Faculty of Business

Factors Affecting the Use of Digital Information Sources for Work Purposes Among Rural Entrepreneurs

Yeo Hui Hui

0000-0002-1181-3571

This thesis is presented for the Degree of

Master of Philosophy (Marketing)

of

Curtin University

April 2023

STATEMENT OF ORIGINAL AUTHORSHIP

Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made. This thesis contains no material which has been accepted for the award of any other degree or diploma in any university. None of the reference and person' work has been used without proper acknowledgement in the context of this thesis.

Curtin University Human Research Ethics Committee has approved this thesis with the approval number HRE2020-0121. The survey has been conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007).

Signature: 

YEO HUI HUI

Date: 30 March 2023

ACKNOWLEDGEMENT

This thesis would not have become a reality if it wasn't for the kind support and help of many people. I would like to extend my heartfelt thanks to all of them.

Firstly, I would like to extend my sincerest gratitude to my supervisors, Dr. Fidella Tiew Nga Huong, Dr. Fayrene Chieng and my previous co-supervisor Dr. Yap Ching Seng for the patience, encouragement, expertise, assistance and guidance throughout the past few years of writing my thesis. Without their continuous support, this thesis would not be possible. Besides, I would also like to extend my utmost gratitude to my chairperson A/P Lew Tek Yew for the support, suggestions and encouragement. I would thank the internal and external reviewers to spend time and effort and provide their generous suggestions to my thesis. Also, I would like to thank Dr. Tiong Ying Ying who has been providing assistance whenever is needed and always being the person I could reach out to.

I am especially indebted to Curtin University Malaysia, Faculty of Business and Graduate School for the opportunity to complete this milestone. Specifically, providing financial support, quality research environment, valuable research training and workshops that has broadened my knowledge in the research field. I would also like to thank all the participants who have participated in this study for devoting their time and willingness to share their perceptions and thought although at that time we were going through one of the toughest time, COVID-19 pandemic.

Furthermore, I would like to thank my husband, Reuben Brandon Lee, for his unwavering support and encouragement throughout the course of this research. My fellow research colleagues and dear friends, especially Jennifer Chong for the inspiration, reminder and being the best desk mate I ever had and making my research journey easier. Also, Ting Qian Hui who has always lend out her hand whenever I needed help or advises.

Last but not least, my heartfelt appreciation to my family, my parents, Yeo Kheng Siang, Jenny Sim and siblings Yeo Keh Seng, Yeo Hui Loo and Jessica Yeo for their never-ending love and support.

ABSTRACT

Malaysia aims to achieve decent standard of living to all Malaysians by year 2030 through the Shared Prosperity Vision or in short, SPV 2030. The Malaysia government has spent more than RM230 million to embark on digital initiatives of providing infrastructures to narrow the digital divide in rural Malaysia. However, the usage of digital information sources for work-related information in the rural Malaysia is obscure, particularly among the entrepreneurs. This study aims to determine the factors affecting the use of digital information sources for work information among the rural entrepreneurs in Malaysia. Specifically, this research attempts to answer how information source accessibility, quality of information and psychosocial work environment influence the use of digital information center, as well as how the use of digital information sources affects the rural entrepreneur's task performance. Besides, it also determines the moderation effect of task importance on the factors of the use of digital information sources.

The underpinning theories of this study is cost-benefit theory and theory of planned behavior which determines the value of worth when an effort is put in to obtain benefits. The information seekers will weigh if the effort to get such information is worthwhile to improve their task performance. Specifically, the conceptual framework comprises three factors of the use of digital information sources – source accessibility, quality of information and psychosocial work environment; a moderator – task importance; and a consequence of the use of digital information sources – task performance.

This study utilizes a quantitative approach using telephone survey for data collection. Four-hundred and seventeen rural entrepreneurs around Malaysia participated in this survey, a response rate of 51.3%. The collected data will be analyzed using partial least square structural equation modelling (PLS-SEM) to test the hypothesized relationships. The research findings indicate that source accessibility and quality of information are positively to use of digital information sources where use of digital information is also positively related to task performance. As for the moderation effect, task importance and quality of information shows the interaction are negatively influenced.

On the other hand, two-stage approach was used to test the moderating effect between factors of use of digital information and use of digital information. The moderation analysis revealed that the relationship between quality of information and use of digital information was supported with negative effect. There are few recommendations from this study which are having this study in longitudinal studies may be a better alternative to draw conclusions on the

changes, use of different data collection method and replication of the study to determine the differences before and after of the COVID-19 pandemic.

Keywords: psychosocial work environment; quality of information; rural entrepreneurs; source accessibility; task performance; use of digital information sources.

DEFINITION OF KEY TERMS

The terms usually used in this study are now provided and defined as below. All these terms will be explained further in the literature review chapter.

Information Seeking Behavior – are concerned with determining the information seekers' information needs, search of behavior and the subsequent use of information (Ikoja-Odongo and Mostert 2006, 145).

Information Sources – describe as a person, thing, or place from which information comes, arises, or is obtained (Gilly et al. 1998).

Digital Information Sources – refer to a source of information that is transmitted through the electronic platform (Schatz 1997).

Traditional Information Sources - refer to a source of information which has been written or printed (Schatz 1997).

Psychosocial Work Environment – means psychological and social environment which influence an individual's creativity, domain-relevant skills and task motivation at workplace (Rigolizza and Amabile 2015).

Quality of Information - are information or literature provides sufficient details to use or the extent to successfully serves the purpose to information seekers (Kahn, Strong, and Wang 2002).

Rural Dwellers - person who lives in a rural area.

Rural Entrepreneurs – are entrepreneurs related to the establishment of industrial and business units in the rural areas (Chatterjee, Dutta Gupta, and Upadhyay 2020).

Source Accessibility – implies the time and effort required to reach to the information source to the extent which the information seeker perceive that the particular source has the information required and is available for use (Agarwal, Xu, and Poo 2011, Zimmer, Henry, and Butler 2007).

Task Importance - reflects the degree to which one perceive their work as significantly impacting other people within or outside of the organization (Johnson et al. 2016)

Task Performance – is the effectiveness of an individual with their personal task (Borman and Motowidlo 1997, Lo Destro et al. 2015).

Table of Contents

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE: INTRODUCTION

1.1 Chapter Overview

This chapter introduces the research area and outlines the background of the present study. It briefly reviews the factors affecting the use of digital information sources and outline the effect on the task performance of the rural entrepreneurs. The chapter first introduces the background of the study, followed by the problem statement, research questions and research objectives. Then, the significance of the study is outlined with the novelty of the study.

1.2 Background

Information has become one of the most important resources that are required in a country with the knowledge-based economy such as Malaysia as it encourages the citizens to contribute to the country's socio-economic growth (Roztocki and Weistroffer 2016, Roztocki, Soja, and Weistroffer 2019, Woolcock and Narayan 2000). Information is data that can lead to an increase in understanding and decrease in uncertainty whereby it can affect a behavior, decision, or outcome from happening (Berger and Lafferty 2017, Casson and Wadeson 2007). Information nowadays can be retrieved from multiple sources such as traditional information sources (e.g., books, friends and family, magazines) and digital information sources (e.g., social media, websites). Sources can be categorized into interpersonal and impersonal; internet and non-internet (Gainsbury et al. 2012, Jacobsen and Munar 2012, Molina, Gomez, and Martin-Consuegra 2010, Mortimer 2013, Saffarinia, Mazidi, and Saffarinia 2016, Tokunaga and Gustafson 2014) where one look for information from the sources which they trust most or is more accessible to them.

In the current information age, information acquired digitally are more frequently used in urban area (Badarudin et al. 2018, Wok and Mohamed 2017). Information seekers from two different communities - rural community and urban community, may have different approaches to reach out to their desired information (Dutta 2009, Mshana et al. 2008). According to Dutta (2009), urban dwellers highly prefer to seek information from digital information sources as it is more effective and efficient; however, due to spatial barriers, rural dwellers prefer traditional information sources. Besides accessibility of information, quality of information is also crucial in the process of information-seeking process. Quality of information depends on the information providers who carry responsibilities on the information that they produce and published online or offline (Stohl, Stohl, and Leonardi 2016). Information is needed in both individual and organization.

In an organization, the amount of information acquired for the task of the information seekers is crucial as it may affect the environment within the organization; thus, one has to understand an individual's information seeking behavior (Fidel and Pejtersen 2004, Spink and Cole 2006). Entrepreneurs or working individuals will gain more knowledge in seeking information through multiple sources in order to enhance their task performance in executing proper decision making and problem-solving in the organization (Sampson Jr et al. 1999, Spink and Cole 2006).

Besides, personal factors also affect the information seeking behavior of the information seekers. Information seekers will calculate the cost in terms of monetary or effort to determine the sources that will be used. If there is the existence of barriers to reach to the information, lack of knowledge, more hustle to reach to the information, information seekers will look for an alternative source as it might not be worth the effort (Agarwal, Xu, and Poo 2011, Xu, Tan, and Yang 2006). However, if the information source is easy-to-use, more readily available and requires less effort to receive quality information, the information seekers will use the source as information seekers seek for information with lower cost and potential loss while receiving quality information (Agarwal, Xu, and Poo 2011, Hertzum and Simonsen 2019). Specifically, after the implementation of government initiatives on digital infrastructures in rural areas of Malaysia, there are limited studies on the information-seeking behavior of rural entrepreneurs using digital information sources.

Limited studies were done to understand entrepreneurs' information-seeking behavior particularly in rural context. Questions such as "Where does one seek for information in rural context?" and "Why does one choose the particular source instead of other sources?" triggered plenty of researchers who are interested in organizational behavior and information science (Case 2016, Halili and Sulaiman 2018, O'Reilly 1980, Xu, Tan, and Yang 2006, Zimmer, Henry, and Butler 2007). Prior studies conducted in Malaysia were mainly focused on students or youth (Halili and Sulaiman, 2018, Lim et al., 2020, Shaifuddin, Ahmad and Mokhtar, 2011, Zaremohzzabieh et al., 2016), women groups (Abu Bakar 2011,), farmers (Yeong et al., 2018), and limited study on the rural entrepreneur on the usage of digital information.

The rural community in Malaysia is about a quarter of the whole Malaysia population (Adnan 2019). In year 2020, the Malaysia government released a government blueprint - Malaysia Shared Prosperity Vision or in short, SPV 2030 with the objectives: (i) development for all – restructuring economy, (ii) addressing wealth and income disparities – addressing inequalities and (iii) united, prosperous and dignified nation – nation building. These objectives aim to move forward by restructuring the economy as the foundation in improving the

wellbeing of the Malaysians. The Malaysia government implemented digital infrastructure initiatives such as establish telecentres, providing short courses for users to learn how to use internet (MyGovernment 2020) to bridge the digital divide between urban and rural communities. There are a total of 870 *Kampung Tanpa Wayar* (Wireless Village) which was later renamed to *Pusat Internet 1 Malaysia* (1Malaysia Telecentre) built by the Malaysia government to ensure that the ICT infrastructures are available in the rural areas (MCMC 2019a). The Malaysia prime minister believe that the entrepreneurial field is proved to be effective in developing the country's socio-economic status, thus, "Karnival Usahawan Desa" (Rural Entrepreneurial Carnival) was launched in 2019 in order to encourage the rural community to fully utilize the telecentres and help digitalize the entrepreneurs' business (MalayMail 2019b, PMO 2019a). Thus, the rural area of Malaysia was selected to be studied to highlight on the progress of the SPV 2030 objectives.

Studies on the information-seeking behavior of the rural communities of Malaysia, it is found that rural dwellers use mostly traditional information sources despite government initiatives of providing digital infrastructures (Ismail and Affandy 2013, Omar et al. 2018, Yunan 2011). According to Ariff 2020, Halili and Sulaiman 2018 and Yeong et al. 2018, rural entrepreneurs are prone to use digital information sources however some limitation such as, lack of funds to support ICT implementation, language and literacy barriers still exist despite having initiatives by the Malaysia government. Besides, few problems strengthen the need of this study such as there are many industries who are still in the low value added category with low adoption of high digital technology and the economic growth potential is not fully realized and economy is not fully diversified (PMO 2019b).

1.3 Problem Statement

In year 2011, Malaysia government has allocated RM230 million to embark on initiatives for the Malaysia Development 5 Year Plan (year 2011-2015) namely Kampung Tanpa Wayar (Wireless Village) where most of the rural villages were installed with internet (Asohan 2015, Post 2015). In addition, Smart Village project was launched in September 2019 involving six local corporations to increase greater internet access in rural areas (KPLB 2020). The Malaysia government set up short courses for rural entrepreneurs to increase their knowledge on how to use computer in order to promote the well-being of rural community (Rashid, Ngah and Misnan 2019). All these initiatives aim to provide equal access of Internet to both urban and rural population to reduce the digital divide and to provide opportunity for the rural entrepreneurs to participate in the digital economy (MalayMail 2019a).

Despite all initiatives embarked by the Malaysia government to increase Internet penetration to the rural areas, in 2020, there are still many rural dwellers complaining on the Internet speed in their areas. There are as much as 67.1 per cent of East Malaysia's rural dwellers mentioned the Internet access is weak, slow and have unstable connectivity (Ariff 2020, Johari 2020) and low adoption of digital information sources (Abu Bakar 2011, Adnan 2019). No study has been done to investigate the profile of this underserved groups who have yet taken advantages of these digital information sources, and what are the factors that can contribute towards engaging rural communities to become an active user in seeking information digitally for work purposes.

To date, there are limited data and information regarding the use of digital information sources by the rural community thus, there is a need of this research to investigate profile of this underserved groups and shed light about factors that can contribute towards engaging rural communities to become an active user in seeking information digitally. It is imperative and timely to research the usage and effectiveness of such digital information sources provided to the rural entrepreneurs in Malaysia.

With the implementation of digital access to the rural areas, how ready are the rural dwellers to accept and utilize the digital access? What are the factors that encourage or discourage the use of digital source to seek for information in rural areas? How can the information retrieve affect their task performance? These questions address the factors that affect the rural entrepreneurs' selection of information source to seek for work-related information to improve their task performance at workplace. According to Kim and Roth (2011), work-related information helps to improve task performance at workplace as they are able to gain more insights. According to Suseno et al. (2019), work environment plays a crucial role in a person's work experience. Psychosocial work environment affects task motivation at workplace as it creates motivation when there is a positive environment at workplace (Hammond et al. 2011, Suseno et al. 2019). With positive psychological and social work environment, it is more likely to retrieve higher quality information with the presence of motivation.

Quality information may be easier to retrieve when there are more interactions both internally and externally of the workplace between colleagues as a sign of social support creating positive work environment (Aurora 2019). The quality of information from sources are solely based on the perception of the rural dwellers in Malaysia. The studies conducted by Abu Bakar (2011) and Dutta (2009) suggested that teachers and students prefer books, magazines and library as their source as they find electronic information systems are hard to

use. As a decade passed, according to Hasin and Nasir (2021) teachers and students do have positive view towards ICT despite lack of facilities and expertise however, they do anticipate to get trainings to increase the knowledge to use ICT.

1.4 Research Gap

Prior researchers found that radio was rated as the most credible source because the information broadcasted were found to be more truthful and some find word-of-mouth from family and friends are more credible (Kim and Johnson 2009, Rodriguez et al. 2015, Sulemani and Katsekpor 2007). However, decades ago, there were no digital infrastructures in rural areas hence, accessibility to digital source is a barrier which rural dwellers face when they seek for information (Mohd Nor, Chapun, and Wah 2013). The surrounding environment (e.g. work environment, social environment) may be one of the motivation factors to motivate rural dwellers to seek for information as the power of word-of-mouth among rural dwellers are still known to be credible (Baernholdt and Mark 2009, Jacobsen and Munar 2012).

In the recent studies it is found that there are still limited infrastructures as the existing infrastructures were being damaged or vandalized (Maulana 2020), rural dwellers are incapable to purchase ICT equipment and they still lack computer self-efficacy, literacy and language barrier still exists (Halili and Sulaiman 2018, Yeong et al. 2018). Prior studies largely focus on traditional information sources and limited research has been done to examine the digital information-seeking behavior of rural folks (Abu Bakar 2011, Dutta 2009, Hamzah 2010, Islam and Ahmed 2012, Mohd Nor, Chapun, and Wah 2013). Thus, the current study focuses on the accessibility of the sources. The accessibility of the source is a crucial part of the usage of digital information. With the accessibility studied, it would give an overview of which location or state would require attention to improve the accessibility of the digital sources.

Besides, information needs changes constantly with new and sensory inputs motivated by different purposes such as social, entertainment, work performance or self-development. Prior studies focus mainly on everyday life information and is descriptive in nature (Abu Bakar 2011, Dutta 2009, Hamzah 2010, Islam and Ahmed 2012, Mohd Nor, Chapun, and Wah 2013). Despite that, work-related information-seeking behavior among the rural entrepreneurs in Malaysia are not explored. It is important for an entrepreneur to seek information with relation to their task to ensure that their task is performed well. The current study would aid in painting a clearer vision of the work-related information among the rural entrepreneurs.

In addition, previous research on information-seeking behavior of rural dwellers in Malaysia is location-specific with distinctive content (Abu Bakar 2011, Anwar and Supaat 1998, Hamzah 2010, Islam and Ahmed 2012, Mohd Nor, Chapun, and Wah 2013). These location-specific studies were unable to generalize the findings and provide a comprehensive understanding of the overall situation in Malaysia. Thus, this study covers wider and multiple locations in Malaysia (Sarawak, Sabah and Peninsular Malaysia), with a broader range of demographics to provide a more holistic understanding of information-seeking behavior of rural entrepreneurs in Malaysia using digital information sources.

Concisely, prior studies on information-seeking behavior of rural dwellers mainly focus on types of information and sources used by the rural dwellers (Abu Bakar 2011, Anwar and Supaat 1998, Hamzah 2010, Islam and Ahmed 2012, Mohd Nor, Chapun, and Wah 2013). On the other hand, existing research on information-seeking behavior topic placed little attention on rural entrepreneurs.

The different factors such as efforts, time spent and accessibility would affect the rural entrepreneurs to select which information source to be used to seek for work-related information is a serious matter to study because along with the government infrastructure initiatives, the factors affecting the selection might be different. In order for the government or policy makers to better understand the information seeking behavior of rural entrepreneurs in this digital era, the study of factors affecting the digital information source such as source accessibility, quality of information, psychosocial work environment, task importance and task performance is crucial. Therefore, this study will fill the research gap by studying on the factors affecting rural entrepreneurs using digital information sources to seek for work-related information in Malaysia.

a) Research Questions

Based on the preceding discussions, this research aims to answer the following research questions:

1. How do information source accessibility and quality of information influence the use of digital information sources by rural entrepreneurs?
2. What relationship does psychosocial work environment have with the use of digital information sources by rural entrepreneurs?
3. How does the use of digital information sources affect task performance of rural entrepreneurs?

4. What is the moderation effect of task importance on the relationships between information source accessibility, quality of information, psychosocial work environment and the use of digital information sources?

b) Research Objectives

The objectives of this study are as follows:

1. To determine the influence of information source accessibility and quality of information on the use of digital information sources in Malaysia by rural entrepreneurs.
2. To determine the relationship between psychosocial work environment and the use of digital information sources.
3. To determine the relationship between the use of digital information sources and task performance of rural entrepreneurs.
4. To determine the moderation effect of task importance on the relationships between information source accessibility, quality of information, psychosocial work environment and the use of digital information sources.

1.5 Research Significance

1.5.1 Theoretical Significance

This research is significant as the exogenous variable, social risk is focused down to psychosocial work environment in this conceptual framework to identify the relationship between the entrepreneurs' psychological, social work environment and the use of digital information sources. As in prior studies Agarwal, Xu, and Poo 2011, Xu, Tan, and Yang (2006), social risk is being measured as the study focuses on information-seeking behavior using digital information sources in general.

Secondly, an endogenous variable has been introduced in this conceptual framework which is the task performance. In prior research, the framework ends at preference or use of information sources (Agarwal, Xu, and Poo 2011, Xu, Tan, and Yang 2006). Whereas, in this study, it further examines if the selection of use of digital information sources will further affect the task performance of the rural entrepreneur. This research will study if the use of digital information sources will have any effect on the task performance of the rural entrepreneur at workplace. As task performance is the result of an activity which is recognized as one's job contribution to the organization.

Thirdly, this studies on digital information sources and work-related information as compared to the prior studies which largely focus on traditional information sources and everyday-like information (Abu Bakar 2011, Anwar and Supaat 1998, Dutta 2009, Mohd Nor, Chapun, and Wah 2013, Yeong et al. 2018). Next, this study has an underpinning theory – Cost-benefit model where no underpinning theory were used in the prior studies (Abu Bakar 2011, Anwar and Supaat 1998, Dutta 2009, Mohd Nor, Chapun, and Wah 2013, Yeong et al. 2018). Lastly, this study is significant as it provides framework to identify digital information-seeking behavior of rural entrepreneurs covering the whole Malaysia. This is done by studying the selection of digital information sources on the task performance of the rural entrepreneurs. The research area of this study covers throughout Malaysia with a larger sample size whereas in prior studies it is location-specific and having the sample size ranges from 51 to 193 (Abu Bakar 2011, Anwar and Supaat 1998).

1.5.2 Practical Significance

This study provides better understanding of digital information-seeking behavior of rural entrepreneurs in Malaysia which can help the government and NGOs to identify areas for improvement to develop appropriate measures for the rural community as the data are analyzed with inferential statistics instead of descriptive statistics. The country's socio economy can be developed with more insights collected from the rural dwellers through this research, it allows the government to respond and act accordingly to resolve issues (if any). The data from the study would also aid in helping the government to conduct a more precise and accurate seminar to aid in the rural development.

The rural dwellers are able to gain confidence in using the digital information sources when the government have improved the digital infrastructure strategies based on the understanding of what the rural dwellers needs. Thus, rural dwellers will be more internet self-efficacy and obtain more information through digital information sources and have better task performance at workplace. For example, during the COVID-19 pandemic, the rural dwellers would be able to obtain preventive method to curb the outspread of the virus in their villages. This will lead towards the Malaysia's Local Agenda and the mission of Malaysia Digital Economy Corporation (MDEC) which is to develop the nation's Digital Economy. With the rural dwellers being more

Besides, libraries and information centers, telecommunication providers, social enterprises and NGOs could benefit from the research findings by reaching to the rural dwellers for participation in socio-economic development and integration, and ultimately, towards

closing income inequality and achieving a high-income and developed country of Malaysia in 2030.

CHAPTER TWO: LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Chapter Overview

The present chapter outlays five areas, that includes the overview of information and information-seeking, the different types of information sources, psychosocial factor at work, a brief review of Internet in Malaysia, past researches of information-seeking in Malaysia and the underpinning theory. The chapter concludes with the hypotheses development and the conceptual framework of the study.

2.2 Overview of Information and Information-Seeking

Information is the key contributor to the development of individuals and communities. Information is based three components which are data collection, data analysis and data interpretation. According to Jones and Ross (2007), to ensure information is correct with high reliability, it requires a few activities that is grouped to be the information management.

Information is ambiguous and can be used in different ways where three principal uses of the word "information" were identified: information-as-process, information-as-knowledge and information-as-thing (Buckland 1991, Case 2016). According to Cole (1997), information-as-process is a process of informing such as communicating knowledge, or act of telling, informing news and fact which constructs with different cognitive and affective stages, where information-as-knowledge is intangible and have to be expressed, described, or represented in some physical way whereby information is used to reduce uncertainty. Lastly, information-as-thing is the information this research is going to focus on is used to describe tangible items such as documents and data as they are regarded as informative.

Information is crucial towards the current society as accurate and precise information can save one's time and money through increasing efficiency, improving productivity and creating huge impact on operations and decision-making (Center 1998). It is common for one to spend more time in obtaining more information and evaluates other alternatives to reduce the risks (Center 1998, Jun, Kim, and Tang 2017). Thus, before one commits into something, acquiring relevant information is usual to reduce the risk of wasting resources. It is undeniable that information produces subsequent information which leads to solving a problem or doubt of a person or decision making especially in this digital era where the community seek for trustworthy source for information in the internet (De Alwis, Majid, and Chaudhry 2006, Hirsh and Dinkelacker 2004).

According to Coombs (1999) supported by Lee and Song (2010), there is negative impact on the decision-making whenever information is insufficient to support the decision for next action. On the contrary, overloading of information may also impact on the effectiveness of decision making as there will be too much considerations thus, more options or alternatives can be determined (Coombs 1999, Lee and Song 2010).

Besides, information is also important to decision making in the business for business companies as adequate information would help the company to make right decision to strategize their business strategies to reach to their goal (Agnihotri et al. 2016, Michaelidou, Siamagka, and Christodoulides 2011).

Many researchers have come to a mutual agreement that information is needed when a problem is recognized (De Alwis, Majid, and Chaudhry 2006, Hirsh and Dinkelacker 2004, Pandey, Goyal, and Sundararaman 2008, Saleh and Lasisi 2011, Spink and Cole 2006). All questions despite with work or non-work information deserves to receive equal attention as information is wide range and it may not be conceived through unintentional communications but through wide exposure to variety of events and objects (Buckland 1991, Savolainen 1995).

In the modern era, it is simpler to transfer information within one another with the development of information technology. Through information technology, information transfer has been easier and faster than ever to all aspects of human needs and activity (Hicks 2007). Modern complex developments have allowed data or information to be converted to knowledge which is a crucial part of human development (Filippini, Güttel, and Nosella 2012). People need information to develop their skills and potential through education and training, to succeed in business, to enrich their cultural experience and to take control of their daily lives (Moore 2007). A community is unable to develop without knowledge and can only develop if the recognition and use of information as their tool for development is accepted (Carberry, Elzer, and Demir 2006).

A study conducted by Oggero, Rossi and Ughetto (2020), determined that the importance of financial literacy and digital skills shaped an entrepreneur in Italy. The study found that there was a strong relationship between financial literacy and digital skills. Their study concluded that males, who have digital skill and financial literacy are more prone to be an entrepreneur which highlights that digital skill is an important sector to be an entrepreneur. Thus, the determination of rural entrepreneurs with relation to their digital skills must also be assessed in their information seeking behavior.

