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An Empirical study of attitudes towards telecommuting among government finance professionals

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An Empirical Study of Attitudes Towards Telecommuting
Among Government Finance Professionals

by

Joseph J. Grippaldi

A professional paper submitted in partial fulfillment
of the requirements for the Master of Public Administration

Department of Public Administration

Greenspun College of Urban Affairs

University of Nevada, Las Vegas

May 2002

ABSTRACT

An Empirical Study of Attitudes Towards Telecommuting Among Government Finance Professionals

by

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This paper presents the results of a preliminary study to evaluate attitudes towards telecommuting among finance employees who are employed by special district governments in the United States. Original data was collected by using a self-administered mail survey sent to 400 special district government finance employees who are members of the Government Finance Officers Association (GFOA) of the United States and Canada. This paper will examine variables including employee support for telecommuting, the likelihood of employees working away from the office, and the number of days employees wish to telecommute. A factor analysis was employed to determine if patterns of correlation within the set of observed attitudinal variables could be explained by underlying factors. The results revealed that four factors exist. These include how telecommuting impacts organizational attitudes, personal attitudes, job satisfaction, and the relationship between job stress and saving money. Two of the four factors are analyzed in this paper. Additionally, the impact of telecommuting on the inclination to leave an organization is examined.

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CHAPTER I – INTRODUCTION

Chapter I will provide some general information about telecommuting. The definition of telecommuting will be discussed as it relates to this study. I will then discuss my personal experience with special district governments, and the research will be outlined. Finally, the remainder of the paper will be summarized.

1.1 BACKGROUND

A 2001 study by the International Telework Association and Council (ITAC) found that there are now 28.8 million teleworkers in the United States. This is a 17 percent increase from the prior year, and equates to one out of every five U.S. workers. The study revealed that 42.4 percent combine working at home with some other form of telework, 24.1 percent work on the road, 21.7 percent of teleworkers work at home, 7.5 percent work at telework centers, and 4.2 percent work in satellite offices. The study further declared that more than two-thirds of teleworkers express greater job satisfaction, 80 percent feel a greater sense of loyalty towards their organizations, and over three-quarters reported increases in productivity and work quality. Teo, Lim, and Wai (1998) studied information technology personnel to determine attitudes towards telework, and they found overwhelming positive attitudes. They also found a willingness to opt for telecommuting and an increase in company loyalty. Mokhtarian and Bagley (1998) discovered that City of San Diego employees expressed positive attitudes about telecommuting. They also found that gender, personal, and occupational differences impacted their attitudes about telework. Telecommuting has become eminent in the world of public and private organizations. This paper seeks to determine if the results of other telecommuting studies can be generalized to government finance professionals. Hence, this topic requires additional research.

1.2 TELECOMMUTING DEFINED

Telecommuting (also known as telework or flexiplace) may take on several definitions. In its early stages, Crimando and Godley (1985) defined telecommuting to be only the use of a computer terminal to perform computer work at a remote location. But according to Brimsek and Bender (1995) and De Marco (1995), it includes using a variety of other resources including the gamut of electronic communication devices available to keep in touch with society. Handy and Mokhtarian (1995) further specified that telecommuting now includes teleconferencing, using cellular phones, voice mail, electronic mail, fax machines, and on-line database services.

According to Handy et al. (1995), State of Arizona (1996), and Teo et al. (1998) telecommuting is defined as performing a job task away from the regular work site (i.e. the office) at least one to two days per week. ITAC-2 (2001) found telecommuting is performed at the home, on the road, a customer location, or a satellite office. To further clarify the definition, telework is not normally a full-time work arrangement; Pratt (1999) found the average teleworker typically works two-and-a-quarter days per week away from the office. However, it may be done full-time in some cases. According to Dutton (1994), full-time telecommuting is still rare, and if it is used it may only last for the duration of a special project.

Some employees telecommute on an irregular basis, but others just take work home to catch-up or keep-up with the workload. For the purposes of this research, the definition of telecommuting is performing your regular job away from your regular work location on either a part- or full- time basis, and by doing so, avoiding the associated commute. Telecommuters are considered to be those employees that have an agreement (written or verbal) with their employer to perform a job function away from the office, and get paid for doing so. Employees who do catch-up or keep-up work are not considered to be telecommuters for the purpose of this study.

1.3 PERSONAL EXPERIENCE AND SPECIAL DISTRICTS

Over the past six years I have worked in the accounting / finance departments of two special district, public sector organizations. On several occasions, I have telecommuted, but not on any regular basis. I found that a great deal of accounting and finance work is amenable to telecommuting. Accounting and finance work typically includes financial record keeping, preparation of financial reports and spreadsheets, and budget administration and preparation. Much of this work does not require human interaction beyond what can be achieved by telephone and email. This is because much of the data required to perform financial work is stored on computer servers in databases and tables. Current technology, according to Ahmadi, Helms, and Ross (2000), including high-speed personal computers and Internet capabilities (i.e. broadband communications such as DSL and cable modems), allow employees to work outside the office at any time or any place. Employees can easily and rapidly gain access to needed data. The result is that much of the work can be performed away from the standard office without any degradation in productivity. In fact most studies, including the ITAC study, cite productivity increases as one of the greatest benefits of telecommuting. Accounting and finance work requires quiet time to perform financial analyses, and thus working away from the office may provide increases in productivity as suggested in the literature.

Additionally, special district governments, which are limited purpose governments created to handle a narrow scope of public functions, are a relatively new form of government. According to the United States Census Bureau (1997), special district governments number over 34,000 in the United States. Because of their contemporary design, they may be less institutionalized than other mature state and local governments. Foster (1997) characterized special districts as politically and fiscally independent and having “institutional independence

from other local governments” (p.10). Special purpose governments are often exempt from civil service and given “broad discretion to establish personnel policies...management techniques, and internal operating procedures” (p.10). As a result of this flexibility, special district governments may participate in telecommuting more often than their general-purpose counterparts, and special district employees may view telecommuting as a positive benefit of employment.

1.4 DEFINING THE RESEARCH

This paper seeks to examine attitudes towards telecommuting among accounting / finance employees who are employed by special district, public sector organizations in an attempt to answer the following research questions: 1) Do special district government finance employees express positive attitudes towards telecommuting, and do gender, personal, or occupational differences exist? 2) Will the availability of telecommuting impact the inclination of special district government finance employees to leave their organization? The following variables will be examined as a result of this research: Do special districts utilize telecommuting? Does their rate of use differ from other governments? What are the attitudes (organizational and personal) and attitudinal differences between telecommuters and non-telecommuters? Will government finance professionals, in their own view, be more productive when telecommuting? Will they be more satisfied? Does telecommuting play a role in organizational loyalty? These are some of the questions and relationships that will be investigated in the course of my research.

1.5 ORGANIZATION OF THE STUDY

The remainder of this professional paper is divided into four chapters. The next chapter discusses what the current literature says about telecommuting. It describes some of the impacts of telecommuting including positive and negative aspects. Recent studies about employees’

attitudes regarding telecommuting are summarized. Finally the need for this research is discussed. Chapter III – Methodology describes the research task, the procedures and survey instrument used to collect data, and limitations of the study. Chapter IV – Findings & Analyses examines the results of the survey data including demographic characteristics of respondents, attitudes toward telecommuting, and the impact of telecommuting on the propensity to leave the organization. A factor analysis is employed to determine if relationships exist among the multitude of variables being examined. Two attitudinal factors are revealed and analyzed. Chapter V – Conclusions discusses the implications of the findings and analyses to special district governmental organizations and special district employees. Finally, an evaluation of this research is completed and the need for future research is discussed.

CHAPTER II - LITERATURE REVIEW

Chapter II will discuss the impacts of telecommuting and look at studies of telecommuting in the private and public sector. Positive and negative aspects will be examined as well as the need for this research.

2.1 IMPACTS OF TELECOMMUTING

Widespread telecommuting is a relatively new phenomenon, however, countless formal programs exist. Formal programs are laid out by an employer, usually with written policies, procedures, and telecommuting agreements, to guide supervisors and employees on the dos and don'ts of telecommuting. Informal programs are guided by a willingness of supervisors and employees to participate in this flexible work arrangement without written agreements or policies in place. Most of the literature states overwhelmingly that employees, whether they are telecommuters or not, have positive attitudes about telecommuting programs. The literature also cites positive benefits for employer, employee, and the community. One of the most cited benefits of telecommuting is increased work efficiency, productivity, and satisfaction.

