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**Developing Measures of Intra-Team Support
and Organizational Support of Teams**

**by
M. Andrew Kennedy, B.Comm.**

A thesis submitted to
the Faculty of Graduate Studies
in partial fulfillment of
the requirements for the degree of

Master of Management Studies

Carleton University
Ottawa, Ontario
December 16, 1997

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the Faculty of Graduate Studies
acceptance of the thesis

**“Developing Measures of Intra-Team Support
and Organizational Support of Teams”**
submitted by **M. Andrew Kennedy, B.Comm.**
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the degree of Master of Management Studies

Thesis Supervisor

Director, School of Business

CARLETON UNIVERSITY
January 12, 1998

ABSTRACT

This research involves the development of two behaviour-based measures: (1) a measure of perceived intra-team support and (2) a measure of perceived organizational support of teams. The objectives of this research were: (1) to identify the behaviours which team members perceive typify supportive and non-supportive team members, (2) to identify the behaviours of their organization towards teams which team members perceive as being both supportive and non-supportive, (3) to determine if individual and team characteristics affect either of these perceptions, and (4) to determine if either of these perceptions are associated with perceived team effectiveness, and a number of relevant individual and organizational outcomes.

According to the results, perceived intra-team support is associated with both team effectiveness and job satisfaction. Team members who rate their fellow team members as supportive are more likely to work on relatively effective teams and experience a higher level of job satisfaction. Perceived organizational support of teams is also associated with aspects of team effectiveness as well as job stress, frequency of doctor visits and job satisfaction. Team members who perceive organizational support of teams as high are also more likely to work on relatively effective teams, experience less job stress, visit the doctor less frequently and experience a higher level of job satisfaction.

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INTRODUCTION

The definition of a team, as it is used in the organizational setting, is an intact social system that is viewed as such by both its members and non-members, whose members have differentiated roles and interdependent relations with each other in order to achieve some shared purpose operating within the boundaries of an organization (Walton and Hackman, 1986; Brett and Rognes, 1986; Hackman, 1987).

The concept of using teams in an organizational setting was first investigated by the Hawthorne studies of the 1920's and 1930's (Homans, 1950). The emergence of socio-technical theory in the 1950's emphasized the ability of groups to improve productivity through optimization of both technical and social aspects of work (Trist and Bamforth, 1951). Other research suggests that working in groups may lead to increased employee satisfaction (Aquilano, 1977), as well as lower absenteeism, turnover and accident rates (Trist et al., 1977; Walton, 1977). In the last decade or so, the use and importance of work teams in organizations has grown significantly (Magjuka and Baldwin, 1991; Guzzo and Shea, 1992; Campion et al., 1993).

The objectives of this research are twofold: The first objective is to develop measures which can be used by both organizations and by researchers to assess the amount of support team members perceive they give each other, and the amount of support provided to teams by the organization. The second objective is to empirically determine the extent to which either of these types of support influence relevant team outcomes (i.e. team effectiveness), and relevant individual and organizational outcomes (i.e. job satisfaction, commitment, job stress, overall stress, hours worked, absenteeism, frequency of doctor visits).

Webster's dictionary defines support as "...to keep from falling, slipping, or sinking...give courage...or confidence to; help; comfort...give approval to...maintain or provide...with money or subsistence...vindicate or corroborate...to keep up; maintain; sustain..." (Webster's New World Dictionary, 1959, p. 1465). Within the context of this research, support refers to any behaviour or action which positively affects a team member's ability to work in a team.

The literature on work teams contains a number of models which attempt to describe the factors which influence work team effectiveness (Gladstein, 1984; Hackman, 1987; Sundstrom et al., 1990). Work team effectiveness has generally been defined to encompass team performance and the level of satisfaction of the work team members (Walton, 1972; Hackman and Morris, 1975; Goodman, 1979; Shea and Guzzo, 1987a; Campion et al., 1993, 1996).

With the exception of Gladstein's (1984) model, which specifically includes support as part of group process criteria, the concept of perceived intra-team support (that is, support that team members give to each other) has not been explicitly mentioned or examined as a factor which may influence team effectiveness. The concept of perceived intra-team support is, however, implicitly included in other models.

Hackman's (1987) normative model, for example, describes group synergy, which includes group interaction, as a factor in group effectiveness, while Sundstrom et al.'s (1990) framework includes interpersonal processes and cohesion as factors related to group effectiveness. Despite these explicit and implicit references to intra-team support being an important factor in work team effectiveness, no empirical studies could be found in the research literature describing what these supportive and non-supportive behaviours might actually be and how they might relate to relevant team outcomes.

With respect to organizational support of teams, Gladstein's model (1984), Hackman's normative model (1987), and Sundstrom et al.'s (1990) framework all include organizational inputs such as training, rewards and information systems as factors influencing team effectiveness. Again, however, no comprehensive measure of organizational support of teams nor any empirical work linking different perceived organizational support of teams to relevant outcomes could be found in the research literature.

OVERVIEW OF RESEARCH

This research used the act frequency approach (Buss and Craik, 1980; 1981; 1983; 1984) to develop two behaviourally based measures of team support. The first measure, henceforth referred to as perceived intra-team support, looks at how much individuals who are working on a team feel their fellow team members support their ability to work on a team. The second measure, henceforth referred to as perceived organizational support of teams, looks at how much individuals who are working on a team feel the organization supports their ability to work on a team. The act frequency approach involved interviewing a sample of team members to form a preliminary list of the behaviours of fellow team members and of the organization which these individuals perceive as supportive or not supportive of their ability to work in a team. Following the interviews, a questionnaire was sent to a larger sample of members of work teams asking them to rate the extent to which each of the behaviours identified in the interviews were representative of support or non-support. The final phase of the research checked the usefulness of the measures by determining if each type of support was associated with relevant outcomes such as team effectiveness and individual and organizational outcomes.

RESEARCH QUESTIONS

This research has the following objectives: (1) to develop measures of perceived intra-team support and perceived organizational support of teams, and (2) to determine the extent to which this support influence team effectiveness outcomes, and individual and organizational outcomes. The specific research questions to be addressed in this study are: (1) What are the behaviours associated with perceived intra-team support?; (2) What are the behaviours associated with perceived organizational support of teams?; (3) How do individual characteristics of team members relate to perceived intra-team support?; (4) How do team characteristics relate to perceived intra-team support?; (5) How do individual characteristics of team members relate to perceived organizational support of teams?; (6) How do team characteristics relate to perceived organizational support of teams?; (7) How does perceived intra-team support relate to team effectiveness?; (8) How does perceived intra-team support relate to a number of relevant individual and organizational outcomes (i.e. commitment, job satisfaction, job stress, overall stress, hours worked, doctor visits, absenteeism)?; (9) How does perceived organizational support of teams relate to team effectiveness?; (10) How does perceived organizational support of teams relate to a number of relevant individual and organizational outcomes?

RELEVANCE OF THE RESEARCH

This research developed two behaviourally-based measures of: (1) perceived intra-team support and (2) perceived organizational support of teams. It also attempted to quantify the relationship between support and team outcomes. Behavioural measures of support should be more useful for managers than attitudinal measures because they provide specific information regarding

what team members and the organization may need to do to be supportive of team members. The measures developed by this research should enable the organization to identify the critical behaviours which comprise support, quantify the level of support (both between team members and from the organization) received by a team, and design appropriate training programs and policies to increase that level of support.

Such an identification will not only permit the organization to design training regimens for team members which emphasize supportive behaviours and minimize non-supportive behaviours, but can also aid in the selection of new team members by screening out those employees who tend to exhibit a large proportion of non-supportive behaviours as compared to supportive behaviours. A behaviourally-based measure of perceived organizational support of teams should also enable the organization to identify the tangible actions it exhibits towards teams and team members which are seen to be supportive or non-supportive of the teams' effectiveness. The organizational policies and practices toward teams could then be altered so as to minimize the identified non-supportive behaviours and maximize supportive ones.

ORGANIZATION OF THE THESIS

This thesis is divided into six chapters. Chapter one provides a review of the published research regarding the relevant factors that influence work team effectiveness. The second chapter will explain the theoretical framework of this study while chapter three outlines the methodology used in this research. This chapter includes an outline of the act frequency approach and a description of the analysis. The fourth chapter presents the behaviours which comprise the two newly developed measures of support. The fifth chapter of the thesis presents the results of the study and provides a

discussion of the findings. The thesis concludes with a discussion of the limitations of the research and relevant conclusions.

CHAPTER ONE

LITERATURE REVIEW

This chapter will examine the literature on work groups and teams in order to gain a better understanding of those factors that influence work team effectiveness. The review is divided into three sections. The first section provides a brief introduction to the subject of work teams and discusses the different types of work groups. The second section examines group effectiveness, and outlines factors that influence group effectiveness. The final section looks at limitations of the current body of literature in this area.

1.0 INTRODUCTION

The literature, for the most part, uses the terms 'team' and 'group' interchangeably. Katzenbach and Smith (1993a) do, however, make a distinction between the two based upon performance results. While a work group's performance is a function of the individual results of group members, a team's performance is based upon individual results of group members as well as the results generated by two or more team members working together. In addition, they state that teams require both individual and mutual accountability. "Simply stated, a team is more than the sum of its parts" (Katzenbach and Smith, 1993a, p.112). Due to the lack of a clear-cut distinction in the usage of the terms 'group' and 'teams', this review examines the literature regarding both. The factors that influence the effectiveness of 'groups' can reasonably be assumed to influence the effectiveness of teams.

The concept of using groups in organizational applications was first brought to light by the Hawthorne studies of the 1920's and 1930's, which discovered that informal groups can affect an

individual's productivity (Homans, 1950). Some of the early literature on groups led to them being viewed as problematic as it was felt they undermined management supervision (Vitalet, 1939) and were found to enforce norms of low productivity (Whyte, 1955). Later studies found that the use of groups could lead to poor decisions (Janis, 1972) as well as conflict within and between groups (Alderfer, 1977).

Despite these potential negative outcomes, work groups also have the potential to increase both productivity and employee satisfaction. Socio-technical theory, which emerged from Britain in the 1950's, emphasized the positive impact of groups on performance in their potential to optimize both technical and social aspects of work (Trist and Bamforth, 1951). Sayles (1958), in fact, viewed work groups as the key to increasing productivity. Research suggests that work groups may lead to increased employee satisfaction (Aquilano, 1977) as well as lower absenteeism, turnover, and accident rates (Trist et al., 1977; Walton, 1977).

1.1 DIFFERENT TYPES OF TEAMS

A review of the literature suggests that there is no consensus with respect to clear distinctions and definitions of the different types of groups or teams. Hackman (1990) divides groups into seven different types: top management groups, task forces, professional support teams, performing groups, human service teams, customer service teams and production teams. Sundstrom et al. (1990) have four categories of teams based on their application: advice and involvement, production and service, projects and development, and action and negotiation. Project teams, task forces, autonomous work groups, and quality circles have all been described as groups (Shea and Guzzo, 1987a). Despite the lack of clear-cut descriptions and distinctions between different types of groups, two ways of

classifying teams were found in the literature: with respect to their basic function, and by whether or not they are empowered.

1.1.1 CLASSIFICATION BY FUNCTION

Katzenbach and Smith (1993b) have classified teams into one of three categories: teams that recommend things, teams that make or do things, and teams that run things (refer to Appendix A).

Teams That Recommend Things: This category of teams includes task forces, quality circles, as well as project, audit and safety groups. The recommendations that these teams make can span a wide range of areas, such as quality issues, the development of new products, and internal organizational issues. Unlike the other two categories of teams, these teams usually have a predetermined completion date or meet temporarily (Katzenbach and Smith, 1993b). A task force would typically fall into this category as it consists of members that come together from different areas to perform a one-time only task by a set deadline (Hackman, 1990). Quality circles would also fall into this category as they are small groups of employees who meet on a regular basis to recommend improvements and solve quality-related problems (Adam, 1991).

Teams That Make or Do Things: These teams usually consist of first-line employees who generate products or provide services. Examples of these functions are manufacturing, operations, marketing, and sales. Most of these teams are ongoing and have no completion date (Katzenbach and Smith, 1993b).

Teams That Run Things: These types of teams oversee some business, ongoing program, or significant functional activity and range from top-management teams all the way down to the

functional level. They can be in charge of thousands of people or only a few. Like teams that make or do things, they have no set completion date for their duties (Katzenbach and Smith, 1993b).

1.1.2 EMPOWERED WORK TEAMS

The concept of empowered work teams emerged from socio-technical systems theory, which stated that to be truly productive, an organization must integrate and optimize its social and technical components (Pearce and Ravlin, 1987). Empowered work teams are designed to facilitate this integration.

Empowered, or self-directed, teams have a number of attributes which distinguish them from non-empowered teams. Firstly, the team has permanent task control (Chacko, Stone, & Brief, 1979; Cummings, 1978). That is, they plan, control and improve their own work processes, as well as preparing their own budgets. They may also do their own scheduling, acquire their own training, set their own goals and review their performance as a team (Wellins, Byham, and Wilson, 1991). This makes empowered teams different from quality circles, task forces and other non-empowered teams in that these teams do not have internal task control.

Secondly, the team has boundary control, which is the ability to influence transactions within the task environment (Cummings, 1978). A variety of skills, a well-defined work area, and team responsibility for boundary control decisions are factors which contribute to attaining boundary control.

Thirdly, the team's output is an identifiable or "whole" piece of work (Kelly, 1978; Cummings, 1978). This facilitates the cooperation and communication required to complete interdependent tasks, as well as containing technical variances within the team's boundaries.

Hackman (1987) divides autonomous work teams into two further categories based on whether the team is responsible for the actual design of the team as a performing unit. 'Self-designing work groups', as described by Hackman (1987), are responsible for decisions concerning the structuring of the team's task, as well as for team membership. 'Self-managing work groups', on the other hand, leave these responsibilities in the hands of management.

It is conceivable that all three types of teams described according to function in the previous section can be empowered. In the literature, descriptions of teams that are empowered are commonly functional in nature.

2.0 TEAM EFFECTIVENESS

A significant body of research addresses the issue of team effectiveness (Hackman and Morris, 1975; Gladstein, 1984; Goodman, 1986; Hackman, 1987, 1990; Shea and Guzzo, 1987a, 1987b; Sundstrom et al., 1990; Campion et al., 1993; Meyer, 1994). This section reviews three of these bodies of literature: literature which defines team effectiveness, research dealing with the measurement of effectiveness, and literature outlining the characteristics which influence effectiveness.

2.1 DEFINITION

A review of the relevant literature shows that a consensus with respect to the definition of team effectiveness may be emerging. Shea and Guzzo (1987a, p.329) narrowly define team effectiveness as "the delivery of designated products or services per specification". This definition ignores the condition of the team in terms of its ability to be productive in the future.

Recent studies involving teams recognize the importance of defining team effectiveness beyond the single criteria of team performance. Hackman and Morris (1975) define team effectiveness in terms of the following three dimensions: (1) The degree to which the team's output meets the standards of those who receive, review and use the output (i.e. productivity); (2) The degree to which the process of carrying out the work enhances the capability of members to work together interdependently in the future (i.e. the team's future prospects); and (3) The degree to which the team experience contributes to the growth and personal well-being of team members (i.e. employee satisfaction).

Gladstein (1984) limits her definition of team effectiveness to two variables: team performance and team-member satisfaction. A number of other researchers including Goodman (1979) and Walton (1972) have also used this definition.

Campion et al. (1993, 1996) defined team effectiveness in terms of both performance and employee satisfaction. In a study of self-managing work teams, they defined work team effectiveness in terms of performance (e.g. productivity, quality, efficiency), employee attitudes about quality of work life (e.g. job satisfaction, organizational commitment) and short-term absenteeism.

Sundstrom et al. (1990, p.130) noted that "Although many experts agree that effectiveness includes more than performance, the 'more' remains an issue." While their definition of effectiveness is in many ways consistent with Hackman and Morris' (1975), they combine members' satisfaction and the team's future prospect as a work unit under the one heading: team viability. They add that a more rigorous definition of team viability could include cohesion, intermember coordination, mature communication, problem solving, and clear norms and roles. Many of these variables (i.e. cohesion, intermember coordination, mature communication) can be thought of as components of team support.

2.2 MEASUREMENT

A review of the literature uncovered three methodologies designed to enable managers to measure team effectiveness. The first, the Productivity Measurement and Enhancement System (Pritchard et al., 1988), focuses solely on productivity. The second, the Team Inventory (Hoevemeyer, 1993), measures productivity indirectly by measuring the team's effectiveness in the areas of team mission and goal achievement. The third, developed for the Oregon Department of Transportation (Wipper, 1994), scores team performance results according to a range of potential performance results.

Pritchard et al. (1988) developed the Productivity Measurement and Enhancement System (ProMES) in response to the productivity literature's focus on individuals performing simple tasks. This measure focuses solely on productivity. Productivity is measured by considering efficiency as well as output. In developing ProMES, the group's products or objectives are identified by supervisors, followed by the development of indicators for measuring how well each objective is being met. The minimum and maximum capabilities of the group for each indicator are then determined. This measure differs from other productivity measures in that it is not based on an organizational standard but a standard based on the group's capabilities (Greene, 1989).

Hoevemeyer (1993) has developed the Team Inventory, which enables teams to measure their own effectiveness and need for improvement in five areas: team mission; goal achievement; empowerment; open, honest communication; and positive roles and norms.

Wipper (1994) describes a pilot project developed for the Oregon Department of Transportation which quantified measures of efficiency and effectiveness for management teams and work teams. A 'performance matrix' is used to track measures of team efficiency and effectiveness

(productivity) by comparing actual performance results to potential results such as: percent of work delivered on time, percent of work requiring correction, and percent satisfied customers. The actual result is assigned a weighted score. The weighted score, as well as the measures themselves, are developed by team members.

Empirically, team effectiveness has been measured in a number of different ways (Green, 1989; Campion et al., 1993, 1996; Gladstein, 1984). Greene (1989), in his longitudinal study of cohesion and productivity in work groups, measured productivity by a manager's appraisal of his or her group's performance against formal organization performance measures. To accomplish this, two scales were developed for the manager to indicate the percent of plan achieved by the team for a given week: one for quality of performance or output, the other for time or quantity of output.

Campion et al. (1993) measured team effectiveness in terms of productivity and satisfaction. He also asked managers to rate the effectiveness of the team. Productivity was measured using company records. Employee satisfaction was measured using a 71 item survey with a five-point Likert scale to measure employees' level of agreement or satisfaction with statements concerning work team characteristics. Principal components analysis was used to identify 12 factors which explained 61% of total variance. The most important factors included supervision, job, quality of service, upper management, career development, rewards, management's commitment to quality, employee relations, communications, co-workers, recognition, and workload.

Manager judgements of effectiveness was measured by having managers evaluate teams on four items, all of which represented the organization's definition of effectiveness: (1) quality of work, (2) customer service, (3) satisfaction of the members, and (4) productivity. A five-point response format was again used which allowed managers to rate teams as either above or below average.

In a subsequent study (1996), Campion et al. again measured team effectiveness in terms of productivity and satisfaction. For this study, however, different measures of effectiveness were used because professional jobs, as opposed to administrative support jobs, were being examined (the complex nature of these jobs precluded the existence of productivity records). As in the previous study, manager ratings of the team were used, as were ratings of employee satisfaction. Four other criteria were examined: (1) Ratings of team effectiveness by outside managers; (2) performance appraisal records of team members and managers; (3) delayed judgements (3 months) of team managers and (4) employee judgements of team effectiveness.

Gladstein (1984) in a study of sales teams, measured team performance by the revenue each team generated above a certain standard set at the start of the year. She also had team members rate their own performance in three areas: satisfaction, decision making, and work completion. Satisfaction was measured using three scales: team satisfaction, which relates to satisfaction with being a team member; work satisfaction, which relates to satisfaction with the job, compensation, method of evaluation and workload; and satisfaction with serving the customer.

2.2.1 CRITIQUE OF CURRENT MEASURES OF EFFECTIVENESS

Most of the measures of effectiveness that have been reported in the literature focus solely on productivity. In doing so, they often rely on managerial ratings and examination of data which are not related to the team itself. They do not look at factors within the team which may influence effectiveness, such as interaction and support between team members. The exception to this is Hoevermeyer's (1993) team inventory, which looks at aspects such as communication and norms. There is, however, no evidence of empirical testing of this measure and its reliability is unknown.

Another problem is the fact that the measures are not prescriptive with respect to improving team effectiveness. Meyer (1994) suggests that any measurement of team effectiveness should help the team, rather than managers, gauge the team's progress. Process measures should explain how the team's actions contributed to a given result. Measures such as profit, market share, or cost do not help teams monitor the activities that enable it to perform a given process, nor tell them what they must do to improve performance. Measures more directly related to the team's daily activities, such as time spent per service call (in the case of a service team), give a team better information than does profit (Meyer, 1994). Behaviourally-based measures of perceived intra-team support and perceived organizational support of teams, such as those being developed in this research, should help in this regard as they may help teams identify behaviours which could enhance or suppress team effectiveness.

2.3 CHARACTERISTICS ASSOCIATED WITH TEAM EFFECTIVENESS

Gladstein (1984) used an earlier input-process-output model developed by McGrath (1964) to develop a theoretical model of task group effectiveness (refer to Appendix B). Gladstein's (1984) model describes group effectiveness as being a function of characteristics at the group level, at the organizational level, and of group process (defined as group actions such as communication and supportiveness, which transform resources into a product). Gladstein (1984) suggests that characteristics at the group and organizational level will have both a direct influence on effectiveness, as well as an indirect role. She postulates that the indirect effect will be because characteristics of the group will influence group process. She also sees the task of the group as moderating the effect of process on effectiveness.

Hackman (1987) suggests an alternative to the input-process-output models of McGrath (1964) and Gladstein (1984) (refer to Appendix C). In this model, not only are input conditions perceived to affect both process and performance (as Gladstein's (1984) model suggests), but there is also a hypothesized reciprocal relationship between group process and group performance. Hackman (1987) suggests that groups evaluate their collective performance as they work, and evaluations affect group processes. These group processes are then hypothesized to affect subsequent performance. This is quite different from Gladstein's (1984) model which does not suggest that performance could affect process.

Hackman (1987) also proposes a normative model of work group effectiveness (Refer to Appendix D). This model was designed to identify accessible, manipulable factors which might enhance or depress task group effectiveness. The constructs in this model include organizational context, material resources, group design, and group synergy to interaction between group members. Hackman distinguishes between group synergy, which he defines as the interaction between group members and process criteria which includes level of effort, task performance strategies, and skill level.

Sundstrom et al. (1990) developed a framework for work team effectiveness in which work team effectiveness, organizational context, team development and boundaries are interrelated (Refer to Appendix E). Organizational context refers to organizational and task characteristics, while team development refers to interpersonal processes and group structure. Boundaries relate to how the group operates within the context of the organization.

Campion et al. (1993), developed a conceptual framework of work group effectiveness based on a number of theoretical models described above (Gladstein, 1984; Hackman, 1987; Guzzo and

Shea, 1992; Tannenbaum, Beard, and Salas, 1992). Key components of previous theories were summarized and split into five different themes: (1) job design; (2) interdependence; (3) composition; (4) context; (5) process. These five themes were, in turn, subdivided into a total of 19 categories (Refer to Appendix F). Campion et al. hypothesized that all of these themes will have a direct influence on team effectiveness.

Cohen et al. (1996) developed a similar model to describe the predictors of effectiveness for a self-managing work team (Refer to Appendix G). They divide the predictors of effectiveness into four categories: (1) group task design; (2) encouraging supervisory behaviours; (3) group characteristics; and (4) employee involvement context. These predictors are operationalized using 23 variables. Included in the category of group characteristics is the group process variable 'group coordination and caring'. Like Campion et al.'s (1993) model, these variables are suggested as having a direct influence on effectiveness.

The models described above are consistent in that each suggests that team, task, organizational, and process characteristics will influence work group effectiveness. These characteristics are discussed below.

2.3.1 TEAM CHARACTERISTICS ASSOCIATED WITH TEAM EFFECTIVENESS

The literature on teams describes several characteristics of the team which may influence team effectiveness including team size, mission clarity, status of the team within the organization, and team autonomy.

Team Size: Different studies in the literature appear to be in agreement with respect to the relationship between team size and team effectiveness (Goodman et al., 1986; Gladstein, 1984; Nieva

et al., 1978): It would appear that while the team should include enough people to adequately perform the task, it should be limited by the fact that as the number of team members increases, the difficulty in coordination increases while performance declines. No optimum team size is specified in the literature

Mission Clarity: Team effectiveness may be influenced by having a clearly defined team mission (Shea and Guzzo, 1987). Hoevermeyer (1993, p.69) points out that: "Each person on the team should know exactly why the team exists and what it contributes to the department and to the company as a whole. It's easier for the team to do its job if it knows why it is doing its job."

Status: Status, in terms of both member status and overall group status, has been shown to influence task effectiveness. O'Reilly and Roberts' (1977) study of groups in Naval Aviation Units found group status to be positively related to task effectiveness. Their work suggested that being on a higher status team gave team members a greater sense of responsibility and pride, which in turn increased their level of motivation and effort in order to retain such status. In order to give a team high status, the group's output should make a tangible contribution to the overall organizational mission. Team status should not, however, be enhanced at the expense of creating status differences between members (Pearce and Ravlin, 1987).

Autonomy: The influence of team autonomy (also known as self-management or empowerment) on team effectiveness first emerged from a series of group experiments in the British coal-mining industry in the early 1950's (Bucklow, 1966). These experiments led to the development of socio-technical systems theory. Miners were put into small groups and given collective supervisory responsibility for their own work. Higher autonomy was associated with lower rates of turnover, absenteeism, and accidents, fewer stress related illness, and higher output.

Studies performed in the United States on the influence of autonomous work teams on group outcomes reported similar results. Aquilano (1977) and Trist et al. (1977) found that work satisfaction increased with the use of autonomous work groups as did worker innovation.

Pearce and Ravlin (1987) note, however, that while published statistical analyses have found attitudinal changes from the use of autonomous work groups, there is little empirical work that has: (1) supported observations of increased productivity in autonomous work teams, or (2) observed declining productivity with the use of autonomous work groups.

Finally, work by Campion et al. (1993) suggests that autonomy may improve group effectiveness by increasing members' responsibility and ownership of the work. Pearce and Ravlin (1987) caution that not all work group members may desire autonomy and the resulting additional responsibility.

2.3.2 TASK CHARACTERISTICS ASSOCIATED WITH TEAM EFFECTIVENESS

The literature indicates that the identity, significance, variety and interdependence of the group's task may be related to effectiveness.

Task Identity: Cummings (1978), Pearce and Ravlin (1987), and Hackman, (1987) found that groups that performed an identifiable, whole and separate piece of work were more motivated and co-operative. They suggested that this occurred because such tasks instilled a team with a sense of responsibility and ownership towards the work. Such tasks may also increase the control the team has by keeping technical variances or other errors with the product within the group (Cummings, 1987; Campion et al., 1993).

Task Significance: Hackman (1987) states that team members are more likely to work harder to attain team objectives if they believe that their work is important. Campion et al. (1993) found evidence that the significance of the task was useful in predicting team effectiveness.

Task Variety: Wellins, Byham and Wilson (1991) suggest that instead of being highly specialized, team members should be allowed to understand and perform all tasks within the team. They feel that this should enhance team effectiveness by enabling members to allow for changing demands and fill in for each other if needed. As well, task variety should motivate team members to use and develop different skills (Hackman, 1987) and enable them to share both interesting and boring tasks (Davis and Wacker, 1987). Research by Campion et al. (1993) showed a positive relationship between the level of task variety and team effectiveness.

Task Interdependence: Team members interact and may depend heavily on each other to accomplish the team's work. Campion et al.'s (1993) research found a positive correlation between team member productivity and the level of task interdependence.

2.3.3 ORGANIZATIONAL FACTORS ASSOCIATED WITH TEAM EFFECTIVENESS

The literature indicates that organizational resources, as shown in Gladstein's (1984) model, can influence team effectiveness. Specific organizational resources that may influence effectiveness are training, rewards, information systems, and organizational policies related to teams.

Training: Wellins, Byham and Wilson (1991) state that people who have been involved with teams believe training to be one of the most important factors influencing group effectiveness. The importance of training is understood given the fact that people who are new to teams may have developed habits that are not conducive to effective teamwork. They suggest two general guidelines

with respect to training. First, teams members must be provided with a core set of skills, such as group decision making skills, interpersonal skills and technical knowledge. Second, they must be provided with ongoing training when they have immediate opportunities to apply what they have just learned. Similarly, Hackman (1987) says that for a team to reach its performance potential, technical consultation and training must be accessible to teams.

