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Investigating responses of comparable paper and computer opinion surveys

April E. Oman
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INVESTIGATING RESPONSES OF COMPARABLE
PAPER AND COMPUTER OPINION SURVEYS

A Thesis

Presented to

The Faculty of the Department of Psychology

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

April E. Oman

May 1998

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International Survey Research ^{LLC}

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ABSTRACT

INVESTIGATING RESPONSES OF COMPARABLE PAPER AND COMPUTER OPINION SURVEYS

by April E. Oman

This research determines if differences in response rate, favorability towards survey items, and rate of item completion exist between comparable paper and disk questionnaires. Conducted over 2 years for a telecommunications organization, employees were randomly assigned to complete paper or disk. In Study 1, conducted in 1995, a 29 item survey was administered to 624 employees.

Results show insignificant differences between disk and paper respondents on response rate and item completion; however, disk respondents are significantly more favorable towards 4 opinion items. In Study 2, conducted in 1996, an 135 item survey was administered to 6,137 employees. Results indicate significantly more disk respondents returned the survey and were significantly more favorable towards 37 items than paper respondents. The difference in item response is attributable to the greater use of the question mark by paper respondents in both studies. Consistent with the initial study, there was no difference in item completion.

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Investigating Responses of Comparable Paper and Computer Opinion Surveys

The collection of employee opinions through surveys remains one of the most widely used methods to understand what employees think about their organizations. Survey data not only increases the organization's knowledge from a Human Resources perspective, but also provides insight into employees' views on the direction of the company, the delivery and development of its products and services, and the strengths and opportunities for improvement for the organization as a whole. Assessing employee concerns through the use of surveys can be important for managing change, strategic initiatives, and the overall effectiveness of the organization (Rosenfeld, Doherty, Vicino, Kantor, & Greaves, 1989).

With the advancements in the computer industry, organizations are increasingly interested in the application of technology for collecting employee opinion survey data. Traditionally, the primary function of computers in survey research has been in the area of processing and analyzing responses (Karweit & Meyers, 1983). However, the technological advancements in hardware and software in the 1990s have facilitated the infiltration of computing into virtually all aspects of survey research beyond simply processing of the survey results (Neffendorf, 1993).

Currently, the most common application of the available technology, in addition to data analysis, has been in the form of scannable or machine-readable surveys; electronic devices convert responses marked on paper to electronic information by electrical or optical sensing marks. According to Allen (1987), these mark-sense readers have been used since the mid-1970s to collect information from opinion polls. An advantage of using machine readable surveys is that the amount of time from administration to analysis is reduced (i.e., the processing cycle is shortened). Machine-readable surveys can often be scanned more quickly than the manual labor of key-punching of the responses. In this respect, computers have decreased the amount of time to process survey responses.

There has been, however, only minor improvements with regard to the actual survey administration procedure. While technology offers the opportunity to explore administration beyond paper-and-pencil, the majority of employee opinion surveys in the workplace are still conducted using this traditional method (Vicino, 1989). However, the increased capacity, availability and access to computers has made it possible to contemplate further application of computers in such areas as survey administration with perhaps ameliorated efficiency and value (Neffendorf, 1993). Additionally, with the standardization of operating systems and software and the increased experience with computers in every day

life, organizations may be in a position to determine if use of computer technology is viable in a company employee opinion survey process.

Computers in Research

In the late 1960s, behaviorists began using computers to administer psychological tests and personality inventories for clinical assessment (Bartram & Bayliss, 1984; Rosenfeld et al., 1989). During the 1970s many psychological tests (particularly personality questionnaires and interest assessment rather than ability and intelligence tests) were computerized. Researchers cited by Bartram and Bayliss (1984) reported high test-retest reliabilities and no significant differences between the manual and computer administrations of various psychological tests. Comparable findings resulted in greater use of computer assessment for nonclinical applications (Rosenfeld et al., 1989). However, much of the automation focused on scoring and interpretation rather than on the actual administration of the test (Bartram & Bayliss, 1984). A purpose of this research is to focus on the administration of comparable paper and computer employee opinion questionnaires. Are there differences?

Paper-and-Pencil versus Computer Administration

Results of studies comparing orally administered or self-paper and computer questionnaires are ambiguous; some researchers indicate there are similarities between responses using the two administration methods (Atkinson &

Jones, 1994; Booth-Kewley, Edwards, & Rosenfeld, 1992; Carr & Ghosh, 1983; Kiesler & Sproull, 1986; Rosenfeld et al., 1989; Sproull, 1986; Vicino, 1989; Wilson, Genco, & Yager, 1985), while others indicate there are systematic differences (Evan & Miller, 1969; Lautenschlager & Flaherty, 1990; O'Brien & Dugdale, 1978) in their respective studies. The conflicting findings seem to be a primary function of the type and content (i.e., degree of sensitivity) of the questions addressed in the study. Further, there is some research that suggests individual differences may offer an explanation (Rosenfeld et al., 1989).

Allen (1987) compared computer administered versus scanned surveys. Although he found that computer respondents participated at a lower rate, they gave more varied responses and liked the survey more than scanner respondents. The difference in response rate (29% vs 49%) was significantly associated with previous computer experience; this finding led Allen to conclude that past experience with computers may be a determinant in predicting who will complete a computer survey. When Allen compared the variances between the computer and scanner groups, the response distribution was significantly different for seven of the 12 items; the computer group had a higher standard deviation for six of the seven items. Based on this result, Allen concluded that significantly more computer respondents used the extreme response scale points than scanner respondents. However, a one-way analysis of variance

showed no significant differences between computer and scanned respondents on their overall satisfaction with their college experience; Allen had predicted that since participants were randomly selected to receive either the computer or scanner version, there would be no difference in their overall satisfaction with their college experience. In the end, Allen concluded that computer-administered surveys are a viable means of gathering opinion data despite a somewhat lower response rate.

Similarly, Atkinson and Jones (1994) evaluated the reliability of alternative survey methods (i.e., paper versus computer). Atkinson and Jones found no significant differences in responses between the two methods and, therefore, concluded a computer survey may be as reliable as a paper survey. Booth-Kewley et al. (1992) found that computer and paper-and-pencil administration produced comparable results (i.e., similar means and standard deviations). These researchers reported that computer respondents, in comparison with paper respondents, found the questionnaire more interesting, more meaningful, and felt more conscious of their thoughts and feelings.

Kiesler and Sproull (1986) compared responses of an electronic survey with that of an equivalent paper survey and hypothesized that responses between the electronic and paper versions would be comparable since the questions were presented via text in both versions. However, they found

electronic survey respondents returned the survey more quickly (9.6 vs 10.8 days), completed more items (10% vs 22%), made fewer mistakes, and gave less socially desirable responses than paper respondents. In responding to open-ended questions, there was no systematic difference in the number of words between electronic and paper respondents. Although more paper respondents returned the survey (75% vs 67%), no significant differences in extremity of response attributable to survey method was reported by Kiesler and Sproull (1986).

While the aforementioned studies suggest that similar findings are obtained when comparing the results of a computer-administered survey versus a paper-administered survey, these studies did report some instances of variation. Allen (1987) found that significantly more computer respondents used the extreme response scale points; Kiesler and Sproull (1986) found computer respondents gave less socially desirable responses; Booth-Kewley et al. (1992) determined computer respondents liked the questionnaire more so than paper respondents. Rosenfeld et al. (1991) suggested differences in findings between paper and computer administered surveys is a function of individual differences. Individuals who tend to react in socially desirable ways may be more genuine in responding to a computer because the human factor is gone; the computer provides an impersonal environment. And those individuals who are always

forthright in any situation would respond the same on computer as paper since their responses are an indication of their sincere opinion (Rosenfeld et al., 1991).

Analogous to the suggestion that individual differences could be the basis for lack of equivalence between paper-and-pencil and computer, Lautenschlager and Flaherty (1990) found greater levels of impression management (i.e., conscious deception of others) in the computer administration than paper administration; individuals who answered questionnaires using a computer gave more socially desirable responses and were less candid than people using paper-and-pencil. Lautenschlager and Flaherty suggested the reason for the reduction in candor and an increase in socially desirable responses was a function of the administration. Perhaps these findings may be a function of the methodology of the study; the computer version of the questionnaire was designed so that each question had to be answered before the next item would appear. In addition, respondents, either identified or anonymous, were prevented from looking at and/or changing their responses. Based on their findings, Lautenschlager and Flaherty challenged the continued administration of computerized versions of traditional instruments; in their view, computer administration of sensitive questions did not reduce socially desirable responding.

O'Brien and Dugdale (1978) compared a computer versus an orally administered questionnaire, and reported the computer produced a response distribution with a higher standard deviation. The computer-derived mean was marginally lower (i.e., participants used what the authors deemed as the more honest end of the response scale). This lead O'Brien and Dugdale to conclude that the computer-elicited data, was broadly similar to that obtained from a conventional oral administration; perhaps this is due to respondents who indicated they were less embarrassed by the computer than the interviewer and consequently, were more inclined to be honest when answering questions about personal hygiene.

Evan and Miller (1969), in investigating response bias between a computer and manually-administered questionnaire, concluded subjects were more honest in responding via computer whenever the questions were of a highly personal nature than when the questions were asked manually. When neutral or impersonal questions were asked, however, there were no differences in responses.

In summary, previous research suggests that for certain types of questionnaires, there is a difference between people's reactions, and consequently, their responses to questions (Bartram & Bayliss, 1984). This is typically called "response effects." Therefore, when designing any survey,

electronically or using the traditional paper method, one must consider the possible response effects of the item text and potential respondent reaction on the survey results (Bradburn, 1983).

Response Effects

Bradburn (1983) refers to three types of errors which can impact the quality of the data collected. Initially, responses, and consequently results, are affected when, in a effort to make a favorable impression, the participant adds or neglects to include information. Secondly, lapses in memory about an event on the part of the respondent is considered a response effect. Furthermore, if misunderstandings occur between the respondent and the investigator in which instructions or responses are not clear, the data collected could be invalid.

Although research on response effects has primarily focused on interviewer and respondent characteristics, what and how questions are asked, the order of items, and method of administration can have a substantial impact on whether there will be communication errors and consequently distortion of responses (Bradburn, 1983). Cronbach (1946) believed response bias could be reduced through use of any procedure that increases the structure of the test situation.

Evan and Miller (1969) reported computer-administered opinion questionnaire was one method to ensure that the test situation was structured.

Kiesler and Sproull (1986) theorized that since computers create an impersonal social setting, it may reduce the tendency for socially desirable responding on attitude and personality instruments; the respondent can be less concerned about how he/she appears to others. Overall, computers are perceived as less judgmental due to the impersonal and anonymous environment they create.

Evan and Miller (1969) reported a small but statistically significant difference between computer and the paper-and-pencil groups on highly personal questions; the computer group was more candid in their responses. In contrast, no differences emerged between the computer and paper group on the impersonal and emotionally-neutral questions. Therefore, if the questions are personal or controversial, researchers have suggested computers can reduce response bias (Bartram & Bayliss, 1984).

Despite attempts to prevent human error (e.g., misreading of questionnaires, omission in responding to questions, routing through the questionnaire may not be correctly followed, data entry errors) in the administration and data collection of surveys, the potential for error is probable. According to O'Brien and Dugdale (1978), the computer made a difference in the honesty of participants; considering the potential for embarrassment on the part of respondents, it was easier to be honest with an impersonal computer than to verbally respond to questions to the investigator about one's personal hygiene.

Therefore, O'Brien and Dugdale (1978) concluded that utilizing a computer to administer the questionnaire is one way to reduce the likelihood of errors.

Disadvantages of Computer-based Questionnaires

While there seems to be a favorable, general consensus among researchers for administering a survey via computer, there are disadvantages associated with using computer technology to collect attitudinal data. A principal disadvantage that prevents full use of computer-administered questionnaires is that it is restricted to employees who are confident operating and have access to computers (Kiesler & Sproull, 1986). Another disadvantage, as presented by O'Brien and Dugdale (1978), is the actual cost and time involved in developing a program that reads the responses. However, this disadvantage is prevalent in all survey processes; there are cost and time implications in preparing any keypunch and/or scan format instructions and setting up the data processing program.

Finally, and perhaps most importantly, as noted by previous research, there can be differences in the findings between paper-and-pencil and computer versions of surveys. For example, Hedl, O'Neil, and Hansen (1973) found that computer administration led to higher levels of anxiety and less favorable attitudes compared with a proctored paper-and-pencil administration. They concluded that both clarity of the instructions and how familiar the participant is

with the computer are important factors that affect reactions to the computer testing situation. Consequently, when considering administering a questionnaire via computer, one must consider the target population's experience and accessibility to computers.

Advantages of Computer-based Questionnaires

The primary advantage cited for using computer-based questionnaires is that data collection and scoring are faster, thereby making results available almost immediately after administration (Bartram & Bayliss, 1984; Booth-Kewley et al., 1992). Since the data is directly and immediately stored, the potential for key punching errors is also removed (O'Brien & Dugdale, 1978). An additional advantage indicated by O'Brien and Dugdale (1978) is the computer can verify item completion before allowing the respondent to proceed to the next question. Computer-based questionnaires can offer increased standardization over the presentation of instructions, tasks or items - all of which result in improved reliability and validity (Bartram & Bayliss, 1984). Electronically administered questionnaires can include explanatory material, prompts, error corrections, drop-down menus, etc. (Kiesler & Sproull, 1986). Furthermore, computers seem to offer an impartial setting that can lead to higher levels of respondent objectivity; potential sources of bias (e.g., non-verbal communication with or influence of an interviewer) are removed (Bartram & Bayliss, 1984; O'Brien &

Dugdale, 1978). Overall, the main advantage Kiesler and Sproull (1986) seem to value is the reduced costs of an electronic survey. Electronic surveys can reduce costs because it automates the conversion of raw data into a computer-readable form. In light of substantial costs and labor involved in interviewing, telephoning, and distributing questionnaires, researchers should expect lower costs when administering via computer for collecting and converting data into computer-readable form.

Independent of the economic advantages cited previously, the utility of electronic surveys, according to Kiesler and Sproull (1986), depend on its comparability with other survey administration techniques. Comparability with traditional paper-and-pencil questionnaires is not readily apparent since electronic surveys can share or have particular characteristics. In an effort to distinguish between the two survey systems, researchers such as Allen (1987) and Evan and Miller (1969) have approached this comparison by asking questions in which there are factual or correct answers that can be verified for accuracy. In light of previous research reporting equivalence (i.e., no statistical difference) between the computerized questionnaire and a paper-and-pencil version, and the cited advantages, Rosenfeld et al., (1989) and Kiesler and Sproull (1986) make the argument for expanded use of computer surveys in organizational settings. Therefore, with the intent to collect employee opinion,

analyze the results, and determine the issues that require effort and resources in a quickly changing business environment, computer administration of organizational questionnaires is increasingly prevalent (Bartram & Bayliss, 1984).

Present Study

The purpose of this research is to investigate the differences between comparable questionnaires administered via paper and computer. This study was conducted in two phases over a two year period. Survey design, administration, analyses and reporting for Study 1 occurred in 1995 whereas Study 2 occurred in 1996. All questionnaire items used to conduct these studies were designed by International Survey Research (ISR), a worldwide employee opinion survey firm. For a description of ISR, please see Appendix A.

A longstanding client, an international telecommunications corporation, approached ISR about expanding the scope of the annual companywide employee opinion survey. The client requested that ISR develop, administer, and analyze the results of a survey using a non-traditional administration procedure, i.e., utilizing a computer.

ISR advised the client that to administer the companywide study to all employees using a non-traditional administration procedure could impact the survey process and any subsequent action in response to the survey findings for

several reasons. First, research cannot completely substantiate that non-traditional administration procedures do not impact how respondents answer questions; there is very little applied research published on this topic. Second, to base incentive compensation and companywide effort and resources to address unfavorable issues identified by the study, when response bias may have impacted the survey results, could be influence the outcome of the bonus scheme; compensation could be rewarded to an individual who may not have earned the reward and effort and resources could be expended resolving a problem when in fact the issue may not be a problem but a function of the administration procedure used to collect the opinion data. Additionally, issues to consider when administering an electronic survey included lack of employee experience and access to computers, cost implications for the development of a questionnaire and computer programs to process/tabulate the data, prevention of "computer hackers" entering the network system and submitting multiple questionnaires or destroying the program, preservation of respondent anonymity, etc. Therefore, it was decided the companywide survey did not present a suitable opportunity to test a new method of administration.

Although interest in non-traditional administration procedures continued, the companywide survey would be conducted using the traditional paper-and-pencil procedure with responses to be scanned by machine. ISR recommended,

however, the client pursue the non-traditional method only on a smaller scale in terms of the target population, and allow for a simultaneous administration of a duplicate paper-and-pencil version for the purpose of comparing the results between each version in order to determine the existence or non-existence of differences. ISR and the client still believed in the perceived value of administration via computer, mainly the shortened time involved for data collection and analysis, and the reduced cost for printing.

With the intention to investigate differences in computer versus traditional paper-and-pencil administered employee opinion survey using the client's data, the following hypotheses were put forth:

- H¹ Consistent with previous research (Allen, 1987; Kiesler & Sproull, 1986), it is hypothesized that the return rate percentage will be significantly greater for the paper survey than for the disk survey.
- H² It is hypothesized that there will be no significant differences in favorable responses to survey opinion items between disk and paper respondents. This hypothesis is consistent with previous research (Kiesler & Sproull, 1986), which states that if impersonal questions are asked via text using two different methods, there will be comparable results between paper and disk responses.

H³ In accordance with previous research (Kiesler & Sproull, 1986), it is hypothesized that disk respondents will complete, on average, more survey items than paper respondents.

Method

Study 1

Design and Procedure. Business units, within the corporation, were solicited about their willingness to administer a supplement using both the traditional paper-and-pencil method in addition to a non-traditional method such as administration using a computer. As an incentive, the supplement would contain questions specifically designed to address unique concerns within the unit. One business unit agreed to participate in the study despite the potential for biasing of the results due to the administration method.

The computer versions of the questionnaires were designed jointly by ISR and the client. This joint effort served the project well in that ISR could monitor the design, administration, and processing aspects from a survey technology and integrity point of view, while the client could ensure the computer version was created within the constraints of the organization's computer systems.

The same concerns (e.g., computer access) however, still remained. To address these concerns, caution was taken in the selection of the target respondents and in the design of the supplement. To ensure that the program

operated properly (e.g., saved a respondents' answers [and accurately] upon exiting, allowed a change in a response if a respondent clicked another response option), extensive testing by the ISR and client's Employee Opinion Survey project team was done. Further, to ensure respondents could easily complete the computer version of the supplement without assistance, a pre-test was conducted on 19 January 1995 with employees.

Subjects. The business unit selected a census model of administration in which all employees within the unit received a copy of the supplement. Employees within the unit represented all job levels from executive/manager to professional/sales force to operative/technical. Further, employees represented all demographics. Participation in the survey process was strictly voluntary. Encouragement to participate in the survey was communicated through the company newsletter and letter which accompanied the supplement (see Appendix B1).

As previously stated, to address the issues of administering a supplement using an alternative survey method (i.e., computer), a section (624 employees) within the business unit was chosen to participate; the paper respondents functioned as the control group and the disk respondents as the experimental group. This section of the business unit was selected on the basis of two criteria: all employees were computer literate, and all employees had access to their own

computer.

Employees from the section were randomly selected to participate based on the last-digit of their employee number. Approximately 324 employees (with the same last digits) were randomly selected to receive the paper-and-pencil version of the supplement. Responses to the supplement would be scanned by machine. Approximately 300 employees (with the same last digits) were randomly selected to receive the supplement questionnaire on diskette. These groups were deemed equivalent.

Instrumentation. Using different data collection techniques, two identical surveys of 29 questions were administered to employees of the section. The items in the supplement addressed topics regarding a recent restructuring of the business unit, perceptions of management, communication, standardization of work procedures, and job satisfaction. Please refer to Appendices B2 (paper version) and B3 (disk version) to review copies of the supplements.

Administration and Procedure. Administration was conducted on-site, during company hours from 3 April through 23 May 1995. Employees were invited into a conference room to participate in the companywide employee opinion survey process. Survey sessions were approximately one hour in duration. Each employee was handed a packet by the Survey Administrator containing the companywide survey, either the paper-and-pencil or computer

version of the business unit Supplement, and a postage-paid return envelope addressed to ISR. In addition to the questionnaire and supplement, a letter from the business unit National General Manager was included in the packet. This letter explained the purpose of the survey, confirmed the anonymity of respondents, and encouraged participation in the survey process (see Appendix B1).

Companywide Questionnaire. The companywide questionnaire contained demographic questions, opinion items, and an open-ended comment question. The purpose of the questionnaire was to solicit opinions on a variety of topics such as work organization, management, compensation and benefits, company image, and competitive position. Demographic questions included business unit, job level, location, accountability for work output of others, gender, years of service with the company, age, and equal opportunity status. This information was used to produce results by each demographic variable so that the organization would be able to determine the strengths and opportunities for improvement within the entire or parts of the organization. To protect respondent anonymity, no results were produced for a group of less than 20 respondents and no attempt was made to identify individual respondents.

Paper-and-pencil (Scanner) Supplement. Employees who received the packet containing the scanner supplement were asked to complete the

companywide survey and Business Unit Supplement (see Appendix B2) during the session and seal the questionnaires in the envelope provided. All sealed envelopes were then collected at the end of each session and dispatched directly to ISR for scanning and processing. ISR used the demographic information provided in the companywide survey to process results for each coding variable (e.g., job level, location, gender) in the supplement.

Computer (Diskette) Supplement. Employees who received the packet containing the computer supplement were asked to complete the companywide questionnaire during the session and seal the survey in the envelope provided. All sealed envelopes were then collected at the end of each session and dispatched directly to ISR for scanning and processing. These respondents were then asked to complete their business unit supplement at their convenience using their own computer (see Appendix B3).

Respondents simply loaded the disk into their computer and were greeted by an introductory section that indicated that the supplement was the electronic version being administered throughout their section. Respondents could complete the Windows^R-driven supplement by using a mouse or TAB key to indicate their responses. In addition to the Introduction providing instructions on how to complete the supplement on diskette, respondents were asked to complete demographic (same questions included in the companywide employee

survey), opinion, and comment sections.

How the Diskette Version Worked. In reviewing the research of Carr (1992), who presented the results of a survey of computer programmers and users, designers and users reported necessity for computer systems that are more friendly to the infrequent or computer illiterate user. It is believed that people will experience frustration if the system is poorly designed with complex commands, error messages, etc. Factors identified by Carr (1992) which contribute to user-friendliness are found in the disk survey used in this study (all parenthetical statements refer to the current study): (a) Minimal effort was required to gain access to program (respondents were instructed to insert the disk into their computer, from the File menu select Run and type A:\), (b) No information overload with rapid advancing or crowding of screens (respondents selected "Next Page" to proceed), (c) Informative (clear instructions on how to complete the survey), (d) Reliable (system functions without error, several pilot tests were conducted ensure that the system recorded the responses correctly, and the respondent could complete the survey without system errors), (e) A program is responsive to user requests or questions (drop down menus to answer questions; program progresses entirely at the respondent's pace), and (f) System is simple to use (the system was designed to be Windows driven; respondents could use a mouse or tab key to indicate their response. Once a

respondent clicked the appropriate response bubble, he/she simply saved it on the disk).

Study 2

Background. As mentioned previously, the Employee Opinion Survey is conducted annually within the company. In 1996, the survey process was an "Off-Year" cycle; the survey is administered companywide without any supplements designed to address unique issues within business units. The precedence for an Off-Year cycle is to update scores, serve as an early warning system, to award incentive compensation, etc., however, there is no effort to perform any data refinement or organizational development activities in response to the findings.

In an effort to continue to determine if differences exist between paper-and-pencil respondents and disk respondents, the client queried business units to ascertain who would be interested in using two survey methods. The same business unit elected to again participate in this follow-up study.

Design and Procedure. The questionnaire used to conduct the second study was also designed by ISR. Similar to the 1995 study, extensive testing was performed on the 1996 disk version of the Employee Opinion Survey. In addition, a pretest was conducted on 6 February 1996 to obtain employee thoughts on all aspects of the computer version of the questionnaire.

Subjects. Consistent with 1995, the business unit selected a census model of administration in which all employees within the unit received a copy of the companywide Employee Opinion Survey. Again, employees represented all job levels and demographics. Participation in the survey process was strictly voluntary. However, the company strongly encouraged participation through publicizing the survey in the company newsletter.

To expand the scope of the study, the business unit (not just a section of the business unit who participated in Study 1) was divided in half in terms of survey administration method; half received the paper version while the other half received the disk version of the Employee Opinion Survey. Consistent with Study 1, employees were randomly selected based on the last digit of their employee number. Approximately 3,069 employees (with the same last digits) would be randomly selected to receive the paper-and-pencil version of the survey and their responses would be scanned by machine. The target population to receive the computer version of survey were selected on the basis of two criteria; all employees had to be computer literate and all employees had to access to their own computer. Approximately 3,068 employees (with the same last digits) were randomly selected to receive the diskette version of the survey.

Instrumentation. Using different data collection techniques, two identical surveys were administered to employees of the business unit. The purpose of the questionnaire was to solicit opinions on a variety of topics such as work organization, management, compensation and benefits, company image, and competitive position. The companywide survey contained eight demographic questions, 183 opinion items, and an open-ended comment question.

