effort. Market access is believed to be one of the key business challenges facing pharmaceutical companies. While the model was significant, indicating that a team orientation is beneficial, results also showed a negative relationship with *shared goals and objectives* which we do not feel is intuitively correct.

Despite being noted as a critical issue in the pharmaceutical industry, this outcome did not reveal strong results in this model. A possible explanation may be due to the respondents and their relationship with those responsible for regulatory approval. Anecdotal evidence suggests that these groups do not work harmoniously together, therefore, may not express evidence of team oriented behavior. Groups that focus on getting the product approved by the correct governmental bodies and getting the product approved to be reimbursed by all ten provincial governments may have goals that seem unaligned with marketing department. The regulatory groups must focus on an enormous amount of detail and cannot push and exaggerate any of the product benefits. They may be more protective of the company's position and want to avoid any liability or negative publicity for a risky product. These groups may not share goals and so lends support to why our results are inconclusive.

Superior Marketing Plan Another component that is critical to many companies and the prime responsibility of the product manager is the marketing plan. This analysis indicates that a number of factors contribute to the development of a sound marketing plan - the document that will guide the marketing strategies and sales force activities. The interaction effect found in this analysis indicates that team orientation is more important to developing a superior marketing plan when the company size is larger. In larger organizations, the more team oriented they perceive themselves to be, the more information flows among team members and the more each team member considers this objective part of his or her own responsibility. Larger organizations will have larger sales forces feeding field information and market intelligence into the company. This results in a better marketing plan that is focused on key objectives that drive superior performance.

Some of the issues that were outlined in the literature regarding a product manager's responsibilities are pertinent here. Historically, the product manager has had the sole responsibility of the success of the marketing plan. Clearly this has caused problems for product managers to gain support and cooperation for his/her objectives. In smaller companies, this may not be an issue, but with larger organizations that become more bureaucratic and departmentalized, this task can be difficult. These results bring conclusive evidence that the larger the company size, the more team orientation is related to a superior marketing plan. As Berek (1998) and Ross (199) both concluded, the product manager's responsibility for the success of the product is facilitated by access to a wider range of skills and expertise making up for gaps in skill sets. In this, frustration is lowered, priorities better juggled and workloads are more manageable with shared objectives to reduce conflicting priorities. These results support the assertion of Sterman (1998) that teams provide a richer interface among marketing, and other departments for richer input into marketing strategies.

In smaller organizations, the emphasis on formal teams is less important. The product manager may wear more hats in the smaller organization and have fewer internal resources upon which to rely thus reducing the need for teams.

Effects of Team Orientation & Market Orientation on Marketing Department Performance Outcomes

In the last analysis, it was found that market orientation mediates the relationship between team orientation and performance. In this, it was found that team orientation becomes less important to performance when market orientation is considered in the relationship. Hence, market orientation has a stronger influence on an organization's performance than team orientation does. Given these results, if a company had to make a choice as to which to focus its efforts upon, should it choose between a team-based organization or a market orientation? If efforts are placed on becoming more market oriented, a firm will find benefits in terms of improved performance. On the other hand, if a company chose only to focus it efforts on becoming more team oriented, it too would find a benefit in terms of performance. Our results indicate that greater results may be found with market orientation versus team orientation. We contend, however, that both of these efforts should be combines. Market orientation (and perhaps customer orientation) may be the "what" whi9le team may help in the "how". Structural changes are frequently needed for firms to pursuer new objectives and strategies. Success is improved when team are a part of the strategic pursuit of higher objectives.

These results make a unique contribution to the literature, as this relationships among teams, market orientation and performance had not yet been tested empirically. With respect to the market orientation and performance relationship, these findings support prior empirical research "that suggests that market orientation is a significant factor in the effectiveness of organizational processes and activities" (Atuahene-Gima 1996).

Past research has made strong suggestions that teamwork, or interfunctional interaction and coordination, are important antecedents to market orientation (Jaworski & Kohli 1993, Slater & Narver 1994). Jaworski and Kohli (1993) found some concluding evidence that interdepartmental connectedness is related to a market orientation. A mediating chain, however, had not been investigated.

Atuahene-Gima (1996) took a different approach in an examination of market orientation and innovation. This research used a path analysis to examine the underlying dimensions of performance. In this study, with market orientation as the independent variable, interfunctional teamwork was one of seven factors that contributed to performance. Whereas that research predicted market orientation to have a positive impact on interfunctional teamwork in the innovation process, the current study found dissimilar results.

To conclude this discussion, it is found that the results are consistent with previous research but extend existing theory. The research confirms that teams contribute to performance in marketing and in knowledge-based industries. It also confirms that teams are an essential component of a company striving to be more market oriented and customer-focused. These results combine several streams of research into one area for a more holistic view of changes taking place in marketing organizations. Our research lends proof to the call of Homburg, Christian and Jensen (2000) for data on new structures in marketing organizations that demonstrate a shift from product-focused to customer-focused organizations. They add, "while numerous marketing academics have drawn on the marketing concept to argue that firms should be more customer oriented, market oriented or market driven, ... there has been relatively little discussion of specific organizational changes required to achieve this objective" (Homburg, Christian and Jensen 2000). The current research addresses this issue by stating that a team-based structure enables an organization to align its people, goals and priorities to target its customer segments so that performance is improved.