2.2 POSITIVE AND NEGATIVE ASPECTS OF TELECOMMUTING

There are a host of advantages for all of the participants of telecommuting including the telecommuter, the employer, and the community. According to Piskurich (1996) and Handy et al. (1995), an employee who telecommutes will reduce the amount of transportation costs associated with traveling to work, and they will also reduce the amount of time spent and stress generated from commuting. In addition, Piskurich (1996), an independent consultant who has evaluated the pros and cons of telecommuting, says the worker will be able to control working conditions, and they will be able to prevent unplanned drop-ins. They can also maintain a higher level of privacy than normally achieved at the office, and more work can be performed with

fewer interruptions. Handy et al. (1995) contends that telecommuters have the flexibility to care for children or for the elderly. The employer of a telecommuter will also benefit from this arrangement by attracting qualified, new employees who require flexible work times. It can also assist in retaining good employees by increasing their job satisfaction, reducing sick time and absenteeism, and help comply with ADA and EPA regulations, according to Piskurich (1996). The most valuable advantage of telecommuting appears to be the increased levels of employee productivity. Table 1 below summarizes positive and negative aspects of telecommuting:

Table 1 – Positive & Negative Aspects of Telecommuting. Sources as listed.

Positive Characteristics	Negative Characteristics
Reduction of transportation costs (Piskurich, 1996)	Employees may feel lonely or isolated (Piskurich, 1996)
Less time / stress spent commuting / energy conservation (Piskurich, 1996)	Not all jobs or employees are telecommuting candidates (Teo, et al., 1998)
Reduced vehicle traffic / improved air quality (Pendleton, 1998, Massachusetts, 1994). Poor air quality may lead to loss of federal funding for highway projects in some jurisdictions (Girard, 1998).	Telecommuters may become workaholics (Piskurich, 1996)
Better control of working conditions (Piskurich, 1996)	Jealousy among employees (Teo, et al., 1998)
Increased privacy / fewer interruptions (Piskurich, 1996)	Reduced participation in office culture (Piskurich, 1996)
Physically challenged workers may join workforce (Handy, et al., 1995)	Limited access to office forms (Gordon, 1997)
Employers can attract workers who require flexible work arrangements (Teo, et al., 1998; Pratt, 1999;)	Fear of being left out of communication circle / reaching management during crisis (Brimsek, et al., 1995)
Excellent employee retention tool (Gordon, 1997; Pratt, 1999)	Fear of being passed up for promotions (Gordon, 1997)
Increased job satisfaction / reduced sick time and absenteeism (Gordon, 1997; Pratt, 1999)	Managers fear loss of employee control / less face-to-face meetings (Piskurich, 1996;)
Possible reduced office space needs (Teo, et al., 1998)	Managers fear employee abuse / less flexibility (Piskurich, 1996)
Increased employee productivity (Kemp, 1995; Gordon, 1997; Teo, et al., 1998; Pratt, 1999)	Encourage decentralization and leapfrogging to rural areas (Handy, et al., 1995)

2.3 TELECOMMUTING STUDIES

Studies of telecommuters have taken place throughout the 1990s and into the new millennium. Non-telecommuters have also been studied to assess attitudes regarding telecommuting and job satisfaction to compare with telecommuters. Studies have taken on a

variety of shape and sizes including examining public and private sector employees and managers. Mokhtarian et al. (1998) surveyed 583 employees of the City of San Diego in 1992 to determine what impacts gender, occupation, and presence of children have on telecommuting motivation and constraints. The study found that both men and women had strong desires to telecommute, but women on average rated telecommuting as more important than men. The study also found that managers and professional level employees were more likely to cite getting more work done as a motivation to telecommute as opposed to clerical level employees who cited family and office stress reduction as motivations.

In a study by Baruch and Yehuda (1998), a majority of private sector non-teleworkers in the United Kingdom and Hong Kong felt that teleworking would reduce their stress and less time would be wasted traveling as a result of telecommuting. However, several negative attitudes toward telework were also revealed. These included less time being spent communicating with colleagues and the inability to share experiences and knowledge with coworkers, for example.

Teo et al. (1998) looked at attitudes towards telecommuting among information technology personnel. They examined issues including propensity of telecommuters to leave an organization, perceived advantages and disadvantages, and events influencing the decision to telework. The study revealed the number of employees planning to leave their organization was reduced almost in half as a result of implementing a telework program. Additionally, almost 90 percent of respondent were in favor of teleworking and almost 87 percent would opt for telework as an alternative work arrangement.

A study by Ilozor, Ilozor, and Carr (2001) examined the relationships between management communication strategies and satisfaction of telecommuters. They discovered that

several strategies have significant influence over the job satisfaction of telecommuters. These included clear communication of job responsibilities, goals and objectives, and deadlines.

2.4 TELECOMMUTING IN THE PUBLIC SECTOR

The federal government and many state and local governments have adopted telecommuting as part of an alternative work schedule. The federal government began a telecommuting pilot program in 1990 called the Federal Flexiplace Pilot Study. The program was initiated to increase the number of employees working from home and study the impacts of telecommuting. According to Kemp (1995), in 1991 Congress approved an amendment to study telecommuting by the Department of Transportation and Energy. Kemp (1995) also stated that by 1992 approximately 500 federal employees from 13 agencies including the Department of Agriculture, Health and Human Services, Interior, Treasury, and the EPA were participating in the telecommuting program. According to the Merit Systems Protection Board (MSPB) Merit Principles Survey of 2000, 20 percent of federal employees now have telecommuting available to them. However, according to ITAC-1 (2001), the Office of Personnel Management noted only 45,298 federal employees or 2.6 percent of the federal workforce telework at least one day a week.

The federal government is not the only one participating in telecommuting; local and state governments are also taking part in this innovative work arrangement. According to Kemp (1995), in 1989, the county of Los Angeles, California, introduced a telecommuting program because they believed that it would have positive results, and by 1992 there were 500 telecommuters in the program working an average of two days per week. In 1993, the city of San Diego had 35 telecommuters, and the city of Santa Barbara was initiating a program. In addition, the Los Angeles School District had 70 to 80 telecommuters, the Orange County

Transportation Authority had 24 telecommuters, the South Coast Air Quality Management District had 30 telecommuters, and the Los Angeles Metropolitan Water District had 60 employees in a pilot program.

In 1993, a survey was sent to all of the states requesting information about state programs on telecommuting. Eighty percent replied saying that the state had no formal telecommuting policy; although, many employees were allowed to telecommute anyway. States that had established telecommuting programs cited improved productivity, response to employees' needs for work flexibility, and fringe benefits as some of the reasons for implementing such programs.

The State of Arizona began planning a telecommuting pilot program in the fall of 1989. An evaluation of the State of Arizona's telecommuting plan was completed to assess how the program was working for all stakeholders. The assessment focused on several topics including current perceptions, attitudes, and level of support for telecommuting. Senior and mid-level managers had positive attitudes towards telecommuting. Eighty-six percent of employees were positive and cited increased job satisfaction and productivity as a benefit of telecommuting.

The State of California (1990), initiated a telecommuting pilot program. Employee effectiveness was measured, and employees and their supervisors cited increased productivity as a benefit of telework. However, supervisors' estimates of productivity increases tended to be more conservative than the employee's.

The state of Florida (1997) began a telecommuting program as a result of Florida Statute 110.171, the State Employee Telecommuting Act. The Department of Management Services (1997), stated, "Telecommuting provides an opportunity to increase productivity, enhance work quality, and reduce costs. Telecommuting may help recruit and retain personnel and increase accessibility to state employment for individuals who have a disabling condition" (p. 1).

Between November 1995 and October 1996, the Minnesota Department of Administration (1997), ran a successful pilot telecommuting program. Participants included employees from a variety of positions including accounting staff, management analysts, word processors, managers, and more. The Minnesota Department of Administration (1997), found that telecommuting was a successful concept with advantages for employer, employee, and society. They found, similar to other programs studied, increases in employee satisfaction and productivity. They also concluded that “organizations that have embraced telecommuting report reduced sick leave usage, reduced real estate and property management costs, and increased employee satisfaction and retention” (p.19). Telecommuting is becoming commonplace in the public sector as is evident by the number of successful programs in place today.

2.5 TELECOMMUTING IN THE PRIVATE SECTOR

The private sector is also participating in telecommuting. According to Apgar (1998), companies such as AT&T, IBM, and American Express are engaged in telecommuting. An IBM survey of employees revealed that 87 percent of telecommuters believed their productivity and effectiveness had increased. Similar results were obtained from AT&T and American Express. According to Chadderdon (1998), Merrill Lynch employs about 400 telecommuters. Management insists that telecommuters complete a rigorous training program to teach employees the “how to” of telecommuting. In return, management has reported increased productivity and decreased turnover among telecommuters. Przybys (2000) says a local organization, Clark County Credit Union, is also participating in telecommuting. Credit union management is pleased with the program, and especially satisfied with the initial savings of \$4 million, which was the impetus for the transition to telecommuting.

