الجامعة الاسلامية العالمية ماليزيا
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
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FACTORS ASSOCIATED WITH ATTITUDES TOWARDS TELECOMMUTING

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A PROJECT PAPER SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF MANAGEMENT

MANAGEMENT CENTER
INTERNATIONAL ISLAMIC UNIVERSITY
MALAYSIA

FEBRUARY 1998

ABSTRACT

This exploratory research attempts to identify factors that are associated with telecommuting among Malaysian executives. There are three aspects covered in this study. Firstly, types of works that are appropriate for telecommuting. Secondly, the relationship between performance appraisal and promotion to telecommuting. Finally, whether family commitment is related to telecommuting. The questionnaire used to collect data for the research is self-developed based on the literature. It consists of two sections. Section A is for respondents to state their demography and commuting data. Section B is on the respondents' attitudes towards family commitment, promotion, organization and other factors related to telecommuting. Three out of five hypotheses tested showed statistically significant results. Respondents agreed that there are official tasks that they could do outside office hours ($r = 0.1200$; p-value 0.0000). Their attitudes towards telecommuting are positively correlated with the work done after office hours ($r = 0.1200$; p-value 0.8770). The study also shows that individuals who are family-oriented tend to favor telecommuting ($r = 0.3260$; p-value 0.0000). In contrast to previous studies (Mahmassani et al. 1993), Malaysian executives do not seem to telecommute for the same reasons. In particular, travelling times and expenses are not statistically significant ($r = 0.0070$; p-value 0.7580). Also, in contrast to previous studies (Bernardino et al. 1993), telecommuting, promotion and performance appraisal also do not show significant correlation ($r = 0.0460$; p-value 0.7020). The respondents think that visibility in the office is important to get promotion and telecommuting would, therefore, hinder them from being visible in the office. It can be concluded that telecommuting is still in its infancy in Malaysia. The government as well as the private sector should collaborate to promote this new working concept for a better working environment.

APPROVAL PAGE

TITLE OF PROJECT PAPER : FACTORS ASSOCIATED WITH ATTITUDES TOWARDS TELECOMMUTING.

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DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by reference notes and bibliography is appended.

Date: 28th February 1998

Signature.....

Name : Rosli bin Din

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DEDICATION

This project is specially dedicated to
my late father Allahyarham Din bin Uda Pengkor, my mother, Puan Nasidah bt Hj Uda Salleh, my beloved wife, Muaz'zah bt Abdul Rahman and my children, Nurul Aqidah, Mohd Saifullah, Nor Alanna and Amir Danish, for their everlasting love and care.

ACKNOWLEDGEMENT

Praise be to Allah for His blessings for granting me the strength, physically and mentally to pursue my master's degree.

I would also like to thank the Ministry of Education for providing me with this opportunity to further my studies to equip me to face the challenges ahead in the next millenium.

Special thanks to all the lecturers who taught the 2nd Cohort of the Master of Management program: Dr. Syed Hamid Al Junid, Dr. Ahmad Zohdi Abdul Hamid, Brother Zakaria Man, Dr. Syed Musa Syed Jaafar Al Habshi, Dr. Ahmad Kameel Meera, Dr. Nik Nazli Nik Ahmad, Brother Abdul Aziz Mohamed, Dr. Kalthom Abdullah, Dr. Sheikh Ghazali Sheikh Abod, Dr. Naceur Jabnoun and Tuan Haji Ghazali Ahmad. Their tolerance and commitment helped me get through the semesters.

My utmost and highest gratitude goes to Hon. Brother Yusof Ismail, who supervised me in completing this project paper. Despite his busy schedule, he managed to allocate some time to help me understand the intricacies of writing a project paper. His guidance and suggestions helped me to analyze the data and to produce this project paper.

I would also like to thank my friends, Encik Abdul Rahman bin Abdul Hamid and Encik Nor Azammudin bin Mazlan for helping me distribute the questionnaires to the respondents, and I feel very much indebted for their kindness and thoughtfulness.

