



Telecommute Acceptance and Work Performance: A Multiple Regression Analysis

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Received 20 April 2020

Revised 18 May 2020

Accepted 20 May 2020

Abstract: Remote office or home office has become the new norm in 2020. The study aims to establish (1) acceptance of telecommuting in terms of intention, usefulness, and ease of use among graduate business students (2) and the relationship between work performance and telecommute acceptance. Data was collected by handing out questionnaire surveys. Multiple regression analysis was used for data analysis. There is evidence to support intention, ease of use, and the relationship between commute usefulness and job performance related to commuting acceptance. The results will be discussed further.

Keywords: Telecommute, work from home, work performance

Paper type: Research paper

1. Introduction

December 2019 was the first case of Covid-19 reported to the World Health Organization (WHO) after the Covid-19 outbreak attacking Central China's Hubei Province. On 11 March WHO declared the virus was a pandemic and every corner of the world was exposed to the spread of that new disease. Since that announcement, every country in the world launched its precautionary action to prevent the Covid-19 containment. In Malaysia, the government imposed the first MCO (Movement Control Order) in reaction to the pandemic outbreak on March 19. Since then, life has changed from the normal norm to a new way of

life. Especially for businesses that face challenges in practicing their business activities. Therefore, new business rules have been implemented to cater to the issue. The new business rule has been implemented to cater to the issue. This is where information and communication technologies (ICT) replaced the conventional way of communication in business and working environments. Since MCO periods, people who have been working from home increased and many companies have adopted teleworking to manage the business and allow their employees to pursue their work tasks from home. Teleworking also is known as telecommuting, is an event where paid employees or workers work away from normal places of work, for example working from home (Changiz Valmohammadi, 2012). Telecommuting was introduced earlier by many companies to their employee to support the “work-life balance” initiative. Workers that are working from home are called home-based teleworkers or in the USA they are also called as telecommuters.

Factors that encourage the teleworking or “work from home” option to be popular is because of the economic conditions, environmental factors, and the rapid growth of the ICT with a smarter technology (Ahmad Tamsal and Mustabsar Awais, 2016). Due to the current environment where the pandemic outbreak became the factor that leads to MCO implementation, it has forced many companies and businesses to use teleworking. In Malaysia, there are different types of telecommuting such as flexible working, home based working, remote working, and mobile workforce. In this era of the millennium, usually in business, the use of video conferencing, virtual meeting and training is no longer unfamiliar anymore. Applications such as Microsoft Team, Zoom and Webex Meeting are the popular applications used by most companies. All applications required stable internet connectivity to ensure the application is usable.

The implementation of telecommuting or “work from home” at this moment flattened the curve of Covid-19 and because of the changes of this new norm that happened abruptly, some issues arose, such as readiness in new technology adoption for the employee. It also involved technical readiness, such as an internet connection. do the employees have a stable internet connection at their home? All of these factors do have an influence on employee performance in completing their work task at home. However, Ahmad Tamsal and Mustabsar Awais (2016) have listed the advantages and disadvantages of working at home:

Table 1. Advantages of telecommuting

Advantages of Telecommuting for Employees
<ul style="list-style-type: none">● Giving freedom and flexibility in time management for the employee to work base on the agreement made by both parties (employer and employee);● Reducing the stress level and distraction in work;● Reduce travelling time and closer with family;● Better life and health;● Better work life balance; and● Generate more creativity and lead to better productivity.

Table 2. Disadvantages of telecommuting

Disadvantages of Telecommuting for Employees
<ul style="list-style-type: none">● Challenge in dividing the priority between home and work;● Self-imposed pressure of working endlessly;● Disruption in emotion and feeling of being apart from the company especially involvement in sharing an opinion, the company’s major decision and maybe promotions.