10. THEORETICAL IMPLICATIONS

The project has great significance to researchers in the areas of marketing, organization design and structure, brand management and teamwork. By testing a model that combines both management and marketing variables, we have captured unique insight regarding market teams and performance. Theoretical work on product and marketing teams has been lacking in the literature. With this research, we propose an integrative framework that demonstrates team based marketing departments improve the performance of an organization. Given the complexity of the marketing organization, Workman, Homburg and Gruner (1998), call for empirical research to identify a conception framework to account for how marketing is organized. They add that "although there is increasing interest in organizational issues in marketing, much of the research in marketing focuses on narrow organizational dimension and is not well integrated with research on organizational theory and strategy" (Workman, Homburg and Gruner 1998). This research, with its thorough review of the team effectiveness literature addresses team based marketing structures and their performance implications.

We have also advanced the knowledge and the thinking surrounding teams in knowledge-based industries. As indicated in the literature, little research has been done in this area. This research adds to this important area by quantifying some of the performance measures in a knowledge-based industry. These aspects have been difficult to capture in prior research.

This research also adds the market orientation theory in two ways. The first is by formally including teams as a predictor variable or market orientation. Past research

Kohli, Jaworski and Kumar 1993, Slater & Narver 1994) interdepartmental interactions and interdepartmental connectedness, but had formally considered or tested teams. This research extends this theory by confirming this linkage. The second theoretical contribution is the testing of marketing orientation as a mediator between teams and performance. This unique aspect of this theory helps weigh the importance of organizational structure (teams) with organizational strategy (market orientation) for competitive advantage.

An additional theoretical implication pertains to evolution of the role of the product manager. Some of the recent conceptual papers have examined these changes that have occurred over the past years (Katsanis & Pitta 1995) and had proposed that rapid changes are followed by periods of smooth integration and stabilization. This research captures empirically this phase where brand management is team based. Some authors have questioned whether the brand / product manager or marketing for that matter will go away. Workman, Homburg and Gruner (1998) assert through qualitative studies that this not the case and that the role of marketing is still vital yet changing. This research adds the quantitative dimension to their quantitative work.

11. Limitations

The first limitation of this study is that the positive results may be due to common method variance which can lead to misleading conclusions. Common method variance is found in data collection that uses self report instruments. Although a common method in organizational research, these instruments can have an impact generating method, rather than substantive variance (McLaughlin 2002). In this case, we ask whether the variance is inflated because the predictor variables are highly correlated. Although we attempted to control this issue by including objective measures or measures uncorrelated to the predictor variables that address a variety of conceptually different constructs, we must still exercise caution when interpreting results given that the objective measures in our study were not significant. Although several objective measures were part of the model, they were unsuccessful in model testing. Unsatisfactory results occurred with objective measures of growth, sales, number products and promotional spending for the most part. This limited the ability to bring external validity to the study by illustrating that the measures functioned well with both objective and subjective measures. We did, however, control for other factors, such as satisfaction with the team so this makes common method variance unlikely.

A second limitation to be addressed is that erroneous results are drawn because the independent variables are highly correlated. An examination of the correlation matrix (Appendix 5) of the independent variables, however, illustrates that this is not a factor. All of the correlations are low or moderately low. High correlations were not found among these factors that express the existence of teams and whether team effectiveness is present in an organization.

Although the sample size was strong in terms of survey research, a larger response would have increased the power of statistics and brought greater confidence to the results. In the Canadian industry, the population of product managers is limited thus limiting the total possible responses. Efforts were made to improve the response rate by contacting the supervisors or directors of the product managers. We also limited our study to product managers only and did not include directors, team leaders, market research or other marketing personnel.

Another limitation may come from restriction in range. It may be that a narrow range of responses emerged because many pharmaceutical companies have already moved toward team-based structures. Given movement within the industry, company structures become well known and can be duplicated by competing companies. While many pharmaceutical companies attempt to keep their sales and marketing structures secret, over time, this information can pass though the industry and new benchmarks can be set. Nonetheless, results did show differences, in that there are product managers who perceive their marketing department to be NOT very team oriented while other perceive theirs to be team oriented.

Ability to generalize these results to product managers in other industries, other knowledge-based companies or simply to non-pharmaceutical industry has yet to be proven. These findings could only be applied to all industries after further research to confirm these assertions. Despite these limitations, the measures were prepared with enough general terms that one could extend these results to other industries with reasonable confidence.

12. FUTURE RESEARCH

Future research might undertake this study at a new point in time to mark trends in the pharmaceutical industry. An inter-temporal study should note changes over time in team, market orientation or performance. Examining teams in this industry at a second point in time would give an indication of whether they are becoming more prominent and more necessary for successful companies. It would also give empirical evidence that teams are a positive trend in knowledge-based industries. It would important to examine how they have changed in addition to whether there have been changes at all.