2.2.1 Information-Seeking Behaviors

Information-seeking behavior is "concerned with determining the information seekers' information needs, search of behavior and the subsequent use of information" (Ikoja-Odongo and Mostert 2006, 145). According to Belkin (1982), information needs occur when a gap is identified between current knowledge and task or action required. Information-seeking become necessary when an information need evolves from an awareness of something missing (Kuhlthau 1991). According to Smith (1991), there are two categories of information needs known as general information or specific information (Ikoja-Odongo and Mostert 2006). General information refers to information which are of one's topics of interest, whereas, specific information refers to information which could help to find solutions and problem solving (Ikoja-Odongo and Mostert 2006). However, information should not be a need itself, but rather act as a tool to satisfy primary human needs (Ikoja-Odongo and Mostert 2006).

As the internet era rises, studies on information-seeking behavior were done related to traditional information sources and/or digital information sources. Topics such as information-seeking behavior of consumer health on the internet (Cline and Haynes 2001, Gray et al. 2005), the digital information seeking behavior in general (Nicholas et al. 2006, Wilson 2006). These studies were conducted on urban dwellers on the information seeking behaviors and does not investigate the rural dwellers or specifically the rural entrepreneurs. Thus, there is a demand to investigate rural entrepreneurs as they also play an important role in the digitization of a nation (Rashid, Ngah and Misnan 2019). Hence, this study studies on work-related information through digital information sources of rural entrepreneurs are conducted to better understand the rural entrepreneurs on the information seeking behavior.

Different backgrounds and profession (Leckie, Karen, and Christian 1996), gender (Gray et al. 2005, Rowley, Johnson, and Sbaffi 2017, Tong, Raynor, and Aslani 2014), occupation (Dutta 2009, Ocholla 1996), society and environment may affect an individual's information need and seeking behavior (Agarwal, Xu, and Poo 2011, Xu, Tan, and Yang 2006).

According to Aboyade (1984) and Savolainen (2005), information can be classified as work-related and non-work related information such as everyday life information, health information is classified under non-work related information. Work-related is defined as having a relation with a person's work or with paid work in general (Dictionary 2021). Therefore, work-related information is information that connects with one's work and non-work related information are other information that does not have any relation with work. For example, everyday life information (ELIS) acquires various informational elements which

people performs in their daily life or to solve their problems are not directly related to their work (Savolainen 2005).

Prior researches are mostly done on everyday life information or non-work related information (Bosompra 1987, Cline and Haynes 2001, Savolainen 1995, Savolainen 2005). Besides, there are a few work-related information researches such as work-related use of ICT after hours and focus on opportunities (Shi et al. 2018), work-related use of ICT after hours and emotional exhaustion (Xie et al. 2018), novice teachers and their acquisition of work-related information (Kim and Roth 2011). As the current digital era, work-related issues are in higher demand thus, there is a need for more on work-related information needs and information seeking behavior.

Factors affecting how a person seeks and use of information, different types of information sources and why information is needed are studied by many researchers (Byström and Järvelin 1995, Leckie, Karen, and Christian 1996, Savolainen 1995, Wilson 1999). According to prior researches, it started off from everyday life information-seeking (Savolainen 1995, Wilson 1999), the sources one use and why does one needs information. As years goes by some researchers have started to research on how information affect task complexity (Byström and Järvelin 1995, Byström 2002, Byström and Hansen 2005, Case 2016). Information-seeking behavior of working professionals such as working engineers, doctors and lawyers were studied by (Hemminger et al. 2007, Leckie, Karen, and Christian 1996, Reddy and Jansen 2008). Studies were also done on students and how they seek for information (Fidzani 1998, Howlader and Islam 2019, Nicholas et al. 2009). Besides work or non-work, information itself such as information source and information quality also affect one's information seeking behavior (Agarwal, Xu, and Poo 2011, Bai, Law, and Wen 2008). Thus, there are many different types of information, different types of information sources and it depends on what the information seeker is looking for in order to satisfy their need of information.

2.2.2 Information-Seeking Studies in Malaysia

A number of researches had been conducted in Asia on the information needs of the rural dwellers (Abu Bakar 2011, Anwar and Supaat 1998, Mohd Nor, Chapun, and Wah 2013, Zawawi and Shaheen 2001). In Malaysia, a research had been conducted on three Malaysian villages that has no library services and found that rural dwellers were seeking for non-work related information such as religious information, health information, education, politics and businesses (Anwar and Supaat 1998). Research done by Anwar and Supaat (1998) found that

there were limited study on information needs of rural population in Malaysia and information services has to be redesigned to match the information needs of the rural population. The rural population seeks information for the purpose to fulfil what they need to know, follows by solving problems. Information for work purposes are ranked fifth in the list in the study conducted by Anwar and Supaat (1998). The result of the research clearly indicated that the Malaysian in the rural areas are eager to learn more as they look into subjects that will aid to boost the country's economy. The result obtained is limited as the researchers only focused on three villages. Another research by Zawawi and Shaheen (2001) concluded that printed materials are still the preferred information source as lack of knowledge and/or lack of self-efficacy to use the digital information sources are possible reasons for the underutilization of digital information sources.

In year 2011, Abu Bakar (2011) studied on information needs and information-seeking behaviors of women in rural setting of Malaysia, where the researcher found that traditional information sources are preferred as compare to digital information sources to seek for family-related information, child education, religious information. The rural women of Malaysia do use Internet to seek for information such as food and child education, however, due to lack of infrastructures, they prefer to use traditional information sources (Abu Bakar 2011). On contrary, a study done by Shaifuddin, Ahmad, and Mokhtar (2011) in Kuala Selangor concluded that rural youths prefers digital information sources to seek for information for decision making purpose. From these two studies, it was focused on the women and youth in the rural setting. Therefore, the current study focuses on entrepreneurs in the rural setting as they play an important role in the rural area.

In addition, Mohd Nor, Chapun, and Wah (2013) investigated the use of ICT seeking for health-related information in Serian district, Sarawak. Less than 50% of the respondents in the research seek information through digital information sources despite being aware of the benefits of digital information sources or having Internet at home or workplace. This study highlights that the digital environment of the rural area is low. Thus, it is also an important part of the current study to dive into the digital sector of information seeking.

A study conducted by Zaremohzzabieh et al. (2016), on the information and communication technology acceptance by youth entrepreneurs in rural Malaysia. This study was conducted from 4 states in Malaysia. The study concluded that youth entrepreneurs are highly affected by social norms through the information and communication technology channel. Their study also proposed that ICT acceptance is an under researched part of a growing

nation. Thus, this further increase the need of the current study on the rural entrepreneurs in Malaysia.

In the recent study conducted by Lim et al. (2022), the study referred to how health information seeking were done among patients in primary care in Malaysia. Reasons and the sources of online information seeking were studies together with the level of trust in the information found. The study concluded that the eHealth literacy was low with suboptimal appraisal skills to evaluate the accuracy of online health information. Thus, this further increase the need of the current study on the rural entrepreneurs in Malaysia.

2.3 Underpinning Theories

There are two underpinning theories in this study which comprises of Cost-Benefit Analysis (CBA) and Theory of Planned Behavior (TPB). The cost-benefit model or also known as cost-benefit analysis (CBA) is a progressive method that studies and compares the cost and benefits of the investment made towards a particular income (Maresova, Sobeslav, and Krejcar 2017). Cost-benefit model also known as benefit cost model is an approach used to determine a strategy which is most cost-effective with maximized benefits (Keary 2000). According to Ratchford (1982), cost-benefit model is the evaluation of cost and benefits of observed behavior in monetary terms. Whereas David, Ngulube, and Dube (2013) defined cost-benefit model as a systematic approach to determine the strengths and weaknesses of alternatives to identify which can be the best approach to maximize benefits. Hansjürgens (2004) and Snell (2011) suggests that cost-benefit analysis helps to increase efficiencies and rationality in environmental decision making which are used to overcome fallacies.

Besides, cost-benefit model has been used in varieties of researches to compare social benefit with the cost of study, environmental impact assessment or in risk assessment for an economic study (Bergion et al. 2018, Cai et al. 2015, Domah and Pollitt 2001). As there are certain values which cannot be considered as an economic term or cannot be expressed in terms of monetary, thus, cost-benefit model is adapted by using the contingency valuation or hedonic pricing (Wamuziri 2012).

Cost-benefit model is widely used in different disciplines of businesses and industries to measure productivity, efficiency and effectiveness (Hardy 1982). Disciplines such as marketing, human resources, accounting, finance, production utilizes cost-benefit model to determine the most effective strategy and receiving the greatest outcome compared to other alternatives (Behrangrad 2015, Goggins, Spielholz, and Nothstein 2008, Reynolds et al. 2002,

Sardi et al. 2017). This model is widely being used in businesses, such as in economics (Hansjürgens 2004), accounting (Kristensen et al. 2017), social (Domah and Pollitt 2001), taxes and subsidies (Potts 2002), in medicines (Gonser, Fuchsberger, and Matern 2017, Miller-Jansön and Stander 2011) and in information-seeking behavior (Ratchford 1982, Willems, Leroi-Werelds, and Swinnen 2016).

On the other hand, Theory of Planned Behavior (TPB) is the extension of the Theory of Reasoned Action (TRA) which is one of the most influential conceptual framework in the field of social psychology for studying human behavior (Ajzen 1991). The TPB model is a well-proven and effective theory in predicting behavior and explaining the determinants of an individual's decision making. According to Mu et al. (2023), this model is widely used in predicting the psychosocial factors to help alleviate environmental problems. Decision made by a person has to be evaluated rationally with the consequences of one's behavior and the intention to perform a behavior means that the person is cognitively ready to act which is the most direct antecedent of the corresponding behavior (Liu, Liu, and Mo 2020). The TPB model is used to understand and predict behaviors where it was determined by three factors namely, attitudes, subjective norms and perceived behavioral control (Ajzen 1991).

Attitude is referred as the individual's favorable or unfavorable evaluation towards a particular behavior through assessing the importance of these consequences (Ajzen 1991). It is said that if one believes the behaviors would lead to a positive outcome, one will present positive attitude toward the behavior and vice versa. In the next stage, if one's attitude is more desirable towards a particular behavior, the intention to perform for the desired behavior would be stronger (Shamlou, Saberi, and Amiri 2022). As for the second predictor, subjective norms, it refers to the response from an important reference source of groups to a particular behavior where the individual will study the responses and then decide to perform or not to perform the behavior (Ajzen 1991). As for the final predictor, perceived behavioral control, refers to the degree of ease to perform the particular behavior where few components are in consideration when making the decision (Ajzen 1991). Self-efficacy and controllability are the components where it reflects how a person is perceived self-confidence in performing a particular behavior and individual's ability to understand if the particular behavior is in control or not (Liu, Liu, and Mo 2020). Thus, by combining both CBA and TPB theories in the current study, all aspects of the objective can be studied effectively. The CBA would enable the study to understand the entrepreneur factors and the information seeking behaviors. On the other hand, the TPB would ensure that the decision making of the rural entrepreneurs is covered.

2.3.1 Cost-Benefit Model in Information-Seeking Behaviors

Information-seeking behavior is a study which many researchers has studied before and models have been developed such as the Wilson's Model (Wilson 1999), the Bystrom and Jarvelin Model (Byström and Järvelin 1995, Byström 2002) and the Savolainen Model (Savolainen 1995). Wilson's Model by Wilson (1999) studies on needs, satisfaction and demands on information systems and sources which has no causative factors, thus no hypotheses to be tested. The information-seeking model by Byström and Järvelin (1995) does not consider the use of information and it evaluates the satisfaction of the information seeker after receiving the information, whereas, the ELIS Model by Savolainen (1995) focuses on everyday life information only. The models are related to everyday life information seeking, however, this study researches on work-related information by the rural entrepreneurs. Most of prior researchers who made contributions to information-seeking behavior study aims to describe the information-seeking process whereas, for cost-benefit analysis it involves optimizing trade-off between choices to achieve the ultimate goal which is receiving information (Agarwal, Xu, and Poo 2011, Ratchford 1982).

When information is provided, information receiver will suffer some welfare loss such where the information receiver will attempt to minimize the losses in order to involve a fair trade-off between the quality of source of information (Ratchford 1982). Whereas, Hauser, Urban, and Weinberg (1993) agreed that cost-benefit model is the optimum framework that seeks the benefits (which are also known as value) from information must be fair with the cost of obtaining the information. However, the costs do not just include welfare losses but also the accessibility to the information and the benefits of the information are the quality of the information (Fidel and Pejtersen 2004, Hardy 1982, O'Reilly 1980, Woudstra, van den Hooff, and Schouten 2016).

On the other hand, Agarwal, Xu, and Poo (2011) argued that the decisions may vary with the use of cost-benefit model as the factors varies across people, tasks and environment. Woudstra, van den Hooff, and Schouten (2016) agreed by stating that people may have different level of acceptance of time and effort to receive the benefit, thus concluded that accessibility and quality of information received by information receiver varies according to time pressure information seekers.

Besides, cost-benefit model is useful and relevant to study information-seeking behavior as "obtaining a good result from a source requires substantial effort of resources" (Min and Kim 2015, 841). Cost-benefit model is when the seeker identifies the potential gain and losses when using an information channel and selects the information source on a basis

(Bronstein and Baruchson-Arbib 2007, Hardy 1982, Wang, Sarkar, and Shah 2017, White and Crawford 1998, Wang et al. 2016). According to Wang, Sarkar, and Shah (2017), the perceived accessibility is known as the cost whereas the quality of the information is the benefit during a decision making process. Individual would seek for the least rate of effort in order to reach the highest quality. In order for an information seeker to receive the information, the seeker is required to put in an effort to access the information source (Xu, Tan, and Yang 2006). The difficulty in understanding the information is the cost to the information seeker in the cost-benefit calculation because the seeker tends to minimize the cost and potential loss associated with accessing the information with the use of digital information sources (Agarwal, Xu, and Poo 2011). Prior studies have used cost-benefit model to determine the information-seeking behavior (Agarwal, Xu, and Poo 2011, Xu, Tan, and Yang 2006). Uses of this model enable the researchers to determine what sources and why the seekers would prefer the particular source to other alternatives (Agarwal, Xu, and Poo 2011). Other alternatives might require more effort and cost in order to receive the information hence information seeker will not use the source. Thus, cost-benefit model is integrated to identify how rural entrepreneurs in Malaysia select the digital information source to seek for work-related information.

2.3.2 Theory of Planned Benefit in Information-Seeking Behaviors

The TPB model has been widely used in various research fields, mainly for health information and environmental information. According to prior research conducted by Chang et al. (2009), TPB model to infer the perceived behavioral control from the user toward the information-seeking would be a primary differentiator between the offline and online academic libraries. Besides, according to Kahlor (2007) this model had shown strong relationship between information seeking and processing, especially with regards to environment risks. Similarly, prior researches by Shamlou, Saberi, and Amiri (2022) and Niu and Willoughby (2018) shows that the variables of TPB model in search of health information are positive and significant.

When one seeks for information through digital information sources, the information seeking behavior is affected by several factors with psychosocial characteristics such as personal traits, beliefs, values, tendencies, individual emotions (Zare-Farashbandi et al. 2016). When one has the beliefs or has positive emotions towards the particular behavior, they would more likely to have positive intention in seeking for the information that is required. Different information sources are considered when seeking for information to achieve the better outcome if one had self-confidence and high controllability.

2.4 Information Sources

With the explosion of data, there are many ways to retrieve and integrate information from various sources. Information sources can be categorized as traditional and digital information sources (Sagun et al. 2019); impersonal and interpersonal sources (Wang, Sarkar, and Shah 2017, Yinghong et al. 2011). Impersonal source only involves one-way communications whereas interpersonal involves two-way communications (Dodd et al. 2005, Gilly et al. 1998, McGee and Sawyerr 2003, Yinghong et al. 2011). Besides, impersonal source is non-relational to an individual such as manuals, journals, digital libraries and interpersonal source is on human-to-human, heart-to-heart channel (Agarwal, Xu, and Poo 2011, Molina, Gomez, and Martin-Consuegra 2010, Tokunaga and Gustafson 2014, Wang, Sarkar, and Shah 2017, Xia et al. 2012).

Impersonal sources are commonly used in early stages of decision making as it provides greater expertise about the product or issue as compare to individuals (Dodd et al. 2005). When an individual has collected sufficient information, he or she can use their own preferences such as self-judgement or to consult friends, family or professionals for more information. Once it involves seeking information from another individual or involves two-way communication, it is known as interpersonal sources (Dodd et al. 2005, Yinghong et al. 2011).

Interpersonal sources also known as personal sources is considered to provide better view of intricacies of the encounter, as the information is shared from two perspectives simultaneously (Gilly et al. 1998). Besides, it is also believed that interpersonal information exchange has the ability to affect the level of episodic influence of one's decision of doing something (Gilly et al. 1998, McGee and Sawyerr 2003). Interpersonal sources of environmental information could be notably important among owner-managers of small business firms (McGee and Sawyerr 2003).

Besides, selection of information-seeking source is also based on the convenience of the information seeker (Dodd et al. 2005). Whichever source is convenient; information seekers are most likely to choose the source. Sources of information can be classified into two major sources, which are mainly traditional information sources and digital information sources.

2.4.1 Traditional vs Digital Information Sources

The source of information is an important part of the study as the source of the information is related to the source accessibility and quality of the information searched which leads to the innovativeness of a person. Some of the examples are that multiple sources of information can provide a possible combination and enhancement of different knowledge source (Bigliardi and

Ivo Dormio 2009, Trippl et al. 2009). With the many variation of information source, it can aid in the progressive search of innovation ideas and information for one to increase their innovative capability (Fiet, Norton, and Clouse 2007). With the sufficient information, one will then be able to work out multiple innovative idea to gain benefit as it would reflect their success (Dosi 1988). In this research, traditional information source is defined as sources of information that is relayed through non- electronic imaging or sound (Johnson and Kaye 1998). Traditional and digital information sources will be discussed in the following sub-heading.

2.4.1.1 Traditional Information Sources

Traditional information sources such as word of mouth are often being used to receive information in a faster way however the credibility of information is scored in midpoint as it involves emotional contagion and affect infusion during the response process (Söderlund and Rosengren 2007, Sulemani and Katsekpor 2007). The rural dwellers also heavily depend on word of mouth (Bosompra 1987, Islam and Ahmed 2012) as it is more convenient, however, word of mouth is an information conversation between two or more people which has powerful impacts towards the behavior of the person shows when making a decision. The reliability of information through word of mouth varies as it is more of a personal experience or reflection sharing (Ghorban and Tahernejad 2012).

Radio was rated as the most credible source as compared to other traditional information sources among the rural folks (Bosompra 1987, Kim and Johnson 2009, Guan et al. 2017, Rodriguez et al. 2015, Sulemani and Katsekpor 2007) because the information broadcasted were found to be more truthful. Besides, in the recent studies in three different researchers has shown similar form of information source for the rural dwellers and entrepreneurs in Tanzania, Cyprus and North-West zone of Nigeria (Adamides and Stylianou 2018, Isaya, Agunga, and Sanga 2016, Mohammed and Garaba 2019). In all three countries, the researchers have found that the rural dwellers highly use radio as their main information source (Adamides and Stylianou 2018, Isaya, Agunga, and Sanga 2016, Mohammed and Garaba 2019). From the feedback compiled from the rural dwellers, the researcher concluded that, the information which uses local dialect is preferred as they are able to understand the information better. Besides, television is another common source used among the rural dwellers (Abu Bakar 2011, Anwar and Supaat 1998, Islam and Ahmed 2012, Rodriguez et al. 2015) as it produces visual images which is more attracting as compared to the radio that only produces sound.

2.4.1.2 Digital Information Sources

On the other hand, according to Schatz (1997) digital information source is defined as a source of information that is transmitted through the electronic platform. Digital information sources are readily to give the information which saves the effort of an individual to gather the information required (Sagun et al. 2019, Veinberg 2015). Internet, World Wide Web (WWW) are examples of digital information sources whereby by June 2019, there is more than 4 billion internet users which is nearly 60 per cent of the world population has the access to internet (Stats 2019). According to MCMC (2019b), there is 28.7 million internet uses which is 87.4 per cent of the Malaysian population and 85 per cent of the users were seeking for information.

Few recent studies show that rural dwellers in Poland and Rio are adapting to the digital information sources as they found it to be more accessibility and timeliness (Camillo 2020, KrzyŻAnowska and Wawrzyniak 2019). The researchers found that the rural dwellers showed lesser interest in using radio or television to receive information however, they've turned to E-mails and social networks to receive information in a faster way (Camillo 2020, KrzyŻAnowska and Wawrzyniak 2019). Thus, this shows that as the digital era is rising, certain rural dwellers has moved from the traditional information sources to the digital information sources. Digital information sources play an important role in developing the entrepreneurial orientation by providing ample information regarding business opportunities (Chatterjee, Dutta Gupta, and Upadhyay 2020). According to Venkatesh et al. (2017), digital information sources such as ICT can benefit the rural community especially rural entrepreneurs as market information can be extracted and it lowers the transaction cost which greatly help the entrepreneurs to speak to customers, in market expansion, to build business network and to obtain skills and strategy.

As the technology advances, both traditional information sources and digital information sources has merged leading to digital convergence (Chung, Boutaba, and Hariri 2014, Garcia-Murillo and MacInnes 2003, Mueller 1999). Digital convergence is "a take-over of all forms of media by one technology" (Mueller 1999, 12) such as digital computers, smartphones, digital television, cloud and more (Vukanovic 2018).

Thus, as the digital information source provides crucial information for the entrepreneurs. Little studies were done on the usage of the digital information source in the rural parts of Malaysia. This increases the need to conduct this study on the digital information sources escpially the rural entrepreneurs in Malaysia to further understand the factors affecting the use of digital information sources of the rural entrepreneurs in Malaysia.

2.5 Source Accessibility

According to O'Reilly (1983), accessibility of source is the primary determination of use of the particular source. The characteristics of accessibility such as timeliness and effort forms opinions about the sources, thus affects the selection of information sources by the information seeker (Christensen and Bailey 1997). According to Woudstra, van den Hooff, and Schouten (2012), there are three dimensions for source accessibility namely, physical dimension, relational dimension and cognitive dimension. Physical dimension involves the time and physical effort to access to the information source where the source can be accessed fast with little effort. Relational accessibility is the relational cost where the information seeker is comfortable to ask for information and reveals the lack of knowledge on the topic. Lastly, cognitive accessibility refers to getting the information from the source after being approached or contacted. Selection of source differs for every individual or organizations as it depends on the accessibility.

In terms of an entrepreneurial Small Medium Enterprise (SME), the source of information can be either from other firms or institutes either in the public or private region. In addition, other source of information of the SME are from the internet and other media, through exhibition and fairs, through trade journal and educational events. Some source of information is obvious to the entrepreneur as it is part of their everyday routine. As an example, a majority of entrepreneurs attend commercial and technology fair as part of their day to day business. Thus, their information source is embedded as part of their daily routine. On the contrary, some potential useful source of information can be less obvious and the ability to extract the information from its source is partially dependent on the background, education level and the knowledge of the entrepreneur (Varis and Littunen 2010).

Furthermore, the external environment of a person would affect the ability of the person to underline the potential external source of information when they are trying to obtain it or when using it. People in the rural area and the peripheral areas are forced to be dependent on the limited information source. This is mainly due to the lack of local network development and also the lack of public instruments such as a library or a computer center/hub (North and Smallbone 2000).The delivery and source of information to the rural dweller are important subject matters that need to be analyzed as information received by the rural dwellers must be accurate and sufficient to ensure the quality of the information (Woudstra, van den Hooff, and Schouten 2016).

The source accessibility of digital information is a critical factor to dive in. Despite many programs that had been conducted on computer literacy for the rural entrepreneurs, there

is still a need to study source accessibility. Only with accessible source of information can the digital divide for the urban and the rural entrepreneurs. As Malaysia is a developing country, this would also act as a catalyst to ensure the country would develop faster.

2.6 Quality of Information

According to Yinghong et al. (2011), the two traditional and digital information sources contains few attributes namely, content, ambiguity-resolving capacity, credibility and bias. These attributes are few of the common dimensions of information quality. Quality information is which the information or literature provides sufficient details to use or the extent to successfully serves the purpose to information seekers (Kahn, Strong, and Wang 2002). According to Kahn, Strong, and Wang (2002), information quality dimensions are mapped into model tailoring to information needs in order to show validity and quality. On the other hand, information or data is described as "Fit-for-use" because one may have different perspective on the sufficiency of the information received compared to another person (Knight and Burn 2005, Tayi and Ballou 1998, Wang and Strong 1996).

The rise of digital resources in the current era, the meaning of information quality is a paramount concern (Lukyanenko, Wiggins, and Rosser 2020). According to Knight and Burn (2005, 162), quality of information is "within the context of World Wide Web and its Search Engines," and it highly depends on how the information provider produces the information, the storage and maintain the system for information providers and information seekers. The information quality is one of the indication of trust between information seeker and the information provider on the source of information (Baqa et al. 2018).

The accuracy of information from the information sources is an important dimension for quality of information, as the accuracy should show correct, reliable and certified free of error information else, it would be a misleading information (Knight and Burn 2005, Nakahara, Nakajima, and Sakamoto 2018). There may be a considerable amount of inaccurate information on the Internet as there were no editorial control (Fallis 2004), however, if the information seeker seeks for information in proper sources (e.g. official websites) information are high chances to be credible.

Besides, understandability of information is another important dimension for quality of information. Information which has higher scores for understandability often includes clear and simple information which is easy to comprehend and understand the content provided in the information source (Visla et al. 2019). Information which are easy to comprehend are information that can be understood by cohorts of information seekers with different

experiences and background (Zuccon 2016). According to Beltramini (2006), information which are believable indicates the effectiveness of communication and able to create positive affect outcome behavior. The believability of information is the extent to which the information is regarded as true and credible (Knight and Burn 2005).