Rewards: Hackman (1987), Gladstein (1984), and Pearce and Ravlin (1987) agree that rewards should be based on group performance in order to promote team-oriented behaviour. Individual rewards for team members could cause conflict within the team. Campion et al. (1993) found that feedback and rewards were positively related to employee satisfaction, one component of effectiveness.

Information Systems: Hackman (1987) states that appropriate support from the organization's information system is extremely important for a group to be effective. According to Wellins, Byham and Wilson (1991), information systems should be able to provide information to teams directly when and where needed. In other words, the computer information system should be able to provide the team with information regarding the task situation as well as access to data concerning likely consequences of alternative strategies.

Other Policies and Practices Related to Teams: Katzenbach and Smith (1993) state that top management should focus major policies and resources to favour teams in order to get the organization as a whole to understand the importance of, and to support, teams. In particular, the organization must promote teams to the extent that employees will consider being in a team as part of any successful career. The organization must promote team accomplishments over individual ones.

There must also exist a strong work ethic and sense of discipline throughout the entire organization, not just among teams, in order to foster team performance (Katzenbach and Smith, 1993).

2.3.4 PROCESS CHARACTERISTICS ASSOCIATED WITH TEAM EFFECTIVENESS

Group process behaviours are behaviours which relate to the maintenance of the group (Bales, 1958) that "build, strengthen and regulate group life" (Philp and Dunphy, 1959, p.162) or task behaviours that allow the group to complete their assigned task. According to Gladstein's (1984) model of task group effectiveness, group process can have a direct effect on team effectiveness. She also postulates that group process itself can be influenced by group and organizational level inputs. Hackman (1987) has suggested that the relationship between effectiveness and process characteristics is a reciprocal one. Initial team success could positively affect group processes, producing a reinforcing spiral of effectiveness (Hall and Watson, 1971), while poor team performance could create negatively reinforcing spirals of decreasing effectiveness (Steiner, 1972). The process characteristics of commitment, cohesiveness, and potency are discussed below.

Group Commitment: According to Hackman (1987, p.325), group commitment leads members to exert extra effort, thereby positively affecting productivity: "...when individuals value their membership in the group and find it rewarding to work collaboratively with their teammates, they may work considerably harder than they would otherwise." Hackman states that a strong commitment from its members can enable a team to successfully perform its task even when performance conditions are highly unfavourable.

Group Cohesiveness: Group cohesiveness refers to the attraction and desire to remain in a particular team (Campion et al., 1993). O'Keefe, Kernaghan and Rubenstein (1975), in a study of

self-regulated work teams, found that cohesive teams can positively influence performance by being more responsive to change.

Hackman (1987) cautions that group cohesiveness, as well as commitment, can be a double-edged sword, as they could lead to group ethnocentrism, resulting in dysfunctional conflict between teams. Green's (1989) longitudinal study of the relationship of cohesion and productivity in work groups found that though cohesion positively affects productivity when group drive is high, it may negatively affect productivity when conditions of low group drive and low goal acceptance exist.

Groupthink is another example of how cohesiveness may lead to negative team outcomes. Put very simply, groupthink occurs when teams under pressure are reluctant to look at new or different information that may challenge a consensus team decision (Janis, 1972).

Whether the cohesiveness experienced by a team is detrimental to performance may depend on whether the group has a task or social orientation. Sakuri (1975) found that cohesiveness was negatively related to team performance only in teams that have a mainly social orientation. Teams performing highly interdependent tasks showed positive effects of cohesiveness on performance (Bird, 1977).

While the literature has shown that cohesiveness may have both positive and negative effects on team performance, it has also been shown that causality may flow in the other direction as well (Bakeman and Helmreich, 1975; Green, 1989). In a laboratory study, Nixon (1977) found that a team's past successful performance tends to reinforce cohesiveness.

Other factors that have been found to be positively related to team cohesiveness are specificity of team goals (Koch, 1979), team size (Sundstrom et al., 1990), accuracy of performance feedback

(Koch, 1979), physical proximity of workspaces (Sundstrom, 1986), and similarity in team member attitudes (Terborg, Castore, and DeNinno, 1976).

Potency: Potency is defined as the collective belief in a team that it can be effective (Guzzo, 1986). The literature has many examples showing potency as instrumental in team effectiveness. Sayles (1958) in an investigation of work teams in a manufacturing plant, found that teams differ according to members' collective belief about their group's likely effectiveness and that this belief not only results in team effectiveness, but is also a result of team effectiveness. Hackman (1990) has described many instances of work teams whose effective performance could be partially attributed to their belief that they would be effective.

There are various factors, both internal and external to the team, which influence potency. Factors internal to the team are mainly related to characteristics of individual team members. According to Larson and LaFasto (1989), a team's sense of confidence is influenced by members' assessments of the adequacy of the skills represented in the group to perform the task at hand. Consistent with this, Guzzo et al. (1991) found potency to be related to team composition and to the clarity and challenge of team objectives. Guzzo et al. (1993) further suggest that the experience and knowledge of members will be positively related to potency. They also predict team size to be a factor and that understaffed or overstaffed teams will have a lower sense of potency.

Factors external to the team which influence potency include the level of resources provided to the team (Guzzo et al., 1993). Like the skill of team members, this must be perceived as being adequate to complete the team's task effectively. As well, the contribution the team's effort makes to the broader social system (ie. the organization) is positively related to potency (Guzzo et al, 1993). This is consistent with the influence of clarity of the team's mission on team effectiveness.

Communication and Cooperation: Laboratory research has shown a link between communication and cooperation within the team, including the degree of workload sharing, and the team's performance and outcomes (Deutsch, 1949; Leavitt, 1951; Sundstrom et al., 1990).

2.4 IMPACT OF INTRA-TEAM SUPPORT AND ORGANIZATIONAL SUPPORT OF TEAMS ON TEAM EFFECTIVENESS

While 'support', the construct, as defined in this study has been implicitly or explicitly included in a number of models presented previously (Gladstein, 1984; Hackman, 1987; Sundstrom et al., 1990; Campion et al., 1993) there has been little empirical work done in this area. There was no research found on individual behaviours of team members toward each other which may relate to group effectiveness. Nor was it possible to find empirical work identifying how organizations could support their teams. While Gladstein (1984) includes supportiveness as a variable of group process in her model of task group effectiveness, she did not define what she meant by supportiveness nor describe supportive behaviours. Rather, supportiveness was included in a set of variables titled 'maintenance behaviours', which also included the variables open communication and low interpersonal conflict, two variables which seem consistent with the idea of supportiveness as defined in this study.

In work closely related to that proposed in this study, Parker (1990) developed a check-list of behaviours of four types of team players: contributor, challenger, communicator, and collaborator. Several shortcomings exist which limit the generalizability of Parker's findings. First, the behaviours which characterize each of these types of team players were developed based on information received from chief executive officers and vice-presidents of human resources of 51 companies, not from

actual team members themselves. Secondly, the behaviours have not been empirically tested. Parker's (1990) study is similar to the research being conducted in this in that it sought to identify and classify actual behaviours of team members. However, unlike Parker's study, this research sought to identify behaviours of team members and then empirically tested the impact these behaviours had on a number of outcomes of interest.

Wellins, Byham and Wilson (1991) include team/interaction skills as one of three core set of skills required by effective teams. These skills consist of interpersonal and communication skills that are required for effectiveness, as well as the ability to handle conflict, negotiating skills, one-to-one communication and the ability to lead meetings. These types of skills could be considered to be supportive behaviours. Unfortunately this information have not been empirically validated.

Similarly, Hackman (1987) states that having at least moderate interpersonal skills among team members is important, especially if they have diverse backgrounds as poor team member collaboration could impede the group's ability to function, no matter how strong the members' individual task skills and expertise.

The social support literature also supports a link between team-member support and worker effectiveness. Social support is information that leads one to believe that he or she is cared for, loved, esteemed, valued and belongs to a network of communication and mutual obligation (Cobb, 1976). The social support literature indicates that there exists a negative relationship between the amount of support one receives and the stress that one feels (Kahn, 1970; Cobb, 1976; Jayartne et al., 1983; Dolan, van Ameringen, Arsenault, 1992). Stress refers to "environment events...that may produce strain, an internal state of continued attention, and potential exhaustion" (Koeske and Koeske, 1991, p.476). In addition, it has been argued that social support has a "buffering" effect (Cobb, 1976;

LaRocco et al., 1980; Fried and Tiegs, 1993): That is, it lessens the effects of job stress on mental and physical strain.

It makes intuitive sense that team members who experience less stress will be more effective. This assumption remains, however, to be empirically validated. To date, little research exists supporting a relationship between support and stress. Given that workers with low levels of stress tend to be more effective than those with higher stress levels (Brown, 1991), an inverse relationship between social support and stress would imply that support from co-workers could be associated with increased effectiveness.

CHAPTER TWO

THEORETICAL FRAMEWORK

The research literature reviewed in the previous section was used to generate the theoretical framework shown in Figure 1.

Figure 1: Theoretical Framework

This model will be used to guide the research efforts. It is based mainly on Gladstein's (1984) model (refer to Appendix B) of task group effectiveness in which group process characteristics such as open communication and group cohesiveness are hypothesized to influence group effectiveness, as do organizational-level inputs such as organizational resources and organizational structure. Gladstein's (1984) model also postulates that group task characteristics moderate the effect of group processes on group effectiveness.

Perceived intra-team support as conceptualized in this study is a construct which measures how much individuals who are working on a team feel their fellow team members support their ability to work on a team. This construct is similar to the concept of group process described in Gladstein's (1984) model as well as by others (Campion et al., 1993; Sundstrom et al., 1990). The first research question deals with the development of the measure of perceived intra-team support: 'What are the behaviours associated with perceived intra-team support?'

Perceived organizational support of teams as conceptualized in this study is a construct which measures how much individuals who are working on a team feel the organization supports their ability to work on a team. Perceived organizational support of teams is analogous to the organizational-level inputs of resources and organizational structure included in Gladstein's (1984) model. The second research question deals with the development of the measure of perceived organizational support of teams: 'What are the behaviours associated with perceived organizational support of teams?'

Data regarding individual demographic characteristics were also collected as part of this study. Specifically, information regarding the gender and division of each individual team member

was gathered, as well as other demographic information such as job type, age, marital status, number of children living at home, and whether or not they have eldercare responsibilities. While Gladstein's (1984) model did not include such individual characteristics, it was felt to be useful information which would not be difficult to collect.

Information regarding team characteristics was also collected. This information included the team's function, whether it was empowered, the team's age, the team's size, the degree of interaction among team members, whether the team had a leader, the autonomy level of the team and the its task characteristics. The collection of team-level data is consistent with Gladstein's (1984) model which includes group-level inputs such as group composition and group structure.

This research used the newly-developed measure of perceived intra-team support to measure the actual level of this type of support in a number of existing teams. In addition, the levels of perceived intra-team support were checked for any significant differences by individual characteristics or by team characteristics in order to minimize the impact of possible confounds. Demographic characteristics, team characteristics and intra-team support data were used to answer research questions three and four: 'How do individual characteristics of team members relate to perceived intra-team support?'; and 'How do team characteristics relate to perceived intra-team support?'.

The measure of perceived organizational support of teams was used to measure the level of this type of support in a number of existing teams. As with perceived intra-team support, the levels of perceived organizational support of teams were checked for any differences by individual characteristics or by team characteristics. This portion of the researched was dealt with by answering research questions five and six: 'How do individual characteristics of team members relate to

perceived organizational support of teams?'; and 'How do team characteristics relate to perceived organizational support of teams?'.

Data was gathered that would gauge the team's effectiveness in doing their work. This was done two ways: (1) having team members rate the effectiveness of their team and (2) having each team leader rate the effectiveness of their team. Also gathered was data regarding individual and organizational outcomes, which included commitment, job stress, overall stress, job satisfaction, hours worked, doctor visits and absenteeism. Both team effectiveness, as it is used in this model, and individual and organizational outcomes are consistent with the construct of group effectiveness in Gladstein's (1984) model. In her model, as well as elsewhere in the literature (Campion et al., 1993; Sundstrom et al., 1990), group effectiveness includes performance and satisfaction. The team effectiveness construct in the model used to guide this research looks at the team performance component of Gladstein's (1984) model. Individual and organizational outcomes are similar to the satisfaction component in Gladstein's (1984) model.

This research examines the proposition that perceived intra-team support is related to team effectiveness and/or individual and organizational outcomes. This is consistent with Gladstein's (1984) model which hypothesizes that group process characteristics influence group effectiveness. The empirical examination of this proposition can thus help answer research questions seven and eight: 'How does perceived intra-team support relate to team effectiveness?'; and 'How does perceived intra-team support relate to a number of relevant individual and organizational outcomes'.

Perceived organizational support of teams is also checked for any association with team effectiveness and/or individual and organizational outcomes. This is consistent with Gladstein's (1984) model which hypothesizes that organization-level inputs influence group effectiveness. The

testing of these associations can be used to answer research questions nine and ten: ‘How does perceived organizational support of teams relate to team effectiveness?’; and ‘How does perceived organizational support of teams relate to a number of relevant individual and organizational outcomes’.

It is important to note that this model is not all inclusive. Practical considerations limited the amount of data that could be collected and the number of constructs that could be examined. Not all possible relationships are examined or tested. For example, it is likely, given evidence in the literature, that team characteristics have a direct effect on team outcomes. This relationship, however, is not tested as the focus of this study is to examine the support construct.

CHAPTER THREE

METHODOLOGY

The act frequency approach was used to develop two measures: 1) a measure of perceived intra-team support and 2) a measure of perceived organizational support of teams. The study also examined the validity and reliability of these measures by determining whether levels of intra-team and organizational support are related to various team outcomes. In addition, characteristics of both individual team members and teams themselves were examined in order to see if there exists a relationship between these characteristics and levels of perceived support, and also to make sure that any relationship observed can be attributed to the support construct, not to individual or team characteristics. The samples came from team members at a large west coast utility that will be referred to as Company X.

This chapter will discuss: (1) the act frequency approach, and (2) the three phases of research that were performed.

1.0 THE ACT FREQUENCY APPROACH

Developed by Buss and Craik (1980; 1981; 1983; 1984), the act frequency approach is a technique that identifies behavioural acts at the core, mid-range and periphery of a given disposition. The core acts are used as behavioural definitions of, and as measures of, the disposition. For this study, the act frequency approach will be used to define and develop measures of perceived intra-team support and perceived organizational support of teams. This section will describe: (1) the act frequency approach, including criticisms of the act frequency approach; and (2) the procedure for the act frequency approach.

1.1 DESCRIPTION OF ACT FREQUENCY APPROACH

Though there are three basic perspectives on dispositional concepts, the act frequency approach views dispositions as "the tendency of individuals to behave in certain ways" (Buss and Craik, 1980, p.379). It should be noted that in this thesis, the term 'individual' is defined as: i) a team member and ii) the organization. While team members are clearly individuals, it may be less obvious how an organization can be given this definition. Policies and procedures of an organization, however, as well as organizational culture, could be viewed as dispositions, or the tendency to behave in a certain way. Dispositional assertions are summary statements of behaviour up to the present (Buss and Craik, 1983). The act frequency approach is based upon the frequency concept of disposition: if a subject is said to possess a given disposition, it means that over a given period of time the subject will have exhibited a high incidence of acts that are characteristic of that disposition.

Dispositional categories have two important features. First, these categories are treated as 'fuzzy sets' in that there are no specific boundaries between categories and categories may overlap. This feature is not a concern for this research as two diametrically opposite dispositions, 'support' and 'non-support', are being used to develop an overall measure of support. The second feature, which is more relevant to this study, is that "not all acts within a given dispositional category possess equal status within it" (Buss and Craik, 1983, p.246). That is, one act may be more typical of a given disposition than another act might be.

One of the main assumptions of the act frequency approach is that dispositions are simply the sum of their behavioural manifestations (Buss and Craik, 1983). Moser (1989), however, argues that a given behaviour can be an expression of many different personality dispositions. For this study, the act frequency approach is being used to determine behaviours of other parties that respondents feel

characterize support or non-support. Whether or not a given behaviour or set of behaviours are representative of certain personality types, therefore, is not an issue.

A criticism of Block (1989) is that the act frequency approach does not analyze the situation in which the act occurs. He argues that acts which are very specific and depend on the situation in which they occur, or that have multiple conditions, are technically useless. This should not be a concern for this study, as judges will be asked to rate the degree to which they agree or disagree that a given act is supportive or not supportive of their specific situation - their ability to work in a team.

Another criticism of the act frequency approach made by Block (1989) is that respondents' retrospective accounts of acts may be inaccurate. However, as Dyke (1990) points out, traditional measures are also subject to recall biases. Based on the findings by Buss (1984) that self-reports and observer reports converged, Buss and Craik (1984) concluded that self-reports of acts are appropriate for assessing act frequencies.

Another important criticism of Block (1989) is that the act frequency approach methodology is "nothing more than, and provides appreciably less than, traditional procedures in personality assessment for developing inventory scales" (p.238). Dyke (1990) counters many of Block's arguments and points out several benefits the act frequency approach has over traditional measures with respect to scale construction. First, Dyke (1990) rejects Block's (1989) claim that the act frequency approach is no different from traditional methods in its approach to scale construction. She argues that the act frequency approach's adoption of an empirical process in the creation of measurement items makes an important contribution to item development. Traditional methods, however, offer little guidance in creating items.

Second, Dyke (1990) points out that in terms of editing the pool of items created, traditional methods simply edit out redundancies during selection, while the act frequency approach first generates a large number of items and then edits out redundancies. Thus, she argues, the act frequency approach is more likely to result in a more thorough sampling of the domain (Dyke, 1990).

Finally, Block (1989) views the act frequency approach and traditional methods to be equivalent in their judgement of the adequacy of measurement items. Traditional methods ask respondents to reply in terms of their own values, methods and behaviours, while the act frequency approach involves the respondent indicating the degree to which a given act reflects the behaviour of prototypical others. Dyke (1990) argues that in traditional methods, respondents are only reflecting on their behaviour, thus introducing random variance. Therefore the act frequency approach has less probability of being influenced by chance characteristics of the sample.

1.2 PROCEDURE FOR THE ACT FREQUENCY APPROACH

The act frequency approach consists of two main steps: act nominations and prototypicality ratings. The act nomination phase involves subjects nominating behaviours in order to create a preliminary list of behaviours that is as exhaustive as possible. Once the preliminary list is complete, all redundancies, non-act statements, frequency statements, and vague statements are eliminated.

The second step, prototypicality ratings, consists of respondents rating, on a seven-point scale, each of the behaviours on the revised list based on the degree to which they believe a given behaviour represents the disposition in question. These ratings are analyzed for each behaviour for consensus or near-consensus.

2.0 PHASES OF RESEARCH STUDY

This research study consisted of three phases in the development and testing of measures of perceived intra-team support and perceived organizational support of teams. The first two phases, which correspond with the two steps of the act frequency approach described above, were used to develop the two measures of support. The third phase tests the validity and reliability of each of these measures.

The three phases are summarized below:

PHASE 1: Interviews to identify behaviours
(Act Nominations)

- redundancies removed
- list of unique behaviours prepared

PHASE 2: Questionnaire to identify most important behaviours.
(Prototypicality ratings)

- non-important behaviours removed

Research questions answered in Phases 1 and 2:

- (1) What are the behaviours associated with perceived intra-team support?
- (2) What are the behaviours associated with perceived organizational support of teams?

PHASE 3: Relative impact of support examined
Tested validity and reliability of measures

Research questions answered in Phase 3:

- (3) How do individual characteristics of team members relate to perceived intra-team support?
- (4) How do team characteristics relate to perceived intra-team support?

- (5) How do individual characteristics of team members relate to perceived organizational support of teams?
- (6) How do team characteristics relate to perceived organizational support of teams?
- (7) How does perceived intra-team support relate to team effectiveness?
- (8) How does perceived intra-team support relate to a number of relevant individual and organizational outcomes?
- (9) How does perceived organizational support of teams relate to team effectiveness?
- (10) How does perceived organizational support of teams relate to a number of relevant individual and organizational outcomes?

The relevant details of each of these three phases are given below.

2.1 PHASE 1: INTERVIEWS TO IDENTIFY BEHAVIOURS

The objective of Phase 1 was to generate comprehensive lists of: (1) behaviours that make up perceived intra-team support and (2) behaviours that make up perceived organizational support of teams. This section outlines the procedures followed and the analysis performed in interviews with members of teams at Company X.

2.1.1 PHASE 1 PROCEDURE

The first step of the study, which corresponds to the act nominations step of the act frequency approach, was to interview team members at Company X. These interviews were conducted in person with team members on location at Company X. Each interview spanned anywhere from ten to forty-five minutes in length.

The purpose of the interviews was to: (1) identify behaviours of fellow team members that the respondents perceived as supportive or non-supportive of their ability to work in a team (e.g. 'Listens to me', 'Overburdens other team members with work') and (2) identify behaviours of Company X that the respondents perceived as either supportive or non-supportive of their ability to work in a team (e.g. 'Provides appropriate training for teams', 'Fails to keep teams informed of future changes that may affect them'). After explaining the purpose of the study and assuring the respondents of confidentiality, four questions were asked:

- (1) What specific behaviours of your fellow team members are supportive of your ability to work in a team?;
- (2) What specific behaviours of your fellow team members are not supportive of your ability to work in a team?;
- (3) What specific behaviours of (Company X) are supportive of your ability to work in a team?;
- (4) What specific behaviours of (Company X) are not supportive of your ability to work in a team?

Respondents were asked to focus on specific behaviours and not attitudes or general traits, as behaviours are concrete, observable and can be measured. If a respondent gave a phrase such as "My team members are considerate" they were then prompted for specific examples of considerate behaviour.

It is important to note that throughout this thesis, support is assumed to be a single construct, with supportive behaviours at one end of the continuum and non-supportive behaviours at the opposite end. This assumption is consistent with the interviews. Where a given behaviour was

described by some team members as being supportive, the opposite (i.e. negative) behaviour was described as being non-supportive by other team members. For example, the behaviour "Keeps me informed about their work" was described as being supportive by some study participants while other participants mentioned "Fails to keep me informed about their work" as being a non-supportive behaviour.

2.1.2 PHASE 1 SAMPLE

A total of 41 team members from 7 different teams were interviewed. Just over half (56%) of the team members in this sample were male; 17 (44%) were female. These teams came from different areas of the company as well as from different geographical locations (the company is multi-site). The types of teams interviewed were split as follows: two information systems team, one customer network design team, one team dealing with educational support, two customer service-oriented teams, and one installation team. The organization had a member of their human resources department act as a facilitator for the researcher. This person contacted as many teams as possible to participate and scheduled the interviews with the participating teams. The organization did not have a list of teams, nor did the company directory flag or designate areas of the company that have teams or employees that are team members or team leaders. Thus the facilitator was faced with the problem of identifying and contacting an adequate number of teams. Many of the teams were identified through word-of-mouth, though an attempt was made to get teams from different areas of the company.

2.1.3 ANALYSIS OF PHASE 1 DATA

Phase 1 of the study generated four lists of behaviours: (1) behaviours from fellow team members that were perceived to be supportive of the employee's ability to work in a team, (2) behaviours from fellow team members that were perceived to be non-supportive of the employee's ability to work in a team, (3) behaviours of the organization that were perceived to be supportive of the employee's ability to work in a team, and (4) behaviours of the organization that were perceived to be non-supportive of the employee's ability to work in a team. These four sets of behaviours were then analyzed and all redundancies, non-act statements, and vague statements were eliminated. This was done in order to have a workable and concise set of unique behaviours for inclusion in the Phase 2 questionnaire. In addition, some behaviours were reworded so that the behaviour was stated clearly and easily understood.

In terms of perceived intra-team support, the interviews generated 42 supportive behaviours and 21 non-supportive behaviours (Refer to Appendix H). For perceived organizational support of teams, 17 supportive behaviours and 12 non-supportive behaviours were generated by the process (Refer to Appendix I).

2.2 PHASE 2: QUESTIONNAIRE TO IDENTIFY MOST IMPORTANT BEHAVIOURS

The second phase of the study involved the development of a questionnaire which included the four sets of behaviours identified in Phase 1. This section outlines the procedures followed in Phase 2 of the research, as well as describing the Phase 2 sample, and the type of analysis performed. The section concludes with a discussion about how a consensus was determined with respect to

behaviours that would be included in the measures of perceived intra-team support and perceived organizational support of teams.

2.2.1 PHASE 2 PROCEDURE

The four sets of behaviours identified in Phase 1 were included in the Phase 2 questionnaire (refer to Appendix J for the Phase 2 questionnaire). In this questionnaire, the respondent was asked to rate the extent to which he/she agreed or disagreed with the list of supportive and non-supportive behaviours, for each category, on a seven-point scale. A rating of one meant the respondent strongly disagreed that a given behaviour was either supportive or non-supportive, a rating of four meant the respondent neither agreed nor disagreed, and a rating of seven meant the respondent strongly agreed that the behaviour was either supportive or non-supportive. The questionnaire also included demographic questions such as gender, division, job type, age, marital status and number of children.

Team characteristics were collected in order to determine if there was any divergence between different types of teams in terms of what behaviours were considered supportive or non-supportive. The following information regarding the respondent's team was collected: team size, whether the team had a leader within the group or outside it, the team's general function and the level of team autonomy.

The subject of measuring team autonomy is one which could be covered by a research study of its own. No set measure of team autonomy was found in the literature. A number dimensions of interest were, however, identified by Chacko, Stone and Brief (1979), Cummings (1978), Hackman (1987), Wellins, Byham, and Wilson (1991), and Campion et al. (1993) which were used to create a measure of team autonomy. It should be noted that it is not the intention of this study to create a

comprehensive measure of team autonomy, but to simply provide an impression of the autonomy level of teams as rated by their members. The reliability of this scale was tested using the Cronbach's Alpha measure of internal consistency. A measure is reliable to the degree that it supplies consistent results (Emory and Cooper, 1991). Cronbach's Alpha for this autonomy measure (refer to Table 1 below) was .90.

Table 1: Cronbach's Alpha for Team Autonomy (Phase 2)

Item	Source of Measure	# of items	Cronbach's Alpha
Team Autonomy	Chacko, Stone and Brief (1979). Cummings (1978). Hackman (1987). Wellins, Byham, and Wilson (1991)	11	0.90

2.2.2 PHASE 2 SAMPLE

The Phase 2 questionnaire was administered to a sample of 105 team members from 9 different teams. As in Phase 1, these teams were identified by the organization. The questionnaire package included a cover letter (refer to Appendix K), and a postage-paid return envelope. A total of 29 useable questionnaires were returned for a response rate of 27.6%. This low response rate was likely due to the fact that a union-management dispute regarding the use of survey data led the union to recommend to its members that they not take part in company-sponsored surveys. Furthermore, it is possible that those who did complete the questionnaire may have been negatively-biased against the union because they chose to ignore the union's recommendations.

Data describing the demographic and work characteristics of the sample are shown in Tables 2 to 5. Demographically, there was an even split between males (48.3%) and females (51.7%).

While the responses were fairly evenly distributed throughout four major divisions of the company there were no responses received from the fifth division, 'Network Operations'. Responses were also evenly distributed between managers (41.4%) and non-managers (58.6%).

Table 2: Phase 2 Respondents (Gender by Division)

Division	Gender		Total
	Male	Female	
Emerging Business	1 (25%)	3 (75%)	4 (14.3%)
HRCS	3 (33.3%)	6 (66.7%)	9 (32.1%)
Business Division	3 (42.9%)	4 (57.1%)	7 (25.0%)
CIO	7 (87.5%)	1 (12.5%)	8 (28.6%)
Network Operations	0	0	0
Total	14 (50.0%)	14 (50.0%)	28 (100.0%)

Table 3: Phase 2 Respondents (Gender by Job Type)

Job Type	Gender		Total
	Male	Female	
Managerial	6 (50.0%)	6 (50.0%)	12 (41.4%)
Clerical	0	6 (100.0%)	6 (20.7%)
Systems Analyst	4 (100.0%)	0	4 (13.8%)
Other	4 (57.1%)	3 (42.9%)	7 (24.1%)
Total	14 (48.3%)	15 (51.7%)	29 (100.0%)

Table 4: Phase 2 Respondents (Gender by Marital Status, Children at home, and Eldercare Responsibilities)

Demographic Item	Gender		Total
	Male	Female	
Marital Status			
Married/Sig Other	13 (59.0%)	9 (41%)	22 (78.6%)
Single	1 (16.7%)	5 (83.3%)	6 (21.4%)
Children at home?			
Yes	9 (56.3%)	7 (43.8%)	16 (57.1%)
No	5 (41.7%)	7 (58.3%)	12 (42.9%)
Eldercare responsibilities?			
Yes	0	5 (100%)	5 (17.9%)
No	14 (60.1%)	9 (42.9%)	23 (82.1%)

Table 5: Phase 2 Respondents (Gender by age, number of different managers in previous two years)

Demographic Item	Gender				Total	
	Male		Female			
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
Age	40.1	7.2	36.3	8.7	38.7	8.1
Number of different managers in previous 2 years	2.4	1.4	2.8	2.7	2.62	2.16

2.2.3 ANALYSIS OF PHASE 2 DATA

The analysis of the data collected during Phase 2 of the study allowed the identification of critical behaviours through the determination of consensus. This was done through the calculation of means and variances for each behaviour from the four categories. While means and variances of behaviours were calculated by gender, division, and job type, the sample size was too low to allow

the use of t-tests to examine between group differences. An “eyeball” examination of the mean scores split by gender, division, and job type did not, however, reveal any major discrepancies by gender, division, or job type with respect to how team members view support.