Further studies should be conducted in other industries to see if the effect holds in other circumstances. Since studies show that more industries are becoming customer focused, are they also aligning themselves in teams in order to permit themselves to get access to customer information, circulate it more efficiently within their organization and respond to their customers in a way that is satisfactory to them. This will help companies be market leaders. Research in this area would be very valuable.

Future research should have tighter operational definitions for the predictor variables. Although a standardized scale was sought and not found, perhaps further investigation would uncover a more parsimonious measure. Problems with this measure led to a number of variables being dropped from the model. These unnecessary elements may have been distractions to respondents. Future research could also control other elements that were to be included in the model, but were subsequently dropped. For example, several objective measures were not used in the final analysis. Objective measures could have been supplemented or complemented by asking opinions on performance, market share, growth as has been done in studies in the past (see Narver and Slater 1993, Kohli & Jaworski 1993 among others).

In terms of dependent variables, further exploration can be done with respect to the variable regarding *understanding the regulatory environment / market access*. While this was included as the same construct, future research should expand it into two separate variables and explore each of these constructs more in depth. While these issues were noted to be of high importance to the pharmaceutical industry, this variable was not a significant variable in our model. It may be that it did not adequately capture the intricacies of this important outcome in the pharmaceutical industry. Future research should also be sensitive to the role of these group in the marketing department. Perhaps marketing's direct influence on this group is less than previously anticipated. The relationship among these groups and whether they work in a team based fashion with goals that are aligned would be an interesting exploration.

A measure of customer orientation should also be included in future studies. As mentioned by Homburg, Workman and Jensen (2000), teams in marketing departments are believed to be helpful for attaining a customer focus. They suggest that to make organizations more customer oriented, structural changes are needed to configure business units in a way that enables them to focus on their customer needs. An important question to address is if teams are more customer focused than non- team based companies and does this customer focus then contribute to improved performance. The future research should include the measure of customer orientation as a dependent variable to measure the outcome of team-based structures and market orientation. This measure would be interesting and would be the next building block in this theory.

Although a manipulation check was included with the final four items that assess team orientation in the product managers department and organization, a stronger and separate check could be included in the future to ensure greater construct validity.

The research could have included more members of the team rather than just product managers. While the product manager is a central figure in the team, a wider perspective would include other team members from marketing, such as market research, promotional managers, market access managers, marketing directors or therapeutic team leaders or from non-marketing such as clinical or medical research, regulatory affairs, or R&D. This would provide the opportunity to conduct the analyses atthe team level rather than the individual product manager level. These results would give insight as to the strength of the team and their belief on how their performance fairs in this environment.

This research was admittedly focused on the product manager as much of the interest was on changes happening to this function within marketing organizations. As marketing activities get carried out more frequently in cross functional teams, future research should explore what happens to the role of the product manager. As Homburg, Workman and Jensen (2000) assert, product management is not going away, but rather shifting to market segments and key accounts to deliver better customer value. They call academic researchers to "describe and predict changes... to key account management and to the dispersion of marketing activities".

Other types of research may want to pursue the process of becoming more team oriented and the implementation challenges these organizations face in this pursuit.

BIBLIOGRAPHY

Appiah-Adu, Kwaku (1997) "Market orientation and performance: Do the findings established in large firms hold in the small business sector?" *Journal of Euro – Marketing*, 6, 3, 1-26.

Applebaum, Eileen and Rosemary Blatt (1994) *The New American Workplace: Transforming Work Systems in the United States,* ILR Press, Cornell University Press, Ithaca.

Atuahene-Gima, Kwaku (1996) "Market orientation and innovation" *Journal of Business Research*, 35, 93-103.

Avlonitis, George and Spiros Gounaris (1997) "Marketing orientation and company performance" *Industrial Marketing Management,* 26, 5 (September) 385-402.

Baker, William and James Sinkula (1999) "The synergistic effect of market orientation and learning orientation on organizational performance" *Academy of Marketing Science*, 27, 4 (Fall) 411-427.

Baron, Reuben and David Kenny (1986) "The moderator-mediated variable distinction in social psychological research: Conceptual, strategic, and statistical considerations" *Journal of Personality and Social Psychology*, 51, 6, 1173-1182.

Berek, Richard (1998) "Product Management a work in progress" *Pharmaceutical Executive,* 18, 3 (March) 60-70.

Berthon, Pierre, James Hulbert and Leyland Pitt (1999) "The role of brands and the ways of managing brands are changing" Sloan Management Review.

Bishop, Suzanne (1999) "Cross-functional project teams in functionally aligned organizations" *Project Management Journal,* 30, 3 (September) 6-17.

Campion, Michael, Ellen Pepper and Gina Medsker (1996) "Relations between work team characteristics and effectiveness: A replication and extension" *Personnel Psychology*, 49, 2 (Summer) 429-444.

Campion, Michael, Gina Medsker and Catherine Higgs (1993) "Relations between work group characteristics and effectiveness: Implications for designing effective work groups" *Personnel Psychology*, 46, 4 (Winter) 823-844.

Carless, Sally and Caroline De Paola (2000) "The measurement of cohesion in work teams" Small *Group Research*, 31, 1 (February) 71-88.

Cooper, Robert (1996) "Winning businesses in product development: The critical success factors" *Research Technology Management*, 39, 4 (Jul/Aug) 18-24.