Consistent with the 1995 survey, demographic questions included business unit, job level, location, accountability for work output of others, gender, years of service, age, and equal opportunity status. Again, this information was used to produce results so that the organization would be able to determine the strengths and weaknesses within the entire and/or parts of the organization. To protect respondents' anonymity, no results were produced for a group of less than 20 respondents and no attempt was made to identify individual respondents. Please refer to Appendices C1 (paper version) and C2 (disk version) to review copies of the questionnaires.

Administration and Procedure. Surveys were distributed via internal mail for administration (at the respondent's desk and own leisure) during company hours from 6 May through 6 June 1996. Employees in the business unit received a packet containing either the paper-and-pencil or computer version of the companywide survey and a postage-paid return envelope addressed for

return to ISR.

Paper-and-pencil (Scanner) Employee Opinion Survey. Employees who received the packet containing the scanner survey (see Appendix C1) were asked to complete the questionnaire and seal it in the envelope provided. All sealed envelopes were then posted by mail directly to ISR for scanning and processing.

Computer (Diskette) Employee Opinion Survey. Employees were asked to complete the disk version of the companywide questionnaire (see Appendix C2) using their own computer. Respondents simply loaded the disk into their computer and were greeted by an introductory statement indicating that the survey was the electronic version being administered throughout their business unit. Respondents completed the Windows^R-driven survey using a mouse to select their responses. Employees then returned their diskette via mail to ISR for processing. Improvements (e.g., creating Help Menu that contained the definitions of certain terms used in the survey, the program functioned faster and was more user-friendly) from Study 1 were implemented for Study 2.

Results

Study 1

Administration of the supplement for Study 1 was conducted on-site, during company hours from 3 April through 23 May 1995. All analyses to

determine statistical significance were performed using a proprietary software program designed especially for ISR.

Return Rate. In Hypothesis 1 it is predicted that the return rate achieved for the paper administration procedure will be the significantly greater than the computer administration, i.e., the percentage of returned paper supplements would be higher than the percentage of return of the disk supplements. The return rate percentage was calculated by taking the number of returned supplements and dividing by the number of supplements sent to target respondents. Return rates were 62% for paper and 63% for computer (please refer to Table 1). Each return rate is sufficient to ensure the statistical validity of the survey results at the 95% confidence level.

A chi-square test of independence (Couch, 1987) was used to determine whether participation in the survey process was independent of the type of survey the respondent was asked to complete. In the case of the present study, the chi-square results ($\chi^2(1, N = 624) = .026, p = \text{n.s.}$) indicate that there is no significant differences in the percentage of return rates between disk and paper respondents. Hypothesis 1 is not supported.

Table 1

Return Rates for Disk and Paper Supplement

Survey Type	Outgoing	Returned	Return Rate
Disk	N = 300	N = 188	63%
Paper	N = 324	N = 201	62%

Overall Category Scores and Item Level Results. It was predicted for Hypothesis 2 that there would be no significant differences in favorable response between disk and paper respondents to survey items addressed in the supplement questionnaire. The survey results were initially studied by reviewing the categories; each item in the survey is placed in a respective category in an effort to provide an average of the responses to items addressing a particular topic. The supplement addressed the following six topics: O&M Restructure (6 items), Management (6 items), Communication (7 items), Standardization (5 items), Job Satisfaction (4 items), and Participative Approach (1 item [note this item has no favorable response and was not treated as a standard opinion item; it was used a coding question for exploratory purposes]). The favorable score for each of the aforementioned categories (notable exception of the Participative Approach Category) was calculated by taking the aggregate of the favorable responses (Agree and Tend to Agree, Tend to Disagree and Disagree [for negatively worded items], etc.) and dividing by the number of items in the

respective category. Every item has equal value. Please note that items 12, 13, and 17 were excluded from this calculation since there is no favorable response assigned to these items.

Although not significantly different in all categories, there was a trend indicating disk respondents responded more favorably than paper respondents (please refer to Table 2). For a graphic representation of the category scores please refer to Appendix B4.

Table 2

Difference in Overall Category Scores for Disk and Paper Respondents

Category No.	Category Title	Disk Score	Paper Score	Z-test	Difference in Average
1	O&M Restructure	34%	26%	1.72	8 points
2	Management	52%	48%	.79	4 points
3	Communication	49%	45%	.79	5 points
4	Standardization	53%	45%	1.57	8 points
5	Job Satisfaction	91%	90%	.33	1 point

Twenty-six items were included in the analysis of item level results. Again, items 12, 13, and 17 were excluded from this analysis. The analysis of the opinion items was determined by using a Z-test for significance for the equality between two proportions (i.e., disk respondents, paper respondents)

and takes into consideration the number of respondents in each group. The purpose of this statistic is to determine systematic differences - not differences due to chance. The specific equation used to determine statistical differences between paper and computer respondents on survey opinion items is as follows (Kanji, 1993):

p_1 =Proportion for Group 1 n_1 =Respondents in Group 1
 p_2 =Proportion for Group 2 n_2 =Respondents in Group 2

$$Z = \frac{(p_1 - p_2)}{\{P(1 - P)^{1/n_1} + ^{1/n_2}\}^{1/2}}$$

where

$$P = \frac{p_1 n_1 + p_2 n_2}{n_1 + n_2}$$

Disk respondents were statistically more favorable in response to four items, more favorable, although not statistically disparate, towards 18 items, no different than paper respondents in response for one item, and less favorable in response toward three items in comparison with paper respondents. The four items in which there was a statistically significant difference between disk and paper-and-pencil respondents in favorability are presented in Table 3. Further examination of the survey data reveals that the statistical difference in favorable response between disk and paper respondents is attributable to the high number of question mark responses from paper respondents. Results for all items are presented in Appendix B5. For completeness of data, means and standard deviations for each survey item are presented in Appendix B6.

In summary, the results of the category scores indicate there are no statistical differences between disk and paper respondents on the topics addressed in the supplement. However, upon review of the individual survey items, there are four items in which disk respondents are statistically more favorable than paper respondents. Consequently, Hypothesis 2 which suggested there would be no statistical differences in the response to survey items between disk and paper respondents is not supported.

Table 3

Statistical Difference in Favorability between Disk and Paper Respondents

Item No.	Survey Item	Disk Score	Paper Score	Z-test	Difference in Favorability
2	Supervisors are too task oriented to the detriment of employees. (Disagree)	30%	19%	2.52*	11 points
6c	The recent O&M Restructure has been well implemented.	23%	12%	2.85**	11 points
9a	I am adequately informed about new standard procedures and work instructions.	67%	57%	2.02*	10 points
6a	The recent O&M Restructure has been well planned.	42%	32%	2.03*	10 points

Note. Response scale options are Agree/Tend to Agree/?/Tend to Disagree/Disagree. Score provided is the percentage of favorable response for that respective item; the favorable response for items 6c, 6a, and 9a is the aggregate of Agree/Tend to Agree and the favorable response of item 2 is the aggregate of Disagree/Tend to Disagree. Item 2 is from the Management Category, item 6a and 6c are from the O&M Restructure Category, and 9c is from the Standardization Category.

* $p < .05$. ** $p < .01$.

Completeness of data. It was predicted for Hypothesis 3 that disk respondents would complete on average more survey items than paper respondents. The average was determined by taking the number of valid responses and dividing by the number of total respondents. This analysis was exclusive to valid responses; invalid responses are those in which the respondent did not answer the opinion item. The percentage rate of completion of the 26 items was virtually the same for both disk and paper respondents, 99.3% ($SD = .42$) for paper and 99.2% ($SD = .32$) for disk. Given the homogeneity of the population variances, an independent t test (Couch, 1987) was conducted using the percentage of the items completed for both disk and paper respondents. The results of the t test ($t(50) = .63$) indicated no significant differences in item completion between disk and paper respondents. The number of valid and missing responses and the percentage of completed items for Study 1 are contained in Appendix B7.

Disk Version: Written Comments and Content Analysis. In an effort to determine what respondents thought about the disk version of the supplement, the questionnaire included the following request, "We would welcome any thoughts you might have about this electronic version or how it has been implemented." Of the 188 employees who completed the supplement by diskette, 87 typed comments in response to the statement. Half of the

respondents expressed high regard for the diskette survey. Just over a fifth of the respondents did not comment specifically about the diskette survey. The remaining employees, however, liked the diskette version but had additional comments or suggestions. In summary, the percentage of respondents expressing positive opinions was 82.7% (i.e., purely positive opinions 49.4%, additional suggestions 33.3%). Percentage of employees commenting on other matters not related to the diskette supplement was 21.8%. The total percentage is less than 100 percent because some respondents evaluated the survey and discussed additional matters. Although, the majority of respondents who commented on other matters did not evaluate or provide suggestions or comments on the disk version of the survey.

Disk related comments represented the following three areas: (a) comments concerning the presentation and execution of the survey (i.e., how it looked and ran), (b) comments about the distribution and access (i.e., how the survey was or should be distributed and returned, questions of accessibility for those without appropriate computer hardware), and (c) comments on the content of the survey items. These comments (from Study 1) were used to make changes to the disk version for Study 2. Please refer to Appendix B8 for a listing of these verbatim comments.

Study 2

The duration of the data collection for Study 2 occurred on-site, during company hours from 6 May through 6 June 1996. Consistent with the 1995 study, all analyses of the opinion items were performed using a proprietary software program designed especially for ISR.

Return Rate. Consistent with the first study, it was hypothesized that the paper administered survey would have a significantly greater return rate than the computer administered survey. Return rates were calculated by taking the number of returned questionnaires and dividing by the number of surveys sent to target respondents. The return rates were 64% for paper and 70% for computer (please refer to Table 4). Each return rate is sufficient to ensure the statistical validity of the survey results at the 95% confidence level.

The chi-square test of independence (Couch, 1987) was used to determine whether participation in the survey process was independent of the type of survey the respondent was asked to complete. Results of the chi-square indicate a statistically different difference ($\chi^2(1, N = 6137) = 19.76, p < .01$) between the disk and paper return rate.

Table 4

Return Rates for Disk and Paper Employee Opinion Survey

Survey Type	Outgoing	Returned	Return Rate
Disk	N = 3,068	N = 2,140	70%
Paper	N = 3,069	N = 1,977	64%

Overall Category Scores and Item Level Results. It was predicted for Hypothesis 2 that comparable results would be found between disk and paper respondents, i.e., that there would be no significant differences in favorability between disk and paper respondents towards items addressed in the Employee Opinion Survey. The survey addressed the following 21 topics: Work Organization (5 items), Operating Efficiency (9 items), Management (21 items), Supervision (9 items), Working Relationships (4 items), Communication (35 items), Training and Development (5 items), Performance Appraisal (5 items), Career Advancement (11 items), Pay and Fringe Benefits (5 items), Working Conditions (3 items), Job Security (6 items), Personnel Policies and Procedures (5 items), Job Satisfaction (5 items), Company Identification and Image (7 items), Quality (7 items), Customer Focus (5 items), Company Values (7 items), Participative Approach (6 items), Work/Family/Diversity (18 items), and Reaction to the Survey (5 items).

The survey results were initially analyzed by reviewing the aforementioned overall category scores; items in the survey are grouped together according to topic area. The favorable score for each of the 21 categories was calculated by taking the sum of the favorable responses and dividing by the number of items in the respective category. Overall, disk respondents responded more favorably than paper respondents to 15 of the 21 categories (see Table 5). In two categories, there was a statistically significant comparison; disk respondents were significantly more favorable in answering items regarding Personnel Policies and Procedures and Working Relationships than paper respondents. Although not statistically different, the same trend occurred in this investigation as in Study 1; disk respondents responded more favorably than paper respondents to 13 topics. In the remaining six categories, there were no differences between disk and paper respondents. For a graphic representation of the category scores, refer to Appendix C3.

Table 5

Difference in Overall Category Scores for Disk and Paper Respondents

Category No.	Category Title	Disk Score	Paper Score	Z-test	Difference in Average
1	Work Organization	53%	53%	.00	0 points
2	Operating Efficiency	47%	47%	.00	1 point
3	Management	38%	37%	.66	1 point
4	Supervision	62%	60%	1.31	2 points
5	Working Relationships	75%	72%	2.17*	3 points
6	Communication	53%	50%	1.91	2 points
7	Training & Development	32%	32%	.00	0 points
8	Performance Appraisal	31%	31%	.00	1 point
9	Career Advancement	43%	43%	.00	1 point
10	Pay & Fringe Benefits	43%	42%	.64	1 point
11	Working Conditions	89%	87%	1.56	2 points
12	Job Security	20%	20%	.00	0 points
13	Personnel Policies	59%	53%	3.85*	6 points
14	Job Satisfaction	60%	59%	.65	0 points
15	Company ID & Image	52%	52%	.00	0 points
16	Quality	46%	45%	.64	1 point
17	Customer Focus	61%	61%	.66	2 points
18	Company Values	60%	60%	.00	0 points
19	Participative Approach	53%	50%	1.92	3 points
20	Work/Family/Diversity	62%	59%	1.88	3 points
21	Reaction to the Survey	51%	49%	1.27	2 points

Note. The ISR data processing program calculates the category averages using 8 decimal points; therefore, the difference between disk and paper is not significant. However, in calculating the Z-test which uses the category for determine significance, one must enter 88.6 as the disk score for Working Conditions in order to determine that the difference is not statistically significant; therefore, the results of the Z test match the output of the data processing program. It is a function of rounding.

* $p < .05$.

Consistent with Study 1 conducted in 1995, the analysis of the item level results was determined by using the same Z-test for significance between two proportions which considers the number of respondents in both the disk and paper groups (Kanji, 1993). Any item in which there was no favorable response or it was a dependency item based on a particular response to a previous item were excluded from this analysis (i.e., 81c, 84, 85, 86a-i, 87a, 89a-k, 90, 91, 92a-g, 94, 96, 97a-h, 98, and 99a-d). Of the 135 items included in the analysis of item level results, disk respondents were statistically more favorable in responding to 37 items, more favorable, although not statistically different, in response toward 49 items, no different in response toward 32 items, and less favorable in response toward 17 items in comparison with paper respondents. The 37 items in which there was a statistically significant difference in favorability between disk and paper respondents are presented in Table 6. Further examination of the survey data discloses that the statistical difference in favorable response between disk and paper respondents is due to the high number of question mark responses from paper respondents. Results for all items are presented in Appendix C4. For completeness of data, means and standard deviations are presented in Appendix C5.

Table 6

Statistical Difference in Favorability between Disk and Paper Respondents

Item No.	Survey Item	Disk Score	Paper Score	Z-test	Difference in Favorability
100.	I understand how the company's regulatory and legal obligations impact my work.	66%	50%	10.07**	16 points
70a.	There is good cooperation between my branch and other branches in my line of business.	71%	65%	4.11**	6 points
70b.	There is good cooperation between my branch and other branches in my business unit or company support unit.	65%	59%	3.95**	6 points
24.	The company does an excellent job of keeping employees informed about matters affecting us.	51%	45%	3.84**	6 points
36.	My supervisor is considerate of my commitments/family responsibilities, etc., outside of work.	75%	70%	3.59**	5 points
78b.	I believe the concept of the Participative Approach is good for the long-term future employees.	73%	69%	2.82**	5 points
46.	The company is flexible in its practices and policies regarding work and family issues.	61%	56%	3.25**	5 points

Table 6

Statistical Difference in Favorability between Disk and Paper Respondents
(Continued)

Item No.	Survey Item	Disk Score	Paper Score	Z-test	Difference in Favorability
13.	We receive adequate information on conditions of service.	57%	51%	3.86**	5 points
55.	My supervisor does a good job of building teamwork.	56%	52%	2.57*	5 points
75a.	There is sufficient contact between branch management and employees.	54%	49%	3.20**	5 points
66.	Computerized information systems provide information in a useful format.	47%	42%	3.22**	5 points
53.	I believe my branch management has adopted a more participative style.	47%	42%	3.22**	5 points
56.	I have the opportunity for input before changes are made that will affect my job.	42%	37%	3.27**	5 points
63.	I have already been given the opportunity to contribute to a participative decision-making process as part of the new Participative Approach between the company management, staff, and the Unions.	30%	24%	4.32**	5 points

Table 6

Statistical Difference in Favorability between Disk and Paper Respondents
(Continued)

Item No.	Survey Item	Disk Score	Paper Score	Z-test	Difference in Favorability
20.	The company provides a work environment free of sexual harassment.	85%	81%	3.42**	4 points
82a.	The company has established a good reputation for the quality of its products.	80%	75%	3.84**	4 points
101.	Filling in this survey is a good way to tell company management what I think.	77%	73%	2.96**	4 points
50.	I think the job I perform is considered important in this company.	72%	68%	2.80**	4 points
81e.	The company has a good work environment for older employees.	65%	61%	2.65**	4 points
87b.	The content of business unit or company support unit publications is up-to-date.	64%	59%	3.27**	4 points
23.	My supervisor shows favoritism to some employees in my section. (Disagree)	60%	56%	2.60**	4 points
81f.	The company has a good work environment for employees with a disability.	55%	52%	1.96*	4 points

Table 6

Statistical Difference in Favorability between Disk and Paper Respondents
(Continued)

Item No.	Survey Item	Disk Score	Paper Score	Z-test	Difference in Favorability
6.	Little effort is made to obtain the opinions and thoughts/ideas of employees in this company. (Disagree)	48%	44%	2.56*	4 points
75b.	There is sufficient contact between my line of business management and employees.	46%	42%	2.57**	4 points
81b.	The company has a good work environment for male employees.	88%	85%	2.81**	3 points
87d.	The content of faxed bulletins are up-to-date.	81%	78%	2.37*	3 points
40.	I would feel free to approach my supervisor and discuss issues of racism, sexism, or other biases held by other employees.	81%	78%	2.38*	3 points
78a.	I believe the concept of the Participative Approach is good for the long-term future of the company.	79%	76%	2.30*	3 points
79a.	My supervisor communicates effectively.	76%	73%	2.20*	3 points

Table 6

Statistical Difference in Favorability between Disk and Paper Respondents
(Continued)

Item No.	Survey Item	Disk Score	Paper Score	Z-test	Difference in Favorability
61.	I feel company management support equal opportunity for all employees.	72%	69%	2.11*	3 points
16.	The quality of work done in my branch is excellent.	72%	69%	2.11*	3 points
71a.	Branch management is generally respected by employees.	58%	54%	2.57**	3 points
4.	My supervisor seldom gives me recognition for work done well. (Disagree)	52%	48%	2.56*	3 points
71b.	My line of business management is generally respected by employees.	50%	46%	2.56*	3 points
51.	From what I know, Human Resources policies (e.g., training, performance development reviews, promotions) are administered consistently throughout the company.	33%	30%	2.06*	3 points
75d.	There is sufficient contact between company management and employees.	31%	28%	2.10*	3 points

Table 6

Statistical Difference in Favorability between Disk and Paper Respondents
(Continued)

Item No.	Survey Item	Disk Score	Paper Score	Z-test	Difference in Favorability
29.	Corrective action is usually taken when unsafe conditions are brought to management's attention.	85%	83%	1.98*	2 points

Note. Response scale options Agree/Tend to Agree/?/Tend to Disagree/Disagree. Score provided is the percentage of favorable response for that respective item; the favorable response for items is the aggregate of Agree/Tend to Agree with the notable exception of items 23, 6, and 4 in which the favorable response is the aggregate of Disagree/Tend to Disagree. To determine the respective category for the items listed in Table 6, please refer to Appendix C4 or C5.
* $p < .05$. ** $p < .01$.

In summary, the category scores reveal that disk and paper respondents are statistically different, on average, in responding to items addressing Personnel Policies and Procedures and Working Relationships. Upon further investigation of the survey items, disk respondents are statistically more favorable than paper respondents towards 37 items out of the 135 items used in this analysis. Accordingly, Hypothesis 2 (i.e., no significant differences in response between disk and paper respondents toward survey opinion items) is not supported.

Completeness of data. It was predicted for Hypothesis 3 that disk respondents would complete on average more opinion items than paper respondents. This analysis was exclusive to valid responses; invalid responses are those in which the respondent did not answer the opinion item or provided

two responses to the same opinion item. Consistent with the findings of Study 1, the average rate of completion was not much different between disk and paper respondents; on average, 99.6 ($SD = .32$) of disk respondents completed items whereas on average 99.3 ($SD = 1.02$) of paper respondents completed survey items.

An independent t test (Couch, 1987) was conducted using the percentage of the items completed for both disk and paper respondents. The results of the t test ($t(268) = .00$) indicated no significant differences in item completion between disk and paper respondents. The number of valid, missing and double responses and the percentage of completed items for Study 2 are contained in Appendix C6.

Disk Version: Written Comments and Content Analysis. The 1996 Employee Opinion Survey open-ended comment question asked, "What ideas or suggestions would you like to bring to the attention of management?" Of the 2,140 employees who completed the computer survey, 33 wrote comments specifically about the completion of their survey on diskette. Please refer to Appendix C7 for a listing of these verbatim comments.

Discussion

The purpose of this research was to determine if differences existed between comparable questionnaires that were administered using two different media, i.e., completing the questionnaire via paper-and-pencil versus completing the questionnaire by computer (diskette). This research was conducted over a two-year period. Study 1 was conducted in 1995 using a small questionnaire of 29 items that was administered to 624 employees in an international telecommunications organization. In a subsequent study, conducted in 1996, a questionnaire containing 183 survey opinion items was administered to 6,137 employees of the same organization. In each study, the employee population are randomly assigned into either the paper or computer group; all employees were computer literate and had access to their own computer. Although the studies were designed to answer the same hypotheses, the results achieved were different.

It was predicted for the first hypothesis that a greater percentage of paper respondents, in comparison to disk respondents, would participate in the survey process by completing and returning the questionnaire. In both studies, an adequate amount of questionnaires were returned for statistical validity of the results at the 95% confidence level. In Study 1, slightly more computer supplements (63%) were returned than paper supplements (62%); however, this

difference was not statistically significant. In Study 2, however, the results of a chi-square analysis indicated a statistically significant difference between the number of returned disk surveys and the number of returned paper surveys. The return rates were 70% for the disk and 64% for the paper. In both studies, the findings did not support the hypothesis because a greater percentage of disk surveys were returned rather than paper surveys.

The small difference (not statistically significant) in the return rate between the disk and paper versions is somewhat surprising for Study 1 given that the disk respondents were asked to complete demographic coding questions twice. In the initial study, there was a minor difference between the paper and computer version of the supplement that was administered concurrently with the paper company-wide Employee Opinion Survey. The company survey contained the coding questions (e.g., what is your job level, where are you located, what is your gender) that were used to produce results for each demographic. Employees completing the paper supplement simply inserted their supplement into the employee survey and dropped it in the survey return box or mailed it directly to ISR. Those employees completing the supplement by computer were asked to complete two duplicate coding (questions that could potentially identify who you are, e.g., job level, location, gender, age) sections - one for the employee survey and one for the supplement. While this is an obvious limitation

of the study, because coding can indicate who the respondent is, therefore, a respondent may be less likely to complete these types of demographic questions there was no other way to obtain important coding information since the paper-and-pencil company-wide survey and the computer supplement were returned independently.

Employees who received the paper version were able to complete their survey and supplement in one sitting. The disk respondents may have been less motivated to complete the survey and then complete the supplement at a later time at their own desks; it is speculated that when asked to complete a voluntary activity (such as an employee opinion survey) one may be less motivated to participate when considering his/her workload - which is not voluntary and typically has a deadline. However, the findings did not support this limitation since a greater return rate was achieved for the disk supplement than for the paper supplement. This limitation was not present in the second study. Respondents either completed the paper-and-pencil or the diskette version. All information to process the results was present in the version the respondent completed.

When one considers the return rate - what motivates employees to respond to a company survey? Given the respectable return rates achieved in both studies, one is inclined to suggest that employees, when given an

opportunity to respond to management - to give their opinions on the strengths and opportunities for improvement in their organization will take the chance to participate (regardless of the administration method) if they believe management will listen and act upon their concerns. It should also be noted that the Employee Opinion Survey process is a well established method for the participating organization to gather the responses of all of its employees on a number of important issues.

It has been established that the disk and paper version used in both studies are comparable. The disk version of the survey, however, presented an opportunity to try something innovative - completing the survey on-line. The disk survey was touted as an opportunity to take advantage of the available technology; this too could have contributed to the motivation of respondents to participate in completing the survey. In reading the comments written by respondents in both studies, the disk version was received quite favorably and considered much easier to complete than the paper version in which required filling in response bubbles with a particular type of pencil.

Additionally, all employees in the sample were computer literate and used computers as part of their daily work procedure. It is possible to assume that if a respondent is familiar with the computer and is asked to complete a task (e.g., completing a company survey) using the computer, that he/she will be able to do

it proficiently and will prefer the computer. In summary, it is suggested the reason for the greater participation of disk respondents than paper respondents is a function of their knowledge of computers and opportunity to participate using a novel approach; this study controlled for computer experience by randomly selecting respondents who would have the capability to participate in the survey process if they so chose.

In addition to investigating response rates between the disk and paper questionnaires, the data were assessed to determine if disk and paper respondents answer survey opinion items similarly or differently. Based on previous research, it was hypothesized that there would be no significant differences in the favorable response between disk and paper respondents to individual survey opinion items. In both studies, there were instances when the disk respondents were significantly more favorable towards an opinion than paper respondents. In Study 1, this statistical difference occurred for four of the 29 items and in Study 2 this statistical difference occurred for 37 of the 135 items. Accordingly, the hypothesis was not supported in either investigation; however, the difference in favorable response between disk and paper respondents can be explained.