The quality of information obtained from the web is important as it is commonly linked to the value of the webpage (Hadi and Kusnandar 2018, Lee, Chan, and Purnomo 2014). In order to receive quality information, there will be cost implied either in monetary form or non-monetary (e.g. effort) form which may be a cultural barrier.

2.7 Psychosocial Factor at Work

Psychosocial factor includes the aspects of psychological factor and social factors of the job and work environment such as organizational climate or culture, roles, interpersonal relationship and design and content of respective task assigned (Hammer et al. 2004, Rugulies 2019). According to Kristensen et al. (2005), psychosocial work environment is one of the most important work environment issues in the current and future societies. Nature of work has evolved in many ways ever since the digital era arises and transformation of traditional way of work environment to digital fields (Hoff and Öberg 2015). The use of digital information sources for work activities is known as the "new ways of working" (Nijp et al. 2016), creating more flexible in terms of place and time-independent work environment (Christensen et al. 2020). With flexibility at work due to existence of digital information sources have pros and cons towards the working employees. The cons are that employers may have higher expectations and urges on responses and results from the employees which causes "workplace telepressure" (Barber and Santuzzi 2015, Christensen et al. 2020). Besides, there may be obstacle when accessing the digital information sources, if there is low social support in the workplace, it causes techno-fatigue where employee feels that it is inefficient to use the digital information sources (Christensen et al. 2020). On the other hand, the pros of the presence of digital information sources at workplace is that many work roles may potentially be boundary less (Kingma 2018) where data transmission acceleration and virtual access are applicable. If the employees are digital savvy, this is a benefit and may boost their self-confidence in workplace.

Psychosocial work environment affects two contexts which are the workplace and individual. In workplace, it involves the nature and quality of workplace norms such as emotional demands for work, meaning of work and social support from colleagues at workplace (Hammer et al. 2004, Kristensen et al. 2005). Organizational norms such as

commitment to the job and social relations are important because it is parallel to job demands and social supports (Loughry and Eyber 2003). Few researches were done on psychosocial work environment through both cross-sectional and longitudinal studies shows that psychological demands at the work environment affects one's mental health, such as, high levels of social support at workplace from colleagues or partners, may help in one's mental health which leads to better working environment and higher productivity (Broadbent 1985, Bromet et al. 1992, Estryn-Behar et al. 1990, Estryn-Béhar et al. 2007, Kawakami, Haratani, and Araki 1992, Stansfeld and Candy 2006).

It is important to keep positive psychosocial work environment in workplace as there are studies stating that many negative health outcomes arise in psychosocial work environment in different workforces (Useche et al. 2019). When the workplace is surrounded with positive work environment, it will highly affect one's motivation to perform well and be more committed to work and produce good performances. As the work is more emotionally demanding it is more likely to cause low performance (van den Heuvel et al. 2010). Task performance is the action that is relevant to seek certain achievement in the organization goals (Koopmans et al. 2014). As one seeks to have better task performance, it places the task as an important task thus, willingness to put in extra effort to gain affirmation in the task performance (Befort and Hattrup 2003). According to Rotundo and Sackett (2002), it is found that the overall task performance significantly improves when the task is deemed important.

Besides, the social factors in workplace is important as it involves culturally appropriate social codes which one has to learn and follow to form relationships with one another in the workplace (Loughry and Eyber 2003). Social well-being is included in the definition of health which helps to reach higher job satisfaction and higher task performance at work (Koopmans et al. 2014). The social risk refers to the emotional demands and self-efficacy at workplace and how it affects an individual. Thus, with the support from the organization to improve the organizational, social and psychological environment in workplace, it encourages workers to be more engaged with work (Koopmans et al. 2014).

2.8 Task Importance

Task importance is the factor which will affect the task during implementation (Johnson et al. 2016, Révész, Kourtali, and Mazgutova 2017, Tang, King, and Kay 2018). When there is a task situation, there will be a need of information. Information seeking behavior will be affected by task importance. According to Khan (2006), the three main constraints in order to achieve a successful project implementation is time, cost and scope of the project. The

perceived importance of task is a term of cultural barrier which affects the information seeker to either spend more or lesser cost to receive such information (Zhang 2014).

Task importance is correlated with the seeker's self-regulation when seeking for information as the seeker is willing to put in more effort to receive the information and will carefully look for quality content to complete the task (Agarwal, Xu, and Poo 2011, William 2005, Xu, Tan, and Yang 2006). Task importance is equivalent to the outcome that the information seeker would like to have, thus, information seekers will be more willing to put in effort to get quality information (Chiaburu et al. 2017). Information seeker would use the most convenient way to reach the information required to avoid communication difficulty and to accomplish the task within the required timeframe (Agarwal, Xu, and Poo 2011, Chester et al. 2016).

When a task is important, information is mandatory to effectively resolve the task hence, creating positive task performance at workplace. A task is important when the outcome of the task is important to the information seeker whereby the information seeker is willingly to spend more time and effort on the task (Xu, Tan, and Yang 2006). Besides, information seeker will also put in more effort when there is a time frame to complete the task and the task is being highly prioritized by the seeker, thus the task is important (Dhir, Chen, and Nieminen 2015). Information seeker is willing to carefully look for quality content to fulfil a task if it is important as it correlates with the seeker's self-regulation (Agarwal, Xu, and Poo 2011). If the task is perceived as highly important, more effort will be put in and vice versa.

According to Befort and Hattrup (2003), the information is needed when the information seeker sees a value in the task that they are performing, when the task is valued, it is deemed to be important to the information seeker. The information seeker's view of importance of task reflects the following action to retrieve information to increase the task performance (Befort and Hattrup 2003, Cayir, Basoglu, and Daim 2016). According to Cayir, Basoglu, and Daim (2016), task performance improves when the information seeker is motivated to work as knowing to its importance at workplace.

Entrepreneurs are faced with a numerous number of tasks daily. It would even be more challenging for the rural entrepreneurs to complete their task. Thus, the task is of importance, information is required to complete the task at a short period of time. The rural entrepreneurs had not been studied in previous studies. Thus, it is important to study how the task importance of the rural entrepreneurs can affect their usage of digital information.

2.9 Hypotheses Development

2.9.1 Source Accessibility and Use of Digital Information Sources

Source accessibility is the time and effort required to reach to the information source to the extent which the information seeker perceive that the particular source has the information required and is available for use (Agarwal, Xu, and Poo 2011, Zimmer, Henry, and Butler 2007). According to prior research, it is found that source accessibility is one of the primary factors determining the use of an information source (Gray and Meister 2004, Zhang 2014, Zimmer, Henry, and Butler 2007). Previous studies found that information seekers tend to seek for information from people who they are more familiar within their social networks (Cool and Xie 2000, Hertzum et al. 2002, Woudstra, van den Hooff, and Schouten 2012).

Source accessibility does not limit availability of the source but includes the cost of the source and the potential loss of information (Woudstra, van den Hooff, and Schouten 2012). In simple term, seekers would prefer to use sources which they perceive as cheap and worthwhile among other sources. According to Woudstra, van den Hooff, and Schouten (2016), information seekers are willing to trade off their time to acquire true and quality information. Besides, with little effort required, it is deemed that the information source has higher accessibility which can be accessed relatively fast (Woudstra, van den Hooff, and Schouten 2016). There is a positive relationship between seeker's perceived accessibility to source and the selection of use of information source (Zhang 2014). Source accessibility is one of the determinants for an individual to select whether to use the source. Therefore, this hypothesizes that:

H1: Source accessibility positively influences the use of digital source for work purposes among the rural entrepreneurs in Malaysia.

2.9.2 Quality of Information and Use of Digital Information Sources

Quality of information pertains to the benefit aspect of the content of an information source (Agarwal, Xu, and Poo 2011, Gorla, Somers, and Wong 2010, Xu, Tan, and Yang 2006). Quality of information obtained from the web is important as it is commonly linked to the value of the webpage (Hadi and Kusnandar 2018). A study conducted by Kim and Niehm (2009) concluded that information quality affects the value and loyalty towards the information source as a perception of the source is created. Kim and Niehm (2009) also suggested that the use of online entertainment and design of website can boost the website information quality as it may attract the user to continue searching for information from the particular site. According to Agarwal, Xu, and Poo (2011), quality of information in the source is equivalent to how the

source communicates with the seeker. Understandability, accuracy, relevance and timeliness are the determinants of quality of information (Agarwal, Xu, and Poo 2011, Gorla, Somers, and Wong 2010, Xu, Tan, and Yang 2006). Quality of information will tag along service interaction quality in the site in order to ensure the quality of the source.

In addition, service interaction quality is often encountered when going to a digital source especially on an e-commerce site where with positive service interaction on the source, it will positively increase the purchase intention of the customer (Bai, Law, and Wen 2008). A research conducted in Malaysia found that the extend use of persuasive features on the source such as dialogue support, credibility support and primary task support may enhance the service interaction quality of the source (Abdul Hamid et al. 2019). An individual does not always get the highest quality information available. However, more individuals tend to prefer to use information which has higher quality (Zimmer, Henry, and Butler 2007). When the quality of the information is high, the seeker would choose to use the digital source as the information may increase the decision making efficiency thus, leading to increase of organizational efficiency (Gorla, Somers, and Wong 2010). (Hadi and Kusnandar 2018) and (Abdul Hamid et al. 2019) demonstrates the considerably relationship between quality of information and the use of digital information sources respectively. Therefore, the study hypothesizes that:
H2: Quality of information positively influences the use of digital information source for work purposes among the rural entrepreneurs in Malaysia.

2.9.3 Psychosocial Work Environment and Use of Digital Information Sources

In the previous conceptual framework by Xu, Tan, and Yang (2006), the term was formerly known as "social risk" and to suit this study better, the term was modified to psychosocial work environment. This is due to this study focuses on rural entrepreneurs' work context and not limited to social context seeking of information. Entrepreneurs they face different possible environment such as physical environment or psychosocial work environment which influences and individual's performance in workplace (Estryn-Béhar et al. 2007, Kristensen et al. 2005, Rigolizza and Amabile 2015).

Psychosocial work environment is the psychological and social environment which influence an individual's creativity, domain-relevant skills and task motivation at workplace (Rigolizza and Amabile 2015). In today's work environment, it requires social support from colleagues and interactions both internally and externally of the workplace (Humphrey, Nahrgang, and Morgeson 2007, Rigolizza and Amabile 2015, Suseno et al. 2019). Task motivation is the one that is strongly affected by the psychosocial work environment as the

people will be motivated to engage to learn when there is a positive environment at workplace (Hammond et al. 2011, Suseno et al. 2019). Psychosocial work environment involves the amount of work, complexity of work, time constraints, one's qualifications, and the supports from the surrounding (Hammer et al. 2004, Lavoie-Tremblay et al. 2005).

A psychosocial work environment might affect an individual's social risk and eventually affecting their information seeking behavior due to loss of self-confidence and loss of face when the environment is negative (Hammond et al. 2011, Rigolizza and Amabile 2015, Xu, Tan, and Yang 2006). On the other hand, if the psychosocial work environment is positive and is filled with encouragement, the individual will face lower social risk and in fact gain more self-confidence to ask for feedback or another chance to perform (Tan and Zhao 2003, Xu, Tan, and Yang 2006). The relationship between psychosocial work environment and use of sources are indirect however, they have a positive relationship (Humphrey, Nahrgang, and Morgeson 2007, Tan and Zhao 2003, Xu, Tan, and Yang 2006).

H3: When the psychosocial work environment is positive, the use of digital information sources for work purposes increases among the rural entrepreneurs in Malaysia.

2.9.4 Task Performance and Use of Digital Information Sources

Task performance is the effectiveness of an individual with their personal task (Borman and Motowidlo 1997, Lo Destro et al. 2015). According to Koopmans et al. (2013), task performance is the proficiency of an individual on performing a technical task on the individual's job and is often related to work quantity and quality, skills and knowledge of the particular task (Rotundo and Sackett 2002). With the same definition as task performance, prior researchers have used different term in their study such as task proficiency (Campbell 1990), technical activities (Borman and Motowidlo 1997) and job role performance (Welbourne, Johnson, and Erez 1998).

Task performance is also known to be the result of an activity which is recognized as part of their job contribution to the organization (Borman and Motowidlo 1997, Viswesvaran and Ones 2000). Being acknowledge for the work that an individual has done is crucial as it helps to determine the performance of individual's work from another person's point of view. This may be a motivation factor to motivate the individual to continue or improve to perform better in the future task (Humphrey, Nahrgang, and Morgeson 2007, Shyam et al. 2015). The task performance will be positive when the individual is satisfied with the process of operating the task (Koopmans et al. 2013). Thus, the use of digital information sources is one of the

processes for the rural entrepreneur to seek information in order to perform well for the task. Therefore, this hypothesizes that:

H4: The use of digital information sources for work purposes positively relates to task performance of the rural entrepreneurs in Malaysia.

2.9.5 The Moderating Role of Task Importance

According to Allen (2017), the inclusion of moderating variable may facilitate to explain the links between the independent and dependent variables. The moderator affects the strength of the relationship between the independent and dependent variables (Sharma, Durand, and Gur-Arie 1981). The task importance is proposed as the moderator between the relationship between source accessibility and use of digital information sources, quality of information and use of digital information sources; and psychosocial work environment and use of digital information sources to examine the strength of relationships.

The relationship between source accessibility, quality of information and psychosocial work environment and use of digital information sources are affected by task importance. If the task is perceived important, the information seeker is willing to spend more time and effort to use the digital information sources in order to receive quality information (Xu, Tan, and Yang 2006). On the other hand, if the task is deemed as unimportant, the information seeker is not willing spend extra effort or time to use the digital information sources or as well as use other alternative sources available which requires lesser effort and time. The task importance affects the relationship between quality of information and use of digital information sources. Once the task is deemed important, the information seeker will choose information source which are able to provide more meaningful, comprehend, accurate and credible information (Agarwal, Xu, and Poo 2011). Same goes to psychosocial work environment, where is the task is deemed important, the information seeker may have a better psychological and social environment to have a better performance result at workplace (Woudstra, van den Hooff, and Schouten 2016).

According to Xu, Tan, and Yang (2006), task importance is a moderating factor as it acts as a central route of processing in the information seeking process. Task importance highly affected by personal relevance of the information-processing task. As the task is more important, information seeker would be more engage and motivated to seek for information. Therefore, this hypothesizes that:

*H5a: When task importance is high, the positive relationship between source accessibility, and the use of digi*tal information sources for work purposes are stronger.

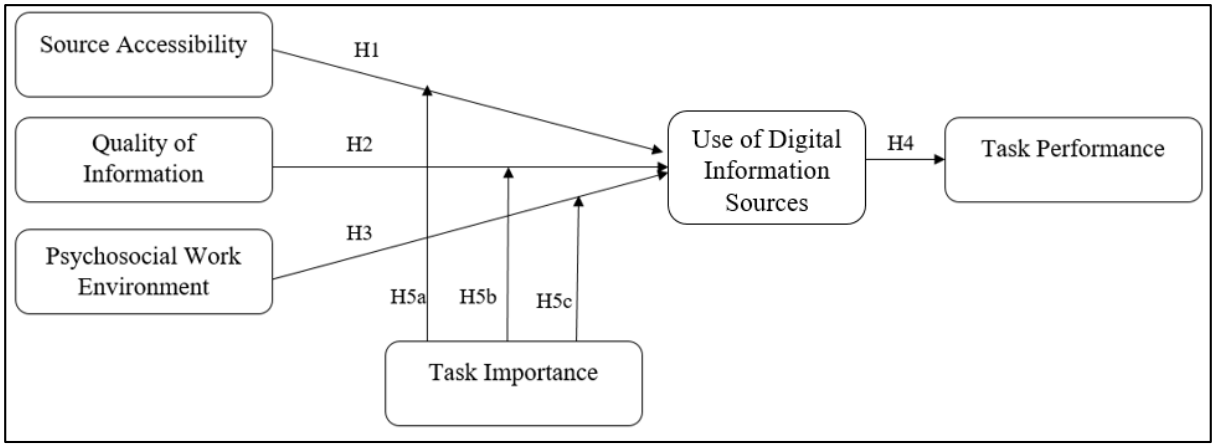
H5b: When task importance is high, the positive relationship between quality of information and the use of digital information sources for work purposes are stronger.

H5c: When task importance is high, the positive relationship between psychosocial work environment and the use of digital information sources *for work purposes are stronger.*

2.10 Conceptual Framework

In this study, the cost-benefit model and theory of planned behavior model are adapted. Besides, a conceptual framework by Agarwal, Xu, and Poo (2011) was adapted with slight modification to suit to this study. Certain variables in the conceptual framework by Agarwal, Xu, and Poo (2011) are modified to suit this research such as the term "Communication Difficulty" was modified to "Quality of Information". The term communication difficulty used in the study by Agarwal, Xu, and Poo (2011) is the difficulty of communication from the information source with the information seeker hence, it is replaced with quality of information because through the research it is understand that with good quality of information the difficulty of communication is lower and with the term quality of information is more relatable in this study. Besides, the moderator; task importance influences the level of relationship between source accessibility, quality of information and psychosocial work environment. Cost-benefit model is used in this framework as there were many different information sources available for the rural entrepreneurs and through cost-benefit analysis, the rural entrepreneurs are able to make decision on which information sources shall be chosen. A new exogenous variable "Psychosocial Work Environment" is introduced as the focus of this research is on rural entrepreneur and the social surrounding in workplace of an entrepreneur will affect the information-seeking behavior. Lastly, an endogenous variable was also added to determine the task performance of the rural entrepreneur after the use of the digital information sources. The theory of planned behavior applied when use of digital information sources are the intention of a particular behavior and task performance is the behavior. Active information seeking plays key role in maintaining high awareness on surrounding issues for an entrepreneur as it has direct impact on the outcome of the task, so it is crucial to examine the intention and behavior for the information seeking. In the premise, the conceptual framework of this research is developed based on the adapted theory and the series of hypotheses, which is exhibited in Figure 2.1.

Figure 2. 1 The Research Framework of the Study



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Chapter Overview

This chapter outlines the methodological approach and methods utilized in this investigation of factors affecting digital information seeking behavior of rural entrepreneurs in Malaysia. The chapter first explains the philosophical foundations underpinning the epistemology of the research paradigm, followed by the overview of the research design. Next is the measurements of each variable, followed by sampling procedures, data collection method, research instruments, method for data analysis. Then, the ethical considerations for the research are discussed. In general, all the rural entrepreneurs from the listing provided from Ministry of Rural Development are contacted through telephone interview for main survey and interviewer-administered questionnaire for pilot study in Malaysia.

3.2 Research Paradigm

In social science research, the word 'paradigm' is conceptualized by many authors that determines its current meaning – set of ideas, assumptions and beliefs that shaped and guided the activity of a particular scientific community (Babbie 2014, Jackson 2003, McGregor and Murnane 2010). Traditionally, the definition of 'paradigm' defined by Kuhn (1970) was a general concept of high quality research or thinking that putative practices are agreed by a particular scientific community. Kuhn (1970) was also known by popularizing the idea of 'paradigm' to the social science research world. There are few types of paradigms used by researchers however, the four most extensively used paradigms in research are positivism, post-positivism, pragmatism and interpretivism.

Pragmatism is a philosophical approach that evaluates theories or ideology which works satisfactorily towards the philosopher's practical application (Kankam 2019). According to Guthrie (2010), pragmatism approach allows researchers to combine methodologies in the same project and use any research techniques that solves the research problem they face. Thus, pragmatism approach is not a loyal to any system of philosophy as its flexibility to change and readiness to respond at unavoidable situations (Kankam 2019, MacKenzie and Podsakoff 2012, Scott 2016). Pragmatic research paradigm is used in both quantitative and qualitative researches as it provides opportunity to identify useful points of connection between the data.

On the other hand, interpretivist research paradigm is mostly used in qualitative research as it deals with social truth or reality (Creswell and Poth 2007). According to Aliyu et al. (2014, 84), interpretivism is defined as "the ontological point of view at social formation or construct of the mind's inner feeling." The interpretivist researchers rely much on the

participants' point of view on the subject being studied thus, their purpose is to describe situations (Cronje 2012).

Besides, the purpose of post-positivism is to observe the necessary influences by perception and cognition which can never be totally value-free (Kankam 2019, McGregor and Murnane 2010). Post-positivism is an enhanced version of positivism where it similar by investigating or studying the criticism of the participants, however, at certain extent post-positivism is similar to the pragmatism approach (Henderson 2011, Scotland 2012). There are distinct differences between post-positivism and positivism as in post-positivism, the criticism is made is more on a wide perspective such as world problems (Henderson 2011, Wang, Duffy, and Haffey 2007).

According to Aliyu et al. (2014, 81), positivism is defined as "self-governing, independent and objective existence of truth" where the observations are based on the opinions of the participants. Positivism is a hypothetico-deductive method to examine the outcome of a study which often is quantitative study, where the functional relationships are derived between independent variable and dependent variables (Park, Konge, and Anrtino 2020). The positivism paradigm is applied in this study to discover the true knowledge of information-seeking behavior of the rural entrepreneurs in Malaysia which the term 'positivism' reflects on claiming that the knowledge is directly based on experience and emphasis on facts and causes of the behavior (Aliyu et al. 2014). Besides, this study is limited to data collection and interpretation in an objective way where the findings are usually observable and quantifiable. One of the fundamental goals of positivist research is to generate explanatory linkages or causal relationships that eventually lead to prediction and control of the phenomena under consideration. With the ability to understand, identify and measure how use of digital information sources affects their task performance among the rural entrepreneurs in this study fits to one of the philosophical foundation of the positivist paradigm – ontology (Park, Konge, and Anrtino 2020).

3.3 Research Design

The quantitative study is more structured, rigid, fixed and predetermined to ensure validity and reliability of the information and its classification is more applicable to an inductive study (Regnér 2003). Besides, this study uses a cross-sectional study to obtain overall picture of the research as it stands at the time of the study (Levin 2006). This research utilized a survey design accomplished through telephone interview. As there may be presence of language barrier between the respondents and researchers, different languages (in Bahasa Malaysia and

Mandarin) of questionnaire are prepared. The respondents for this research is rural entrepreneurs, thus, government agencies such as Ministry of Rural Development was contacted to obtain the sampling frame.

3.4 Population, Sample and Sampling Procedures

The population of this study is the rural entrepreneurs who use digital information source to enhance their task performance in Malaysia. The sampling frame in this research is obtained from the Ministry of Rural Development Malaysia or *Kementerian Pembangunan Luar Bandar* (KPLB). KPLB is the government organization which provides a platform for rural entrepreneurs to improve their business by organizing courses, events and competition to increase their business knowledge and skills and to provide them opportunities to expand their business. According to KPLB (2019), there are 1,128 rural entrepreneurs in Peninsular Malaysia, 100 in Sarawak and 41 rural entrepreneurs in Sabah, a total of 1,269 rural entrepreneurs. However, after filtering out, only 813 rural entrepreneurs who provide contact number in the list. All the rural entrepreneurs on the KPLB list were selected to participate in this research as the number is manageable. This research acknowledges that not all rural entrepreneurs in Malaysia are registered with KPLB. However, the listing provided by KPLB is considered appropriate to represent the population of rural entrepreneurs in Malaysia.

3.4.1 Sample Size

According to the KPLB, there is a total of 813 rural entrepreneurs that are contactable (KPLB 2020). The G*Power analysis program is used to determine the population size of the study, with 3 predictors (source accessibility, quality of information and psychosocial work environment), with 95% statistical power, 0.05 α error probability, 0.15 (medium) effect size, the minimum sample size required for this research is 119. However, according to Krejcie and Morgan (1970), the sample size of this study should reach 260 as the population size is between 800 and 850. Therefore, the intended sample size for this research is 260.

3.5 Data Collection Method

Initially, this study adopts an approach as distribution channel which is by conducting offline questionnaire survey, where the questionnaire forms are distributed to respondents who are qualified in a face-to-face manner. However, due to the global pandemic – COVID 19 pandemic, this study employs telephone interview as data collection method. The researcher

called the rural entrepreneurs, introduced and explained on the research and seek for permission before starting with the questionnaires. A copy of the questionnaire was sent to the participants upon their agreement to participate in the study through Whatsapp or Email so the participants are able to see the questions they are being asked on. At the same time, a call will be dialed out to the participant to read out the questions and researcher will note down the participant's response. Ultimately, there is a total of 813 respondents and only 417 participated in the research over 3-months period from October 2020 to December 2020 throughout Malaysia. Which converts to a 53% of response rate which was acceptable. As this is over the phone interview, so calls were made based on the list obtained. Most of the phone numbers did not went through or they do not agree to participate in this survey, thus, resulting to have 417 respondents.

Online questionnaire is not used in this research as there is a criterion in order to participate in this research. There is no doubt that online survey research would be more time-saving and cost-saving, however, it is difficult to identify who are the respondent and if they fit in the criteria as there is no guarantee on the demographic or characteristics information provided are accurate (Wright 2005). There is also a chance for the rural entrepreneurs to have the lack of access to internet thus, missed out the opportunity to participate in this research. Besides, with the use of virtual internet communities to distribute invitation to participation in a survey may cause sample bias (Alessi and Martin 2010, Ball 2019). Thus, it is most appropriate to apply telephone interview or interviewer-administered questionnaire but due to the pandemic, which further justifies the use of telephone interview to collect data was preferred.

An opening script is prepared prior to the data collection. When the phone call is made, it starts with greeting the participant and self-introduction. Then, the purpose of the call is being notified to the participant together with the purpose of the study. Once the participant understands, the researcher will explain thoroughly what the participation needs to do and approximate duration of the survey. The researcher will then emphasis on the voluntary participation where participant is able to choose to continue the survey or withdraw. The confidentiality and anonymity is then explained to the participants. Participants are allowed to ask questions if they are in doubt and if no questions, again, the researcher will get the consent to proceed to the questionnaire. The above telephone survey protocols are adopted from (UWO 2002, Busara 2021).