Coulson-Thomas, Colin (1997) "The future of the organisation: Achieving excellence through business transformation" *Management Services*, 41, 12 (Dec) 16-19.

Cummings, Thomas (1978) "Self-Regulating Work Groups: A Socio-Technical Synthesis"
The Academy of Management Review, 3, 3 (July) 625-641.

Day, George (1984), *Strategic Market Planning: The Pursuit of Competitive Advantage,* West Publishing Group, Minnesota.

Day, George (1997), "Aligning the organization to the market" *Reflections of the Futures of Marketing, Marketing Science Institute.*

Day, George and Robin Wensley (1983) "Assessing advantage: A framework for diagnosing competitive superiority" *Journal of Marketing*, 52 (April) 1-20.

Day, George, Marjorie Adams and Deborah Dougherty (1998) "Enhancing new product development performance: An organizational learning perspective" *The Journal of Product Innovation Management*, 15,5 (Sep) 403-422

DeMeuse, Kenneth and Jay Liebowitz (1981) "An Empirical Analysis of Team-Building Research" *Group & Organization Studies*, 6, 3 (Sep) 357-379.

Devine, Dennis, Laura Clayton, Jennifer Philips, Benjamin Dunford, and Sarah Melner (1999) "Teams in organizations: Prevalence, characteristics, and effectiveness" *Small Group Research*, 30, 6 (December) 678-711.

Drew, Stephen and Colin Coulson-Thomas (1997) "Transformation through teamwork: The path to the new organization?" *Team Performance Management*, 3, 3, 162-174.

Dunphy, Dexter and Ben Bryant (1996) "Teams: Panaceas or prescriptions for improved performance?" Human Relations, 49, 6 (May) 677-698.

Elmuti, Dean (1996) "Sustaining high performance through self-managed work teams" *Industrial Management*, 38, 2 (March/April) 4-12.

Elmuti, Dean (1997) "The perceived impact of team-based management systems on organizational effectiveness" *Team Performance Management*, 3, 3, 179-189.

Fisher, Robert, Elliot Maltz and Bernard Jaworski (1997) "Enhancing communication between marketing and engineering: The moderating role of relative functional identification" Journal *of Marketing*, 61, 3 (July) 54-70.

Flynn, John, John Rhodes and Faith Glazier (1998) "Reasons for rivalry" *Pharmaceutical Executive,* 18, 6 (June) 88-106.

Foreman, Susan (1997) "Interdepartmental dynamics and market orientation" *Manager Update*, 9, 2 (Winter) 10-19.

Forrester, Russ and Allan Drexler (1999) "A model for team-based organization performance" *The Academy of Management Executive*, 13, 3 (August) 36-49.

Gladstein, Deborah (1984) "Groups in Context: A Model of Task Group Effectiveness" *Administrative Science Quarterly*, 29, 4 (Dec) 19.

Glassop, Linda (2002) "The organizational benefit of teams" *Human Relations*, 55, 2 (February) 225-249.

Good, David and Roberta Schultz (1997) "Technological teaming as a marketing strategy" *Industrial Marketing Management*, 26 (September) 413-422.

Griffin, Abbie and John, R. Hauser (1993) "The Voice of the Customer", Marketing Science, 12, 1, 1-27.

Gupta, Ashok, S.P. Raj and David Wilemon (1986) "A Model for Studying R&D-Marketing Interface in the Product Innovation Process" *Journal of Marketing*, 50, 2 (Apr) 7-16.

Guzzo, Richard (1996) "Teams in organizations: Recent research on performance and effectiveness" *Annual Review of Psychology*, 47 p307-339.

Guzzo, Richard and Gregory Shea (1992) "Group Effectiveness: What Really Matters?" *Sloan Management Review*, 28, 3 (Spring) 25-32.

Guzzo, Richerd and Marcus Dickson (1996) "Teams in Organizations: Recent Research on Performance and effectiveness" *Annual Review of Psychology*, 47, 307-338.

Hackman, Richard (1987) *Groups That Work (and Those That Don't) Creating More Effective Work Groups in Organizations*, Jossey-Bass Publishing, San Francisco.

Hall, Christopher (198) "Designing and Leading Team-Based Organizations: A Workbook for Organizational Self-Design" *Personnel Psychology*, 51, 4, 1074-1079.

Han, Jin, Namwoon Kim and Rajendra Srivastava (1998) "Market orientation and organizational performance: Is innovation a missing link?" *Journal of Marketing*, 62, 4 (October) 30-45.

Hankinson, P and G. Hankinson (1999) "Managing successful brands: an empirical study which compares corporate cultures of companies managing the World's Top 100 brands with those managing Outsider brands" Journal of Marketing Management, 15, 3, 135-155.

Heiens, Richard (2000) "Market orientation: Toward an integrated framework" *Academy of Marketing Science*

Hills, William, Donald Rosen and Jan Gugliotti (1998) "Dominating the era of outcomes" *Pharmaceutical Executive*, 18, 4 (April) 74-84.

Homburg, Christian, John Workman and Harley Krohmer (1999) "Marketing's influence within the firm" *Journal of Marketing*, 63,2 (April) 1-17.