For Study 1, in reviewing the distribution of the responses to the four items in which the disk respondents were statistically more favorable (see

Appendix B5), it generally appears as though the disk respondents are just more favorable than paper respondents; paper respondents tended to answer these items with a question mark response rather than answering using the favorable or unfavorable response scale points. This is especially true for item 6c, "The recent O&M Restructure has been well implemented"; the difference is in the question mark response. Significantly more paper respondents answered this item with a question mark response than did disk respondents, 37% versus 26% respectively. Differences between disk and paper respondents on survey opinion items could also be attributable to the different sample sizes.

With respect to the item level results for Study 2, in evaluating the response distribution for the items in which disk respondents were statistically more favorable than paper respondents (see Appendix C4), the variance can be easily explained by the difference in the question mark response; disk respondents answered favorably whereas paper respondents answered using the question mark response. Perhaps these differences are attributable to the population selected. To be randomly selected to receive a disk survey, the employee must have had access to their own computer. One might be inclined to consider that employees who have access to their own computer might be more "knowledgeable" about issues within the organization than a field person with a lower level employee who might have less access to information and

therefore cannot respond to some of the issues addressed in the survey so he/she answered with a question mark response.

The final hypothesis addressed item completion. It was hypothesized that disk respondents would complete, on average, more survey items than paper respondents. Previous research suggested this would be true (Kiesler & Sproull, 1986). In the case of both studies, *t*-tests revealed no significant differences in item completion for either disk or paper respondents. Hypothesis 3, therefore, was not supported.

However, there are a few issues worth noting. Unlike previous research (Lautenschlager & Flaherty, 1990), neither disk survey, from Study 1 or 2, was designed to force individuals to answer a question before being allowed to proceed with answering subsequent items. The survey process is strictly voluntary - which includes having the option of answering or not answering any question or item. In the case of Study 1, the majority of both disk and paper respondents elected to answer most of the items. At most, three of 188 disk and 201 paper respondents choose not to answer a particular item. There were no cases in which the respondent answered an item twice. Although it should be mentioned that the disk version did not provide an opportunity for respondents to answer an item twice. If a respondent selected a response and then opted to change his/her response, by clicking the new response option with the mouse

button, the “old” response was un-selected. Unfortunately, this is not possible with a paper survey. In reviewing the item completion rates (see Appendix C6), there are several respondents who provided two answers to some survey items; this arbitrarily increased the number of invalid responses.

An issue of merit to consider is the survey items themselves and employees’ motivation to complete the items in the respective survey. The survey items for Study 1 were designed after lengthy discussions with the Human Resources community of the business unit participating in this investigation. The items were designed to address unique issues of the business unit and therefore because the items are relevant, employees were motivated to complete them. For the Employee Opinion Survey used in Study 2, the items were originally designed for the first survey administered in 1992. The items were designed to address issues found as a result of conducting focus groups with a random sample of staff. Every year, the survey is reviewed and items deleted or added to reflect the current environment of the organization. No item is considered more important than another; all have equal importance and if an item is deemed no longer worthwhile in terms of the information it provides and/or management is no longer committed to take action, it is dropped from the questionnaire. The organization uses the historical data to determine if implemented actions as a result of employee responses are successful or not.

The items are also randomly dispersed throughout the questionnaire respective to response scale (i.e., for ease of completion, items using the same response scale are grouped together - but not by topic). By not grouping items addressing the same topic together, the respondent is compelled to read each item and consider his/her response; this prevents scoring patterns. In addition, the response scale of the opinion items also encourages completion. ISR questions do not use a mid-point (i.e., neither agree nor disagree), which tend to encourage use of this response option; this is unusable data since it is neutral and cannot be interpreted as favorable or unfavorable. Moreover, ISR does not use a typical "Likert" scale which uses "Strongly" in its response scale options. ISR has found that many employees, especially those from an Asian background tend not to respond using the strongly agree or strongly disagree response options (G. Stanek, personal communication, November 25, 1997). So, perhaps the response scale used in the questionnaires for Study 1 and 2 are acceptable to the employee population who participated in these investigations. Similar to Study 1, the assumption is, given the high rate of completion, that employees were motivated to complete items. In summary, regarding item completion, the author believes the high return rate is a reflection of the relevance of the items and motivation of employees to participate in the process because of how the survey is designed and the credibility of the survey process.

In addition to closed questions (which allow for extensive quantitative data collection), the disk version of the questionnaires included an open-ended comment question. This section allowed respondents to comment on any topic with regard to the disk survey (Study 1) and any other topic they might like to bring to the attention of management (Study 2). The disk-related comments (see Appendix B8 and C7) provided insight into how the survey was distributed and how it functioned. Many of the comments written in response to Study 1 were used as justification for modifying the disk version for the second study.

Overall Limitations

A potential limitation, from a purely research perspective, is the difference in administration methods (i.e., all employees completed the companywide Employee Opinion Survey in a group setting with the paper supplement questionnaire completed at the same time while the disk version of the supplement questionnaire was completed at one's leisure independent of completing the Employee Opinion Survey) for Study 1. In an ideal situation, it would have been preferable to have respondents complete the supplement questionnaire under the same conditions, e.g., in the same group setting or individually at one's leisure. Given the desire to try a disk administered survey on a small scale, a supplement questionnaire of 29 items provided a perfect opportunity without impacting the established overall companywide Employee

Opinion Survey system.

In addition, there will always be a number of employees who cannot complete the survey using an alternative survey method. Two fundamental reasons for continuing to rely on paper-and-pencil based questionnaires are due to little respondent knowledge and experience with how to use a computer and the inability to access a computer. For the participating organization, a segment of the employee population will always be offered a paper survey.

Another limitation is the use of a convenient sample. Although respondents were randomly selected to complete the disk version of the survey, all respondents were computer literate and could complete either version of the survey if they choose. There was no opportunity for non-participation due to lack of experience with a computer. There was, however, opportunity for non-participation if a respondent elected to simply not participate; the survey process is strictly voluntary.

According to previous research (Allen, 1987), computer-administered surveys often achieve a lower return rate when compared with a survey administered by paper-in-pencil. This is due to several reasons: (a) if the survey is administered to people who may not be computer knowledgeable, they are not likely to complete a survey by computer, (b) concern about anonymity - if the survey is available by network in which your computer contains an ID number,

your ID number would be attached to your survey results, (c) many organizations do not seem to be interested in administering a survey using a network - there is a great potential for computer hackers to ruin the purity of the survey results, and (d) how would you prevent people from returning duplicate surveys? ISR has addressed these issues by doing the following: (a) the computer versions were only administered to computer literate populations, (b) the computer versions were only available on diskette not in an network environment, (c) the diskette prevented the "hacker" problem, and (d) only diskettes returned with the original labeling were processed. To prevent lack of participation due to a "bad" diskette, extra diskettes were provided to the survey coordinators to replace a disk if one turned out not to work.

The research (Carr & Ghosh, 1983) in this area has mainly focused on the viability of using computers for clinical purposes. If not for clinical purpose, the research centers on whether people are more truthful about themselves when responding to questions by computer. While useful and interesting, this research presented in this paper is not supportive of this previous research. The intent of the questionnaires used in this study was to obtain opinions and ideas on a variety of topics in relation to a specific organization. No opinion items requested personal information which required truth on the part of the respondent. Consequently, there can be no effort to ensure the answers provided by

respondents were truthful.

Previous research has been able to determine the response validity between two administration procedures. Allen (1987) checked for response validity by verifying the responses given to demographic questions on the computer and scanner surveys with student University records. The reliability of the computer survey was found to be dependent on the respondent's cognitive style (Atkinson & Jones, 1994). Again, this study cannot verify response validity as it simply is a collection of respondents' views on the organization. Further, participation in the survey process was entirely voluntary and responses were anonymous. Therefore, no attempt can be made to confirm responses to any part of the survey.

Implications for the Participating Organization

The greater return rate for the disk version is encouraging as the organization continues to look for opportunities to increase the number of employees voluntarily participating in the survey process. The issue of the difference between disk and paper respondent to the opinion items can be simply explained by the greater usage of the question mark response by paper respondents. While this study specifically focused on differences in favorability, one should also consider the question mark and unfavorable responses as well in reviewing the results and determining which issues/topics merit further

investigation for resolution.

With regard to item completion, the disk version of the survey does have the potential for eliminating multiple responses because it can be programmed to “unclick” a response if another response is selected; this is not feasible with a paper survey. As the results of this study illustrate, there were a number of paper respondents who elected to answer the same item more than once. Therefore, a positive feature of the disk version is the ability to control for multiple responses. The author is inclined to suggest continued use of disk administration while continued use of the paper administration for those respondents who lack computer access and/or experience based on the findings of these studies. Diskette-based surveys are also environmentally friendly.

There are, however, cost and time considerations. It does, in fact, cost more to provide a disk survey than it does to provide a paper survey. Design, packaging and distribution costs being equal, printing on paper is less expensive than duplicating a disk because paper is cheaper than diskettes. In terms of time allotted, it takes virtually the same amount of time to design the survey and the program to scan-capture or convert the computer responses into a readable form for ISR proprietary data processing software program. Where time is saved is in the capturing of comments. Time is needed to enter in comments written in on a paper survey into the computer whereas with a disk survey, the respondent

types his/her comments.

In an effort to continue to the advanced use of technology in the survey process for this organization, ISR is recommending an Intranet survey. The survey would be located on either an ISR or client server. Employees would be provided with a password (or could select a password from a list) in which they could access the survey from their personal computer. Although this option requires the computer have Intranet access and be equipped with browser software, this alternative requires no printing or shipping cost associated with distributing survey materials to respondents or return of completed surveys. Further, data entry would not be required because respondents would simply submit their survey to the server once finished. Prior to implementing this survey technology one would need to determine employee accessibility. However, this method would have the positive features similar to the disk version, but would also eliminate shipping costs and potential loss of data through damaged disks.

Future Research

It would be interesting to know if differences in response to disk versus paper questionnaire exist by gender, years of service, and job level. However, survey trends suggest that even within one administration model (e.g., paper), there are differences between men and women, by management and non-management, etc. Consequently, it would be difficult to determine if variations

would be a function of the administration method or a function of difference individual perception with regard to the strengths and weaknesses of the organization.

As organizations clamor for quicker reporting of survey results, it would be interesting to track the length of time it takes for a paper respondent to return a survey versus an electronic respondent. If electronic surveys are returned quicker, then it would suggest this could be a procedure which reduces the survey cycle. Electronic respondents could be reminded daily to complete the survey by a survey icon as they turn-on their system.

Although other researchers (Booth-Kewley et al., 1992; Kiesler & Sproull, 1986) have found similar results - no systematic differences between computer and paper-and-pencil administered questionnaires, the studies investigated herein did have a few minor instances in which there were statistically significant differences in employees' response to the disk or paper versions. A primary advantage associated with finding no difference(s) is that the organization has a choice between administering via paper or electronically or a combination of both because equivalent paper and computer questionnaires produce similar results (Booth-Kewley et al., 1992). Despite the few instances of variations as reported in these studies, it is reported that these differences can be justified and that continued administration of an electronic version of a survey is a viable option,

especially given the positive response to the disk version as evidenced by the comments provided by respondents. In agreement with Booth-Kewley et al. (1992), with regard to the minor differences (i.e., response rate) that do exist between these two administration methods, one can only expect the discrepancies to dissipate with the continued use and expansion of computer technology in survey research.

References

Allen, D. F. (1987). Computers versus scanners: An experiment in nontraditional forms of survey administration. Journal of College Student Personnel, 28(3), 266-271.

Atkinson, M., & Jones, S. (1994). An evaluation of the reliability of alternative survey media. Journal of Applied Business Research, 10(1), 86-91.

Bartram, D., & Bayliss, R. (1984). Automated testing: Past, present and future. Journal of Occupational Psychology, 57(3), 221-237.

Booth-Kewley, S., Edwards, J. E., & Rosenfeld, P. (1992). Impression management, social desirability, and computer administration of attitude questionnaires: Does the computer make a difference? Journal of Applied Psychology, 77(4), 562-566.

Bradburn, N. M. (1983). Response effects. In P. H. Rossi, J. D. Wright, & A. B. Anderson (Eds.), Handbook of Survey Research (pp. 289-318). San Diego, CA: Academic Press, Inc.

Carr, C. H., & Ghosh, A. (1983). Accuracy of behavioral assessment by computer. British Journal of Psychiatry, 142, 66-70.

Carr, H. H. (1992). Factors that affect user-friendliness in interactive computer programs. Information Management, 22, 137-149.

Couch, J. V. (1987). Nonparametric statistical tests. Fundamentals of statistics for the behavioral sciences (pp. 263-268). St. Paul, MN: West Publishing Company.

Cronbach, L. J. (1946). Response sets and test validity. Educational and Psychological Measurement, 6, 475-495.

Evan, W. M., & Miller III, J. R. (1969). Differential effects on response bias of computer vs. conventional administration of a social science questionnaire: An exploratory methodological experiment. Behavioral Science, 14, 216-227.

Hedl, J.J., O'Neil, H. F. Jr., & Hansen, D. N. (1973). Affective reactions toward computer-based intelligence testing. Journal of Consulting and Clinical Psychology, 40, 217-222.

Kanji, G. K. (1993). Test 5: Z -test for the equality between two proportions (binomial distribution). 100 statistical tests (pp. 25). Thousand Oaks, CA: Sage Publications.

Karweit, N., & Meyers Jr., E. D. (1983). Computers in survey research. In P. Rossi, J., Wright, & A. Anderson (Eds.), Handbook of Survey Research (pp. 379-414). San Diego, CA: Academic Press, Inc.

Kiesler, S., & Sproull, L. S. (1986). Response effects in the electronic survey. Public Opinion Quarterly, 50, 402-413.

Lautenschlager, G. J., & Flaherty, V. L. (1990). Computer administration of questions: More desirable or more social desirability? Journal of Applied Psychology, 75(3), 310-314.

Neffendorf, H. (1993). Survey computing in the 1990s: A technology update. Journal of the Market Research Society, 35(3), 205-209.

O'Brien T., & Dugdale, V. (1978). Questionnaire administration by computer. Journal of Market Research Society, 20, 228-237.

Rosenfeld, P., Doherty, L. M., Vicino, S. M., Kantor, J., & Greaves, J. (1989). Attitude assessment in organizations: Testing three microcomputer-based survey systems. The Journal of General Psychology, 116(2), 145-154.

Rosenfeld, P., Giacalone, R. A., Knouse, S. B., Doherty, L. M., Vicino, S. M., Kantor, J., & Greaves, J. (1991). Impression management, candor, and microcomputer-based organizational surveys: An individual differences approach. Computers in Human Behavior, 7, 23-32.

Sproull, L. S. (1986). Using electronic mail for data collection in organizational research. Academy of Management Journal, 29(1), 159-169.

Vicino, S. M. (1989). Effects of computer versus traditional paper-and-pencil survey administration on response bias among self-monitors. Unpublished masters thesis, San Diego State University, San Diego, CA.

Wilson, F. R., Genco, K. T., & Yager, G. G. (1985). Assessing the equivalence of paper-and-pencil vs. computerized tests: Demonstration of a promising methodology. Computers in Human Behavior, 1, 265-275.

Appendix A

Description of International Survey Research ^{LLC}

During its 25 year history, International Survey Research ^{LLC} (ISR), has conducted employee and senior management opinion surveys for organizations worldwide - that is, 28 million employees, in 1,900 companies in 106 countries. With offices in Chicago (World Headquarters), San Francisco, London (European Headquarters), Singapore (Asia Pacific Headquarters), Adelaide Australia, South Africa, and Rio Janerio, ISR can offer its global expertise. Therefore, ISR's multilingual, multicultural staff is well-versed in many cultures. This helps to evaluate what findings are truly significant and which are normal cultural variations. Advanced language capabilities also facilitate communication of results to managers in their own language.

ISR's survey process is designed to provide its clients with a first-class survey system that allows flexibility for future changes. The survey process starts with thorough planning to understand an organization's needs and its strategies, goals, and objectives. ISR then conducts interviews with a representative sample of the organization's population to define key issues. These steps lead to a customized questionnaire (in any language required) designed to target areas of critical importance to the organization. Survey opinions can be collected via the Internet, network, disk, or on paper.

ISR's survey process involves the development of a coding section that appears at the beginning of each questionnaire. This coding section contains a series of questions that permit respondents to classify themselves (e.g., division/business unit, location, job function, gender, tenure). The options for each coding section would be mutually exclusive and exhaustive. This section would also contain a statement clearly stating only group scores (typically of 20 or more respondents) will be reported for both quantitative and qualitative data. This statement supports the feeling of respondent anonymity, which is critical to the survey process. Moreover, all demographic coding questions (e.g., gender, tenure, age) are usually voluntary. ISR has found making the demographic questions voluntary actually increases the response rate to these perceived sensitive questions.

Item order within the questionnaire is randomized to control for response sets or patterns (e.g., respondent fatigue, subject bias, order effects). In addition, negatively worded items are also used to reduce the potential for response bias. Definitions of specific terms are also provided to ensure respondents understand key words used in the survey.

ISR's questionnaires typically also include an open-ended comment section. Open-ended comments provide respondents with an opportunity comment on any topic addressed or not addressed in the survey. Respondents

self-code the topic they wish to discuss which facilitates the reporting of quantitative findings; comments are reported back by topic.

Recognizing that each organization is unique, ISR project staff can augment the questionnaire with tailored items to address company distinctive issues identified during the interviews. Additionally, supplements may be developed in response to areas of particular concern for specific populations.

A pretest version of the questionnaire is created to administer to a sample of staff as a quality check to verify the coding section, ensure adequacy of coverage of issues, and appropriate use of company terminology. This process serves to ensure the validity of the questionnaire. From the pretest, amendments are made to the survey accordingly and all documents are printed.

Survey results are meaningless without an accurate base of comparison. ISR offers a plethora of normative data for clients to benchmark themselves by industry, country, job function, demographics, company performance, etc. Items used from ISR's normative database have been tested extensively worldwide for validity and reliability.

A critical step in the survey process is the "marketing" of the survey. Pre-administration communication should address four things: respondent anonymity, the survey is an opportunity for employees to "upward consult," top management's commitment to act on results, and proposed post-survey process.

In ISR's experience, an organization can achieve the highest return rate by conducting on-site group administration of the survey. ISR provides an Administrator Script to assist the administrator in directing employees through completion of the questionnaire. It should be noted, however, that all surveys are designed for self-administration. Completed surveys are placed in a sealed survey return box and returned to ISR for processing. Many of ISR's clients have experienced return rates of 70 percent or higher using on-site administration. Interoffice distribution is the second most successful administration procedure for maximizing potential return rates. The questionnaire is sent to the employees at their work location or is personally distributed by their manager. Once the survey is completed, and sealed in the self-addressed, postage-paid return envelope, employees simply return their survey via mail directly to ISR's processing center. For international locations, ISR can provide envelopes (to include country postage or not) for which employees will insert their completed surveys. Completed surveys are then collected by an assigned individual and return via courier. Interoffice distribution will often yield a return rate ranging from 65 to 70 percent. Home distribution is the least effective way to administer a survey. Return rates utilizing this method are often in the low 40's to mid 50 percent. In general, employees tend to believe the survey should be completed during work hours since it is considered

a company-sponsored activity. Therefore, organizations that can offer employees the opportunity to participate in the survey process during business hours will achieve a higher return rate than organizations that wish to mail the questionnaire to employees' homes.

The perceived anonymity that respondents feel toward the survey process will have a major impact on the return rate. If employees feel they can be identified, they will choose not to complete the survey - which results in a lower return rate. Consequently, it is important to keep the coding section to a minimum and not use identifying numbers on bar codes anywhere in the instrument. A statement reinforcing the anonymity of the process should be made by the Chief Executive Officer or appropriate officer in the cover letter for example accompanying the questionnaire. Additionally, ISR includes several statements (No report will be produced for less than 20 respondents, No attempt will be made to identify individual respondents, etc.) within the Introduction. These statements serve to build confidence in the survey process.

Past experience employees have with previous surveys will have an impact their perception of the survey process. Should the previous survey be perceived in the minds of employees as successful (i.e., management acted on the problems identified and communicated the results to employees), the return rate for successive surveys will increase. If management took little action on the

survey findings, return rates will often decrease for consecutive surveys. In ISR's experience, employees will be enthusiastic about the survey process if they believe their opinions are valued and actions are taken in response to the issues raised.

Processing and analyses are conducted in-house using peerless proprietary software, for the highest quality control, confidentiality, and flexibility. ISR's internally developed software package performs a statistical significance test on every category and item contained in the questionnaire for both internal and external comparisons. The direction (i.e., either positive or negative) and significance is indicated by an asterisk (*) in all report book comparisons.

Once data is available, ISR reviews the results of the questionnaire to determine the areas of strength and opportunities for improvement. The exact criteria is often determined during the survey process; however, often used criteria include significant differences from norms, highly positive or negative items, data that support or contradict interview findings, large differences between groups (e.g., division/business unit, location, job level, gender, tenure) and comment highlights. These findings would be presented to the top management team.

At the conclusion of the reporting phase of the study, ISR assists the organization in the identification of categories that top management may wish to

submit to internally designated peer level Focus Groups for data refinement. ISR can conduct on-site, two-day Focus Group Leader Training Session(s) to instruct selected focus group leaders in the process of conducting focus group sessions.

Focus groups are generally commissioned to develop problem statements and recommendations for chartered categories identified as unfavorable by the survey results. Focus group members review the items in the chartered category, develop problem statements that provide management insight into how staff view the problem, and generate recommendations for resolution of the problem(s).

Subsequent to the focus groups, a management committee can be established to review the problem statement and recommendations in light of their financial, operational, and Human Resource feasibility. Decisions will often fall into four possible groups: Agreement (i.e., we agree with the recommendation and will implement all of it), Theoretical Agreement (i.e., we agree with the recommendation but cannot implement the recommendation at this time but will reconsider it at a later date), Partial Agreement (i.e., we can implement part but not all of the recommendation), and Disagreement (i.e., the recommendation cannot be implemented due to its financial, operational, and/or Human Resource impact on the organization). ISR works with top management to establish a select committee and assist in developing a methodology to

evaluate the problem statements and recommendations.

Company management then communicates decisions on the focus group problem statements and recommendations to the staff population. ISR also encourages clients to remind staff of the favorable results identified in the survey as they continue to communicate decisions on the focus group recommendations.

In considering why organizations survey employees (e.g., to run the business better), ISR can provide an objective view. ISR's role as diagnosticians is provide a through and in-depth picture indicating strengths and areas of weakness.

Appendix B1

Study 1: Letter from National General Manager to All Employees of the Section

On the following pages is the letter which accompanied the 1995 Supplement questionnaire for Study 1. This purpose of this letter was to encourage participation in the survey process.

Please note that this letter is in British spelling and had been retyped verbatim, with the notable exception of any text of terminology which identifies the participating organization.

10 March 1995

Dear colleague:

[Business Unit] people have now participated in two employee surveys, the 1992 [survey name] Employee Opinion Survey which everyone had the opportunity to fill in, and the 1994 [survey name] Employee Opinion Survey which sampled 10 percent of the company. Now in 1995 we are conducting the second [survey name] survey for all employees. It is your opportunity to have your say about the company and [Business Unit], about what we are doing right and wrong, and how we can improve our approach and performance.

This year your survey envelope contains a [Business Unit] supplement along with the [Company] core survey. For many people, the past 12 months has been one of uncertainty. For that reason, the [Name] Council and I felt it was timely to ask you to tell us how you think the changes have been managed and to give us more details about the problem areas raised in the 1994 [Name] Seminars. We also felt that it was important to evaluate some of the mechanisms we put in place following the first [survey name] Survey in 1992. The four major areas we looked at were management, operating efficiency, communication, and performance appraisal.

Management improvements include higher visibility by managers in the field seen through visits and presentations such as the O&M Agreement

presentation and [Name] Seminars. Communication initiatives included the introduction of [Name] newspaper and Team Briefing. In a step towards company-wide roll-out, [Business Unit] office-based [Name] members and all [Name] members are currently part of a 12 month trial of Performance Review and Development.

Please be assured that your input is completely anonymous. All returned surveys go directly to the external company, International Survey Research (ISR), for processing of results. No cross tabulation of who did or did not return surveys is undertaken and no results are reported for any area where less than twenty completed surveys are returned.

Please take time to complete the survey fully. Fill it in and return it as soon as possible, either in the enclosed ISR return addressed envelop, or if you are completing the survey at an arranged on-site venue, drop it in the ballot box provided. It is important that as many staff as possible complete and return their survey so that useful information is obtained.

The survey results will be communicated to all staff as soon as they are available.

Regards,

[Name]

National General Manager

Appendix B2

Study 1: 1995 Supplement Questionnaire - Paper Version

Following is a photocopy of the paper version of the 1995 Supplement administered for Study 1. Items in this supplement addressed the following topics: O&M Restructure, Management, Communication, Standardization, and Job Satisfaction. Please note that is questionnaire is in British spelling and that any text or terminology which identifies the organization has been eliminated. Of the 29 items in this supplement, items 12, 13, and 17 were eliminated from most analyses. All items contained in this respective questionnaire are copyrighted by International Survey Research ^{LLC}.