3.5.1 Telephone Survey Protocol

According to Kempf and Remington (2007), telephone survey is a research method where the researcher would proceed the research surveys with respondents over the telephone. It was proven that telephone is the primary doorway to reach to the general public where almost everyone has a telephone. The main aim for the use of telephone survey is to have valid, reliable and generalizable conclusions of the populations on the basis of respondents in the research (Kempf and Remington 2007). It is important to select the participants from the target population, so the researcher is able to obtain valid information for the item of interest (Israel and O'Leary 2020). Therefore, the participants from this survey were obtained from KPLB. Telephone survey has few advantages which are cost-effective, provides immediate response and has personal touch. Through telephone survey, it is undeniable that the researcher is able to get immediate response which is faster than emails, however, there is also a chance for the participant to not picking up the telephone. Thus, there is a need to have sufficient contacts prepared to ensure there is sufficient respondents in the research. Besides, telephone interviews are more expressive as compare to email surveys, the presence of personal touch can capture more responses. The protocols for telephone survey used in this research are adopted from Israel and O'Leary (2020).

The protocol starts with an introduction of the researcher, purpose and getting a permission from the participants to continue with the survey. The researcher will mention that the participation of the survey is voluntary and the answers are confidential. If the participant disagrees to participate, the researcher prepared few refusal comebacks to respond to the participant just so they can give another chance.

On the other hand, if the participant agrees to participate, the researcher will send a copy of the questionnaire to the participant via Whatsapp or Email and dialed out to the participant beginning with informing them the measurement scale. Once the participants are clear, the researcher will proceed to the questionnaires. If the participant could not finish the survey at once, the researcher will get an alternative time for the call-back from the participant. The call-back will be done at the promised schedule. Each phone call is estimated to be 15-30 minutes. The detailed scripts are attached in Appendix D.

3.6 Questionnaire Design

The questionnaire survey is the main approach adopted in this research to collect primary data. The questionnaire is constructed based on the cost-benefit analysis model, and most appropriate

questions have been selected to determine the use of digital information sources and task performance of the rural entrepreneurs. The questionnaire is divided into 5 sections in 5 pages inclusive of a categorical question, rating questions, open question and list questions with five-point Likert scale for exogenous variables, endogenous variables and moderating variables and one open-ended question to measure the items. The five-point Likert scale is measured with the scales from strongly disagree to strongly agree according the measurement scales adopted from similar researches of cost-benefit analysis model (Agarwal, Xu, and Poo 2011, Xu, Tan, and Yang 2006). According to Joshi et al. (2015), Likert scale aims to understand the opinions or perceptions of the participants involved in the research related with the single 'latent' variable. The perceptions of the 'latent' variable is expressed through a series of questions in the questionnaire. The five-point Likert scale is adopted as Symonds (1924) implied that 5-point Likert scale has the optimal reliability (Croasmun and Ostrom 2011). If the point scale were to increase, the reliability might increase but it would be in small values that it is not worth the effort to analyze the difference. In addition, there have been numerous successful studies that uses five-point Likert scale to measure the items in the research. Thus, the scale is appropriate for this research.

As for the exogenous variables, the questionnaire items for source accessibility are adapted from researches by Agarwal, Xu, and Poo (2011). In the prior study conducted by Agarwal, Xu, and Poo (2011), the questionnaire particularly for source access difficulty were adapted to the study. 4 out of 5 of the items of the questionnaire for this construct were adapted where one question "It would be very hard to get to [ ]" was removed due to similar context with "It would take a lot of effort to reach [ ]". In this study, the researcher filled up the "[ ]" from the original context with the term, digital information source to better fit the questions to the study. One of the question, "It would not be easy to approach [ ]" was reversed to "It is easy to access the digital information sources to prevent acquiescence bias.

Besides, as for quality of information, the questionnaire all fours questions were adapted from the study conducted by Lee et al. (2002). In order for the question to fit better to this study, in each question the researcher added "from the digital information source". There were two questions were reconstructed but the meaning of the question remains the same to better understand the question with using layman terms.

Moreover, psychosocial work environment, questions are deduced from studies by Agarwal, Xu, and Poo (2011) and Kristensen et al. (2005). From the study conducted by Kristensen et al. (2005), 3 out of 30 of the questions are adapted where the three most relatable questions are focusing on emotional demands, meaning of work and social support under the

psychosocial factors at workplace. As this study is focusing on entrepreneurs, the questionnaires developed on other scales are more for organizations. The three questions adapted were converted from question to statement to ensure consistency of the questionnaire. Besides, psychosocial work environment also focuses on task self-efficacy where the questions are adopted from the studies conducted by Agarwal, Xu, and Poo (2011). Two out of five questions were adapted in this study. Only the two questions adopted in this study as the questions were adapted from two prior studies conducted by Xu, Tan, and Yang (2006) and Xu and Chen (2006) thus, it was utilized in this study.

On the other hand, as for the endogenous variable, use of digital information sources, the question was adapted from Agarwal, Xu, and Poo (2011). One question was adapted in this study as the three questions were merged to one question so it will be easier for the participant to respond. Besides, as for task performance, all the questions on this sector were adopted from Koopmans et al. (2013).

As for the moderating variable, task importance, the questions were adapted from the study conducted by Agarwal, Xu, and Poo (2011). In the prior study, there were five questions in this construct where three questions were adopted to this study. The three questions were adopted to this study as it was adopted in prior research conducted by Xu, Tan, and Yang (2006).

The whole questionnaire is shown in Appendix A for English language and translated to Mandarin (refer Appendix B) and Bahasa Malaysia (refer Appendix C) by the researcher. The advantages of having a multilingual survey is that it enables the researcher to reach people from more diverse backgrounds and the respondents will be able to understand the context of survey questions which helps to provide high-quality data and better respondent experience. The questionnaires which has been translated to Mandarin was checked by a Chinese Teacher of a Secondary school with teaching experience of over 7 years in teaching Mandarin, and the Bahasa Malaysia questionnaire was checked by a Malay teacher of a Secondary school with experience of over 15 years in teaching Bahasa Malaysia language. Both teachers have strong bilingual skills in either Mandarin and English; Bahasa Malaysia and English. The translated questionnaire allows the participants to understand the easily as most of the rural entrepreneurs' mother tongue language is Bahasa Malaysia and in certain region, their mother tongue language is Mandarin. There are five pages in the questionnaire which consists of the Participant Information Sheet which exhibits the purpose of the survey, ethics approval number and the researcher's contact information. On the second page, it is the beginning of the survey which indicates the task and information sources that the rural entrepreneurs most frequently use.

In section B, the information collected in Section A will be used to relate to the questions which portrays the perception of the rural entrepreneurs who have participated in this survey. The respondents are required to answer all the questions in Section B and C as it measures the latent variables. In Section C collects information of the task performance of the rural entrepreneurs after the usage of the digital information sources, thus, it is required to answer all the questions. Section D collects the demographic information of the respondents regarding age, gender, highest education level, business type, establishment of business, number of staff and average turnover for 3 years.

According to Saunders, Lewis, and Thornhill (2016), rating questions are often used to collect opinion data. Category questions are used to collect data about behavior or attributes. Open questions are used to understand in depth of the topic and to find out what is the uppermost in the respondent's mind.

3.7 Pilot Test

Prior to data collection, a pilot test was conducted. A pilot study is a preliminary study to test research protocols, data collection, ample recruitment strategies, and other research techniques in preparation for the main study (Hassan, Schattner, and Mazza 2006). A pilot test is to identify issues that would make significant improvement in the questionnaire and to test on the feasibility of the analysis to provide the proper groundwork of the questionnaire (Hassan, Schattner, and Mazza 2006, Taylor, Sinha, and Ghostal 2016). The process of pilot study is to "rectify any inadequacies, in time, before administering the instrument orally or through a questionnaire to respondent, and thus reduces bias" (Sekaran and Bougie 2016, 155). Necessary amendments are made to establish content validity thus, the researcher are able to ensure that the questions in the questionnaire are properly answered by the participant who are identical to the participants in the main survey with no doubt (Krosnick 2018, Saunders, Lewis, and Thornhill 2016).

Preliminary analysis can be done from the pilot study to ensure that the data collected is valid. The purpose of pilot study was further explained by Kumar, Talib, and Ramayah (2013) is to ensure the wordings for each question in the questionnaire is correct, whether there is a need to add or eliminate any questions, the questions are in the right sequence, no ambiguous questions asked and all instructions are stated clear and adequate. All adopted or adapted developed questions or scales are best to go through pilot study to ensure that the questions are feasible and works accurately in the new context (Kumar, Talib, and Ramayah 2013). According to Willis (2004), the optimal sample size for pilot study is 5 to 15

participants, however, Perneger et al. (2015) argues that sample size of 30 is optimum as a default value for pilot study of a questionnaire. A sample size of 5-15 is not sufficient as there is prone to miss fairly common problems thus, produces unwanted results or difficulty (Perneger et al. 2015). According to Hunt, Sparkman, and Wilcox (1982), the decision of sample size in a pilot study depends on the length and complexity of the questionnaire, if a questionnaire is short and simple, a small sample size of 30 is sufficient, however if a long and complex questionnaire might require a larger sample size. In this study, the questionnaire is simple thus small sample size of 30 is reasonable.

The pilot study took place two weeks before the data collection period on 28th August 2020 to 1st September 2020. The period of time was given to allow the researcher to make any necessary amendments on the questionnaires before finalizing the questionnaire to brief the research assistants. With purposive sampling method, 30 pilot study respondents were collected across Miri divisions which consists of two districts: Marudi and Miri via interviewer-administered questionnaire (PBM 2020). This is due to COVID-19 pandemic, there is a lock down in Malaysia where there is a restriction on travel across states in all transportations. There are two requirements to be a respondent of this survey is: (1) not registered under Kementerian Pembangunan Luar Bandar (KPLB) and (2) is a rural entrepreneur in any field of business. The researchers collected 12 respondents from Marudi district and 18 respondents from Miri district. These respondents who were involved in the pilot study will not be included to the main study for analysis. The pilot study respondents were approached with the help of two research assistants in the districts by going to door-to-door businesses in the rural area. Before the pilot study respondents start with the questionnaire, the research assistants will ask the rural entrepreneurs few questions to see if they fit in the criterion to be involved in the questionnaire survey. Once the rural entrepreneurs fit in the criteria, the research assistant will get the consent from them to continue the survey by explaining to them the purpose of this study.

Upon completion of the pilot study, there was suggestions made by the pilot study respondents as there was a confusion on question 7 - "It is easy to access the digital information source" as compared to the previous questions because it was reverse coded. Reversals were included in the survey to prevent acquiescence bias to happen in the questionnaire, thus, no changes were made (Krosnick and Presser 2010). Apart from that, respondents found two words rather similar "accurate" and "credible", however, after explaining the definition to the respondents they are fine with the questions. The word accurate is defined as correct, exact and without any mistakes, whereas, credible is defined as able to believe or trusted (Dictionary 2020). Thus, no changes were made for the questions.

According to Hinton, McMurray, and Brownlow (2014), Cronbach's alpha reading of 0.7 to 0.9 shows high reliability whereas 0.5 to 0.7 shows moderate reliability assessed with SmartPLS. Thus, with the Cronbach's alpha reading yielded from each construct, the items in the questionnaire are deemed reliable.

3.7.1 Assessing Reliability and Validity of the Questionnaire

Reliability has a characteristic of measurement concerned with accuracy, precision and consistency. The reliability test is tested through Cronbach's Alpha in SPSS software with the threshold value of 0.6. Where if the Cronbach's Alpha value should be equal or 0.6, it is deemed reliable, similarly, if lower than 0.6 it is not reliable (Straub, Boudreau, and Gefen 2004). To analyze the reliability of the item measured, Cronbach's alpha from SPSS is used. The questionnaire yielded a Cronbach's alpha of 0.63 to 0.89, as show in table 3.1.

Table 3. 1 Reliability Statistics for Constructs of Questionnaire

Variable	**Number of Items**	**Cronbach's Alpha**
Source Accessibility	4	0.89
Quality of Information	4	0.63
Psychosocial Work Environment	5	0.71
Use of Digital Information Sources	2	0.72
Task Performance	4	0.68
Task Importance	3	0.74

However, reliability is crucial for research studies, however, it is not sufficient unless combined with validity (Taherdoost 2016). Validity has a characteristic of measurement concerned with the extent that a test measures what we actually wish to measure. The validity test is also determined through SPSS software which the threshold for the validity test to be considered valid is when the significance value (Sig.) is lower than 0.05. If the Sig. of a question is larger than 0.05, it is deemed not valid, thus suggested to be removed (Straub, Boudreau, and Gefen 2004). Sig. is the two-tailed p-value which evaluated the null against the alternative where the mean does not equal to 50. Under the null hypothesis, the probability of absolute value of t-value should be greater than p-value. Thus, If the p-value is less than the pre-specified alpha value, it is concluded that the mean is statistically significantly different from 0 (Bruin 2006). In table 3.2 shows the validity test reading.

Table 3. 2 Validity Statistics for Constructs of Questionnaire

Variable	**Item**	**Significance Value**
Source Accessibility	ACC1	0.050
	ACC2	0.001
	ACC3	0.001
	ACC4	0.002
Quality of Information	QOI1	0.001
	QOI2	0.000
	QOI3	0.005
	QOI4	0.044
Psychosocial Work Environment	PWE1	0.011
	PWE2	0.034
	PWE3	0.000
	PWE4	0.024
	PWE5	0.001
	TP1	0.004
Task Performance	TP2	0.001
	TP3	0.032
	TP4	0.003
Task Importance	TIM1	0.001
	TIM2	0.001
	TIM3	0.035

3.8 Data Analysis Methods

This collected data are analyzed by utilizing Partial Least Square Structural Equation Modelling (PLS-SEM) to test the relationships between factors and the use of digital information sources. The relationship between use of digital information sources and task performance of the information seeker will be analyzed with the same model. The use of PLS-SEM will be beneficial to this study as there are 2 endogenous variables in the conceptual framework. SEM is capable to examine multiple dependences in a research framework (Teo and Noyes 2011). There will be four major phases involved in the data analysis, namely preliminary data analysis, descriptive data analysis, measurement model and structural model analysis.

3.8.1 Descriptive Data Analysis

Descriptive statistics allow researchers to further describe and compare variables numerically (Saunders, Lewis, and Thornhill 2016). Frequency and percentage distributions in descriptive data analysis helps to describe the demographic characteristics of the participants involved in the data collection. Examples of demographic are gender, age, educational level and background knowledge. Descriptive data analysis is conducted on all items in the questionnaires including source accessibility, quality of information, psychosocial work environment, use of digital information sources, task performance and task importance. According to Saunders, Lewis, and Thornhill (2016), analysis is done on each of the variable to identify the preliminary information of the samples which includes frequency, mean and standard deviation of the results obtained.

Besides, common method bias (CMB) also known as common method variance (CMV)is the systematic variance induced by measurement techniques (Doty and Glick 1998) where possibilities of CMB exist in empirical estimation of relationships among variables (Doty and Glick 1998, Jakobsen and Jensen 2015). It is necessary to conduct the CMB as most results and concerns of fellow researchers are related to studies having single-source, self-reporting, cross-sectional design which has a tendency of biasness towards the rating of the indicator or items of the questions in the questionnaire. When a respondent is completing the questionnaire, there is a potential of bias to arise. Approaches and procedures were recommended to minimize common method bias in studies.

3.8.2 Partial Least Squares Structural Equation Modeling

In this research, SmartPLS 3.0 software is used and employing Partial Least Squares Structural Equation Modeling (PLS-SEM) technique to test the relationship between the potential factors and the use of digital information sources and the relationship between the use of digital information sources and the task performance of the rural entrepreneurs. There are two endogenous constructs in this research, thus, SEM is adopted for its capability to examine multiple dependences in a research framework (Teo and Noyes 2011). Besides, the measurement of reliability and validity of the theoretical constructs can be assessed simultaneously with testing of the relationships of those constructs. There are two streams of SEM namely, covariance-based SEM (CB-SEM) and variance-based SEM (PLS-SEM) (Hair et al. 2017) and the purpose of both methods differ substantially.

Principally, CB-SEM and PLS-SEM are different approaches and both have significant assumptions. It is crucial to select the appropriate method for the study. Thus, a recommended guideline is illustrated in Table 3.3.

Table 3. 3 Guidelines for Selecting PLS-SEM and CB-SEM

Types of analysis	Recommended method		
	PLS-SEM	CB-SEM	Both
Objective = prediction	X		
Objective = exploratory research or theory development	X		
Objective = explanation only		X	
Objective = explanation and prediction	X		
Measurement philosophy = total variance (composite-based)	X		
Measurement philosophy = common variance only (factor-based)		X	
Reflective measurement model specification			X
Formative measurement model specification	X		
Metric data			X
Non-metric data = ordinal and nominal	X		
Smaller sample sizes – N = < 100	X		
Larger sample sizes – N = > 100			X
Binary moderators			X
Continuous moderators	X		
Normally distributed data			X
Non-normally distributed data	X		
Secondary (archival) data	X		
Higher order constructs = two 1st order constructs	X		
Higher order constructs = three or more 1st order constructs			X
Latent variable scores needed for subsequent analysis	x		

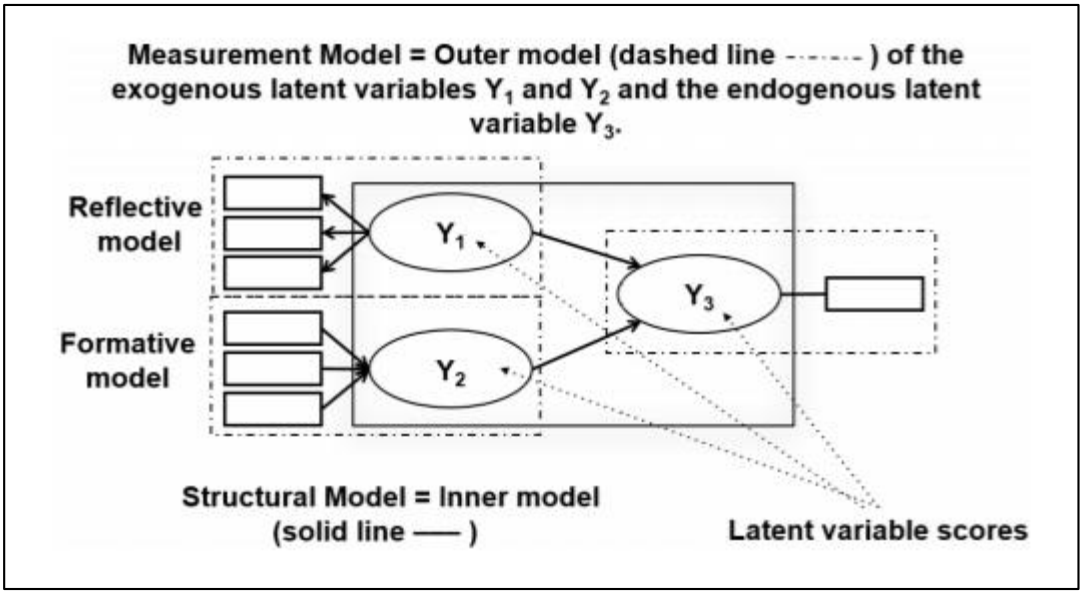
Source: Hair, Matthews, et al. (2017)

As shown in Table 3.3, two type of analysis, objective of study on explanation only and measurement philosophy being common variance (factor-based) cannot be analyzed with PLS-SEM. The other remaining types of analysis can be done on either both CB-SEM and PLS-SEM or on PLS-SEM only. There are a few common reasons for using PLS-SEM for analysis of prediction (Hair, Gabriel, and Patel 2014), a very common analysis in most social sciences studies, non-normal data (Hair, Gabriel, and Patel 2014), complex models and advanced analyses (Hair et al. 2017, Matthews 2017, Sarstedt et al. 2011), and the desire to identify unobserved heterogeneity (Hair et al. 2016, Matthews et al. 2016, Sarstedt et al. 2011). With the reasons concerning non-normal data, PLS-SEM is employed as the data analysis approach in this research.

In this study, the statistical analysis is conducted with PLS-SEM as this research does not intend to confirm and existing theory but extends the Cost-Benefit model by adding an endogenous variable – Psychosocial Work Environment. PLS-SEM is appropriate for theory development and prediction. Besides, there are presence of formative constructs in the structural model where PLS-SEM is able to measure the formative constructs without the need to construct specification modification which is required by CB-SEM (Hair et al. 2016). With the use of CB-SEM for formative construct may result in failure to explain the covariance of all indicators (Chin 1998). Besides, it is also more complicated to use CB-SEM to analyses both formative and reflective constructs (Urbach and Ahlemann 2010). In conclusion, SmartPLS 3.0 is utilized in this study to test the structural model as it works well with complex model, for both formative and reflective constructs and develop theory research (Hair et al. 2012).

3.8.3 Reflective and Formative Models

Figure 3. 1 Theoretical SEM and Constructs



Source: Hair et al. (2017)

As shown in Figure 3.1, the statistical model underlying SEM consists of two elements of measurement model in this study namely, reflective measurement model and formative measurement model. Reflective measurement models are that assumes causality flows from the construct to the indicators which the underlying latent variable is assumed to affect all the measured variables (Hair et al. 2017, Hair, Howard, and Nitzl 2020, Sarstedt et al. 2016). On the contrary, the causality flows in the formative measurement models are from the measured variables are assumed to affect the constructs whereas the variables are not interchangeable and does not correlate with each other (Hair et al. 2017). In Table 3.6 shoes the differences between reflective and formative models.

When formative constructs are included in the structural mode, it is more preferable to use the PLS-SEM approach and it is evaluated based on: convergent validity, indicator collinearity, statistical significance and relevance of the indicator weights (Hair et al. 2017, Hair et al. 2019, Hair 2019).

In this research, source accessibility (SA) and psychosocial work environment (PWE) are considered as reflective constructs where the indicators manifest the construct (Agarwal, Xu, and Poo 2011, Kristensen et al. 2005, Xu, Tan, and Yang 2006). Specifically, the causality direction is from construct to indicators, all indicators have internal consistency, with high correlations and the measures are interchangeable. In contrast, quality of information (QOI)

and use of digital information sources (USE) are formative constructs where the measure item defines the construct (Agarwal, Xu, and Poo 2011, Lee et al. 2002). The causality direction of formative construct is from indicators to construct, internal consistency among indicators are not implied, correlations are not expected and items are not interchangeable (Freeze and Raschke 2007, Venkatesh et al. 2003). Thus, the degree of users' attitudes towards the constructs determines how user rate all of the items.

Table 3. 4 Reflective Model vs Formative Model

	Reflective	**Formative**
Nature of construct	Latent construct exists independent of the measures used	Latent constructs are a combination of its indicators
Direction of causality between items and latent construct	Causality from construct to items - Variation in the constructs causes variation in the item measures	Causality from items to construct - Variation in the item measures causes variation in the construct
Characteristics of items used to measure the construct	Items are manifested by the construct - Items share a common theme - Items are interchangeable - Adding or dropping an item does not change the conceptual domain of the construct	Items define the construct - Items need not share a common theme - Items are not interchangeable - Adding or dropping an item may change the conceptual domain of the construct
Item intercorrelation	Items should have high positive intercorrelations	Items could have various pattern of intercorrelation but it

		should possess the same directional relationship
Item relationships with construct antecedents and consequences	Items have similar sign and significance of relationships with the antecedents and consequences as the construct	Items may not have similar significance of relationships with the antecedents and consequences as the construct
Measurement error and collinearity	Identifying the error term in items is possible	Identifying the error term is not possible if the formative items behave as predicted

Source: Coltman et al. (2008)

3.9 Variables and Measurements

3.9.1 Exogenous Variables

There are four exogenous variables in this study – source accessibility, quality of information, work environment and task attributes. Appendix A exhibits the detailed measurement items of each exogenous variable.

(a) Source Accessibility (SA)

Source accessibility is the time and effort required to reach the information source (Agarwal, Xu, and Poo 2011, Xu, Tan, and Yang 2006). Agarwal, Xu, and Poo (2011) measured the source accessibility by the time spent to access to the source, effort required to reach the source and the ease to approach to the information source. Meanwhile, Fidel and Pejtersen (2004) measure source accessibility by the location of both source and seeker. Therefore, this study examines source accessibility by the extent to which the digital information sources improves the time, effort, distance and ease to approach. There were four items under SA representing the use of digital information sources that may increase the rural entrepreneurs' task performance measured with five-point Likert scale. Given prior study have tested the SA variable (Agarwal, Xu, and Poo 2011), it was therefore deemed suitable to use in this study.

(b) Quality of Information (QOI)

Quality of information is how well the information provider outlay the content in the source (Kim and Niehm 2009, Zhang 2014). Xu, Tan, and Yang (2006) states QOI reflects the perceived understandability of the information from the digital information sources.

Agarwal, Xu, and Poo (2011) evaluated quality of information by how easy to communicate with the source, and ease of extracting useful information from the digital source. Thus, perceived understandability, ease of extracting useful information and ease of communication with the social media are the indicators for measuring quality of information. There were four items under QOI representing the quality of information that may affect the intention to use the digital information sources measured with five-point Likert scale. Given prior studies have tested the QOI variable (Agarwal, Xu, and Poo 2011, Lee et al. 2002, Xu, Tan, and Yang 2006), it was therefore deemed suitable to use in this study.

(c) Psychosocial Work Environment (PWE)

Psychosocial work environment is illustrated by the degree to which the information seeker's confidence, action, decision makings are influenced by the peers in workplace (Rigolizza and Amabile 2015). Kristensen et al. (2005) divided the measurement of work environment into two; workplace and individual. In workplace, the work environment is measured by type of production and tasks, work organization and job content, interpersonal relations and leadership, and work-individual interface. As for individual, the work environment is measured by health and well-being and personality (Kristensen et al. 2005). However, in this study, we will only measure work environment by work organization, interpersonal relations and leadership. There were five items under PWE representing the psychosocial work environment that may increase the rural entrepreneurs' task performance measured with five-point Likert scale. Given prior study have tested the PWE variable (Agarwal, Xu, and Poo 2011, Kristensen et al. 2005), it was therefore deemed suitable to use in this study. Table 3.4 shows the items of the exogenous variable and the source adopted.