2.6 NEED FOR THIS RESEARCH

As mentioned, there have been many studies and a variety of literature discussing the who, what, when, where, and why of telecommuting. Private and public organizations have been studied. However gaps remain in the literature. Government finance professionals, as a group, have not been studied, and special district governments have not been investigated. As mentioned, accounting / finance employees perform work that lends itself to telecommuting. It is important to determine what attitudes exist about telecommuting among this group, and if telecommuting, in the employees' view, can improve productivity, satisfaction, and retention. Also discussed is the fact that special district governments are newer, less institutionalized, and should be more open to offering telecommuting as an alternative work arrangement. This study looks specifically at accounting / finance employees who are employed by special district governments in the United States. In my opinion, if I examine the combination of accounting / finance employees who work in special district governments, I should find a higher percentage of employees participating in telecommuting programs than other governments. I should also find elevated levels of satisfaction and productivity among telecommuters, and positive attitudes among telecommuters and non-telecommuters alike. Additionally, in my opinion, if the results of this study are disseminated to government finance professionals it may have the effect of solidifying existing programs and creating interest within those organization that have not realized the organizational benefits of telecommuting.

CHAPTER III – METHODOLOGY

Chapter III defines the research task and describes the procedures followed to gather a representative sample. The survey instrument will be described, and the procedures used to process the data will be analyzed. The final response rate for this study will be discussed, and finally, limitations of the study will be addressed.

3.1 RESEARCH TASK

The preceding section suggests that employers and employees believe that telecommuting has the potential to provide many benefits for all participants. Government finance professionals employed by special district governments perform work that can easily be completed away from the traditional office, but it is unknown how much this segment of public employees participates in telecommuting and how the results vary from other groups. It is also unknown how this group perceives telecommuting. The task of this research is to empirically determine the extent of telecommuting performed by government finance professionals employed in special district governments. Moreover, this study will examine the attitudes of non-telecommuters and telecommuters including how telecommuting impacts organizational attitudes, personal attitudes, job satisfaction, and the relationship between job stress and saving money. The study will also examine other components of telecommuting including the inclination of employees to leave an organization if telecommuting is offered elsewhere, the benefits and drawbacks (perceived and actual) of working away from the office, and how attitudes vary among different groups of employees.

3.2 SAMPLE AND PROCEDURES

In order to gather the necessary data and perform this research, a self-administered mail survey was provided to a random sample of government finance professionals who are employed

by special district governments. The Government Finance Officers Association (GFOA) of the United States and Canada was contacted in order to obtain a list of special district government employees. Membership in this organization consists of approximately 14,500 from the U.S., Canada, and other countries. Members serve a variety of accounting and finance positions in city, county, state, retirement system, and special district governments. Currently, there are 2,435 special district GFOA members in the United States. I obtained a list of all special district government members from the GFOA for this research project. GFOA was only able to provide the list in non-electronic format. Therefore, all of the labels were numbered, and Excel software was used to create a random number table of 400 numbers ranging from one through 2,435 (thus creating a random sample). This sample of 400 was given identification numbers and entered into an electronic database for tracking purposes.

3.3 SURVEY INSTRUMENT

I proceeded by drafting a cover letter (Appendix A) and survey. In the cover letter, I identified myself as government finance professional, a GFOA member, and a student. The letter defined telecommuting, and was credible and personalized in order to attract as many respondents as possible. The survey was divided into several sections with the goal of determining the following information: 1) telecommuter or not (including nature of telecommuting); 2) attitudes and satisfaction towards job function and telecommuting (i.e. perceived benefits and drawbacks, interest in telecommuting, propensity to leave an organization as a result of telecommuting being offered elsewhere); 3) management communication regarding job responsibilities (i.e. goals and objectives clearly conveyed, review of work; and modes of communication most often used with the organization); 4) organizational information (i.e. number of employees, budget); 5) demographic information (i.e. age, gender, income); and 6)

additional comments from respondents (Survey variable are listed in Appendix B). Four hundred surveys were mailed using first class postage. The cover letter, a self addressed, stamped return envelope, and a business card were included in the survey package. Five days later, a reminder postcard was sent to all survey recipients (Appendix C). Three weeks after the original mailing, all non-respondents were sent a second survey package including a revised cover letter, a replacement survey, a self addressed, stamped return envelope, and a business card. Due to the deadline of this professional paper, surveys received after March 21, 2002, are not included in Chapter IV – Findings.

3.4 PROCESSING DATA

Upon receipt of completed surveys, the data was entered into SPSS software package to perform statistical analyses. The analyses of the data included employing a factor analysis to determine if patterns of correlation within the set of observed attitudinal variables could be explained by underlying factors. The results revealed that four factors exist. These include how telecommuting impacts organizational attitudes, personal attitudes, job satisfaction, and the relationship between job stress and saving money. Dependent and independent variables were also identified. Originally, the independent variable in all cases was intended to be whether an employee telecommutes. However due to the small group (six individuals) of telecommuters in the study group, significant statistical analysis cannot be performed. Other independent variables were identified in order to determine how they affect the attitudes of special district government employees towards telecommuting. Independent variables include gender, marriage status, level in the organization, and whether the employee provides childcare. Dependent variables include whether an employee is in favor of telecommuting and whether the employee would participate in telecommuting. Other dependent variables include two of the four factors revealed by the

factor analysis. When examining the dependent variable, propensity to leave an organization, the independent variable is whether an organization offers telecommuting. A complete list of survey variables may be found in Appendix B. Most variables are measured using a Likert scale and evaluated using ordinal or interval scales. Some variables are dichotomous (i.e. yes/no questions), and other variables require fill-in answers (i.e. budget, job title).

3.5 RESPONSE RATE

Of the 400 surveys that were distributed, 160 surveys were returned. One survey was returned unopened because the recipient was no longer employed at the institution. Another survey was returned in an envelope that was not properly sealed, and the survey was missing. As of March 21, 2002, the final response rate was 40 percent. Surveys returned after March 21, 2002, are not included in this paper.

Almost four percent (3.8 percent) of respondents identified themselves as telecommuters. However, with a sample of 160, that equates to only six respondents. It appears that two of the six respondents may have shaded the wrong box on their survey (indicating they are telecommuters), but I was not able to completely discern if they had erred. If they did make a mistake in the survey and only four respondents identified themselves as telecommuters, two-and-one-half percent of respondents would be telecommuters. According to the results of a United States Office of Personnel Management (2001) telework survey, just over two-and-one-half percent of federal employees in 94 agencies are teleworking at least once per week (45,300 employees out of 1.8 million). It appears that a telecommuting rate of two-and-one-half percent of special district government finance employees is on par with the federal government. The ITAC-2 (2001) survey reports a 20 percent telework rate, but they include employees working at home, working on the road, working at telework centers, and working in satellite offices.

Without having their entire report (at a cost of \$500), it is impossible to perform a comparison. Having such a small sample of telecommuters to work with, it is virtually impossible to perform any meaningful statistical analyses. Therefore, the entire sample of 160 special district government finance employees will be used to determine attitudes about telecommuting.

3.6 LIMITATIONS

It is noteworthy to mention that GFOA's membership may not be representative of all special district governments. There are approximately 34,000 special district governments in the United States according to the United States Census Bureau (1997); however, GFOA's membership consists of only 2,435 special district government employees. It is very possible that very small special districts may not have the needed resources to purchase memberships for employees. In very small special districts it is also possible that there may not be a dedicated accounting / finance employee. One employee may perform many functions including accounting / finance work and consequently not be a member of GFOA. Furthermore, these smaller special districts may not participate in telework because of the limited number of employees. Additionally, in the course of this study some of the sample sizes used to analyze the survey results are limited, and therefore, may be subject to sampling error. The result is this study will have limited generalizability throughout city, county, state, retirement system, and special district governments.

CHAPTER IV – FINDINGS & ANALYSIS

Chapter IV provides a detailed analysis of the survey results. The chapter begins with a review of the demographic characteristics of the respondents. Attitudes of respondents and the likelihood of participating in telecommuting are analyzed. A factor analysis is used to find relationships among like variables, and further analyses are performed on organizational and personal attitudes towards telecommuting. Finally, the inclination to leave an organization as a result of telecommuting is discussed.

4.1 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Of the 160 respondents, approximately 51 percent were males and 49 percent were females. Approximately 85 percent were married and 15 percent were single. Twenty-one percent of respondents provide childcare and four percent provide eldercare. Nearly nine percent of respondents are between the ages of 25 – 34; 27 percent from 35 – 44; 44 percent from 45 – 54; 20 percent from 55 –64; and less than one percent are older than 64. Fifty-two percent of respondents work in urban areas, 38 percent in suburban regions, and the remaining ten percent are employed in rural areas.

The majority of respondents characterized themselves as either mid- or upper-level management (26 percent mid-level and 53 percent upper-level). Nineteen percent characterized themselves as professional level employees, and roughly two percent considered their positions as clerical level. Eleven percent of respondents have annual gross earnings between \$25,000 and \$49,999. Approximately 36 percent of respondents earn between \$50,000 and \$74,999, and one-third earns between \$75,000 and \$99,999. Twenty percent of respondents earn more than \$99,999 annually. Respondents have a mean tenure of 6.8 years while more than 44 percent

have worked ten or more years for their present organization. Table 2 provides a comprehensive look at the demographic makeup of the respondents.