1995

	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
1. The result of the new restructure will improve business to the level of the world's best practice.....	=	=	=	=	=
2. supervisors are too task oriented to the detriment of employees.....	=	=	=	=	=
3. In my opinion, the people I work with are complying with standard procedures and work instructions	=	=	=	=	=
4. In my opinion, management and employees share common goals to work towards the same future.....	=	=	=	=	=
5. With regard to the communication you receive from management, it is usually: (Please answer <i>both</i> items)					
a. Timely.....	=	=	=	=	=
b. Accurate	=	=	=	=	=
6. The recent O&M restructure has been: (Please answer <i>each</i> item)					
a. Well planned.....	=	=	=	=	=
b. Well communicated	=	=	=	=	=
c. Well implemented.....	=	=	=	=	=
d. Generally successful	=	=	=	=	=
7. In my opinion, the following management levels are capable of leading through the changing environment: (Please answer <i>both</i> items)					
a. My branch management	=	=	=	=	=
b. My supervisor.....	=	=	=	=	=
8. With regard to the communication you receive from the Unions, it is usually: (Please answer <i>both</i> items)					
a. Timely	=	=	=	=	=
b. Accurate	=	=	=	=	=

	<u>Very Import- tant</u>	<u>Import- tant</u>	<u>Neither Important nor Un- important</u>	<u>Un- important</u>	<u>Very Un- important</u>	<u>Don't Know</u>
16. How important are the following on improving morale with the people you work with on a day-to-day basis: (Please answer <i>each</i> item)						
a. Recognition of employee's performance.....	☐	☐	☐	☐	☐	☐
b. Valuing the needs of individuals in a changing environment.....	☐	☐	☐	☐	☐	☐
c. Laid out individual career paths	☐	☐	☐	☐	☐	☐
d. Communication about the pace of change within	☐	☐	☐	☐	☐	☐

17.

(Please select only *one* response.)

- ☐
- ☐
- ☐
- ☐
- ☐
- ☐

PLEASE PLACE YOUR SUPPLEMENT INSIDE YOUR QUESTIONNAIRE AND RETURN IT TO ISR.

PLEASE DO NOT WRITE ON THIS PAGE.

Appendix B3

Study 1: 1995 Supplement Questionnaire - Disk Version

Following is a photocopy of the disk version of the 1995 Supplement administered for Study 1. Note the differences from the paper version are the following: an inclusion of an Introduction, coding section, and comment section; all opinion items are entirely the same. Items in this supplement addressed the following topics: O&M Restructure, Management, Communication, Standardization, and Job Satisfaction. Please note that this questionnaire is in British spelling and any text or terminology which identifies the organization has been eliminated. Of the 29 items in this supplement, items 12, 13, and 17 were eliminated from most analyses. All items contained in this respective questionnaire are copyrighted by International Survey Research ^{LLC}.

File Help

INTRODUCTION

Hello and welcome to the electronic version of the Survey. This survey is the same length as the paper version, except it's spread across computer screens rather than paper, and it consists of the same two sections...

I. CODING SECTION

In this section, you are asked to provide some information about yourself and your position within the organization. This information is requested because persons from different parts of the organization and those with different levels of responsibility may have varying opinions. ISA will use the coding section to break down the results in a meaningful way while preserving the anonymity of all respondents. Separate reports are produced for each one of the coding questions. No two coding questions are combined to produce a report.

II. OPINION SECTION

There are no right or wrong answers. We simply ask for your opinion, based on your experience and perception of the way the organization operates. Please read the definitions for key words used in the supplement. Because we are all different, some of the items may not be worded exactly as you would wish. However, please indicate the response which most closely reflects your view. In most cases, a "7" or "No Opinion" response is provided if you cannot decide about a statement or if it does not apply to you.

INSTRUCTIONS

In the survey you are asked to express your views regarding a number of issues by:

- * clicking on the option button, OR (if you don't have a mouse)
- * using the TAB key to move forwards to the correct question then the arrow key to move the desired answer(s) then press the SPACE bar.

Here is an area you can practise responding, without affecting the real survey...

Pick one of these

Are you employed by ? ☐ Yes ☐ No

Exit Help Cancel Next Page ->

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A screenshot of a computer window titled "File Help". The window contains a survey question: "1. In which part of do you work?" followed by "(Please read the entire list on this page before making your choice)". Below the text are two vertical columns of radio button options. The left column has 10 options, and the right column has 10 options. At the bottom of the window are four buttons: "<- Prev Page", "Exit", "Help", and "Cancel". On the far right, outside the main window frame, is a button labeled "Next Page ->". The window also features a standard toolbar with icons for file operations like open, save, print, etc., located below the title bar.

File Help

2. What is your designated category?

☐ Executive	☐ Draftsperson	☐ Operator Services
☐ Manager		☐ Production
☐ Administrative Staff	☐ Media Relations	
☐ Administrative Staff	☐ Food Service	☐ Professional
☐ Tradesperson/Artisan	☐ Information Technologists	☐ Sales Force
☐ Building Services	☐ Material Distribution	☐ Technical
☐ Communications Officer		

3. Where are you located?

☐	☐	☐
☐	☐	☐
☐	☐	☐

4. Are you accountable for the work output of other people?
[i.e., do you have one or more employees reporting to you?]

☐ Yes ☐ No

< Prev Page Exit Help Cancel Next Page >

File Help

The following coding questions are VOLUNTARY. We do request your cooperation, however, for the information will allow us to compare the results of men and women, people with different lengths of service, etc. Results will only be tabulated for as a whole.

5. What is your gender?

☐ Male ☐ Female

6. How long have you worked for _____ ?
(Include your service with _____ and any time with a subsidiary company as part of your total length of service)

☐ Less than 1 year ☐ 5 years but less than 10 years ☐ 20 years but less than 30 years
☐ 1 year but less than 3 years ☐ 10 years but less than 15 years ☐ 30 years or more
☐ 3 years but less than 5 years ☐ 15 years but less than 20 years

7. What is your age?

☐ 19 years or less ☐ 35 years but less than 40 years ☐ 50 years but less than 55 years
☐ 20 years but less than 25 years ☐ 40 years but less than 45 years ☐ 55 years but less than 60 years
☐ 25 years but less than 30 years ☐ 45 years but less than 50 years ☐ 60 years or over
☐ 30 years but less than 35 years

8. What, if any, is your equal opportunity status? Please mark all that apply.
(If you do not have an EEO status, please mark box 4)

☐ 1. ☐ 3.
☐ 2. ☐ 4. All other employees without equal opportunity status

<- Prev Page Exit Help Cancel Next Page ->

The screenshot shows a software window with a title bar containing 'File Help' and a menu bar with 'File' and 'Help'. The main content area is titled 'DEFINITIONS' and contains the following text:

THE FOLLOWING GENERAL DEFINITIONS WILL BE HELPFUL IN COMPLETING THE SUPPLEMENT.

"SUPERVISOR" refers to the person to whom you immediately and most often report, regardless of his or her title.

"BRANCH MANAGEMENT" refers to the management team of your branch and this includes your branch manager and his or her direct reports.

"MANAGEMENT" refers to the Managing Director of and his direct reports.

"THE PARTICIPATIVE APPROACH"

At the bottom of the window, there is a horizontal bar with five buttons: '< Prev Page', 'Exit', 'Help', 'Cancel', and 'Next Page >'. A small text box at the bottom left of the main content area reads: 'If you click the Help button or press the F1 key, this text will be displayed in a separate window for you. On the other hand, you can also use the NextPage and PrevPage buttons to get back to this screen.'

		Agree	Tend to Agree	?	Tend to Disagree	Disagree
1.	The result of the new structure will improve business to the level of world's best practice	☐	☐	☐	☐	☐
2.	supervisors are too task oriented to the detriment of employees	☐	☐	☐	☐	☐
3.	In my opinion, the people I work with are complying with standard procedures and work instructions	☐	☐	☐	☐	☐
4.	In my opinion, management and employees share common goals to work towards the same future	☐	☐	☐	☐	☐
5.	With regard to the communication you receive from management, it is usually: (Please answer both items)					
	a. Timely	☐	☐	☐	☐	☐
	b. Accurate	☐	☐	☐	☐	☐

		Agree	Tend to Agree	?	Tend to Disagree	Disagree
6.	The recent O & M restructure has been: (Please answer each item)					
	a. Well planned	☐	☐	☐	☐	☐
	b. Well communicated	☐	☐	☐	☐	☐
	c. Well implemented	☐	☐	☐	☐	☐
	d. Generally successful	☐	☐	☐	☐	☐
7.	In my opinion, the following management levels are capable of leading through the changing environment: (Please answer both items)					
	a. My branch management	☐	☐	☐	☐	☐
	b. My supervisor	☐	☐	☐	☐	☐
8.	With regard to the communication you receive from the Unions, it is usually: (Please answer both items)					
	a. Timely	☐	☐	☐	☐	☐
	b. Accurate	☐	☐	☐	☐	☐

	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
9. I am adequately informed about the following: (Please answer both items)					
a. New standard procedures and work instructions	☐	☐	☐	☐	☐
b. Changes to standard procedures and work instructions	☐	☐	☐	☐	☐
10. My supervisor advises me in advance of the following: (Please answer both items)					
a. Changes that will affect my job	☐	☐	☐	☐	☐
b. The rationale behind the change that will affect my job	☐	☐	☐	☐	☐
11. The standardised processes have: (Please answer both items)					
a. Simplified my work output and performance	☐	☐	☐	☐	☐
b. Improved my work output and performance	☐	☐	☐	☐	☐

File Help

PLEASE NOTE THE FOLLOWING ITEMS HAVE SEVERAL DIFFERENT RESPONSE SCALES

12 ☐ Yes ☐ No

13 ☐ Yes ☐ No

14. Are the new O&M processes and work practices successful in your section where they are deployed? ☐ Yes ☐ No ☐ Don't Know/Not Applicable

15. How would you rate the information communicated via the monthly Team Briefing process? ☐ Very Good ☐ Good ☐ Average ☐ Very Poor ☐ Poor ☐ Don't Know

< Prev Page Exit Help Cancel Next Page >

		Very Important	Important	Neither Important nor Unimportant	Unimportant	Very Unimportant	Don't Know
PLEASE NOTE THE FOLLOWING ITEMS HAVE SEVERAL DIFFERENT RESPONSE SCALES							
16.	How important are the following on improving morale with the people you work with on a day-to-day basis? (Please answer each item)						
	a. Recognition of employees performance	☐	☐	☐	☐	☐	☐
	b. Valuing the needs of individuals in a changing environment	☐	☐	☐	☐	☐	☐
	c. Laid out individual career paths	☐	☐	☐	☐	☐	☐
	d. Communication about the pace of change within	☐	☐	☐	☐	☐	☐
17.							
	☐	☐					
	☐	☐					
	☐	☐					
<input type="button" value="Prev Page"/> <input type="button" value="Exit"/> <input type="button" value="Help"/> <input type="button" value="Cancel"/> <input type="button" value="Next Page"/>							

The image shows a screenshot of a graphical user interface window titled "Thank you!". The window has a standard menu bar with "File" and "Help" options, and a toolbar with various icons. The main content area contains the following text and elements:

Thank you for helping us with the first electronic version of

We would welcome any thoughts you might have about this electronic version or how it has been implemented. If you'd like to leave any comments, please type them into the box below.

Any comments you choose to enter will be stored in a computer file separate from your survey response.

Below this text is a large, empty rectangular text box for user input.

After you've saved your survey responses - by clicking the 'Exit' button below - please...

- Unload the disk from your computer
- Put the disk in the supplied mailer and seal the packet
- Mail the prepaid mailer to the address printed on its cover

To save your survey responses, please click the 'Exit' button, below.

At the bottom of the window, there are four buttons: "< Prev Page", "Exit", "Help", and "Cancel".

Appendix B4

Study 1: Differences in Category Scores

CATEGORIES

Disk Respondents (N=188)
 Paper Respondents (N=201)

† Difference in favorable response between disk and paper

Differences may be plus or minus one point due to computer rounding

Appendix B5

Study 1: Differences in Item Level Results

Standardization

= % Favorable = % "?" = % Unfavorable
 0% 20% 40% 60% 80% 100%

Disk Respondents (N=188) † Difference in favorable response between disk and paper
 Paper Respondents (N=201) Differences may be plus or minus one point due to computer rounding

* A statistically significant comparison ($p < .05$)

Standardization

11. The standardized processes have:

a. Simplified my work output and performance

b. Improved my work output and performance

Disk Respondents (N=188)
Paper Respondents (N=201)

† Difference in favorable response between disk and paper
Differences may be plus or minus one point due to computer rounding

* A statistically significant comparison ($p < .05$)

O&M Restructure

1. The result of the new restructure will improve our business to the level of the world's best practice.

Disk Respondents (N=188)
 Paper Respondents (N=201)

† Difference in favorable response between disk and paper

Differences may be plus or minus one point due to computer rounding

O&M Restructure

6. The recent O&M Restructure has been:

a. Well planned

Disk Respondents (N=188)
 Paper Respondents (N=201)

† Difference in favorable response
 between disk and paper

Differences may be plus or minus one
 point due to computer rounding

* A statistically significant comparison ($p < .05$)

O&M Restructure

14. Are the new O&M processes and work practices successful in your section where they are deployed?

Communication

5. With regard to the communication you receive from management, it is usually:

a. Timely

b. Accurate

8. With regard to the communication you receive from the Unions, it is usually:

a. Timely

b. Accurate

0% 20% 40% 60% 80% 100%
 ■ = % Favorable □ = % "?" ■ = % Unfavorable

Disk Respondents (N=188)
 Paper Respondents (N=201)

† Difference in favorable response between disk and paper

Differences may be plus or minus one point due to computer rounding

Communication

Disk Respondents (N=188) † Difference in favorable response Differences may be plus or minus one
 Paper Respondents (N=201) between disk and paper point due to computer rounding
 * A statistically significant comparison ($p < .05$)

Management

10. My supervisor advises me in advance of the following:

a. Changes that will affect my job

b. The rationale behind the change that will affect my job

0% 20% 40% 60% 80% 100%
 = % Favorable = % "?" = % Unfavorable

Disk Respondents (N=188)
 Paper Respondents (N=201)

† Difference in favorable response between disk and paper
 Differences may be plus or minus one point due to computer rounding

* A statistically significant comparison ($p < .05$)

Job Satisfaction

16. How important are the following on improving morale with the people you work with on a day-to-day basis:

a. Recognition of employee's performance

b. Valuing the needs of individuals in a changing environment

c. Laid out individual career paths

d. Communication about the pace of change within our business unit

= % Very Important/Important
 = % Neither
 = % Very Unimportant/Unimportant
 = % Don't Know

† Difference in favorable response between disk and paper
 Disk Respondents (N=188)
 Paper Respondents (N=201)

Differences may be plus or minus one point due to computer rounding

Appendix B6

Study 1: Means, Standard Deviations and N Counts

Item Number	Survey Item	Disk			Paper		
		Category	M	SD	n	M	SD
1	The result of the new restructure will improve our business to the level of world's best practice.	O&M Restructure	2.58	0.79	129	2.53	0.80
6a	The recent O&M Restructure has been well planned.	O&M Restructure	2.53	0.80	139	2.35	0.78
6b	The recent O&M Restructure has been well communicated.	O&M Restructure	2.52	0.76	153	2.40	0.84
6c	The recent O&M Restructure has been well implemented.	O&M Restructure	2.13	0.74	137	1.91	0.73
6d	The recent O&M restructure has been generally successful.	O&M Restructure	2.25	0.76	127	2.14	0.78
14	Are the new O&M processes and work practices successful in your section where they are deployed?	O&M Restructure	1.76	0.43	58	1.60	0.49
2	Supervisors are too task oriented to the detriment of employees. (Disagree)	Management	2.38	0.80	133	2.12	0.73
4	In my opinion, management and employees share common goals to work towards the same future.	Management	2.45	0.86	160	2.48	0.84
7a	In my opinion, my branch management is capable of leading our business unit through the changing environment.	Management	2.58	0.91	151	2.65	0.98
7b	In my opinion, my supervisor is capable of leading our business unit through the changing environment.	Management	2.95	0.84	162	2.95	0.94
10a	My supervisor advises me in advance of changes that will affect my job.	Management	2.91	0.87	172	2.79	0.90
10b	My supervisor advises me in advance of the rationale behind the change that will affect my job.	Management	2.78	0.96	167	2.67	0.95

Note. Total number of returned surveys was 188 (disk) and 201 (paper).

All items are copyrighted by International Survey Research LLC.

The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; “?” responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
5a	With regard to the communication you receive from management, it is usually timely.	Communication	2.55	0.74	169	2.52	0.75	172
5b	With regard to the communication you receive from management, it is usually accurate.	Communication	2.76	0.67	154	2.82	0.71	153
8a	With regard to the communication you receive from the Unions, it is usually timely.	Communication	2.65	0.78	141	2.56	0.83	143
8b	With regard to the communication you receive from the Unions, it is usually accurate.	Communication	2.82	0.74	134	2.75	0.77	134
15	How would you rate the information communicated via the monthly Team Briefing process?	Communication	3.09	0.81	186	2.90	0.93	195
3	In my opinion, the people I work with are complying with the standard procedures and work instructions.	Standardization	2.94	0.70	174	2.90	0.72	175
9a	I am adequately informed about new standard procedures and work instructions.	Standardization	2.86	0.81	174	2.74	0.80	171
9b	I am adequately informed about changes to standard procedures and work instructions.	Standardization	2.78	0.83	169	2.69	0.86	164
11a	The standardized processes have simplified my work output and performance.	Standardization	2.38	0.90	133	2.45	0.77	120
11b	The standardized processes have improved my work output and performance.	Standardization	2.31	0.92	123	2.38	0.81	121
16a	How important is recognition of employee's performance on improving morale with the people you work with on a day-to-day basis?	Job Satisfaction	4.57	0.52	187	4.50	0.63	200

Note. Total number of returned surveys was 188 (disk) and 201 (paper). All items are copyrighted by International Survey Research LLC.

The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; "7" responses were excluded.

Item Number	Survey Item	Disk			Paper		
		Category	M	SD	n	M	SD
16b	How important is valuing the needs of individuals in a changing environment on improving morale with the people you work with on a day-to-day basis?	Job Satisfaction	4.42	0.59	186	4.38	0.60
16c	How important is laid out individual career paths on improving morale with the people you work with on a day-to-day basis?	Job Satisfaction	3.98	0.89	184	4.04	0.85
16d	How important is communication about the pace of change within our business unit on improving morale with the people you work with on a day-to-day basis?	Job Satisfaction	4.29	0.68	187	4.22	0.75

Note. Total number of returned surveys was 188 (disk) and 201 (paper). All items are copyrighted by International Survey Research LLC. The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; “?” responses were excluded.

Appendix B7

Study 1: Number of Valid and Invalid Responses and the Percentage of Completed Items

Item Number	Survey Item	Category	Disk		Paper	
			Valid	% out of 188	Valid	% out of 201
1	The result of the new restructure will improve our business to the level of world's best practice.	O&M Restructure	188	100	199	99
2	Supervisors are too task oriented to the detriment of employees. (Disagree)	Management	187	99.4	199	99
3	In my opinion, the people I work with are complying with the standard procedures and work instructions.	Standardization	186	98.9	201	100
4	In my opinion, management and employees share common goals to work towards the same future.	Management	186	98.9	200	99.5
5a	With regard to the communication you receive from management, it is usually timely.	Communication	187	99.4	201	100
5b	With regard to the communication you receive from management, it is usually accurate.	Communication	187	99.4	199	99
6a	The recent O&M Restructure has been well planned.	O&M Restructure	186	98.9	199	99
6b	The recent O&M Restructure has been well communicated.	O&M Restructure	186	98.9	199	99
6c	The recent O&M Restructure has been well implemented.	O&M Restructure	186	98.9	199	99
6d	The recent O&M restructure has been generally successful.	O&M Restructure	187	99.4	200	99.5
7a	In my opinion, my branch management is capable of leading our business unit through the changing environment.	Management	186	98.9	201	100
7b	In my opinion, my supervisor is capable of leading our business unit through the changing environment.	Management	185	98.4	200	99.5

Note. Total number of returned surveys was 188 (disk) and 201 (paper).

All items are copyrighted by International Survey Research LLC.

The column labeled Missing indicates the number of respondents who did not answer the item.

Item Number	Survey Item	Category	Disk			Paper		
			Valid	% out of 188	Missing	Valid	% out of 201	Missing
8a	With regard to the communication you receive from the Unions, it is usually timely.	Communication	186	98.9	2	200	99.5	1
8b	With regard to the communication you receive from the Unions, it is usually accurate.	Communication	186	98.9	2	200	99.5	1
9a	I am adequately informed about new standard procedures and work instructions.	Standardization	187	99.4	1	200	99.5	1
9b	I am adequately informed about changes to standard procedures and work instructions.	Standardization	187	99.4	1	200	99.5	1
10a	My supervisor advises me in advance of changes that will affect my job.	Management	187	99.4	1	200	99.5	1
10b	My supervisor advises me in advance of the rationale behind the change that will affect my job.	Management	187	99.4	1	200	99.5	1
11a	The standardized processes have simplified my work output and performance.	Standardization	187	99.4	1	198	98.5	3
11b	The standardized processes have improved my work output and performance.	Standardization	187	99.4	1	198	98.5	3
14	Are the new O&M processes and work practices successful in your section where they are deployed?	O&M Restructure	187	99.4	1	199	99	2
15	How would you rate the information communicated via the monthly Team Briefing process?	Communication	187	99.4	1	200	99.5	1
16a	How important is recognition of employee's performance on improving morale with the people you work with on a day-to-day basis?	Job Satisfaction	187	99.4	1	200	99.5	1

Note. Total number of returned surveys was 188 (disk) and 201 (paper).

All items are copyrighted by International Survey Research LLC.

The column labeled Missing indicates the number of respondents who did not answer the item.

Item Number	Survey Item	Category	Disk		Paper	
			Valid	% out of 188	Valid	% out of 201
16b	How important is valuing the needs of individuals in a changing environment on improving morale with the people you work with on a day-to-day basis?	Job Satisfaction	186	98.9	199	99
16c	How important is laid out individual career paths on improving morale with the people you work with on a day-to-day basis?	Job Satisfaction	187	99.4	198	98.5
16d	How important is communication about the pace of change within our business unit on improving morale with the people you work with on a day-to-day basis?	Job Satisfaction	187	99.4	199	99

Note. Total number of returned surveys was 188 (disk) and 201 (paper).
All items are copyrighted by International Survey Research LLC.

The column labeled Missing indicates the number of respondents who did not answer the item.

Appendix B8

Study 1: Employee Verbatim Written Comments

Open-ended statement: We would welcome any thoughts you might have about this electronic version or how it has been implemented.

The following 43 comments were evaluated as positive thoughts regarding the computer version:

"Get rid of the paper version for next time."

"This electronic version is very efficient. It is much quicker to fill in than the paper version."

"Electronic Survey system works well. Ensure further investment and maintenance of Digital Performance Monitoring System (DPMS)."

"Works well."

"Very good, easy to use and much faster to fill in than the paper copy. Program runs a little slow on my PC, maybe I need a faster PC."

"This is much easier to complete than the paper survey. Much prefer the electronic version."

"It worked well. The electronic version is better than the hard copy version."

"It is much quicker to complete the survey in it's electronic form. Does this encourage you to supply further surveys in this form [Y] [N] ?"

"This method is quick and easy to complete. It would be productive if all surveys were conducted in this manner."

"The electronic version is less wasteful and as easily (if not easier) to complete - I prefer the electronic version."

"Excellent, why can't the entire survey be done this way?"

"Very good format! Very easy to use. All command type steps are clearly laid out."

"The electronic format is a great improvement on paper based questionnaires, the next obvious step is to transmit the data obtained from the questionnaires via Email (or similar) to its destination."

"Well presented. Easy to complete. Recommended for future surveys."

"This is definitely better than the paper format."

"It is very good, quick, simple and easy to use. Clearly laid out. It is about time something like this was developed."

"It was all right."

"Excellent means of doing survey."

"I think the electronic version is much quicker and simpler to use. Good idea...."

"Appreciative of the electronic version for the survey."

"Fantastic!!"

"Better method than using pencil and paper version, well done."

"I think all future EOS (Employee Opinion Surveys) should be in this format - Excellent."

"I found this version easy to use."

"Better than paper copy."

"Why not do the whole survey this way?"

"Great idea, you do not have to spend half a day looking for a 2B pencil."

"Electronic survey a good idea. Quicker to fill out than paper version."

"It is simple to use."

"Yes, I believe that this format is OK for a office based staff. We all use computers 7 hours (at least) a day."

"All surveys should in future be in this format."

"I think the electronic version is great. Hope the format can be utilized for all future surveys. To me this type of format is more inviting and as such, I am tending to put more thought to my answers."

"This method definitely saves a lot of paper and is very easy to use."

"This is much better than the paper version!!"

"This survey was very user-friendly and easy to fill out."

"1. Much easier to change responses. 2. I generally found this survey very friendly and easy to use. 3. Well suited for office based staff like myself, who have access to a PC. I use a PC every day, there is one sitting on my desk. It was no problem at all for me to find time to do this survey."

"Much better than the paper version."

"Good idea."

"Three advantages:—saves trees —easier to correct a wrong answer —more interesting."

"This method is quicker and easier than the paper means. Implementation was OK - plenty of warning, etc. Like to see it used in future surveys."

"Much better than paper."

"The electronic version is easier to complete. It took me a matter of 10 minutes instead of the 35 for the Company paper version. That is important because I have large demands upon my time."

"This electronic version is quite user friendly."