Homburg, Christian, John Workman and Ove Jensen (2000) "Fundamental changes in marketing organization: The movement toward a customer-focused organizational structure" Academy of Marketing Science, 28, 4 (Fall) 459-478.

Hope, Tony and Jeremy Hope (1996) *Transforming the bottom line: Managing performance with the real numbers*, Harvard Business School Press, Boston.

Hurley, Robert and Tomas Hult (1998) "Innovation, market orientation, and organizational learning: An integration and empirical examination" Journal of Marketing, 62, 3 (July) 42-54.

Ingold, Mel (1999) "The indispensable brand – Why pharmaceutical companies can no longer live without brand management" *Pharmaceutical Executive,* 19, 3 (March) 100-104.

Ittner, Christopher and David Larcker (1997) "Product development cycle time and organizational performance" *Journal of Marketing Research*, 34 (February) 13-23.

Janz, Brian, Jason Colquitt and Raymond Noe (1997) "Knowledge worker team effectiveness: The role of autonomy, interdependence, team development, and contextual support variables" *Personnel Psychology*, 50, 4 (Winter) 877-904.

Jassawalla, Avan and Hemant Sashittal (1999) "Building collaborative cross-functional new product teams" *The Academy of Management Executive*, 13, 3 (August) 50-63.

Jaworski, Bernard and Ajay Kohli (1993) "Market orientation: Antecedents and consequences" *Journal of Marketing*, 57, 3 (July) 53-73.

Jaworski, Bernard, Ajay Kohli and Arvind Sahay (2000) "Market-driven versus driving markets" *Academy of Marketing Science*, 28, 1 (Winter) 45-54.

Johns, Gary (1987) *Organizational behavior: understanding life at work,* Glenview, Ill. Scott, Foreman Publishing.

Katsanis, Lea and Dennis Pitta (1995) "Punctuated equilibrium and the evolution of the product manager" *Journal of Product & Brand Management*, 4, 3, 49-60.

Katsanis, Lea, Jean-Paul Laurin and Dennis Pitta (1996) "How should product manager's job performance be evaluated in emerging product management systems" *Journal of Product & Brand Management*, 5, 6, 24-37.

Katsanis, Lea and Dennis Pitta (1999) "The performance appraisal process of pharmaceutical product managers in Canada: An empirical study" *Journal of Product & Brand Management*, 8, 6, 463-487.
Katsanis 1999, 1996

Katzenbach, Jon R and Douglas K. Smith (1990) *The wisdom of teams: creating the high-performance organization*, Boston, Mass., Harvard Business School Press.

Katzenbach, Jon R (1998) *Teams at the top: unleashing the potential of both teams and individual leaders*, Boston, Mass., Harvard Business School Press.

Koberstein, Wayne (1998) "Competitive choices" *Pharmaceutical Executive,* 18, 6 (June) 58-76.

Kohli, Ajay and Bernard Jaworski (1990) "Market orientation: The construct, research propositions, and managerial implications" *Journal of Marketing*, 54 (April) 1-18.

Kohli, Ajay, Bernard Jaworski and Ajith Kumar (1993) "MARKOR: A measure of market orientation" *Journal of Marketing Research*, (November) 467-477.

Kotler, Philip, Gordon McDougall and Gary Armstrong (1988) *Marketing*, Scarborough Prentice-Hall Canada.

Kumar, Kamalesh (1998) "Examining the market orientation-performance relationship: A context-specific study", *Journal of Management*, 24, 2, 201-33.

Lant, Theresa and Alan Eisner (1998) "Pharmaceutical R&D in an era of managed healthcare: Using integrative teams to produce enduring competitive advantage" *International Journal of Technology Management,* 15, 3 299-321.

Larkin, Marilyn (1991) "What's ahead for product managers?" *Medical Marketing and Media,* 26, 5 (May) 2-27.

Laurin, J.P. (1997) *Product management and performance appraisal systems in the Canadian pharmaceutical industry*, Thesis (M.Sc.Admin.) Faculty of Commerce and Administration, Concordia University.

Lehman, D.R., and R.S. Winer (1994) *Product Management*, Irwin, Illinois.

Lichtenstein, Richard, Jeffrey Alexander, Kimberly Jinnett and Esther Ullman (1997) "Embedded intergroup relations in interdisciplinary teams: Effects on perceptions of level of team integration" *The Journal of Applied Behavioral Science*, 33, 4 (December) 413-434.

Low, George and Ronald Fullerton (1994) "Brands, brand management and the brand manager system: A critical-historical evaluation" *Journal of Market Research*, 31, 4 (May) 173-190.

Maccoby, Michael (1999) "Building cross-functional capability: What it really takes" *Research Technology Management*, 42, 3 (May/June) 56-58.

Macy, B. A., & Izumi, H. (1993). Organizational Change, design and work innovation: A meta-analysis of 131 North American Field Studies- 1961-1991. *Research in organizational change and development, 7*, 235-313.

Majchrzak, Ann and Qianwei Wang (1996) "Breaking the functional mind-set in process organization" *Harvard Business Review*, 74, 5 (September/October) 92-100.