Finally, last but not least, to my beloved wife, Azah, who single-handedly taking care of the children while I was at UIA. Your dedication and understanding helped by providing me with motivation, love and care.

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CHAPTER ONE

INTRODUCTION

1.0 Introduction

According to the speech text by the Malaysian Prime Minister, Dr. Mahathir Mohamad on 28th February 1991 at the first Malaysian Commerce Council in Kuala Lumpur, Malaysia is moving towards a new era of a developed country in realizing the national Vision 2020. Many improvements on infrastructure facilities are to be carried out throughout the country to help achieve the missions and objectives set. One of the objectives is to improve telecommunication facilities to cater the needs for local and international telecommunication.

The Prime Minister is concerned over the matter because telecommunication is a vital part of the country's strength to encourage foreign investors. Apart from the government incentives, good communication facilities are also the attraction for the foreign investors because they do national and international transactions everyday.

He visited California's Silicon Valley area in an attempt to promote partnerships to help develop Malaysia's Multimedia Super Corridor. The

planned $40-billion effort calls for the 30-mile times 9-mile area south of the capital, Kuala Lumpur, to be the Asian hub for multimedia research and development. In his speech at Stanford University to major computer companies' CEOs, the Prime Minister laid out plans to wire the area with 2.5 to 10 gigabyte optical fiber networks and build a new airport and two new cities. This shows how serious he is in providing the telecommunication facilities in the country. In his speech over the celebration of the Independence Day, the Prime Minister expressed his concern over the knowledge of Malaysians over information technology. He urged Malaysians to take the opportunities to learn the technology as it is very important as Malaysia is progressing towards the information technology advancement (Lenny, 1996).

With improved communication services in this country, employers could take the advantage to introduce telecommuting to their employees. Telecommuting is a relatively new concept that has been successfully implemented in Western countries. In the United States, employers are encouraged to adopt the concept because it will increase productivity as well as reduce job stress.

Telecommuting is a new concept of freedom. It is about cleanliness. It is about empowerment and it is a new trend. This trend is practiced in many countries around the globe. The effectiveness on productivity and efficiency is visible (Thomas et al., 1986).

As air congestion and air quality problems in metropolitan areas worsen and in need for remedy, people are looking for alternative ways of working in the new era. Telecommuting offers employees conveniences from the hassle of driving through the traffic jam and inhaling toxic fumes to a better conducive working environment. The Clean Air Act Amendment of 1990 (California Act, 1990) for example, suggests that federal governments consider implementing telecommuting programs for their own employees and sometimes for other employees in the public and private sectors.

Interest in telecommuting is growing, despite the fact that very little is known about its potential effectiveness as a transportation control. Part of the effectiveness of telecommuting will depend on impacts on travel. If traveling is relatively easy, telecommuting would not be favorable or chosen. Advanced technology and enlightened attitudes toward work have made it possible for today's employees to be no longer confined to traditional office. They can work from their home, cars or on the decks of their yacht - virtually anywhere where you can plug in a computer and a phone line (Greenberg, 1994).

IBM is one of the first companies to apply its technology to telecommuting. Although IBM's Midwest division is headquartered in Chicago, few of its 4000 employees including salespersons and customer service technicians, show up only once or twice a week using its ThinkPad laptop computers, fax-modems, e-mail, and cellular phones to do their work from remote locations. In addition to

less real estate space of 55 percent, less computer terminals for the employees, IBM employees could impart better service for its customers. At the same time, telecommuting has done well for IBM employees themselves: 83 percent report that they do not want to return to the traditional office environment (Richer and Mishuan, 1993).

Telecommuting is the alternative way to meet the requirement of the employers as in real life situations. Even though the employers have to face some barriers and constraints as well as levels of uncertain job productivity for the telecommuting, they have to consider their employees' job satisfaction. Among other causes of job satisfaction is working condition. With the rising costs of real estate in the metropolitan cities, employers could not provide employees with comfortable or spacious office space. Employees have to cramp up fighting for the tiny office space. Not to mention the hassle of coming to work, having to beat the traffic jam and the road congestion. These are the samples of the working condition that employees have to face everyday. Companies such as Great Plains Software, The Traveler's Insurance Co., US West Communications, and the NPD Group have all reported similar benefits with respect to savings in office expenses, gain in productivity, and satisfaction among employees (Storeer and Porter, 1991).