The following 12 comments relate to the presentation and execution of the computer supplement:

"It would be a good idea to be able to change the font size, so you can see it."

"For the next electronic survey, make sure the unsaved info is not lost when you select EXIT because the floppy disk was write protected. This is the ONLY way to do surveys."

"Would help to have an indication of how many questions there are in total."

"Make the bloody font bigger. I'm thinking about placing a claim for eye strain."

"Well presented, but the print is small and a little hard to read."

"This version seems to have worked well enough, but it is so resource hungry that I had to shut down all other applications in order for the screens to appear properly."

"At least half the PC's I attempted to run this on had trouble with the display, with lines being corrupted, etc. The concept is good, however."

"A possible problem with this method of survey may be the intrinsic lack of privacy while completing each screen. That is, others can walk up from behind you and read how you have responded to a particular question; or from seated positions nearby in view of the screen."

"Help key does not seem to work. 1st question assumes you have taken part in the change. Going Prev & next on screens sometimes produced corrupted picture. Question 15 is deceptive in regards to the scoring line (biased response/donkey vote). Overall, much preferred to than pencil survey."

"Generally good. Instructions should be made clear that choosing EXIT on a partly completed form does save responses. Re-entry to a partly

completed form should be at first uncompleted question. Relationship between paper form and electronic form is unclear. The coding questions are repeated which may lead to the belief that all questions are repeated and the main survey may not be completed."

"Worked fine for me. Only Q15 (where there were 6 responses over two lines) caused any confusion. It might have been better to keep the whole Likert scale on the next line down. Q17 with its 6 choices over three lines is a different matter and caused no problems. The ability to go forwards and backwards and to correct responses were important and useful. There is no indication of how far into the survey you have progressed nor how far to go - especially if you are interrupted and you have to decide if to ask your caller to wait or to put the survey aside to handle something more urgent. It is really easy with paper versions."

"This is an excellent way of presenting surveys. It would have been a good idea if the entire survey was on this medium instead of the paper survey and disk supplement. In addition to being very easy to fill out, if errors were made along the way, there was no effort to make a change. Any change in decision on the paper version is more effort to record and is likely to be left "as is" out of unwillingness to go to the trouble to change it. This medium also gives plenty of room for written comment with no room for misinterpretation because of poor handwriting, etc."

The following nine comments relate to the distribution and access of the computer supplement:

"The electronic version is a very good idea and much preferred to the paper version. Perhaps any future surveys that don't require anonymity could be E-mailed to improve the efficiency even more (or perhaps this could be E-mailed to a destination that removes the senders details?!)"

"There is no doubt that this is the most efficient way of conducting a survey provided all participants have access to a computer."

"This mode is a good idea. Perhaps a better method would be via WAN/LAN distribution."

"Why not use e-mail? It would save on postage and disk costs."

"The electronic version is great - very easy to use - faster to use - easier to make changes. Although everyone should use this method, it has to be acknowledged that some staff may not have access to a computer running Windows. All our software should be this good. I would strongly recommend using this method for the next companywide survey."

"This is a good system but, unfortunately, cannot be used by all due to lack of PC's or lack of Windows environment."

"I suggest that you use the MS-Mail facility to provide network access as a significant number of staff now are connected, and reduce distribution costs for future surveys by automation. It should be a simple design to ensure that the contents are anonymous."

"I think that this electronic EOS is very good and should increase the hit rate of the survey. The next step should be that the survey is e-mailed to staff, starts with the double click and is returned via E-mail when the 'exit' is clicked."

"Very quick and easy but not everyone has Windows on a PC."

The following eight comments relate to the content of the supplement:

"Where are the rest of the questions?"

"In talking to other staff in my area many seem unaware that this supplement is different to the paper EOS."

*"I care far more about the consequences of direction the company is heading than I do about the format and delivery of the *&@\$#% survey. The survey is much more efficient this way. The survey could be delivered by floppy and auto e-mailed back."*

"Q8: Not prepared to answer. Q13: Sometimes button please."

"If only the written version of the EOS was as short of this!"

"This is great very easy to follow, and more efficient than the paper version. Pity all the questions were not on this system."

"I think that the electronic version is an excellent idea. However, there was no information relating to it either in the Employee Opinion Survey envelope or in the [Business Unit] Supplement floppy disk envelope. I was not sure what it was about until I had completed. I wasn't even sure if it was merely an electronic version of the EOS simply duplicating the same questions."

"This is an excellent means of performing the survey. I would have appreciated the opportunity to comment against some of the points selected to provide clarity but appreciate this would make the summarizing of the survey very difficult. "

Although unrelated to the request for thoughts regarding the electronic version of the supplement, there were 18 comments made by respondents completing the computer supplement. The author as chosen not to list those comments as part of this research to protect the anonymity of the section and company.

Appendix C1

Study 2: 1996 Employee Opinion Survey - Paper Version

Following is a photocopy of the paper version of the 1996 Employee Opinion Survey administered for Study 2. Items in this Employee Opinion Survey addressed the following topics: Work Organization, Operating Efficiency, Management, Supervision, Working Relationships, Communication, Training and Development, Performance Appraisal, Career Advancement, Pay and Fringe Benefits, Working Conditions, Job Security, Personnel Policies and Procedures, Job Satisfaction, Company Identification and Image, Quality, Customer Focus, Company Values, Participative Approach, Work/Family/Diversity, and Reaction to the Survey. Please note that this questionnaire is British spelling and any text or terminology which identifies the organization has been eliminated. Of the 183 items in this questionnaire, items 81c, 84, 85, 86a-i, 87a, 89a-k, 90, 91, 92a-g, 94, 96, 97a-h, 98, and 99a-d were eliminated from most analyses. All items contained in this respective questionnaire are copyrighted by International Survey Research ^{LLC}.

INTRODUCTION

The 1996 Survey represents an opportunity for you to express your views on a variety of topics relating to the strengths and weaknesses of the company, and to communicate those views to management. The questions in the survey are based upon areas requiring improvement that were identified in the last Employee Opinion Survey (EOS). Special attention was paid to these areas; we would like to know if these areas have improved. In order for management to focus its resources and actions on the important issues facing staff in their jobs, we ask you to please respond candidly to the questionnaire. Your individual opinions are strictly confidential and anonymous.

- The survey results will be tabulated by International Survey Research Corporation (ISR) of
- ISR's agreement with is to report only statistical summaries of results for groups of 20 or more respondents. If you work in an area with fewer than 20 employees your responses will either be combined with another area or aggregated into your business unit/company support unit or line of business.
- No individual responses will be reported and no attempt will be made to identify individual respondents.
- No one in will see your completed questionnaire.

This questionnaire is divided into three sections:

I. CODING SECTION

In this section you are asked to provide some information about yourself and your position within the organisation. This information is requested because persons from different parts of the organisation and those with different levels of responsibility may have varying opinions. ISR will use the coding section to break down the results in a meaningful way while preserving the anonymity of all respondents.

II. OPINION SECTION

In this section you are asked to express your views regarding a number of issues by filling in the appropriate bubble. There are no right or wrong answers. We simply ask you for your opinion, based on your experience and perception of the way operates. Please read the list of definitions for key words used in the survey. Because we are all different, some of the items may not be worded exactly as you would wish. However, please read each statement carefully and indicate the response that most closely reflects your view. In most cases, a "?", "Don't Know," or "No Opinion" response is provided if you cannot decide about a statement or if it does not apply to you.

GENERAL INSTRUCTIONS

Because this survey is designed to be scored by machine, you must indicate your response for each statement by filling in the appropriate bubble. Carefully observe these requirements:

- Use a 2B or HB pencil.
 - Make heavy dark marks that entirely fill the bubble.
 - Erase cleanly any responses you wish to change.
 - Mark only one response for each statement.
- Multiple marks cannot be counted.

EXAMPLES

Please MARK
LIKE THIS:

NOT LIKE THIS:

III. COMMENT SECTION

This section offers you an opportunity to write suggestions you think should be brought to management's attention.

L CODING SECTION

The following coding questions are necessary to maximise the usefulness of your survey responses. There may be varying opinions about from employees from different business units/company support units, etc. Breaking down the results for these groups will enable management to understand and address these differences of opinion. To protect anonymity, under no circumstances will these coding questions be combined to produce results for groups of less than 20 respondents.

1. In what part of do you work? Please check the special coding insert for your Business Unit/Company Support Unit or Line of Business. Find the correct code, then write the code in the box across the top and darken the corresponding bubbles below. If you are unsure of your Business Unit/Company Support Unit or Line of Business, please ask your supervisor or an EOS Co-ordinator. You can also refer to the enclosed organisation chart.

2. What is your designated category? (Please read the entire list and darken the bubble for only one response.)

- ☐ Executive
- ☐ Manager
- ☐ Administrative Staff
- ☐ Administrative Staff
- ☐ Tradesperson/Artisan
- ☐ Building Services
- ☐ Communications Officer
- ☐ Draftsperson
- ☐ Media Relations
- ☐ Food Service
- ☐ Information Technologist

2. (Continued)

Material Distribution

—

Operator Services

—

Professional

—

Sales Force

—

Technical

—

Production

—

3. Where are you located? (Please read the entire list and mark only one response.)

—

—

—

—

—

4. Are you accountable for the work output of other people, i.e., do you have one or more employees reporting to you?

Yes

No

—

The following coding questions are VOLUNTARY. We do request your cooperation, however, for the information will allow us to compare the results of men and women, people with different lengths of service, etc.

5. What is your gender?

Male

Female

—

6. How long have you worked for (Include your service with any time with a subsidiary company as part of your total length of service.) (Please mark only one response.)

☐ Less than 1 year	☐ 10 years but less than 15 years
☐ 1 year but less than 3 years	☐ 15 years but less than 20 years
☐ 3 years but less than 5 years	☐ 20 years but less than 30 years
☐ 5 years but less than 10 years	☐ 30 years or more

7. What is your age?

☐ 19 years or less	☐ 40 years but less than 45 years
☐ 20 years but less than 25 years	☐ 45 years but less than 50 years
☐ 25 years but less than 30 years	☐ 50 years but less than 55 years
☐ 30 years but less than 35 years	☐ 55 years but less than 60 years
☐ 35 years but less than 40 years	☐ 60 years or more

8. Do any of the following equal opportunity target groups apply? (Please mark all that apply.)

☐	
☐	
☐	
☐	
☐	None of the above

II. OPINION SECTION

DEFINITIONS

THE FOLLOWING DEFINITIONS WILL BE HELPFUL IN COMPLETING THE QUESTIONNAIRE.

or "COMPANY" refers to Corporation Limited as a whole and any participating subsidiary company

"BUSINESS UNIT" refers to distinct organisational units within business groups that in general have large workforces typically in the hundreds or thousands and report directly to the head of the business group.

If you are unsure of the type of unit you work in, refer to the organisation chart where business units and other types of organisational units are colour coded, or ask your supervisor or an EOS Co-ordinator.

"COMPANY SUPPORT UNIT" refers to each one of the distinct organisational units within company support groups that report directly to the head of the company support group.

"LINE OF BUSINESS" refers to distinct organisational entities within a business unit that have sizeable workforces which may be comparable in size to some business units and report directly to the head of the business unit.

"BRANCH" refers to the organisation where you work within your business unit, company support unit, or line of business.

"SECTION" refers to your work unit within a branch and the people you work with on a day-to-day basis.

"SUPERVISOR" refers to the person to whom you immediately and most often report, regardless of his or her title or level.

"BRANCH MANAGEMENT" refers to the management team of your branch and equates to your branch manager and his or her direct reports.

"LINE OF BUSINESS MANAGEMENT" refers to the management team in your line of business and equates to the head of the line of business and his or her direct reports.

"BUSINESS UNIT" or "COMPANY SUPPORT UNIT MANAGEMENT" refers to the management team in your business unit or company support unit and equates to the head of the business unit or company support unit and his or her direct reports.

or "COMPANY MANAGEMENT" refers to the top level management team

"THE PARTICIPATIVE APPROACH"

In most cases, a "?," "Don't Know," or "No Opinion" response is provided if you cannot decide about a statement or if it does not apply to you.

Reviewing the colour-coded organisation chart may be helpful in completing the questionnaire.

	Agree	Tend to Agree	?	Tend to Disagree	Disagree
1. I have a very clear idea of my job responsibilities _____					
2. My branch operates efficiently. _____					
3. _____ management is interested in the well-being of its employees _____					
4. My supervisor seldom gives me recognition for work done well _____					
5. The people I work with usually get along well together _____					
6. Little effort is made to obtain the opinions and thoughts/ideas of employees in this company _____					
7. The training I have received has adequately prepared me for the work I do _____					
8. I understand how my performance on the job is evaluated _____					
9. There is adequate opportunity for employees to learn about available job openings in _____					
10. From what I hear, our pay is as good as or better than the pay in other _____ organisations _____					
11. Overall, the physical working conditions at my location are satisfactory (e.g., ventilation, temperature, space to work) _____					
12. I can be sure of having a job with _____ as long as I perform well _____					
13. We receive adequate information on conditions of service _____					
14. I am doing something I consider really worthwhile in my job _____					
15. The longer you work for _____ the more you feel a part of the company _____					
16. The quality of work done in my branch is excellent _____					
17. I have enough flexibility in my job to do what is necessary to provide good customer service _____					
18. The decisions company management makes concerning employees are usually fair _____					
19. I believe the relationship between _____ and the Unions has improved since the agreement was reached on the Participative Approach _____					
20. _____ provides a work environment free of sexual harassment _____					

	Agree	Tend to Agree	?	Tend to Disagree	Disagree	
21. Unplanned absences have a negative effect on the overall productivity of my branch.....	1	1			1	1
22. My branch is making appropriate use of technology to improve its operating efficiency.....	1	1				1
23. My supervisor shows favouritism to some employees in my section.....	1	1		1	1	1
24. does an excellent job of keeping employees informed about matters affecting us.....	1	1		1	1	1
25. My branch management generally understands the problems we face in our jobs.....	1	1	1		1	1
26. I think my workload is excessive.....	1	1	1	1	1	1
27. Employees are treated with respect in my branch, regardless of their job.....		1	1	1	1	1
28. For the work I do, I am very much underpaid.....	1	1	1	1	1	1
29. Corrective action is usually taken when unsafe conditions are brought to management's attention.....	1	1	1	1	1	1
30. I believe I will be able to contribute to the success of the Participative Approach in my part of the business.....	1	1	1	1	1	1
31. My branch management is considerate regarding work and family issues.....	1	1	1	1	1	1
32. My supervisor makes clear-cut decisions.....	1	1	1	1	1	1
33. I would rather report myself "sick" than state one of my dependents was ill.....	1	1	1	1	1	1
34. My work gives me a sense of personal accomplishment.....	1	1	1	1	1	1
35. The work in my branch is well organised.....	1	1	1	1	1	1
36. My supervisor is considerate of my commitments/family responsibilities, etc., outside of work.....	1	1	1	1	1	1
37. In my opinion, employees new to my branch receive adequate training for their jobs.....	1	1	1	1	1	1
38. I think my performance on the job is evaluated fairly.....	1	1	1	1	1	1
39. I would recommend as a good place to work.....	1	1	1	1	1	1
40. I would feel free to approach my supervisor and discuss issues of racism, sexism, or other biases held by other employees.....	1	1	1	1	1	1
41. Too much emphasis is placed on the quantity of work produced, rather than the quality.....	1	1	1	1	1	1

	Agree	Tend to Agree	?	Tend to Disagree	Disagree
42. I have trouble getting my work done because priorities or work objectives are changed so frequently _____	1	2	3	4	5
43. My supervisor gives me regular feedback on my performance _____	1	2	3	4	5
44. I believe my promotion prospects are good _____	1	2	3	4	5
45. Compared with other people working in _____ I think I am paid fairly _____	1	2	3	4	5
46. _____ is flexible in its practices and policies regarding work and family issues _____	1	2	3	4	5
47. Current cost-reduction efforts position _____ to be a more efficient and competitive company in the future _____	1	2	3	4	5
48. _____ management is honest and straightforward in its dealings with employees _____	1	2	3	4	5
49. We usually hear about important matters first through rumours _____	1	2	3	4	5
50. I think the job I perform is considered important in _____	1	2	3	4	5
51. From what I know, Human Resources policies (e.g., training, performance development reviews, promotions) are administered consistently throughout _____	1	2	3	4	5
52. _____ fringe benefits _____ fit my needs _____	1	2	3	4	5
53. I believe my branch management has adopted a more participative style _____	1	2	3	4	5
54. In my opinion, too much time is wasted in my branch _____	1	2	3	4	5
55. My supervisor does a good job of building teamwork _____	1	2	3	4	5
56. I have the opportunity for input before changes are made that will affect my job _____	1	2	3	4	5
57. There is usually sufficient staff in my branch to handle the normal workload _____	1	2	3	4	5
58. _____ usually promotes qualified company people before hiring people from outside of the company _____	1	2	3	4	5
59. The relations between employees of different races or _____ are usually good _____	1	2	3	4	5
60. I often don't believe what company management says _____	1	2	3	4	5

	Agree	Tend to Agree	?	Tend to Disagree	Disagree	
61. I feel _____ management supports equal opportunity for all employees _____	1	2	3	4	5	6
62. I am often bothered by excessive pressure in my job _____	1	2	3	4	5	6
63. I have already been given the opportunity to contribute to a participative decision-making process as a part of the new Participative Approach between _____ management, staff, and the Unions _____	1	2	3	4	5	6
64. From what I hear, our fringe benefits _____ are as good as or better than the fringe benefits in other organisations _____	1	2	3	4	5	6
65. _____ is too lenient with employees who perform poorly _____	1	2	3	4	5	6
66. _____ computerised information systems provide information in a useful format _____	1	2	3	4	5	6
67. My work area is a safe place to work _____	1	2	3	4	5	6
68. Morale in my branch is generally high _____	1	2	3	4	5	6
69. _____ commitment to quality is apparent in what we do on a day-to-day basis _____	1	2	3	4	5	6
70. There is good cooperation between my branch and other branches in my: (Please answer each item.)						
a. Line of business _____	1	2	3	4	5	6
b. Business unit or company support unit _____	1	2	3	4	5	6
71. The following levels of management are generally respected by employees: (Please answer each item.)						
a. Branch management _____	1	2	3	4	5	6
b. My line of business management _____	1	2	3	4	5	6
c. My business unit or company support unit management _____	1	2	3	4	5	6
d. _____ management _____	1	2	3	4	5	6
72. Regarding suggestions for change from employees, my supervisor is usually: (Please answer each item.)						
a. Receptive (willing to listen) _____	1	2	3	4	5	6
b. Responsive (takes action on suggestions) _____	1	2	3	4	5	6

		Agree	Tend to Agree	?	Tend to Disagree	Disagree
73.	I am frequently worried about the following: (Please answer each item.)					
—	a. Being made redundant	1		2		3
—	b. The future of my branch		1	2	3	4
—	c. The future of my line of business	1	2	3	4	5
—	d. The future of my business unit or company support unit					1
—	e. The future of		1	2		3
74.	 is highly regarded by: (Please answer each item.)					
—	a. The general public	1	2	3	4	5
—	b. Its customers	1		2		3
—	c. Its employees	1	2	3	4	5
75.	There is sufficient contact between: (Please answer each item.)					
—	a. Branch management and employees	1	2	3	4	5
—	b. My line of business management and employees	1	2	3		4
—	c. My business unit or company support unit management and employees			1	2	3
—	d. management and employees		1	2	3	4
76.	 too often sacrifices the quality of our products/services in order to: (Please answer each item.)					
—	a. Cut costs	1	2	3	4	5
—	b. Meet schedules or deadlines	1	2	3	4	5
77.	My branch: (Please answer each item.)					
—	a. Constantly looks for better ways to service its internal/external customers	1	2	3	4	5
—	b. Actively seeks to understand internal/external customer requirements	1	2	3	4	5
—	c. Is responsive to internal/external customer needs	1		2	3	4
—	d. Is easy to do business with	1		2	3	4

PLEASE NOTE THAT THE FOLLOWING ITEMS HAVE SEVERAL DIFFERENT RESPONSE SCALES.

84.

— Yes — No

IF YOU RESPONDED "YES" TO QUESTION 84, PLEASE ANSWER QUESTION 85. OTHERWISE, PROCEED TO QUESTION 86.

85.

— _____ : : :

Changed for the Better	Stayed the Same, Generally Good	Stayed the Same, Generally Poor	Changed for the Worse	No Opinion
------------------------------	---	---	-----------------------------	---------------

86.

Yes No

(Please answer each item.)

— a. _____

— b. _____

— c. _____

— d. _____

— e. _____

— f. _____

— g. _____

— h. _____

— i. _____

		<u>Relevant</u>	<u>Some- what Relevant</u>	<u>Irrelevant</u>	<u>No Opinion</u>
89.	(Please answer each item.)				
☐	a. _____				
☐	b. _____				
☐	c. _____				
☐	d. _____				
☐	e. _____				
☐	f. _____				
☐	g. _____				
☐	h. _____				
☐	i. _____				
☐	j. _____				
☐	k. _____				

90.

☐ Yes ☐ No

IF YOU RESPONDED "YES" TO QUESTION 90, PLEASE ANSWER QUESTION 91. OTHERWISE, PROCEED TO QUESTION 92.

	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
91.					
☐	_____				

92.

(Please answer each item.)

a.

b.

c.

d.

c.

1.

g.

93. At the present time, are you seriously considering leaving for any reason?

Yes	No	Don't Know
-----	----	------------

Yes

Na

Don't Know

94.

☒ **Yes**

No

95. Taking everything into account, how satisfied are you with _____ as a place to work? _____

Very Satisfied

Satisfied

Neither
Satisfied
nor Dis-
satisfied

Dis-
satisfied

Very Dis-
satisfied

96.

Change for the Better

**Stay
the
Same**

Change for the Worse

**No
Opinion**

	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>	
101. Filling in this survey is a good way to tell management what I think _____	-	-	-	-	-	==
102. I feel significant action has been taken as a result of the previous Surveys _____	-	-	-	-	-	==
103. As a result of the survey, I think _____ manage- ment will: (Please answer <i>each</i> item.)						
a. Carefully consider problems brought to its attention _____	-	-	-	-	-	==
b. Act on problems identified _____	-	-	-	-	-	==
c. Communicate decisions to employees _____	-	-	-	-	-	==

PLEASE PROCEED TO PAGE 19 TO WRITE COMMENTS TO

MANAGEMENT

III. COMMENT SECTION

Please print your comments in the space provided below. Do not sign your name. Your comments will be typed and reported anonymously. No one in _____ will see your handwritten comments. Provided below are some general topics to consider when making your comments. If possible, please identify the subject of your comment by placing the appropriate category topic number in the box beside your comment. Please use only one topic number for each comment.

1. Work Organisation	9. Career Advancement	16. Quality
2. Operating Efficiency	10. Pay & Fringe Benefits	17. Customer Focus
3. Management	11. Working Conditions	18. Values
4. Supervision	12. Job Security	19. Participative Approach
5. Working Relationships	13. Personnel Policies & Procedures	20. Work Family/Diversity
6. Communication	14. Job Satisfaction	21. Reaction to the Survey
7. Training & Development	15. Identification & Image	22. Other
8. Performance Development Review		

What ideas or suggestions would you like to bring to the attention of management?

[illegible]

THANK YOU FOR YOUR PARTICIPATION

PLEASE DO NOT WRITE ON THIS PAGE.

PLEASE DO NOT WRITE ON THIS PAGE.

Appendix C2

1996 Employee Opinion Survey - Disk Version

Following is a photocopy of the disk version of the 1996 Employee Opinion Survey administered for Study 2. The disk version is exactly the same as the paper version with the notable exception of the instructions for completion, (i.e., using a computer versus a pencil). Items in this Employee Opinion Survey, consistent with the paper version, addressed the following topics: Work Organization, Operating Efficiency, Management, Supervision, Working Relationships, Communication, Training and Development, Performance Appraisal, Career Advancement, Pay and Fringe Benefits, Working Conditions, Job Security, Personnel Policies and Procedures, Job Satisfaction, Company Identification and Image, Quality, Customer Focus, Company Values, Participative Approach, Work/Family/Diversity, and Reaction to the Survey. Please note that this questionnaire is British spelling and any text or terminology which identifies the organization has been eliminated. Of the 183 items in this questionnaire, items 81c, 84, 85, 86a-i, 87a, 89a-k, 90, 91, 92a-g, 94, 96, 97a-h, 98, and 99a-d were eliminated from most analyses. All items contained in this respective questionnaire are copyrighted by International Survey Research ^{LLC}.

INTRODUCTION

The 1996 Survey represents an opportunity for you to express your views on a variety of topics relating to to identify the strengths and weaknesses of the company, and to communicate those views to management. The questions in the survey are based upon areas requiring improvement that were identified in the last Employee Opinion Survey (EOS). Special attention was paid to these areas; we would like to know if these areas have improved. In order for management to focus its resources and actions on the important issues facing staff in their jobs, we ask you to please respond candidly to the questionnaire.

Your individual opinions are strictly confidential and anonymous.

*The survey results will be tabulated by International Survey Research Corporation (ISR) of

* ISR's agreement with is to report only statistical summaries of results for groups of 20 or more respondents. If you work in an area with fewer than 20 employees your responses will either be combined with another area or aggregated into your business unit

* No individual responses will be reported and no attempt will be made to identify individual respondents.

* No one in will see your completed questionnaire.