Table 3. 5 Items for Exogenous Variable

Exogenous Variable	**Amended Item**	**Original Item**	**Source**
Source Accessibility (ACC)	1. It takes a lot of time to access the digital information source.	1. I would have to spend a lot of time to gain access to [].	(Agarwal, Xu, and Poo 2011)

	2. It takes too long to reach the digital information source. 3. It takes a lot of effort to reach the digital information source. 4. It is easy to access the digital information source.	2. It would be very hard to get to []. 3. It would take a lot of effort to reach []. 4. It would take too long to get to []. 5. It would not be easy to approach [].	
Quality of Information (QOI)	1. The information I get from the digital information is clear in meaning. 2. The information I get from the digital information is easy to comprehend. 3. The information I get from the digital information is accurate. 4. The information I get from the digital information is credible	1. The information is accurate. 2. The information is easy to manipulate to meet our needs. 3. This information is easily interpretable. 4. This information is credible.	(Lee et al. 2002)
Psychosocial Work Environment (PWE)	1. My work is emotionally demanding. 2. I can tell a lot of people how to do the work. 3. I have clear objectives of my work. 4. I consider myself an expert in doing the work. 5. I often get help and support from my	1. How often do you get help and support from your colleagues? 2. Is your work emotionally demanding? 3. Do you feel that the work you do is important?	(Agarwal, Xu, and Poo 2011, Kristensen et al. 2005)

	colleagues/partners to complete my work.	4. I consider myself an expert in doing this task. 5. I can tell a lot about how to do this task.	

3.9.2 Endogenous Variables

The endogenous variables are the use of digital information sources and task performance.

(a) Use of Digital Information Sources (USE)

Use of digital information sources is the measurement of any activities done within the digital information sources including information searching, transacting, navigating and visiting (DeLone and McLean 2004). Use of digital information sources is one of the most important aspects of an individual's skillset (Lecheler and Kruikemeier 2015). In this study, use of digital information sources is measured by frequency of using the digital source to achieve different objectives (Zimmer, Henry, and Butler 2007). Ordinal scale was used to measure the digital information sources that is used most among social media, website and printed media.

(b) Task Performance (TP)

Task performance is the individual's performance on the tasks which required to be done at work (Borman and Motowidlo 1997). Koopmans et al. (2013) measures the task performance by the perceived quality of work, time management, work motivation and priority. Five items were used to measure the task performance. For instance, the user may strongly agree or disagree that high quality of information leads to better task performance. There were four items under TP representing the use of digital information sources that may increase the rural entrepreneurs' task performance measured with five-point Likert scale. Given prior study have tested the PWE variable Agarwal, Xu, and Poo (2011) and (Kristensen et al. 2005), it was therefore deemed suitable to use in this study. Table 3.5 shows the items of the endogenous variable and the source adopted.

Table 3. 6 Items for Endogenous Variable

Endogenous Variable	**Amended Item**	**Original Item**	**Source**
Use of Digital Information Sources (USE)	On average, please indicate how much time you spend on work-related information seeking daily on the scale of 1 – "less than 1 hour" to 5 – "more than 5 hours".	1. Among all the sources of information available to me, I used [] a lot for problem-solving information. 2. I used [] very often for problem-solving information. 3. How frequently did you use the following sources for this specific problem/part of the task?	(Agarwal, Xu, and Poo 2011)
Task Performance (TP)	1. I manage to plan my work so that it is done on time. 2. I am able to perform my work well with minimal time and effort.	1. I managed to plan my work so that it was done on time. 2. It took me longer to complete my work tasks than intended.	(Koopmans et al. 2013)

	3. I can complete my work in the shorter intended time. 4. Regarding my work in general, I am pleased with my work as a whole, everything taken into consideration.	3. I was able to perform my work well with minimal time and effort. 4. Regarding your work in general, how pleased are you with the people you work with?	

3.9.3 Moderating Variable

This study has a moderating variable which affects the strength of the relation between the exogenous variables and endogenous variable. Task importance refers to the moderating variable.

(a) Task Importance (TIM)

Task importance is one of the characteristics of a task which influences the work performance (DeWall et al. 2011). Task importance is measured by the level of importance to oneself, importance to their performance and how much the task meant to the information seeker (Agarwal, Xu, and Poo 2011). Generally, this study measured the importance of the task to the extent which influenced the use of the digital information sources. There were three items under TIM representing the task importance that may affect the rural entrepreneurs' decision to use digital information sources to achieve better task performance. This is measured with a five-point Likert scale. Given prior study have tested the TIM variable (Agarwal, Xu, and Poo 2011, Xu, Tan, and Yang 2006), it was therefore deemed suitable to use in this study. Table 3.6 shows the item of the moderating variable and the source adopted.

Table 3. 7 Items of Moderating Variable

Moderating Variable	**Amended Item**	**Original Item**	**Source**
Task Importance (TIM)	1. The task is important to me. 2. The task is important to my performance. 3. The task means a lot to me.	1. The task is an important part of my duty. 2. The task is important to my performance. 3. The task means a lot to me.	(Agarwal, Xu, and Poo 2011)

3.9.4 Control Variables

This study identified four control variables which influence the use of digital information sources to increase the task performance. "The control variables are used to capture factors that are broadly defined as extraneous to the desired effect" (Carlson and Wu 2011, 414). It is intended to use to provide better estimates of relationships between the independent variables and dependent variables (Atinc, Simmering, and Kroll 2011, Becker et al. 2016). Appendix C illustrates the details of measurement of the control variables.

(a) Age

Age could significantly affect the use of digital information sources as the younger the age, the higher the use of digital information sources as they may be more computer self-efficacy; and it would be harder for older individuals as they have yet to adopt to innovative technologies (He and Freeman 2010). Age is measured in a nominal scale and by a certain interval of years (Wu 2012). According to DOSM (2018), the age group is in the interval of 5 years.

(b) Gender

Gender is also another variable that may affect the use of digital information sources. Different gender has different level of anxiety towards the innovative technologies (Bao et al. 2013). According to Dhir, Chen, and Nieminen (2015), females are less likely to be influenced by technologies however, if the female are in need to search for information that

they require, their anxiety level increases and will have the motivation to use the digital source. Therefore, male and female rural entrepreneurs in Malaysia may have different objectives and motivations to use digital source.

(c) Education Level

The use of digital information sources to seek for information may require education to understand. The more educated people are more likely to adopt and use the digital information sources to seek for information that is required (Bingimlas 2009). Ganzach (2003) identifies that less educated people are most likely to have limited knowledge in understanding or have the motivation to seek for information. These education level categories extend from no formal education to tertiary education (DOSM 2018).

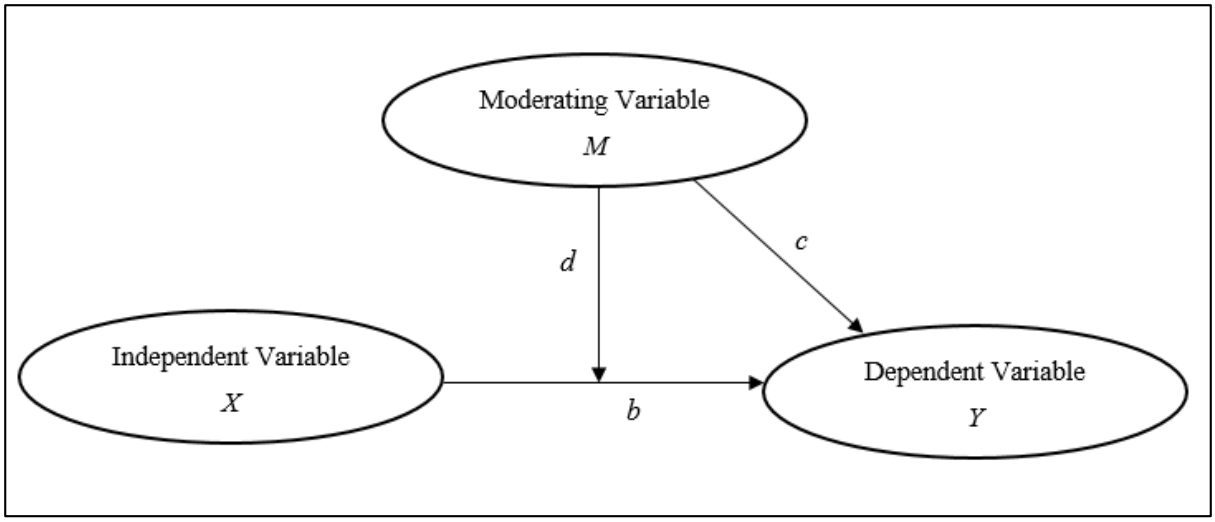
(d) Background Knowledge

Background knowledge is the information that one has known or understood to a situation (Xu, Tan, and Yang 2006). Background knowledge of a person could influence an individual's belief and behavior (Ajzen, Brown, and Rosenthal 1996). Ajzen, Brown, and Rosenthal (1996) and Xu, Tan, and Yang (2006) measure background knowledge with the individual's perceived expertise on the task whereas, Venkatesh, Thong, and Yu (2012) measures the background by the duration of time the individual uses the source. Interval scale is used to measure the background knowledge of use of digital information source for work-related information with the scale of 1 – "do not use at all", 2 – "Less than a year", 3 – "1-2 years", 4 – "3-4 years" and 5 – "More than 4 years".

3.10 Testing Moderation

A moderator variable is a third variable which affects the relationship between two variables, dependent and independent variable, where the nature of impact of the independent variable varies according to the moderator value (Ramayah et al. 2018). Whenever an unexpectedly weak or inconsistent relationship between the independent and dependent variable, moderator variables are often introduced to the model (Baron and Kenny 1986, 1178).

Figure 3. 2 Moderating Effect



Moderating effects are modelled to gain better understanding on moderator analysis, shown in Figure 3.2. In Figure 3.2, the main effect of independent variable (IV) to dependent variable (DV) is path *b* without the moderator. Path *b* is known as simple effect when a moderator is included where moderating effect, path *d*, is shown with the arrow pointing towards path *b*. Besides including the moderating effect to the model, the moderator variable also has a direct relationship to the dependent variable which creates path c. Path c is important as it controls the direct impact of the moderator on the dependent variable, if omitted, the relationship in path d will be increased (Ramayah et al. 2018). According to Ramayah et al. (2018), the path model can also be expressed mathematically with the formula:

Main Effect:

$$Y = a + b.\ X + c.\ M$$

Interaction Effect:

$$Y = a + (b + d.\ M).\ X + c.\ M$$

$$Y = a + b.\ X + c.\ M + d\ (X*M)$$

There are three types of approaches to examine the moderator analysis namely, Product-Indicator Approach (Chin, Marcolin and Newstad 1996; 2003), Two-Stage Approach (Henseler et al. 2012, Chin et al., 2003) and Orthogonalzing Approach (Henseler and Chin 2010). In this study, two-stage approach is used to analyses the moderator as one of the constructs is formative construct and this study aims to determine if the moderator variable

exert any significant effect on the relationship between the variables. According to Henseler and Chin (2010), the two stages are as follows:

Stage 1: Estimates of the latent variable scores are obtained from running the main effect PLS path model. The scores of the latent variables are calculated and saved for further analysis.

Stage 2: The interaction term x *·M is built up as the element-wise product of the latent variable scores of the independent variable (x) and the moderator (M). This interaction term as well as the latent variable scores of x and M are used as independent variables in a multiple linear regression on the latent variable scores of the endogenous variable, y.

Figure 3. 3 Two-stage Approach

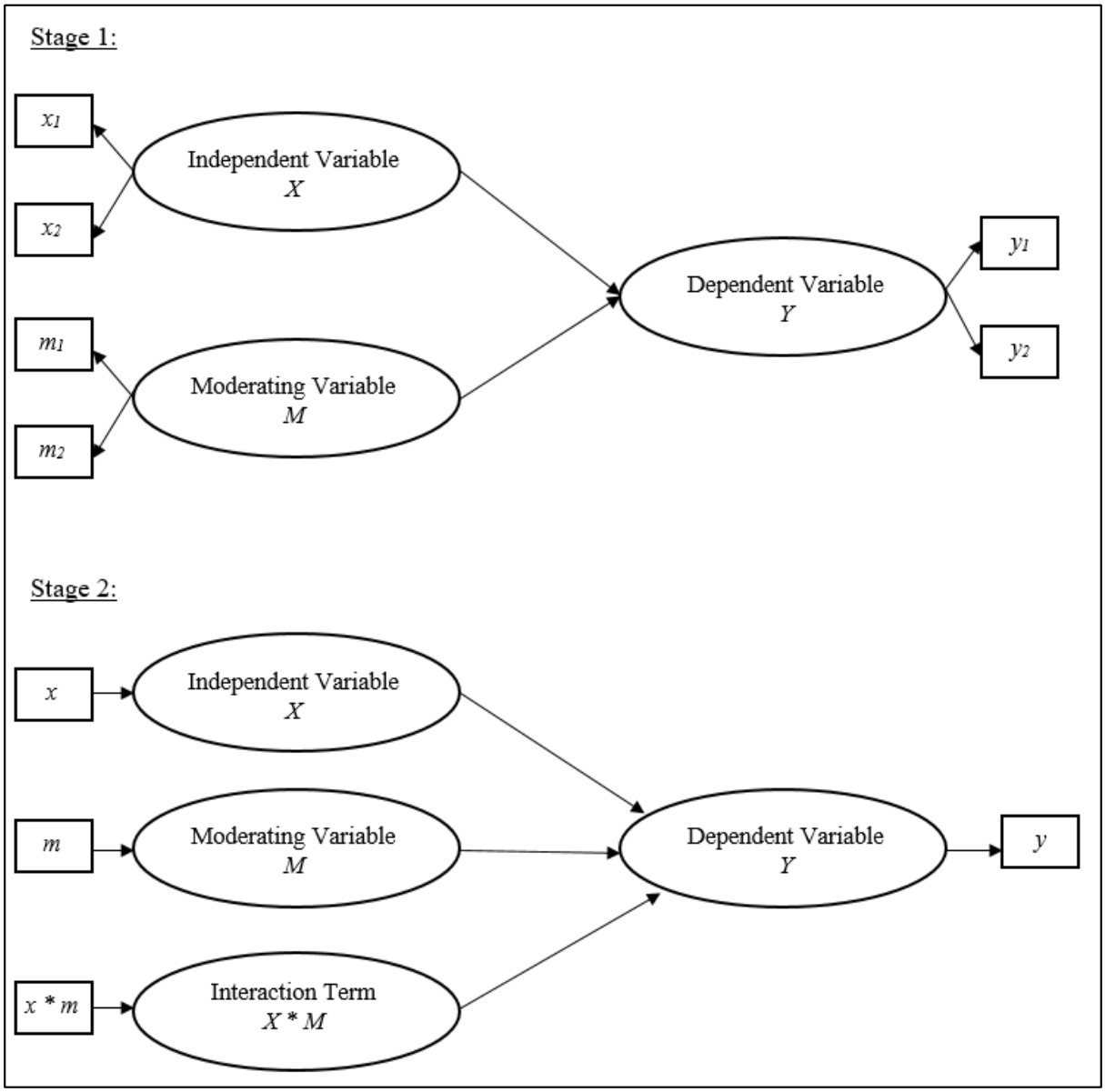


Figure 3.3 illustrates the two-stage approach. However, with this approach, this approach may induce collinearity as it involves interaction term (Ramayah et al. 2018). Similarly, for product indicator approach, it produces collinearity in the structural model and it is not used in this study as the constructs must be reflective constructs and it may show significantly weak statistical power (Ramayah et al. 2018). On the other hand, orthogonalizing approach eliminates the issue of collinearity through residual centering and it has advantages in terms of parameter and prediction approach. However, it is not used as it is applicable for formative constructs in the model and prefers small sample sizes (less or equal to 200) and less than 4 indicators per construct (Henseler and Chin 2010).

In this study, moderator is considered as with the moderating variable, task importance, it affects the strength and the direction of the relationship. Task importance acts upon the relationship between the two variables and changes its direction or strength. For example, task importance may moderate the relationship between source accessibility and use of digital information: the relationship might be stronger for people who does have the accessibility to the source than those does not.

3.11 Ethics

The research was approved by Human Research Ethics Committee of Curtin University with the approval number of HRE2020-0121. According to the Curtin University policy, it is required to complete and submit the ethics application for approval before commencing with the questionnaire survey. With the ethics approval, the research is able to recruit and assess participants for the research. This research conformed to all terms and conditions stated and agreed in the ethics approval.

The participation for this questionnaire survey is voluntary and there will be no cost incurred to the participants. The procedures of the research project and potential risks were informed to the participants upon commencing with the questionnaire. All the participants and responses were remained anonymous, as promised by the researcher. All the raw data will be securely stored in a locked cabinet at Curtin University and will be retained for at least seven years where only research personnel such as the researcher and supervisors will have the access to the data.

3.11 Summary

This chapter discusses the research paradigm, research design, sample, data collection methods, and variables and measurement used in this research. The research paradigm of this study is positivist paradigm. In-depth discussion of the variables and measurement were discussed in this topic. Quantitative research method was applied to this research where the justification of why was discussed. Telephone interview is the main method of data collection through telephone interview to gather all relevant data. The study site of the research covers the rural areas of Malaysia. The study intends to collect 417 questionnaires through the listings provided by the Ministry of Rural Development. A pilot study was done prior to the main study involving 30 participants which are not included in the main study. Necessary changes and justification were made accordingly. A Cronbach's alpha reliability test was employed on all the items as well to check the reliability of the items and the results obtained were deemed reliable. Descriptive data analysis as well as PLS-SEM were discussed in-depth and was chosen to analyses the data of the study. Finally, ethical considerations of the data collection methods and ways were discussed.

CHAPTER FOUR: DATA ANALYSIS AND RESULTS

4.1 Chapter Overview

This chapter presents the empirical findings of this study which includes descriptive statistics of respondents and instruments, verifying data characteristics analyzed with SPSS and SEM-PLS. Then, assessments on the model were made performed using Smart PLS 3.0 on both measurements model and structural model levels.

4.2 Data Preparation

The data preparation process involved data entry and coding into Microsoft Excel. There are a total of 417 responses received and the data are manually coded into Microsoft Excel by the researcher to check for incomplete, invalid or missing data. The raw data collected must be checked for completeness and consistency before the data analysis starts. Any data found missing will affect the validity of the results and findings which is one of the barriers in the procedure of data analysis in social research. Thus, missing value analysis is an important requirement before proceed to further analysis. After thorough checking, there were no incomplete or invalid responses as the researcher was mindful when calling the respondents for the telephone interview survey.

After preliminary scrutiny, 417 usable cases were then loaded into SPSS version 26 for analysis. The data in SPSS statistics is used to generate descriptive statistical report, generate exploratory analyses on each variable for missing or invalid data.

The existing data in SPSS was then exported to Microsoft Excel as a CVS file to generate raw input for SmartPLS data analysis software. Assessment of both measurement and structural models are performed using SmartPLS.

4.3 Response Rate

A total of 813 calls were been made to all the rural entrepreneurs obtained from the list from KPLB. Four-hundred and thirty-one rural entrepreneurs provided their consent to participate in the survey, a response rate of 53%. However, only 417 rural entrepreneurs completed the survey and the remaining 8 rural entrepreneurs did not finish the survey due to insufficient time or connectivity issue. This translates into an effective response rate of 51.3%. The number of respondents in this research is considered adequate and representative of the population based on the calculation of G*Power shown in section 3.5.1 of this thesis and sample size

determination from given population by Krejcie and Morgan (1970). In addition, according to Sekaran and Bougie (2016), a response rate of 30% for a questionnaire survey is adequate.

4.4 Descriptive Data Analysis

A total of 417 questionnaires collected are valid for analysis. The respondents are rural entrepreneurs in Malaysia with different backgrounds. This section shows the analysis of the demographic profile, background knowledge of digital information sources, type of industry, average sales turnover for the last three years, number of employees and business establishment. The descriptive statistics of each item are presented in Table 4.1.

Table 4. 1 Demographic Information of Respondents

Variable		Frequency	Percentage (%)
Age	25-29	27	6.5
	30-34	121	29.0
	35-39	160	38.4
	40-44	90	21.6
	45-49	8	1.9
	50 and above	11	2.6
Gender	Male	120	28.8
	Female	297	71.2
Highest Education Level	No formal education	27	6.5
	Primary Education	105	25.2
	Secondary Education	237	56.8
	Tertiary Education	48	11.5
Background Knowledge	***Social Media***		
	Do not use at all	3	0.7
	Less than a year	7	1.7
	1-2 years	49	11.8
	3-4 years	89	21.3
	More than 4 years	269	64.5
	Website		
	Do not use at all	4	1.0

	Less than a year	13	3.1
	1-2 years	53	12.7
	3-4 years	86	20.6
	More than 4 years	261	62.6
	Printed Media		
	Less than a year	1	0.2
	1-2 years	6	1.4
	3-4 years	20	4.8
	More than 4 years	390	93.5
Type of Industry	Food and Beverage	208	49.9
	Sales and Services	105	25.2
	Handicraft	50	12.0
	Agriculture	34	8.2
	Beauty and Wellness	8	1.9
	Automobile	4	0.9
	Construction	3	0.7
	Travel and Tourism	3	0.7
	ICT	2	0.5
Average Sales for the Last 3 Years	Below RM100,000	159	38.1
	RM100,001 to RM200,000	185	44.4
	RM200,001 to RM300,000	56	13.4
	RM300,001 to RM400,000	12	2.9
	Above RM400,000	5	1.2
Number of Full-Time Employees	Less than 10	393	94.2
	11-50	24	5.8
Establishment of Business	1 to 4 years	28	6.7
	5 to 10 years	194	46.5
	11 to 20 years	151	36.2
	Above 20 years	44	10.6

(a) Age and Gender

As shown in Table 4.1, majority of the rural entrepreneur in Malaysia are in the age between 35 to 39 comprising of 160 respondents (38.4%), followed by age 30 to 34 comprising of 121 respondents (29.0%), then age 40 to 44 with 90 respondents (21.6%), age 18 to 24 with 27 respondents (6.5%), age 50-54 with 11 respondents (2.6%) and age 50-54 with 8 respondents (1.9%). None of the user in the sample were of age 18 to 24 and above 55. As for gender, there are 120 male respondents and 297 female respondents with 28.8% and 71.2% respectively. This shows that there were more female who participated in this research.

(b) Education Level

The highest education levels of respondents are exhibited in Table 4.1, where 237 respondents (56.8%) completed secondary education, 105 respondents (25.2%) received primary education, 48 respondents (11.5%) graduated with tertiary education and only 27 respondents (6.5%) did not receive any formal education.

(c) Background Knowledge of Digital Information Sources

Majority of the respondents had the background knowledge of using social media, website and printed media for more than four years. The frequency of respondents using background knowledge of using social media, website and printed media is 269 respondents (64.5%), 261 respondents (62.6%) and 390 respondents (93.5%) respectively. This shows that more than 60% of the rural entrepreneurs were introduced to digital information sources more than four years ago. Less than 1% of the respondents have not used any of the digital information sources.

(d) Business Background

As shown in Table 4.1, nearly 50% of the respondents are in the food and beverage industry with 208 respondents (49.9%) out of 417 respondents. Followed by sales and services industry with 105 respondents (25.2%), and the least are in the ICT industry with 2 respondents (0.5%).

Besides, the average sales turnover for the last 3 years for each respondent were considered in this research. There were 185 respondents (44.4%) had an average sales turnover between RM101,000 to RM200,000, followed by 159 respondents (38.1%)

with an average sales turnover of RM100,000 and below, and 5 respondents (1.2%) with more than RM401,000 as the average sales turnover.

As for number of employees, there were 94.3% (399 respondents) of the businesses have less than 10 full-time employees in their business and the least with 24 respondents (5.7%) have full time employees numbered between 11 to 50. None of the rural entrepreneurs has employees more than 51.

Majority of the business were established for 5 to 10 years comprising of 195 respondents with 46.1%. There were also 154 respondents (36.4%) business established for 11 to 20 years, 29 respondents' (6.9%) business established between 1-4 years. In this research, there were no business established under 1 year.

(e) Geographical profile

Table 4.2 shows the geographical breakdown of the respondents. There is a total of 15 states including 2 federal territories in Malaysia. The number of respondents from each region were: 150 respondents from North Malaysia, 95 respondents from East Coast Malaysia, 37 respondents from Central Malaysia, 49 respondents from Southern Malaysia, 24 respondents and 68 respondents are from Sabah and Sarawak respectively and also known as East Malaysia.

Table 4. 2 Respondents by States

Region	State	Frequency	Percentage (%)
North	Perlis	5	1.2
	Kedah	58	13.7
	Penang	78	18.5
	Perak	9	2.1
East Coast	Kelantan	33	7.8
	Terengganu	54	12.8
	Pahang	8	1.9
Central	Selangor	31	7.3
	Kuala Lumpur	5	1.2
	Negeri Sembilan	1	0.2
Southern	Melaka	12	2.8
	Johor	37	8.7

Sabah	Sabah F.T. Labuan	22 2	5.2 0.5
Sarawak	Sarawak	68	16.1

4.4.1 Descriptive Statistics

By using SPSS version 26, the mean and standard deviation of each indicator were calculated. Table 4.3 outlines the descriptive statistics for all indicators of this study.