Although teleworking or “work from home” can benefit the employee especially at this pandemic crisis, but it also depends on the employee to accept the challenges and readiness in accepting the new norm. And they do not have much choice, besides accepting and adopting the new way of working immediately. It is important for them so they can make sure that they are able to contribute to the company and generate productivity in their work. Therefore, the research explores the relationship between the intentions to telecommute, usefulness and ease to use, acceptance of telecommuting, and work performance. Thus, the research questions are formulated accordingly:

- (1) *Is there a relationship among usefulness, ease of use, and intention to telecommute?*
- (2) *Is work performance related to telecommuting acceptance?*

2. Literature Review

According to (Liaw et al., 2007), the explanation of virtual work is that the employees are not necessarily physically working at the traditional central office, instead, they can perform their professional tasks through Internet facilities from a remote home. (Golden, 2007) also mentioned that working from home is one kind of virtual work that can be also known as telecommuting. (Bailey and Kurland, 2002) described that working from home is characterized by two main aspects which are first, employees work at a place which is different from the common workplace, secondly, there is a connection between home and office.

Rapid changes in technology are reshaping the relationship between work and home. There are some cases like Covid-19 affected the workers working from home directly. Due to the coronavirus pandemic, most of the people are working from home and some of them may expect work from home to become a normal arrangement. This is the historical flow of workers from home to office changed especially for white collar occupations (Bailyn 1988). There are different types of white collar occupations, which are admin staff can resume work at home; the professional workers who are focused on doing research or investigation can also work from home (Fredriksen-Goldsen and Scharlach 2001). The characteristic task of a worker, especially those who work in flexible time or mainly with computers, most of the employees are suitable to work at home (Perin 1991).

Telecommuting can be defined as the individuals who work for the company from their own homes, and they will allocate their working time between the office and home (Golden, Veiga, and Simsek, 2006). Telecommuters usually work in remote locations and do not have an exact location for working but they still need to communicate and connect with the company or organization and their managers as well (Ross, 2016). For example, the faculty members of the campus would work online, can be defined as a new teleworker. They can work at multiple colleges or universities which do not have a virtual office location. The teleworker sometimes will misunderstand or feel unconnected with the other members (Stadtlander, Sickel, and Giles, 2014). In most studies mentioned that teleworking is beneficial for both employers and employees, it can improve the employee’s quality of lifestyle and enhance work life balance (Gajendran and Harrison 2007). Teleworking may bring a lot of advantages like higher productivity, employee satisfaction and lesser stress on work, better work performance, and others, especially those who have more family responsibility and stay longer at home (Shockley and Allen 2007). However, some research argues that teleworking may increase stress due to work and family conflicts, and workers must handle both responsibilities at the same time (Sullivan 2012).

Mirchandani (2000) argues that workers who work from home may cause the worker more stress and anxiety because homeworkers need to integrate both work and family issues. It directly affects the work life balance and does not improve the quality of life. Previous research also concluded that gender is the variable of work from home, most women and single parents prefer to work from home due to the need to take care of their children (Hoque and Kirkpatrick 2003). The time for working from home and telework might happen the longer it takes to cover the works. The employees will not only work during traditional

working hours but will spend evenings or weekends to complete their work that is not finished during the regular working hours (Towers et al., 2006). According to the research by Hjorthol and Nossun (2009), working at home is related to the family needs, such as the workers may choose teleworking due to their parents or children being sick or fetch their children to school and so on.

Based on the Harvard researchers, work from home has transformed the work life of employees by helping the employees to parallelize and distinguish between their corporate work and their daily tasks (Amabile and Kramer, 2013). Research conducted at New York Bank indicated that working from home saves time, increases productivity, workers can complete their targeted tasks at the given time, and employees are more satisfied with their work. In the meantime, they can also have more time for their families (Singh et al., 2017). Basically, working from home is suitable for employees who have a high degree of autonomy, strong knowledge-based, and require the least supervision (Bailey and Kurland, 2002).