* If you decide to exit the survey prior to answering all of the questions, all of your responses will be saved. To finish, simply restart the program, locate your last answer and continue to complete the survey.

* When you have finished your survey, please place the disk in the postage-paid envelope provided and put it in the out-going mail. Should you have misplaced your envelope an address is provided at the end of the survey for you to return your disk.

Exit

Org Chart

Cancel

Next Page

This electronic questionnaire is divided into three sections:

I. CODING SECTION

In this section you are asked to provide some information about yourself and your position within the organisation. This information is requested because persons from different parts of the organisation and those with different levels of responsibility may have varying opinions. ISR will use the coding section to break down the results in a meaningful way while preserving the anonymity of all respondents.

To complete the coding section simply "click" the appropriate bubble with your mouse. Should you wish to change your answer, just click the new response and your previous answer will automatically be clicked off.

II. OPINION SECTION

In this section you are asked to express your views regarding a number of issues by clicking the appropriate response bubble with your mouse. Once again, should you wish to change your answer, simply click on a new response and your old answer will be clicked off. There are no right or wrong answers. We simply ask you for your opinion, based on your experience and perception of the way the organisation operates. Please read the list of definitions for key words used in the survey.

Additionally, an Organisation Chart is provided to assist you in completing the coding and opinion sections of the survey. To access the organisation chart click the Org Chart button at the bottom of your screen. To return to the survey, click the minus sign at the top left hand corner of your screen and select Close. This will return you to the survey.

Because we are all different, some of the items may not be worded exactly as you would wish. However, please read each statement carefully and indicate the response that most closely reflects your view.

In most cases, a "?," "Don't Know," or "No Opinion" response is provided if you cannot decide about a statement or if it does not apply to you.

Should you wish to test your mouse in responding to a question, the following item has been provided. Click the appropriate bubble to respond to the question. Should you wish to change your answer simply click on the new response.

Are you employed by ☐ Yes ☐ No

III. COMMENT SECTION

This section offers you an opportunity to type suggestions you think should be brought to management's attention.

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Prev. Page

Exit

Org Chart

Cancel

Next Page

File Help
[F1] [F2] [F3] [F4]

I. CODING SECTION

The following coding questions are necessary to maximise the usefulness of your survey responses. There may be varying opinions about from employees from different business units. Breaking down the results for these groups will enable management to understand and address these differences of opinion. To protect anonymity, under no circumstances will these coding questions be combined to produce results for groups of less than 20 respondents.

1. In what part of do you work?

Please read the entire list and select the correct response by clicking the appropriate bubble. If you are unsure what part of your work in, please refer to the organisation chart or ask your supervisor or an EOS coordinator. To access the organisation chart, click the Org Chart button at the bottom of your screen. To return to the survey, click the minus sign at the top left hand corner of your screen and select Close. This will return you to the survey.

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
---	---

Prev Page
Exit Sys Org Chart Cancel Next Page

File Help		
2. What is your designated category?		
☐ Executive	☐ Draftsperson	☐ Operator Services
☐ Manager		☐ Professional
☐ Administrative Staff	☐ Media Relations	☐ Sales Force
☐ Administrative Staff	☐ Food Service	☐ Technical
☐ Tradesperson/Artisan	☐ Information Technologist	
☐ Building Services	☐ Material Distribution	☐ Production
☐ Communications Officer		
3. Where are you located?		
☐	☐	☐
☐	☐	☐
☐	☐	☐
4. Are you accountable for the work output of other people? (i.e., do you have one or more employees reporting to you?)		
☐ Yes ☐ No		
Prev Page	With Exit	Org Chart
	Cancel	Next Page

<p>The following coding questions are VOLUNTARY. We do request your cooperation, however, for the information will allow us to compare the results of men and women, people with different lengths of service, etc.</p>				
<p>5. What is your gender? —</p> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> ☐ Male ☐ Female </div>				
<p>6. How long have you worked for —</p> <p style="font-size: small;">(Include your service with _____ and any time with a subsidiary company as part of your total length of service)</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> ☐ Less than 1 year ☐ 1 year but less than 3 years ☐ 3 years but less than 5 years </td> <td style="width: 33%; vertical-align: top;"> ☐ 5 years but less than 10 years ☐ 10 years but less than 15 years ☐ 15 years but less than 20 years </td> <td style="width: 33%; vertical-align: top;"> ☐ 20 years but less than 30 years ☐ 30 years or more </td> </tr> </table>		☐ Less than 1 year ☐ 1 year but less than 3 years ☐ 3 years but less than 5 years	☐ 5 years but less than 10 years ☐ 10 years but less than 15 years ☐ 15 years but less than 20 years	☐ 20 years but less than 30 years ☐ 30 years or more
☐ Less than 1 year ☐ 1 year but less than 3 years ☐ 3 years but less than 5 years	☐ 5 years but less than 10 years ☐ 10 years but less than 15 years ☐ 15 years but less than 20 years	☐ 20 years but less than 30 years ☐ 30 years or more		
<p>7. What is your age? —</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> ☐ 19 years or less ☐ 20 years but less than 25 years ☐ 25 years but less than 30 years ☐ 30 years but less than 35 years </td> <td style="width: 33%; vertical-align: top;"> ☐ 35 years but less than 40 years ☐ 40 years but less than 45 years ☐ 45 years but less than 50 years </td> <td style="width: 33%; vertical-align: top;"> ☐ 50 years but less than 55 years ☐ 55 years but less than 60 years ☐ 60 years or more </td> </tr> </table>		☐ 19 years or less ☐ 20 years but less than 25 years ☐ 25 years but less than 30 years ☐ 30 years but less than 35 years	☐ 35 years but less than 40 years ☐ 40 years but less than 45 years ☐ 45 years but less than 50 years	☐ 50 years but less than 55 years ☐ 55 years but less than 60 years ☐ 60 years or more
☐ 19 years or less ☐ 20 years but less than 25 years ☐ 25 years but less than 30 years ☐ 30 years but less than 35 years	☐ 35 years but less than 40 years ☐ 40 years but less than 45 years ☐ 45 years but less than 50 years	☐ 50 years but less than 55 years ☐ 55 years but less than 60 years ☐ 60 years or more		
<p>8. Do any of the following equal opportunity groups apply? (Please mark all that apply) —</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> ☐ 1. ☐ 2. </td> <td style="width: 50%; vertical-align: top;"> ☐ 3. ☐ 4. None of the above </td> </tr> </table>		☐ 1. ☐ 2.	☐ 3. ☐ 4. None of the above	
☐ 1. ☐ 2.	☐ 3. ☐ 4. None of the above			

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II. OPINION SECTION

DEFINITIONS

THE FOLLOWING DEFINITIONS WILL BE HELPFUL IN COMPLETING THE QUESTIONNAIRE. SHOULD YOU WISH TO REVIEW THE DEFINITIONS AS YOU COMPLETE THE SURVEY, CLICK THE HELP MENU AT THE TOP LEFT HAND CORNER OF YOUR SCREEN THEN SELECT CONTENTS AND DEFINITIONS.

or "COMPANY" refers to Corporation Limited as a whole and any participating subsidiary company

"BUSINESS UNIT" refers to distinct organisational units within business groups that in general have large workforces typically in the hundreds or thousands and report directly to the head of the business group.

If you are unsure of the type of unit you work in, refer to the organisation chart where business units and other types of organisational units are colour coded, or ask your supervisor or an EOS Co-ordinator. To access the organisation chart, click the Org Chart button at the bottom of your screen. To return to the survey, click the minus sign at the top left hand corner of your screen and select Close. This will return you to the survey.

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<p>"COMPANY SUPPORT UNIT" refers to each one of the distinct organisational units within company support groups that report directly to the head of the company support group.</p>			
<p>"LINE OF BUSINESS" refers to distinct organisational entities within a business unit that have sizeable workforces which may be comparable in size to some business units and report directly to the head of the business unit.</p>			
<p>Note that lines of business do not appear on the organisation chart as the chart only reflects the top level organisation structure of</p>			
<p>"BRANCH" refers to the organisation where you work within your business unit, company support unit, or line of business.</p>			
<p>"SECTION" refers to your work unit within a branch and the people you work with on a day-to-day basis.</p>			
<p>"SUPERVISOR" refers to the person to whom you immediately and most often report, regardless of his or her title or level.</p>			
<p>"BRANCH MANAGEMENT" refers to the management team of your branch and equates to your branch manager and his or her direct reports.</p>			
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"LINE OF BUSINESS MANAGEMENT" refers to the management team in your line of business and equates to the head of the line of business and his or her direct reports.

"BUSINESS UNIT" or "COMPANY SUPPORT UNIT MANAGEMENT" refers to the management team in your business unit or company support unit and equates to the head of the business unit or company support unit and his or her direct reports.

or "COMPANY MANAGEMENT" refers to the top level management team

"THE PARTICIPATIVE APPROACH"

In most cases a "?," "Don't Know," or a "No Opinion" response is provided if you cannot decide about a statement or if it does not apply to you.

Reviewing the colour-coded organisation chart may be helpful in completing the questionnaire. To access the organisation chart, click the Org Chart button at the bottom of your screen. To return to the survey, click the minus sign at the top left hand corner of your screen and select Close. This will return you to the survey.

	Agree	Tend to Agree	?	Tend to Disagree	Disagree
1. I have a very clear idea of my job responsibilities	☐	☐	☐	☐	☐
2. My branch operates efficiently	☐	☐	☐	☐	☐
3. management is interested in the well-being of its employees	☐	☐	☐	☐	☐
4. My supervisor seldom gives me recognition for work done well	☐	☐	☐	☐	☐
5. The people I work with usually get along well together	☐	☐	☐	☐	☐
6. Little effort is made to obtain the opinions and thoughts/ideas of employees in this company	☐	☐	☐	☐	☐
7. The training I have received has adequately prepared me for the work I do	☐	☐	☐	☐	☐
8. I understand how my performance on the job is evaluated	☐	☐	☐	☐	☐
9. There is adequate opportunity for employees to learn about available job openings in	☐	☐	☐	☐	☐

	Agree	Tend to Agree	?	Tend to Disagree	Disagree
10. From what I hear, our pay is as good as or better than the pay in other organisations	☐	☐	☐	☐	☐
11. Overall, the physical working conditions at my location are satisfactory (e.g., ventilation, temperature, space to work)	☐	☐	☐	☐	☐
12. I can be sure of having a job with as long as I perform well	☐	☐	☐	☐	☐
13. We receive adequate information on conditions of service	☐	☐	☐	☐	☐
14. I am doing something I consider really worthwhile in my job	☐	☐	☐	☐	☐
15. The longer you work for , the more you feel a part of the company	☐	☐	☐	☐	☐
16. The quality of work done in my branch is excellent	☐	☐	☐	☐	☐
17. I have enough flexibility in my job to do what is necessary to provide good customer service	☐	☐	☐	☐	☐
18. The decisions company management makes concerning employees are usually fair	☐	☐	☐	☐	☐
19. I believe the relationship between and the Unions has improved since the agreement was reached on the Participative Approach	☐	☐	☐	☐	☐

	Agree	Tend to Agree	?	Tend to Disagree	Disagree
20. provides a work environment free of sexual harassment	☐	☐	☐	☐	☐
21. Unplanned absences have a negative effect on the overall productivity of my branch	☐	☐	☐	☐	☐
22. My branch is making appropriate use of technology to improve its operating efficiency	☐	☐	☐	☐	☐
23. My supervisor shows favouritism to some employees in my section	☐	☐	☐	☐	☐
24. does an excellent job of keeping employees informed about matters affecting us	☐	☐	☐	☐	☐
25. My branch management generally understands the problems we face in our jobs	☐	☐	☐	☐	☐
26. I think my workload is excessive	☐	☐	☐	☐	☐
27. Employees are treated with respect in my branch, regardless of their job	☐	☐	☐	☐	☐
28. For the work I do, I am very much underpaid	☐	☐	☐	☐	☐
29. Corrective action is usually taken when unsafe conditions are brought to management's attention	☐	☐	☐	☐	☐

	Agree	Tend to Agree	?	Tend to Disagree	Disagree
30. I believe I will be able to contribute to the success of the Participative Approach in my part of the business	☐	☐	☐	☐	☐
31. My branch management is considerate regarding work and family issues	☐	☐	☐	☐	☐
32. My supervisor makes clear-cut decisions	☐	☐	☐	☐	☐
33. I would rather report myself 'sick' than state one of my dependents was ill	☐	☐	☐	☐	☐
34. My work gives me a sense of personal accomplishment	☐	☐	☐	☐	☐
35. The work in my branch is well organized	☐	☐	☐	☐	☐
36. My supervisor is considerate of my commitments/family responsibilities, etc., outside of work	☐	☐	☐	☐	☐
37. In my opinion, employees new to my branch receive adequate training for their jobs	☐	☐	☐	☐	☐
38. I think my performance on the job is evaluated fairly	☐	☐	☐	☐	☐
39. I would recommend as a good place to work	☐	☐	☐	☐	☐

	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
40. I would feel free to approach my supervisor and discuss issues of racism, sexism, or other biases held by other employees	☐	☐	☐	☐	☐
41. Too much emphasis is placed on the quantity of work produced, rather than the quality	☐	☐	☐	☐	☐
42. I have trouble getting my work done because priorities or work objectives are changed so frequently	☐	☐	☐	☐	☐
43. My supervisor gives me regular feedback on my performance	☐	☐	☐	☐	☐
44. I believe my promotion prospects are good	☐	☐	☐	☐	☐
45. Compared with other people working in Telstra, I think I am paid fairly	☐	☐	☐	☐	☐
46. is flexible in its practices and policies regarding work and family issues	☐	☐	☐	☐	☐
47. Current cost-reduction efforts position to be a more efficient and competitive company in the future	☐	☐	☐	☐	☐
48. management is honest and straightforward in its dealings with employees	☐	☐	☐	☐	☐
49. We usually hear about important matters first through rumours	☐	☐	☐	☐	☐

	Agree	Tend to Agree	?	Tend to Disagree	Disagree
50. I think the job I perform is considered important in	☐	☐	☐	☐	☐
51. From what I know, Human Resources policies (e.g., training, performance development reviews, promotions) are administered consistently throughout	☐	☐	☐	☐	☐
52. fringe benefits	☐	☐	☐	☐	☐
fit my needs					
53. I believe my branch management has adopted a more participative style	☐	☐	☐	☐	☐
54. In my opinion, too much time is wasted in my branch	☐	☐	☐	☐	☐
55. My supervisor does a good job of building teamwork	☐	☐	☐	☐	☐
56. I have the opportunity for input before changes are made that will affect my job	☐	☐	☐	☐	☐
57. There is usually sufficient staff in my branch to handle the normal workload	☐	☐	☐	☐	☐
58. usually promotes qualified company people before hiring people from outside of the company	☐	☐	☐	☐	☐
59. The relations between employees of different races or are usually good	☐	☐	☐	☐	☐

	Agree	Tend to Agree	?	Tend to Disagree	Disagree
60. I often don't believe what company management says	☐	☐	☐	☐	☐
61. I feel management supports equal opportunity for all employees	☐	☐	☐	☐	☐
62. I am often bothered by excessive pressure in my job	☐	☐	☐	☐	☐
63. I have already been given the opportunity to contribute to a participative decision-making process as a part of the new Participative Approach between management, staff, and the Unions	☐	☐	☐	☐	☐
64. From what I hear, our fringe benefits are as good as or better than the fringe benefits in other organisations	☐	☐	☐	☐	☐
65. is too lenient with employees who perform poorly	☐	☐	☐	☐	☐
66. The computerised information systems provide information in a useful format	☐	☐	☐	☐	☐
67. My work area is a safe place to work	☐	☐	☐	☐	☐
68. Morale in my branch is generally high	☐	☐	☐	☐	☐
69. commitment to quality is apparent in what we do on a day-to-day basis	☐	☐	☐	☐	☐

	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
70. There is good cooperation between my branch and other branches in my: (Please answer each item.)					
a. Line of business	☐	☐	☐	☐	☐
b. Business unit or company support unit	☐	☐	☐	☐	☐
71. The following levels of management are generally respected by employees: (Please answer each item.)					
a. Branch management	☐	☐	☐	☐	☐
b. My line of business management	☐	☐	☐	☐	☐
c. My business unit or company support unit management	☐	☐	☐	☐	☐
d. management	☐	☐	☐	☐	☐
72. Regarding suggestions for change from employees, my supervisor is usually: (Please answer each item.)					
a. Receptive (willing to listen)	☐	☐	☐	☐	☐
b. Responsive (takes action on suggestion)	☐	☐	☐	☐	☐

	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
73. I am frequently worried about the following: (Please answer each item.)					
a. Being made redundant	☐	☐	☐	☐	☐
b. The future of my branch	☐	☐	☐	☐	☐
c. The future of my line of business	☐	☐	☐	☐	☐
d. The future of my business unit or company support unit	☐	☐	☐	☐	☐
e. The future of	☐	☐	☐	☐	☐
74. is highly regarded by: (Please answer each item.)					
a. The general public	☐	☐	☐	☐	☐
b. Its customers	☐	☐	☐	☐	☐
c. Its employees	☐	☐	☐	☐	☐

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	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
75. There is sufficient contact between: (Please answer <i>each</i> item.)					
a. Branch management and employees	☐	☐	☐	☐	☐
b. My line of business management and employees	☐	☐	☐	☐	☐
c. My business unit or company support unit management and employees	☐	☐	☐	☐	☐
d. management and employees	☐	☐	☐	☐	☐
76. too often sacrifices the quality of our products/services in order to: (Please answer <i>each</i> item.)					
a. Cut costs	☐	☐	☐	☐	☐
b. Meet schedules or deadlines	☐	☐	☐	☐	☐

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	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
77. My branch: (Please answer each item.)					
a. Constantly looks for better ways to service its internal/external customers	☐	☐	☐	☐	☐
b. Actively seeks to understand internal/external customer requirements	☐	☐	☐	☐	☐
c. Is responsive to internal/external customer needs	☐	☐	☐	☐	☐
d. Is easy to do business with	☐	☐	☐	☐	☐
78. I believe the concept of the Participative Approach is good for the long-term future of: (Please answer each item.)					
a.	☐	☐	☐	☐	☐
b. Its employees	☐	☐	☐	☐	☐
79. My supervisor: (Please answer each item.)					
a. Communicates effectively	☐	☐	☐	☐	☐
b. Manages people well	☐	☐	☐	☐	☐
c. Develops people's abilities	☐	☐	☐	☐	☐

		<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
80.	There are sufficient opportunities for me to receive: (Please answer <i>each</i> item.)					
	a. Training to improve my skills in my current job	☐	☐	☐	☐	☐
	b. Training to learn other jobs	☐	☐	☐	☐	☐
	c. Training to increase my eligibility for a better job in	☐	☐	☐	☐	☐
81.	_____ has a good work environment for: (Please answer <i>each</i> item.)					
	a. Female employees	☐	☐	☐	☐	☐
	b. Male employees	☐	☐	☐	☐	☐
	c.	☐	☐	☐	☐	☐
	d. Younger employees	☐	☐	☐	☐	☐
	e. Older employees	☐	☐	☐	☐	☐
	f. Employees with a disability	☐	☐	☐	☐	☐

		<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
82.	_____ has established a good reputation for the quality of its: (Please answer each item.)					
	a. Products	☐	☐	☐	☐	☐
	b. Services	☐	☐	☐	☐	☐
83.	In my judgement, the following are well managed: (Please answer each item.)					
	a. My branch	☐	☐	☐	☐	☐
	b. My line of business	☐	☐	☐	☐	☐
	c. My business unit or company support unit	☐	☐	☐	☐	☐
	d. _____ as a whole	☐	☐	☐	☐	☐

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PLEASE NOTE THE FOLLOWING ITEMS HAVE SEVERAL DIFFERENT RESPONSE SCALES

84.

☐ Yes ☐ No

IF YOU RESPONDED "YES" TO QUESTION 84, PLEASE ANSWER QUESTION 85.
OTHERWISE, PROCEED TO QUESTION 86.

85.

Changed for the Better	Stayed the Same, Generally Good	Stayed the Same, Generally Poor	Changed for the Worse	No Opinion
☐	☐	☐	☐	☐

86.

[Please answer each item.]

a.	☐ Yes	☐ No
b.	☐ Yes	☐ No
c.	☐ Yes	☐ No
d.	☐ Yes	☐ No
e.	☐ Yes	☐ No
f.	☐ Yes	☐ No
g.	☐ Yes	☐ No
h.	☐ Yes	☐ No
i.	☐ Yes	☐ No

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	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
87. The content of the following sources of information is up-to-date: (Please answer each item.)					
a.	☐	☐	☐	☐	☐
b. Business unit or company support unit publications	☐	☐	☐	☐	☐
c. Health Safety and Environment (HS&E)/OH&S	☐	☐	☐	☐	☐
d. Faxed bulletins	☐	☐	☐	☐	☐
e. Team Briefing sessions	☐	☐	☐	☐	☐
f. Forums	☐	☐	☐	☐	☐
g. E-Mail	☐	☐	☐	☐	☐
h. videos	☐	☐	☐	☐	☐
i. Management hotlines	☐	☐	☐	☐	☐
j. Newspaper/Radio/Television articles/announcements about	☐	☐	☐	☐	☐
k. Informal discussions with colleagues	☐	☐	☐	☐	☐

		Very Good	Good	Adequate	Poor	Very Poor	Don't Know
88.	In your judgement, with all things considered, how good a job is company management doing in handling the following aspects of the business: (Please answer each item.)						
	a. Providing a clear sense of direction	☐	☐	☐	☐	☐	☐
	b. Making decisions promptly	☐	☐	☐	☐	☐	☐
	c. Eliciting staff support for initiatives	☐	☐	☐	☐	☐	☐
89.	(Please answer each item.)	Relevant	Somewhat Relevant	Irrelevant	No Opinion		
	a.	☐	☐	☐	☐		
	b.	☐	☐	☐	☐		
	c.	☐	☐	☐	☐		
	d.	☐	☐	☐	☐		
	e.	☐	☐	☐	☐		
	f.	☐	☐	☐	☐		
	g.	☐	☐	☐	☐		
	h.	☐	☐	☐	☐		
	i.	☐	☐	☐	☐		
	j.	☐	☐	☐	☐		
	k.	☐	☐	☐	☐		

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90.

☐ Yes ☐ No

IF YOU RESPONDED "YES" TO QUESTION 90, PLEASE ANSWER QUESTION 91.
OTHERWISE, PROCEED TO QUESTION 92.

91.

<u>Agree</u>	<u>Tend to</u> <u>Agree</u>	<u>?</u>	<u>Tend to</u> <u>Disagree</u>	<u>Disagree</u>
☐	☐	☐	☐	☐

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	Very Successful	More Successful than Unsuccessful	More Unsuccessful than Successful	Very Unsuccessful
92.				
(Please answer each item.)				
a.	☐	☐	☐	☐
b.	☐	☐	☐	☐
c.	☐	☐	☐	☐
d.	☐	☐	☐	☐
e.	☐	☐	☐	☐
f.	☐	☐	☐	☐
g.	☐	☐	☐	☐

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93. At the present time, are you seriously considering leaving for any reason? ☐ Yes ☐ No ☐ Don't Know

94. ☐ Yes ☐ No

95. Taking everything into account, how satisfied are you with _____ as a place to work?

Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied
☐	☐	☐	☐	☐

96.

Change for the Better	Stay the Same	Change for the Worse	No Opinion
☐	☐	☐	☐

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	Very Import- tant	Import- tant	Neither Important nor Un- important	Un- import- tant	Very Un- import- tant	No Opinion
97.						
(Please answer each item.)						
a.	☐	☐	☐	☐	☐	☐
b.	☐	☐	☐	☐	☐	☐
c.	☐	☐	☐	☐	☐	☐
d.	☐	☐	☐	☐	☐	☐
e.	☐	☐	☐	☐	☐	☐
f.	☐	☐	☐	☐	☐	☐
g.	☐	☐	☐	☐	☐	☐
h.	☐	☐	☐	☐	☐	☐

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98.

☐ Yes ☐ No

IF YOU RESPONDED "YES" TO QUESTION 98, PLEASE ANSWER QUESTION 99.
OTHERWISE, PROCEED TO QUESTION 100.

99.

(Please answer each item.)

	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
a.	☐	☐	☐	☐	☐
b.	☐	☐	☐	☐	☐
c.	☐	☐	☐	☐	☐
d.	☐	☐	☐	☐	☐

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	<u>Agree</u>	<u>Tend to Agree</u>	<u>?</u>	<u>Tend to Disagree</u>	<u>Disagree</u>
100. I understand how regulatory and legal obligations impact my work	☐	☐	☐	☐	☐
101. Filling in this survey is a good way to tell management what I think	☐	☐	☐	☐	☐
102. I feel significant action has been taken as a result of the previous Surveys	☐	☐	☐	☐	☐
103. As a result of the survey, I think management will: (Please answer each item.)					
a. Carefully consider problems brought to its attention	☐	☐	☐	☐	☐
b. Act on problems identified	☐	☐	☐	☐	☐
c. Communicate decisions to employees	☐	☐	☐	☐	☐

File Help

Thank you!

What ideas or suggestions would you like to bring to the attention of _____ management? Please type your comments in the space provided below. Do not type your name. Your comments will be reported anonymously. Provided are some general topics to consider when making your comments. Please identify the subject of your comment by using the pull down menu box located above each comment window. Simply highlight your comment topic so that it appears in the pull down menu window.

After you've saved your survey responses - by clicking the 'Exit' button below - please...