Table 4. 3 Descriptive Statistics of All Variables

Construct	Item	Mean	SD
Source Accessibility	ACC1	1.90	0.831
	ACC2	1.92	0.821
	ACC3	1.63	0.859
	ACC4	1.60	0.855
Quality of Information	QOI1	4.65	0.687
	QOI2	4.57	0.721
	QOI3	4.67	0.621
	QOI4	4.63	0.667
Psychosocial Work Environment	PWE1	4.62	0.520
	PWE2	4.95	0.224
	PWE3	4.97	0.174
	PWE4	4.96	0.186
	PWE5	4.89	0.323
Use of Digital Information Sources	WSM	3.02	0.873
	WW	1.66	0.678
	WPM	1.85	0.823
Task Performance	TP1	4.96	0.215
	TP2	4.86	0.358
	TP3	4.83	0.397
	TP4	4.92	0.266
Task Importance	TIM1	4.98	0.145
	TIM2	4.97	0.160

	TIM3	4.97	0.174

Source accessibility has a mean of lower than 2 as the questions in the questionnaire are negative items whereas, the remaining variables such as quality of information, psychosocial work environment, task performance and task importance are positive questions. Balancing the questionnaire with positive and negative items is one of the method to reduce common method bias suggested by Podsakoff, MacKenzie, and Podsakoff (2011).

4.5 Verifying Data Characteristics

This section discusses the analysis performed on the indicators to verify the characteristics of the collected data. With valid data characteristics, it ensures that the data collected is usable, valid and complete for the higher-level analysis undertaken in the SmartPLS analysis. These analyses include verification of any missing value, data normality and potential common method bias.

4.5.1 Missing Data Management

Frequency analysis in SPSS was undertaken to identify any missing value in the dataset. Accordingly, there were no missing values in the data found in the dataset.

4.5.2 Data Normality

The identification of skewness and kurtosis of data prior to determining the method of analysis is crucial to mitigate the occurrence of Type I error in t-tests and factor analysis (Cain, Zhang, and Yuan 2017). With the acknowledgment of the severity and type of non-normality, more suitable methods of analysis may be adopted to enhance the robustness of the study. According to Hair et al. (2017), skewness is associated with the symmetric property of a variable's distribution while kurtosis represents the peak of magnitude of distribution. Any distribution which exceeds +1 or -1 are considered to violate assumptions of normally-distributed data. According to Doane and Seward (2011), the threshold for the z-value is between -1.96 and 1.96 to achieve data normality. Besides, Shapiro-Wilk test is also commonly known to analyses data normality using SPSS software, with the threshold value for p-value of 0.05 (Shapiro and Wilk 1965, Razali and Wah 2011).

The univariate skewness of the four constructs were determined with the use of SPSS software. Below in Table 4.4 shows the skewness and kurtosis of each variable. It shows that

the some of the z-value in the study have exceeded the range of threshold value, and the Shapiro-Wilk test have a p-value of 0.00 which indicating that the data is not normal.

Table 4. 4 Normality Test Results for All Variables

Variables	Items	Skewness		Kurtosis		Z-Value		Shapiro-Wilk Test (p-value)
		Statistic	Standard Error	Statistic	Standard Error	Skewness	Kurtosis	
Source Accessibility	4	1.296	0.12	1.354	0.238	10.845	5.679	0.000
Quality of Information	4	-2.030	0.12	3.403	0.238	-16.986	14.268	0.000
Psychosocial Work Environment	5	-1.348	0.12	1.868	0.238	-11.279	7.831	0.000
Task Performance	4	-2.241	0.12	4.875	0.238	-18.749	20.442	0.000

The Mardia's measure of multivariate skewness and kurtosis is suggested to compare the joint distribution of multiple variables against a multivariate normal distribution (Cain, Zhang, and Yuan 2017). The results were obtained by using the web application http://psychstat.org/kurtosis. Based on the results generated, both univariate and multivariate data are non-normal distribution.

In similar manner, the acceptable values for multivariate skewness and kurtosis is between -3 and +3 for skewness and -10 and +10 for kurtosis (Urbano 2013). The multivariate skewness and kurtosis yields 38.566 and 121.501 respectively in this study. The non-normality data may be due to insufficient data discrimination where there may be an insufficient number of different values.

4.5.3 Common Method Bias

The procedural remedies are to be performed prior to the data collection stage which is during the design stage of the study and the development of questionnaire instrument stage. This study adopts three of the procedures suggested by Podsakoff, MacKenzie, and Podsakoff (2011) which are temporal, proximal or psychological separation between predictor and

criterion, improve scale items to eliminate ambiguity and balancing of positive and negative items. The questionnaire instrument is divided into 5 sections to create a time delay to reduce the participant's tendency to repeat the same answer as the previous question. Besides, prior to the main data collection, pilot study was carried out to test the questionnaire instruments and the comments regarding the scale items were noted down for improvement. In the questionnaire design, there is also a balance of both negative and positive items to reduce CMB.

Besides, according to Tehseen, Ramayah, and Sajilan (2017), CMB may occur due to social desirability. Thus, the questionnaire instrument started with a cover page ensuring the participant understand that the participation of this survey is fully confidential and voluntary. The participant was briefed on the purpose of the study with clear instructions and researcher had reassured the participants that all the responses will remain confidential.

Administering only procedural remedies does not warrant complete elimination of CMB in research findings (Tehseen, Ramayah, and Sajilan 2017). Thus, statistical remedy recommended by Kock (2015) is deployed. According to Kock (2015), CMB in PLS-SEM studies can be assessed through Variance Inflation Factor (VIF) values which the threshold is 3.3. Based on table 4.5, the collinearity results of the variable show that there are 3 items which are above the threshold. However, according to Hair, Ringle, and Sarstedt (2011), the VIF value below 5 is acceptable. Thus, all VIF of the variables are within threshold with no CMB.

Table 4. 5 Collinearity Results

Variable	Items	Variance Inflation Factor (VIF)
Source Accessibility	ACC1	3.379
	ACC2	3.387
	ACC3	3.345
	ACC4	2.992
Quality of Information	QOI1	2.453
	QOI2	2.490
	QOI3	2.348
	QOI4	2.080
Psychosocial Work Environment	PWE1	1.018
	PWE2	1.060
	PWE3	1.091

	PWE4	1.103
	PWE5	1.008
Task Performance	TP1	1.100
	TP2	1.288
	TP3	1.316
	TP4	1.391
Use of Digital Information Sources	WPM	1.038
	WSM	1.167
	WW	1.130
Age	AGE	1.000
Gender	GEN	1.000

4.6 Assessment of Reflective Measurement Model

In this study, Partial Least Square Structural Modelling (PLS-SEM) is used to evaluate the research model. Smart-PLS 3.0 is used to assess the measurement of reflective measurement model's validity and reliability using the following analyses: internal consistency reliability, indicator reliability, convergent validity and discriminant validity. The analyses and findings are presented in the following subsections.

4.6.1 Internal Consistency Reliability

The reliability of internal consistency is measured with Cronbach's alpha (α). According to Ramayah et al. (2018, 81), Cronbach alpha offers an estimation of reliability based on the inter-correlation of the observed predictor variables. However, there are some limitations on the use of Cronbach's alpha where it assumes all indicators yields the same loadings in SEM which is impropriate and it is sensitive to the number of items and it has high tendency to underestimate the internal consistency reliability (Hair et al. 2017). Given this limitation, it is technically more appropriate to apply the alternative measure known as composite reliability. Higher values of composite reliability yield higher level of reliability between 0 and 1. Specifically, values between 0.60 and 0.69 are acceptable in exploratory research, while value between 0.70 and 0.90 are regarded as satisfactory. As shown in the Table 4.6, the composite reliability values ranged between 0.599 and 0.937, which is associated with satisfactory level. Thus, this shows that the items used to describe the structure are accurate regarding internal consistency.

4.6.2 Indicator Reliability

The indicator reliability is also known as the outer loadings where higher outer loading values indicate the associated indicators have much in common, which is captured by the construct. A common rule of thumb suggests that the outer loadings should be 0.708 or higher as it indicates the latent variable is able to explain at least 50 percent of indicator's variance (Hair et al. 2010). Loadings equal to or greater to 0.4, 0.5 and 0.6 are acceptable, if the other items have high scores of loadings to complement the composite reliability and average variance extracted values (AVE) (Byrne 2016). Loading values equal to or greater than 0.7 are deemed acceptable. As shown in Table 4.6, it shows that the values of loading ranges between 0.637 and 0.996. Thus, the indicator reliability is acceptable.

4.6.3 Indicator Loadings

Indicator Loadings includes the assessments of internal consistency and convergent validity. Internal consistency which is measured by Composite Reliability (CR) takes into account of the indicator loadings. If the CR is greater than 0.9, it is not desirable as all indicators measured the same phenomenon; if CR is between 0.7 and 0.9, it is deemed satisfactory, whereas, if CR is more than 0.6, it is acceptable for exploratory research (Ramayah et al. 2018).

Convergent validity also known as Average Variance Extracted (AVE) involves favorable comparison with the same construct's alternate steps. According to Urbach and Ahlemann (2010), the convergent validity includes the degree to which individual indicators reflect a construct converging in contrast with to indicators measuring other constructs. The threshold value of the AVE of construct should reach for at least 50 percent of the indicators' variance thus, AVE should be equal to or greater than 0.5 (Fornell and Larcker 1981, Hair et al. 2017). As shown in table 4.6, the AVE values are between 0.517 and 0.788 which is considered acceptable.

Table 4. 6 Reliability Statistics

Construct	**Item**	**No. Items Deleted**	**Cronbach's Alpha**	**Outer Loadings**	**Composite Reliability**	**Average Variance Extracted (AVE)**
Source Accessibility	ACC1 ACC2 ACC3 ACC4		0.911	0.887 0.872 0.904 0.886	0.937	0.788
Psychosocial Work Environment	PWE1 PWE2 PWE3	2	0.208	0.821 0.594 0.625	0.599	0.517
Use of Digital Information Sources	WW WSM	1	0.506	0.939 0.642	0.779	0.646
Task Performance	TP2 TP3 TP4	1	0.671	0.588 0.770 0.890	0.805	0.583

4.6.4 Discriminant Validity

Discriminant validity is the extent to which the constructs by empirical criteria differ from other constructs (Ramayah et al. 2018). The discriminant validity of the measurement model is assessed with 1) Cross loading criterion, 2) Fornell and Larcker's (1981) criterion, and 3) Heterotrait-Monotrait ratio of correlations (HTMT).

4.6.4.1 Cross Loading Criterion

According to Ramayah et al. (2018), the loading of indicators in this criterion has to be higher than the loadings on other latent variables in the model where the difference between loadings across variables must not be less than 0.1. If each indicator's loading is higher as compare to other constructs, it can conclude that indicators of different constructs are not inter-changeable. The results attained from SmartPLS algorithm function were tabulated in Table 4.7. The bolded elements in Table 4.7 represents the cross loading result for the designated latent variable.

Based on the result, the study has met all the criterion stated, thus, confirms the discriminant validity of the cross loading criterion.

Table 4. 7 Cross Loading Results

	Source Accessibility	**Psychosocial Work Environment**	**Task Performance**	**Use of Digital Information Sources**
ACC1	**0.886**	-0.025	0.027	-0.510
ACC2	**0.874**	0.009	-0.040	-0.413
ACC3	**0.903**	-0.094	-0.028	-0.526
ACC4	**0.886**	-0.088	-0.041	-0.545
PWE1	-0.063	**0.996**	-0.030	0.095
PWE2	0.026	**0.205**	0.045	0.009
TP2	0.034	-0.030	**0.637**	-0.017
TP3	-0.078	0.003	**0.887**	-0.044
TP4	0.050	-0.054	**0.747**	-0.062
WSM	-0.578	0.096	-0.014	**0.940**
WW	-0.261	0.045	-0.112	**0.639**

*ACC as Source Accessibility, PWE as Psychosocial Work Environment, TP as Task Performance, WSM as Work Social Media and WW as Work Website

4.6.4.2 Fornell and Larcker's (1981) Criterion

Through this criterion, the latent variable is able to better explain the variance on its own indicators as compare to the variance of other latent variables. The criteria are that the AVE of the latent variable shall be higher than the squared correlation between the latent variable and all other variables (Fornell and Larcker 1981, Ramayah et al. 2018). This can also be assessed by the square root of AVE on the diagonal should be higher than the correlation on the off-diagonal (Ramayah et al. 2018). However, there are criticism on the Fornell and Larcker's (1981) criterion where neither approach is found reliable to detect discriminant validity, thus, Heterotrait-Monotrait ratio of correlations (HTMT) are proposed as remedy (Henseler, Ringle, and Sarstedt 2015).

Table 4. 8 Fornell and Larcker's Criterion Results

	Psychosocial Work Environment	**Source Accessibility**	**Task Performance**	**Use of Digital Information Sources**
Psychosocial Work Environment	**0.719**			
Source Accessibility	-0.060	**0.887**		
Task Performance	-0.026	-0.022	**0.764**	
Use of Digital Information Sources	0.095	-0.567	-0.055	**0.804**

*The bold on the diagonal shows the square root of Average Variance Extracted (AVE)

4.6.4.3 Heterotrait-Monotrait Ration of Correlations (HTMT)

HTMT is known to be the most reliable method to assess discriminant validity as it is the ratio of correlations within the constructs to correlations between the constructs (Henseler, Ringle, and Sarstedt 2015, Ramayah et al. 2018). There are two approaches to assess discriminant validity with HTMT: 1) when using it as criterion, HTMT value greater than 0.85 or 0.90 shows that there is problem of discriminant validity; and 2) when using statistical test, assessing HTMT inference is the purpose (Henseler, Ringle, and Sarstedt 2015). If the HTMT value for structural paths contains the value of 1, it is deemed lack of discriminant validity. The constructs are empirically distinct if the value of 1 falls outside the interval's range. There is a need for researchers to run bootstrapping to derive the distribution of the HTMT statistic (Henseler, Ringle, and Sarstedt 2015). SmartPLS is used to execute the bootstrapping technique with a significance level of 0.1 from the two-tailed test and a 90% confidence interval. The output is tabulated in table 4.9.

In summary, all necessary assessment for the reflective model were undertaken and meets all the recommended criteria. The tests for the reflective measurement model confirmed that the indicators of this study were fit and accepted to be used in the structural model analysis.

Table 4. 9 Heterotrait-Monotrait Ration of Correlations (HTMT) Results

Construct	PWE	ACC	TP	USE
PWE				
ACC	0.147 (0.073,0.213)			
TP	0.192 (0.077,0.244)	0.090 (0.035,0.118)		
USE	0.324 (0.123,0.573)	0.747 (0.666,0.852)	0.151 (0.039,0.196)	

4.7 Assessment of Formative Measurement Model

After assessment of reflective measurement model, assessment of formative measurement model is required as there are presence of formative construct. SmartPLS 3.0 is used to assess the measurement model. Formative measurement model includes assessing convergent validity, collinearity and significance and relevance of formative indicators which will be discussed in the following subsections.

4.7.1 Convergent validity

According to Ramayah et al. (2018), convergent validity measures correlates positively with other indicators of the same construct. Redundancy analysis is used to analyses formative measurement models where the formative constructs must highly correlate with a reflective measure of the same construct (Hair et al. 2017). The threshold of the path coefficient is 0.70 is crucial as it shows sufficient support for convergent validity of the formative construct. The convergent validities of the single items were assessed using the square root of the correlation and the items for Quality of Information (QOI1, QOI2, QOI3 and QOI4) scoring 0.982, 0.832, 0.739 and 0.655 respectively, thus, it is concluded that convergent validity was established.

4.7.2 Collinearity

Collinearity is high correlations between two formative indicators (Hair, Gabriel, and Patel 2014). High collinearity is not expected between indicators in formative measurement models as the indicators are not essentially inter-changeable. According to Hair et al. (2017) and Ramayah et al. (2018), variance inflation factor (VIF) can be used to examine collinearity of

formative indicators. VIF values should be equal to or lower than 3, else it is deemed to have potential issue with collinearity problem (Diamantopoulos and Siguaw 2006). Results indicated that all formative indicators have VIF values below 3. Therefore, it is concluded that there are no critical levels of collinearity in the formative measurement model. Full results on the VIF scores are tabulated in 4.10.

Table 4. 10 Variance Inflation Factor of Formative Measured Indicators

Higher-Order Construct	Lower-Order Construct	VIF Value
Quality of Information	QOI1	2.453
	QOI2	2.490
	QOI3	2.348
	QOI4	2.080

4.7.3 Statistical Significance and Relevance of Formative Indicators Weights

According to Ramayah et al. (2018), outer weights is crucial to evaluate the contribution of a formative indicator. Outer weight is the outcome of multiple regression where latent variable scores as dependent variable and the formative indicators are the independent variable (Hair et al. 2017). Bootstrapping technique is required to obtain the outer weights values, with 5000 resamples, two-tailed test, and significance level of 0.05 was carried out. Based on the Table 4.11, three out of four formative indicators established values which are not significant, where $p>0.05$, except for QOI1, who p-value is 0, indicated significant.

According to Cenfetelli and Bassellier (2009) Hair et al. (2017) emphasized on the importance of absolute contribution of a formative indicator or be considered to the construct when dealing with non-significant indicator weights. Ramayah et al. (2018) also suggested to consider absolute contribution of the formative indicator to the construct should be assessed provided all loadings are above 0.50 and significant at t-value above 1.96. Therefore, all three QOI constructs were retained as formative indicators as its outer loading (0.832, 0.739, and 0.655 respectively) and t-value (16.820, 9.862, and 10.179 respectively) for QOI1, QOI2 and QOI3 have exceeded the minimum threshold value.

Table 4. 11 Path Assessment of Formative Measurement Model and Decision on Retention of Indicators

	Outer Weight	**Standard Deviation**	**t-value**	**p-value**	**97.5% Confidence Interval**	**Outer Loadings**	**Standard Deviation**	**t-value**	**p-value**	**97.5% Confidence Interval**	**Decision**
QOI1 -> Quality of Information	0.461	0.115	3.998	<.001	[0.232, 0.674]	0.916	0.033	27.580	<.001	[0.848, 0.969]	Retain
QOI2 -> Quality of Information	0.164	0.130	1.268	<.001	[0.092, 0.426]	0.835	0.051	16.367	<.001	[0.732, 0.921]	Retain
QOI3 -> Quality of Information	0.309	0.112	2.750	<.001	[0.110, 0.553]	0.867	0.042	16.367	<.001	[0.792, 0.938]	Retain
QOI4 -> Quality of Information	0.215	0.109	1.974	<.001	[0.024, 0.417]	0.806	0.059	13.631	<.001	[0.672, 0.892]	Retain

4.8 Assessment of Structural Model

The following subsections discusses on the assessment of structural model against five criteria, namely, lateral collinearity, significance and relevance of structural model relationships, level of coefficient of determinations (R^2), level of effect size (f^2), predictive relevance of an endogenous construct to the structural model (Q^2) (Ramayah et al. 2018). All the assessment of structural model is executed with SmartPLS 3.0.

4.8.1 Lateral Collinearity (Inner VIF)

According to Kock and Lynn (2012), there are possibility where presence of lateral collinearity in a structural model might mislead outcomes due to its strong ability in masking causal effects in a model despite the discriminant validity (vertical collinearity) were met. Lateral collinearity also known as predictor-criterion collinearity was assessed using inner VIF values with the similar threshold value of collinearity assessment in formative measurement models exceeding 3.3 (Diamantopoulos and Siguaw 2006) or 5 (Hair, Ringle, and Sarstedt 2011). The results of inner VIF is tabulated in Table 4.12 where it suggests that the structural model has no collinearity issues.

Table 4. 12 Inner Variance Inflation Factor (VIF) Values

	Task Performance	Use of Digital Information Sources
Source Accessibility		2.261
Quality of Information		2.021
Psychosocial Work Environment		1.029
Use of Digital Information Sources	1.118	
Age	1.120	1.301
Gender	1.002	1.006

4.8.2 Level of Coefficient Determination (R^2)

Upon the confirmation of no presence of collinearity issues in the structural model, the level of coefficient determination, R^2 was determined. R^2 measures the level of variance in the endogenous construct explained by the exogenous constructs linked to it (Ramayah et al. 2018). There are several interpretations of R^2 values introduced by Chin (1998), Cohen (1988) and Hair et al. (2017). According to Hair et al. (2017), the R^2 values of 0.75, 0.50 and 0.25 describes substantial, moderate or weak levels of predictive accuracy respectively. In this study, the R^2 value for use of digital information sources is 0.385, suggesting moderate levels of predictive accuracy and R^2 value of task performance is 0.019 which is deemed weak levels of predictive accuracy.

4.8.3 Level of Effect Size (f^2)

Next, the level of effect size, f^2, indicates "the relative impact of predictor construct on an endogenous construct" (Ramayah et al. 2018, 146) is examined. Similarly, the f^2 values were assessed from PLS algorithm, under "f Square" section. The guidelines for assessing f^2 values are 0.35, 0.15 and 0.002 represents large, medium and small effect size, whilst values below 0.02 indicates no effect (Cohen 1988).

Following the rule of thumb by Cohen (1988), the relative impact on psychosocial work environment and use of digital information sources are small with 0.003 value, while impact of source accessibility on use of digital information and quality of information on use of digital information sources are weak with the values of 0.088 and 0.064 respectively.

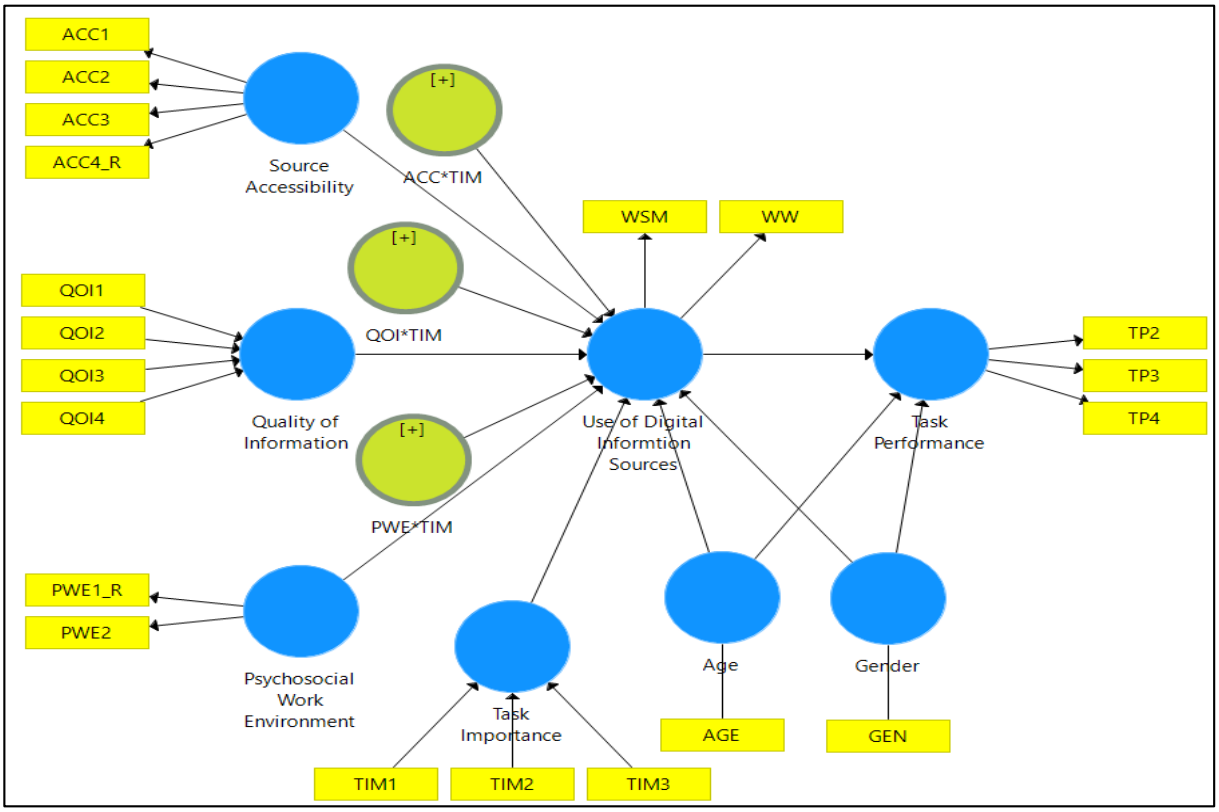
4.8.4 Blindfolding-based Cross-Validated Redundancy Measure Using PLSpredict (Q^2)

Q^2 reflects on the predictive accuracy of a path model (Geisser 1974). In general, it can be determined with the blindfolding procedure in SmartPLS where it is a resampling technique that removes single points of indicators in the reflective measurement model of the endogenous construct (Ramayah et al. 2018). A Q^2 larger than zero indicates that the predictive relevance for a particular endogenous construct in the model is present. However, if the Q^2 value is less than zero, it signifies that there is lack of predictive relevance (Hair et al. 2017). The Q^2 value of this study for use of digital information sources is 0.220 which shows that the exogenous

constructs have predictive relevance of the endogenous constructs. Besides, the task performance, the Q^2 value is 0.003 which is also higher than 0, indicates that there is presence of predictive relevance.

4.8.5 Hypothesis Testing

Figure 4. 1 Path Diagram



Upon substantiating the explanatory and predictive power of the structural model, the examination of significance and relevance of structural relationship is recommended (Hair et al. 2019). Figure 4.1 shows the path diagram of this study. Path coefficients between latent variables and confidence interval bias is assessed with SmartPLS. The assessment of path coefficient, there are three different path coefficient rules for a one-tailed test which are; (1) when p-value<0.01, t-value>2.33; (2) when p-value<0.05, t-value>1.645; and (3) when p-value<0.10, t-value>1.28 (Hair et al. 2017). As for the confidence interval bias, it affirms the significance and relevance of the structural model which were generated with SmartPLS bootstrapping test. The relationship is significant if the value 0 does not occur within the 95%

confidence interval bias results. The results of path coefficients and confidence interval bias are tabulated in Table 4.13.

H1: Source accessibility positively influences the use of digital information source for work purposes among the rural entrepreneurs in Malaysia.

H1 is supported as the ß = 0.297, t = 5.202, p <.001 and a 95% confidence interval bias of [0.247, 0.423] and is statistically significant. This shows that the study rejects the null hypothesis as the t-value is larger than the critical value, and the p-value is smaller than the significance of 5%; therefore, it resides in the rejection region.