When analyzing work from home policy, there are always the pros and cons, proven by a variety of researchers. (Bailyn, 1988) mentioned that the employees' productivity increased when they are undergoing work from home policy and this positive impact is due to the employees having a high degree of autonomy and thus increased their motivation. However, another researcher namely (Olson, 1989) mentioned that employees have only moderate productivity when working at home, this situation is due to bad technological devices at their home. The nature of tasks can also affect the employees' productivity when working from home. (Glenn Dutcher, 2012) finds out that working from home increases employees' productivity when they are finishing their work. However, when they are doing boring tasks, their productivity will have a negative impact.

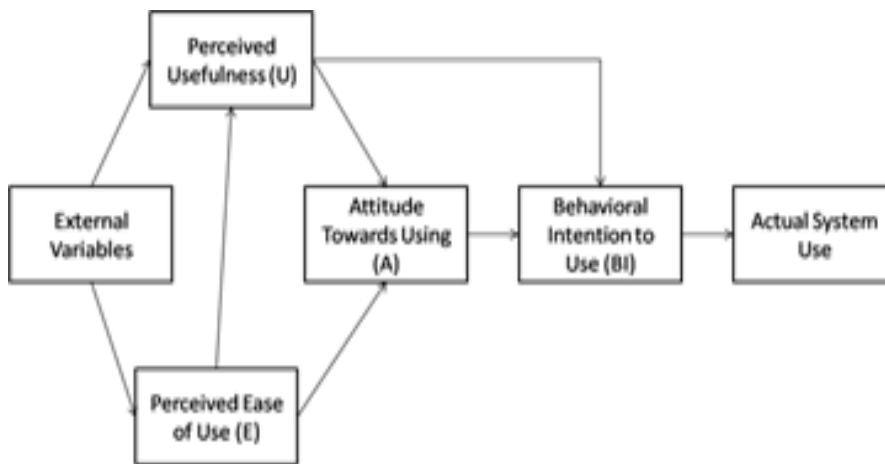
A field experiment conducted by (Bloom et al., 2015) in a large Chinese travel agency to investigate the effect of working from home on employees' performance. (Bloom et al., 2015) discovered that employees who work from home have higher overall performance than employees who work in the office. (Bloom et al., 2015) explained that higher employees' productivity was related to a quieter working environment and employees were free to have more breaks when working at home, so this situation has brought out more motivation for them when working.

Aside from advantages gained from working from home policy, there are disadvantages when companies conduct working from home policy. One of the disadvantages is when employees work from home, employers will take advantage of employees by messaging them for extra work. Basically, they will face overwork issues. Besides, continuous isolation will exist, and inadequate devices when employees work from home which will then affect their performance or professionalism in the corporate world (Singh et al., 2017). There is also a researcher who defined the benefits and the drawbacks of work from home. (Gregory, 2019) described that the work from home can increase credibility, such as increase the usage of Internet facilities which made the work easier. However, (Gregory, 2019) also mentioned that there is a dark side of work from home since employers are giving the employees such freedom when doing their work. Thus, this freedom will also lead to a delay in work and not submitting the given tasks on time.

Working from home may negatively impact the relationship between partners and children due to the conflict between work and home roles (Mann and Holdsworth, 2003). The flexibility of work might result in the difference in quality and quantity outcomes. Work from home may affect the employee's home environment, due to home workers need to bring back home a lot of files, documents, and laptop. Their home place may become a workspace, which could impact the employee's lifestyle. The employee can work in a quiet environment and can concentrate without interruption while working at home. The firms may benefit from saving the cost of rent office space and flexibility to communicate or assign the work task. The human resource of the company has an important role to play to ensure the employees can complete work efficiently and improve the employee's satisfaction during work from home (Basile and Beauregard, 2016).

In this research paper, the model that we will be using is the Technology Acceptance Model (TAM). TAM is then further extended by (Davis et al., 1989) including independent variables (refer Figure 1).