- Unload the disk from your computer
- Put the disk in the supplied mailer and seal the packet
- Mail the prepaid mailer to the address printed on its cover

To save your survey responses, please click the 'Exit' button, below.

SHOULD YOU HAVE MISPLACED THE RETURN ENVELOPE, PLEASE SEND YOUR DISK TO:
International Survey Research Corporation
Processing Centre

Prev Page Exit Org Chart Cancel

Appendix C3

Study 2: Differences in Category Scores

CATEGORIES

■ Disk Respondents (N=2,140)
 □ Paper Respondents (N=1,977)

† Difference in favorable response
 between disk and paper

Differences may be plus or minus one
 point due to computer rounding

* A statistically significant comparison ($p < .05$)

CATEGORIES

■ Disk Respondents (N=2,140)

□ Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper

Differences may be plus or minus one point due to computer rounding

CATEGORIES

Appendix C4

Study 2: Differences in Item Level Results

Personnel Policies and Procedures

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper
 * A statistically significant comparison (p < .05)

Differences may be plus or minus one point due to computer rounding

Working Relationships

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper
 * A statistically significant comparison (p < .05)

Differences may be plus or minus one point due to computer rounding

Work/Family/Diversity

0% 20% 40% 60% 80% 100%

= % Favorable = % "?" = % Unfavorable

† Difference in favorable response between disk and paper

Disk Respondents (N=2,140)
Paper Respondents (N=1,977)

Differences may be plus or minus one point due to computer rounding

* A statistically significant comparison ($p < .05$)

Work/Family/Diversity

81. The company has a good work environment for:

a. Female employees

b. Male employees

d. Younger employees

e. Older employees

f. Employees with a disability

Disk Respondents (N=2,140)
Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper

Differences may be plus or minus one point due to computer rounding

* A statistically significant comparison ($p < .05$)

Participative Approach

† Diff.

% of Responses

63. I have already been given the opportunity to contribute to a participative decision-making process as a part of the new Participative Approach between the company management, staff, and the Unions.

Disk
Paper

5*

78. I believe the concept of the Participative Approach is good for the long-term future of:

a. The company

Disk
Paper

3*

b. Its employees

Disk
Paper

5*

Disk Respondents (N=2,140)
Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper

* A statistically significant comparison ($p < .05$)

Differences may be plus or minus one point due to computer rounding

Working Conditions

0% 20% 40% 60% 80% 100%
 ■ = % Favorable □ = % "?" ■ = % Unfavorable

† Difference in favorable response between disk and paper
 * A statistically significant comparison ($p < .05$)

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

Differences may be plus or minus one point due to computer rounding

Supervision

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper
 * A statistically significant comparison ($p < .05$)

Differences may be plus or minus one point due to computer rounding

Communication

Communication

87. The content of the following sources of information is up-to-date:

b. Business unit or company support unit publications

c. Health Safety and Environment

d. Faxed bulletins

e. Team Briefing sessions

f. Forums

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper
 * A statistically significant comparison ($p < .05$)

Differences may be plus or minus one point due to computer rounding

Communication

87. The content of the following sources of information is up-to-date:

0% 20% 40% 60% 80% 100%
 = % Favorable = % "?" = % Unfavorable

† Difference in favorable response between disk and paper
 Differences may be plus or minus one point due to computer rounding
 * A statistically significant comparison ($p < .05$)

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

Reaction to the Survey

= % Favorable = % "?" = % Unfavorable
 0% 20% 40% 60% 80% 100%

† Difference in favorable response between disk and paper
 * A statistically significant comparison ($p < .05$)
 Differences may be plus or minus one point due to computer rounding

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

Quality

Quality

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper
 * A statistically significant comparison ($p < .05$)

Differences may be plus or minus one point due to computer rounding

Career Advancement

† Difference in favorable response between disk and paper
 * A statistically significant comparison ($p < .05$)
 Differences may be plus or minus one point due to computer rounding

Pay and Fringe Benefits

Management

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper

Differences may be plus or minus one point due to computer rounding
 * A statistically significant comparison ($p < .05$)

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper
 * A statistically significant comparison ($p < .05$)

Differences may be plus or minus one point due to computer rounding

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

Differences may be plus or minus one point due to computer rounding

Management

75. There is sufficient contact between:

a. Branch management and employees

b. My line of business management and employees

c. My business unit or company support unit management and employees

d. Company management and employees

† Diff. % of Responses

0% 20% 40% 60% 80% 100%
☒ = % Favorable ☐ = % "?" ☒ = % Unfavorable

Disk Respondents (N=2,140)

Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper

* A statistically significant comparison ($p < .05$)

Differences may be plus or minus one point due to computer rounding

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper

Differences may be plus or minus one point due to computer rounding
 * A statistically significant comparison ($p < .05$)

Performance Appraisal

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper

Differences may be plus or minus one point due to computer rounding

* A statistically significant comparison ($p < .05$)

Job Satisfaction

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper
 * A statistically significant comparison ($p < .05$)

Differences may be plus or minus one point due to computer rounding

Job Satisfaction

95. Taking everything into account, how satisfied are you with the company as a place to work?

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)
 † Difference in favorable response between disk and paper
 Differences may be plus or minus one point due to computer rounding

Disk Respondents (N=2,140) † Difference in favorable response between disk and paper Differences may be plus or minus one point due to computer rounding
 Paper Respondents (N=1,977)

* A statistically significant comparison ($p < .05$)

Company Identification
and Image

Disk Respondents (N=2,140)
Paper Respondents (N=1,977)

† Difference in favorable response
between disk and paper

* A statistically significant comparison ($p < .05$)

Differences may be plus or minus one
point due to computer rounding

Company Identification
and Image

93. At the present time, are you seriously
considering leaving the company for any
reason?

Disk Respondents (N=2,140)
Paper Respondents (N=1,977)

† Difference in favorable response
between disk and paper

Differences may be plus or minus one
point due to computer rounding

* A statistically significant comparison ($p < .05$)

Training and Development

Disk Respondents (N=2,140)
Paper Respondents (N=1,977)

† Difference in favorable response between disk and paper

Differences may be plus or minus one point due to computer rounding

* A statistically significant comparison ($p < .05$)

Job Security

= % Favorable = % Unfavorable
 = % "?"

† Difference in favorable response between disk and paper
 * A statistically significant comparison ($p < .05$)

Disk Respondents (N=2,140)
 Paper Respondents (N=1,977)

Appendix C5

Study 2: Means, Standard Deviations and Item N Counts

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
1	I have a very clear idea of my job responsibilities.	Work Organization	3.38	0.79	2,086	3.44	0.77	1,906
26	I think my workload is excessive. (Disagree)	Work Organization	2.48	0.90	1,764	2.52	0.90	1,533
35	The work in my branch is well organized.	Work Organization	2.52	0.90	1,896	2.58	0.88	1,648
57	There is usually sufficient staff in my branch to handle the normal workload.	Work Organization	2.40	0.99	1,994	2.41	1.00	1,802
62	I am often bothered by excessive pressure in my job. (Disagree)	Work Organization	2.42	0.87	1,869	2.44	0.88	1,668
2	My branch operates efficiently.	Operating Efficiency	2.75	0.92	1,934	2.85	0.89	1,757
21	Unplanned absences have a negative effect on the overall productivity of my branch. (Disagree)	Operating Efficiency	2.11	0.91	1,823	2.13	0.90	1,647
22	My branch is making appropriate use of technology to improve its operating efficiency.	Operating Efficiency	2.86	0.94	1,994	2.85	0.90	1,770
42	I have trouble getting my work done because priorities or work objectives are changed so frequently. (Disagree)	Operating Efficiency	2.32	0.94	1,938	2.40	0.92	1,698
47	Current cost-reduction efforts position the company to be a more efficient and competitive company in the future.	Operating Efficiency	2.40	1.00	1,821	2.40	0.98	1,582
54	In my opinion, too much time is wasted in my branch. (Disagree)	Operating Efficiency	2.65	0.93	1,751	2.74	0.93	1,563
66	Computerized information systems provide information in a useful format.	Operating Efficiency	2.49	0.91	1,796	2.45	0.92	1,518

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

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The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; “?” responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
3	Company management is interested in the well-being of its employees.	Management	2.17	0.92	1,823	2.22	0.95	1,623
18	The decisions company management makes concerning employees are usually fair.	Management	2.24	0.89	1,701	2.26	0.91	1,531
25	My branch management generally understands the problems we face in our jobs.	Management	2.39	0.95	1,925	2.42	0.95	1,764
31	My branch management is considerate regarding work and family issues.	Management	3.01	0.86	1,812	3.04	0.85	1,626
48	Company management is honest and straightforward in its dealings with employees.	Management	1.90	0.87	1,823	1.92	0.88	1,603
60	I often don't believe what company management says. (Disagree)	Management	2.02	0.85	1,915	2.11	0.90	1,681
71a	Branch management is generally respected by employees.	Management	2.70	0.93	1,907	2.67	0.94	1,686
71b	My line of business management is generally respected by employees.	Management	2.56	0.90	1,838	2.58	0.92	1,559
71c	My business unit or company support unit management is generally respected by employees.	Management	2.31	0.91	1,771	2.35	0.93	1,527
71d	Company management is generally respected by employees.	Management	2.19	0.94	1,831	2.21	0.98	1,623
75a	There is sufficient contact between branch management and employees.	Management	2.62	0.90	1,972	2.56	0.90	1,712
75b	There is sufficient contact between my line of business management and employees.	Management	2.46	0.86	1,892	2.47	0.86	1,604

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

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The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; “?” responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
75c	There is sufficient contact between business unit or company support unit management and employees.	Management	2.24	0.85	1,814	2.25	0.86	1,564
75d	There is sufficient contact between company management and employees.	Management	2.13	0.88	1,871	2.11	0.90	1,639
83a	In my judgment, my branch is well managed.	Management	2.72	0.90	1,874	2.73	0.90	1,692
83b	In my judgment, my line of business is well managed.	Management	2.57	0.87	1,788	2.59	0.87	1,578
83c	In my judgment, my business unit or company support unit is well managed.	Management	2.40	0.87	1,698	2.46	0.87	1,479
83d	In my judgment, the company as a whole is well managed.	Management	2.39	0.91	1,786	2.41	0.92	1,582
88a	In your judgment, with all things considered, how good a job is company management doing in providing a clear sense of direction?	Management	2.55	1.13	2,100	2.54	1.14	1,913
88b	In your judgment, with all things considered, how good a job is company management doing in making decisions promptly?	Management	2.46	1.04	2,039	2.48	1.05	1,882
88c	In your judgment, with all things considered, how good a job is company management doing in eliciting staff support for initiatives?	Management	2.23	1.03	2,029	2.23	1.02	1,863
4	My supervisor seldom gives me recognition for work done well. (Disagree)	Supervision	2.59	0.99	1,969	2.55	0.97	1,741
23	My supervisor shows favoritism to some employees in my section. (Disagree)	Supervision	2.91	1.04	1,866	2.87	1.06	1,650
32	My supervisor makes clear-cut decisions.	Supervision	2.79	0.92	1,899	2.81	0.91	1,695

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

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The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; "7" responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
55	My supervisor does a good job of building teamwork.	Supervision	2.70	0.94	1,868	2.68	0.95	1,621
72a	Regarding suggestions for change from employees, my supervisor is usually receptive (willing to listen).	Supervision	3.26	0.78	2,032	3.19	0.76	1,838
72b	Regarding suggestions for change from employees, my supervisor is usually responsive (takes action on suggestions).	Supervision	2.86	0.90	1,884	2.80	0.89	1,658
79a	My supervisor communicates effectively.	Supervision	3.08	0.87	2,027	3.02	0.88	1,831
79b	My supervisor manages people well.	Supervision	2.84	0.96	1,905	2.79	0.96	1,740
79c	My supervisor develops people's abilities.	Supervision	2.60	0.95	1,813	2.56	0.97	1,612
5	The people I work with usually get along well together.	Working Relationships	3.46	0.65	2,075	3.46	0.67	1,887
27	Employees are treated with respect in my branch, regardless of their job.	Working Relationships	3.04	0.85	1,946	3.06	0.83	1,744
70a	There is good cooperation between my branch and other branches in my line of business.	Working Relationships	2.99	0.80	1,887	2.93	0.78	1,626
70b	There is good cooperation between my branch and other branches in my business unit or company support unit.	Working Relationships	2.90	0.81	1,805	2.83	0.80	1,553
6	Little effort is made to obtain the opinions and thoughts/ideas of employees in this company. (Disagree)	Communication	2.48	0.90	1,943	2.44	0.91	1,710
24	The company does an excellent job of keeping employees informed about matters affecting us.	Communication	2.53	0.86	1,880	2.47	0.87	1,653
49	We usually hear about important matters first through rumors. (Disagree)	Communication	1.92	0.85	1,990	1.93	0.84	1,812

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

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Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
56	I have the opportunity for input before changes are made that will affect my job.	Communication	2.30	0.99	1,952	2.24	0.98	1,713
87b	The content of business unit or company support unit publications is up-to-date.	Communication	3.25	0.67	1,485	3.22	0.69	1,274
87c	The content of Health Safety and Environment (HS&E)/(OH&S) is up-to-date.	Communication	3.33	0.66	1,293	3.29	0.69	1,145
87d	The content of faxed bulletins is up-to-date.	Communication	3.39	0.62	1,796	3.35	0.62	1,595
87e	The content of Team Briefing sessions is up-to-date.	Communication	3.12	0.77	1,960	3.12	0.76	1,731
87f	The content of forums is up-to-date.	Communication	3.20	0.82	760	3.08	0.87	717
87g	The content of E-Mail is up-to-date.	Communication	3.38	0.71	1,462	3.38	0.71	1,304
87h	The content of company videos is up-to-date.	Communication	2.84	0.92	738	2.80	0.91	674
87i	The content of management hotlines is up-to-date.	Communication	2.90	1.01	532	2.87	1.03	498
87j	The content of newspaper/radio/television articles/announcements about the company is up-to-date.	Communication	2.85	0.85	1,730	2.88	0.83	1,537
87k	The content of informal discussions with colleagues is up-to-date.	Communication	3.02	0.69	1,611	3.04	0.72	1,447
7	The training I have received has adequately prepared me for the work I do.	Training & Development	2.64	0.96	2,023	2.63	0.97	1,809
37	In my opinion, employees new to my branch receive adequate training for their jobs.	Training & Development	2.27	0.93	1,648	2.32	0.96	1,468
80a	There are sufficient opportunities for me to receive training to improve my skills in my current job.	Training & Development	2.23	0.96	1,985	2.23	0.98	1,772

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

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The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; "7" responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
80b	There are sufficient opportunities for me to receive training to learn other jobs.	Training & Development	1.79	0.85	1,928	1.79	0.85	1,735
80c	There are sufficient opportunities for me to receive training to increase my eligibility for a better job in the company.	Training & Development	1.85	0.88	1,935	1.83	0.89	1,719
8	I understand how my performance on the job is evaluated.	Performance Appraisal	2.35	1.02	1,787	2.39	1.02	1,587
38	I think my performance on the job is evaluated fairly.	Performance Appraisal	2.78	0.90	1,441	2.82	0.88	1,301
43	My supervisor gives me regular feedback on my performance.	Performance Appraisal	2.10	0.92	1,868	2.09	0.90	1,655
65	The company is too lenient with employees who perform poorly. (Disagree)	Performance Appraisal	1.73	0.74	1,811	1.75	0.75	1,571
9	There is adequate opportunity for employees to learn about available job openings in the company.	Career Advancement	2.80	0.90	1,956	2.85	0.90	1,757
44	I believe my promotion prospects are good.	Career Advancement	1.63	0.85	1,844	1.63	0.83	1,670
58	The company usually promotes qualified company people before hiring people from outside of the company.	Career Advancement	2.82	0.95	1,579	2.82	0.95	1,397
10	From what I hear, our pay is as good as or better than the pay in other organizations.	Pay and Fringe Benefits	2.84	0.91	1,655	2.78	0.93	1,505
28	For the work I do, I am very much underpaid. (Disagree)	Pay and Fringe Benefits	2.57	0.94	1,651	2.61	0.93	1,478

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

All items are copyrighted by International Survey Research LLC.

The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; "7" responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
45	Compared with other people working in the company, I think I am paid fairly.	Pay and Fringe Benefits	2.61	0.95	1,762	2.64	0.93	1,564
52	Company fringe benefits fit my needs.	Pay and Fringe Benefits	2.50	1.04	1,928	2.49	1.05	1,747
64	From what I hear, our fringe benefits are as good as or better than the fringe benefits in other organizations.	Pay and Fringe Benefits	1.93	0.94	1,533	2.00	0.96	1,343
11	Overall, the physical working conditions at my location are satisfactory (e.g., ventilation, temperature, space to work).	Working Conditions	3.38	0.77	2,081	3.33	0.78	1,904
29	Corrective action is usually taken when unsafe conditions are brought to management's attention.	Working Conditions	3.35	0.72	2,007	3.32	0.72	1,790
67	My work area is a safe place to work.	Working Conditions	3.55	0.61	2,084	3.49	0.62	1,903
12	I can be sure of having a job with the company as long as I perform well.	Job Security	1.81	0.95	1,856	1.83	0.99	1,695
73a	I am frequently worried about being made redundant. (Disagree)	Job Security	1.83	1.00	2,032	1.84	1.00	1,850
73b	I am frequently worried about the future of my branch. (Disagree)	Job Security	1.66	0.85	2,052	1.69	0.86	1,879
73c	I am frequently worried about the future of my line of business. (Disagree)	Job Security	1.76	0.89	2,009	1.78	0.91	1,831
73d	I am frequently worried about the future of my business unit or company support unit. (Disagree)	Job Security	1.88	0.93	1,976	1.92	0.95	1,764

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

All items are copyrighted by International Survey Research LLC.

The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; "?" responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
73e	I am frequently worried about the future of the company. (Disagree)	Job Security	1.95	1.03	2,007	1.96	1.01	1,811
13	We receive adequate information on company conditions of service.	Personnel Policies & Procedures	2.74	0.87	1,833	2.64	0.91	1,649
33	I would rather report myself "sick" than state one of my dependents was ill. (Disagree)	Personnel Policies & Procedures	3.10	1.03	1,872	3.04	1.05	1,722
51	From what I know, Human Resources policies (e.g., training, performance development reviews, promotions) are administered consistently throughout the company.	Personnel Policies & Procedures	2.31	0.96	1,561	2.27	0.97	1,360
61	I feel company management supports equal opportunity for all employees.	Personnel Policies & Procedures	3.00	0.85	1,918	3.05	0.87	1,698
100	I understand how the company's regulatory and legal obligations impact my work.	Personnel Policies & Procedures	2.92	0.84	1,822	2.72	0.96	1,286
14	I am doing something I consider really worthwhile in my job.	Job Satisfaction	3.12	0.89	1,967	3.14	0.85	1,767
34	My work gives me a sense of personal accomplishment.	Job Satisfaction	2.96	0.95	2,009	2.96	0.90	1,800
50	I think the job I perform is considered important in the company.	Job Satisfaction	3.10	0.91	1,960	3.02	0.91	1,717
68	Morale in my branch is generally high.	Job Satisfaction	2.01	0.96	2,014	2.05	0.95	1,771

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

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The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; "2" responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
95	Taking everything into account, how satisfied are you with the company as a place to work?	Job Satisfaction	3.35	1.13	2,131	3.39	1.08	1,968
15	The longer you work for the company, the more you feel a part of the company.	Identification & Image	2.26	1.01	1,897	2.25	1.01	1,690
39	I would recommend the company as a good place to work.	Identification & Image	2.76	0.98	1,879	2.81	0.96	1,662
74a	The company is highly regarded by the general public.	Identification & Image	2.64	0.83	1,903	2.67	0.78	1,676
74b	The company is highly regarded by its customers.	Identification & Image	2.71	0.78	1,844	2.76	0.73	1,621
74c	The company is highly regarded by its employees.	Identification & Image	2.52	0.88	1,863	2.58	0.86	1,653
93	At the present time, are you seriously considering leaving the company for any reason?	Identification & Image	1.69	0.46	1,810	1.72	0.45	1,611
16	The quality of work done in my branch is excellent.	Quality	3.02	0.77	1,873	3.04	0.76	1,649
41	Too much emphasis is placed on the quantity of work produced, rather than the quality. (Disagree)	Quality	2.15	0.93	1,925	2.18	0.95	1,672
69	The company's commitment to quality is apparent in what we do on a day-to-day basis.	Quality	2.45	0.93	1,855	2.47	0.91	1,645
76a	The company too often sacrifices the quality of our products/services in order to cut costs. (Disagree)	Quality	1.71	0.82	1,967	1.79	0.84	1,777

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

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The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; "2" responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
76b	The company too often sacrifices the quality of our products/services in order to meet schedules or deadlines. (Disagree)	Quality	1.82	0.83	1,896	1.88	0.83	1,684
82a	The company has established a good reputation for the quality of its products.	Quality	3.12	0.68	1,953	3.07	0.70	1,720
82b	The company has established a good reputation for the quality of its services.	Quality	2.79	0.79	1,913	2.79	0.78	1,696
17	I have enough flexibility in my job to do what is necessary to provide good customer service.	Customer Focus	2.84	0.95	1,992	2.87	0.93	1,752
77a	My branch constantly looks for better ways to service its internal/external customers.	Customer Focus	2.90	0.84	1,814	2.88	0.83	1,620
77b	My branch actively seeks to understand internal/external customer requirements.	Customer Focus	2.86	0.85	1,791	2.83	0.83	1,581
77c	My branch is responsive to internal/external customer needs.	Customer Focus	2.92	0.84	1,858	2.90	0.78	1,632
77d	My branch is easy to do business with.	Customer Focus	2.89	0.86	1,740	2.88	0.83	1,541
19	I believe the relationship between the company and the Unions has improved since the agreement was reached on the Participative Approach.	Participative Approach	2.49	0.92	1,567	2.53	0.95	1,396
30	I believe I will be able to contribute to the success of the Participative Approach in my part of the business.	Participative Approach	2.69	0.96	1,599	2.72	0.98	1,393
53	I believe my branch management has adopted a more participative style.	Participative Approach	2.56	0.92	1,701	2.52	0.92	1,450

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

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The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; "?" responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
63	I have already been given the opportunity to contribute to a participative decision-making process as a part of the new Participative Approach between company management, staff, and the Unions.	Participative Approach	2.11	1.09	1,727	2.01	1.04	1,518
78a	I believe the concept of the Participative Approach is good for the long-term future of the company.	Participative Approach	3.34	0.74	1,866	3.31	0.75	1,651
78b	I believe the concept of the Participative Approach is good for the long-term future of its employees.	Participative Approach	3.20	0.87	1,853	3.17	0.87	1,608
20	The company provides a work environment free of sexual harassment.	Work/Family/ Diversity	3.42	0.64	1,926	3.37	0.67	1,700
36	My supervisor is considerate of my commitments/ family responsibilities, etc., outside of work.	Work/Family/ Diversity	3.19	0.83	1,876	3.16	0.82	1,639
40	I would feel free to approach my supervisor and discuss issues of racism, sexism, or other biases held by other employees.	Work/Family/ Diversity	3.38	0.82	1,964	3.30	0.82	1,758
46	The company is flexible in its practices and policies regarding work and family issues.	Work/Family/ Diversity	2.88	0.81	1,710	2.84	0.80	1,464
59	The relations between employees of different races are usually good.	Work/Family/ Diversity	3.28	0.66	1,672	3.29	0.64	1,486
81a	The company has a good work environment for female employees.	Work/Family/ Diversity	3.32	0.66	1,645	3.34	0.64	1,482

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

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The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; “?” responses were excluded.

Item Number	Survey Item	Category	Disk			Paper		
			M	SD	n	M	SD	n
81b	The company has a good work environment for male employees.	Work/Family/ Diversity	3.31	0.67	1,994	3.30	0.62	1,775
81d	The company has a good work environment for younger employees.	Work/Family/ Diversity	3.08	0.85	1,761	3.08	0.81	1,565
81e	The company has a good work environment for older employees.	Work/Family/ Diversity	3.00	0.86	1,780	2.95	0.86	1,566
81f	The company has a good work environment for employees with a disability.	Work/Family/ Diversity	3.11	0.78	1,424	3.10	0.77	1,210
101	Filling in this survey is a good way to tell company management what I think.	Reaction to the Survey	3.21	0.84	1,942	3.15	0.91	1,755
102	I feel significant action has been taken as a result of the previous Surveys.	Reaction to the Survey	2.18	0.92	1,594	2.20	0.92	1,414
103a	As a result of the survey, I think company management will carefully consider problems brought to its attention.	Reaction to the Survey	2.58	0.94	1,801	2.58	0.94	1,623
103b	As a result of the survey, I think company management will carefully consider problems brought to its attention.	Reaction to the Survey	2.38	0.92	1,708	2.35	0.93	1,518
103c	As a result of the survey, I think company management will act on problems identified.	Reaction to the Survey	2.77	0.90	1,816	2.77	0.90	1,600

Note. Total number of returned surveys was 2,140 (disk) and 1,977 (paper).

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The N column indicates the number of respondents who answered the respective item with a favorable or unfavorable response; "?" responses were excluded.