2.2.4 DETERMINATION OF CONSENSUS

The next step in Phase 2 involved the examination of each behaviour to decide whether it should remain in the analysis. A high degree of consensus as to whether a given behaviour was considered to be supportive or non-supportive was sought.

After examining the mean and variance for each of the four sets of behaviours (supportive and non-supportive sets of behaviour for perceived intra-team support; supportive and non-supportive sets of behaviour for perceived organizational support of teams), it was decided to use a mean score of 6.00 or greater as a critical cut-off for three of the four categories of variables. For the fourth set of behaviours (non-supportive behaviours of team members), a cut-off mean of 5.97 was deemed critical. While these cut-off points may seem arbitrary, they were chosen for two reasons: 1) a cut-off of approximately 6 ensures that a majority of respondents are scoring 6 and 7 on a behaviour, indicating a strong level of agreement that it characterizes a supportive or non-supportive behaviour and 2) for three of the four categories (with the exception being ‘supportive behaviours of team members’) there were relatively large drop-offs in mean scores after the selected cut-off scores. For the category ‘supportive behaviours of team members’, the difference between the cut-off mean score of 6.00 and the next highest mean (5.96) is not quite so pronounced. Ideally, six additional behaviours (with mean scores ranging between 5.93 and 5.96) would have been kept as part of the measure. They were excluded because of the organization’s desire to limit the size of the survey

measure. Many of these borderline behaviours are, however, similar to behaviours that were kept in the measure (e.g. 'Provides me encouragement' is similar to 'Provides me with positive reinforcement, and 'Is flexible with respect to scheduling' is similar to 'Covers for me when I am absent or have to leave early'). The list of behaviours with their corresponding means and standard deviations is given in Appendix L.

2.3 PHASE 3: TESTING THE USEFULNESS OF THE DEVELOPED MEASURES

Phase 3 of the study has four major objectives: (1) measuring the level of perceived intra-team support of a number of teams, (2) measuring the level of perceived organizational support of teams of a number of teams, (3) testing the reliability of the measure of perceived intra-team support and the measure of perceived organizational support of teams, and (4) testing the validity of the measure of perceived intra-team support and the measure of perceived organizational support of teams. This section will describe the following: (1) the Phase 3 questionnaire for team members (2) the Phase 3 questionnaire for team leaders, (3) the Phase 3 sample, and (4) the analysis performed on the data gathered in Phase 3.

2.3.1 PHASE 3 QUESTIONNAIRE FOR TEAM MEMBERS

The Phase 3 questionnaire for team members was designed with several objectives in mind: (1) to collect basic demographic information on individual team members; (2) to collect information about the team in which the team member works; (3) to collect information regarding individual and organizational outcomes, as they pertain to each individual team member (i.e. job satisfaction, job stress, overall stress, commitment, absenteeism, frequency of doctor visits, and number of hours

worked); (4) to measure perceived intra-team support and perceived organizational support of teams; (5) to get team members' perceptions regarding the effectiveness of the team in which they work. Each of these objectives will be explained in the five sections given below. The Phase 3 questionnaire is given in Appendix M.

2.3.1.1 DEMOGRAPHIC INFORMATION OF INDIVIDUAL TEAM MEMBERS

The Phase 3 questionnaire for team members collected demographic information. This information consisted of the following: (1) the division in which the team member works, (2) their job type, (3) the number of managers they reported to in the preceding 2 years, (4) gender, (5) age, (6) marital status, (7) whether they have children living at home, and (8) whether they have eldercare responsibilities. Much of this data was gathered at the request of Company X.

Before the data was analyzed, the following operations were performed to assist interpretability of the data. The variable 'division' was collapsed into three categories from the five original categories appearing on the questionnaire. The divisional categories 'Long Distance Services', 'Local and Access Services' remain intact, with the other three categories ('Corporate Services', 'Corporate Communications' and 'Other') were combined into the category 'Other'. This was done due to the relatively low number of responses from these three divisional categories. In addition, the variable 'job type' was collapsed into two categories, 'managerial' and 'non-managerial'. This was done so as to differentiate responses between those employees who were managerial-level and those who were not. Sample size did not allow a further breakdown of this job type. To facilitate the analysis, the variable age was divided into four different categories: (1) Under 27 years, (2) 27 to 34 years, (3) 35 to 45 years (4) Over 45 years.

Finally, it should be noted that information regarding team members' gender and division was also used to determine if the level of either perceived intra-team support or perceived organizational support of teams varied with either of these variables.

2.3.1.2 TEAM INFORMATION

The Phase 3 questionnaire for team members collected information regarding the respondent's team. The information in this section of the questionnaire was gathered in order to determine if the level of either perceived intra-team support or perceived organizational support of teams varied with team characteristics. It was also collected in order to have some basic information about teams and their structure at Company X, for which there had been no previous information. The following information was collected: (1) whether the respondent was a member of an empowered/self-directed work team; (2) the number of people on the respondent's team; (3) the number of team members who the respondent interacts with consistently; (4) the age of the team in months; (5) how long the respondent had been a member of the team; (6) whether the respondent worked on the team full-time; and (7) whether the respondent's team had a team leader/facilitator. In addition, the following construct variables were included on the survey: percent of team members interacted with consistently, team function, team autonomy, and task characteristics. Each of these constructs is explained in detail below. Data on all constructs included in the team information section of the questionnaire are summarized in Table 6.

PERCENT OF TEAM MEMBERS INTERACTED WITH CONSISTENTLY: This construct was created by dividing the number of team members the respondent interacted consistently with by the team's size.

TEAM FUNCTION: Each team member was asked to classify the function of their team. The functions were based on classifications by Katzenbach and Smith (1993b). After initial data analysis, the five categories included in the survey were collapsed into two categories: 'Provides A Service' and 'Other'. This reclassification was made necessary by the low frequency of respondents in the other four categories which are now included in the 'Other' category.

TEAM AUTONOMY: The same measure of team autonomy used in the Phase 2 questionnaire is used in the Phase 3 questionnaire for team members. This measure was created from various dimensions described by Chacko, Stone and Brief (1979), Cummings (1978), Hackman (1987), Wellins, Byham, and Wilson (1991), and Campion et al. (1993). This scale consisted of 11 items, each a question concerning the team's level of responsibility for a given area (e.g. determining work methods, setting team's budget, setting team objectives). The respondent was given a five-point Likert scale to rate the extent of their team's responsibility for that specific area, where 1='none' and 5='total'. The Cronbach's Alpha for this scale in Phase 3 was 0.93 (see Table 6).

An overall score for team autonomy was created by summing the average score for each of the 11 questions. This overall score was then divided into two categories: 'Low' (below mean) and 'High' (above mean). This method of categorization was chosen because the measure was created from various dimensions (as mentioned above) and no other known categorization of scores existed. Splitting into categories above and below the mean was considered suitable when comparing team autonomy to other variables and constructs (i.e. gender, perceived intra-team support).

While the concept of empowerment and autonomy are related, the measure of autonomy differs from the question regarding whether team members felt they were members of an empowered/self-directed team. The eleven-item measure attempts to actually measure team

autonomy by having team members rate the extent of team responsibility in a number of areas (e.g. determining work methods, setting team's budget, setting team objectives). This differs from the single question regarding empowerment, which seeks team members' perceptions of whether or not they believe they work on an empowered team. Again, it must be reiterated that it is not the intention of this study to create a comprehensive measure of team autonomy, but to simply provide an impression of the autonomy level of teams as rated by their members.

TASK CHARACTERISTICS: Four different task characteristics were measured: task significance, task variety, task identity, and task interdependence. Each of these characteristics were measured through team members' perceptions using scales from Campion et al. (1993). Each scale consisted of three statements concerning the level of the task characteristic with regard to the team's work. (Each of the four task characteristics will be explained in greater detail below.) In all cases the respondent was required to rate their agreement with the statement on a five-point Likert scale, where 1='strongly agree' and 5='strongly disagree'. An overall score for each characteristic was calculated by summing the average score for each of the three questions. Again, each overall score was divided into two categories: 'low' (below the mean) and 'high' (above the mean). Categorizing scores above or below the mean was considered suitable when comparing task characteristics to other variables and constructs.

Task significance is the degree to which team members believe their team's work has significant consequences for others either inside or outside the organization (Campion et. al, 1993). The scale measuring task significance consisted of the following three items: (1) 'The work performed by my team is important to the customers in my area'; (2) 'My team makes an important contribution

to serving the company's customers'; and (3) 'My team helps me feel that my work is important to the company'. The Cronbach's Alpha for this scale was .80 (see Table 6).

Task variety is the extent to which each team member gets the chance to perform a number of the team's tasks (Campion et al., 1993). The scale measuring task variety consisted of the following three items: (1) 'Most members of my team get a chance to learn the different tasks the team performs'; (2) 'Most everyone on my team gets a chance to do the more interesting tasks', (3) 'Task assignments often change from day-to-day to meet the work load needs of the team'. The Cronbach's Alpha for this scale was .61 (see Table 6). This alpha is somewhat low, suggesting that care needs to be taken when interpreting results obtained with this variable.

Task identity is the degree to which the team completes a whole and separate piece of work (Campion et al., 1993). The scale measuring task identity consisted of the following three items: (1) 'My team is able to complete all the work on a given product'; (2) 'My team is responsible for all aspects of a product for its area', (3) 'My team is responsible for its own unique area or segment of the business'. The Cronbach's Alpha for this scale was 0.76 (see Table 6).

Task interdependence is the degree to which team members depend on each other to accomplish the team's work (Campion et al., 1993). The scale measuring task interdependence consisted of the following three items: (1) 'I cannot accomplish my tasks without information or materials from other members of my team', (2) 'Other members of my team depend on me for information or materials needed to perform their tasks', (3) 'Within my team, jobs performed by team members are related to one another'. The Cronbach's Alpha for this scale was .80 (see Table 6).

Table 6: Cronbach's Alpha for Autonomy and Task Characteristics (Phase 3)

Item	Source of Measure	# of items	Cronbach's Alpha
Team Autonomy	Chacko, Stone and Brief (1979); Cummings (1978); Hackman (1987); Wellins, Byham, and Wilson (1991)	11	0.93
Task Significance	Campion et al. (1993)	3	0.80
Task Variety	Campion et al. (1993)	3	0.61
Task Identity	Campion et al. (1993)	3	0.76
Task Interdependence	Campion et al. (1993)	3	0.80

2.3.1.3 INDIVIDUAL AND ORGANIZATIONAL OUTCOMES

Specific constructs examined were: (1) job satisfaction, (2) job stress, (3) overall stress, (4) commitment and (5) absenteeism. The information in this section of the Phase 3 questionnaire was gathered to: (1) check the reliability and validity of the measures of perceived intra-team support and perceived organizational support of teams and (2) to see if individual and organizational outcomes varied with the level of perceived intra-team support or with the level of perceived organizational support of teams. Each of these constructs are discussed below. Relevant data on these constructs are summarized in Table 7.

COMMITMENT: Commitment refers to an employee's loyalty to the organization (Duxbury et al., 1991). Each team member's level of commitment was measured using a scale developed by Mowday et al. (1979). This scale consisted of eight items, each a statement concerning the team members' commitment to the organization, with the respondent required to rate their agreement with the statement on a five-point scale, where 1='strongly disagree' and 5='strongly agree'. An overall

score for commitment was created by summing the average score for each of the eight questions. The scale had a Cronbach's Alpha of 0.87. The scale was divided into three categories - high, moderate, and low - based on population norms from Duxbury et al. (1991). Scores of 2.5 and less were categorized as low, scores between 2.5 and 3.5 were categorized as moderate, and scores of 3.5 and above were categorized as high.

JOB STRESS: Job stress is the extent to which a person experiences incompatible pressures within the work domain (Kahn et al., 1964). Each team member's level of job stress was measured using a scale developed by Rizzo et al. (1970). This scale was categorized in the same manner as the commitment scale described above. This scale consisted of five items (each a statement concerning an aspect of job-related stress experienced by the team member), with the respondent required to rate their agreement with the statement on a five-point scale, where 1='strongly disagree' and 5='strongly agree'. An overall score for job stress was created by summing the average score for each of the five questions. The scale yielded a Cronbach's Alpha of 0.62. Again, this score is somewhat low, therefore caution needs to be exercised when interpreting results obtained with this variable.

JOB SATISFACTION: Job satisfaction is the degree to which employees have a positive, affective orientation toward employment by the organization (Duxbury et al., 1991). Each team member's level of job satisfaction was measured using a scale developed by Quinn and Shepard (1974). Again, this scale was categorized in the same manner as the commitment scale described above. This scale consisted of seven items with the respondent required to rate their satisfaction on a five-point scale, where 1='very dissatisfied' and 5='very satisfied'. An overall score for job satisfaction was created by summing the average score for each of the seven questions. This scale had a Cronbach's Alpha of 0.78.

OVERALL STRESS: Overall stress is the extent to which one's current life situation is unpredictable, uncontrollable and burdensome (Duxbury et al., 1991). Each team member's overall stress level was measured using a scale developed by Cohen et al. (1983). This scale consisted of ten items, each a question concerning the frequency of an incident which contributes to the overall stress level experienced by the team member, with the respondent required to rate the frequency of such an incident on a five-point scale, where 1='never' and 5='always'. An overall score for overall stress was created by summing the average score for each of the ten questions (four of the ten questions had to be reverse-coded before they could be summed). Cronbach's Alpha for this ten-item scale was 0.88. The scale is categorized into high, moderate, and low, again based on population norms from Duxbury et al. (1991) (i.e. scores of 1.5 and below categorized as low stress, scores between 1.5 and 2.8 categorized as moderate stress, and scores of 2.8 and above categorized as high stress).

ABSENTEEISM: The Phase 3 questionnaire for team members also included two questions concerning absenteeism. Respondents were asked to indicate: (1) The total number of days absent from work in the previous 12 months due to health problems and (2) the total number of days absent from work in the previous 12 months due to family or personal problems. The responses from these two questions were summed into a number for total absenteeism. The combining of these two questions was done in order to facilitate the analysis. This variable was divided into three categories: (1) no absenteeism, (2) below average absenteeism, and (3) above average absenteeism.

In addition to these five constructs, information regarding the number of doctor visits, excluding those for maternity care, in the previous twelve months and the number of hours worked per week were also collected. The first measure can be used as a surrogate measure for physical

health (Moos et al., 1988), while the second can be used as a surrogate for productivity and effort (Duxbury et al., 1991).

Table 7: Cronbach's Alpha for Individual and Organizational Outcomes

SCALE	Reference	# of items	Cronbach's Alpha
Commitment	Mowday et al. (1979)	8	0.87
Job Stress	Rizzo et al. (1970)	5	0.62
Job Satisfaction	Quinn and Shepard (1974)	7	0.78
Overall Stress	Cohen et al. (1983)	10	0.88

2.3.1.4 PERCEIVED INTRA-TEAM SUPPORT AND PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

The extent to which respondents perceived that they received support from their fellow team members and the organization was assessed in the Phase 3 questionnaire using the measures developed in Phase 2. As noted previously (section 2.2.4), behaviours that did not receive strong consensus in Phase 2 were dropped from the analysis and the remaining behaviours were included in the Phase 3 questionnaire.

For the measure of perceived intra-team support, 22 supportive behaviours of team members were retained, as were five non-supportive behaviours of team members. For the purpose of calculating the Cronbach's Alpha for this scale, the five non-supportive behaviours were reverse coded. The Cronbach's Alpha was 0.94 (see Table 8 below).

For the measure of perceived organizational support of teams, five supportive actions of the organization and ten non-supportive actions of the organizations were retained. Again, for the

purpose of calculating the Cronbach's Alpha for this scale, the ten non-supportive behaviours were reverse coded. The Cronbach's Alpha for this scale was 0.88 (refer to Table 8 below).

In the Phase 3 questionnaire team members were asked to: (1) rate the degree to which they agreed that fellow team members exhibited each of the 27 supportive and non-supportive behaviours listed and (2) rate the degree to which they agreed the organization exhibited each of the 15 supportive and non-supportive behaviours listed. The respondents were asked to rank their agreement with each item using a scale ranging from 1 = strongly disagree to 5 = strongly agree.

Table 8: Cronbach's Alpha for Support Scores

Measure	# of items	Cronbach's alpha
Perceived intra-team support	27	0.94
Perceived organizational support of teams	15	0.88

RATING FELLOW TEAM MEMBERS: In rating fellow team members, the respondents were asked to rate their team as a whole on each of the behaviours. During the personal interviews conducted in Phase 1, team members revealed that this was the preferred method of rating each other. The other option was to rate each team member individually on each behaviour. Many employees felt this would be overly time consuming and many indicated they would be reluctant to rate individuals. It should also be noted that many team members felt that a global rating of their team would be as accurate a measure of support from team members as would rating each individual member.

2.3.1.5 TEAM EFFECTIVENESS

Though the literature commonly used the term 'team effectiveness' to refer to performance and team member satisfaction, as it is used in this study it will refer exclusively to performance-related outcomes. For this study, team member satisfaction is considered a component of individual and organizational outcomes. Team effectiveness was assessed in two ways in this study: (1) self-rating by respondent and (2) rating of team by team leader/manager. Each of these methods is reviewed below.

Self-Assessment by Team Members: The objective of this section of the team member questionnaire was to collect information regarding perceived team effectiveness in order to see if it varied with the level of perceived intra-team support or the level of perceived organizational support of teams. The use of employee ratings of team effectiveness is supported by their recent use by Campion et al. (1996). No broad-based, empirically-tested measure of team effectiveness was found in the literature review. Certain components from the Oregon Department of Transportation's performance measurement system (Wipper, 1994) were adapted and included on the Phase 3 questionnaire to provide a self-rating by team members of their team's level of performance. Though untested, aspects of this scale were chosen due to their broad applicability for different types of teams. This adapted scale consisted of self-ratings by team-members of the team's delivery of its product/service, and its meeting of client expectations. Specifically, this section of the questionnaire asked team members questions regarding their perceptions of: (1) the percentage of time the team delivers its work on time, (2) the frequency of complaints about the team's performance from internal clients, (3) the frequency of complaints about the team's performance from external clients, (4) satisfaction with team performance, (5) perceived team productivity and (6) perceived team

effectiveness. These last three measures were combined to create an aggregate measure of team effectiveness. Each of these constructs are described in detail below.

PERCENTAGE OF TIME THE TEAM DELIVERS ITS WORK ON TIME: This question (referred to throughout the rest of the thesis as 'Percentage of Time Work on Time') asks the team members to give an approximate rating of the percentage of time their team delivers its work on time. There was no known way to categorize responses for this measure. This variable was broken down into the following three categories based on the frequency distribution of responses: 80% or less (28% of sample) were categorized as 'low', between 80% and 95% (42.7% of sample) were categorized as 'moderate', and greater than 95% (29.3% of sample) were categorized as 'high'.

COMPLAINTS ABOUT TEAM PERFORMANCE BY INTERNAL CLIENTS: This single question (referred to throughout the rest of the thesis as 'Complaints by Internal Clients') has team members rate the frequency of complaints about their team's performance by clients within Company X. It uses a five-point scale with 5= Daily, 4=Weekly, 3=Monthly, 2=Yearly, 1=Never. In order to facilitate the analysis the scale was collapsed from five categories into three. The responses 'daily' and 'weekly' were collapsed into the category 'frequently', the response 'monthly' became the category 'moderately', and the responses 'yearly' and 'never' were collapsed into the category 'rarely'.

COMPLAINTS ABOUT TEAM PERFORMANCE BY EXTERNAL CLIENTS: This single question (referred to throughout the rest of the thesis as 'Complaints by External Clients') gets employees to rate the frequency of complaints about their team's performance by clients outside Company X. It also uses a five-point scale with 5=Daily, 4=Weekly, 3=Monthly, 2=Yearly, 1=Never.

In order to facilitate the analysis the scale was collapsed from five categories into three (see the discussion regarding the collapsing of 'Complaints by Internal Clients', described above, for details).

AGGREGATE TEAM EFFECTIVENESS: Team members were asked to rate each of the following on a five-point scale: (1) satisfaction with team performance (1=very dissatisfied, 5=very satisfied); (2) perceived team productivity (1=very unproductive, 5=very productive); and (3) perceived team effectiveness (1=very ineffective, 5=very effective). A score for Aggregate Team Effectiveness was created by summing the average score for each of the three questions. The calculation of Cronbach's Alpha for these three items yielded a high alpha level of 0.89, suggesting that one can collapse these three ratings into one without losing any information. Scores from 1 to less than 2.5 were categorized as low team effectiveness, scores from 2.5 to 3.5 as moderate team effectiveness, and scores above 3.5 and above as high team effectiveness. This categorization was done to facilitate calculation of the design effect (in order to account for clustering within the sample) (see section 2.3.4.7).

2.3.2 ASSESSMENT BY TEAM LEADERS

A Phase 3 questionnaire was also designed for team leaders: (1) in order to check team members' perceptions and compare them to what could be considered a less-biased opinion, (2) to get a second opinion on team effectiveness and (3) because the company itself might place more weight on managers' views. The use of leaders' ratings of team effectiveness is supported by their recent use by Campion et al. (1996). The team leader did **not** complete the Phase 3 questionnaire for team members (see Appendix N for the team leader questionnaire). Rather, their questionnaire consisted of exactly the same information contained in the team effectiveness section of the Phase 3

questionnaire for team members described above. As with team members' ratings of effectiveness, the three questions regarding: (1) satisfaction with team performance, (2) the rating of team productivity and (3) the rating of team effectiveness, were combined to create an aggregate measure of team effectiveness. The calculation of Cronbach's Alpha for these three measures together resulted in an acceptable Alpha level of 0.69.

2.3.3 PHASE 3 SAMPLE

Company X provided a list of employees that were thought to be team leaders in their organization. (As mentioned previously, the organization does not keep a list or directory of its teams, therefore it was not certain if all of these employees in fact worked in a team). As many of these employees were contacted by telephone as was possible and asked if they worked in a team. After it was determined that the employee did work in a team, they were provided with an explanation of the nature and purpose of the study. The list of possible team leaders had 36 names. Sixteen of these people were not actually part of a team, and five others could not be contacted. A total of 15 team leaders were contacted and all agreed to participate in the study. Though these contacts (leaders) agreed to take part, it did not guarantee the participation of the members of their team. These contacts (leaders) were asked to explain the study to their team and distribute the questionnaire to them. The questionnaire also included a cover letter explaining the study's purpose and procedures (refer to Appendix O). These 15 teams totalled 240 members. The team leader did not fill out this questionnaire but instead, as mentioned earlier, completed a shorter, one-page questionnaire dealing with the effectiveness of the team. There was one leader per team, therefore a total of 15 team leader questionnaires were sent out.

LINKING MEMBER QUESTIONNAIRES TO LEADER QUESTIONNAIRES: In order to link team member questionnaires to the questionnaires of their respective co-team members and team leader, each team was assigned a number from 1 to 15. This number was chosen based simply on the order in which the teams were contacted, and was only used to match questionnaires. This number was printed in the top right corner of every questionnaire sent to a given team. The purpose of this identification number was explained to the team leader in the initial conversation and they were assured of the confidentiality of all responses. They were asked to explain the purpose of this number to their team members and assure them of the confidentiality of their responses. The cover letter included with the questionnaire also explained to each respondent the purpose of the team identification number and reassured them that their responses would remain confidential.

MAILING/RESPONSE PROBLEMS: Unfortunately, the response rate for this phase of the study was lower than expected due to problems with the post office box system used for the return envelopes. As a result only 92 completed questionnaires from thirteen different teams were returned, for a response rate of 38.3%. No completed questionnaires were received from team 10 nor team 13. A completed leader questionnaire was obtained from each of the thirteen teams included in the sample.

2.3.4 ANALYSIS OF PHASE 3 DATA

The data collected in Phase 3 was analyzed to provide answers to research questions 3 to 10 (The first two research questions were answered in Phase 2 of the study). In addition to these research questions, analysis was done to: (1) provide a broad picture of the teams in the sample, (2) help us interpret the results, and (3) provide a necessary first step to answering the research

questions. Analysis done in association with this background analysis (six background questions are addressed), as well as analysis to answer research questions 3 to 10, are listed below. To help the reader conceptualize the analysis, the model used to guide this research is presented again below in Figure 2, with the number for each research question or background question placed in the appropriate point on the model.

Background Questions about the Sample

- (B1) What are the individual characteristics of team members?
- (B2) What are the characteristics of the teams?
- (B3) What are the levels of perceived intra-team support?
- (B4) What are the levels of perceived organizational support of teams?
- (B5) How effective, in terms of performance, are the teams?
- (B6) What are the levels of individual and organizational outcomes of team members?

Research Questions

- (3) How do individual characteristics of team members relate to perceived intra-team support?
- (4) How do team characteristics relate to perceived intra-team support?
- (5) How do individual characteristics of team members relate to perceived organizational support of teams?
- (6) How do team characteristics relate to perceived organizational support of teams?
- (7) How does perceived intra-team support relate to team effectiveness?
- (8) How does perceived intra-team support relate to a number of relevant individual and organizational outcomes?
- (9) How does perceived organizational support of teams relate to team effectiveness?

- (10) How does perceived organizational support of teams relate to a number of relevant individual and organizational outcomes?

Figure 2: Model used to guide research (with research questions indicated)

The types of methodologies used for each set of analyses are presented below. Except where noted, all data analysis was done using SPSS (Windows version). The results of the data analysis for Phase 3 are discussed in Chapter 4.

2.3.4.1 INDIVIDUAL DEMOGRAPHIC CHARACTERISTICS OF TEAM MEMBERS

Frequencies of the following individual demographic characteristics were calculated: gender, division, job type, age, marital status, children at home, and eldercare responsibilities. Cross-tabulations of these frequencies were also calculated by gender and by division. Chi-square was performed to check for any significant differences in any of the individual characteristics when broken down by either gender or by division. See Table 9 for a summary of the analysis performed on the individual demographic characteristics.

Table 9: Summary of Analysis of Individual Demographic Characteristics

Individual Characteristic	Categories	Analysis
Gender	<ul style="list-style-type: none"> • Male • Female 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Division
Division	<ul style="list-style-type: none"> • LDS • LAS • Other 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender
Job Type	<ul style="list-style-type: none"> • Managerial • Non-managerial 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division
Age	<ul style="list-style-type: none"> • Under 27 years • 27 to 34 • 35 to 45 • Over 45 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division
Marital Status	<ul style="list-style-type: none"> • Married • Not Married 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division
Children at Home	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division
Eldercare Responsibilities	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division

2.3.4.2 TEAM CHARACTERISTICS

Frequencies were calculated for the following team characteristics: team function, empowered team, team size, team age, percent of members interacted with consistently, team leader, team autonomy, task significance, task variety, task identity and task interdependence. Means and standard deviations were then calculated for team autonomy, task significance, task variety, task identity, and task interdependence for the total sample, and by gender, and by division. These variables were then categorized into 'high' and 'low' categories based on being above or below the mean. Chi-square analysis was performed to check for any significant differences in any of the team characteristics when split by gender or by division. A summary of the analysis performed on team characteristics data is given in Table 10.