1.1 Problem Statement

Studies by Runzheimer International, a consulting organization specializing in relocation costs, have indicated that housing and commuting cost in and around New York are getting to the point where "It may not pay to be a commuter". Washington, Boston, San Francisco, and Los Angeles also have the same cost pressures. To counter these costs, employers often have to pay higher salaries or specialized "perks" such as commuting subsidies, to attract good applicants or to encourage current employees to stay.

In Malaysia, the same thing also happens especially in the bigger city areas. Many people are complaining the massive traffic jam in Kuala Lumpur, Penang and Ipoh . The short distance between home and workplace is not compatible to the time spent on commuting from one place to another. Since most of the business activities are done in the city center, people have to crowd in the city most of the time.

The rising cost of estate in the city area has made employers unable to buy, rent or lease bigger space for their business. The rent of the office space as well as factory space is very high in these areas. Some of the employers even try to move their business entities out of the metropolitan area but only certain businesses or factories would suit such relocation. With the Kuala Lumpur, being the heart of the business activities, many firms and entities have

to stay in the city areas to meet the needs of their activities. The best way is to allow their employees to implement telecommuting. Another option is to set up satellite office, which is located remotely from the main headquarters linked by advanced telecommunication technology, which would cost even more.

1.2 Research Objectives

The research is aimed at identifying influential factors that could be associated with telecommuting, which in turn could help to increase productivity and motivation for executives in Malaysia.

This research will be looking at four independent factors such as travelling, promotion and performance appraisal, family commitment and degree of work that can be done at home towards telecommuting.

Specifically, the main objectives of the research are:

1. To identify significant reasons for executives to telecommute;
2. To examine the working condition that tends to encourage executives to telecommute; and
3. To investigate the relationship between telecommuters and promotion and performance appraisal.

1.3 Research Questions

The following questions would guide the study

1. Is there any relationship between the work that can be done at home with telecommuting?
2. Do traveling time and expenses to work have any significant impact on those who telecommute?
3. Does family commitment have any significant impact on people to telecommute?
4. Are telecommuters worried with promotion and performance appraisal?

1.4 Research Hypotheses

To provide answers to the research questions, the following hypotheses have been developed to predict relationship between factors that are associated with attitudes towards telecommuting.

H1 : There is a relationship between proportion of work that can be done at home with attitudes towards telecommuting.

H2 : Attitudes towards telecommuting are positively correlated with the work done after office hours.

H3 : There is a relationship between travelling time to work with those who favor telecommuting.

H4 : Individuals who are family-oriented tend to like telecommuting.

H5 : Promotion and performance appraisal are correlated with attitudes toward telecommuting.

1.5 Research Field and Barriers

The research is an exploratory study of attitudes on implementing telecommuting in Malaysia based on the available resource and facilities. The respondents would be randomly selected from the government and private sectors in Kuala Lumpur, Ipoh and Penang, being three large cities in the country. These cities are apparently plagued with traffic congestion problems. Their inclusion in the study would represent the condition of other cities in the country.

The research will compare four main factors that would influence the feasibility of implementing telecommuting in Malaysia. They are demographic factor, the nature of the work, environmental factor, and motivational factor.

For the demographic factor, only several information would be important that are based on race, marital status, size of family, age, and length of work.

For the nature of work factor, the information that will be tested would be the type of job the person is doing and the length of work done in the office.

For the travelling factor, the information that will be tested would be on the time employees spend on commuting and how much time and money they spend on the travel expenses, and lastly the comfort of their daily travelling.

The organizational factor that would be looked upon into the feasibility study would be the organization's policy on taking work home and the policy to support the new concept and on how they monitor performance and promotion due to telecommuting.