Figure 1. Technology Acceptance Model



Source: Davis (1989)

(Davis, 1989) described that TAM assumed usefulness and ease of use as two theoretical components that were used to determine the system use. (Davis, 1989) assumed that “usefulness as the degree to which an individual believes that using a certain system would improve his or her work performance.” (Davis, 1989) also assumed that “ease of use as the degree to which an individual believes that using a certain system would be free of effort.” From Figure 1, we can observe that usefulness and ease of use are significantly and positively linked to attitude towards using, behavioral intention to use and actual use (Davis, 1989).

(Davis, 1989) has stated that usefulness refers to the improvement in work performance by applying a particular system. Thus, in order to reach the improvement, the users are required to have a driver to launch the sense of liking to use that particular system which is known as Behavior Intention. (Davis, 1989) examined and found that perceived ease of use and perceived usefulness play a similar role in predicting the attitudes of the user towards the system used. The influence of effective usefulness was fifty percent more than the perceived ease of use. Most of the researchers had applied this model TAM in their studies especially for analyzing the perceived usefulness and ease of use that has a significant relationship impact on the behavioral intention used in the system. Oppositely, some of the research concluded that the variables which are external were indirectly impacted on usage intentions (Agarwal and Prasad, 1999) and the research of (Lu, Yu, and Liu, 2005) showed that perceived usage and perceived ease use have a direct relationship on the intended use of technology. However, the application of TAM to e-learning technologies had produced mixed method from previous research, one of the research showed that perceived ease use was not a good predictor of the intention to use on the system of learning management (Lee, Cheung, and Chen, 2005). Another study presented that the perceived ease of use significantly relationship with intention use on the learning management system (Ngai, Poon, and Chan, 2007).

(Dohan and Tan, 2013) in his study also concluded that there is a strong relationship between usefulness and behavior intention. When users believe that the application of telecommuting is more convenient, and simple, then the users will have more intention to use the application of telecommuting (Elkaseh et al., 2016). A simple way to explain the relationship between usefulness and intention to telecommute, when users feel that the telecommute is more useful and convenient, then the users will have more intention to telecommute.

H1a: Usefulness is significantly and positively related to intention to telecommute

(Abdullah et al., 2017) mentioned that an individual's technology adoption can be estimated based on their intention to use the technology which is influenced by the easiness and also the usefulness of certain technology. When the employees believe that telecommuting is more useful rather than attending themselves to a physical central office, then employees will have more intention to apply to telecommute. Undeniable, there is a strong relationship between ease to use and intention to telecommute. In the context of this study, ease of use can be considered as the users who freely believe in the continued use of a system of e-government. If the system is easy to use, most of the users or individuals feel it can bring convenience, they will be willing to learn the ways of the system and intend to use the system continuously. From the studies of (Chiu and Wang, 2008), ease of use is a positive relationship between the context of a web-based learning system with the user continuance intention.

H1b: Ease of use is significantly and positively related to intention to telecommute

Furthermore, (Davis, 1993) discovered that ease of use has a significant and positive relationship with usefulness because when a certain system is as easy to use then it can also be perceived as more useful. When employees assume that telecommute is easy to apply for them to present their professionalism then they will assume telecommute is a more useful application for them to complete their tasks.

H1c: Ease of use is significantly and positively related to usefulness telecommute.

There is also a significant and positive relationship between work performance and the usefulness of telecommuting. If the user perceived that the certain technology or system is useful, then the intention to use the certain technology or system will be higher, however, when the user perceived that the certain technology or system is not useful, then the user will reject to use the system or technology (Joo et al., 2016). Since telecommuting provides employees the biggest flexibility and also less travel-related stress, they have higher work performance. When the work performance of employees is high, employers will perceive that telecommuting is useful. From the research of (DiMartino and Wirth 1990), the study believes that the success of telecommuting arrangements is closely related to employee performance rather than observation management can improve in the result. Thus, managers of the organization may communicate well with employees to focus on outcomes and goals and not monitored on a day to day basis.

H2a: Work performance is significantly and positively related to the usefulness of telecommuting.