Table 10: Summary of Analysis of Team Characteristics

Team Characteristic	Categories	Analysis
Team Function	<ul style="list-style-type: none"> • Provides a service • Other 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division
Empowerment	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division
Team Size	<ul style="list-style-type: none"> • < 11 members • 11 to 15 members • 16 to 20 members • > 20 members 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division
Team Age	<ul style="list-style-type: none"> • <12 months • 12 - 23 months • 24 -35 months • > 35 months 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division
Percent of Members Interacted with Consistently	<ul style="list-style-type: none"> • < 25% • 26% 50% • 51% to 75% • 76% to 100% 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division
Team Leader	<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • Frequencies • χ^2 by Gender, by Division

Table 10: Summary of Analysis of Team Characteristics (continued)

Team Characteristic	Categories	Analysis
Team Autonomy	<ul style="list-style-type: none"> • Low • High 	<ul style="list-style-type: none"> • Mean calculated for total sample, by gender, by division, and for each category • Frequencies • χ^2 by Gender, by Division
Task Significance	<ul style="list-style-type: none"> • Low • High 	<ul style="list-style-type: none"> • Mean calculated for total sample, by gender, by division, and for each category • Frequencies • χ^2 by Gender, by Division
Task Variety	<ul style="list-style-type: none"> • Low • High 	<ul style="list-style-type: none"> • Mean calculated for total sample, by gender, by division, and for each category • Frequencies • χ^2 by Gender, by Division
Task Identity	<ul style="list-style-type: none"> • Low • High 	<ul style="list-style-type: none"> • Mean calculated for total sample, by gender, by division, and for each category • Frequencies • χ^2 by Gender, by Division
Task Interdependence	<ul style="list-style-type: none"> • Low • High 	<ul style="list-style-type: none"> • Mean calculated for total sample, by gender, by division, and for each category • Frequencies • χ^2 by Gender, by Division

2.3.4.3 PERCEIVED INTRA-TEAM SUPPORT

This section discusses the analysis performed on: (1) the ratings of perceived intra-team support, (2) the relationship between individual characteristics of team members and the ratings of perceived intra-team support, and (3) the relationship between team characteristics and the ratings of perceived intra-team support.

A summed average score was calculated for the 27 supportive and non-supportive behaviours which comprised the measure of perceived intra-team support. It should be noted that the scores for non-supportive behaviours were reversed coded before being included in this calculation. The means

and standard deviations of the score for perceived intra-team support was calculated for the total sample, for men and women, for each division, and for each of the thirteen teams. One-way analysis of variance was performed to look for differences in perceived intra-team support by gender and by division.

One-way analysis of variance was also performed to look for differences in perceived intra-team support that could be associated with the team characteristics being examined in this study: (1) team function, (2) empowerment, (3) team size, (4) team age, (5) percent of members interacted with consistently, (6) team leader, (7) team autonomy, (8) task significance, (9) task variety, (10) task identity, and (11) task interdependence. See Table 11 for a summary of the analysis performed on perceived intra-team support.

Table 11: Summary of Analysis Performed on Perceived Intra-Team Support

Variable	Categories	Analysis
Total Sample	-	• Mean and Standard Deviation
Gender	• Male • Female	• Mean and Standard Deviation • ANOVA
Division	• LDS • LAS • Other	• Mean and Standard Deviation • ANOVA
Team Function	• Provides a service • Other	• Mean and Standard Deviation • ANOVA
Empowerment	• Yes • No	• Mean and Standard Deviation • ANOVA
Team Size	• < 11 members • 11 to 15 members • 16 to 20 members • > 20 members	• Mean and Standard Deviation • ANOVA
Team Age	• <12 months • 12 - 23 months • 24 -35 months • > 35 months	• Mean and Standard Deviation • ANOVA
Percent of Members Interacted with Consistently	• < 25% • 26% 50% • 51% to 75% • 76% to 100%	• Mean and Standard Deviation • ANOVA
Team Leader	• Yes • No	• Mean and Standard Deviation • ANOVA
Team Autonomy	• Low • High	• Mean and Standard Deviation • ANOVA
Task Significance	• Low • High	• Mean and Standard Deviation • ANOVA
Task Variety	• Low • High	• Mean and Standard Deviation • ANOVA
Task Identity	• Low • High	• Mean and Standard Deviation • ANOVA
Task Interdependence	• Low • High	• Mean and Standard Deviation • ANOVA

2.3.4.4 PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

This section discusses the analysis performed with respect to: (1) the ratings of perceived organizational support of teams, (2) the relationship between individual characteristics of team members and the ratings of perceived organizational support of teams, and (3) the relationship between team characteristics and the ratings of perceived organizational support of teams.

A summed average score was calculated for the 15 supportive and non-supportive behaviours which comprised the measure of perceived organizational support of teams. Again, the scores for non-supportive behaviours were reversed coded before being included in this calculation. The means and standard deviations of the score for perceived organizational support of teams was calculated for the total sample, for men and women, for each division, and for each of the thirteen teams. One-way analysis of variance was performed to look for differences in perceived organizational support of teams by gender and by division.

One-way analysis of variance was also performed to look for differences in perceived organizational support of teams that could be associated with the team characteristics being examined in this study: (1) team function, (2) empowerment, (3) team size, (4) team age, (5) percent of members interacted with consistently, (6) team leader, (7) team autonomy, (8) task significance, (9) task variety, (10) task identity, and (11) task interdependence. A summary of the analysis performed on perceived organizational support of teams is given in Table 12.

Table 12: Summary of Analysis Performed on Perceived Organizational Support of Teams

Variable	Categories	Analysis
Total Sample	-	• Mean and Standard Deviation
Gender	• Male • Female	• Mean and Standard Deviation • ANOVA
Division	• LDS • LAS • Other	• Mean and Standard Deviation • ANOVA
Team Function	• Provides a service • Other	• Mean and Standard Deviation • ANOVA
Empowerment	• Yes • No	• Mean and Standard Deviation • ANOVA
Team Size	• < 11 members • 11 to 15 members • 16 to 20 members • > 20 members	• Mean and Standard Deviation • ANOVA
Team Age	• <12 months • 12 - 23 months • 24 -35 months • > 35 months	• Mean and Standard Deviation • ANOVA
Percent of Members Interacted with Consistently	• < 25% • 26% 50% • 51% to 75% • 76% to 100%	• Mean and Standard Deviation • ANOVA
Team Leader	• Yes • No	• Mean and Standard Deviation • ANOVA
Team Autonomy	• Low • High	• Mean and Standard Deviation • ANOVA
Task Significance	• Low • High	• Mean and Standard Deviation • ANOVA
Task Variety	• Low • High	• Mean and Standard Deviation • ANOVA
Task Identity	• Low • High	• Mean and Standard Deviation • ANOVA
Task Interdependence	• Low • High	• Mean and Standard Deviation • ANOVA

2.3.4.5 RELATIONSHIP BETWEEN PERCEIVED INTRA-TEAM SUPPORT AND PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

In order to check for any relationship between perceived intra-team support and perceived organizational support of teams, Pearson correlations were calculated for the overall scores of the two measures.

2.3.4.6 TEAM EFFECTIVENESS

Team effectiveness was measured through ratings by team members and by team leaders. The analysis of each method of rating is discussed below and summarized in Table 13.

TEAM MEMBERS' RATINGS OF TEAM EFFECTIVENESS: Means and standard deviations were calculated for the Percentage of Time Work on Time and for Aggregate Team Effectiveness. Frequencies for each category of Complaints by Internal Clients and Complaints by External Clients were also calculated. In all cases three sets of calculations were done: (1) total sample, (2) by gender, (3) by division.

One-way analysis of variance was performed on Percentage of Time Work on Time and Aggregate Team Effectiveness to check for any significant differences by gender and by division. Chi-square tests were also done on Complaints by Internal Clients and Complaints by External Clients to check for any significant differences by gender and by division.

TEAM LEADERS' RATINGS OF TEAM EFFECTIVENESS: Means and standard deviations were calculated for the Percentage of Time Work on Time and for Aggregate Team Effectiveness. Frequencies for each category of Complaints by Internal Clients and Complaints by External Clients were also calculated.

COMPARING MEMBER RATINGS TO LEADERS RATINGS: Team members' ratings for the original three measures which make up Aggregate Team Effectiveness, namely Satisfaction with Team Performance, Team Productivity, and Team Effectiveness, were compared to the rating given to the team by their team leader. This comparison was done by calculating, for each variable, the frequency of cases where: (1) the team leader gave a higher rating than that of the team member, (2) the team member and team leader gave the same rating and (3) the team member gave a rating higher than that of their team leader. This comparison was done for the total sample, as well as for the sample broken down by team.

Table 13: Summary of Analysis Performed on Team Effectiveness (both member and leader assessment)

Variable	Categories	Analysis
Percent of Time Work on Time	<ul style="list-style-type: none"> • Gender • Division 	<ul style="list-style-type: none"> • Mean and Standard Deviation • ANOVA
Aggregate Effectiveness	<ul style="list-style-type: none"> • Gender • Division 	<ul style="list-style-type: none"> • Mean and Standard Deviation • ANOVA
Complaints by Internal Clients	<ul style="list-style-type: none"> • Gender • Division 	<ul style="list-style-type: none"> • Frequencies • χ^2
Complaints by External Clients	<ul style="list-style-type: none"> • Gender • Division 	<ul style="list-style-type: none"> • Frequencies • χ^2

2.3.4.7 INDIVIDUAL AND ORGANIZATIONAL OUTCOMES

Means and standard deviations were calculated for each of the seven measures of individual and organizational outcomes: (1) commitment, (2) job stress, (3) overall stress, (4) job satisfaction, (5) hours worked per week, (6) doctor visits and (7) absenteeism. Means and standard deviations were also calculated with the sample broken down by gender and by division. One-way analysis of

variance was performed to check for significant gender and divisional differences in each of the seven constructs.

2.3.4.8 RELATIONSHIP BETWEEN PERCEIVED INTRA-TEAM SUPPORT AND TEAM EFFECTIVENESS

The analysis of the relationship between perceived intra-team support and team effectiveness will be discussed in two separate parts. The analysis of ratings of team effectiveness by team members will be described first followed by a description ratings of team effectiveness by team leaders.

TEAM MEMBER RATINGS: In order to see if the level of perceived intra-team support was associated with any of the measures of team effectiveness, four chi-square analyses were done: (1) perceived intra-team support by Percent of Time Work on Time; (2) perceived intra-team support by Complaints by Internal Clients; (3) perceived intra-team support by Complaints by External Clients; and (4) perceived intra-team support by Aggregate Team Effectiveness. Perceived intra-team support was divided into two levels: 'high' (above the mean) and 'low' (below the mean).

The chi-square test relies on the assumption that the data are obtained by simple random sampling from one or more large populations. By its very nature (i.e. a study of teams likely leads to complex clustering in the sample), the third phase of this research violates the assumption that the data were obtained from a simple random sample. As Rao and Thomas (1988) point out "clustering distorts the distribution of Pearson's chi-square statistic...The effect of the distortion is generally to make the test liberal" (p. 214). In other words, significant results from data collected using cluster sampling may in reality not be significant due to correlations among sample elements.

In the case of this study, correlations may exist among members of a given team, which might inflate the variance of the chi-square statistic. The ratio of the inflated variance of a statistic under a complex sampling scheme (such as cluster sampling) to the corresponding simple random sampling variance is known as the design effect (Kish, 1965). In order to determine if the design effect had any impact on significant chi-square tests, or on chi-square tests which approach significance, a correction factor was calculated for all chi-square tests that examined: (1) the relationship between perceived intra-team support and team effectiveness, (2) the relationship between perceived intra-team support and individual and organizational outcomes, (3) the relationship between perceived organizational support of teams and team effectiveness, and (4) the relationship between perceived organizational support of teams and individual and organizational outcomes.

It should be noted that while the four relationships outlined above were also examined using analysis of variance, it was decided to report chi-square tests only. This decision is based on the fact that: (1) the two types of tests yielded similar significant results (pre-correction factor), and (2) the chi-square test allows us to calculate a correction factor (see Appendix P). A summary of the analysis performed to determine the relationship between perceived intra-team support and team effectiveness is given in Table 14.

Table 14: Summary Table of Analysis Regarding Relationship Between Perceived Intra-Team Support and Team Effectiveness

Effectiveness Measure and Categories	Support Measure and Categories	Analysis
Percent of Time Work on Time <ul style="list-style-type: none"> • 80% or less • between 80% and 95% • greater than 95% 	Perceived Intra-team Support <ul style="list-style-type: none"> • high • low 	<ul style="list-style-type: none"> • frequencies • χ^2 and design effect correction factor
Aggregate Effectiveness <ul style="list-style-type: none"> • high • moderate • low 	Perceived Intra-team Support <ul style="list-style-type: none"> • high • low 	<ul style="list-style-type: none"> • frequencies • χ^2 and design effect correction factor
Complaints by Internal Clients <ul style="list-style-type: none"> • frequently • moderately • rarely 	Perceived Intra-team Support <ul style="list-style-type: none"> • high • low 	<ul style="list-style-type: none"> • frequencies • χ^2 and design effect correction factor
Complaints by External Clients <ul style="list-style-type: none"> • frequently • moderately • rarely 	Perceived Intra-team Support <ul style="list-style-type: none"> • high • low 	<ul style="list-style-type: none"> • frequencies • χ^2 and design effect correction factor

TEAMLEADER RATINGS: In order to see if there was any association between each team leader's perception of their team's effectiveness and their team's perception of intra-team support, correlations were calculated. For each team, Pearson correlations were calculated for: (1) the average score of perceived intra-team support and the leader's rating of Percent of Time Work on Time and (2) the average score of perceived intra-team support and the leader's score for Aggregate Team Effectiveness. For each team, Spearman correlations were calculated for: (1) the average score of perceived intra-team support and the leader's rating of Complaints by Internal Clients and (2) the average score of perceived intra-team support and the leader's rating of Complaints by External Clients. Spearman correlations were used for Complaints by Internal Clients and Complaints by External Clients since these two variables were measured using ordinal ranking scales.

2.3.4.9 RELATIONSHIP BETWEEN PERCEIVED INTRA-TEAM SUPPORT AND INDIVIDUAL AND ORGANIZATIONAL OUTCOMES

In order to see if the level of perceived intra-team support was associated with any of the seven individual and organizational outcomes, chi-square analysis was performed on perceived intra-team support by each of the seven items: (1) commitment, (2) job stress, (3) overall stress, (4) job satisfaction, (5) hours worked per week, (6) doctor visits and (7) absenteeism. Perceived intra-team support was divided into two levels: 'high' (above the mean) and 'low' (below the mean). A correction factor was also calculated for any significant chi-square result in order to take into account any design effect which may result from cluster sampling (as explained in the previous section).

2.3.4.10 RELATIONSHIP BETWEEN PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS AND TEAM EFFECTIVENESS

The relationship between perceived organizational support of teams and team effectiveness will be discussed in two separate sections below. The first will discuss team member ratings of effectiveness while the second will deal with team leader ratings of effectiveness.

TEAM MEMBER RATINGS: In order to see if the level of perceived organizational support of teams was associated with any of the measures of team effectiveness, four chi-square analyses were done: (1) perceived organizational support of teams by Percent of Time Work on Time; (2) perceived organizational support of teams by Complaints by Internal Clients; (3) perceived organizational support of teams by Complaints by External Clients; and (4) perceived organizational support of teams by Aggregate Team Effectiveness. Perceived organizational support of teams was divided into two levels: 'high' (above the mean) and 'low' (below the mean). Again, a correction factor was calculated for any significant chi-square result in order to take into account any design effect which

may result from cluster sampling. A summary of the analysis performed regarding the relationship between perceived organizational support of teams and team effectiveness is given in Table 15.

Table 15: Summary Table of Analysis Regarding Relationship Between Perceived Organizational Support of Teams and Team Effectiveness

Effectiveness Measure and Categories	Support Measure and Categories	Analysis
Percent of Time Work on Time <ul style="list-style-type: none"> 80% or less between 80% and 95% greater than 95% 	Perceived Organizational Support of Teams <ul style="list-style-type: none"> high low 	<ul style="list-style-type: none"> frequencies χ^2 and design effect correction factor
Aggregate Effectiveness <ul style="list-style-type: none"> high moderate low 	Perceived Organizational Support of Teams <ul style="list-style-type: none"> high low 	<ul style="list-style-type: none"> frequencies χ^2 and design effect correction factor
Complaints by Internal Clients <ul style="list-style-type: none"> frequently moderately rarely 	Perceived Organizational Support of Teams <ul style="list-style-type: none"> high low 	<ul style="list-style-type: none"> frequencies χ^2 and design effect correction factor
Complaints by External Clients <ul style="list-style-type: none"> frequently moderately rarely 	Perceived Organizational Support of Teams <ul style="list-style-type: none"> high low 	<ul style="list-style-type: none"> frequencies χ^2 and design effect correction factor

TEAM LEADER RATINGS: In order to see if there was any association between each team leader's perception of their team's effectiveness and their team's perception of organizational support of teams, correlations were calculated. For each team, Pearson correlations were calculated for: (1) the average score of perceived organizational support of teams and the leader's rating of Percent of Time Work on Time and (2) the average score of perceived organizational support of teams and the leader's score for Aggregate Team Effectiveness. For each team, Spearman correlations were calculated for: (1) the average score of perceived organizational support of teams and the leader's rating of Complaints by Internal Clients and (2) the average score of perceived organizational support

of teams and the leader's rating of Complaints by External Clients. Again, Spearman correlations were used for Complaints by Internal Clients and Complaints by External Clients since these two variables were measured using ordinal ranking scales.

2.3.4.11 RELATIONSHIP BETWEEN PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS AND INDIVIDUAL AND ORGANIZATIONAL OUTCOMES

In order to see if the level of perceived organizational support of teams was associated with any of the seven individual and organizational outcomes, chi-square analysis was performed on perceived organizational support of teams by each of the seven items: (1) commitment, (2) job stress, (3) overall stress, (4) job satisfaction, (5) hours worked per week, (6) doctor visits and (7) absenteeism. Perceived organizational support of teams was divided into two levels: 'high' (above the mean) and 'low' (below the mean). A correction factor was also calculated for any significant chi-square result in order to take into account any design effect which may result from cluster sampling (as explained previously). It should be reiterated that though the four relationships outlined above were also examined using analysis of variance, for consistency's sake it was decided to report chi-square tests only.

CHAPTER FOUR

INTRA-TEAM AND ORGANIZATIONAL SUPPORT

This chapter identifies those behaviours that respondents from Company X perceive as being: (1) supportive behaviours of fellow team members, (2) non-supportive behaviours of fellow team members, (3) supportive behaviours of the organization toward teams, and (4) non-supportive behaviours of the organization toward teams. This chapter serves to answer the first two research questions: (1) What are the behaviours associated with perceived intra-team support?; and (2) What are the behaviours associated with perceived organizational support of teams?

1.0 BEHAVIOURS ASSOCIATED WITH PERCEIVED INTRA-TEAM SUPPORT

The following section begins with a discussion of the behaviours associated with supportive team members. This is followed by a discussion of the behaviours associated with non-supportive team members.

1.1 BEHAVIOURS OF SUPPORTIVE TEAM MEMBERS

Analysis of the Phase 2 questionnaire indicated that 22 unique supportive behaviours were equal to or exceeded the cut-off of 6.0 (representing 52% of the supportive behaviours included on the Phase 2 questionnaire). These behaviours are classified according to predominant themes in Table 16.

Table 16: Themes among supportive behaviours of team members

Supportive Behaviour of Team Members	Mean	Valid Std. Dev.
Engages in two-way communication:		
Listens to me.	6.55	.74
Asks me for my opinion.	6.36	1.13
Gets me to clarify something if he/she does not understand.	6.32	.86
Tells me when they do not agree with me.	6.21	.86
Asks me questions.	6.00	1.10
Clearly explains their opinion/perspective on matters important to the team.	6.18	1.12
Is co-operative with fellow team members:		
Is flexible with respect to scheduling.	6.14	1.15
Offers to help me with my work when needed.	6.07	1.41
Doesn't set unreasonable expectations on team members.	6.00	1.07
Makes me feel that I can ask questions at any time.	6.46	.92
Facilitates the achievement of team objectives:		
Performs required tasks without having to be asked.	6.32	1.19
Completes tasks on time.	6.21	.86
Takes on unpopular tasks that need to be done.	6.07	1.27
Understands the team's purpose.	6.45	.69
Shares expertise:		
Shares personal knowledge/experience/skills.	6.71	.76
Shares information with me.	6.57	.69
Keeps me informed of issues of concern to the team.	6.46	.96
Treats fellow team members as equals:		
Treats me as an equal.	6.46	1.04
Includes me in decision-making.	6.17	1.04
Provides positive reinforcement:		
Provides me with positive reinforcement.	6.10	1.26

Table 16: Themes among supportive behaviours of team members (continued)

Supportive Behaviour of Team Members	Mean	Valid Std. Dev.
Maintains good client relations:		
Maintains good relations between the team and the client.	6.48	.91
Supports the team's survival:		
Supports the team when its survival is threatened.	6.38	.90

1.1.1 SUPPORTIVE THEMES

On reorganizing the list of supportive behaviours, several themes appear. A supportive team member is one who:

- (1) engages in two-way communication,
- (2) is co-operative with fellow team members,
- (3) facilitates the achievement of team objectives,
- (4) shares expertise,
- (5) treats fellow team members as equals,
- (6) provides positive reinforcement,
- (7) maintains good client relations,
- (8) supports the team's survival.

Details on each of the themes is provided below.

Engages in two-way communication: Behaviours in the first theme relate to communication.

From a team member's perspective, two-way communication involves having their concerns listened to, being asked questions, and being asked for clarification in order to be better

understood. A supportive team member is also perceived to be one who clearly explains their opinion and tells others when they do not agree with them.

Is co-operative with fellow team members: A second set of behaviours relate to co-operation with fellow team members. The supportive behaviours in this theme include being flexible with respect to scheduling, offering to help fellow team members with work, not setting unreasonable expectations on others, and making fellow team members feel that they can ask them questions at any time.

Facilitates the achievement of team objectives: The behaviours in the third theme relate to facilitating the achievement of team objectives. A supportive team member is perceived as one who completes tasks on time, performs required tasks without having to be asked and takes on tasks that are unpopular, but necessary. A supportive team member is also one who understands the team's purpose.

Shares expertise: Behaviours in the fourth theme relate to the sharing of personal knowledge and information. Supportive team members are perceived as ones who share their own personal experience and knowledge with other team members, as well as any skills which may be useful to the team. The sharing of information not only includes information which may facilitate the completion of specific tasks, but also information which may concern changes to the team.

Treats fellow team members as equals: A supportive team member is perceived as one who treats fellow team members as equals and involves fellow team members in decision-making.

Provides positive reinforcement: The sixth theme relates to positive reinforcement. A supportive team member is perceived as one who provides others with positive reinforcement.

Maintains good client relations: A supportive team member is perceived as one who maintains good relations between the team and its clients.

Supports the team's survival: A supportive team member is perceived as one who supports the team when its survival is threatened.

1.2 BEHAVIOURS OF NON-SUPPORTIVE TEAM MEMBERS

Analysis of the Phase 2 questionnaire indicated that five unique non-supportive behaviours were equal to or exceeded the cut-off of 5.97 (representing 24% of the non-supportive behaviours included on the Phase 2 questionnaire). These behaviours are classified according to predominant themes in Table 17.

Table 17: Themes among non-supportive behaviour of team members

Non-supportive Behaviour of Team Members	Mean	Valid Std. Dev.
Critical of fellow team members:		
Makes negative comments about my work to others but fails to point out the problems to me.	6.66	.77
Make negative comments about me to other team members.	6.52	.99
Scolds me in the presence of other team members.	6.38	1.05
Projects a negative image of the team to those outside:		
Projects a negative image of the team to people outside the team.	6.45	.91
Puts their own interest ahead of the team:		
Is part of a sub-group of team members who defend their interests at the expense of the entire team.	5.97	1.24

1.2.1 NON-SUPPORTIVE THEMES

The list of non-supportive behaviours were reorganized into three themes. A non-supportive team member is one who:

- (1) critical of fellow team members,
- (2) projects a negative image of the team to those outside,
- (3) puts their own interest ahead of the team.

Details on each of the themes is provided below.

Projects a negative image of a fellow team member: The first theme relates to negative comments being made about another team member. A non-supportive team member is perceived as one who makes negative comments about a co-worker to other team members or who scolds another team member in the presence of others. A non-supportive team member is also viewed as one who complains about a team member's work to others, but fails to bring these concerns to the attention of the team member in question.

Projects a negative image of the team: A non-supportive team member is viewed as one who projects a negative image of the team to people outside the team.

Puts their own interest ahead of the team: A non-supportive team member is perceived as one who is part of a sub-group of team members who defend their interests at the expense of the entire team.

2.0 BEHAVIOURS ASSOCIATED WITH PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

The following section first presents the supportive behaviours of the organization toward teams, followed by the non-supportive behaviours of the organization toward teams.

2.1 SUPPORTIVE BEHAVIOURS OF THE ORGANIZATION TOWARD TEAMS

Analysis of the Phase 2 questionnaire indicated that five unique supportive behaviours were equal to or exceeded the cut-off of 6.0 (representing 29% of the supportive behaviours included on the Phase 2 questionnaire). These behaviours are classified according to predominant themes in Table 18.

Table 18: Themes among Supportive Actions of the Organization

Supportive Actions of the Organization	Mean	Valid Std. Dev.
Facilitates communications between teams and upper management:		
Allows communication from the team to upper management.	6.41	.63
Has few layers of management between teams and upper-level management.	6.03	1.09
Considers input from teams:		
Allows a team to participate in decisions which affect it.	6.69	.47
Listens to input from teams.	6.48	.63
Provides teams with appropriate training:		
Provides appropriate training for teams.	6.24	.99

2.1.1 SUPPORTIVE THEMES

The list of supportive behaviours were reorganized into three themes. An organization that is supportive of its teams is one that:

- (1) facilitates communications between teams and upper management,
- (2) considers input from teams,
- (3) provides teams with appropriate training.

Details on each of the themes is provided below.

Facilitates communications between teams and upper management: The first theme deals with the ability of the team to communicate with upper levels of management. Team members perceive the organization to be one that is supportive toward teams if few layers of management exist between the team and upper management, and if communication is permitted between the team and the this upper level.

Considers input from teams: The second theme concerns the use of team input by the organization. This theme relates somewhat to the first theme on the facilitation of communications between teams and upper management (see above). However, to team members, a supportive organization is one which takes the extra step and actually listens to the input from teams and allows a team to participate in decision which directly affect it.

Provides teams with appropriate training: An organization that is viewed as being supportive of its teams is one which provides them with appropriate training.

2.2 NON-SUPPORTIVE BEHAVIOURS OF THE ORGANIZATION TOWARD TEAMS

Analysis of the Phase 2 questionnaire indicated that 10 unique non-supportive behaviours exceeded the cut-off of 6.0 (representing 83% of the supportive behaviours included on the Phase 2 questionnaire). These behaviours are classified according to predominant themes in Table X.

Table 19: Themes among Non-Supportive Actions of the Organization

Non-supportive Actions of the Organization	Mean	Valid Std. Dev.
Fails to communicate with teams:		
Fails to keep teams informed of future changes that may affect them.	6.59	.57
Fails to consult with a team when changing its role or creating more work for it.	6.48	.58
Fails to provide clear explanation of why a change to a team is taking place.	6.63	.56
Asks for a team's input, then fails to consider that input in decision-making.	6.48	.64
Does not support the use of teams:		
Only 'pays lip service' to the concept of support of teams.	6.63	.69
Has members of upper-management who verbalize the fact that they don't like using teams.	6.04	1.26
Fails to provide the team with adequate resources:		
Uses forms and procedures suitable for a traditional managerial structure, but not for teams.	6.19	.83
Does not provide the team with sufficient clerical support.	6.07	.92
Constantly reorganizes teams:		
Creates uncertainty among team members through constant re-organizing of teams.	6.59	.57
Has unrealistic expectations of teams:		
Expects teams to solve problems that are beyond its scope and control.	6.22	.85

2.2.1 NON-SUPPORTIVE THEMES

The list of non-supportive behaviours were reorganized into five themes. An organization that is not supportive of its teams is one that:

- (1) fails to communicate with teams,
- (2) does not support the use of teams,
- (3) fails to provide the team with adequate resources,
- (4) constantly reorganizes teams,
- (5) has unrealistic expectations of teams.

Details on each of these themes is provided below.

Fails to communicate with teams: Behaviours in the first theme relate to adequately communicating with teams. A non-supportive organization is perceived as one that fails to consult with teams, or keep them informed, regarding changes that may affect them. A non-supportive organization is also one that fails to provide clear explanation as to why a change to a team is taking place.

Does not support the use of teams: The second theme relates to the general feeling regarding the use of teams by the organization. An organization that is not supportive of its teams is perceived as one that only pays 'lip service' to the concept of teams, or that has members of upper management who verbalize the fact that they do not like using teams.