H2: Quality of information positively influences the use of digital information source among the rural entrepreneurs in Malaysia.

H2 is supported as the ß = 0.318, t = 5.733, p <.001 and a 95% confidence interval bias of [0.217, 0.405] and is statistically significant. This shows that the study rejects the null hypothesis as the t-value is larger than the critical value, and the p-value is smaller than the significance of 5%; therefore, it resides in the rejection region.

H3: When the psychosocial work environment is positive, the use of digital information sources for work purposes increases among the rural entrepreneurs in Malaysia.

H3 is not supported as the ß = 0.040, t = 0.739, p = 0.230 and a 95% confidence interval bias of [-0.093, 0.105]. Thus, hypothesis is not supported.

H4: The use of digital information sources *for work purposes positively relates to task performance of the rural entrepreneurs in Malaysia.*

H4 is supported as the ß = 0.092, t = 1.375, p = 0.039 which is lower than 5 and a 95% confidence interval bias of [-0.160, 0.013]. Thus, hypothesis is supported.

4.8.6 Moderation Analysis

Two-stage approach are being used in this study to analyses the moderation analysis as there is presence of formative construct in both exogenous and moderator variables. Before running the analysis, the model has to ensure the AVE value, CR value and Outer VIF values are under

threshold value. In this study, with reference to Figure 4.6, the AVE value, CR value and Outer VIF value are under threshold. The bootstrapping is executed to identify the difference in R squared results.

Before the moderating variable, the R-squared value is at 0.385 and subsequently, after the moderating variable was added, the R-squared value is 0.390. The R-squared change of 0.005 indicates that with the additional of three interaction term, the R-squared has changed about 0.5% of additional variance.

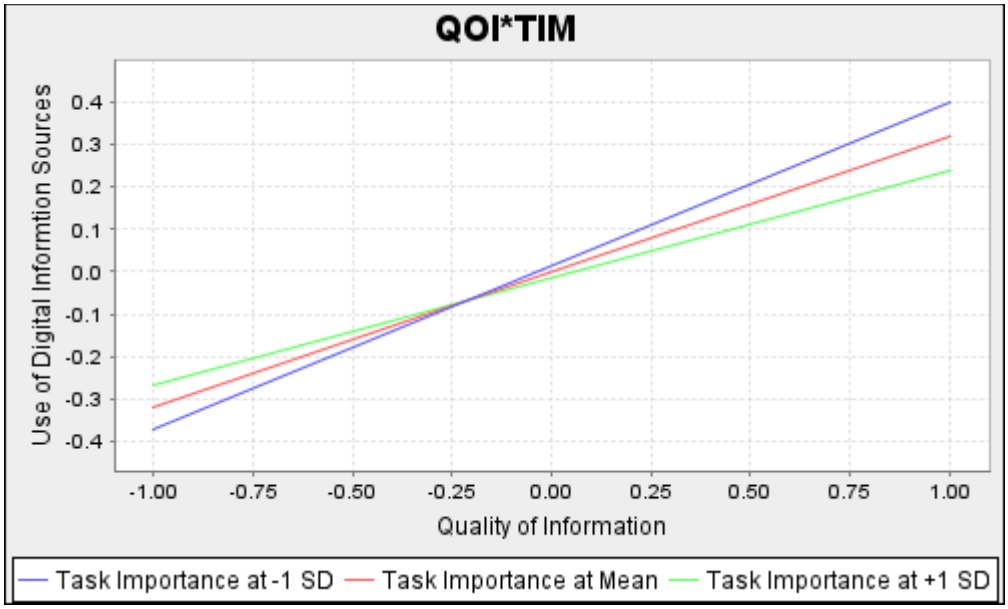
The f-squared value is 0.008 which has small effect size as suggested by Kenny (2016). The f-squared guidelines given by Kenny (2016) are 0.005 as small effect size, 0.01 as medium effect size and 0.025 as large effect size. The interaction effect test is then tested to determine if the beta is statistically significant or not.

Table 4. 13 Results of Moderator Analysis

Hypothesis	Relationship	Standard Beta	Standard Error	t-value	Decision
H5a	Source Accessibility (ACC) * Task Importance (TIM) -> Use of Digital Information Sources (USE)	-0.033	0.068	0.475	Not Supported
H5b	Quality of Information (QOI) * Task Importance (TIM) -> Use of Digital Information Sources (USE)	-0.066	0.049	1.344*	Not Supported
H5c	Psychosocial Work Environment (PWE) * Task Importance (TIM) -> Use of Digital Information Sources (USE)	-0.003	0.057	0.044	Not Supported

Note: *p<0.05 **p<0.01 ***p≤0.001

Figure 4. 2 Interaction Plot between Quality of Information and Use of Digital Information Sources Moderated by Task Importance



As shown in Table 4.13, the interaction between Quality of Information (QOI) * Task Importance (TIM) is negative. Thus, it shoes that the positive relationship between QOI would be stronger when TIM is lower. This was also shown in Figure 4.2. This is due to the interaction occurred on the negative axis of quality of information (QOI) and negative axis of use of digital information sources (USE). Therefore, our hypothesis, H5a, H5b and H5c are not supported as what we have hypothesized before analysis was done.

Table 4. 14 Results of Hypothesis Testing

Hypothesis	**Relationship**	**Path Coefficient (ß)**	**Std. Error**	**t-value**	**p-value**	**95% Confidence Interval**	**Decision**	***R²***	***f²***	***Q²***
H1	ACC->USE (+)	0.297	0.057	5.202***	≤0.001	[0.247, 0.423]	Supported	0.390	0.080	0.223
H2	QOI->USE (+)	0.318	0.056	5.733***	≤0.001	[0.217, 0.405]	Supported		0.062	
H3	PWE->USE (+)	0.040	0.054	0.739	0.230	[-0.093, 0.105]	Not Supported		0.003	
H4	USE->TP (-)	0.092	0.052	1.759*	0.039	[-0.160, 0.013]	Supported		0.005	
H5a	TIM*ACC ->USE (-)	0.033	0.068	1.375	0.117	[-0.156, 0.044]	Not Supported		0.004	
H5b	TIM*QOI->USE (-)	0.066	0.049	1.344*	0.050	[-0.171, -0.007]	Not Supported		0.005	
H5c	TIM*PWE->USE (-)	0.003	0.057	0.044	0.482	[-0.092, 0.074]	Not Supported		0.004	

Note: *p<0.05 **p<0.01 ***p≤0.001

(+): Positive Relationship, (-) Negative Relationship

4.9 Discussion of Results

Table 4.14 shows a summary of the proposed hypotheses in which two hypotheses (H1 and H2) are supported and five hypotheses (H3, H4, H5a, H5b and H5c) were unsupported. According to the findings of the study, the factors found to influence the use of digital information sources and task importance for the rural entrepreneurs are positively influenced by Source Accessibility and quality of information.

Table 4. 15 Summary of the Results of Research Question and Hypotheses

Research Questions	**Hypotheses**		**Results**
RQ1: How do information source accessibility and quality of information influence the use of digital information sources by rural entrepreneurs?	H1	Source accessibility positively influences the use of digital source for work purposes among the rural entrepreneurs in Malaysia.	Supported
	H2	Quality of information positively influences the use of digital source for work purposes among the rural entrepreneurs in Malaysia.	Supported
RQ2: How does psychosocial work environment influence the use of digital information sources by rural entrepreneurs?	H3	When the psychosocial work environment is positive, the use of digital information sources for work purposes increases among the rural entrepreneurs in Malaysia.	Not supported
RQ3: How does the use of digital information sources affect task performance of rural entrepreneurs?	H4	The use of digital information sources for work purposes positively relates to task performance of the rural entrepreneurs in Malaysia.	Supported
RQ4: What is the moderation effect of task importance on the relationships between information source accessibility, quality of information,	H5a	When task importance is high, the positive relationship between source accessibility, and the use of digital information sources for work purposes are stronger.	Not supported
	H5b	When task importance is high, the positive relationship between quality of information	Not Supported

psychosocial work environment and the use of digital information sources?	H5c	and the use of digital information sources for work purposes are stronger. When task importance is high, the positive relationship between psychosocial work environment and the use of digital information sources for work purposes are stronger.	Not supported

The analyses from the data collection revealed the following notable findings:

- Source accessibility (ACC) positively affects the use of digital information sources of the rural entrepreneurs in Malaysia.
- Quality of information (QOI) positively affects the use of digital information sources of the rural entrepreneurs in Malaysia.
- Psychosocial work environment (PWE) does not positively affect the use of digital information sources of the rural entrepreneurs in Malaysia.
- Use of digital information sources (USE) positively affect the task performance (TP) of the rural entrepreneurs in Malaysia.
- Task importance (TIM) does not significantly moderate the relationship between source accessibility (ACC) and use of digital information sources when the task importance (TIM) is high.
- Task importance (TIM) does not significantly moderate the relationship between quality of information (QOI) and use of digital information sources when the task importance (TIM) is high.
- Task importance (TIM) does not significantly moderate the relationship between psychosocial work environment (PWE) and use of digital information sources when the task importance (TIM) is high.

In conclusion, H1, H2 and H4 are consistent with existing literature. However, H3, H5a, H5b and H5c are not consistent with existing literature. This is due to emotional demands from rural entrepreneurs in Malaysia may have different behavior as emotions do have great impact on the use of digital information sources. Besides, there are no significant relationship between ACC, PWE and USE moderated by TIM as source accessibility is deemed to be less important

compare to quality of information (Xu, Tan, and Yang 2006). The first part of the CBM is supported where the TPB is not supported in this study.

4.10 Conclusion

This chapter discusses the preparation and analysis of data. The measurement model is analyzed and observed with SPSS 25 and SmartPLS 3.0. The results yielded from the measurement model analyses were proven to reach its threshold values and thus have successfully passed the measurement model assessment and proceeds to analyzing the structural model assessment. Then, the structural model analysis was conducted using SmartPLS 3.0. It was found that among the seven hypotheses, only four was supported.

CHAPTER FIVE: DISCUSSION AND CONCLUSION

5.1 Chapter Overview

The chapter first elaborates on the on the discussion of results which includes the summary of the main findings and survey findings under respective hypotheses. Then, the chapter outlines the research implications of the study; including theoretical and managerial implications. The research limitations and future recommendations are also discussed in this chapter. Lastly, the chapter and thesis ends with the conclusion of the study.

5.2 Recapitulation of the Main Findings

The conceptual framework of this study was developed based on cost-benefit analysis and theory of planned behavior proposing psychosocial work environment (PWE) as a new antecedent and task importance (TIM) as a moderator in explaining the use of digital information sources (USE) to task performance. By using the telephone interview, data were collected from entrepreneurs in Malaysia. Majority of the entrepreneurs are in food and beverage industry, sales and services industry, handicraft industry and agriculture industry. The data collected were ten analyzed with SPSS 25 and SEMPLS 3.0. The research findings indicated that source accessibility (SA) and quality of information (QOI) positively influences the use of digital information sources (USE) among the rural entrepreneurs in Malaysia. However, the relationship between psychosocial work environment (PWE) and use of digital information sources are not supported which may be due to habits of the employees. Similarly, the proposed relationship between use of digital information sources (USE) and task performance (TP) is not supported. The moderation analysis revealed that the relationship between task importance (TIM) and use of digital information sources (USE) contradicts the hypothesized relationship in this study. Overall, the brief recapitulation of the proposed hypotheses and findings are discussed based on the research questions which are presented next.

Research Question 1: How do information source accessibility and quality of information influence the use of digital information sources by rural entrepreneurs?

The findings of research imply the source accessibility (ACC) and quality of information (QOI) are antecedents influencing the rural entrepreneur's use of digital information sources in

Malaysia. Source accessibility (ACC) is the strongest predictor as compared to quality of information (QOI) as the rural entrepreneurs' choice of use of information depends on which source was the easiest way to reach. The proposed relationship for both sources accessibility (ACC) and quality of information (QOI) on use of digital information sources (USE) is supported. According to prior studies, quality of information and source accessibility are strongly significant on the use of information sources which is consistent with this study (Agarwal, Xu, and Poo 2011, Xu, Tan, and Yang 2006).

Source accessibility and quality of information are one of the main factors to determine the use of digital information sources (Gray and Meister 2004, Zhang 2014). According to Chen et al. (2019) access is the capacity of individuals to seek, locate, and obtain information whereas, the ability of people to use the information they receive to make decisions that preserve and/or improve on related issues are referred to as use of information sources. The quality of the information in the source corresponds to how the source interacts with the information seeker (Agarwal, Xu, and Poo 2011). Consistent with prior studies show that there is a significant positive relationship between information source accessibility and quality of information influences the use of digital information sources by the rural entrepreneurs (Agarwal, Xu, and Poo 2011, Xu, Tan, and Yang 2006). For the source accessibility with ß = 0.297, t = 5.202, p <.001 and a 95% confidence interval bias of [0.247, 0.423] and quality of information with ß = 0.318, t = 5.733, p <.001 and a 95% confidence interval bias of [0.217, 0.405], it shows that the rural dwellers do agree on that time and effort accessing to the information sources and the information received is clear in meaning, easy to comprehend, accurate and credible contributes to their decision to use the digital information sources. As rural entrepreneurs do need to seek for information when there is a gap or uncertainty. Information seeking is of as a process that people use to consciously alter their level of knowledge (Ikoja-Odongo and Mostert 2006). The result from this study is consistent with the prior study where the effect of quality information is strongly significant with the information source used Agarwal, Xu, and Poo (2011).

Research Question 2: How does psychosocial work environment (PWE) influence the use of digital information sources (USE) by rural entrepreneurs?

The findings of research illustrate that psychosocial work environment (PWE) does not have significant relationship with rural entrepreneurs' use of digital information sources. It may be

due to emotional demands where the employees or workers preferably hides their emotion which is in connection with human service work (Kristensen et al. 2005). Positive emotion increases positive self-belief, which protects persons from the negative consequences of unpleasant events. One of the positive belief is self-efficacy, which relates significantly to work motivation and performance and according to prior research, positive emotions appear to boost self-efficacy (Diener, Thapa, and Tay 2020). The emotions may also be caused by the business opportunities, stress on profit of the business due to the COVID-19 outbreak. COVID-19 outbreak may have causes serious stresses among entrepreneurs especially those with employees (Backman et al. 2021).

Hypothesis 3 postulates that psychosocial work environment positively influences the use of digital information sources for work purposes among the rural entrepreneurs in Malaysia. Finding in this study indicates that there is no significant relationship between psychosocial work environment and use of digital information sources by rural entrepreneurs (ß = 0.040, t = 0.739, p = 0.230 and a 95% confidence interval bias of [-0.093, 0.105]), which is inconsistent with prior studies. Psychosocial work environment was deemed important in a working place due to its motivation and social risk at workplace (Hammond et al. 2011, Suseno et al. 2019). According to Humphrey, Nahrgang, and Morgeson (2007), psychosocial work environment such as autonomy, skill variety, task identification, task significance and feedback positively influences the positive behavioral outcomes. This result may differ from this study as majority of the participants in this study involves in small businesses where they do not receive much motivation or was doing most of the things themselves without depending on others. This may be also due to emotional demands that affected where entrepreneurs choose to hide their emotions instead of speaking it out. As emotions leads to psychological empowerment, it affects the task performance, task satisfaction at workplace (Diener, Thapa, and Tay 2020). Thus, lack of the positive psychosocial work environment to motivate them to use the digital information sources even though they may be aware that they are good at what they are doing.

Besides, the PWE and USE may not be supported may also be due to the questionnaires developed by Kristensen et al. (2005) are more suitable to employees instead of entrepreneurs. According to Burr et al. (2019), the Copenhagen psychosocial questionnaire was being used in workplace setting as it covers wide range of domains including demands at work, work organization and job contents, interpersonal relations and leadership, work-individual interface, social capital, offensive behaviors, health and well-being. Where prior studies mainly used the

questionnaire to determine job satisfaction research and classical work environment (Aronsson et al. 2017, Dollard and Bakker 2010).

Research Question 3: How does the use of digital information sources (USE) affect task performance (TP) of rural entrepreneurs?

The findings of research imply that the proposed relationship between use of digital information sources (USE) and task performance (TP) is supported. As information needs changes with the task performance, the important phase to complete a task is to concentrate on relevant information and sources (Vakkari and Hakala 2000). To achieve a greater performance at work, seeking for information through relevant information sources are crucial and the chances of using the information will be higher if the information provided are deemed relevant and credible. Hypothesis 4 assumes that the use of digital information sources positively influences task performance of the rural entrepreneurs. This finding is found to be significant (ß = -0.092, t = 1.759, p = 0.039 and a 95% confidence interval bias of [-0.160, 0.013]) and consistent with past findings (Humphrey, Nahrgang, and Morgeson 2007, Koopmans et al. 2013, Gatewood et al. 2002). According to Gatewood et al. (2002), this study covers the opportunities for its future research where it suggests the use of digital information sources for entrepreneurship researches towards actual entrepreneurs. Participants who receives more task achievement motivations may exert more effort in spending time to use information sources to seek for information to reach task achievement (Gatewood et al. 2002). To seek a clearer understanding of relevant information in order to achieve a greater task performance, factors such as frequency and types of information sources used are crucial (Vakkari and Hakala 2000). Besides, if task performance were being emphasized to at all stages of the task, the information seeker would use information sources more frequently. Generally, rural entrepreneurs who are willing to achieve greater performance at task and with knowledge to use digital information sources would have greater chance to use digital information sources. According to Byström (2002), the use of information sources regardless of types increases when the task complexity is high and the expectation to perform better. Thus, the finding of this study is consistent with prior studies.

Research Question 4: What is the moderation effect of task importance on the relationships between information source accessibility, quality of information, psychosocial work environment and the use of digital information sources?

The findings of the research illustrate that the task importance (TIM) does not significantly moderate the relationships between source accessibility (SA), psychosocial work environment (PWE) and use of digital information sources (USE). The proposed relationship between SA and USE, and PWE and USE are not supported which may be due to population characteristics such as background knowledge and age. According to Zhang, Stough, and Gerlowski (2022) the older entrepreneurs or workers show more nuanced understanding of entrepreneurship while the digitalization intersects.

On the other hand, the task importance (TIM) significantly moderates the relationship between quality of information (QOI) and use of digital information sources (USE). One would prefer to get higher quality of information and chooses that particular information sources because of its information quality and if it does not suit their purpose, the source would be rejected (Vakkari and Hakala 2000). According to Xu, Tan, and Yang (2006), task importance is expected to play an important role to information seekers to be more sensitive to information quality outweighing the accessibility. Hypothesis 5 assumes that the source accessibility, quality of information and psychosocial work environment has effect on use of digital information sources moderated by task importance. Source accessibility and psychosocial work environment shows that there is no significant relationship with the use of digital information sources moderated by task importance with the result of source accessibility and quality of information being ß = 0.033, t = 1.375, p = 0.117 and a 95% confidence interval bias of [-0.156, -0.044] and ß = 0.003, t = 0.044, p = 0.482 and a 95% confidence interval bias of [-0.092, 0.074] respectively. According to Agarwal, Xu, and Poo (2011) and Xu, Tan, and Yang (2006), quality of information is found to be more important than source accessibility which is consistent with the finding of this study. This is due to when there are more information sources offers, the least effort principle used for source accessibility no longer holds. As for quality of information, it shows insignificant relationship with use of digital information sources moderated by task importance with the result ß = 0.066, t = 1.344, p = 0.050 which is lower or equal to 0.050 and a 95% confidence interval bias of [-0.171, -0.007]. This is inconsistent with prior study where once the information seeker has decided on which information source to use, the options are more quality driven as completing an important task (Xu, Tan, and Yang 2006).

5.3 Research Implications

This section discusses the implication of the research. The implications are separated in to two facets that include the theoretical implications and the practical implications.

5.3.1 Theoretical Implications

Result of the study are added to the body of knowledge dedicated to the use digital information seekers among rural entrepreneurs. The main theoretical implication is the application of CBM and TPB in explaining the adoption of use of digital information sources among the rural entrepreneurs and examining the task performances. This study integrates the CBM and TPB with an additional exogenous variable; PWE and an endogenous variable; TP in a single research model in order to predict and determine the use of digital information sources among the rural entrepreneurs for work purposes and the task performance.

Furthermore, this study also underlines the source accessibility (ACC) is the strongest predictor as compared to the quality of information (QOI). Both the ACC and QOI positively agree and have positive effects on the use of digital information source (USE). This is an agreement to the study conducted by Agarwal, Xu, and Poo (2011). Thus, this study found that it is important that the source accessibility is addressed prior to the quality of information for the rural entrepreneur. This would aid in increasing the use of digital information source in the rural areas.

The researchers, Pejtersen et al. (2009) found that psychosocial work environment plays an important role in affecting the employees' skills and task performances. In workplace, nature and quality of workplace norms such as emotional demands for work are involved, which means that work and social support from colleagues at workplace are important (Kristensen et al. 2005). In this study, the exogenous variable of social risk focusing on the psychosocial work environment highlighting (PWE). In the rural areas, the PWE is very different as compared to the urban area. As in the rural area, the environment where rural entrepreneurs conduct their daily task and they commonly work without a team as they prefer to work alone specializing in their own business (Zhang, Stough, and Gerlowski 2022). Also, it was found that most of the rural entrepreneurs do not overlap in their business nature in their community that would cause a healthy competition in the business. Thus, the rural entrepreneur would not feel the pressure from the PWE and so they do not find the urge to grow and improve their business with the usage of the digital information sources. This may be the main cause of the results of

the research that indicated that the relationship of PWE and USE is not supported. Besides, the data was collected during the COVID-19 outbreak, thus, the situation may have also affected the PWE causing high work-stress (Backman et al. 2021). This may also affect the PWE thus, relationship is not supported.

In addition, the endogenous variable of task importance was added to the study which elevates this study as compared to the study conducted by Agarwal, Xu, and Poo (2011) and Xu, Tan, and Yang (2006) for which their study ends at the use of information source. This study shows that the USE does not affect the task performance (TP). It was found that the business conducted by the rural entrepreneurs are mainly business that require hand skills which are unique and different as compared to the urban entrepreneurs. It is found that due to COVID-19 outbreak is has creates more stressors to the entrepreneurs (Backman et al. 2021). Work stressors such as low business opportunity as there was a nationwide lock down which greatly impacted all entrepreneurs.

Besides, the unique theoretical contribution of this study is that it focuses on use of digital information sources and only to work-related information. This adds value to the study as prior studies are more general and not specific. Respondents in this study have reported to have been exposed to the use of digital information sources however, due to certain restrictions from the facilities provided, the use of digital information sources are limited in certain areas.

5.3.2 Practical Implications

The findings of this research are able to provide important implications. The study is able to benefit the Malaysia government by understanding the digital penetration to rural areas and how it has affect the rural entrepreneurs' performances. This aligns with the Malaysia's Local Agenda and mission of MDEC which is to develop Malaysia's digital economy. With the result of the study, NGOs are able to contribute to entrepreneurship development in the rural areas by focusing on which areas needed enhancement.

The second practical implication of this study is that the study was conducted on the rural entrepreneur on their information seeking behavior in the whole of Malaysia. Thus, this study had a sample size of 417 scattered throughout the whole Malaysia focusing on the rural entrepreneurs. Thus, this study will help the government or policy makers to better analyze the rural entrepreneur with different demography in Malaysia and help to improve the skills and infrastructure of the rural entrepreneur in seeking for information.

Moreover, the government shall consider the digital platforms to be more reachable to rural areas as the SA and QOI are reported to have significant impact on the use of digital information sources among rural entrepreneurs. Some of the digital infrastructures are vandalized or left behind which may be one of the causes of limited reach to digital information sources. Where more awareness shall be shared with the rural dwellers on how the internet may help to bridge the digital divide between urban and rural communities. With this, it aligns with achieving the SPV 2030 objectives development for all – restructuring economy, (ii) addressing wealth and income disparities – addressing inequalities and (iii) united, prosperous and dignified nation – nation building.

5.4 Research Limitations and Future Recommendations

This section discusses the limitations and the future recommendations for future research. The limitation in the survey are that, the research design used in this study is cross-sectional study. According to Raz and Lindenberger (2011), he suggests that in order to reach causal inferences, longitudinal studies would be a better alternatives compare to the cross-sectional studies as the early and later changes in a variable is more informative than simple correlations among changes. As longitudinal data would be crucial to draw conclusions about the changes occurring within an individual (Salthouse 2011).

Besides, data collection method used may have limited the ability to conduct a thorough analysis of the results. alternative data collection method can be used as compare to telephone interview. As telephone interview was used in this survey due to the COVID-19 pandemic where the whole country is under lock down status. Thus, if possible, with different data collection method may produce different results. As in telephone interview, the researcher is unable to observe the behavior and body language of the respondents and unable to use any visual aids to assist in the interview session. It would be beneficial if the data collection can be collected through postal service however, with the list provided by the KPLB, majority does not provide the address thus, this is unable to be done in this research. Besides, with postal mail, it may further delay this study as it might take weeks for the respondent to receive, after completion they will have to mail it back which is time consuming and unsure if the respondent is willing to pay for the postal service.

It is recommended that similar study to be conducted for future research to see how the rural entrepreneurs have changed as the digitalization era is taking over all businesses despite

being in rural or urban area especially after the COVID-19 pandemic. Besides, future researchers can possibly get in a well-designed qualitative study to understand a full in-depth story of the use of information sources and how it affects the task performance. Furthermore, the task importance can be a mediator variable instead of moderator to test if there is more relevance if it mediates the relationship which may input more to the body of knowledge of this study.

5.5 Conclusion

This research examines the antecedents influencing the use of digital information sources among rural entrepreneurs and their task performance in Malaysia. In order to attain the research objectives, a telephone interview was used to collect data from rural entrepreneurs in Malaysia. The research also carried out a comprehensive literature review on the Cost-Benefit Model. Three research questions along with five hypotheses and the conceptual framework of this study were developed. Two of eight paths in the research model were discovered to be significant in the context of this study. The findings showed that source accessibility and quality of information played a significant role is use of digital information sources.