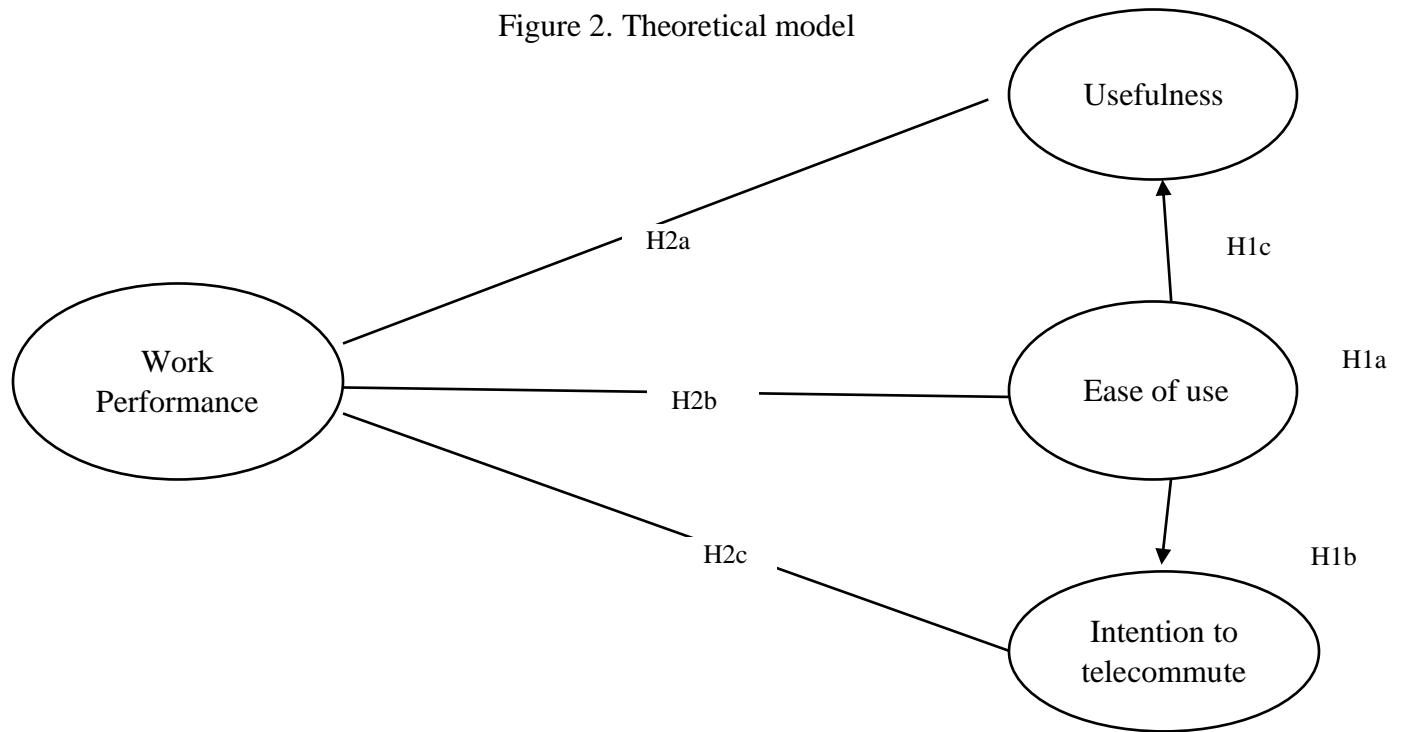
There is research done by (Salman et al., 2014) mentioning that ease of use can influence the work performance of the employees, which in the other words describing that ease of use can determine the expectations of employees towards technology. If employees expect that telecommute is user friendly which also means that is easy to use, then they will believe that telecommute will assist them in performing their work well. The use of telecommuting positively with the supervisor of individual employee performance and productivity in the previous findings (Gajendran and Harrison, 2007).

H2b: Work performance is significantly and positively related to ease of use of telecommuting.