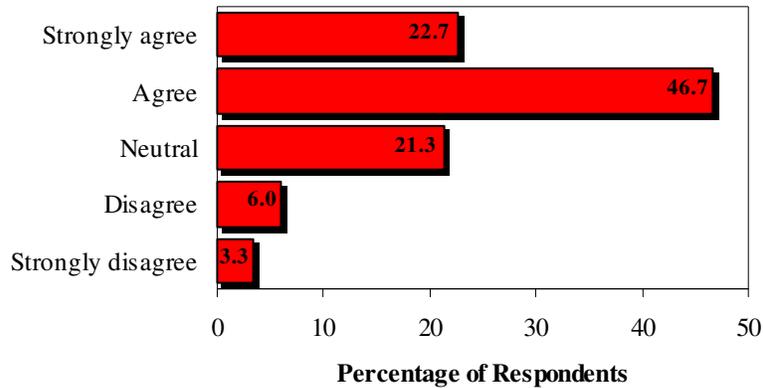
Table 2	Demographic Cross Tabulation				Total
	Male		Female		
	n	Percentage	n	Percentage	
Not Married	3	3.7%	20	26.7%	23
Married	78	96.3%	55	73.3%	133
Total	81	100.0%	75	100.0%	156
Childcare					
Do Not Provide Childcare	66	81.5%	57	77.0%	123
Provide Childcare	15	18.5%	17	23.0%	32
Total	81	100.0%	74	100.0%	155
Age					
Age 25 - 34	7	8.6%	7	9.2%	14
Age 35 - 44	22	27.2%	21	27.6%	43
Age 45 - 54	29	35.8%	39	51.3%	68
Age 55 - 64	22	27.2%	9	11.8%	31
Age > 64	1	1.2%	0	0.0%	1
Total	81	100.0%	76	100.0%	157
Job Level					
Clerical	0	0.0%	3	3.9%	3
Professional	14	17.3%	16	21.1%	30
Mid-level Manager	11	13.6%	29	38.2%	40
Upper-level Mgr.	56	69.1%	28	36.8%	84
Total	81	100.0%	76	100.0%	157
Income					
Income \$25k - \$35k	0	0.0%	1	1.4%	1
Income \$35k - \$50k	6	7.8%	9	12.5%	15
Income \$50k - \$75k	21	27.3%	32	44.4%	53
Income \$75k - \$100	27	35.1%	23	31.9%	50
Income >\$100k	23	29.9%	7	9.7%	30
Total	77	100.0%	72	100.0%	149

4.2 ATTITUDE TOWARDS TELECOMMUTING

Figure 1 shows the attitude of respondents toward telecommuting is positive with more than 69 percent at least agreeing that they are in favor of telecommuting. Twenty-one percent are neutral, and only about nine percent are not in favor of telecommuting. Thus, there is a positive attitude towards telecommuting among special district government finance employees. Teo et al. (1998) also found an overall positive sentiment with 89 percent of respondents being at

least somewhat in favor of telecommuting and only 11 percent at least somewhat against it. However, Teo et al. (1998) used a Likert scale with six choices ranging from extremely against to extremely in favor. A neutral category was not included, and thus may explain some of the variance in the positive attitude of the respondents.

Figure 1 - In favor of telecommuting?



It was found, however, that men and women differ in their opinion of telecommuting. Table 3 shows that five-and-one-half percent of women are not in favor of telecommuting, while more than 13 percent of men were not in favor.

Table 3	In favor of telecommuting?				Total
	Male		Female		
	n	Percentage	n	Percentage	
Strongly Disagree	4	5.3%	1	1.4%	5
Disagree	6	7.9%	3	4.1%	9
Neutral	14	18.4%	18	24.7%	32
Agree	40	52.6%	29	39.7%	69
Strongly Agree	12	15.8%	22	30.1%	34
Total	76	100.0%	73	100.0%	149

Slightly more women are in favor of telecommuting than men (around 69 percent +/-). However, 30 percent of women strongly agreed that they were in favor of telecommuting, while only 16 percent of men strongly agreed. This finding suggests that women have stronger positive attitudes than men about telecommuting and is consistent with Mokhtarian et al. (1998)

who found that women generally rated the benefits of telecommuting higher than men. The balance of respondents, 25 percent of the women and 18 percent of the men remain neutral.

Table 4	In favor of telecommuting?				Total
	Not Married		Married		
	n	Percentage	n	Percentage	
Strongly Disagree	0	0.0%	5	4.0%	5
Disagree	1	4.5%	7	5.6%	8
Neutral	7	31.8%	25	19.8%	32
Agree	7	31.8%	63	50.0%	70
Strongly Agree	7	31.8%	26	20.6%	33
Total	22	100.0%	128	100.0%	148

Table 4 shows that differences exist among married and single employees. About 64 percent of single employees at least agree they are in favor of telecommuting compared to 71 percent of married individuals who are in favor of telecommuting. According to Teo et al. (1998), “Teleworking tends to be of particular interest to married employees” (p.335), and they concluded the importance of telecommuting is likely to increase as single employees get married. Surprisingly, ten percent of married employees versus only five percent of single employees are not in favor telecommuting. However, this finding may be due to sampling error.

Table 5	In favor of telecommuting?				Total
	Do Not Provide Childcare		Provide Childcare		
	n	Percentage	n	Percentage	
Strongly Disagree	5	4.3%	0	0.0%	5
Disagree	5	4.3%	3	10.0%	8
Neutral	31	26.5%	1	3.3%	32
Agree	55	47.0%	15	50.0%	70
Strongly Agree	21	17.9%	11	36.7%	32
Total	119	100.0%	30	100.0%	147

Eighty-seven percent of employees that provide childcare are in favor of telecommuting, while ten percent are not in favor. Just over three percent remain neutral. Sixty-five percent of employees that do not provide childcare are in favor of telecommuting, and nine percent are not in favor. About 27 percent of this group remains neutral. Table 5 provides the details. I would

expect caregivers to want flexible work schedules as opposed to employees without children who may not need the same level of flexibility. Caregivers may therefore see telecommuting as a good idea. Teo et al. (1998) supports this observation. Their study cites having children as the most important event influencing the decision to telecommute.

4.3 LIKELIHOOD OF PARTICIPATING IN TELECOMMUTING

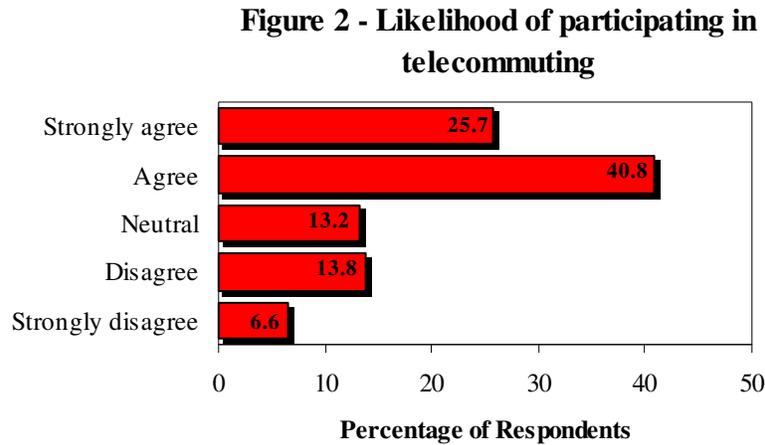


Figure 2 shows the likelihood that respondents will participate in telecommuting if it is offered as a flexible work arrangement in their present organization. Approximately 67 percent agree or strongly agree that they would participate if such an arrangement was offered to them. Thirteen percent remain neutral, and 20 percent would not participate in telecommuting.

Table 6	Would you participate in telecommuting?				Total
	Male		Female		
	n	Percentage	n	Percentage	
Strongly Disagree	7	9.2%	3	4.0%	10
Disagree	12	15.8%	8	10.7%	20
Neutral	9	11.8%	11	14.7%	20
Agree	34	44.7%	28	37.3%	62
Strongly Agree	14	18.4%	25	33.3%	39
Total	76	100.0%	75	100.0%	151

Of the respondents that would not opt to participate in telecommuting, 25 percent are men while less than 15 percent are women. Sixty-three percent of men and 71 percent of women

agreed or strongly agreed they would participate in telecommuting. However, more than 33 percent of women and only 18 percent of men strongly agreed that they would participate in telecommuting. Once again it appears that women have stronger positive attitudes about participating in telecommuting. Mokhtarian (1998) concluded, “Telecommuting appears to appeal more strongly to women...” (p.1129). This conclusion provides support for my findings. Table 6 provides a cross tabulation with the details.

My findings show that married employees would agree to participate in telecommuting slightly more than single employees (67 percent versus 64 percent). As mentioned, this finding is supported by Teo et al. (1998). Surprisingly, though, married individuals also choose not to participate in telecommuting more than their single counterparts (22 percent versus 14 percent). As mentioned, this finding may be the result of sampling error. Single employees are twice as likely as their married counterparts to remain neutral when asked about participating in telecommuting. Table 7 provides a cross tabulation with the details.