Fails to provide the team with adequate resources: The third theme relates to the resources with which a team is provided. A organization that is not supportive of its teams is perceived as one that does not provide its teams with sufficient clerical support and which uses forms and

procedures designed for a traditional management structure but which are not suitable for use by teams.

Constantly reorganizes teams: A non-supportive organization is perceived as one which creates uncertainty through constant reorganizing of teams.

Has unrealistic expectations of teams: The final theme concerns the organization's expectations of a team. A non-supportive organization is one which expects teams to solve problems that are beyond its scope and control.

3.0 DISCUSSION AND COMPARISON OF BEHAVIOURS AND THEMES

It is important to note that many of the supportive themes (for both perceived intra-team support and perceived organizational support of teams) had opposite themes on the non-supportive side (e.g. Provides positive reinforcement - critical of fellow team members; facilitates the achievement of team objectives - puts their own interest ahead of team; facilitates communications between teams and upper management - fails to communicate with teams). This illustrates support and non-support as being on opposite ends of the same continuum and reinforces the use of one measure for each type of support.

It is also interesting to note the importance of communication to both perceived intra-team support and perceived organizational support of teams: 14 of 27 behaviours which make up the measure of perceived intra-team support involve communication between members, while 8 of the 17 behaviours which make up the measure of perceived organizational support of teams involve communication between teams and the organization.

CHAPTER FIVE

RESULTS AND DISCUSSION OF FINDINGS

In the following chapter, the results from this research will be presented and discussed.

This chapter consists of three sections. The first two sections answer background questions about the sample that are needed to answer the remaining research questions. The first section describes the Phase III sample, while the second section discusses the the levels of perceived intra-team support and perceived organizational support of teams as rated by team members. Finally, the third section discusses the results which answer the remaining research questions.

1.0 DESCRIPTION OF PHASE 3 SAMPLE

The following section describes: (1) individual demographic characteristics of team members, (2) team characteristics, (3) team effectiveness, and (4) individual and organizational outcomes.

1.1 INDIVIDUAL DEMOGRAPHIC CHARACTERISTICS OF TEAM MEMBERS

The individual demographics of the sample are reported in Table 20 below. Data for the total sample are reported, as well as breakdowns by gender and division.

Table 20: Demographics of Sample

Variable	Total Sample	Gender		Division		
		Male	Female	Long Distance Services	Local & Access Services	Other
Gender:						
Male	23 (25%)	-	-	10 (25.6%)	0	13 (41.9%)
Female	69 (75%)	-	-	29 (74.4%)	21 (100%)	18 (58.1%)
Division:						
LDS	39 (42.9%)	10 (43.5%)	29 (42.6%)	-	-	-
LAS	21 (23.1%)	0	21 (30.9%)	-	-	-
Other	31 (34.1%)	13 (56.5%)	18 (26.5%)	-	-	-
Job Type:						
Managerial	12 (13.2%)	4 (17.4%)	8 (11.8%)	4 (10.5%)	1 (4.8%)	7 (22.6%)
Non-managenial	79 (86.8%)	19 (82.6%)	60 (88.2%)	34 (89.5%)	20 (95.2%)	24 (77.4%)
Age (years):						
Under 27	13 (14.8%)	3 (13.1%)	10 (15.4%)	12 (32.4%)	0	1 (3.4%)
27 to 34	38 (43.2%)	11 (47.8%)	27 (41.5%)	16 (43.2%)	8 (38.1%)	13 (44.8%)
35 to 45	26 (29.5%)	6 (26.1%)	20 (30.8%)	7 (18.9%)	6 (28.6%)	13 (44.8%)
Over 45	11 (12.5%)	3 (13.0%)	8 (12.3%)	2 (5.4%)	7 (33.3%)	2 (6.9%)
Marital Status:						
Married	60 (66.7%)	16 (72.7%)	44 (64.7%)	21 (55.3%)	16 (76.2%)	22 (73.3%)
Not Married	30 (33.3%)	6 (27.3%)	24 (35.3%)	17 (44.7%)	5 (23.8%)	8 (26.7%)
Children at home:						
Yes	39 (43.3%)	11 (50.0%)	28 (41.2%)	6 (15.8%)	14 (66.7%)	18 (60.0%)
No	51 (56.7%)	11 (50.0%)	40 (58.8%)	32 (84.2%)	7 (33.3%)	12 (40.0%)

Table 20: Demographics of Sample (continued)

Variable	Total Sample	Gender		Division		
		Male	Female	Long Distance Services	Local & Access Services	Other
Eldercare responsibilities:						
Yes	16 (17.8%)	1 (4.5%)	15 (22.1%)	8 (21.1%)	5 (23.8%)	3 (10.0%)
No	74 (82.2%)	21 (95.5%)	53 (77.9%)	30 (78.9%)	16 (76.2%)	27 (90.0%)

The majority of the sample were married, female, non-managers, between 27 and 45 years of age. Slightly more than half had no children at home; 17.8% had eldercare responsibilities. Just under half of the respondents (42.9%) worked in Long Distance Services (henceforth referred to as LDS), 23.1% worked in Local and Access Services (henceforth referred to as LAS); 34.1% worked in some other division (henceforth referred to as Other).

The chi-square analysis of gender by division was statistically significant ($\chi^2=11.66$, 2 df, $\alpha=.003$). This finding is consistent with the fact that no male respondents worked in LAS. The analysis of the age of respondents by division was also statistically significant ($\chi^2=26.48$, 6 df, $\alpha=.0002$). This finding is consistent with the fact that a larger-than-expected proportion of respondents under 27 years of age worked in the LDS (32.4% of respondents from LDS were 27 years of age or less, versus 0% in LAS and 3.4% in Other). The only other significant demographic difference in the sample was parental status ('Children at Home') by division ($\chi^2=19.84$, 2 df, $\alpha<.0001$). The majority of respondents who worked in the LDS division did not have children (84% of LDS non-parents versus 33% of LAS and 40% of Other). This finding is

consistent with the fact that there is a higher number of respondents under the age of 27 working in this division.

1.2 TEAM CHARACTERISTICS

The sample's team characteristics are shown in Table 21 below. The data for the total sample are reported as well as breakdowns by gender and by division. Mean scores for Team Autonomy and for the four task characteristics, broken down by gender and by division are given in Tables 22 and 23.

Table 21: Team Characteristics

Variable	Total Sample	Gender		Division		
		Male	Female	Long Distance Services	Local & Access Services	Other
Team Function:						
Provides a service	54 (63.5%)	15 (65.2%)	39 (62.9%)	15 (39.5%)	17 (89.5%)	21 (77.8%)
Other	31 (36.5%)	8 (34.8%)	23 (37.1%)	23 (60.5%)	2 (10.5%)	6 (22.2%)
Empowered Team:						
Yes	51 (58.0%)	11 (47.8%)	40 (61.5%)	15 (38.5%)	15 (78.9%)	21 (70.0%)
No	31 (42.0%)	12 (52.2%)	25 (38.5%)	24 (61.5%)	4 (21.1%)	9 (30.0%)
Team Size:						
< 11 members	14 (15.2%)	6 (26.1%)	8 (11.6%)	6 (15.4%)	0	8 (25.8%)
11 to 15 members	33 (35.9%)	7 (30.4%)	26 (37.7%)	12 (30.8%)	6 (28.6%)	14 (45.2%)
16 to 20 members	24 (26.1%)	3 (13.0%)	21 (30.4%)	9 (23.1%)	13 (61.9%)	2 (6.5%)
> 20 members	14 (20.3%)	7 (30.4%)	14 (20.3%)	12 (30.8%)	2 (9.5%)	7 (22.6%)

Table 21: Team Characteristics (continued)

Variable	Total Sample	Gender		Division		
		Male	Female	Long Distance Services	Local & Access Services	Other
Team Age:						
< 12 months	21 (25.3%)	3 (13.0%)	18 (30.0%)	9 (23.1%)	4 (21.1%)	8 (33.3%)
12 - 23 months	28 (33.7%)	9 (39.1%)	19 (31.7%)	18 (46.2%)	2 (10.5%)	7 (29.2%)
24 - 35 months	24 (28.9%)	7 (30.4%)	17 (28.3%)	9 (23.1%)	9 (47.4%)	6 (25.0%)
> 35 months	10 (12.0%)	4 (17.4%)	6 (10.0%)	3 (7.7%)	4 (21.1%)	3 (12.5%)
Percent of Members Interacted with Consistently:						
< 25%	11 (13.4%)	0	11 (18.6%)	4 (12.1%)	7 (36.8%)	0
26% - 50%	24 (29.3%)	7 (30.4%)	17 (28.8%)	10 (30.3%)	5 (26.3%)	8 (27.6%)
51% - 75%	14 (17.1%)	5 (21.7%)	9 (15.3%)	4 (12.1%)	3 (15.8%)	7 (24.1%)
76% - 100%	33 (40.2%)	11 (47.8%)	22 (37.3%)	15 (45.5%)	4 (21.1%)	14 (48.3%)
Team Leader						
Yes	49 (55.7%)	14 (66.7%)	35 (52.2%)	23 (59.0%)	8 (38.1%)	18 (66.7%)
No	39 (44.3%)	7 (33.3%)	32 (47.8%)	16 (41.0%)	13 (61.9%)	9 (33.3%)
Team Autonomy:						
Low	51 (57.3%)	9 (39.1%)	42 (63.6%)	27 (69.2%)	16 (80.0%)	7 (24.1%)
High	38 (42.7%)	14 (60.9%)	24 (36.4%)	12 (30.8%)	4 (20.0%)	22 (75.9%)
Task Significance:						
Low	57 (64.8%)	13 (56.5%)	44 (67.7%)	28 (73.7%)	15 (75.0%)	14 (48.3%)
High	31 (35.2%)	10 (43.5%)	21 (32.3%)	10 (26.3%)	5 (25.0%)	15 (51.7%)
Task Variety:						
Low	41 (47.1%)	9 (39.1%)	32 (50.0%)	15 (40.5%)	10 (50.0%)	16 (55.2%)
High	46 (52.9%)	14 (60.9%)	32 (50.0%)	22 (59.5%)	10 (50.0%)	13 (44.8%)

Table 21: Team Characteristics (continued)

Variable	Total Sample	Gender		Division		
		Male	Female	Long Distance Services	Local & Access Services	Other
Task Identity						
Low	46 (52.3%)	16 (69.6%)	30 (46.2%)	19 (50.0%)	8 (40.0%)	19 (65.5%)
High	42 (47.7%)	7 (30.4%)	35 (53.8%)	19 (50.0%)	12 (60.0%)	10 (34.5%)
Task Interdependence						
Low	41 (46.6%)	14 (60.9%)	27 (41.5%)	15 (39.5%)	6 (30.0%)	19 (65.5%)
High	47 (53.4%)	9 (39.1%)	38 (58.5%)	23 (60.5%)	14 (70.0%)	10 (34.5%)

Table 22: Means scores for Team Autonomy and task characteristics (for total sample and by gender)

Variable	Total Sample		Gender			
			Male		Female	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Team Autonomy	2.27	.99	2.63	.97	2.15	.97
Task Significance	2.08	1.02	2.07	.97	2.08	1.04
Task Variety	2.88	.92	2.87	.97	2.88	.91
Task Identity	2.72	1.09	2.35	1.21	2.85	1.03
Task Interdependence	2.99	1.16	2.49	1.22	3.16	1.10

Table 23: Means scores for Team Autonomy and task characteristics (by division)

Variable	Division					
	Long Distance Services		Local & Access Services		Other	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Team Autonomy	2.12	1.06	1.77	.66	2.85	.83
Task Significance	1.93	.94	1.92	1.08	2.28	.92
Task Variety	3.04	1.01	2.88	.85	2.66	.84
Task Identity	2.86	1.25	3.03	.73	2.27	.96
Task Interdependence	3.11	1.20	3.43	1.16	2.56	.99

The majority of respondents indicated they were members of a team whose function was to provide a service (64% of sample) and perceived they were members of an empowered team (58% of sample). Three-quarters of respondents indicated they were members of a team that was more than one year old. Most respondents (62%) were members of teams of between 11-20 people. Almost 60% of the sample indicated that they consistently interacted with at least half of their team's total members; 56% indicated they had a team leader.

The chi-square analysis of the team function broken down by division was statistically significant ($\chi^2=17.28$, 2 df, $\alpha=.0002$). This simply indicates that teams from different divisions perform different general functions, with the LAS division and the divisions in Other being dominated by teams that provide a service and teams in LDS having a variety of other functions.

The number of respondents who perceived that they worked in an empowered team was statistically significant by division ($\chi^2=11.30$, 2 df, $\alpha=.0035$) with respondents in the LDS division significantly less likely to believe they were members of an empowered team. It is interesting to note that this perception of empowerment is not backed up by the Team Autonomy data (see

Table 22), which is a self-measure of different responsibilities that make up an autonomous (or empowered) team. This data would suggest that respondents from LAS had the lowest level of empowerment (mean score of only 1.77 on Team Autonomy compared to that of 2.12 for respondents from LDS and 2.85 for Other). This data illustrates the confusion many team members in this organization have regarding the term 'empowered' and their team's status in this regard. While half of the sample may feel they are empowered, none of the teams studied are autonomous, in the true sense of the word. Managers at Company X, in fact, have indicated that the organization may have only one or two truly empowered team.

The chi-square analysis also indicates the size of the team differs significantly by division ($\chi^2=24.33$, $df=6$, $\alpha=.0005$). The LDS division was more likely to have twenty or more members in a team than the other two divisional categories. The LAS division was significantly more likely to have between 16 and 20 members (62%), while division in Other were more likely to have less than 16 members (70%).

The percent of total team members that respondents interacted with consistently also differed significantly by division ($\chi^2=15.35$, $df=6$, $\alpha=.02$). Respondents from LAS were likely to indicate that they interacted consistently with more than half of their team members. This finding is consistent with the relatively large size of many of the teams from this division as reported above.

The chi-square test revealed a significant difference in the levels of the measure of Team Autonomy when split by division ($\chi^2=19.45$, 2 df , $\alpha<.0001$). Respondents from LDS and LAS were more likely to rate Team Autonomy below the overall mean than did respondents from other divisions.

Examination of the means of the four team task characteristics considered in this analysis indicate that team members perceive task significance to be fairly low ($\bar{x}=2.08$) and experience only moderate levels of variety ($\bar{x}=2.88$), identity ($\bar{x}=2.72$) and interdependence ($\bar{x}=2.99$). These data may indicate that team members are not challenged by their work and do not take ownership in the work that their teams perform.

The only team task characteristic to be significantly different when split by division was Task Interdependence ($\chi^2=7.16$, 2 df, $\alpha=.03$). Respondents from both the LDS and LAS divisions had a greater likelihood of being on a team with a high level of task interdependence than expected, while team's in the divisional category Other had a greater likelihood of being on a team with a low level of task interdependence than expected.

The mean of Team Autonomy for the total sample was relatively low, with a score of 2.27 (on a scale of 5). This indicates that many team members believe their team has little responsibility in how the team is run. The measure of Team Autonomy was significant when split by gender ($\chi^2=4.19$, 1 df, $\alpha=.04$). Men were more likely to believe they worked in teams that possess a high level of autonomy than were women. Referring back to the breakdown by division, respondents who worked in either LDS or LAS were likely to believe they worked on a team with low levels of autonomy. Referring to the individual demographic characteristics, the distribution of gender by division shows a very large proportion of female respondents in these two divisions. Thus a respondent's perceived level of autonomy of their team may be based more on the division in which they work than on their gender. A summary of the relevant demographic and team differences by division are given in Table 24.

Table 24: Summary of Individual and Team Differences by Division

LDS	LAS	Other
<ul style="list-style-type: none"> • Less than 27 years of age • No children • Do not believe they are members of an empowered team 	<ul style="list-style-type: none"> • Female • Provides a service • Believe they are member of an empowered team • Team of 16 -20 members • Less likely to interact consistently with more than half of team's members 	<ul style="list-style-type: none"> • Provides a service • Team of less than 16 members • Higher level of team autonomy • Less likely to perceive a high level of team task interdependence

1.3 TEAM EFFECTIVENESS

Measures of team effectiveness were obtained two ways: (1) through ratings by team members and (2) through ratings by team leaders. The results of team members' ratings are discussed first, followed by the results of ratings by team leaders. The section concludes with a comparison of team members' ratings to those of team leaders.

1.3.1 TEAM MEMBERS' RATINGS OF TEAM EFFECTIVENESS

Team members' ratings of team effectiveness for the total sample are presented in Table 25. The measures Percentage of Time Work on Time and Aggregate Team Effectiveness are shown as means and standard deviations, while Complaints by Internal Clients and Complaints by External Clients are shown as frequencies.

Team members rated their team's work as being on time an average of 87.6% of the time, with a standard deviation of 14.5%. The measure of Aggregate Team Effectiveness was 4.02 with a standard deviation of .79. This indicates that team members believe they are working effectively. Though the ratings may seem high, there does seem to be some variance, particularly for the measure Aggregate Team Effectiveness. The findings with respect to Complaints by

Internal Clients and Complaints by External Clients are approximately the same; almost half of respondents indicated that their team never receives complaints, while approximately 15% to 18% indicated their team receives complaints frequently.

Table 25: Team Members' Ratings of Team Effectiveness

Variable	Total Sample	
	Mean	Std. Dev.
Percentage of Time Work On Time	87.6%	14.5%
Aggregate Team Effectiveness	4.02	.79
	Total	
Complaints by Internal Clients:		
Never	50 (60.2%)	
Moderately	20 (24.1%)	
Frequently	13 (15.7%)	
Complaints by External Clients:		
Never	43 (51.8%)	
Moderately	25 (30.1%)	
Frequently	15 (18.1%)	

Team members' ratings of team effectiveness broken down by gender and by division are presented below in Tables 26 and 27 respectively. One-way analysis of variance of the measures Percentage of Time Work on Time and Aggregate Team Effectiveness revealed no statistically significant differences either by gender or by division. Chi-square analysis of Complaints by Internal Clients and Complaints by External Clients also revealed no significant differences either by gender or by division. This means that when interpreting the impact of either perceived intra-team support or perceived organizational support of teams on team effectiveness, we do not have to worry that gender or divisional differences with respect to these measures will confound the findings.

Table 26: Team Members' Rating of Team Effectiveness (by Gender)

Variable	By Gender			
	Male		Female	
	Mean	Std. Dev.	Mean	Std. Dev.
Percentage of Time Work on Time	88.1%	13.0%	87.4%	15.2%
Aggregate Team Effectiveness	4.10	.78	4.00	.80
	Male		Female	
Complaints by Internal Clients:				
Never	10 (45.5%)		40(65.6%)	
Moderately	8 (36.4%)		12 (19.7%)	
Frequently	4 (18.2%)		9 (14.8%)	
Complaints by External Clients:				
Never	12 (57.1%)		31 (50.0%)	
Moderately	6 (28.6%)		19 (30.6%)	
Frequently	3 (14.3%)		12 (19.4%)	

Table 27: Team Members' Ratings of Team Effectiveness (Broken Down by Division)

Variable	By Division					
	Long Distance Services (LDS)		Local and Access Services (LAS)		Other	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Percentage of Time Work on Time	88.4%	14.6%	81.7%	19.7%	89.5%	12.6%
Aggregate Effectiveness	3.90	.85	4.23	.74	4.03	.76
	Long Distance Services (LDS)		Local and Access Services (LAS)		Other	
Complaints by Internal Clients:						
Never	22 (59.5%)		13 (68.4%)		14 (53.8%)	
Moderately	8 (21.6%)		3 (15.8%)		9 (34.6%)	
Frequently	7 (18.9%)		3 (15.8%)		3 (11.5%)	
Complaints by External Clients:						
Never	17 (47.2%)		8 (42.1%)		17 (63.0%)	
Moderately	13 (36.1%)		6 (31.6%)		6 (22.2%)	
Frequently	6 (16.7%)		5 (26.3%)		4 (14.8%)	

1.3.2 TEAM LEADER RATINGS OF TEAM EFFECTIVENESS

Team leaders' ratings of team effectiveness are presented in Table 28 below. Team leaders rated their team's work as being on time an average of 77.1% of the time, with a relatively high standard deviation of 28.6%. The mean leader rating of Aggregate Team Effectiveness is 4.00 with a standard deviation of .85. This indicates that team leaders also believe that their team is working effectively. The leaders ratings of their team's Complaints by Internal Clients and Complaints by External Clients are very similar to each other with approximately two-thirds of leaders indicating their team never receives complaints from either internal or external clients.

Table 28: Team Leaders' Ratings of Team Effectiveness

Variable	Total		
	n	Mean	Std. Dev.
Percentage of Time Work on Time	12	77.1%	28.6%
Aggregate Team Effectiveness	13	4.00	.85
	Frequency		
Complaints by Internal Clients:			
Never	8 (62%)		
Moderately	4 (31%)		
Frequently	1 (8%)		
Complaints by External Clients:			
Never	9 (69.%)		
Moderately	4 (31%)		
Frequently	0		

1.3.3 COMPARISON OF TEAM MEMBERS' RATINGS TO TEAM LEADER RATINGS

The team leaders' ratings of team effectiveness outcomes are, for the most part, very close to the ratings by team members themselves. Table 29, below, compares on a case by case basis

team member's ratings and team leaders' ratings for the three original measures which make up Aggregate Team Effectiveness: Satisfaction with Team Performance, Team Productivity and Team Effectiveness. The frequencies of cases where the two ratings are same, where the leader's rating is higher, and where the team member's rating is higher are shown. (A similar comparison, only broken down by team, is presented in Appendix Q.)

Table 29: Comparison of Ratings of Team Effectiveness (Total Sample)

Measure	Leader Rates Higher	Rates the Same	Team Member Rates Higher
Satisfaction with Performance	22 (24.7%)	52 (58.4%)	15 (16.9%)
Team Productivity	8 (8.9%)	61 (66.3%)	21 (23.3%)
Team Effectiveness	15 (16.7%)	66 (73.3%)	9 (10.0%)

These results indicate that team leaders and team members share, for the most part, the same perceptions of their team's work effectiveness. The highest amount of agreement occurs for the rating of Team Effectiveness, in which team members and leaders provide the same rating in 73% of cases. The least amount of agreement between team members and team leaders is on Satisfaction with Team Performance, where they give the same rating in 58% of the cases. In 25% of the cases, team leaders give a higher rating for Satisfaction with Team Performance, while team members rate higher 17% of the time. For Team Productivity, team members were more likely to give a higher rating than team leaders (23% versus 9%). It is unclear why team leaders were more prone to give higher ratings for one measure, and more likely to give a lower rating for another.

The overall ratings for team effectiveness, as discussed earlier, show effectiveness scores that are fairly similar. The largest difference is between the ratings of Percentage of Time Work on Time, with team members' providing an average rating of 87.6% versus an average rating of 77.1% by the team leaders. The results for the measure of Aggregate Team Effectiveness is almost identical for team leaders and team members (means of 4.00 and 4.02 respectively and standard deviations of .85 and .79 respectively). The high degree of consistency between these data would suggest that we can use both team and leader measures of effectiveness to determine the impact of the two measures of support.

1.4 INDIVIDUAL AND ORGANIZATIONAL OUTCOMES

Ratings for individual and organizational outcomes were obtained for team members only. The means and standard deviations of the ratings for individual and organizational outcomes for the total sample are presented below in Table 30.

The respondents had a mean score for commitment of 3.68 which, according to categorizations based on population norms by Duxbury et al. (1991; 1992), would indicate a high level of commitment to the organization. The mean score for job satisfaction was 3.03, which would indicate only a moderate level of job satisfaction. The standard deviation of .95 for this measure is relatively high, thus indicating a fair amount of variance in team members' job satisfaction. The mean scores for the measures of job stress and overall stress indicate moderate levels of both types of stress. The standard deviation of 1.20 for the measure of job stress is high, again indicating differing experiences among team members in terms of stress from their work. The mean hours worked per week was 38 hours, a standard work week, with a standard deviation

of 7.28, indicating fairly high variability between team members. Although there are no baseline measures with which to compare them, the mean numbers for doctor visits and absenteeism seem high. The mean number of doctor visits in the previous 12 months was 4.3 with a standard deviation 7.2. Team members' were absent an average of 4.58 times in the previous 12 months, with a high standard deviation of 5.28. This seems to indicate that many team members have experienced poor health.

Table 30: Individual and Organizational Outcomes (Total Sample)

Variable	Mean	Std. Dev.
Commitment	3.68	.78
Job Satisfaction	3.03	.95
Job Stress	3.05	1.20
Overall Stress	2.54	.64
Hours worked per week	38.0	7.28
Doctor visits (previous 12 months)	4.3	7.2
Absenteeism (previous 12 months)	4.58	5.28

The means and standard deviations of the ratings for individual and organizational outcomes broken down by gender and by division are presented below in Tables 31 and Tables 32, respectively. One-way analysis of variance revealed no significant differences either by gender or by division for any of the seven measures. This means that when interpreting the impact of either perceived intra-team support or perceived organizational support of teams on individual and organizational outcomes, significant differences can be attributed to the level of support and not due to gender or divisional differences.

Table 31: Individual and Organizational Outcomes (by Gender)

Variable	Male		Female	
	Mean	Std. Dev.	Mean	Std. Dev.
Commitment	3.49	.74	3.75	.79
Job Satisfaction	2.91	.74	3.07	1.01
Job Stress	2.74	.96	3.16	1.27
Overall Stress	2.30	.74	2.63	.58
Hours worked per week	39.3	8.28	37.6	6.9
Doctor visits (previous 12 months)	4.3	8.7	4.3	6.7
Absenteeism (previous 12 months)	3.85	6.28	4.83	4.92

Table 32: Individual and Organizational Outcomes (by Division)

Variable	Long Distance Services (LDS)		Local and Access Services (LAS)		Other	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Commitment	3.62	.87	3.99	.65	3.52	.68
Job Satisfaction	2.85	.71	3.40	1.48	2.99	.68
Job Stress	2.96	1.00	3.63	1.67	2.84	.98
Overall Stress	2.65	.59	2.43	.48	2.50	.75
Hours worked per week	37.1	7.7	38.1	4.3	39.1	8.5
Doctor visits (previous 12 months)	5.27	9.55	4.10	3.35	3.23	5.66
Absenteeism (previous 12 months)	4.21	5.39	6.45	5.39	3.77	5.02

2.0 SUPPORT RATINGS

This section discusses the support ratings made by team members. Perceived intra-team support is discussed first followed by a discussion of perceived organizational support of teams.

2.1 PERCEIVED INTRA-TEAM SUPPORT

The mean and standard deviation of perceived intra-team support for the total sample are shown in Table 33 below. The means and standard deviations of perceived intra-team support are also broken down by team.

Table 33: Perceived Intra-Team Support (Total Sample)

Perceived Intra-Team Support			Mean	Std. Dev.
Total			3.88	.58
By Team:	Division	n	Mean	Std. Dev.
Team 1	Other	10	3.90	.59
Team 2	LDS	4	4.65	.28
Team 3	LAS	3	3.88	.24
Team 4	Other	7	3.84	.54
Team 5	Other	2	3.81	.63
Team 6	LDS	14	3.67	.59
Team 7	LAS	9	4.11	.63
Team 8	LDS	11	3.51	.55
Team 9	LDS	5	4.20	.38
Team 11	Other	9	3.72	.49
Team 12	LAS	3	3.45	.82
Team 14	LAS	7	4.05	.52
Team 15	LDS	7	4.19	.36

The mean score of perceived intra-team support for the total sample was 3.88 (with a standard deviation of 0.58) indicating that team members feel they receive a high level of support from their fellow team members. There appears to be a fair amount of variance in perceived intra-

team support between individual teams, with means scores ranging from 3.45 to 4.65. The within-team standard deviations however, with one exception (team 12 reported a standard deviation of .82), show little variance suggesting that within the team there is a high level of consistency in perceptions of intra-team support. The low within-team variation and the fact that there is higher variation between teams is consistent with the conceptualization of the construct of perceived intra-team support. The high standard deviation for team 12 might be due to the fact that only three responses were received from this particular team.

2.2 PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

The mean and standard deviation of perceived organizational support of teams for the total sample are shown in Table 34 below. The means and standard deviations of perceived organizational support of teams broken down by team are also shown.