According to (Davis, 1989), behavioral intention is that users accept certain technology or system when the system or technology is useful and easy to use. When employees applied to telecommute and they found out that can help them to perform well in the work or they are able to perform their professionalism, then employees will have the intention to use more telecommute. Based on the previous findings, the extent of telecommuting as a variable found that the significant relationship between the office distance between home and office with job performance (Golden et al., 2008).

H2c: Work performance is significantly and positively related to intention to telecommute.

Figure 2 shows the present research theoretical model



3. Research design

Nowadays, technology has directly affected the working lifestyle, work from home or other locations has become a normal phenomenon. Work from home is happening currently due to the lockdown period. In this study, we will measure the acceptance of remote work and how the work from home may impact on the organization and home workers' working life. Therefore, descriptive research has been chosen in this study due to descriptive research that is conclusive in nature and not exploratory so that it is suitable for research design. Hence, quantifiable information from target participants was collected as data and used to make statistical conclusions through data analysis for this study. Quantitative methods will be used for raw data collection, and the selected data collection method is a questionnaire.

The main variables which are independent variables and dependent variables will be analyzed and consist of the questionnaire of this study. There are two questions by each variable for ensuring the participants can provide the suggestion and feedback more accurately. The questionnaire divides into two parts, the first one is demographic questions which consist of general questions like age, gender, income and so on; and for the second section of questions are more related to effectiveness, ease of use and job performance for working from home. Since most of the interviewees are likely to retain the identification question in anonymity, they prefer to leave it as voluntary rather than mandatory.

The focus of the study is to obtain feedback from employees who work at home, so selecting responders from the community will be most appropriate. Thus, probability sampling design was selected, and simple random sampling as a sampling method in this study. Due to the case of the lockdown period, most of the respondents are not available in the office and restriction for face to face communication. There are some accessibility issues that may arise when contacting employees for research.

A. Population and sampling

In this research, the estimation of the population is 150. The questionnaire was used to collect data on the target respondents of the study, including open-ended questions and scale questions. The questionnaire was distributed to the employees and conduct formal or informal arrangements with their organizations for remote office participation in the study. The study may only reach a specific target population due to time constraints and accessibility issues.

B. Measures

The questionnaire was written in English because it is simple and easy to understand. The questionnaire with a Likert scale is easier for respondents to choose from. The Likert scale selected is 5 in this study, so the response rate is higher. These strongly disagree, disagree, neutral, agree, and strongly agree.

C. Data Analysis

The collected data was analyzed using quantitative methods. SPSS is one of the software that analyzes the quantitative data collected. Reliability, normality, and descriptive statistics were analyzed. Further analysis of the data was performed using frequency analysis.

4. Results

Table 1 shows the pilot reliability analysis test with Cronbach's alpha. J Martin Bland and Douglas G Altman (1995) stated that when items have formed a scale, they have internal consistency. Cronbach's alpha is a coefficient to test the internal consistency, thus correlated with one another. The Cronbach value should be higher than 0.7, highlighting that the internal consistency is acceptable. The Cronbach Alpha of the 4 constructs is deemed consistent internally.

Table 1. Pilot test reliability analysis

Constructs	No. of Items	Cronbach's alpha (α)
Intention to work from home	4	0.864
Usefulness	4	0.886
Ease of use	4	0.822
Work Performance	4	0.801

Table 2 shows the demographic profile of the respondents. A descriptive analysis was conducted. The respondents have been grouped accordingly to gender, age, and income group. The frequency and percentage of choices are shown. Most of the respondents were female, consisting of 57 persons, while the percentage of male respondents was 47.2%. Most of the respondents were in the age group of 31-40, followed closely by the age group of 21-25. 24.1% or 26 respondents earned between RM2,001 to RM3,000, while only 9 respondents earned RM5,500 to RM6,000.