Table 7	Would you participate in telecommuting?				
	Not Married		Married		Total
	n	Percentage	n	Percentage	
Strongly Disagree	0	0.0%	10	7.8%	10
Disagree	3	13.6%	18	14.1%	21
Neutral	5	22.7%	14	10.9%	19
Agree	7	31.8%	55	43.0%	62
Strongly Agree	7	31.8%	31	24.2%	38
Total	22	100.0%	128	100.0%	150

Table 8	Would you participate in telecommuting?				
	Do Not Provide Childcare		Provide Childcare		Total
	n	Percentage	n	Percentage	
Strongly Disagree	8	6.7%	2	6.7%	10
Disagree	18	15.1%	3	10.0%	21
Neutral	18	15.1%	1	3.3%	19
Agree	48	40.3%	14	46.7%	62
Strongly Agree	27	22.7%	10	33.3%	37
Total	119	100.0%	30	100.0%	149

Table 8 shows that 80 percent of employees that provide childcare would agree to participate in a telework program, while only 63 percent of those who do not provide child care would agree to take part. Twenty-two percent of employees that do not provide childcare and 17 percent of childcare givers would not participate in telecommuting.

4.4 NUMBER OF TELECOMMUTING DAYS PREFERRED

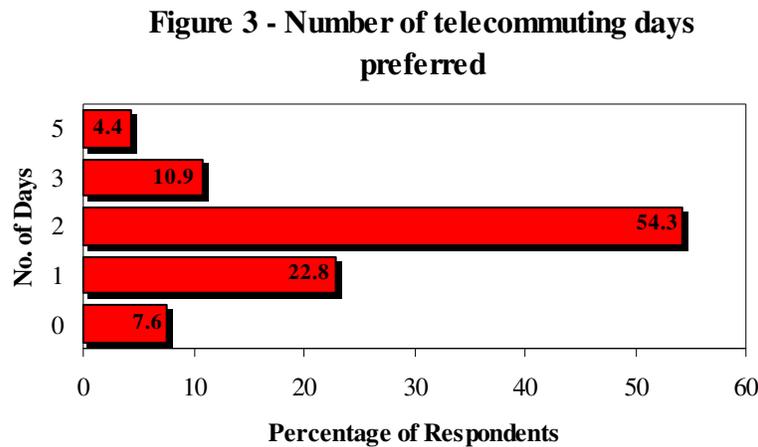


Figure 3 shows the number of telecommuting days preferred by respondents. These respondents are those that would participate in telecommuting if offered by their employer. About 23 percent of respondents would opt to work one day a week away from the office. The majority (54 percent) would opt to work two days a week away from the office while 11 percent would choose to telecommute three days per week. The result is 88 percent of employees who opt to telecommute would choose one to three days per week to work away from the office.

Baruch et al. (2000) also found that part-time teleworking was more preferable by employees. It is obvious that employees who want to telecommute realize the importance of maintaining ties to the office and the difficulty and challenges that full-time telecommuters might face. More than four percent would choose to telecommute five days per week, and the

remaining eight percent, even though interested in participating in telecommuting, opted to work zero days away from the office.

4.5 FACTOR ANALYSIS OF ATTITUDINAL VARIABLES

The analyses presented above examine three discrete attitudinal variables that measure the respondent's opinion toward telework. However, the survey instrument asked the respondent to rate more than 20 attitudinal variables. In order to assess if relationships exist between each of the variables, a factor analysis was completed using SPSS software. A factor analysis groups like variables together to form one factor. These factors, containing several variables, are used to determine the overall opinions about telework. The factor analysis in Table 9 shows that 16 of the attitudinal variables (survey questions) asked of respondents form four factors. All 16 variables listed have loadings above .400 on at least one of the four factors. The analysis confirms that each of the 16 individual variables may be grouped together to form four factors that can be used to measure the effect of telecommuting on organizational attitudes, personal attitudes, job satisfaction, and the relationship between job stress and job expenses. The first two factors, organizational attitudes and personal attitudes, will be analyzed in the remainder of the Findings & Analysis chapter. The last two factors, job satisfaction and the relationship between job stress and job expenses, will only be mentioned briefly to discuss the link between individual variables and the factors.

Using SPSS software, individual variables (components of one or more factors) were grouped together. The mean of each factor (group of variables) was computed in order to perform the analyses that follow. Variables with inverse relationships have been recoded so that all variables are comparable. Frequencies were compiled to determine whether overall organizational and personal attitudes toward telecommuting were negative, neutral, or positive.

Mean scores between zero and 1.49 are considered negative; mean scores between 1.5 and 2.5 are considered neutral; and mean scores between 2.51 and four are considered positive. Cross tabulations have been compiled to analyze the organizational and personal attitudes of respondents using four independent variables. The independent variables are gender, marriage status, whether the respondent provides childcare, and level in the organization.

Table 9 - Rotated Component Matrix of Attitudinal Factors

Item	Factor			
	Organizational Attitudes	Personal Attitudes	Job Satisfaction	Stress & Job Expenses
More productive while telecommuting	.820			
More satisfied while telecommuting	.786			
Improved customer service while telecommuting	.765			
If offered, I would participate in telecommuting	.723	.431		
Unable to share experiences with colleagues while telecommuting	-.698			
Family member will disturb me while telecommuting	-.674			
Job stress will be reduced as a result of telecommuting	.631			
Telecommuting is a positive benefit of employment	.618	.497		
I am in favor of telecommuting	.598	.532		
Telecommuting allows more time to be spent at home with family		.798		
Telecommuting provides flexible working hours		.727		
Telecommuting will allow more personal time		.658		
Work is interesting			.916	
Work is exciting			.886	
Job stress is higher than average				.794
Work related expenses will decrease while telecommuting				-.564

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

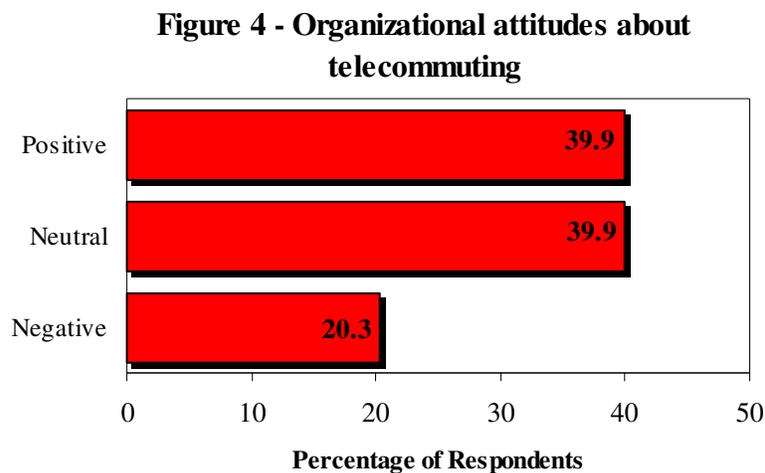
a. Rotation converged in 6 iterations.

4.6 ORGANIZATIONAL ATTITUDES

The first factor, organizational attitudes, consists of nine of the 16 variables. When analyzing the first factor it is easy to discern that each of these components relate to organizational attitudes about telecommuting. For instance, productivity, satisfaction, customer service, and being unable to share experiences with colleagues (inversely related) all relate to the work experience. Additionally, the statements: telecommuting is a positive benefit of

employment; family member will disturb me while telecommuting (inversely related); and job stress will be reduced as a result of telecommuting, also relate to the work experience.

Figure 4 shows the overall organizational attitude towards telecommuting. Using the method described in the preceding section, I have determined that approximately 40 percent of respondents have positive attitudes towards the organizational benefits of telecommuting, and another 40 percent of respondents remain neutral. The remaining 20 percent of respondents exhibit negative attitudes.



The results of my survey found that only 17 percent of special district government organizations offered telecommuting, and only 28 percent of respondents knew of employees in other organizations who telecommute. In a survey of randomly selected public agencies, Durst (1999) found that 42 percent of organizations surveyed offered telecommuting. I would speculate that due to the lower rate of telecommuting by special district governments and the corresponding lack of telecommuting experience and education, a large percentage of respondents are unsure if telecommuting will provide organizational benefits.

Tables 10, 11, 12, and 13 provide further detail into how the respondents differed in their view of telecommuting. Table 10 shows how the organizational attitudes of men and women

differ. Twenty-five percent of men and only 16 percent of women have negative attitudes about the benefits telecommuting will provide to an organization. About 46 percent of women and only 35 percent of men possess positive organizational attitudes, while about 40 percent of all respondents remain neutral. Overall women consistently express more favorable attitudes than men towards telework, which is consistent with other findings that have been mentioned.

Organizational Attitudes					
Table 10	Male		Female		
	n	Percentage	n	Percentage	Total
Negative	20	24.7%	12	15.8%	32
Neutral	33	40.7%	29	38.2%	62
Positive	28	34.6%	35	46.1%	63
Total	81	100.0%	76	100.0%	157

Organizational Attitudes					
Table 11	Not Married		Married		
	n	Percentage	n	Percentage	Total
Negative	6	26.1%	25	18.8%	31
Neutral	7	30.4%	55	41.4%	62
Positive	10	43.5%	53	39.8%	63
Total	23	100.0%	133	100.0%	156

Table 11 provides a cross tabulation of how organizational attitudes differ among married and single employees.