Table 34: Perceived Organizational Support of Teams (Total Sample)

Perceived Organizational Support of Teams			Mean	Std. Dev.
Total			2.74	.70
By Team:	Division	n	Mean	Std. Dev.
Team 1:	Other	10	2.89	.64
Team 2:	LDS	4	2.47	1.39
Team 3:	LAS	3	2.11	.37
Team 4:	Other	7	2.99	.80
Team 5:	Other	2	3.13	1.32
Team 6:	LDS	14	2.68	.47
Team 7:	LAS	9	3.06	.60
Team 8:	LDS	11	2.33	.52
Team 9:	LDS	5	2.47	.78
Team 11:	Other	9	3.12	.33
Team 12:	LAS	3	2.20	.20
Team 14:	LAS	7	2.50	.70
Team 15:	LDS	7	3.02	.93

The mean score of perceived organizational support of teams for the entire sample was 2.74. The standard deviation was .70. Broken down by team, the mean scores for perceived organizational support of teams range from 2.11 to 3.13. This low score indicates that teams do not think the organization supports them.

The mean score for this measure is much lower than that of the measure of perceived intra-team support. In fact, it is interesting to note that the upper end of the range for perceived organizational support of teams is less than the lowest team mean score for perceived intra-team

support. This indicates that team members perceive the organization to be less supportive of teams than fellow team members.

The mean scores for perceived organizational support of teams broken down by team show a number of teams with a high variance. This indicates less within-team agreement regarding the supportiveness of the organization toward teams.

2.3 RELATIONSHIP BETWEEN PERCEIVED INTRA-TEAM SUPPORT AND PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

Overall scores of perceived intra-team support and perceived organizational support of teams were not significantly correlated (Pearson coefficient=.19, $\alpha=.07$). This supports the idea that these scales are measuring two different constructs.

3.0 DISCUSSION OF RESULTS WHICH ANSWER RESEARCH QUESTIONS

This section consists of six subsections, with each subsection addressing one or more of the remaining research questions 3 to 10. Table 35 presents a summary of the subsections and the corresponding research question each addresses.

Table 35: Summary of Sections of Chapter and Research Questions

Subsection	Research Question(s) addressed
3.1. Impact of Individual and Team Characteristics on Perceived Intra-Team Support (PITS)	3, 4
3.2: Impact of Individual and Team Characteristics on Perceived Organizational Support of Teams (POST)	5, 6
3.3 Impact of PITS on Team Effectiveness	7
3.4 Impact of PITS on Individual and Organizational Outcomes	8
3.5 Impact of POST on Team Effectiveness	9
3.6 Impact of POST on Individual and Organizational Outcomes	10

3.1 IMPACT OF INDIVIDUAL AND TEAM CHARACTERISTICS ON PERCEIVED INTRA-TEAM SUPPORT

This section begins with a discussion of the impact of individual characteristics on perceived intra-team support, followed by a discussion of the impact of team characteristics on perceived intra-team support.

3.1.1 IMPACT OF INDIVIDUAL CHARACTERISTICS ON PERCEIVED INTRA-TEAM SUPPORT

The means and standard deviations of perceived intra-team support broken down by gender and division appear in Table 36 below.

Table 36: Perceived Intra-Team Support (broken down by gender and by division)

Perceived Intra-Team Support	Mean	Std. Dev.
Gender:		
Male	3.78	.70
Female	3.92	.53
Division:		
Long Distance Services (LDS)	3.91	.59
Local and Access Services (LAS)	4.03	.54
Other	3.75	.58

One-way analysis of variance revealed no significant differences in mean scores of perceived intra-team support when split by gender. Nor did one-way analysis of variance reveal any significant differences in mean scores of perceived intra-team support when split by division. This indicates that perceived intra-team support is not significantly linked to gender or division and suggests that we do not need to worry that gender and division differences in the data that were noted earlier will confound our findings with respect to support.

3.1.2 IMPACT OF TEAM CHARACTERISTICS ON PERCEIVED INTRA-TEAM SUPPORT

The means and standard deviations of perceived intra-team support broken down by team characteristics appear in Table 37 below.

Table 37: Mean Score for Perceived Intra-Team Support (Broken Down by Team Characteristics)

Team Characteristics	Perceived Intra-Team Support	
	Mean	Standard Deviation
Total Sample	3.88	.58
Team Function:		
Provides a service	3.95	3.95
Other	3.76	3.76

Table 37: Mean Score for Perceived Intra-Team Support (Broken Down by Team Characteristics)

Team Characteristics	Perceived Intra-Team Support	
	Mean	Standard Deviation
Empowered Team:		
Yes	3.96	.57
No	3.77	.57
Team size:		
less than 11 members	3.95	.67
11 to 15 members	3.71	.68
16 to 20 members	4.04	.51
more than 20 members	3.93	.31
Percent of team members interacted with on a consistent basis:		
less than 26%	3.99	.45
26% to 50%	3.67	.67
51% to 75%	3.99	.49
76% to 100%	3.97	.61
Team Leader:		
Yes	3.93	.61
No	3.81	.55
Team Autonomy:		
Low	3.79	.59
High	3.99	.57
Task Significance		
Low	4.08	.48
High	3.52	.60
Task Identity		
Low	4.04	.48
High	3.71	.65
Task Interdependence		
Low	4.04	.49
High	3.74	.64
Task Variety		
Low	4.11	.48
High	3.68	.61

One-way analysis of variance suggests that task characteristics have a significant impact on perceived intra-team support. The perception of intra-team support differs significantly depending on the team's task significance ($F=22.28$, 1 df, $\alpha<.0001$), task identity ($F=7.22$, 1 df, $\alpha=.0087$), task interdependence ($F=5.82$, 1 df, $\alpha=.0179$), and task variety ($F=13.29$, 1 df, $\alpha=.0005$). Respondents who rated their team's tasks as lower in significance, lower in identity, lower in interdependence, and lower in variety were more likely to rate perceived intra-team support higher. It is not clear why these relationships exist, though it may be that mundane, less visible, less important tasks encourage team members to be more supportive of each other (i.e. get satisfaction from each other not from tasks - have a higher need for rewards and support from each other as they do not get either from the work itself). None of the other team characteristics considered in this analysis were significantly associated with perceived intra-team support.

3.1.3 SUMMARY OF RELEVANT DIFFERENCES IN PERCEIVED INTRA-TEAM SUPPORT

A summary table of relevant differences in perceived intra-team support split by both individual demographics characteristics and team characteristics is presented below in Table 37.

Table 37: Summary of Differences in Perceived Intra-Team Support

	Individual Demographic Characteristics	Team Characteristics (and direction of relationship)
Significant Differences in Perceived Intra-Team Support	None	<ul style="list-style-type: none"> • Task Significance (negative) • Task Identity (negative) • Task Interdependence (negative) • Task Variety (negative)

3.2 IMPACT OF INDIVIDUAL AND TEAM CHARACTERISTICS ON PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

This section begins with a discussion of the impact of individual characteristics on perceived organizational support of teams, followed by a discussion of the impact of team characteristics on perceived organizational support of teams.

3.2.1 IMPACT OF INDIVIDUAL CHARACTERISTICS ON PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

The means and standard deviations of perceived organizational support of teams broken down by gender and division appear below in Table 38.

Table 38: Perceived Organizational Support of Teams (Broken Down by Gender and by Division)

Perceived Organizational Support of Teams	Mean	Std. Dev.
Gender:		
Male	2.86	.75
Female	2.70	.68
Division:		
Long Distance Services (LDS)	2.57	.73
Local and Access Services (LAS)	2.70	.68
Other	2.97	.63

One-way analysis of variance revealed no significant differences in mean scores of perceived organizational support of teams when split by gender. Nor did one-way analysis of variance reveal any significant differences in mean scores of perceived organizational support of teams when split by division. This indicates that perceived organizational support of teams is not significantly linked to gender or division and suggests that we do not need to worry that gender

and division differences in the data noted earlier will confound our findings with respect to support.

3.2.2 IMPACT OF TEAM CHARACTERISTICS ON PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

The means and standard deviations of perceived organizational support of teams broken down by team characteristics appear below in Table 39.

Table 39: Mean Score for Perceived Organizational Support of Teams (Broken Down by Team Characteristics)

Team Characteristics	Perceived Organizational Support of Teams	
	Mean	Standard Deviation
Total Sample	2.74	.70
Team Function: Provides a service Other	2.77 2.68	.71 .71
Empowered Team: Yes No	2.82 2.60	.82 .51
Team size: less than 11 members 11 to 15 members 16 to 20 members more than 20 members	2.77 2.74 2.76 2.68	.82 .74 .70 .58
Percent of team members interacted with on a consistent basis: less than 26% 26% to 50% 51% to 75% 76% to 100%	2.58 2.92 2.71 2.70	.81 .56 .76 .78
Team Leader: Yes No	2.72 2.74	.70 .72
Team Autonomy: Low High	2.55 2.93	.56 .82
Task Significance: Low High	2.76 2.65	.75 .61
Task Identity: Low High	2.80 2.62	.81 .56
Task Interdependence: Low High	2.84 2.61	.75 .65
Task Variety: Low High	2.84 2.61	.76 .65

The mean score for perceived organizational support of teams did not vary significantly by team function, whether the team was perceived to be empowered, team size, the percent of team members interacted with consistently, whether the team was perceived to have a leader, or any of the task characteristics. This means that any differences in these characteristics will not confound our findings with respect to perceived organizational support of teams.

The mean score for perceived organizational support of teams was shown to vary significantly with the level of team autonomy ($F=6.69$, 1 df, $\alpha=.0114$). Respondent's who perceived their team to have a high level of autonomy were more likely to rate organizational support of teams higher than if they perceived their team to have a low level of autonomy. This is an interesting finding which suggests that team members may be more likely to view the organization's actions towards their team as supportive when the organization allows the team to have a high degree of autonomy and responsibility. It could, in fact, indicate that team members perceive the organization to be supportive of teams when the organization imposes few restrictions on how teams are run.

3.2.3 SUMMARY OF RELEVANT DIFFERENCES IN PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

A summary table of relevant differences in perceived organizational support of teams split by both individual demographics characteristics and team characteristics is presented below in Table 40.

Table 40: Summary of Differences in Perceived Organizational Support of Teams

	Individual Demographic Characteristics	Team Characteristics (and direction of relationship)
Significant Differences in Perceived Organizational Support of Teams	None	<ul style="list-style-type: none"> • Team Autonomy (positive)

3.3 IMPACT OF PERCEIVED INTRA-TEAM SUPPORT ON TEAM EFFECTIVENESS

Team effectiveness outcomes were measured by two sets of ratings: one by team members and one by team leaders. The first section will discuss the impact of perceived intra-team support on team member-rated effectiveness, while the second section will discuss the impact of perceived intra-team support on team leader-rated effectiveness.

3.3.1 IMPACT OF PERCEIVED INTRA-TEAM SUPPORT ON TEAM MEMBERS' RATINGS OF TEAM EFFECTIVENESS

The cross-tabulations of team effectiveness measures by the level of perceived intra-team support are presented below in Table 41. The means and standard deviations for Percentage of Time Work on Time and Aggregate Team Effectiveness broken down by level of perceived intra-team support are also presented below in Table 42.

Table 41: Impact of Perceived Intra-Team Support on Team Effectiveness (Team Members' Ratings)

Team Effectiveness Outcome	Perceived Intra-Team Support Level	
	Low	High
Percentage of Time Work on Time:		
Low	6 (16.2%)	2 (5.3%)
Moderate	10 (27.0%)	7 (18.4%)
High	21 (56.8%)	29 (76.3%)
Complaints by Internal Clients:		
Never	17 (42.5%)	33 (76.7%)
Moderately	14 (35.0%)	6 (14.0%)
Frequently	9 (22.5%)	4 (9.3%)
Complaints by External Clients:		
Never	14 (35.0%)	29 (67.4%)
Moderately	18 (45.0%)	7 (16.3%)
Frequently	8 (20.0%)	7 (16.3%)
Aggregate Team Effectiveness		
Low	2 (4.7%)	0
Moderate	17 (39.5%)	6 (12.8%)
High	24 (55.8%)	41 (87.2%)

Table 42: Impact of Perceived Intra-Team Support on Team Effectiveness (Team Members' Ratings)

Team Effectiveness Outcome	Perceived Intra-Team Support			
	Low		High	
	Mean	Std. Dev.	Mean	Std. Dev.
Percentage of Work on Time	84.0%	16.0%	91.0%	12.2%
Aggregate Team Effectiveness	3.64	.75	4.37	.67

Initial chi-square analysis showed that three of the four measures varied significantly by the level of intra-team support. The only measure that did not differ significantly by the level of perceived intra-team support was Percentage of Time Work on Time. Even with the calculation and application of the design effect correction factor (see Appendix R for detailed results of the

chi-square values with the application of the correction factor), all three measures remained significant at the .05 level. Complaints by Internal Clients ($\chi^2=10.15$, 2 df, $\alpha=.006$) and Complaints by External Clients ($\chi^2=10.04$, 2 df, $\alpha=.007$) both showed significant differences by the level of perceived intra-team support. In each case, respondents who rated the level of perceived intra-team support as high were more likely to rate their team as never having complaints from either internal or external clients.

The level of Aggregate Team Effectiveness also varied significantly with the level of perceived intra-team support ($\chi^2=11.55$, 2 df, $\alpha=.003$), with employees who perceived higher intra-team support reporting significantly higher aggregate team effectiveness scores. Due to the fact that the measure of Aggregate Team Effectiveness had one empty cell, the low and moderate categories had to be collapsed into one in order to calculate the correction factor. Doing this yielded a pre-correction factor chi-square statistic that was significant. The result for Aggregate Team Effectiveness broken down by level of perceived intra-team support remained significant after the correction factor was calculated.

The fact that three of the four team effectiveness measures are associated with above-average levels of perceived intra-team support suggests that how an individual team member feels with respect to support from co-workers relates to their perception of how effective their team is.

3.3.2 IMPACT OF PERCEIVED INTRA-TEAM SUPPORT ON TEAM LEADERS' RATINGS OF EFFECTIVENESS

Each leader's ratings were correlated with their team's average perceived intra-team support score (see Table 43 below). None of the ratings by the team leaders were found to be significantly correlated with their team's score for perceived intra-team support. It may be that

within a given team, some team members feel supported by their co-workers, and thus more effective, while others do not. These different views may then cancel each other out and thus explain the weak correlation between team leaders' perception of team effectiveness and mean scores of perceived intra-team support.

Table 43: Correlations of Team Leaders' Ratings of Team Effectiveness with Perceived Intra-Team Support

Team Effectiveness Measure (Team Leaders' Ratings)	Perceived Intra-Team Support		
	n	Pearson Correlation Coefficient	Prob.
Percentage of Work on Time	12	-.1340	.678
Aggregate Team Effectiveness	13	.1356	.659
Team Effectiveness Measure (Team Leaders' Ratings)	n	Spearman Correlation Coefficient	Prob.
Complaints by Internal Clients	13	.182	.551
Complaints by External Clients	13	-.079	.798

3.4 IMPACT OF PERCEIVED INTRA-TEAM SUPPORT ON INDIVIDUAL AND ORGANIZATIONAL OUTCOMES

Individual and organizational outcomes were measured using ratings by team members only. The cross-tabulations of individual and organizational outcome measures by the level of perceived intra-team support are presented in Table 44 below while the means and standard deviations for the measures of individual and organizational outcomes broken down by level of perceived intra-team support are presented in Table 45.

Table 44: Impact of Perceived Intra-Team Support on Individual and Organizational Outcomes

Measure	Perceived Intra-Team Support Level	
	Low	High
Commitment:		
Low	2 (4.5%)	4 (8.3%)
Moderate	19 (43.2%)	13 (27.1%)
High	23 (52.3%)	31 (64.6%)
Job Satisfaction:		
Low	15 (34.1%)	7 (14.6%)
Moderate	23 (52.3%)	25 (52.1%)
High	6 (13.6%)	16 (33.3%)
Job Stress:		
Low	10 (22.7%)	19 (39.6%)
Moderate	12 (27.3%)	14 (29.2%)
High	22 (50.0%)	15 (31.3%)
Overall Stress:		
Low	2 (4.5%)	3 (6.3%)
Moderate	22 (50.0%)	33 (68.8%)
High	20 (45.5%)	12 (25.0%)
Hours Worked Per Week:		
less than 30 hours	2 (4.5%)	7 (14.9%)
30 to 34 hours	3 (6.8%)	3 (6.4%)
35 to 40 hours	32 (72.7%)	30 (63.8%)
40 to 60 hours	7 (15.9%)	7 (14.9%)
Doctor Visits (previous 12 months):		
Low (4 days or less)	32 (74.4%)	36 (80.0%)
High (more than 4 days)	11 (25.6%)	9 (20.0%)
Absenteeism (previous 12 months):		
No absenteeism	13 (29.5%)	16 (34.8%)
Below average	12 (27.3%)	13 (28.2%)
Above average	19 (43.2%)	17 (37.0%)

Table 45: Means and Standard Deviations for the Measures of Individual and Organizational Outcomes Broken Down by Level of Perceived Intra-Team Support

Measure	Perceived Intra-Team Support			
	Low		High	
	Mean	Std. Dev.	Mean	Std. Dev.
Commitment	3.57	.69	3.79	.85
Job Satisfaction	2.76	.65	3.27	1.11
Job Stress	3.24	1.29	2.88	1.10
Overall Stress	2.66	.64	2.43	.62
Hours Worked Per Week	38.8	6.6	37.3	7.9
Doctor Visits (previous 12 months)	5.0	9.5	3.5	3.9
Absenteeism (previous 12 months)	4.7	5.2	4.5	5.4

Job satisfaction is the only outcome measure that, from chi-square analysis, showed any significant difference by the level of perceived intra-team support ($\chi^2=7.37$, 2 df, $\alpha=.025$). After calculating and applying the correction factor to account for the design effect, the difference still approached significance. See Appendix R for a summary of the application of the correction factors.

Respondents who rated the level of perceived intra-team support as high were more likely to rate their job satisfaction level as high and vice-versa. The relationship between perceived intra-team support and job satisfaction suggests that support from fellow team members is linked to the likelihood that an employee will enjoy and be satisfied with their work.

It should also be noted that most of the other measures were linked, albeit not significantly, with perceived intra-team support in the predicted direction: A below average level of perceived intra-team support was related to a lower mean score for commitment and to higher

mean scores for job stress and overall stress; below average perceived intra-team support was also linked with higher mean frequencies of doctor visits and absenteeism. This further underlines the importance of perceived intra-team support to the well-being of the team member and their commitment to the organization.

A summary table of the significant relationships between perceived organizational support of teams and team effectiveness and individual and organizational outcomes are presented below in Table 46.

Table 46: Summary of Significant Relationships Between Perceived Intra-Team Support Scores and Team Effectiveness/Individual and Organizational Outcomes

	Team Effectiveness (and direction of relationship)	Individual and Organizational Outcomes (and direction of relationship)
Perceived Intra-Team Support	<ul style="list-style-type: none"> • Complaints by Internal Clients (negative) • Complaints by External Clients (negative) • Aggregate Team Effectiveness (positive) 	<ul style="list-style-type: none"> • Job Satisfaction (positive)

3.5 IMPACT OF PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS ON TEAM EFFECTIVENESS

This section will discuss the impact of perceived organizational support of teams on team effectiveness. The first part will concern itself with team members' ratings of team effectiveness while the second part will discuss the impact of perceived intra-team support on team leaders' ratings of effectiveness.

3.5.1 IMPACT OF PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS ON TEAM MEMBERS' RATINGS OF TEAM EFFECTIVENESS

The cross-tabulations of team effectiveness measures by the level of perceived organizational support of teams are presented in Table 47. The means and standard deviations for Percentage of Time Work on Time and Aggregate Team Effectiveness broken down by level of perceived organizational support of teams are presented in Table 48.

Table 47: Impact of Perceived Organizational Support of Teams on Team Effectiveness (Team Member's Rating)

Team Effectiveness Outcome	Level of Perceived Organizational Support of Teams	
	Low	High
Percent of Time Work on Time:		
Low	5 (13.5%)	3 (7.9%)
Moderate	11 (29.7%)	6 (15.8%)
High	21 (56.8%)	29 (76.3%)
Complaints by Internal Clients:		
Never	23 (53.5%)	27 (67.5%)
Moderately	11 (25.6%)	9 (22.5%)
Frequently	9 (20.9%)	4 (10.0%)
Complaints by External Clients:		
Never	18 (41.9%)	25 (62.5%)
Moderately	12 (27.9%)	13 (32.5%)
Frequently	13 (30.2%)	2 (5.0%)
Aggregate Team Effectiveness		
Low	2 (4.3%)	0
Moderate	16 (34.8%)	7 (15.9%)
High	28 (60.9%)	37 (84.1%)

Table 48: Impact of Perceived Organizational Support of Teams on Team Effectiveness (Team Members' Ratings)

Team Effectiveness Outcome	Level of Perceived Organizational Support of Teams			
	Low		High	
	Mean	Std. Dev.	Mean	Std. Dev.
Percentage of Time Work on Time	86.1%	15.0%	89.0%	14.2%
Aggregate Team Effectiveness	3.80	.80	4.26	.71

Prior to the application of the correction factor, chi-square analysis showed two of the four measures of team effectiveness to be statistically significant when cross tabulated by organizational support of teams. The two significant measures were Complaints by External Clients ($\chi^2=9.15$, 2 df, $\alpha=.01$) and the Aggregate Team Effectiveness ($\chi^2=6.73$, 2 df, $\alpha=.03$). When correction factors were applied to the chi-square statistics (refer to Appendix R for a description of the application of correction factors), both chi-square values were still significant. As in the previous section, categories had to be combined for Aggregate Team Effectiveness due to an empty cell. Low and moderate were combined, yielding a pre-correction factor chi-square value which is significant ($\chi^2=6.05$, 1 df, $\alpha=.014$). This cross tabulation remained significant even after application of the correction factor. The significant differences indicated that higher perceived organizational support of teams relates to team members perceiving the team to be more effective and having fewer complaints by clients from outside the organization.

While the measures Percent Time of Work on Time and Complaints by Internal Clients did not differ significantly by the level of perceived organizational support of teams, they did differ in the expected direction. These data, when taken together indicate that the amount of support that

teams perceive the organization to be providing may play a role in the ability of team to be effective.

3.5.2 IMPACT OF PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS ON TEAM LEADERS' RATINGS OF TEAM EFFECTIVENESS

Correlations of leader ratings to their respective team's overall score of organizational support of teams were performed and are presented below in Table 49.

Table 49: Correlations of Team Leaders' Ratings of Team Effectiveness with Perceived Organizational Support of Teams

Team Effectiveness Measure (Team Leaders' Ratings)	Perceived Organizational Support of Teams		
	n	Pearson Correlation Coefficient	Prob
Percentage of Work on Time	12	.2291	.474
Aggregate Team Effectiveness	13	.4625	.112
Team Effectiveness Measure (Team Leaders' Ratings)	n	Spearman Correlation Coefficient	Prob
Complaints by Internal Clients	13	-.210	.492
Complaints by External Clients	13	-.315	.295

None of the ratings by the team leaders were found to be significantly correlated with their team's score for perceived organizational support of teams. Again, similar to the results for perceived intra-team support, this result could be explained by varying support scores by team members within the same team (some team members may feel supported by the organization, and therefore perceive their team to be more effective, while others feel less supported by the organization, and thus less effective). These different views may then cancel each other out and

thus explain the weak correlation between team leaders' perception of team effectiveness and the means scores of perceived organizational support of teams.

3.6 IMPACT OF PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS ON INDIVIDUAL AND ORGANIZATIONAL OUTCOMES

The cross-tabulations of individual and organizational outcome measures by the level of perceived organizational support of teams are presented in Table 50. The means and standard deviations for the measures of individual and organizational outcomes broken down by level of perceived organizational support of teams are presented in Table 51.

Table 50: Levels of Organizational Support of Teams and Individual/Organizational Outcomes

Measure	Level of Perceived Organizational Support of Teams	
	Low	High
Commitment:		
Low	5 (10.6%)	1 (2.2%)
Moderate	19 (40.4%)	13 (28.9%)
High	23 (48.9%)	31 (68.9%)
Job Satisfaction:		
Low	18 (38.3%)	4 (8.9%)
Moderate	25 (53.2%)	23 (51.1%)
High	4 (18.2%)	18 (40.0%)
Job Stress:		
Low	9 (19.1%)	20 (44.4%)
Moderate	9 (19.1%)	17 (37.8%)
High	29 (61.7%)	8 (17.8%)
Overall Stress:		
Low	1 (2.1%)	4 (8.9%)
Moderate	30 (63.8%)	25 (55.6%)
High	16 (34.0%)	16 (35.6%)
Hours Worked Per Week:		
less than 30 hours	4 (8.7%)	5 (11.4%)
30 to 34 hours	4 (8.7%)	2 (4.5%)
35 to 40 hours	32 (69.6%)	29 (65.9%)
40 to 60 hours	6 (13.0%)	8 (18.2%)
Doctor Visits (previous 12 months)		
Low (4 days or less)	30 (68.1%)	38 (88.4%)
High (more than 4 days)	14 (31.9%)	5 (11.6%)
Absenteeism (previous 12 months)		
No absenteeism	14 (31.1%)	15 (34.1%)
Below average	13 (28.9%)	12 (27.3%)
Above average	18 (40.0%)	17 (38.6%)

Table 51: Means and Standard Deviations for the Measures of Individual and Organizational Outcomes Broken Down by Level of Perceived Organizational Support of Teams

Measure	Level of Perceived Organizational Support of Teams			
	Low		High	
	Mean	Std. Dev.	Mean	Std. Dev.
Commitment	3.52	.81	3.86	.73
Job Satisfaction	2.68	.72	3.38	1.03
Job Stress	3.39	.92	2.70	1.37
Overall Stress	2.66	.64	2.42	.61
Hours Worked Per Week	38.0	7.2	38.0	7.6
Doctor Visits (previous 12 months)	5.2	6.7	3.2	7.6
Absenteeism (previous 12 months)	4.7	5.5	4.2	5.1

Chi-square analysis reveals significant differences between levels of organizational support of teams for job stress ($\chi^2=18.5$, 2 df, $\alpha=.0001$), job satisfaction ($\chi^2=17.9$, 2 df, $\alpha=.00013$), and number of doctor visits ($\chi^2=5.19$, 1 df, $\alpha=.023$), the results obtained with commitment approaches significance ($\chi^2=4.9$, 2 df, $\alpha=.08$). All three differences remained significant after application of the correction factor for each (refer to Appendix R).

For all three significant cases and for commitment, the direction of the relationships is as predicted from the theory. A below average level of perceived organizational support of teams is linked to low levels of job satisfaction, and commitment, high levels of job stress, and to a higher frequency of doctor visits. This indicates the importance of the organization showing team members that they are supportive of them as this data indicates that a failure to do so could adversely affect a team members' satisfaction with their work, their level of job stress, and their health, all of which may be linked to "the bottom line".

A summary table of the significant relationships between perceived organizational support of teams and team effectiveness and individual and organizational outcomes are presented below in Table 52.

Table 52: Summary of Significant Relationships Between Perceived Organizational Support of Teams Scores and Team Effectiveness/Individual and Organizational Outcomes

	Team Effectiveness (and direction of relationship)	Individual and Organizational Outcomes (and direction of relationship)
Perceived Organizational Support of Teams	<ul style="list-style-type: none"> • Complaints by External Clients (negative) • Aggregate Team Effectiveness (positive) 	<ul style="list-style-type: none"> • Job Satisfaction (positive) • Job Stress (negative) • Doctor Visits (negative) • Commitment (positive)

CHAPTER SIX

CONCLUSIONS

This study has filled a void in the literature through the development of comprehensive, behaviour-based measures of perceived intra-team support and perceived organizational support of teams. In doing so, both perceived intra-team support and perceived organizational support of teams have been defined in terms of quantifiable and readily observable behaviours. Both types of support have also been found to be significantly linked to outcomes such as team effectiveness and individual and organizational outcomes. These findings are consistent with the literature which links team process characteristics, under which perceived intra-team support would fall, to team effectiveness and team member satisfaction, as well as relating organizational characteristics, such as resources and organizational context, to team effectiveness and team member satisfaction. Both measures of support developed in this research have high internal reliability. Conclusions regarding perceived intra-team support and perceived organizational support of teams will be discussed in turn, followed by a discussion of the relative levels of each, as well as the relevance and limitations of the research.

1.0 CONCLUSIONS REGARDING PERCEIVED INTRA-TEAM SUPPORT

No significant differences by individual characteristics of team members (i.e. gender, division) were observed regarding levels of perceived intra-team support. This enables interpretation of the impact of perceived intra-team support on team effectiveness and individual and organizational outcomes to be done without accounting for gender or division. It also

demonstrates that the measure could be used to gauge perceived intra-team support of employees of Company X who work in teams regardless of their gender and the division within the company in which they work.