Table 2. Profile sample

Respondents Profile		Frequencies	Percentage
Gender	Male	51	47.2
	Female	57	52.8
	Total	108	100
Age	21-25	31	28.7
	26-30	26	24.1
	31-40	44	40.7
	41-50	6	5.6
	Above 50 years old	1	0.9
	Total	108	100
Income	Less than RM2,000	17	15.7
	RM2,001 to RM3,000	26	24.1
	RM3,001 to RM4,000	18	16.7
	RM4,001 to RM5,000	22	20.4
	RM5,001 to RM6,000	9	8.3
	Above RM6,001	16	14.8
	Total	108	100

Table 3 shows the profile of the Likert-scale measures. Most respondents agreed that telecommute easy to use and have a positive effect on work performance with a mean score higher than 3. In contrast, most of the respondents do not agree that they have the intention to work from home and that is useful. Both indicators only got an average mean of less than 3.

Table 3. Profile of likert-scale measures

	Mean
Intention to Work from Home	
1. I will frequently work from home in the future. (IWH1)	3.03
2. I will strongly recommend others to work from home. (IWH2)	3.06
3. I plan to work from home. (IWH3)	3.05
4. It is better to work from home (IWH4)	2.81
Average intention to work from home score:	
	2.98
Usefulness	
1. Working from home enhances my work effectiveness. (PU1)	2.61
2. Working from home improves the working experience. (PU2)	2.44
3. Working from home improves my quality of work produced. (PU3)	2.59
4. Overall, I find working from home useful. (PU4)	2.85
Average usefulness score:	
	2.62
Ease of use	
1. Working from home is easy for me. (PEOU1)	3.31
2. Working from home is convenient. (PEOU2)	3.49
3. Working from home is flexible. (PEOU3)	3.78
4. Working from home is suitable for me. (PEOU4)	3.03
Average ease of use score:	
	3.40
Work Performance	
1. I can finish my work faster by working from home. (WP1)	2.65
2. I can produce better quality work by working from home. (WP2)	2.79
3. I am less stressed when I am working from home. (WP3)	3.16

4. I can achieve a better work-life balance by working from home. (WP4) 3.25
 Average work-performance score: 2.96

Table 4 shows the multiple regression analysis. It is a technique to predict the unknown value of the dependent variable, which would be work performance. We chose one of the items, which is work-life balance. The items under Intention to Work from Home, Usefulness, and Ease of Use were selected as independent variables. The R square shows for every change in the independent variable, there will be a 41% change in the dependent variable. The adjusted R square shows the model is somewhat fit. Table 5 shows a summary of the hypothesis results where all the findings are supported.

Table 4. Multiple regression analysis

Model Summary ^b						
Model	R	R Square	Adjusted R Square	R	Std. Error of the Estimate	Durbin-Watson
1	.640 ^a	0.410	0.336		1.064	1.902
a. Predictors: (Constant), Q12, Q11, Q6, Q1, Q4, Q9, Q5, Q2, Q3, Q10, Q7, Q8						
b. Dependent Variable: Q16						

Table 5. Summary of hypotheses results

Hypotheses	Findings
H1a: Usefulness is significantly and positively related to intention to telecommute	Supported
H1b: Ease of use is significantly and positively related to intention to telecommute	Supported
H1c: Ease of use is significantly and positively related to usefulness telecommute.	Supported
H2a: Work performance is significantly and positively related to usefulness of telecommute.	Supported
H2b: Work performance is significantly and positively related to ease of use of telecommute.	Supported
H2c: Work performance is significantly and positively related to intention to telecommute.	Supported

5. Conclusion

Two research questions were built in this research, which is *Is there a relationship among usefulness, ease of use and intention to telecommute and Is work performance related to telecommute acceptance?* There is evidence to show that there is a relationship among the variables and work performance is related to telecommute acceptance. With the usage of modern technology, most workers are finding it easier to telecommute from the own comfort of home, where they can do it at their own pace. It is more flexible and

convenient. Telecommute also brings positive effects to work performance, as everyone can achieve better work-life balance. However, there are certain limitations that should be recognized. For example, only certain students of a certain program took part in the survey, which does not represent the general population. The population size can be increased in future research to attain more accurate results. In addition, other variables should also be tested to widen the research area.

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