Martin, James, Beth Ann Martin and Bruno Grbac (1998) "Employee involvement and market orientation in a transition economy: Importance, problems and a solution" *Journal of Managerial Issues*, 10, 4 (Winter) 485-502.

McComb, Sara Ann, Stephen Green and Dale Comptom (1999) "Project goals, team performance, and shared understanding" *Engineering Management Journal*, 11, 3 (September) 7-12.

McCormack, Kevin (1999) "The development of a measure of business process orientation and the relationship to organizational performance" (April).

McDermott, Lynda, Nolan Brawley and William W. Waite (1998) *World class teams: working across borders,* New York: Wiley.

McKenzie, Leon (1994) "Cross-functional teams in health care organizations" *The Health Care Supervisor*, 12, 3, 1-11.

Menon, Ajay, Bernard Jaworski and Ajay Kohli (1997) "Product quality: Impact of interdepartmental interactions" *Academy of Marketing Science*, 25, 3 (Summer) 187-200.

Moller, Kristian and Arto Rajala (1999) "Organizing marketing in industrial high-tech firms: The role of interanl marketing relationships" *Industrial Marketing Management,* 28, 5 (September) 521-535.

Murphy, David and Michael Heberling (1996) "A framework for purchasing and integrated product teams" *Journal of Supply Chain Management*, 32, 3 (Summer) 11-19.

Narver, John and Stanly Slater (1990) "The Effect of a Market Orientation on Business Profitability" Journal of Marketing, 54, 4 (Oct) 20-36.

Oldman, Greg and Richard Hackman (1981) "Relationships Between Organizational Structure and Employee Reactions: Comparing Alternative Frameworks", *Administrative Science Quarterly*, 26, 1 (Mar) 66-84.

Olson, Eric, Orville Walker and Robert Ruekert (1995) "Organizing for effective new product development: The moder" *Journal of Marketing*, 59, 1 (January) 48-71.

O-Rourke, Kevin (1999) "The expanding partnership role of information services at Sanofi" *Pharmaceutical Executive*, 19, 3, 70-78.

Parker, Glenn (1993) Team Players and Teamwork. Jossey-Bass Publishers. San Franscisco.

Pasmore, William (1984) *Designing effective organizations: the sociotechnical systems perspective*, New York, Wiley.

Pelham, Alfred (1997) "Mediating influences on the relationship between market orientation and profitability in small industrial firms" *Journal of Marketing Theory and Practice*, 5, 3 (Summer) 55-76.

Pelham, Alfred (2000) "Market orientation and other potential influences on performance in small and medium-sized manufacturing firms" *Journal of Small Business Management*, 38, 1 (January) 48-67.

Pelham, Alfred and David Wilson (1996) "A longitudinal study of the impact of market structure, firm structure, strategy, and market orientation culture on dimensions of small-firm performance" *Academy of Marketing Science*, 24, 1 (Winter) 27-44.

Peppers, Don and Martha Rogers (1999) *Enterprise one to one: tools for competing in the interactive age,* New York, Currency Doubleday.

Rajesh, Sethi; Daniel C Smith and C Whan Park (2001) "Cross-functional product development teams, creativity, and the innovativeness of new consumer products" *Journal of Marketing Research,* 38, 1, 73-86.

Raju, P. S., Subhash Lonial and Yash Gupta (1995) "Market orientation and performance in the hospital industry" *Market Health Services*, 15, 4 (Winter) 34-47.

Recardo, Ronald and Jennifer Jolly (1997) "Organizational culture and teams" *S.A.M. Advanced Management Journal*, 62, 2 (Spring) 4-7.

Ross, Warren (1999), "It's time we trained out product managers" *Medical Marketing and Media*, 34, 8 (August) 84-96.

Ruekert, Robert (1987) "Marketing's interaction with other functional units: A conceptual framework and empirical evidence" *Journal of Marketing*, 51 (January) 1-19.

Ruekert, Robert (1992) "Developing a market orientation: An organizational strategy perspective" *International Journal of Research in Marketing*, 9, 225-245.

Ruekert, Robert, Orville Walker and Kenneth Roering (1985) "The organization of marketing activities: A contingency theory of structure and performance" *Journal of Marketing*, 49 (Winter) 13-25.

Shocker, Allan, Rajendra Srivastava and Robert Ruekert (1994) "Challenges and opportunities facing brand management: An introduction to the special issue " *Journal of Market Research*, 31, 4 (May) 149-158.

Shonk, James (1992) *Team-based organizations: developing a successful team environment*, Homewood, Business One Irwin.

Slater, Stanley and John Narver (1994) "Market orientation, customer value, and superior performance" *Business Horizons*, (March/April) 22-27.

Slater, Stanley and John Narver (1994) "Does competitive environment moderate the market orientation-performance relationship?" *Journal of Marketing*, 58, 1 (January) 46-60.

Slater, Stanley and John Narver (1995) "Market orientation and the learning organization" *Journal of Marketing*, 59, 3 (July) 63-85.

Slater, Stanley and John Narver "Market orientation, customer value, and superior performance" *Business Horizons*, 37, 2 (Mar/Apr) 22-29.