Few significant differences in perceived intra-team support were observed when broken down by team characteristics, the exception being perceived intra-team support split by each of the four task characteristics. The higher a team member's perception of the significance, identity, interdependence, or variety of their team's task, the lower the perception of intra-team support. This, surprisingly, goes against the literature, which says that the more identifiable the work, the more cooperative groups were (Cummings, 1978; Pearce and Ravlin, 1987; Hackman, 1987). It may be that a high level of any of these four characteristics may increase the sense of responsibility that a team member feels that they and their team have for their work, which in turn raises the expectations they have of their fellow team members. As a result their fellow team members, unable to meet such elevated expectations, receive a lower rating of perceived intra-team support. It may also be that team members that perform low variety, low visibility tasks have a greater need for support from co-workers in order to alleviate boredom and get a sense of worth from their jobs.

Perceived intra-team support was shown to be positively related to team members' ratings of team effectiveness. A significant number of team members who felt they received a high level of perceived intra-team support rated their team as high in regards to its effectiveness. Team members who perceived they received a high level of support by fellow team members were also more likely to perceive that they were on teams that never had complaints about performance by either internal or external clients of the team. No significant correlations were observed between

leader ratings of team effectiveness and team members perception of intra-team support. Team leaders' ranking of effectiveness generally confirms team members' view of their effectiveness and productivity. Team leaders' ratings of effectiveness cannot be linked to either type of support since it is one's own feelings of support that make a difference to the individual's own perception of effectiveness, not the team's mean score. The fact that three out of four measures of team effectiveness were significantly linked to perceived intra-team support shows the importance of positive support and interaction among team members in enabling a team to feel productive and feel like it is achieving its goals. Conversely, the data would suggest that low levels of intra-team support and poor relations among team members may in fact reduce effectiveness by undermining the synergistic benefits of a team's existence.

A high level of perceived intra-team support was related to only one individual and organizational outcome: job satisfaction. Team members with low levels of job satisfaction were more likely to rate perceived intra-team support as low; team members with high job satisfaction were more likely to perceive high support. The fact that this is the only individual and organizational outcome measure upon which perceived intra-team support may have had any substantial impact may be due to the fact that the team members likely interact with fellow members every day, thus contributing to the enjoyment (or non-enjoyment) of their work, whereas other outcomes, such as job stress and commitment, may be due more to organizational factors upon which team members have little or no effect.

2.0 CONCLUSIONS REGARDING PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

No significant differences by individual characteristics of team members were observed regarding the levels of perceived organizational support of teams. As with the measure of perceived intra-team support, this permits interpretation of the impact of perceived organizational support of teams on team effectiveness and individual and organizational outcomes to be performed without accounting for gender or division. It also suggests that the measure has wide applicability within the organization.

Team members who rated their team as having a high level of team autonomy were more likely to rate perceived organizational support of teams as high. The questions describing team autonomy reflect the extent to which team members possess responsibility for running the team (i.e. determining work procedures, setting budgets, hiring new members, setting objectives). This suggests that team members may tend to find the organization supportive of teams only when the organization relinquishes control of the teams to its members. This interpretation of the data is reflected in some of the perceived non-supportive actions of the organization (e.g. "Creates uncertainty among team members through constant reorganizing of teams," "Fails to consult with a team when changing its role or creating more work for it," "Asks for a team's input, then fails to consider that input in decision-making") and in some of the perceived supportive actions of the organization (e.g. "Allows a team to participate in decisions which affect it," "Listens to input from teams").

Perceived organizational support of teams, like perceived intra-team support, was significantly related to member-rated team effectiveness. High ratings of perceived organizational

support of teams corresponded significantly with high ratings of Aggregate Team Effectiveness. As well, a significant number of team members who rated perceived organizational support of teams as high also perceived that their team never received complaints about its performance by external clients. This illustrates the effect the organization's actions regarding teams may have on the teams' ability to be productive and effective in their work. Team members' perceptions of the organization's actions toward teams, if not the actions themselves, may lead to lower effort and productivity.

The relationship between perceived organizational support of teams and individual and organizational well-being was more pronounced than in the case of perceived intra-team support. Respondents who felt that the organization did not support their ability to work in a team were more likely to report high job stress and to experience physical illness. They were also less likely to be satisfied with their jobs and committed to the organization.

The data would also suggest an employee's health may be related to the perception of organizational support, as those who rated perceived organizational support of teams as low tended to visit the doctor more frequently. This is consistent with the link between low support and high job stress.

The relationship between perceived organizational support of teams and these individual and organizational outcome measures may be a result of team members' sense of control regarding the organization's actions toward their team and the environment in which their team must function - decisions that may affect them directly in their day-to-day work life. This interpretation of the data is supported by an examination of the behaviours which make up this measure. As mentioned above, many supportive actions of the organization reflect the

importance of having input or being consulted on changes to the team. A sense of powerlessness in this regard may contribute to job-related stress, health problems and low job satisfaction.

Conversely, high levels of perceived organizational support may lead to low levels of job-related stress, relatively better health and a high level of job satisfaction. This interpretation of the data is further supported by the previously described relationship between the level of team autonomy and perceived organizational support of teams.

3.0 RELATIVE IMPACT OF PERCEIVED INTRA-TEAM SUPPORT AND PERCEIVED ORGANIZATIONAL SUPPORT OF TEAMS

The relative levels of perceived intra-team support and perceived organizational support of teams indicate a greater dissatisfaction with the support provided by the organization than with that of team members. This may be due to a number of factors. Firstly, the organization is a large entity with a substantial amount of power over the individual employee. This is not the case, however, with fellow team members who likely have little or no power over the individual employee. Secondly, the individual may feel powerless in affecting change toward the organization as a whole, whereas changing the behaviour of a fellow employee is more likely within the realm of possibility through direct communication with the employee, or discussions with other team members. Thirdly, it may be that the individual team member may perceive his fellow team members, because of their proximity, to be more empathetic to his or her situation, or to share a common perspective or understanding (i.e. feel that they are “in this together”). The organization, on the other hand is distant and has little understanding of the team’s situation. Lastly, it may be as simple as team members perceiving the organization as being hostile toward

teams and the whole notion of teams. This is reflected rather bluntly in the following non-supportive action of the organization generated in the first phase of this study: “Has members of upper-management who verbalize the fact that they don’t like using teams.”

No significant relationship was found between perceived intra-team support and perceived organizational support of teams. This indicates that these scales measure two different constructs and that each construct can be examined independently of the other.

4.0 RELEVANCE OF THE RESEARCH

The measures developed in this research could be useful to the organization should it wish to promote the use of teams. This research has demonstrated the association of support among team members with team effectiveness and team members’ job satisfaction. Improving intra-team support could improve employee morale and team performance. The measure of perceived intra-team support could bring attention to teams that are experiencing problems among its members. Training programs could be designed for current and prospective team members which emphasize and teach supportive behaviours, and attempt to limit non-supportive behaviours. Finally, this measure could be used to filter out candidates for teams who exhibit a high number of non-supportive behaviours and/or a low number of supportive behaviours.

This research has provided evidence regarding the importance of the organization’s support of teams to team effectiveness and to team members’ levels of job stress, job satisfaction and physical health. Being able to measure teams’ perception of organizational support would allow the company to take corrective action should any dissatisfaction exist. Failing to do so could adversely affect team effectiveness and team member well-being. The measure of perceived

organizational support of teams could be used by management as a form of feedback from people who work on teams as to whether their actions are helping or hindering a given team, or teams in general. The behaviours which comprise the measure could be kept in mind when considering policies or initiatives which may affect the company's teams.

5.0 LIMITATIONS OF THE RESEARCH

As with all research, this study has a number of limitations. The main limitation concerns the generalizability of the two measures that were developed. These measures were developed from results obtained by surveying one organization only. As a result, they may only be useful to this one specific organization and not generalizable to other organizations.

Another limitation is the low response rate experienced in the second and third phases of this study. With only 29 responses in Phase 2, the sets of behaviours may not be as comprehensive as they could have been had a higher response rate been obtained. This low response rate may have been due in part to poor union-management relations at Company X whereby the union discouraged its members from filling out surveys. The third phase of the study also suffered from a lower-than-expected response. Only 92 completed questionnaires were received from team members. The low response rate in this phase can be attributed to problems with the postal box system that was used.

The lack of an objective, concrete measure of a team's effectiveness was a further limitation to this study. Self-ratings by team members and team leaders may have resulted in positively-biased responses. Any future research in this area would benefit from the use of a measure of team effectiveness that has specific and non-biased measurement criteria.

A further limitation was the organization's desire to limit the length of the survey. As a result, a number of behaviours that could have been included in the measure of perceived intra-team support were excluded. This was done despite these behaviours having a high degree a consensus among team members as being supportive behaviours. Ideally, these behaviours would have been included, however the resulting lengthened questionnaire may have further reduced the response rate.

Finally, limitations exist which are inherent in the act frequency approach. With respondents asked to retrospect about the applicability of each item in the measure, it is possible that outside influences or limitations related to recall may have resulted in inaccurate responses. Though behaviours are stated in as simple a manner as possible, respondents may misinterpret them and provide responses that do not accurately reflect their position.

Appendix A
Teams Distinguished By Basic Function
 from Katzenbach and Smith (1993b)

	Teams That Recommend	Teams That Make or Do	Teams That Run
Specified start/stop date	Yes	No	No
Generate product/service	No	Yes	No
Specific mandate	Yes	Yes	No
Example	Task Force	Production Team	Executive Team

Appendix B
Gladstein (1984) Model of Task Group Effectiveness

Appendix C
Hackman's (1987) alternative to the input-process-output model

Appendix D
Hackman's (1987) Normative Model of Work Group Effectiveness

Appendix E
**Sundstrom et al.'s (1990) ecological framework
for analyzing work team effectiveness**

Appendix F
**Campion et al.'s (1993) hybrid conceptual framework of work
group characteristics related to effectiveness**

Appendix G

Cohen et al.'s (1996) model of self-managing work team effectiveness

Appendix H

Supportive Behaviours of Team Members

1. Shares personal knowledge/experience/skills.
2. Shares information with me.
3. Listens to me.
4. Maintains good relations between the team and the client.
5. Keeps me informed of issues of concern to the team.
6. Treats me as an equal.
7. Makes me feel that I can ask questions at any time.
8. Understands the team's purpose.
9. Supports the team when its survival is threatened.
10. Asks me for my opinion.
11. Gets me to clarify something if he/she does not understand.
12. Performs required tasks without having to be asked.
13. Completes tasks on time.
14. Tells me when they do not agree with me.
15. Clearly explains their opinion/perspective on matters important to the team.
16. Includes me in decision-making.
17. Is flexible with respect to scheduling.
18. Provides me with positive reinforcement.
19. Offers to help me with my work when needed.
20. Takes on unpopular tasks that need to be done.
21. Doesn't set unreasonable expectations on team members.
22. Asks me questions.
23. Understands and adapts to the individual characteristics of team members.

Appendix H (continued)

Supportive Behaviours of Team Members

24. Expresses interest in my work.
25. Provides me with feedback.
26. Provides me encouragement.
27. Supports my career aspirations
28. Covers for me when I am absent or have to leave early.
29. Takes ownership of everything the team does.
30. Supports me at team meetings.
31. Supports team members who have trouble fitting in with the group.
32. Uses humour in overcoming personality conflicts.
33. Looks for support from within the team, not from other parts of the company.
34. Keeps me informed about their work.
35. Leaves me alone to do my work.
36. Jokes around with myself and other team members.
37. Shows concern when I have personal problems.
38. Makes an effort to talk to me everyday.
39. Is able to perform most aspects of the team's work.
40. Tries to get to know me on a personal level.
41. Takes coffee and lunch breaks with myself and/or other team members.
42. Spends time with myself or other team members after work or outside working hours.

Appendix H (continued)

Non-Supportive Behaviours of Team Members

1. Makes negative comments about my work to others but fails to point out the problems to me.
2. Make negative comments about me to other team members.
3. Projects a negative image of the team to people outside the team.
4. Scolds me in the presence of other team members.
5. Is part of a sub-group of team members who defend their interests at the expense of the entire team.
6. Puts their own interests before those of the team.
7. Encroaches on my tasks/duties without my permission/knowledge.
8. Overburdens other team members with work.
9. Monitors the length of my breaks.
10. Competes with other team members.
11. Spends too much time socializing at work.
12. Fails to work an adequate amount of hours per week.
13. Suggests changes to work I have done after it has been completed rather than while it was being done.
14. Only performs tasks that are within his/her job description.
15. Fails to thank me or show appreciation when I help him/her with something.
16. Jokes around with team members, but doesn't know when to stop.
17. Expects me to understand things that are not part of my job.
18. Is not organized.
19. Comes to me with a problem without first trying to solve it themselves.

Appendix H (continued)**Non-Supportive Behaviours of Team Members (continued)**

20. Keeps to himself/herself.
21. Does not delegate tasks to others.

Appendix I**Supportive Actions of the Organization**

1. Allows a team to participate in decisions which affect it.
2. Listens to input from teams.
3. Allows communication from the team to upper management.
4. Provides appropriate training for teams.
5. Has few layers of management between teams and upper-level management.
6. Makes available a mentor to aid in setting up teams.
7. Encourages departments to try teams.
8. Allows the team to perform team evaluations.
9. Recognizes team accomplishments with awards.
10. Provides literature on working in teams.
11. Allows the team to set its own objectives and the method for evaluating those objectives.
12. Keeps us informed about the use of teams in the organization.
13. Demonstrates its support for teams by frequent mention of them in corporate communications.
14. Eliminates day-to-day management of team by external manager.
15. Gives the team the power to hire new members.
16. Does not interfere with the team.
17. Allows the team to set its own budget.

Appendix I (continued)

Non-Supportive Actions of the Organization

1.	Fails to provide clear explanation of why a change to a team is taking place.
2.	Only 'pays lip service' to the concept of support of teams.
3.	Creates uncertainty among team members through constant re-organizing of teams.
4.	Fails to keep teams informed of future changes that may affect them.
5.	Fails to consult with a team when changing its role or creating more work for it.
6.	Asks for a team's input, then fails to consider that input in decision-making.
7.	Expects teams to solve problems that are beyond its scope and control.
8.	Uses forms and procedures suitable for a traditional managerial structure, but not for teams.
9.	Does not provide the team with sufficient clerical support.
10.	Has members of upper-management who verbalize the fact that they don't like using teams.
11.	Does not consider ability to work in a team environment when hiring new employees.
12.	Does not provide any additional compensation for teams that are self-directed.

Appendix J - Phase 2 Questionnaire**SECTION A: DEMOGRAPHICS**

We need some demographic information about you to help us interpret this questionnaire. To answer the following questions, please **CIRCLE** the letter of the answer which best describes you and/or **FILL IN** the information requested.

1. What division do you work in?
 - A. EMERGING BUSINESS
 - B. HRCS
 - C. BUSINESS DIVISION
 - D. CIO
 - E. NETWORK OPERATIONS

2. Please **CIRCLE** the letter which best fits the type of work **YOU DO**:

<ol style="list-style-type: none">A. MANAGERIALB. CLERICALC. OPERATORD. SERVICE REPRESENTATIVEE. SALES	<ol style="list-style-type: none">F. PLANTG. TECHNICIANH. DRAFTINGI. ENGINEERJ. OTHER_____
--	--

3. How many different managers have you reported to in the last 2 years?
_____ MANAGERS

4. What is your gender?
 - A. MALE
 - B. FEMALE

5. What is your age? _____ YEARS

6. Are you married and/or living with a significant other?
 - A. YES
 - B. NO

7. Do you have children living at home?

A. YES

B. NO

If yes, indicate the number of children living at home in each of the following age groups:

A. LESS THAN 3 YEARS _____ D. 13-18 YEARS _____

B. 4-5 YEARS _____ E. OVER 18 YEARS _____

C. 6-12 YEARS _____

8. Do you have eldercare responsibilities?

A. YES

B. NO

9. Are you a member of an empowered/self-directed work team?

A. YES

B. NO

SECTION B: TEAM INFORMATION

We would like to ask you some questions about your team and its characteristics. Please **CIRCLE** the letter of the answer which best describes your team and/or **FILL IN** the information requested.

1. How many people are on your team? _____ TEAM MEMBERS
2. How many of these people do you interact with on a consistent basis? _____ TEAM MEMBERS
3. How long has the team been together? _____ MONTHS
4. How long have you been on this team? _____ MONTHS
5. Do you have a team leader/facilitator?

A. YES B. NO

(If **NO**, skip to Question 7)

6. Does this person::	<u>YES</u>	<u>NO</u>
I) Have authority over other team members?	Y	N
ii) Have responsibility for the team's output?	Y	N
iii) Work within the team?	Y	N
iv) Perform basically the same functions as other team members?	Y	N
v) Get selected by the team?	Y	N
vi) Rotate this position with other team members?	Y	N

7. Which of the following descriptions best describes the function of your team? (**CIRCLE ONE**)

- A. MAKES RECOMMENDATIONS TO OTHERS OUTSIDE THE TEAM
- B. GENERATES A PRODUCT
- C. PROVIDES A SERVICE
- D. OVERSEES A PROJECT/PROGRAM/BUSINESS
- E. OTHER (PLEASE SPECIFY) _____

8. Below are a number of tasks that may be performed by a team. Please rate the extent to which your team has responsibility for each of the stated tasks. **(CIRCLE ONE RESPONSE)**

To what extent do team members have responsibility for:		NONE	MODERATE			TOTAL
i)	Determining work methods and procedures?	1	2	3	4	5
ii)	Setting work schedules?	1	2	3	4	5
iii)	Deciding who does what tasks within the team?	1	2	3	4	5
iv)	Making work-related decisions?	1	2	3	4	5
v)	Setting the team's budget?	1	2	3	4	5
vi)	Hiring new members?	1	2	3	4	5
vii)	Setting the team's objectives?	1	2	3	4	5
viii)	Deciding how to reach those objectives?	1	2	3	4	5
ix)	Reviewing the team's performance?	1	2	3	4	5
x)	Specifying and acquiring necessary training?	1	2	3	4	5
ix)	Providing a whole and completed product or service without depending on an outside department or person?	1	2	3	4	5

SECTION C: SUPPORT BY TEAM

The behaviours of fellow team members can make it both easier and more difficult for you to accomplish your work responsibilities and cope with non-work issues. The following is a list of supportive and non-supportive behaviours identified by Company X employees in preliminary interviews.

Supportive behaviours of fellow team members

Please rate the extent to which you agree that each of the following behaviours of a fellow team member are (or would be) supportive of your ability to work in a team.

A supportive team member is one who:

	Strongly Disagree			Neutral			Strongly Agree
	1	2	3	4	5	6	7
1. Takes coffee and lunch breaks with myself and/or other team members.	1	2	3	4	5	6	7
2. Tries to get to know me on a personal level.	1	2	3	4	5	6	7
3. Spends time with myself or other team members after work or outside working hours.	1	2	3	4	5	6	7
4. Shows concern when I have personal problems.	1	2	3	4	5	6	7
5. Makes an effort to talk to me everyday.	1	2	3	4	5	6	7
6. Jokes around with myself and other team members.	1	2	3	4	5	6	7
7. Listens to me.	1	2	3	4	5	6	7
8. Leaves me alone to do my work.	1	2	3	4	5	6	7
9. Offers to help me with my work when needed.	1	2	3	4	5	6	7
10. Shares their personal knowledge/experience/skills.	1	2	3	4	5	6	7
11. Completes tasks on time.	1	2	3	4	5	6	7
12. Performs required tasks without having to be asked.	1	2	3	4	5	6	7
13. Takes on unpopular tasks that need to be done.	1	2	3	4	5	6	7
14. Provides me with positive reinforcement.	1	2	3	4	5	6	7

A supportive team member is one who:

	Strongly Disagree		Neutral			Strongly Agree	
	1	2	3	4	5	6	7
15. Is flexible with respect to scheduling.	1	2	3	4	5	6	7
16. Make me feel that I can ask them any question at any time.	1	2	3	4	5	6	7
17. Treats me as an equal.	1	2	3	4	5	6	7
18. Asks for my opinion.	1	2	3	4	5	6	7
19. Covers for me when I am absent or have to leave early.	1	2	3	4	5	6	7
20. Shares information with me that is relevant to my work.	1	2	3	4	5	6	7
21. Expresses interest in my work.	1	2	3	4	5	6	7
22. Keeps me informed of issues of concern to the team.	1	2	3	4	5	6	7
23. Gets me to clarify something if he/she does not understand.	1	2	3	4	5	6	7
24. Clearly explains their opinion/perspective on matters important to the team.	1	2	3	4	5	6	7
25. Keeps me informed about their work.	1	2	3	4	5	6	7
26. Tells me when they do not agree with me.	1	2	3	4	5	6	7
27. Uses humour in overcoming personality conflicts.	1	2	3	4	5	6	7
28. Understands and adapts to the individual characteristics of team members.	1	2	3	4	5	6	7
29. Asks me questions.	1	2	3	4	5	6	7
30. Includes me in decision-making.	1	2	3	4	5	6	7
31. Supports my career aspirations.	1	2	3	4	5	6	7
32. Looks for support from within the team, not from other parts of the company.	1	2	3	4	5	6	7

A supportive team member is one who:

A supportive team member is one who:		Strongly Disagree		Neutral			Strongly Agree	
		1	2	3	4	5	6	7
33.	Supports team members who have trouble fitting in with the group.	1	2	3	4	5	6	7
34.	Understands the team's purpose.	1	2	3	4	5	6	7
35.	Provides me encouragement.	1	2	3	4	5	6	7
36.	Supports the team when it's survival is threatened.	1	2	3	4	5	6	7
37.	Takes ownership of everything the team does.	1	2	3	4	5	6	7
38.	Supports me at team meetings.	1	2	3	4	5	6	7
39.	Provides me with feedback.	1	2	3	4	5	6	7
40.	Is able to perform most aspects of the team's work.	1	2	3	4	5	6	7
41.	Doesn't set unreasonable expectations on team members.	1	2	3	4	5	6	7
42.	Maintains good relations between the team and the client.	1	2	3	4	5	6	7

Non-Supportive behaviours of fellow team members

The following is a list of non-supportive behaviours identified by Company X employees in preliminary interviews. Please rate the extent to which you agree that each of the following behaviours of a fellow team member **are not (or would not be)** supportive of your ability to work in a team.

A non-supportive team member is one who:		Strongly Disagree		Neutral			Strongly Agree	
		1	2	3	4	5	6	7
1.	Does not delegate tasks to others.	1	2	3	4	5	6	7
2.	Fails to work an adequate amount of hours per week.	1	2	3	4	5	6	7
3.	Only performs tasks that are within his/her job description.	1	2	3	4	5	6	7
4.	Encroaches on my tasks/duties without my permission/knowledge.	1	2	3	4	5	6	7
5.	Comes to me with a problem without first trying to solve it themselves.	1	2	3	4	5	6	7
6.	Overburdens other team members with work.	1	2	3	4	5	6	7
7.	Suggests changes to work I have done after it has been completed rather than while it was being done.	1	2	3	4	5	6	7
8.	Makes negative comments about me to other team members.	1	2	3	4	5	6	7
9.	Berates me in the presence of other team members.	1	2	3	4	5	6	7
10.	Competes with other team members.	1	2	3	4	5	6	7
11.	Makes negative comments about my work to others but fails to point out the problems to me.	1	2	3	4	5	6	7
12.	Jokes around with team members, but doesn't know when to stop.	1	2	3	4	5	6	7
13.	Spends too much time socializing instead of working.	1	2	3	4	5	6	7

A non-supportive team member is one who:

	Strongly Disagree			Neutral			Strongly Agree	
14. Keeps to himself/herself.	1	2	3	4	5	6	7	
15. Is not organized.	1	2	3	4	5	6	7	
16. Fails to thank me or show appreciation when I help him/her with something.	1	2	3	4	5	6	7	
17. Expects me to understand things that are not part of my job.	1	2	3	4	5	6	7	
18. Monitors the length of my breaks.	1	2	3	4	5	6	7	
19. Puts their own interests before those of the team.	1	2	3	4	5	6	7	
20. Is part of a sub-group of team members who defend their interests at the expense of the entire team.	1	2	3	4	5	6	7	
21. Projects a negative image of the team to people outside the team.	1	2	3	4	5	6	7	

SECTION D: SUPPORT OF TEAMS BY THE ORGANIZATION

Research indicates that actions taken by the organization can not only contribute to the effectiveness of teams but can also affect the ability to work in a team environment. The following is a list of supportive and non-supportive organizational actions identified by (Company X) employees in preliminary interviews.

Supportive actions of the organization

Please rate the extent to which you agree that each of the following actions of the organization are (or would be) supportive of your ability to work in a team.

An organization which supports its teams is one that:

An organization which supports its teams is one that:		Strongly Disagree		Neutral			Strongly Agree	
		1	2	3	4	5	6	7
1.	Does not interfere with the team.	1	2	3	4	5	6	7
2.	Gives the team the power to hire new members.	1	2	3	4	5	6	7
3.	Allows the team to set its own objectives and the method for evaluating those objectives.	1	2	3	4	5	6	7
4.	Allows the team to perform team evaluations.	1	2	3	4	5	6	7
5.	Allows the team to set its own budget.	1	2	3	4	5	6	7
6.	Eliminates day-to-day management of team by external manager.	1	2	3	4	5	6	7
7.	Provides literature on working in teams.	1	2	3	4	5	6	7
8.	Provides appropriate training for teams.	1	2	3	4	5	6	7
9.	Make available a mentor to aid in setting up teams.	1	2	3	4	5	6	7
10.	Recognizes team accomplishments with awards.	1	2	3	4	5	6	7
11.	Keeps us informed about the use of teams in the organization.	1	2	3	4	5	6	7
12.	Listens to input from teams.	1	2	3	4	5	6	7
13.	Allows communication from the team to upper management.	1	2	3	4	5	6	7
14.	Allows a team to participate in decisions which affect it.	1	2	3	4	5	6	7

An organization which supports its teams is one that:

Strongly Disagree Neutral Strongly Agree

1 2 3 4 5 6 7

15. Encourages departments to try teams.

1 2 3 4 5 6 7

16. Demonstrates its support for teams by frequent mention of them in corporate communications.

1 2 3 4 5 6 7

17. Has few layers of management between teams and upper-level management.

Non-Supportive Actions of the Organizations

Please rate the extent to which you agree that each of the following actions of the organization are not (or would not be) supportive of your ability to work in a team.

**An organization which does not support:
its teams is one that**

	Strongly Disagree			Neutral			Strongly Agree
	1	2	3	4	5	6	7
1. Fails to keep teams informed of future changes that may affect them.							
2. Only 'pays lip service' to the concept of support of teams.	1	2	3	4	5	6	7
3. Uses forms and procedures suitable for a traditional managerial structure, but not for teams.	1	2	3	4	5	6	7
4. Creates uncertainty among team members through constant re-organizing of teams.	1	2	3	4	5	6	7
5. Fails to provide clear explanation of why a change to a team is taking place.	1	2	3	4	5	6	7
6. Does not provide the team with sufficient clerical support.	1	2	3	4	5	6	7
7. Expects teams to solve problems that are beyond its scope and control.	1	2	3	4	5	6	7
8. Does not consider ability to work in a team environment when hiring new employees.	1	2	3	4	5	6	7
9. Asks for a team's input, then fails to consider that input in decision-making.	1	2	3	4	5	6	7
10. Fails to consult with a team when changing its role or creating more work for it.	1	2	3	4	5	6	7
11. Has members of upper-management who verbalize the fact that they don't like using teams.	1	2	3	4	5	6	7
12. Does not provide any additional compensation for teams that are self-directed.	1	2	3	4	5	6	7

Appendix K - Phase 2 cover letter

Dear COMPANY X Employee:

Over the last four years we have been conducting research with COMPANY X on a variety of issues relating to work and personal life. These results have been reported back to COMPANY X, its employees and the union through a variety of channels. In general the research has been well-received and changes are being made based on our findings.

The use and importance of work teams in the workplace has increased considerably in the decade. As the importance of work teams grow, so too does the role of support among team members, as well as the organization's policies and actions toward teams.

As a follow up to the Supportive Manager study, we are now working with COMPANY X to identify (a) the supportive and non-supportive behaviours team members exhibit toward one another and (b) the supportive and non-supportive actions of COMPANY X towards teams. By a 'team' we are referring to a group of people working together, with or without direct supervision, in order to achieve a common goal.

The supportive team study consists of three phases. The first phase involved interviewing a sample of 40 COMPANY X employees who work in teams to identify supportive and non-supportive behaviours and actions. Phase 2 determines which of these behaviours are most important for employees who work in teams while Phase 3 allows employees to indicate the levels of support their team receives. You are being asked to participate in Phase 2 of this study. The answers to this questionnaire will be used to develop a measure of support for team work at COMPANY X.