More than 43 percent of single employees and 40 percent of married employees express positive attitudes towards telecommuting. This finding is contrary to the results presented in Table 4 where a higher percentage of married employees were in favor of telecommuting. However, the results in Table 4 presented only one variable, whereas the current factor is made up of several variables. A large percentage of single and married individuals remain neutral (30 percent and 41 percent, respectively), and married employees are less likely than single employees to express negative organizational attitudes about telecommuting (19 percent versus 26 percent).

Table 12 provides a cross tabulation of how organizational attitudes differ among employees who provide childcare and those who do not. Individuals who provide childcare are far more likely than employees not providing childcare to express positive attitudes about the organizational benefits of telecommuting (56 percent versus 36 percent). This finding is expected because the demands of childcare place additional burden on the caregiver, and is supported by Mokhtarian et al. (1998) who found employees with children tend to value telework more than those without. Also, fewer childcare providers had negative attitudes about telecommuting benefits for the organization. Once again a reasonably high percentage (43 percent and 28 percent) of respondents remain neutral.

Table 12	Organizational Attitudes				Total
	Do Not Provide Childcare		Provide Childcare		
	n	Percentage	n	Percentage	
Negative	26	21.1%	5	15.6%	31
Neutral	53	43.1%	9	28.1%	62
Positive	44	35.8%	18	56.3%	62
Total	123	100.0%	32	100.0%	155

Table 13	Organizational Attitudes								Total
	Clerical		Professional		Mid-level Manager		Upper-level Manager		
	n	Percentage	n	Percentage	n	Percentage	n	Percentage	
Negative	0	0.0%	3	10.0%	8	19.5%	21	25.3%	32
Neutral	2	66.7%	14	46.7%	14	34.1%	32	38.6%	62
Positive	1	33.3%	13	43.3%	19	46.3%	30	36.1%	63
Total	3	100.0%	30	100.0%	41	100.0%	83	100.0%	157

Table 13 provides a cross tabulation of how organizational attitudes differ among clerical, professional, and mid- and upper-level managers. There are only three clerical employees in this study. Therefore, meaningful analyses cannot be completed on this group. The findings show that professional level employees (10 percent) are the least likely to have negative organizational attitudes about telecommuting, and upper-level managers (25 percent) are most likely to have negative attitudes. Forty-three and 46 percent of professional level

employees and mid-level managers, respectively, express positive organizational attitudes about telecommuting. This finding varies somewhat from the State of Arizona’s results (1996), where front-line supervisors and mid-level managers “appeared overall to have positive perceptions regarding telecommuting” (p. 3), and 64 percent of non-telecommuters were supportive of telecommuting and expressed overall positive attitudes. My findings reveal that a large percentage of all respondents (above 34 percent) remain neutral.

4.7 PERSONAL ATTITUDES

The second factor established by the factor analysis consists of six of the 16 original survey variables. These variables relate to personal attitudes about telecommuting. The variables include asking respondents about personal time, flexible working hours, time spent at home with family, being in favor of telecommuting, and participating in telecommuting. An analysis of these variables reveals that all components of this factor relate to employees’ personal attitudes towards employment and telecommuting. Three variables appear in both factor one and two. These variables are: if offered, I would participate in telecommuting; telecommuting is a positive benefit of employment; and I am in favor of telecommuting. I offer the conclusion that all of these variables affect both the organizational and personal attitudes of the individual considering participating in a telecommuting program.

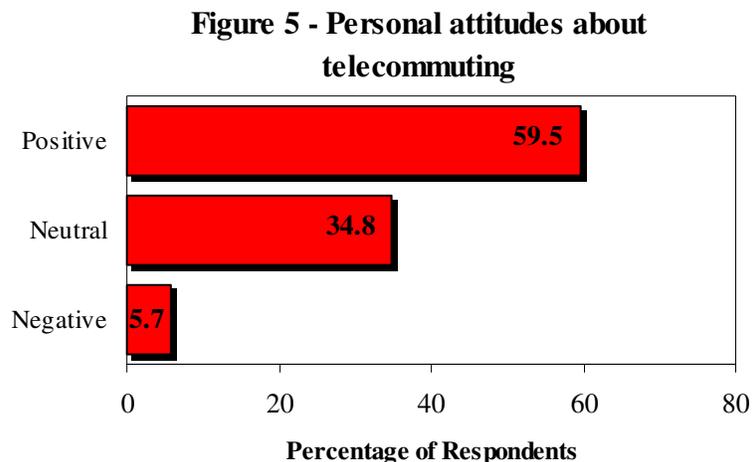


Figure 5 shows that almost 60 percent of respondents' personal attitudes towards telecommuting are positive. This compares with 40 percent of respondents who expressed positive organizational attitudes. Evidently, individuals feel that telework will benefit them more than their employer. According to the State of Massachusetts (1994), 86.8 percent of employees reported that telecommuting had a positive impact on their personal lives. Additionally, Pratt (1999) found that telecommuting could be used to meet the obligations of home and family, thus supporting my findings. Almost 35 percent of special district government finance employees remain neutral, and a mere six percent of respondents convey negative attitudes about the impacts of telecommuting on their personal lives.

Table 14 breaks down personal attitudes by gender. Consistent with the other findings, women are more likely than men to express positive sentiments about the impacts of telework on their personal lives (65 percent versus 56 percent). Women also are less likely than men to convey negative attitudes about the impacts of telework on their personal lives (four percent versus seven percent). Between 31 percent and 37 percent remain neutral.

Table 14	Personal Attitudes				Total
	Male		Female		
	n	Percentage	n	Percentage	
Negative	6	7.4%	3	3.9%	9
Neutral	30	37.0%	24	31.6%	54
Positive	45	55.6%	49	64.5%	94
Total	81	100.0%	76	100.0%	157

Table 15 breaks down personal attitudes by married status. Almost 62 percent of married individuals and 52 percent of single individuals have positive personal attitudes about the impacts of telecommuting. About eight to nine percent of respondents from both groups express negative attitudes about the impacts telecommuting will have on their personal lives. Thirty-nine percent of singles and 30 percent of married employees were neutral in their opinions.

Table 15	Personal Attitudes				Total
	Not Married		Married		
	n	Percentage	n	Percentage	
Negative	2	8.7%	11	8.3%	13
Neutral	9	39.1%	40	30.1%	49
Positive	12	52.2%	82	61.7%	94
Total	23	100.0%	133	100.0%	156

Table 16 compares the personal attitudes of those who provide childcare with those who do not. Almost 69 percent of employees providing childcare see the positive benefits of telecommuting, while almost 58 percent of non-childcare providers express positive sentiments. It was expected that those individuals providing childcare would be more likely to express positive attitudes toward a work arrangement that would provide flexible work times. As mentioned, this finding is supported Mokhtarian et al. (1998). About six percent of all respondents expressed negative attitudes. Twenty-five percent of childcare providers and 37 percent of those not providing childcare were neutral.

Table 16	Personal Attitudes				Total
	Do Not Provide Childcare		Provide Childcare		
	n	Percentage	n	Percentage	
Negative	7	5.7%	2	6.3%	9
Neutral	45	36.6%	8	25.0%	53
Positive	71	57.7%	22	68.8%	93
Total	123	100.0%	32	100.0%	155

Table 17 examines how employees who work at different levels in the organization feel about the personal impacts of telecommuting. Since there are only three clerical employees in this study, meaningful analyses cannot be completed on this group. About two-thirds of mid-level managers and professional level employees express positive attitudes about the impact telecommuting will have on their personal lives. More than 54 percent of upper-level managers express positive attitudes. Ten percent or less of all employees, regardless of level, expressed negative attitudes, and between 23 percent and 39 percent of respondents were neutral. Among

all groups of employees, the findings reveal a 20 percent increase in positive attitudes towards the personal benefits of telecommuting when compared to the organizational benefits (Table 12). The results also show that negative attitudes of mid- and upper-level managers decreased by approximately 17 percent when comparing the personal attitudes and organizational attitudes of the respondents. I submit that no matter the level of the employee, individuals feel that the personal benefits of telecommuting are more advantageous than the organizational benefits.

Table 17	Personal Attitudes								Total
	Clerical		Professional		Mid-level Manager		Upper-level Manager		
	n	Percentage	n	Percentage	n	Percentage	n	Percentage	
Negative	0	0.0%	3	10.0%	1	2.4%	6	7.2%	10
Neutral	2	66.7%	7	23.3%	12	29.3%	32	38.6%	53
Positive	1	33.3%	20	66.7%	28	68.3%	45	54.2%	94
Total	3	100.0%	30	100.0%	41	100.0%	83	100.0%	157

4.8 JOB SATISFACTION

The third factor resulting from the factor analysis is made up of two variables that ask if an employees' job is interesting and exciting. This factor is used to measure job satisfaction. However, the original intent of this part of the study was to compare the job satisfaction of telecommuters and non-telecommuters. Given that there are only six telecommuters in the pool of respondents, significant statistical analyses cannot be performed. Therefore, I will not evaluate the job satisfaction among employees who telecommute with those that do not.