The barriers for this research might be employees' attitudes towards the new concept. They might not have heard of the concept even though it is popular in some other countries as well as in Singapore. People might have different ideas of the concept or some misinterpretation towards telecommuting.

1.6 Research Concept

To ease the understanding of the research it is better to explain some important concepts in the section. According to the Random House College Dictionary, "telecommuting" refers to "working from a distance away from the office using some telecommunication equipment". Some terms are used inter-relatedly such as flexiplace, home office, or from a satellite office, remote work, homework, work-at-home and tele-work.

Early visions of telecommuting assumed that telecommuters were information workers who worked almost entirely with computers (e.g. data entry or word processor, or programmers), who telecommute full-time, and who work from home (Mokhtarian, 1991). Telecommuting as it is understood today is a

much broader phenomenon. First, telecommuters need not be computer-users, and even if they are, they may not use computers at home. Second, most telecommuting is part-time, like one or two days per week. Lastly, telecommuting could also be done from smaller offices in the remote or non-congested area.

The term "telecommuting" refers to the substitution of computer and telecommunications technologies for physical travel to a central work location (Nilles et al., 1976). Other terms, such as flexi-place, homework or work-at-home, tele-work, and remote office work, have been used to refer to telecommuting (Cross, 1986).

In this paper, the term "telecommuting" is used to refer to work carried out at home at any time especially during office hours where work can be synchronized by the employees and their home office.

1.7 Importance of Research

The research would give a clear view on the feasibility of telecommuting in the country and on factors that influence telecommuting. Hopefully, the research would benefit companies and firms in the government and private sectors to try this innovative way to do daily work. The government could use the research to see whether the new concept would benefit its administration. This research

would also help various parts of the organizations in the country to participate in the world of advanced information technology or in the cyber world where virtuosity is comparatively equal to reality. "Virtual office" or telecommuting is a direct effect on the advancement of the information technology in Malaysia. If organizations are willing to spend millions to purchase or upgrade their information technology (IT), telecommuting is a part of IT benefits that many organizations should put into consideration.

1.8 Organization of the Project Paper

This study is organized into five chapters. Chapter One presents an outline of the introduction of the study, the statement of the problem, the objectives of the study, the research field and barriers, the research concept, the importance of the research and the organization of the project paper.

Chapter Two contains four main sections. The first section gives the introduction, definition, theory and studies done on telecommuting. The second section provides the readers with demographic factors that influence telecommuting. It is followed by factors on nature of the work and environmental factors that influence telecommuting. The fourth section is on organizational factors that have influence on telecommuting. The final section reviews on the research done in Malaysia and the conceptual framework on factors that influence attitudes towards telecommuting.

Chapter Three outlines the research methodology that will be used in collecting and analyzing the data. It is divided into four sections that consist of the sample size, composition and its rationale, the instrument used, the data collection method and the statistical techniques that are used for hypotheses testing.

Chapter Four contains the results of the data collection and analyses. It reports the demographic characteristics of the respondents, the analysis of attitude assessment questions, factor analysis, reliability analysis of the instrument and the results of the hypotheses testing.

In Chapter Five, there is a discussion of the study's major findings, limitations and implications for both practitioners and academicians. The chapter concludes some suggestions for future research in this field. A conclusion of the studies is also included in this chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In the world of advanced technology, the word "office" is literally defined as a place where almost everything is computerized and the presence of these advancement would help organizations around the globe to work from a distance. There are fax machines, computers, modems, networking, cellular phones, pagers, and many other devices that would help employers to decide whether to implement telecommuting or not (Coulson, 1991). We can choose whether to drive in the traffic jam to work in the high-rise office building inhaling toxic fumes or to work out in a small comfortable room in the house. Working at home is a new trend that is employed by 8.533 million workers in the United States in 1992. The rate increases for about 18.9 to 40.6 percent annually as reported (Mokhtarian, 1990).

Telecommuting in Europe received something of a shot in the arm in 1994 when the European Commission for industry called for specific measures to promote tele-working (Bangemann, 1994). It suggested creating pilot telecommuting centers in 20 cities by the end of 1995 that would involve at least