Appendix C6

Study 2: Number of Valid and Invalid Responses and the Percentage of Completed Items

Item Number	Survey Item	Category	Disk			Paper		
			% out of		Valid	% out of		Valid
			2,141	Missing		1,977	Missing	
1	I have a very clear idea of my job responsibilities.	Work Organization	2,140	1	2,140	1,974	3	0
2	My branch operates efficiently.	Operating Efficiency	2,139	2	2,139	1,965	11	1
3	Company management is interested in the well-being of its employees.	Management	2,137	4	2,137	1,955	16	6
4	My supervisor seldom gives me recognition for work done well. (Disagree)	Supervision	2,138	3	2,138	1,961	11	5
5	The people I work with usually get along well together.	Working Relationships	2,137	4	2,137	1,970	5	2
6	Little effort is made to obtain the opinions and thoughts/ideas of employees in this company. (Disagree)	Communication	2,137	4	2,137	1,965	10	2
7	The training I have received has adequately prepared me for the work I do.	Training & Development	2,137	4	2,137	1,971	6	0
8	I understand how my performance on the job is evaluated.	Performance Appraisal	2,138	3	2,138	1,969	8	0
9	There is adequate opportunity for employees to learn about available job openings in the company.	Career Advancement	2,139	2	2,139	1,974	3	0
10	From what I hear, our pay is as good as or better than the pay in other organizations.	Pay and Fringe Benefits	2,140	1	2,140	1,974	3	0
11	Overall, the physical working conditions at my location are satisfactory (e.g., ventilation, temperature, space to work).	Working Conditions	2,134	7	2,134	1,973	2	2

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).
Items copyrighted International Survey Research^{LLC}.
Missing responses-responder did not answer the item. Double answer-responder answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			% out of			% out of		
			Valid	2,141	Missing	Valid	1,977	Missing
12	I can be sure of having a job with the company as long as I perform well.	Job Security	2,138	99.9	3	1,974	99.8	3
13	We receive adequate information on company conditions of service.	Personnel Policies & Procedures	2,136	99.8	5	1,972	99.7	4
14	I am doing something I consider really worthwhile in my job.	Job Satisfaction	2,138	99.9	3	1,972	99.7	4
15	The longer you work for the company, the more you feel a part of the company.	Identification & Image	2,139	99.9	2	1,971	99.7	5
16	The quality of work done in my branch is excellent.	Quality	2,137	99.8	4	1,972	99.7	5
17	I have enough flexibility in my job to do what is necessary to provide good customer service.	Customer Focus	2,138	99.9	3	1,965	99.4	11
18	The decisions company management makes concerning employees are usually fair.	Management	2,137	99.8	4	1,971	99.7	4
19	I believe the relationship between the company and the Unions has improved since the agreement was reached on the Participative Approach.	Participative Approach	2,138	99.9	3	1,970	99.6	7
20	The company provides a work environment free of sexual harassment.	Work/Family/ Diversity	2,138	99.9	3	1,973	99.8	3
21	Unplanned absences have a negative effect on the overall productivity of my branch. (Disagree)	Operating Efficiency	2,137	99.8	4	1,975	99.9	2

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper). Items copyrighted International Survey Research LLC.

Missing responses-responder did not answer the item. Double answer-responder answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			Valid	% out of 2,141	Missing	Valid	% out of 1,977	Missing
22	My branch is making appropriate use of technology to improve its operating efficiency.	Operating Efficiency	2,133	99.6	8	1,974	99.8	2
23	My supervisor shows favoritism to some employees in my section. (Disagree)	Supervision	2,139	99.9	2	1,972	99.7	4
24	The company does an excellent job of keeping employees informed about matters affecting us.	Communication	2,139	99.9	2	1,969	99.6	6
25	My branch management generally understands the problems we face in our jobs.	Management	2,139	99.9	2	1,969	99.6	5
26	I think my workload is excessive. (Disagree)	Work Organization	2,135	99.7	6	1,970	99.6	5
27	Employees are treated with respect in my branch, regardless of their job.	Working Relationships	2,134	99.7	7	1,968	99.5	7
28	For the work I do, I am very much underpaid. (Disagree)	Pay and Fringe Benefits	2,137	99.8	4	1,970	99.6	6
29	Corrective action is usually taken when unsafe conditions are brought to management's attention.	Working Conditions	2,137	99.8	4	1,971	99.7	5
30	I believe I will be able to contribute to the success of the Participative Approach in my part of the business.	Participative Approach	2,138	99.9	3	1,971	99.7	6
31	My branch management is considerate regarding work and family issues.	Management	2,139	99.9	2	1,968	99.5	8
32	My supervisor makes clear-cut decisions.	Supervision	2,136	99.8	5	1,971	99.7	5

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).
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Missing responses-responder did not answer the item. Double answer-responder answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			Valid	% out of 2,141	Missing	Valid	% out of 1,977	Missing
33	I would rather report myself "sick" than state one of my dependents was ill. (Disagree)	Personnel Policies & Procedures	2,134	99.7	7	1,971	99.7	6
34	My work gives me a sense of personal accomplishment.	Job Satisfaction	2,137	99.8	4	1,969	99.6	7
35	The work in my branch is well organized.	Work Organization	2,135	99.7	6	1,967	99.5	10
36	My supervisor is considerate of my commitments/ family responsibilities, etc., outside of work.	Work/Family/ Diversity	2,138	99.9	3	1,974	99.8	2
37	In my opinion, employees new to my branch receive adequate training for their jobs.	Training & Development	2,137	99.8	4	1,968	99.5	7
38	I think my performance on the job is evaluated fairly.	Performance Appraisal	2,135	99.7	6	1,969	99.6	8
39	I would recommend the company as a good place to work.	Identification & Image	2,136	99.8	5	1,970	99.6	4
40	I would feel free to approach my supervisor and discuss issues of racism, sexism, or other biases held by other employees.	Work/Family/ Diversity	2,138	99.9	3	1,973	99.8	4
41	Too much emphasis is placed on the quantity of work produced, rather than the quality. (Disagree)	Quality	2,134	99.7	7	1,969	99.6	3
42	I have trouble getting my work done because priorities or work objectives are changed so frequently. (Disagree)	Operating Efficiency	2,140	100	1	1,971	99.7	6

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).
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Missing responses-respondent did not answer the item. Double answer-respondent answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			% out of		Valid	% out of		Valid
			2,141	Missing		1,977	Missing	
43	My supervisor gives me regular feedback on my performance.	Performance Appraisal	2,139	2	2,139	1,968	8	1
44	I believe my promotion prospects are good.	Career Advancement	2,136	5	2,136	1,968	8	1
45	Compared with other people working in the company, I think I am paid fairly.	Pay and Fringe Benefits	2,139	2	2,139	1,970	6	1
46	The company is flexible in its practices and policies regarding work and family issues.	Work/Family/ Diversity	2,136	5	2,136	1,971	6	0
47	Current cost-reduction efforts position the company to be a more efficient and competitive company in the future.	Operating Efficiency	2,136	5	2,136	1,968	8	1
48	Company management is honest and straightforward in its dealings with employees.	Management	2,137	4	2,137	1,968	8	1
49	We usually hear about important matters first through rumors. (Disagree)	Communication	2,139	2	2,139	1,966	9	2
50	I think the job I perform is considered important in the company.	Job Satisfaction	2,137	4	2,137	1,969	8	0
51	From what I know, Human Resources policies (e.g., training, performance development reviews, promotions) are administered consistently throughout the company.	Personnel Policies & Procedures	2,134	7	2,134	1,969	7	1
52	Company fringe benefits fit my needs.	Pay and Fringe Benefits	2,134	7	2,134	1,966	10	1
53	I believe my branch management has adopted a more participative style.	Participative Approach	2,133	8	2,133	1,968	9	0

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).
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Missing responses-responder did not answer the item. Double answer-responder answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			Valid	% out of 2,141	Missing	Valid	% out of 1,977	Missing
54	In my opinion, too much time is wasted in my branch. (Disagree)	Operating Efficiency	2,137	99.8	4	1,967	99.5	8
55	My supervisor does a good job of building teamwork.	Supervision	2,133	99.6	8	1,963	99.3	14
56	I have the opportunity for input before changes are made that will affect my job.	Communication	2,136	99.8	5	1,966	99.4	11
57	There is usually sufficient staff in my branch to handle the normal workload.	Work Organization	2,137	99.8	4	1,967	99.5	10
58	The company usually promotes qualified company people before hiring people from outside of the company.	Career Advancement	2,137	99.8	4	1,965	99.4	11
59	The relations between employees of different races are usually good.	Work/Family/ Diversity	2,134	99.7	7	1,967	99.5	10
60	I often don't believe what company management says. (Disagree)	Management	2,136	99.8	5	1,965	99.4	11
61	I feel company management supports equal opportunity for all employees.	Personnel Policies & Procedures	2,138	99.9	3	1,967	99.5	10
62	I am often bothered by excessive pressure in my job. (Disagree)	Work Organization	2,138	99.9	3	1,966	99.4	9
63	I have already been given the opportunity to contribute to a participative decision-making process as a part of the new Participative Approach between company management, staff, and the Unions.	Participative Approach	2,123	99.2	18	1,969	99.6	8

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).
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Missing responses-responder did not answer the item. Double answer-responder answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			% out of		Valid	% out of		Double Answer
			Valid	Missing		Valid	Missing	
64	From what I hear, our fringe benefits are as good as or better than the fringe benefits in other organizations.	Pay and Fringe Benefits	2,129	12	2,129	1,970	6	1
65	The company is too lenient with employees who perform poorly. (Disagree)	Performance Appraisal	2,137	4	2,137	1,965	11	1
66	Computerized information systems provide information in a useful format.	Operating Efficiency	2,136	5	2,136	1,963	13	1
67	My work area is a safe place to work.	Working Conditions	2,138	3	2,138	1,970	6	1
68	Morale in my branch is generally high.	Job Satisfaction	2,134	7	2,134	1,969	7	1
69	The company's commitment to quality is apparent in what we do on a day-to-day basis.	Quality	2,135	6	2,135	1,965	11	1
70a	There is good cooperation between my branch and other branches in my line of business.	Working Relationships	2,131	10	2,131	1,955	22	0
70b	There is good cooperation between my branch and other branches in my business unit or company support unit.	Working Relationships	2,124	17	2,124	1,958	19	0
71a	Branch management is generally respected by employees.	Management	2,133	8	2,133	1,956	18	3
71b	My line of business management is generally respected by employees.	Management	2,131	10	2,131	1,959	18	0
71c	My business unit or company support unit management is generally respected by employees.	Management	2,129	12	2,129	1,957	20	0

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).

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Missing responses-respondent did not answer the item. Double answer-respondent answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			% out of			% out of		
			Valid	2,141	Missing	Valid	1,977	Missing
71d	Company management is generally respected by employees.	Management	2,132	99.6	9	1,960	99.1	17
72a	Regarding suggestions for change from employees, my supervisor is usually receptive (willing to listen).	Supervision	2,133	99.6	8	1,963	99.3	14
72b	Regarding suggestions for change from employees, my supervisor is usually responsive (takes action on suggestions).	Supervision	2,126	99.3	15	1,958	99	18
73a	I am frequently worried about being made redundant. (Disagree)	Job Security	2,139	99.9	2	1,970	99.6	6
73b	I am frequently worried about the future of my branch. (Disagree)	Job Security	2,137	99.8	4	1,971	99.7	5
73c	I am frequently worried about the future of my line of business. (Disagree)	Job Security	2,133	99.6	8	1,968	99.5	7
73d	I am frequently worried about the future of my business unit or company support unit. (Disagree)	Job Security	2,135	99.7	6	1,964	99.3	12
73e	I am frequently worried about the future of the company. (Disagree)	Job Security	2,136	99.8	5	1,969	99.6	8
74a	The company is highly regarded by the general public.	Identification & Image	2,136	99.8	5	1,968	99.5	9
74b	The company is highly regarded by its customers.	Identification & Image	2,137	99.8	4	1,968	99.5	8
74c	The company is highly regarded by its employees.	Identification & Image	2,134	99.7	7	1,966	99.4	10
75a	There is sufficient contact between branch management and employees.	Management	2,139	99.9	2	1,963	99.3	13

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).
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Missing responses-respondent did not answer the item. Double answer-respondent answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			Valid	% out of 2,141	Missing	Valid	% out of 1,977	Missing
75b	There is sufficient contact between my line of business management and employees.	Management	2,133	99.6	8	1,961	99.2	14
75c	There is sufficient contact between business unit or company support unit management and employees.	Management	2,133	99.6	8	1,958	99	18
75d	There is sufficient contact between company management and employees.	Management	2,132	99.6	9	1,955	98.9	21
76a	The company too often sacrifices the quality of our products/services in order to cut costs. (Disagree)	Quality	2,138	99.9	3	1,964	99.3	11
76b	The company too often sacrifices the quality of our products/services in order to meet schedules or deadlines. (Disagree)	Quality	2,134	99.7	7	1,966	99.4	11
77a	My branch constantly looks for better ways to service its internal/external customers.	Customer Focus	2,136	99.8	5	1,966	99.4	10
77b	My branch actively seeks to understand internal/external customer requirements.	Customer Focus	2,134	99.7	7	1,962	99.2	13
77c	My branch is responsive to internal/external customer needs.	Customer Focus	2,131	99.5	10	1,962	99.2	15
77d	My branch is easy to do business with.	Customer Focus	2,131	99.5	10	1,963	99.3	11
78a	I believe the concept of the Participative Approach is good for the long-term future of the company.	Participative Approach	2,136	99.8	5	1,969	99.6	8

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).

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Missing responses-responder did not answer the item. Double answer-responder answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			% out of		Valid	% out of		Valid
			2,141	Missing		1,977	Missing	
78b	I believe the concept of the Participative Approach is good for the long-term future of its employees.	Participative Approach	2,130	11	1,967	99.5	9	1
79a	My supervisor communicates effectively.	Supervision	2,135	6	1,969	99.6	7	1
79b	My supervisor manages people well.	Supervision	2,134	7	1,971	99.7	6	0
79c	My supervisor develops people's abilities.	Supervision	2,132	9	1,971	99.7	6	0
80a	There are sufficient opportunities for me to receive training to improve my skills in my current job.	Training & Development	2,138	3	1,972	99.7	5	0
80b	There are sufficient opportunities for me to receive training to learn other jobs.	Training & Development	2,136	5	1,969	99.6	7	1
80c	There are sufficient opportunities for me to receive training to increase my eligibility for a better job in the company.	Training & Development	2,131	10	1,969	99.6	8	0
81a	The company has a good work environment for female employees.	Work/Family/ Diversity	2,136	5	1,972	99.7	5	0
81b	The company has a good work environment for male employees.	Work/Family/ Diversity	2,133	8	1,966	99.4	10	1
81d	The company has a good work environment for younger employees.	Work/Family/ Diversity	2,135	6	1,965	99.4	10	2
81e	The company has a good work environment for older employees.	Work/Family/ Diversity	2,131	10	1,966	99.4	11	0
81f	The company has a good work environment for employees with a disability.	Work/Family/ Diversity	2,134	7	1,966	99.4	10	1

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).

Items copyrighted International Survey Research LLC.

Missing responses-respondent did not answer the item. Double answer-respondent answered twice.

Item Number	Survey Item	Category	Disk			Paper			
			Valid 2,137	% out of 2,141	Missing 4	Valid 1,970	% out of 1,977	Missing 7	Double Answer 0
82a	The company has established a good reputation for the quality of its products.	Quality	2,133	99.6	8	1,968	99.5	8	1
82b	The company has established a good reputation for the quality of its services.	Quality	2,136	99.8	5	1,971	99.7	6	0
83a	In my judgment, my branch is well managed.	Management	2,134	99.7	7	1,969	99.6	8	0
83b	In my judgment, my line of business is well managed.	Management	2,134	99.7	7	1,966	99.4	11	0
83c	In my judgment, my business unit or company support unit is well managed.	Management	2,136	99.8	5	1,963	99.3	14	0
83d	In my judgment, the company as a whole is well managed.	Management	2,114	98.7	27	1,951	98.7	26	0
87b	The content of business unit or company support unit publications is up-to-date.	Communication	2,115	98.8	26	1,951	98.7	26	0
87c	The content of Health Safety and Environment (HS&E)/(OH&S) is up-to-date.	Communication	2,122	99.1	19	1,950	98.6	27	0
87d	The content of faxed bulletins is up-to-date.	Communication	2,128	99.4	13	1,957	99	19	1
87e	The content of Team Briefing sessions is up-to-date.	Communication	2,104	98.3	37	1,919	97.1	52	6
87f	The content of forums is up-to-date.	Communication	2,113	98.7	28	1,948	98.5	28	1
87g	The content of E-Mail is up-to-date.	Communication	2,113	98.7	28	1,926	97.4	51	0
87h	The content of company videos is up-to-date.	Communication							

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).
Items copyrighted International Survey Research LLC.

Missing responses-respondent did not answer the item. Double answer-respondent answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			Valid	% out of 2,141	Missing	Valid	% out of 1,977	Missing
87i	The content of management hotlines is up-to-date.	Communication	2,104	98.3	37	1,926	97.4	50
87j	The content of newspaper/radio/television articles/announcements about the company is up-to-date.	Communication	2,118	98.9	23	1,960	99.1	17
87k	The content of informal discussions with colleagues is up-to-date.	Communication	2,114	98.7	27	1,950	98.6	27
88a	In your judgment, with all things considered, how good a job is company management doing in providing a clear sense of direction?	Management	2,124	99.2	17	1,970	99.6	6
88b	In your judgment, with all things considered, how good a job is company management doing in making decisions promptly?	Management	2,122	99.1	19	1,968	99.5	8
88c	In your judgment, with all things considered, how good a job is company management doing in eliciting staff support for initiatives?	Management	2,119	99	22	1,970	99.6	7
93	At the present time, are you seriously considering leaving the company for any reason?	Identification & Image	2,134	99.7	7	1,969	99.6	8
95	Taking everything into account, how satisfied are you with the company as a place to work?	Job Satisfaction	2,131	99.5	10	1,974	99.8	2
								1

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).

Items copyrighted International Survey Research LLC.

Missing responses-responder did not answer the item. Double answer-responder answered twice.

Item Number	Survey Item	Category	Disk			Paper		
			Valid	% out of 2,141	Missing	Valid	% out of 1,977	Missing Double Answer
100	I understand how the company's regulatory and legal obligations impact my work.	Personnel Policies & Procedures	2,133	99.6	8	1,751	88.6	226 0
101	Filling in this survey is a good way to tell company management what I think.	Reaction to the Survey	2,134	99.7	7	1,966	99.4	9 2
102	I feel significant action has been taken as a result of the previous Surveys.	Reaction to the Survey	2,131	99.5	10	1,964	99.3	13 0
103a	As a result of the survey, I think company management will carefully consider problems brought to its attention.	Reaction to the Survey	2,128	99.4	13	1,966	99.4	10 1
103b	As a result of the survey, I think company management will carefully consider problems brought to its attention.	Reaction to the Survey	2,128	99.4	13	1,967	99.5	10 0
103c	As a result of the survey, I think company management will act on problems identified.	Reaction to the Survey	2,125	99.3	16	1,965	99.4	12 0

Note: Number of returned surveys 2,141 (disk) and 1,977 (paper).
Items copyrighted International Survey Research LLC.

Missing responses-responder did not answer the item. Double answer-responder answered twice.

Appendix C7

Study 2: Employee Verbatim Written Comments

The following 33 comments were written by disk participants in response to the open-ended comment question, "What ideas or suggestions would you like to bring to the attention of management?"

"You should provide disk users with an up-front number of the questions involved, and/or an up-front estimate of the time required to complete the survey."

"Electronic format is great!"

"When I save these comments to the disk, then run the program again, many of the E's have been changed to A's. I have corrected the comments several times, but the problem reoccurs. Some other minor changes also happen. In my Business Unit, nothing was achieved from the last EOS survey. Focus groups were held to suggest improvements, but no action was taken. Business Group fared very poorly in the previous EOS, but nothing has changed. Several Business Unit managers took to the road to sell and explain the EOS results, but have not done anything real, anything concrete, to address the problems. Business Unit management are only interested in being seen to address the problems in the last EOS."

"I got halfway through this survey and got an Out of Memory message. Nothing was saved and I had to start from the beginning. There is a need to have automatic saving as you work. It cost me over 30 minutes - time I can ill afford to lose."

"Rather than have a page or more of definitions, it would have been better to have the necessary word highlighted in the question so that you could simply click on that word and the definition would pop up rather than have to go back and reread the definition. Also, a fast forward to and/or search for unanswered questions would help if you had missed a question or had to exit before completing the survey. With the power of the computer and Windows system, it would make the survey better. Apart from that, the

computer-based survey, I feel, was easier than the paper-based one."

"It was nice to have an electronic copy, but you gave the option to look at the organizational chart and gave us a paper copy and did not give easy ability to access the instructions up-front."

"I like the electronic format. It suits my working style. I hope it has an automatic check that I have answered ALL questions. Question 71 had a display problem on my computer. The Please Answer Each Item covered up the last word and all I saw was E, which I guessed to be employees."

"The disk is a great idea and should be used rather than paper surveys."

"It would be good if you could read the survey, e.g., at least half the questions were unreadable on my computer screen and I was not the only one. I would think that this is a problem when it come to filling out this survey."

"It's much better to have a computerized EOS than the paper one I did last year. It is much faster to fill out than the paper one. The disadvantage is you need a fast PC with Windows. The disk system can be copied and it may be possible to rort the survey. I did not like that we were not given the option of paper or diskette by the management. What about corrupted diskettes?"

"I like the electronic version."

"I believe that unless there are a significant number of people expressing the same views as me, the above comments will be wasted. It would be nice to have an index of completed pages on the tool bar, as it took several minutes to get back here to enter these final comments."

"The electronic format of the survey I found to be very innovative and a pleasure to use as opposed to paper surveys. This is definitely one positive aspect and I hope that this type of approach continues. I only hope that the survey results can be conveyed to management in an undistorted form so they can see the real picture of how employees truly feel about this company."

"Electronic survey: PLUS for trying out a new technique; PLUS for ease of recording answers to questions; MINUS for convenience factors. Tedious and unfriendly referencing to soft copies of organization chart and definitions. OK with paper copy of organization chart. Paper copy of definitions would improve, but still confusing, ambiguous and convoluted. Why not provide a briefer and better definition on each survey page where needed? Or even provide a fixed button for access (similar to Organization Chart button). Why close the Definitions help file between use? Why not provide a standard pull-down menu to swap between definitions and survey windows? Slow to move between pages (even on a fast PC). Tedious to open file to add comments and have to scroll through every question. Why not another button to go directly to the last section? The Exit button needs an option to save and not close."

"The electronic copy is a great idea and I found it very easy to use and much easier to fill out. Some confusion over whether Line of Business was another level in the organizational hierarchy or was the same as a branch. Maybe it should be in terms of levels of management from the top."

"My fellow employee is disturbed by the fact that he received a paper survey and he would have certainly preferred a software survey. I suggest that it would be a good idea to ask each section supervisor what quantity of each type of survey his section requires. P.S.: He found a 2B grade pencil after searching (wasting) for a considerable period of time."

"It would be good if you could increase the font (to 12 or 13) of the survey so it is easier to read on the screen."

"A sealed envelope should be provided for the disk survey."

"The electronic version of the survey is great, but it would be nice if one could jump to different pages when need to. e.g., when reentering the survey."

"The floppy disk method takes far too long to load. It is a real pain to try and go back a few pages and therefore not user-friendly. I would prefer the paper method."

"A good questionnaire. You may wish, the next time, to incorporate a feature in the electronic questionnaire that allows you to find a question or subject you have already covered by a search facility that operates by using a key word. This would save one having to do so laboriously, page by page, should one wish to change a response to a question. Also, I changed my mind about responding to questions 3, 6 and 7 at the beginning of the survey on location, age and length of service with the company, after responding to them. However, since I could not erase my response, I highlighted an incorrect response in each case."

"Data entry for the software version of the survey is slow. It is very, very, slow to review/scan for errors. It saves trees. It should be improved so that it can replace the paper version."

"I found answering this survey on a computer slow but different, mainly due to the speed of my machine. My colleagues finished their paper surveys in about 1 hour. I took nearly 2 hours having to refer back to earlier pages for information, and waiting for the screen to update."

"Reaction to survey: I think that the idea of performing the survey on a computer disk is a good one for those who have access to a terminal, but it completely missed the point for those people who have no keyboard skills or are frightened to have a go at the computer. A better idea might be to have the survey on the LAN so that feedback from the field can be instantaneous and the lag between notification of a problem within the Company and a remedy can be reduced."

"Prefer electronic version over paper version."

"It takes way too long to get back to where you leave off in the electronic survey. Smarten it up and make the survey jump straight to where you are up to."

"[initial comment deleted by the author as it did not relate to the disk version of the survey.] The pages on this disk can only be accessed sequentially, not directly to any page."

"Very good - no problems with this format."

"Is it possible to speed up the start-up and next-page response time? I have a 486 with 8 MB RAM."

"Format surveys to suit all machines. Machines using large-size fonts lose more than half of the information. This small font is too difficult to read. Check for faulty disks; this is the second disk."

"It was very difficult to remember the definitions throughout the survey. I, for one, photocopied a paper copy. A better idea would be to be able to access it like the organizational chart, supply it in a printed format or allow it to be printed from disk."

"I think it is a waste of time filling in a paper survey. I prefer the disk version. It took me 30 minutes to find a 2B pencil."

"How can we expect a reaction to a survey which does not give people a chance to express their feelings? A computer survey is too restrictive. Management is not getting true picture."

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