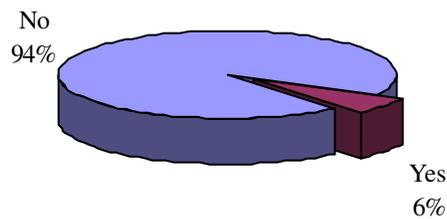
4.9 JOB STRESS & SAVING MONEY

The fourth factor determined by the factor analysis, stress and saving money, consists of two variables. One of the variables asked if the respondents' job stress was higher than average, and the other variable asked if the respondent thought work related expenses would decrease by telecommuting. These two variables share an inverse relationship. When analyzed, it was determined the higher the individual's gross income, the less likely they were to agree that work

related expenses would decrease by telecommuting. No additional analysis was performed for this factor.

4.10 INCLINATION TO LEAVE AN ORGANIZATION

Figure 6 - Are you planning to leave this organization?



ITAC-2 (2001), Pratt (1999), State of Massachusetts (1994), State of Minnesota (1997), and many others have cited telecommuting as an effective recruitment and retention tool. This study investigates the impact of telecommuting on an employee's inclination to leave an organization. Respondents were asked a series of questions to determine what role telecommuting might have on their decision to leave or stay at their present organization.

Figure 6 demonstrates employees' intentions to leave their current organization within one year. Ninety-four percent of respondents are not planning to leave their current organization within one year. Six percent, however, stated they are planning to leave. This shows that an overwhelming majority of employees must have a reasonable level of satisfaction working for their present organization.

Figure 7 looks at those employees who are not planning to leave their present organization. Of the 94 percent of employees (from Figure 6) that are not planning to leave their current organization within one year, one-quarter declared that they would leave their organization if offered a similar position at a different organization with telecommuting. Three-

quarters reported they would remain with their current organization even if offered telecommuting at another organization. As far as I am aware, this analysis has not been performed by another researcher, and therefore, cannot be corroborated.

Figure 7 - If offered a position in another organization with telecommuting, will you leave this organization?

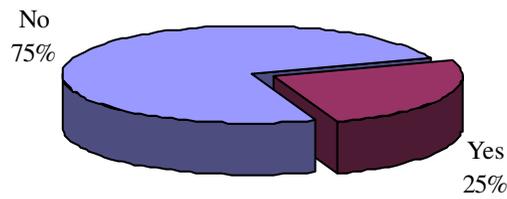


Figure 8 - Will you stay at your current organization if a telecommuting program is initiated?

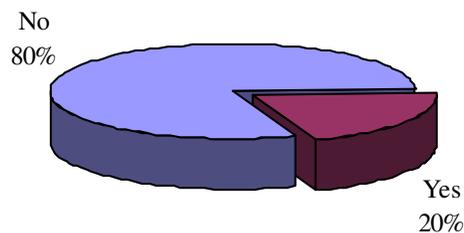


Figure 8 examines those individuals who stated they were planning to leave their current organization (six percent from Figure 6). Twenty percent of those employees that are planning to leave their current organization declared that they would remain if offered telecommuting as an alternative work arrangement. The remaining 80 percent would leave even if offered telecommuting. Teo et al. (1998) performed a similar analysis and found a reduction in the

amount of employees planning to leave the organization from 23 percent to 12 percent when offered telecommuting.

These findings have powerful implications for special district governmental entities. The results show that telecommuting can be used as a tool to attract and retain employees. It is obvious that there are many factors an individual considers prior to accepting a position with an organization. However, if the option of telecommuting as an alternative work arrangement can sway the opinion of 25 percent of the work force, it is a work arrangement that organizations should consider offering to employees.

CHAPTER V - CONCLUSIONS

This study advances knowledge about the attitudes employees have about performing work outside of the traditional office – also known as telecommuting or telework. The results of this preliminary study indicate that generally, government finance employees employed by special district entities have favorable attitudes toward telecommuting and would likely choose to telecommute if it is made available. Generally, employees see the advantages of telecommuting to be flexible working hours, increased job productivity and satisfaction, reduced job stress, and more personal time as a result of less time spent commuting.

ITAC (2001) reports that there are more than 28 million teleworkers in the United States; however, telecommuting is still in its infancy with special district governmental entities. Less than 17 percent of special districts offer telecommuting to their employees. Judging from the results of this study and other similar studies, employees express interest in this flexible work arrangement. The positive attitudes expressed by special district government finance employees indicate that telecommuting may be useful to attract and retain employees.

The key issues of this study included determining the attitudes towards telecommuting among special district government employees, revealing if attitudinal differences exist among various groups of individuals within the sample group, and ascertaining the inclination to leave an organization when telecommuting is offered.

When respondents were asked if they were in favor of telecommuting, more than 69 percent agreed. However, when asked about the likelihood of participating in such a program, about 66 percent agreed. Since a large portion of respondents are managers (79 percent), they might be in favor of telecommuting for their employees, and not necessarily for themselves.

When groups of attitudinal variable are categorized together to form factors, the percentage of respondents that express favorable attitudes towards telecommuting decreased. Forty percent of respondents revealed positive organizational attitudes and 60 percent revealed positive personal attitudes about telecommuting. The factors take into account several individual variables and probably more accurately reflect the true underlying attitudes of individuals.

This study has identified numerous gender, personal, and occupational differences in telecommuting attitudes. Overall women are more likely than men to express positive attitudes towards telework. This was confirmed whether one variable or multiple variables in the form of factors were examined. This may be the result of domestic responsibilities assumed by women. It has been suggested by Tingey, Kiger, & Riley (1996) that working women still take on a disproportionate share of domestic responsibilities. Generally, individuals who are married or provide childcare express positive attitudes towards telework more often than singles or employees not caring for children. Table 18 summarizes the percentage of respondents who either strongly agreed or agreed to the survey questions that are listed in the table.

Category*	All	Gender		Married		Children		Job Level		
	All	M	F	S	M	N	Y	P	M	U
1) I am in favor of telecommuting as an alternative work arrangement.	69	68	70	64	71	65	87	75	63	64
2) If telecommuting were offered to me, I would participate.	66	63	71	64	67	63	80	79	73	60
3) Telecommuting provides/will provide me flexible working hours.	79	79	80	77	81	80	83	83	83	78
4) Telecommuting allows/will allow me to spend more time at home with family.	55	58	51	41	58	52	67	55	63	52
5) The presence of family members at home disturbs/will disturb working progress while telecommuting.**	34	22	45	41	32	33	37	31	38	32
6) Managerial attitudes prevent/may prevent me from telecommuting.**	15	15	16	18	15	23	13	14	10	19
7) My job stress has/will be reduced as a result of telecommuting.	33	30	35	32	33	35	24	31	33	33
8) When telecommuting, I am/will be unable to share experiences with colleagues.**	35	29	40	32	35	31	50	35	48	28
9) Telecommuting is a positive benefit of employment.	72	70	75	59	75	70	83	79	80	67

Category*	All	Gender		Married		Children		Job Level		
10) I am/will be more productive while working away from the office.	32	22	43	44	31	27	50	37	44	27
11) I am/will be more satisfied while working away from the office.	47	46	50	44	49	45	59	60	54	41
12) My customer service has improved/will improve as a result of telecommuting.	15	14	17	30	13	15	16	20	13	15
13) My work related expenses have decreased/will decrease as a result of telecommuting.	46	51	42	30	50	45	47	37	56	47
14) Telecommuting allows/will allow me to have more personal time.	52	55	48	39	55	51	56	52	53	51

* All: All respondents. Gender: M-male, F-female. Married: M-married, S-single. Children (Provide childcare): Y=yes, N=no. Job Level: P-professional, M-mid-level manager, U-upper-level manager.
** Inverse relationship to other variables, therefore, the percentages listed represent the respondents that disagreed or strongly disagreed.

This study ascertained that telecommuting plays a role in an employee’s decision to leave an organization. Twenty-five percent of respondents are willing to leave their present organization for a similar organization that offers telecommuting. Additionally, this study found that 20 percent of the individuals planning to leave their present organization would remain if telecommuting were offered to them. It is obvious that the availability of telecommuting is not the only consideration an employee thinks about when changing jobs. But it is apparent that employees will add it to the decision making process. Therefore, telecommuting needs to become something that management thinks about for its employees.

This study sought to answer the two following research questions: 1) Do special district government finance employees express positive attitudes towards telecommuting, and do gender, personal, or occupational differences exist? 2) Will the availability of telecommuting impact the inclination of special district government finance employees to leave their organization? The research questions have been answered throughout this paper.