Spreitzer, Gretchen, Susan Cohen and Gerald Ledford (1999) "Developing effective self-managing work teams in service organizations" *Group & Organization Management*, 24, 3 (September) 340-366.

Sterman, Arnold (1998) "Competitive advantage through medical marketing excellence" *Pharmaceutical Executive*, 18, 5 (May) 108-120.

Tadepalli, Raghu and Ramon Avila (1999) "Market orientation and the marketing strategy" *Journal of Marketing Theory and Practice*, 7, 2 (Spring) 69-87.

Trent, Robert and Robert Monczka (1994) "Effective cross-functional sourcing teams: Critical success factors" *International Journal of Purchasing and Materials Management*, 30, 4 (Fall) 3-15.

Wisner, Priscilla and Hollace Feist (2001) "Does teaming pay off?" *Strategic Finance*, 82, 8 (February) 58-64.

Workman, John, Christian Homburg and Kjell Gruner (1998) "Marketing organization: An integrative framework of dimensions and determinants" *Journal of Marketing*, 62, 3 (July) 21-41.

Yeoh, Poh-Lin and Kendal Roth (1999) "An empirical analysis of sustained advantage in the U.S. pharmaceutical industry: Impact of firm resources and capabilities" *Strategic Management Journal*, 20, 7 (July) 637-653.

___ (1993) "Product management has changed... Have you?" *Medical Marketing and Media*, 28, 2, 6-11.

APPENDIX 1

INTERVIEW QUESTIONS FOR QUALITATIVE RESEARCH

Interview Questions

As part of a Master's thesis in Marketing at Concordia University, I am investigating a proposed model linking new organizational structure forms to various organizational outcomes. The purpose of the questions below is to identify and explore some of these outcomes which will then be used to form the basis of full length quantitative mail survey. Your contribution to this qualitative portion will provide the rich data needed to construct a valid questionnaire.

1. What type of structure best describes your department organization? Your department? (Is it functionally aligned with individual activities, cross-functional teams or strictly team-based? i.e. how is work organized?)

2. Do you work with others on projects, activities and or other work outcomes? What kinds of things?

3. What do you think are the results of working in a team vs. working individually? What would be missing if you did not work in a team? What type of things would not get accomplished? How would it affect attaining your goals?

4. Do you think the way your company's structure is designed has any affect on its performance?

5. What gives a company in this industry its competitive advantage?

APPENDIX 2

LIST OF COMPANIES INCLUDED IN SAMPLE

Company	City	Province
Abbott Laboratories Ltd	SAINT-LAURENT	QC
Agouron Pharmaceuticals Canada Inc	MISSISSAUGA	ON
Alcon Canada Inc	MISSISSAUGA	ON
AltiMed Pharmaceutical Company	MISSISSAUGA	ON
Alza Canada	MARKHAM	ON
Amgen Canada Inc	MISSISSAUGA	ON
Apotex Inc (Marketing Department)	NORTH YORK	ON
Aventis Pasteur	NORTH YORK	ON
Axcan Pharma Inc	MONT-SAINT-HILAIRE	QC
Bayer Inc	ETOBICOKE	ON
Berlex Canada Inc	LACHINE	QC
Biomira Inc	EDMONTON	AB
Bioniche Pharma	LONDON	ON
Block Drug Company Canada Ltd	MISSISSAUGA	ON
Boehringer Ingelheim (Canada) Ltd	BURLINGTON	ON
Bristol-Myers Squibb Pharmaceutical Group	SAINT-LAURENT	QC
Byk Canada	OAKVILLE	ON
Canderm Pharma Inc	SAINT-LAURENT	QC
Carter-Horner	MISSISSAUGA	ON
Ciba Vision	MISSISSAUGA	ON
Crystaal Division of Biovail Corporation	MISSISSAUGA	ON
Dermtek Pharmaceuticals Ltd	DORVAL	QC
DuPont Pharma	MISSISSAUGA	ON
Eli Lilly Canada Inc	SCARBOROUGH	ON
Faulding (Canada) Inc	KIRKLAND	QC
Fournier Pharma Inc	MONTRÉAL	QC
Genpharm Inc	ETOBICOKE	ON
Glaxo Wellcome Inc	MISSISSAUGA	ON
Hoffmann-La Roche Limited	MISSISSAUGA	ON
Janssen-Ortho Incorporated	NORTH YORK	ON
Johnson & Johnson Inc	PETERBOROUGH	ON
Knoll Pharma Inc	MARKHAM	ON
Leo Pharma Inc	AJAX	ON
Lifescan Canada Ltd	BURNABY	BC
McNeil Consumer Healthcare	GUELPH	ON
Mead Johnson Nutritionals	OTTAWA	ON
Merck Frosst Canada & Co.	OTTAWA	ON
Novartis Pharmaceuticals Canada Inc	DORVAL	QC
Novopharm Limited	SCARBOROUGH	ON
Paladin Labs	MONTRÉAL	QC
Pfizer Canada Inc	KIRKLAND	QC
Pharmacia and Upjohn Inc	MISSISSAUGA	ON