Enclosed you will find a questionnaire which asks you to rate the extent to which you agree that the behaviours identified in Phase 1 represent support or non-support of teams. Questions regarding the structure of your team are also included. It should take 10-15 minutes for you to complete this survey.

Your individual responses will be kept strictly **CONFIDENTIAL** and only summary results will be presented to COMPANY X. No one in the company will see your individual questionnaire, nor will any results be presented to COMPANY X which would allow them to identify you.

We value your opinion and encourage you to participate in this important study. Please complete the survey and return it to us in the enclosed envelope. If you would like to contact us directly, please call Andrew Kennedy at (613) XXX-XXXX or Linda Duxbury at (613) XXX-XXXX.

Yours sincerely,

Andrew Kennedy
Masters Student
School of Business
Carleton University
Ottawa, Ontario

Dr. Linda Duxbury
Associate Professor
School of Business
Carleton University
Ottawa, Ontario

Appendix L
Means and Standard Deviations of Behaviours (from Phase 2)

Supportive Behaviour of Team Members	Mean	Valid Std. Dev.
Shares personal knowledge/experience/skills.	6.71	.76
Shares information with me.	6.57	.69
Listens to me.	6.55	.74
Maintains good relations between the team and the client.	6.48	.91
Keeps me informed of issues of concern to the team.	6.46	.96
Treats me as an equal.	6.46	1.04
Makes me feel that I can ask questions at any time.	6.46	.92
Understands the team's purpose.	6.45	.69
Supports the team when its survival is threatened.	6.38	.90
Asks me for my opinion.	6.36	1.13
Gets me to clarify something if he/she does not understand.	6.32	.86
Performs required tasks without having to be asked.	6.32	1.19
Completes tasks on time.	6.21	.86
Tells me when they do not agree with me.	6.21	.86
Clearly explains their opinion/perspective on matters important to the team.	6.18	1.12
Includes me in decision-making.	6.17	1.04
Is flexible with respect to scheduling.	6.14	1.15
Provides me with positive reinforcement.	6.10	1.26
Offers to help me with my work when needed.	6.07	1.41
Takes on unpopular tasks that need to be done.	6.07	1.27
Doesn't set unreasonable expectations on team members.	6.00	1.07
Asks me questions.	6.00	1.10

Appendix L (continued)
Means and Standard Deviations of Behaviours (from Phase 2)

Supportive Behaviour of Team Members (continued)	Mean	Valid Std. Dev.
Understands and adapts to the individual characteristics of team members.	5.96	1.14
Expresses interest in my work.	5.96	1.23
Provides me with feedback.	5.93	1.13
Provides me encouragement.	5.93	1.33
Supports my career aspirations	5.93	1.12
Covers for me when I am absent or have to leave early.	5.93	1.33
Takes ownership of everything the team does.	5.76	1.46
Supports me at team meetings.	5.72	1.13
Supports team members who have trouble fitting in with the group.	5.68	1.19
Uses humour in overcoming personality conflicts.	5.66	1.23
Looks for support from within the team, not from other parts of the company.	5.64	1.31
Keeps me informed about their work.	5.55	1.15
Leaves me alone to do my work.	5.41	1.30
Jokes around with myself and other team members.	5.38	1.57
Shows concern when I have personal problems.	5.24	1.02
Makes an effort to talk to me everyday.	5.03	1.52
Is able to perform most aspects of the team's work.	4.66	1.88
Tries to get to know me on a personal level.	4.50	1.62
Takes coffee and lunch breaks with myself and/or other team members.	3.72	2.03
Spends time with myself or other team members after work or outside working hours.	3.14	1.71

Appendix L (continued)
Means and Standard Deviations of Behaviours (from Phase 2)

Non-supportive Behaviour of Team Members	Mean	Valid Std. Dev.
Makes negative comments about my work to others but fails to point out the problems to me.	6.66	.77
Make negative comments about me to other team members.	6.52	.99
Projects a negative image of the team to people outside the team.	6.45	.91
Scolds me in the presence of other team members.	6.38	1.05
Is part of a sub-group of team members who defend their interests at the expense of the entire team.	5.97	1.24
Puts their own interests before those of the team.	5.76	1.24
Encroaches on my tasks/duties without my permission/knowledge.	5.72	1.22
Overburdens other team members with work.	5.72	1.31
Monitors the length of my breaks.	5.66	1.59
Competes with other team members.	5.62	1.52
Spends too much time socializing at work.	5.48	1.57
Fails to work an adequate amount of hours per week.	5.48	1.72
Suggests changes to work I have done after it has been completed rather than while it was being done.	5.41	1.02
Only performs tasks that are within his/her job description.	5.38	1.52
Fails to thank me or show appreciation when I help him/her with something.	5.38	1.08
Jokes around with team members, but doesn't know when to stop.	5.07	1.10
Expects me to understand things that are not part of my job.	5.03	1.57
Is not organized.	4.93	1.62
Comes to me with a problem without first trying to solve it themselves.	4.93	1.51
Keeps to himself/herself.	4.38	1.63
Does not delegate tasks to others.	4.03	1.57

Appendix L (continued)
Means and Standard Deviations of Behaviours (from Phase 2)

Supportive Actions of the Organization	Mean	Valid Std. Dev.
Allows a team to participate in decisions which affect it.	6.69	.47
Listens to input from teams.	6.48	.63
Allows communication from the team to upper management.	6.41	.63
Provides appropriate training for teams.	6.24	.99
Has few layers of management between teams and upper-level management.	6.03	1.09
Makes available a mentor to aid in setting up teams.	5.83	.93
Encourages departments to try teams.	5.72	1.16
Allows the team to perform team evaluations.	5.62	1.59
Recognizes team accomplishments with awards.	5.62	1.24
Provides literature on working in teams.	5.55	1.35
Allows the team to set its own objectives and the method for evaluating those objectives.	5.52	1.18
Keeps us informed about the use of teams in the organization.	5.48	1.38
Demonstrates its support for teams by frequent mention of them in corporate communications.	5.45	1.35
Eliminates day-to-day management of team by external manager.	5.28	1.69
Gives the team the power to hire new members.	5.28	1.56
Does not interfere with the team.	5.14	1.53
Allows the team to set its own budget.	5.10	1.59

Appendix L (continued)
Means and Standard Deviations of Behaviours (from Phase 2)

Non-supportive Actions of the Organization	Mean	Valid Std. Dev.
Fails to provide clear explanation of why a change to a team is taking place.	6.63	.56
Only 'pays lip service' to the concept of support of teams.	6.63	.69
Creates uncertainty among team members through constant re-organizing of teams.	6.59	.57
Fails to keep teams informed of future changes that may affect them.	6.59	.57
Fails to consult with a team when changing its role or creating more work for it.	6.48	.58
Asks for a team's input, then fails to consider that input in decision-making.	6.48	.64
Expects teams to solve problems that are beyond its scope and control.	6.22	.85
Uses forms and procedures suitable for a traditional managerial structure, but not for teams.	6.19	.83
Does not provide the team with sufficient clerical support.	6.07	.92
Has members of upper-management who verbalize the fact that they don't like using teams.	6.04	1.26
Does not consider ability to work in a team environment when hiring new employees.	5.78	1.34
Does not provide any additional compensation for teams that are self-directed.	5.47	1.53

Appendix M - Phase 3 Questionnaire
SECTION A: DEMOGRAPHICS

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We need some demographic information about you to help us interpret this questionnaire. To answer the following questions, please **CIRCLE** the letter of the answer which best describes you and/or **FILL IN** the information requested.

1. What division do you work in?

A. LONG DISTANCE SERVICES	D. CORPORATE COMMUNICATIONS
B. LOCAL AND ACCESS SERVICES	E. OTHER _____
C. CORPORATE SERVICES	

2. Please **CIRCLE** the letter which best fits the type of work **YOU DO**:

A. MANAGERIAL	F. PLANT
B. CLERICAL	G. TECHNICIAN
C. OPERATOR	H. DRAFTING
D. SERVICE REPRESENTATIVE	I. ENGINEER
E. SALES	J. OTHER _____

3. How many different managers have you reported to in the last 2 years?
_____ MANAGERS

4. What is your gender?

A. MALE
B. FEMALE

5. What is your age? _____ YEARS

6. Are you married and/or living with a significant other?

A. YES
B. NO

7. Do you have children living at home?

A. YES
B. NO

8. Do you have eldercare responsibilities?

A. YES
B. NO

Appendix M - Phase 3 Questionnaire
SECTION B: TEAM INFORMATION

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We would like to ask you some questions about your team and its characteristics. Please **CIRCLE** the letter of the answer which best describes your team and/or **FILL IN** the information requested.

9. Are you a member of an empowered/self-directed work team?

- A. YES
- B. NO

10. How many people are on your team? _____ TEAM MEMBERS

11. How many of these people do you interact with on a consistent basis?
 _____ TEAM MEMBERS

12. How long has the team been together? _____ MONTHS

13. How long have you been on this team? _____ MONTHS

14. Do you work on this team Full-Time?

- A. YES
- B. NO If NO, what percentage of time do you work on this team?
 _____ PERCENT

15. Do you have a team leader/facilitator?

- A. YES
- B. NO (If NO, skip to Question 17)

16. To what extent does your team leader:	LITTLE	MODERATE	HIGH
Have authority over other team members?	1	2	3 4 5
Have responsibility for the team's output?	1	2	3 4 5
Work within the team?	1	2	3 4 5
Perform basically the same functions as other team members?	1	2	3 4 5
Get selected by the team?	1	2	3 4 5
Rotate this position with other team members?	1	2	3 4 5

Appendix M - Phase 3 Questionnaire

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17. Which of the following descriptions best describes the function of your team? (**CIRCLE ONE**)

- A. MAKES RECOMMENDATIONS TO OTHERS OUTSIDE THE TEAM
- B. GENERATES A PRODUCT
- C. PROVIDES A SERVICE
- D. OVERSEES A PROJECT/PROGRAM/BUSINESS
- E. OTHER (PLEASE SPECIFY) _____

18. Below are a number of tasks that may be performed by a team. Please rate the extent to which your team has responsibility for each of the stated tasks. (**CIRCLE one response**)

To what extent do team members have responsibility for:	NONE		MODERATE		TOTAL
Determining work methods and procedures?	1	2	3	4	5
Setting work schedules?	1	2	3	4	5
Deciding who does what tasks within the team?	1	2	3	4	5
Making work-related decisions?	1	2	3	4	5
Setting the team's budget?	1	2	3	4	5
Hiring new members?	1	2	3	4	5
Setting the team's objectives?	1	2	3	4	5
Deciding how to reach those objectives?	1	2	3	4	5
Reviewing the team's performance?	1	2	3	4	5
Specifying and acquiring necessary training?	1	2	3	4	5
Providing a whole and completed product or service without depending on an outside department or person?	1	2	3	4	5

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19. Please rate the extent to which you agree with the following statements about your team.
(CIRCLE one response)

	STRONGLY AGREE		NEUTRAL		STRONGLY DISAGREE	
Most members of my team get a chance to learn the different tasks the team performs	1	2	3	4	5	
Most everyone on my team gets a chance to do the more interesting tasks	1	2	3	4	5	
Task assignments often change from day-to-day to meet the work load needs of the team	1	2	3	4	5	
The work performed by my team is important to the customers in my area	1	2	3	4	5	
My team makes an important contribution to serving the company's customers	1	2	3	4	5	
My team helps me feel that my work is important to the company	1	2	3	4	5	
My team is able to complete all the work on a given product	1	2	3	4	5	
My team is responsible for all aspects of a product for its area	1	2	3	4	5	
My team is responsible for its own unique area or segment of the business	1	2	3	4	5	
I cannot accomplish my tasks without information or materials from other members of my team	1	2	3	4	5	
Other members of my team depend on me for information or materials needed to perform their tasks	1	2	3	4	5	
Within my team, jobs performed by team members are related to one another	1	2	3	4	5	

Appendix M - Phase 3 Questionnaire
SECTION C: YOUR JOB

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The following questions ask about your job and experiences with your employer.

20. Please indicate the extent to which you agree or disagree with each of the following statements (**CIRCLE** the number appropriate for each statement):

	STRONGLY DISAGREE		NEUTRAL		STRONGLY AGREE	
I am willing to put in a great deal of effort in order to help this company be successful	1	2	3	4	5	
I promote my company to my friends as a great company to work for	1	2	3	4	5	
I would accept almost any type of job assignment in order to keep working for this company	1	2	3	4	5	
I find that my values and my company's values are very similar	1	2	3	4	5	
I am proud to tell others that I am part of this company	1	2	3	4	5	
My company really inspires the very best in me in the way of job performance	1	2	3	4	5	
I am extremely glad that I chose this company to work for over others I was considering at the time I joined	1	2	3	4	5	
I really care about the fate of this company	1	2	3	4	5	

21. Please indicate the extent to which you agree or disagree with each of the following statements (**CIRCLE** the number appropriate for each statement):

	STRONGLY DISAGREE		NEUTRAL		STRONGLY AGREE	
I work under a great deal of tension	1	2	3	4	5	
I have felt fidgety or nervous as a result of my job	1	2	3	4	5	
If I had a different job, my health would probably improve	1	2	3	4	5	
Problems associated with my job have kept me awake at night	1	2	3	4	5	
I often "take my job home with me" in the sense that I think about it when doing other things	1	2	3	4	5	

Appendix M - Phase 3 Questionnaire

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22. Please indicate how satisfied you are with (CIRCLE the number appropriate for each statement):

	VERY DISSATISFIED		NEUTRAL		VERY SATISFIED
Your job in general	1	2	3	4	5
The sorts of things you do on the job	1	2	3	4	5
The number of projects and/or assignments you have	1	2	3	4	5
The number of conflicting demands you have at work	1	2	3	4	5
Your current work load (i.e., the amount of things that need to be done)	1	2	3	4	5
The amount of time at work you have to think and contemplate	1	2	3	4	5
The amount of training you receive	1	2	3	4	5

23. At present, approximately how many **hours per week** do you spend working?

_____ HOURS/WEEK

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24. How often in the **last month** have you (**CIRCLE** the number appropriate for each statement):

	NEVER		SOME-TIMES		ALWAYS
Been upset because something happened unexpectedly?	1	2	3	4	5
Felt that you were unable to control important things in your life?	1	2	3	4	5
Felt nervous or "stressed"?	1	2	3	4	5
Felt confident about your ability to handle your personal problems?	1	2	3	4	5
Felt that things were going your way?	1	2	3	4	5
Found that you could not cope?	1	2	3	4	5
Been able to control irritations in your life?	1	2	3	4	5
Felt you were on top of things?	1	2	3	4	5
Been angered because of things that happened that were outside of your control?	1	2	3	4	5
Felt difficulties were piling up so high that you could not overcome them?	1	2	3	4	5

25. Not counting regular check-ups, how many times **during the last 12 months** have you seen a physician? _____ TIMES

26. **During the last 12 months** have you been unable to work or carry out your usual activities because of health problems?

A. NO

B. YES... How many days? _____ DAYS

27. **During the last 12 months** have you been unable to work or carry out your usual activities because of family or personal problems (i.e., sick child)?

A. NO

B. YES... How many days? _____ DAYS

Appendix M - Phase 3 Questionnaire
SECTION D: SUPPORT BY TEAM

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The behaviours of fellow team members can make it both easier and more difficult for you to accomplish your work responsibilities and cope with non-work issues. In marking your responses, please consider your team as a whole, not individual team members.

28. Please indicate the extent to which you agree or disagree with each of the following statements (CIRCLE the number appropriate for each statement):

	STRONGLY DISAGREE		NEUTRAL		STRONGLY AGREE	
My fellow team members:						
Share personal knowledge/experience/skills	1	2	3	4	5	
Listen to me	1	2	3	4	5	
Make negative comments about my work to others but fail to point out the problems to me	1	2	3	4	5	
Treat me as an equal	1	2	3	4	5	
Get me to clarify something if he/she does not understand	1	2	3	4	5	
Make negative comments about me to other team members	1	2	3	4	5	
Share information with me that is relevant to my work	1	2	3	4	5	
Perform required tasks without having to be asked	1	2	3	4	5	
Project a negative image of the team to people outside the team	1	2	3	4	5	
Provide me with positive reinforcement	1	2	3	4	5	
Tell me when they do not agree with me	1	2	3	4	5	
Offer to help me with my work when needed	1	2	3	4	5	
Maintain good relations between the team and the client	1	2	3	4	5	
Scold me in the presence of other team members	1	2	3	4	5	
Take on unpopular tasks that need to be done	1	2	3	4	5	
Make me feel that I can ask questions at any time	1	2	3	4	5	
Are flexible with respect to scheduling	1	2	3	4	5	

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	STRONGLY DISAGREE		NEUTRAL		STRONGLY AGREE
My fellow team members:					
Ask me questions	1	2	3	4	5
Keep me informed of issues of concern to the team	1	2	3	4	5
Ask me for my opinion	1	2	3	4	5
Understand the team's purpose	1	2	3	4	5
Are reasonable in what they expect from fellow team members	1	2	3	4	5
Are part of a sub-group of team members who defend their interests at the expense of the entire team	1	2	3	4	5
Support the team when its survival is threatened	1	2	3	4	5
Complete tasks on time	1	2	3	4	5
Include me in decision-making	1	2	3	4	5
Clearly explain their opinion/perspective on matters important to the team	1	2	3	4	5

SECTION E: SUPPORT OF TEAMS BY THE ORGANIZATION

Research indicates that actions taken by the organization can not only contribute to the effectiveness of teams but can also contribute to a team environment.

29. Please indicate the extent to which you agree or disagree with each of the following statements (CIRCLE the number appropriate for each statement):

(Company X):	STRONGLY DISAGREE		NEUTRAL		STRONGLY AGREE	
Allows my team to participate in decisions which affect it	1	2	3	4	5	
Has members of upper-management who verbalize the fact that they do not like using teams	1	2	3	4	5	
Listens to input from teams	1	2	3	4	5	
Does not provide the team with sufficient clerical support	1	2	3	4	5	
Fails to consult with a team when changing its role or creating more work for it	1	2	3	4	5	
Allows communication from the team to upper management	1	2	3	4	5	
Uses forms and procedures suitable for a traditional managerial structure, but not for teams	1	2	3	4	5	
Creates uncertainty among team members through constant reorganizing of teams	1	2	3	4	5	
Provides appropriate training for teams	1	2	3	4	5	
Expects teams to solve problems that are beyond its scope and control	1	2	3	4	5	
Has few layers of management between teams and upper-level management	1	2	3	4	5	
Fails to provide clear explanation as to why a change to a team is taking place	1	2	3	4	5	
Fails to keep teams informed of future changes that may affect them	1	2	3	4	5	
Asks for a team's input, then fails to consider that input in decision-making	1	2	3	4	5	
Only 'pays lip service' to the concept of support of teams	1	2	3	4	5	

Appendix M - Phase 3 Questionnaire
SECTION F: TEAM EFFECTIVENESS

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We are interested in how you and others rate the performance of your team. The term "work" in the following questions can mean specific tasks to be done, products delivered or services offered. Please **CIRCLE** the number of the appropriate answer and/or **FILL IN** the information requested.

30. Approximately what percent of the time does your team deliver its work on time?
_____ PERCENT

31. Approximately how often are complaints made about the performance of your team from:

a. Clients within (Company X) (**CIRCLE** one response):

DAILY	WEEKLY	MONTHLY	YEARLY	NEVER
5	4	3	2	1

b. Clients outside of (Company X) (**CIRCLE** one response):

DAILY	WEEKLY	MONTHLY	YEARLY	NEVER
5	4	3	2	1

32. Overall, how satisfied are you with the performance of your team (**CIRCLE** one response)?

VERY SATISFIED		MODERATELY SATISFIED		VERY DISSATISFIED
5	4	3	2	1

33. All things considered, how would you rate your team in terms of its productivity (**CIRCLE** one response)?

VERY PRODUCTIVE		MODERATELY PRODUCTIVE		VERY UNPRODUCTIVE
5	4	3	2	1

34. All things considered, how would you rate your team in terms of its effectiveness (**CIRCLE** one response)?

VERY EFFECTIVE		MODERATELY EFFECTIVE		VERY INEFFECTIVE
5	4	3	2	1

Have you any comments you would like to make?

**Please be assured that your responses will be held in confidence.
If you have any questions, please do not hesitate to call.**

Thank you for completing this questionnaire.

Andrew Kennedy
Masters Student
Carleton University
Ottawa, Ontario
(XXX) XXX-XXXX

Dr. Linda Duxbury
Associate Professor
Carleton University
Ottawa, Ontario
(XXX) XXX-XXXX

Dr. Chris Higgins
Associate Professor
University of Western Ontario
London, Ontario
(XXX) XXX-XXXX

Appendix N - Leader Questionnaire

TEAM LEADER RATING OF TEAM EFFECTIVENESS

We are interested in how you would rate the performance of your team. The term "work" in the following questions can mean specific tasks to be done, products delivered or services offered. Please **CIRCLE** the letter of the appropriate answer and/or **FILL IN** the information requested.

1. Approximately what percent of the time does your team deliver its work on time?

_____ PERCENT

2. Approximately how often are complaints made about the performance of your team from:

- a. Clients within Company X (**CIRCLE** one response):

DAILY	WEEKLY	MONTHLY	YEARLY	NEVER
5	4	3	2	1

- b. Clients outside of Company X (**CIRCLE** one response):

DAILY	WEEKLY	MONTHLY	YEARLY	NEVER
5	4	3	2	1

3. Overall, how satisfied are you with the performance of your team (**CIRCLE** one response)?

VERY SATISFIED		MODERATELY SATISFIED		VERY DISSATISFIED
5	4	3	2	1

4. All things considered, how would you rate your team in terms of its productivity (**CIRCLE** one response)?

VERY PRODUCTIVE		MODERATELY PRODUCTIVE		VERY UNPRODUCTIVE
5	4	3	2	1

5. All things considered, how would you rate your team in terms of its effectiveness (**CIRCLE** one response)?

VERY EFFECTIVE		MODERATELY EFFECTIVE		VERY INEFFECTIVE
5	4	3	2	1

Appendix O - Phase 3 cover letter

Dear Company X Employee:

Over the last four years we have been conducting research with Company X on a variety of issues relating to work and personal life. These results have been reported back to Company X, its employees and the union through a variety of channels. In general the research has been well-received and changes are being made based on our findings.

The use and importance of work teams in the workplace has increased considerably in the decade. As the importance of work teams grows, so too does the role of support among team members, as well as the organization's policies and actions toward teams.

As a follow-up to the Supportive Manager study, we are now working with Company X and the Telecommunications Workers Union to identify (a) the supportive and non-supportive behaviours team members exhibit toward one another and (b) the supportive and non-supportive actions of Company X towards teams. By a 'team' we are referring to a group of people working together, with or without direct supervision, in order to achieve a common goal.

Enclosed you will find a questionnaire which asks you to rate the supportiveness of your fellow team members and the supportiveness of Company X towards teams. Questions regarding the structure of your team, your level of job satisfaction and job stress are also included. It should take 15 - 20 minutes for you to complete this survey.

You will notice that the front of your questionnaire includes a number which identifies your team. This is simply so that the level of support which your team receives can be linked to other team outcomes, such as productivity and satisfaction. Your individual responses will be kept strictly **CONFIDENTIAL** and only summary results will be presented to Company X. No one in the company will see your individual questionnaire, nor will any results be presented to Company X which would allow them to identify you.

We value your opinion and encourage you to participate in this important study. Please complete the survey and return it to us in the enclosed envelope. If you would like to contact us directly, please call Andrew Kennedy at (613) XXX-XXXX or Linda Duxbury at (613) XXX-XXXX.

Yours sincerely,

Andrew Kennedy
Masters Student

Dr. Linda Duxbury
Associate Professor

Appendix P

Detailed Explanation of Calculation of Correction Factor

Rao-Scott (1981, 1984, 1987) first-order correction factors were calculated as follows:

Step 1: The starting point is the computation of the Pearson chi-squared statistic, produced under simple random sampling, using SPSS statistical software package.

Step 2: The Pearson chi-squared statistic can be expressed as follows (from Rao and Thomas (1988, pp. 235-236):

$$(1) \quad \chi_{(p)}^2 = n_D \hat{h}' (\hat{P}_I^{-1} \otimes \hat{P}_J^{-1}) \hat{h}$$

The design effect (deff) can then be defined as the following:

$$(2) \quad \hat{D} = (\hat{P}_I \otimes \hat{P}_J^{-1}) \hat{V}_h$$

The trace of the submatrix corresponding to the residuals considered in the computation of the Pearson chi-squared test divided by $(r-1)(c-1)$ is the design effect for the test. Its expression is:

$$(3) \quad \hat{g} = \text{tr}(\hat{D}) / ((r-1)(c-1))$$

The above is the mean of the generalized design-effect matrix estimate.

$\hat{V}$ is the estimated covariance matrix of the vector of residuals, which is computed as:

$$(4) \quad \hat{V}_h = \hat{H}' \hat{V} H$$

Appendix P (continued)

The matrix of partial derivatives is derived the following way:

$$(5) \quad H = I_{rc} - I_r \otimes [\bar{H}_c \otimes 1'_c] - [\bar{H}_r \otimes 1_r] \otimes I_c$$

From Thomas et al. (1996)

Appendix Q

Team by Team Comparisons of Team Member and Team Leader Ratings of Effectiveness

(1) Team by Team Comparison of Ratings of Measure 'Satisfaction with Team Performance'

Team	Leader Rates Higher	Rates the Same	Team Member Rates Higher
1	4	6	0
2	0	4	0
3	2	1	0
4	0	0	7
5	1	1	0
6	4	9	0
7	1	9	0
8	2	6	3
9	0	0	5
11	3	6	0
12	1	2	0
14	2	3	0
15	2	5	0

Appendix Q (continued)

Team by Team Comparisons of Team Member and Team Leader Ratings of Effectiveness

(2) Team by Team Comparison of Ratings of Measure 'Team Productivity'

Team	Leader Rates Higher	Rates the Same	Team Member Rates Higher
1	2	8	0
2	0	4	0
3	0	3	0
4	1	6	0
5	0	2	0
6	0	3	10
7	1	9	0
8	1	8	2
9	0	0	5
11	1	8	0
12	1	2	0
14	0	2	4
15	1	6	0

Appendix Q (continued)

Team by Team Comparisons of Team Member and Team Leader Ratings of Effectiveness

(3) Team by Team Comparison of Ratings of Measure 'Team Effectiveness'

Team	Leader Rates Higher	Rates the Same	Team Member Rates Higher
1	4	6	0
2	0	4	0
3	0	0	3
4	1	6	0
5	0	2	0
6	3	10	0
7	2	8	0
8	0	9	2
9	0	1	4
11	1	8	0
12	1	2	0
14	2	4	0
15	1	6	0

Appendix R
Design Effect Correction Factors
As Applied to Significant (or Near-Significant) Chi-Square Tests

Variables	χ^2	df	p-value	design effect (deff)	χ^2/deff	Critical Value ($\alpha=.05$)
Intra-Team Support and Complaints About Team Performance by Internal Clients	10.15	2	.006	.917	11.07	5.99
Intra-Team Support and Complaints About Team Performance by External Clients	10.04	2	.007	1.19	8.44	5.99
Intra-Team Support and Performance	16.15	2	.0003	1.137	14.20	5.99
Intra-Team Support and Productivity	13.66	2	.001	1.111	12.31	5.99
Intra-Team Support and Aggregate Effectiveness	11.05	1	.001	1.346	8.21	3.84
Intra-Team Support and Job Satisfaction	7.37	2	.025	1.26	5.85	5.99
Organizational Support and Complaints About Team Performance by External Clients	9.15	2	.01	.821	11.15	5.99
Organizational Support and Productivity	5.445	1	.02	1.145	4.76	3.84
Organizational Support and Effectiveness	7.07	2	.03	1.171	6.04	5.99

Appendix R (continued)

Variables	χ^2	df	p-value	design effect (deff)	χ^2/deff	Critical Value ($\alpha=.05$)
Organizational Support and Aggregate Effectiveness	6.05	1	.02	1.145	5.28	3.84
Organizational Support and Job Stress	18.5	2	.0001	1.26	14.68	5.99
Organizational Support and Job Satisfaction	17.9	2	.0001	1.62	11.05	5.99
Organizational Support and Commitment	4.9	2	.0008	1.727	2.84	5.99
Organizational Support and Frequency of Doctor Visits	5.19	1	.023	1.296	4.00	3.84

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