The results of this study illustrate that telecommuting will impact organizational management in many ways. Telecommuting has the potential to offer increased employee productivity, effectiveness, and satisfaction. It also has the potential to attract new employees

and increase employee retention rates, which should be of interest to human resource managers. This study found that 42 percent of respondents said they would like to telecommute until retirement. Apparently, many employees feel that telecommuting may become a lifetime work arrangement. Overall, special district government employees have positive attitudes about telecommuting, and it is clear that part-time telecommuting is a viable alternative to commuting to work everyday of the week. Since both employer and employee potentially benefit, telecommuting should be actively promoted in the public sector.

As I evaluate the process of carrying out this research project, retrospectively, I have taken note of some things that I would have done differently if I had to perform this research again. First, I would have started collecting data earlier. Since March 21, 2002 (my cutoff date for processing surveys), I have received a number of additional responses to the survey. It appears that the additional results follow the original findings, but without performing all of the analyses again, I cannot be sure. Second, I would have recruited more than four beta testers to review the survey instrument. I found that there were two “bad” survey questions, which with some simple rewording, could have been “good” questions. Additionally, I would have provided additional instructions in the survey instrument to avoid some minor confusion. My beta testers did not detect the problems, and it was only after I began sifting through the data, did the weaknesses become apparent. Finally, I would have narrowed my scope of questions to focus solely on attitudes. I collected data on organizational communication with the intention of measuring communication among telecommuters and their organizations. However, with only six telecommuters in my sample, I could not use the data for its intended purpose. Maybe in the future it may serve another purpose.

Even though telecommuting has been used for about 15 years, it is still a relatively new phenomenon. This study alone cannot answer if the perceived organizational and personal benefits match reality once telecommuting is attempted. It will be very important to assess such knowledge in the future to determine if telecommuting lives up to its hype, and if it is implemented in equitable ways. The answers to these questions will determine the rate of telecommuting implementation in the future. Therefore, in order to determine the future of telecommuting, further research efforts are needed. Large groups of telecommuters must be studied to confirm if the attitudes expressed by non-telecommuters become reality once employees begin to telecommute. Additionally, managers and coworkers of large groups of telecommuters should be studied to determine the organizational impacts of a workforce that telecommutes. These suggested studies will prove very valuable in advancing the knowledge of telecommuting and may steer the development of public policy.

APPENDIX A – COVER LETTER

Date

«FirstName» «LastName»
«JobTitle»
«Company»
«Address1»
«City», «State» «PostalCode»

Dear «FirstName»:

My name is Joe Grippaldi, and I work for the Clark County Regional Flood Control District in Las Vegas, Nevada. I am a government finance professional similar to you, and I am also a member of the Government Finance Officers Association. In addition to working full-time as a management analyst, I am very close to completing my Master's Degree in Public Administration at the University of Nevada Las Vegas. I would like your assistance to complete my degree program.

I have been researching telecommuting for the past couple of years, and I find it to be a work arrangement that can offer people in our profession flexibility, independence, and increased job satisfaction. Telecommuting is an alternative work arrangement in which an employee, possibly you or me, performs a job task away from the regular work site (i.e. the office). Telecommuting can be performed at the home, a customer location, or a satellite office. Telecommuting is not normally a full-time work arrangement. The norm is to telecommute one to three days a week.

Since I am a government finance employee, I am very curious to find out what others, like myself, are doing with regard to telecommuting. The enclosed survey is part of a study I am completing regarding employee participation and awareness of telecommuting. Survey questions focus on job satisfaction, organizational communication with employees, and attitudes about telecommuting. It should take about 10 minutes to answer all the questions. Please be advised that in every research study there are risks. However, risks are considered to be minimal in this study. I am using the survey results to complete the professional paper requirement of my degree program.

I would sincerely appreciate your candid responses to the enclosed survey. I think others in our profession may be especially interested in the findings. You can be assured of complete confidentiality when completing the survey. There is no way that anyone will be able to match your answers with your name. All results will be provided such that no individual can be identified. If you have any questions or require additional information, please call my advisor, Dr. Karen Layne at 702.895.1914 and reference OPRS# 387S0202-261. Thank you for your assistance.

Sincerely,

Joe

APPENDIX B – SURVEY VARIABLES

Section I – General Information

- 1) Does your organization offer employees telecommuting as an alternative work arrangement? (Y/N)
- 2) Can your job function be performed while telecommuting? (Y/N)
- 3) Are other finance/accounting professionals in your office telecommuting? (Y/N)
- 4) Are you aware of other finance/accounting professionals who telecommute in other organizations? (Y/N)
- 5) Are you a telecommuter?
 1. If not:
 - i. How many days would you like to telecommute? (Fill in 1 - 5)
 2. If so:
 - i. How many days per week, on average do you telecommute? (Fill in 1 - 5)
 - ii. How many times per month does someone from the office your remote work sits? (Fill in 1 - 4+)
 - iii. What type of work do you perform while telecommuting? (List provided / check all that apply)

Section II – Attitudes

- 1) I am in favor of telecommuting as an alternative work arrangement. (SD / D / N / A / SA)
- 2) If telecommuting were offered to me, I would participate. (SD / D / N / A / SA)
- 3) Telecommuting provides/will provide me flexible working hours. (SD / D / N / A / SA)
- 4) Telecommuting allows/will allow me to spend more time at home with family. (SD / D / N / A / SA)
- 5) The presence of family members at home disturbs/would disturb working progress while telecommuting. (SD / D / N / A / SA)
- 6) Managerial attitudes prevents/may prevent me from telecommuting. (SD / D / N / A / SA)
- 7) I feel my work is exciting. (SD / D / N / A / SA)
- 8) I feel my work is interesting. (SD / D / N / A / SA)
- 9) My job stress is higher than average. (SD / D / N / A / SA)
- 10) My job stress has/will be reduced as a result of telecommuting. (SD / D / N / A / SA)
- 11) When telecommuting, I am/will be unable to share experiences with colleagues. (SD / D / N / A / SA)
- 12) Telecommuting is a positive benefit of employment. (SD / D / N / A / SA)
- 13) I am/will be more productive while working away from the office. (SD / D / N / A / SA)
- 14) I am/will be more satisfied while working away from the office. (SD / D / N / A / SA)
- 15) My customer service has improved/will improve as a result of telecommuting. (SD / D / N / A / SA)
- 16) My work related expenses have decreased/will decrease as a result of telecommuting. (SD / D / N / A / SA)
- 17) Telecommuting allows/will allow me to have more personal time. (SD / D / N / A / SA)
- 18) My job can be completed away from the office. (SD / D / N / A / SA)
- 19) Are you planning to leave this organization within a year? (Y/N)

APPENDIX B – SURVEY VARIABLES

20) If offered a position in a similar organization, and telecommuting is offered, would you leave this organization? (Y/N)

21) If this organization initiates a telecommuting program, would you still leave this organization? (Y/N)

Section III – Organizational Communication

- 1) The organization's management clearly communicates job responsibility. (SD / D / N / A / SA)
- 2) The organization's management clearly defines goals and objectives. (SD / D / N / A / SA)
- 3) The organization's management clearly defines deadlines. (SD / D / N / A / SA)
- 4) The organization's management clearly defines expectations. (SD / D / N / A / SA)
- 5) I regularly communicate with managers freely. (SD / D / N / A / SA)
- 6) My supervisor reviews my work regularly. (SD / D / N / A / SA)
- 7) Rank the modes of communication most often used to communicate with your organization: in person, telephone, fax, email, and videoconference.

Section IV – Organizational Information

- 1) Number of employees (Full Time Equivalents). (Fill in)
- 2) Annual operating budget (expenditures + transfers). (Fill in)
- 3) Location (State). (Fill in)
- 4) Location (Urban, suburban, or Rural). (Fill in)

Section V – Demographic Information

- 1) Gender. (M/F)
- 2) Age group. (Choose from ranges)
- 3) Gross income range. (Choose from ranges)
- 4) Married. (Y/N)
- 5) Do you provide childcare? (Y/N)
- 6) Do you provide eldercare? (Y/N)
- 7) Commute distance. (Fill in number of miles)
- 8) Number of years at current organization. (Fill in 1 – 10+)
- 9) Number of years telecommuting at current organization. (Fill in 0 – 10+)
- 10) Job title. (Fill in)
- 11) Describe your position as one of the following: Clerical, Professional, Mid-level management, Upper-level management.

APPENDIX C – REMINDER POSTCARD

Front of Card:

Joe Grippaldi
419 Alonzo Court
Las Vegas, NV 89123

«FirstName» «LastName»
«JobTitle»
«Company»
«Address1»
«City», «State» «PostalCode»

Back of Card:

Last week I sent you a questionnaire seeking your opinion about performing your job away from the traditional office – also known as telecommuting. Your name was drawn from a random sample of GFOA members.

If you have already completed and returned it to me, please accept my sincere thanks. If not, please do so today. Because it has been sent to a small, but representative, sample of GFOA members it is extremely important that your opinions be included in the study.

If by some chance you did not receive the questionnaire, or it got misplaced, please call me at 702.455.5899 and I will get another one in the mail to you today.

My sincere thanks,

- Joe

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