Pharmascience Inc	MONTRÉAL	QC
Procter & Gamble Phamaceuticals Canada Inc	NORTH YORK	ON
Rhoxalpharma	SAINT-LAURENT	QC
Rivex Pharma Inc	AURORA	ON
Roche Diagnostics	LAVAL	QC
Sanofi Synthelabo Canada Inc.	MARKHAM	ON
Schering Plough Healthcare	MISSISSAUGA	ON
Searle Canada Inc	MISSISSAUGA	ON
Smith & Nephew Incorporated	LACHINE	QC
Smithkline Beecham Pharma Inc	OAKVILLE	ON
Solvay Pharma Inc	SCARBOROUGH	ON
Stiefel Canada Inc	SAINT-LAURENT	QC
Taro Pharmaceuticals Inc	BRAMPTON	ON
Therapex	ANJOU	QC
Whitehall-Robins Inc.	MISSISSAUGA	ON
Wyeth-Ayerst Canada Inc	MARKHAM	ON

APPENDIX 3

SURVEY QUESTIONNAIRE & Introduction Letter

January 12, 2000

«Salutation_Text» «First_Name» «Last_Name»
«Title»
«Organization_Name»
«Civic_Number_Org» «Street_Name_Org» «Street_Type_Code_Org»
«Unit_Designator_Code_Org» «Unit_Value_Org»
«City_Name_Org», «ProvinceState_Code_Org»
«Postal_Code_Org»

Subject: **Master's Thesis Pharmaceutical Industry / Marketing Department Survey**

Dear «Salutation_Text» «Last_Name»,

As part of the requirements for completion of my Master of Science in Administration, I am conducting a research study with Dr. Lea Katsanis, Associate Professor of Marketing. This research examines the organizational design of marketing departments in the pharmaceutical industry. I invite you to participate in the following survey and reassure you that all responses will be kept in the strictest confidence. This research is solely for academic purposes and will not be used in any other way.

Your participation in this survey will help in the way we understand how organizational forms affect organizational effectiveness and competitive advantage. Your confidential responses will be analyzed statistically, so a strong response rate is essential in order to draw accurate conclusions. This research will contribute to both the management and marketing fields and can benefit you directly by benchmarking best practices in order better understand customer needs, competitor moves and internal efficiency. Results will be disseminated to participating companies.

Please take the time to share with us your views. If you have any questions, please do not hesitate to contact me at 514-428-6404.

Best regards,

Jennifer Kelly

APPENDIX 4

FACTOR ANALYSIS ON MARKET ORIENTATION VARIABLES

	Market Orientation
	RESPONSIVENESS α = .815
.723	When one department finds out something important, it takes a while for the other departments to hear about it (ID)
.703	Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion (R)
.682	If a major competitor were to launch an intensive campaign targeted at our customers, we would implement a response immediately (R)
.651	!t takes us forever to decide how to respond to our competitors' new selling arguments (R)
.588	Physician complaints fall on deaf ears in this business unit (R)
.562	Our competitors' tactics or strategies are frequently discussed among my colleagues (ID)
.554	When a major event occurs in the market, everybody within the organization knows about it within a short period (R)
.528	The activities of the different departments in this business unit are well coordinated (R)
.512	For one reason or another we tend to ignore changes in our customers' product needs (R)
	INFORMATION GENERATION α = .753
.778	We speak often with key physicians who can influence acceptance of our product (IG)
.676	We are slow to detect changes in the market (IG)
.575	We are slow to detect fundamental shifts in our industry (IG)
.557	We consult with physicians regularly to determine how satisfied they are with our products (IG)
	IG, R, ID, α = .624
.727	Compared to our competitors, we do a substantial amount of in-house market research (IG)
.661	There is minimal communication between marketing and research concerning marketing developments (ID)
.567	Principles of market segmentation drive new product development efforts (R)
.509	Intelligence on our customers is generated independently by several departments
	INFORMATION DISSEMINATION α = .773
.829	Several departments get together periodically to plan a response to changes taking place in our business environment (R)
.750	We have interdepartmental meetings regularly to discuss market trends and developments (ID)
.693	We periodically review the changes in the regulatory environment and their likely effect (IG)
.535	We periodically review our product development efforts to ensure that they are in line with what customers want (R)
	IG, R, ID, α = .544
.725	We collect industry information by informal means (IG)
.609	Marketing personnel spend time discussing customers' future needs with other departments (ID)
.422	We understand how end users (patients) feel about our products. (IG)
.269	We periodically circulate documents that provide information on our customers. (D)

Appendix 5

Correlation Matrix of Independent Variables

	INFOSHRCOM	PERFEVAL	SHGLSOBJ	SATIS	CONFLRES	TEAMCORI	SFXTEAMC
INFOSHRCOM	1.000						
PERFEVAL	0.283	1.000					
SHGLSOBJ	0.492	0.407	1.000				
SATIS	0.431	0.362	0.408	1.000			
CONFLRES	0.343	0.193	0.291	0.319	1.000		
TEAMCORI	0.203	0.487	0.286	0.380	0.211	1.000	
SFXTEAMC	0.034	0.208	0.117	0.072	0.090	0.416	1.000