As the progress of the Malaysia government works towards the SPV 2030 objectives, the government and respective boards need to collaborate in leading the rural entrepreneurs towards digitalization. Overall, the findings of this study are anticipated to benefit the Malaysia government, policymakers and builds confidence to the rural entrepreneurs. Finally, there is a distinct, if not a high possibility, that Malaysia can advance towards achieving the SPV 2030 objectives development for all – restructuring economy, (ii) addressing wealth and income disparities – addressing inequalities and (iii) united, prosperous and dignified nation – nation building.

REFERENCE LIST

Abdul Hamid, N. A., C. H. Cheun, N. H. Abdullah, M. F. Ahmad, and Y. Ngadiman. 2019. "Does Persuasive E-commerce Website Influence Users' Acceptance and Online Buying Behaviour? The Findings of the Largest E-commerce Website in Malaysia." In *ICT for a Better Life and a Better World: The Impact of Information and Communication Technologies on Organizations and Society*, edited by Youcef Baghdadi and Antoine Harfouche, 263-279. Cham: Springer International Publishing.

Aboyade, B Olabimpe. 1984. "Communications Potentials of the Library for Non-Literates–An Experiment in Providing Information Services in a Rural Setting." *Libri* 34 (1):243-262.

Abu Bakar, Ahmad Bakeri 2011. "Information Seeking Behaviours of Rural Women in Malaysia." *Library Philosophy and Practice*:1-8.

Adamides, George, and Andreas Stylianou. 2018. "Evaluation of the Radio as an Agricultural Information Source in Rural Areas." *Journal of Agricultural & Food Information* 19 (4):362-376. doi: 10.1080/10496505.2017.1401480.

Adnan, Hezri. 2019. "Revitalising Rural Malaysia." *New Straits Times*. https://www.nst.com.my/opinion/columnists/2019/02/463706/revitalising-rural-malaysia#:~:text=Rural%20Malaysia%20is%20still%20home,cent%20of%20Malaysia's%20land%20mass.

Agarwal, Naresh Kumar, Yunjie Xu, and Danny C. C. Poo. 2011. "A Context-Based Investigation into Source Use By Information Seekers." *Journal of the American Society for Information Science and Technology* 62 (6):1087-1104. doi: 10.1002/asi.21513.

Agnihotri, Raj, Rebecca Dingus, Michael Y. Hu, and Michael T. Krush. 2016. "Social Media: Influencing Customer Satisfaction in B2B Sales." *Industrial Marketing Management* 53:172-180. doi: 10.1016/j.indmarman.2015.09.003.

Ajzen, Icek. 1991. "The Theory of Planned Behavior." *Organizational Behavior and Human Decision Processes* 50 (2):179-211. doi: https://doi.org/10.1016/0749-5978(91)90020-T.

Ajzen, Icek, Thomas C. Brown, and Lori H. Rosenthal. 1996. "Information Bias in Contingent Valuation: Effects of Personal Relevance, Quality of Information, and Motivational Orientation." *Journal of Environmental Economics and Management* 30 (1):43-57. doi: https://doi.org/10.1006/jeem.1996.0004.

Alessi, Edward J., and James I. Martin. 2010. "Conducting an Internet-based Survey: Benefits, Pitfalls, and Lessons Learned." *Social Work Research* 34 (2):122-128.

Aliyu, Ahmad, Muhammad Umar Bello, Rozilah Kasim, and David Martin. 2014. "Positivist and Non-Positivist Paradigm in Social Science Research: Conflicting Paradigms or Perfect Partners." *Journal of Management and Sustainability* (3):79-95.

Allen, Mike. 2017. "Variables, Moderating Types." *The SAGE Encyclopedia of Communication Research Methods*. doi: 10.4135/9781483381411.

Anwar, Mumtaz Ali, and Hana Imam Supaat. 1998. "Information Needs of Rural Malaysians: An Exploratory Study of a Cluster of Three Villages with No Library Service." *The International Information & Library Review* 30 (1):23-36.

Ariff, Imran. 2020. "Slow and 'Embarrassing' Broadband Hurts Growth, Says Business Group." *Free Malaysia Today* https://www.freemalaysiatoday.com/category/nation/2020/09/29/slow-and-embarrassing-broadband-hurts-growth-says-business-group/.

Aronsson, Gunnar, Töres Theorell, Tom Grape, Anne Hammarström, Christer Hogstedt, Ina Marteinsdottir, Ingmar Skoog, Lil Träskman-Bendz, and Charlotte Hall. 2017. "A Systematic Review Including Meta-Analysis of Work Environment and Burnout Symptoms." *BMC Public Health* 17 (1):264. doi: 10.1186/s12889-017-4153-7.

Asohan, A. 2015. "11th Malaysia Plan: Broadband Gets Some Love." https://www.digitalnewsasia.com/digital-economy/11th-malaysia-plan-broadband-gets-some-love.

Atinc, Guclu, Marcia J. Simmering, and Mark J. Kroll. 2011. "Control Variable Use and Reporting in Macro and Micro Management Research." *Organizational Research Methods* 15 (1):57-74. doi: 10.1177/1094428110397773.

Aurora, UMEA Universitet. 2019. "Working Environment." https://www.aurora.umu.se/en/employment/working-environment-health-and-equal-access/working-environment/.
Babbie, Earl R. 2014. *The Practice of Social Research*. 14 ed. USA: Cengage learning.
Backman, Mikaela, Johannes Hagen, Orsa Kekezi, Lucia Naldi, and Tina Wallin. 2021. "In the Eye of the Storm: Entrepreneurs and Well-Being During the COVID-19 Crisis." *Entrepreneurship Theory and Practice*:10422587211057028. doi: 10.1177/10422587211057028.
Badarudin, Ummi Wahida, Wan Isni Sofiah Wan Din, Yuli Adam Prastyo, AZalili Musa, and Shahreen Kasim. 2018. "Internet of Things: An Implementation and Its Challenges in Malaysia." *International Journal on Advanced Science, Engineering and Information Technology* 8 (6):2641-2647. doi: 10.18517/ijaseit.8.6.5043.
Baernholdt, Marianne, and Barbara A. Mark. 2009. "The Nurse Work Environment, Job Satisfaction and Turnover Rates in Rural and Urban Nursing Units." *Journal of Nursing Management* 17 (8):994-1001. doi: 10.1111/j.1365-2834.2009.01027.x.
Bai, Billy, Rob Law, and Ivan Wen. 2008. "The Impact of Website Quality on Customer Satisfaction and Purchase Intentions: Evidence from Chinese Online Visitors." *International Journal of Hospitality Management* 27 (3):391-402. doi: https://doi.org/10.1016/j.ijhm.2007.10.008.
Ball, Helen L. 2019. "Conducting Online Surveys." *Journal of Human Lactation* 35 (3):413-417. doi: 10.1177/0890334419848734.
Bao, Yukun, Tao Xiong, Zhongyi Hu, and Mboni Kibelloh. 2013. "Exploring Gender Differences on General and Specific Computer Self-Efficacy in Mobile Learning Adoption." *Journal of Educational Computing Research* 49 (1):111-132. doi: 10.2190/EC.49.1.e.
Baqa, H., N. B. Truong, N. Crespi, G. M. Lee, and F. Le Gall. 2018. "Quality of Information as an Indicator of Trust in the Internet of Things." 2018 17th IEEE International Conference On Trust, Security And Privacy In Computing And Communications/ 12th IEEE International Conference On Big Data Science And Engineering (TrustCom/BigDataSE), 1-3 Aug. 2018.
Barber, Larissa K., and Alecia M. Santuzzi. 2015. "Please Respond ASAP: Workplace Telepressure and Employee Recovery." *Journal of Occupational Health Psychology* 20 (2):172-189. doi: 10.1037/a0038278.
Becker, Thomas E., Guclu Atinc, James A. Breaugh, Kevin D. Carlson, Jeffrey R. Edwards, and Paul E. Spector. 2016. "Statistical Control in Correlational Studies: 10 Essential Recommendations for Organizational Researchers." *Journal of Organizational Behavior* 37 (2):157-167. doi: 10.1002/job.2053.
Befort, Nancy, and Keith Hattrup. 2003. "Valuing Task and Contextual Performance: Experience, Job Roles, and Ratings of the Importance of Job Behaviors." *Applied H.R.M. Research* 8 (1-2):17-32.
Behrangrad, Mahdi. 2015. "A Review of Demand Side Management Business Models in the Electricity Market." *Renewable and Sustainable Energy Reviews* 47:270-283. doi: 10.1016/j.rser.2015.03.033.
Belkin, N. J., Oddy R. N., Brooks, H. M. 1982. "Ask For Information Retrieval: Part I. Background and Theory." *Journal of documentation* 38 (2):61-71. doi: 10.1108/eb026722.
Beltramini, Richard F. 2006. "Consumer Believability of Information in Direct-to-Consumer (DTC) Advertising of Prescription Drugs." *Journal of Business Ethics* 63 (4):333-343. doi: 10.1007/s10551-005-4711-2.
Berger, Adam, and John Lafferty. 2017. "Information Retrieval as Statistical Translation." *ACM SIGIR Forum* 51 (2). doi: 10.1145/3130348.3130371.
Bergion, Viktor, Andreas Lindhe, Ekaterina Sokolova, and Lars Rosén. 2018. "Risk-Based Cost-Benefit Analysis for Evaluating Microbial Risk Mitigation in a Drinking Water System." *Water Research* 132:111-123. doi: 10.1016/j.watres.2017.12.054.
Bigliardi, Barbara, and Alberto Ivo Dormio. 2009. "An Empirical Investigation of Innovation Determinants in Food Machinery Enterprises." *European Journal of Innovation Management* 12 (2):223-242. doi: 10.1108/14601060910953988.
Bingimlas, Khalid Abdullah. 2009. "Barriers to the Successful Integration of ICT in Teaching and Learning Environments: A Review of the Literature." *EURASIA Journal of Mathematics, Science & Technology Education* 5 (3):235-245.

Borman, Walter C., and Stephan J. Motowidlo. 1997. "Task Performance and Contextual Performance: The Meaning for Personnel Selection Research." *Human Performance* 10 (2):99-109. doi: 10.1207/s15327043hup1002_3.

Bosompra, Kwadwo. 1987. "Sources of Health Information Among Rural Dwellers in Africa: A Case Study of Two Ghanaian Villages." *African Media Rev* 1 (2):120-33.

Broadbent, Donald E. 1985. "The Clinical Impact of Job Design." *British Journal of Clinical Psychology* 24 (1):33-44. doi: 10.1111/j.2044-8260.1985.tb01311.x.

Bromet, Evelyn J., Mary Amanda Dew, David K. Parkinson, Shelly Cohen, and Joseph E. Schwartz. 1992. "Effects of Occupational Stress on the Physical and Psychological Health of Women in a Microelectronics Plant." *Social Science & Medicine* 34 (12):1377-1383. doi: 10.1016/0277-9536(92)90146-H.

Bronstein, Jenny, and Shifra Baruchson-Arbib. 2007. "The Application of Cost—Benefit and Least Effort Theories in Studies of Information Seeking Behavior of Humanities Scholars: The Case of Jewish Studies Scholars in Israel." *Journal of Information Science* 34 (2):131-144. doi: 10.1177/0165551507079733.

Bruin, J. 2006. "Introduction to SAS. UCLA: Statistical Consulting Group."

Buckland, Michael K. 1991. "Information As Thing." *Journal of the American Society for Information Science* 42 (5):351-360.

Burr, Hermann, Hanne Berthelsen, Salvador Moncada, Matthias Nübling, Emilie Dupret, Yucel Demiral, John Oudyk, Tage S. Kristensen, Clara Llorens, Albert Navarro, Hans-Joachim Lincke, Christine Bocéréan, Ceyda Sahan, Peter Smith, and Anne Pohrt. 2019. "The Third Version of the Copenhagen Psychosocial Questionnaire." *Safety and Health at Work* 10 (4):482-503. doi: https://doi.org/10.1016/j.shaw.2019.10.002.

Busara. 2021. "Phone Survey Protocol." https://www.busaracenter.org/phone-survey-protocol.

Byrne, Barbara 2016. *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming* Vol. 396: Routledge.

Byström, Katriina. 2002. "Information and Information Sources in Tasks of Varying Complexity." *Journal of the American Society for Information Science and Technology* 53 (7):581-591. doi: 10.1002/asi.10064.

Byström, Katriina, and Preben Hansen. 2005. "Conceptual Framework for Tasks in Information Studies." *Journal of the American Society for Information Science and Technology* 56 (10):1050-1061. doi: 10.1002/asi.20197.

Byström, Katriina, and Kalervo Järvelin. 1995. "Task Complexity Affects Information Seeking and Use." *Information Processing & Management* 31 (2):191-213. doi: https://doi.org/10.1016/0306-4573(95)80035-R.

Cai, Yongyang, Kenneth L. Judd, Timothy M. Lenton, Thomas S. Lontzek, and Daiju Narita. 2015. "Environmental Tipping Points Significantly Affect the Cost-Benefit Assessment of Climate Policies." *Proceedings of the National Academy of Sciences of the United States of America* 112 (15):4606-4611.

Cain, Meghan K., Zhiyong Zhang, and Ke-Hai Yuan. 2017. "Univariate and Multivariate Skewness and Kurtosis for Measuring Nonnormality: Prevalence, Influence and Estimation." *Behavior Research Methods* 49 (5):1716-1735. doi: 10.3758/s13428-016-0814-1.

Camillo, Cíntia Moralles. 2020. "Conceptions of Students of a Rural School About Digital Information and Communication Technologies." *Research, Society and Development* 9 (4). doi: 10.33448/rsd-v9i4.3006.

Campbell, John P. 1990. Modeling the Performance Prediction Problem in Industrial and Organizational Psychology. In *Handbook of Industrial and Organizational Psychology*. Palo Alto, CA, US: Consulting Psychologists Press.

Carberry, Sandra, Stephanie Elzer, and Seniz Demir. 2006. "Information Graphics: An Untapped Resource for Digital Libraries." Proceedings of the 29th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval.

Carlson, Kevin D., and Jinpei Wu. 2011. "The Illusion of Statistical Control: Control Variable Practice in Management Research." *Organizational Research Methods* 15 (3):413-435. doi: 10.1177/1094428111428817.

Case, Donald O., Lisa M. Given. 2016. *Looking for Information: A Survey Research on Information Seeking, Needs, and Behaviour*. Edited by Jens-Erik Mai. 4 ed, *Studies in Information*. Bingley: Emerald Group Publishing Limited.

Casson, Mark, and Nigel Wadeson. 2007. "The Discovery of Opportunities: Extending the Economic Theory of the Entrepreneur." *Small Business Economics* 28 (4):285-300. doi: 10.1007/s11187-006-9037-7.

Cayir, Sinan, Nuri Basoglu, and Tugrul U. Daim. 2016. "A Study on the Relationship Between Task, Information, and Individual Performance." *Technology in Society* 46:1-9. doi: 10.1016/j.techsoc.2016.02.002.

Cenfetelli, Ronald T., and Geneviève Bassellier. 2009. "Interpretation of Formative Measurement in Information Systems Research." *MIS Quarterly* 33 (4):689-707. doi: 10.2307/20650323.

Center, Volpe National Transportation Systems. 1998. Value of Information and Information Services.

Chang, Chiao-Chen, Chia-Yen Lin, Yu-Chin Chen, and Yang-Chieh Chin. 2009. "Predicting Information-Seeking Intention in Academic Digital Libraries." *The Electronic Library* 27 (3):448-460. doi: 10.1108/02640470910966899.

Chatterjee, Susmita, Sangita Dutta Gupta, and Parijat Upadhyay. 2020. "Technology Adoption and Entrepreneurial Orientation for Rural Women: Evidence from India." *Technological Forecasting and Social Change* 160:120236. doi: 10.1016/j.techfore.2020.120236.

Chen, Xuewei, Heather Orom, Jennifer L. Hay, Erika A. Waters, Elizabeth Schofield, Yuelin Li, and Marc T. Kiviniemi. 2019. "Differences in Rural and Urban Health Information Access and Use." *The Journal of Rural Health* 35 (3):405-417. doi: https://doi.org/10.1111/jrh.12335.

Chester, David S., Donald R. Lynam, Richard Milich, David K. Powell, Anders H. Andersen, and C. Nathan DeWall. 2016. "How Do Negative Emotions Impair Self-Control? A Neural Model of Negative Urgency." *NeuroImage* 132:43-50. doi: https://doi.org/10.1016/j.neuroimage.2016.02.024.

Chiaburu, Dan S., In-Sue Oh, Jiexin Wang, and Adam C. Stoverink. 2017. "A Bigger Piece of the Pie: The Relative Importance of Affiliative and Change-Oriented Citizenship and Task Performance in Predicting Overall Job Performance." *Human Resource Management Review* 27 (1):97-107. doi: https://doi.org/10.1016/j.hrmr.2016.09.006.

Chin, Wynne W. 1998. *The Partial Least Squares Approach to Structural Equation Modeling*, *Modern Methods for Business Research*. New Jersey: Lawrence Erlbaum Associates.

Christensen, Edward W., and James R. Bailey. 1997. "A Source Accessibility Effect on Media Selection." *Management Communication Quarterly* 10 (3):373-387. doi: 10.1177/0893318997010003005.

Christensen, Jan Olav, Live Bakke Finne, Anne Helene Garde, Morten Birkeland Nielsen, Kathrine Sørensen, and Jolien Vleeshouwes. 2020. "The Influence of Digitalization and New Technologies on Psychosocial Work Environment and Employee Health: A Literature Review." *STAMI-rapport*.

Chung, Kyungyong, Raouf Boutaba, and Salim Hariri. 2014. "Recent Trends in Digital Convergence Information System." *Wireless Personal Communications* 79 (4):2409-2413. doi: 10.1007/s11277-014-2182-4.

Cline, R. J. W., and K. M. Haynes. 2001. "Consumer Health Information Seeking on the Internet: The State of the Art." *Health Education Research* 16 (6):671-692. doi: 10.1093/her/16.6.671.

Cohen, Jacob. 1988. *Statistical Power Analysis for the Behavioral Sciences*. New York: Academic Press.

Cole, Charles. 1997. "Information As Process: The Difference Between Corroborating Evidence and "Information" in Humanistic Research Domains." *Information Processing & Management* 33 (1):55-67. doi: 10.1016/S0306-4573(96)00050-7.

Coltman, Tim, Timothy M. Devinney, David F. Midgley, and Sunil Venaik. 2008. "Formative Versus Reflective Measurement Models: Two Applications of Formative Measurement." *Journal of Business Research* 61 (12):1250-1262. doi: 10.1016/j.jbusres.2008.01.013.

Cool, Colleen, and Hong Xie. 2000. "Patterns of Information Use, Avoidance and Evaluation in a Corporte Engineering Environment." *Proceedings of the ASIS Annual Meeting* 37:462-472.

Coombs, W. Timothy. 1999. "Information and Compassion in Crisis Responses: A Test of Their Effects." *Journal of Public Relations Research* 11 (2):125-142. doi: 10.1207/s1532754xjprr1102_02.
Creswell, John W, and Cheryl N Poth. 2007. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. California: Sage Publications.
Croasmun, James T., and Lee Ostrom. 2011. "Using Likert-Type Scales in the Social Sciences." *Journal of Adult Education* 40 (1):19-22.
Cronje, Johannes. 2012. *What Is This Thing Called "Design" in Instructional Design Research? - The ABC Instant Research Question Generator*, *Media in Education*. New York: Springer.
David, Rodreck, Patrick Ngulube, and Adock Dube. 2013. "A Cost-Benefit Analysis of Document Management Strategies Used at a Financial Institution in Zimbabwe: A Case Study." *SA Journal of Information Management* 15 (2). doi: 10.4102/sajim.v15i2.540.
De Alwis, Gina, Shaheen Majid, and Abdus Sattar Chaudhry. 2006. "Transformation in Managers' Information Seeking Behaviour: A Review of the Literature." *Journal of Information Science* 32 (4):362-377.
DeLone, William H., and Ephraim R. McLean. 2004. "Measuring e-Commerce Success: Applying the DeLone & McLean Information Systems Success Model." *International Journal of Electronic Commerce* 9 (1):31-47.
DeWall, C. Nathan, Nicole L. Mead, Roy F. Baumeister, and Kathleen D. Vohs. 2011. "How Leasers Self-Regulate Their Task Performance: Evidence That Power Promotes Diligence, Depletion, and Disdain." *Journal of Personality and Social Psychology* 100 (1):47-65.
Dhir, Amandeep, Sufen Chen, and Marko Nieminen. 2015. "Predicting adolescent Internet addiction: The roles of demographics, technology accessibility, unwillingness to communicate and sought Internet gratifications." *Computers in Human Behavior* 51:24-33. doi: https://doi.org/10.1016/j.chb.2015.04.056.
Diamantopoulos, Adamantios, and Judy A. Siguaw. 2006. "Formative Versus Reflective Indicators in Organizational Measure Development: A Comparison and Empirical Illustration." *British Journal of Management* 17 (4):263-282. doi: 10.1111/j.1467-8551.2006.00500.x.
Dictionary, Cambridge. 2021. "Work-Related." https://dictionary.cambridge.org/us/dictionary/english/work-related.
Diener, Ed, Stuti Thapa, and Louis Tay. 2020. "Positive Emotions at Work." *Annual Review of Organizational Psychology and Organizational Behaviour* 7:451-477.
Dodd, Tim H., Debra A. Laverie, James F. Wilcox, and Dale F. Duhan. 2005. "Differential Effects of Experience, Subjective Knowledge, and Objective Knowledge on Sources of Information used in Consumer Wine Purchasing." *Journal of Hospitality & Tourism Research* 29 (1):3-19. doi: 10.1177/1096348004267518.
Dollard, Maureen F., and Arnold B. Bakker. 2010. "Psychosocial Safety Climate as a Precursor to Conducive Work Environments, Psychological Health Problems, and Employee Engagement." *Journal of Occupational and Organizational Psychology* 83 (3):579-599. doi: 10.1348/096317909X470690.
Domah, Preetum, and Michael G. Pollitt. 2001. "The Restructuring and Privatisation of the Electricity Distribution and Supply Businesses in England and Wales: a Social Cost-Benefit Analysis." *Fiscal Studies* 22 (1):107-146. doi: 10.1111/j.1475-5890.2001.tb00036.x.
Dosi, Giovanni. 1988. "Sources, Procedures, and Microeconomic Effects of Innovation." *Journal of Economic Literature* 26 (3):1120-1171. doi: 10.2307/2726526.
DOSM, Department of Statistics Malaysia. 2018. Population & Demography.
Doty, D. Harold, and William H. Glick. 1998. "Common Methods Bias: Does Common Methods Variance Really Bias Results?" *Organizational Research Methods* 1 (4):374-406. doi: 10.1177/109442819814002.
Dutta, Renee. 2009. "Information Needs and Information-Seeking Behavior in Developing Countries: A Review of the Research." *The International Information & Library Review* 41 (1):44-51. doi: https://doi-org.dbgw.lis.curtin.edu.au/10.1080/10572317.2009.10762796.
Estryn-Behar, M., M. Kaminski, E. Peigne, N. Bonnet, E. Vaichere, C. Gozlan, S. Azoulay, and M. Giorgi. 1990. "Stress at Work and Mental Health Status Among Female Hospital Workers." *British Journal of Industrial Medicine* 47 (1):20. doi: 10.1136/oem.47.1.20.

Estryn-Béhar, Madeleine, Beatrice I. J. M. Van der Heijden, Halszka Ogińska, Donatella Camerino, Olivier Le Nézet, Paul Maurice Conway, Clementine Fry, and Hans-Martin Hasselhorn. 2007. "The Impact of Social Work Environment, Teamwork Characteristics, Burnout, and Personal Factors upon Intent to Leave among European Nurses." *Medical Care* 45 (10):939-950.

Fallis, Don. 2004. "On Verifying the Accuracy of Information: Philosophical Perspectives." *Library Trends* 52 (3):463-487.

Fidel, Raya, and Annelise Mark Pejtersen. 2004. "From Information Behaviour Research to the Design of Information Systems: The Cognitive Work Analysis Framework." *Information Research* 10 (1):1-20.

Fidzani, B. T. 1998. "Information Needs and Information-Seeking Behaviour of Graduate Students at the University of Botswana." *Library Review* 47 (7):329-340. doi: 10.1108/00242539810233459.

Fiet, James O., William I. Norton, and Van G. H. Clouse. 2007. "Systematic Search as a Source of Technical Innovation: An Empirical Test." *Journal of Engineering and Technology Management* 24 (4):329-346. doi: 10.1016/j.jengtecman.2007.09.001.

Filippini, Roberto, Wolfgang H. Güttel, and Anna Nosella. 2012. "Ambidexterity and the Evolution of Knowledge Management Initiatives." *Journal of Business Research* 65 (3):317-324. doi: 10.1016/j.jbusres.2011.04.003.

Fornell, Claes, and David F. Larcker. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error." *Journal of Marketing Research* 18 (1):39-50. doi: 10.2307/3151312.

Freeze, Ronald D., and R. Raschke. 2007. "An Assessment of Formative and Reflective Constructs in IS Research." ECIS.

Gainsbury, Sally, Robert Wood, Alex Russell, Nerilee Hing, and Alex Blaszczynski. 2012. "A Digital Revolution: Comparison of Demographic Profiles, Attitudes and Gambling Behavior of Internet and Non-Internet Gamblers." *Computers in Human Behavior* 28 (4):1388-1398. doi: https://doi.org/10.1016/j.chb.2012.02.024.

Ganzach, Yoav. 2003. "Intelligence, Education, and Facets of Job Satisfaction." *Work and Occupations* 30 (1):97-122. doi: 10.1177/0730888402239328.

Garcia-Murillo, Martha, and Ian MacInnes. 2003. "The Impact of Technological Convergence on the Regulation of ICT Industries." *International Journal on Media Management* 5 (1):57-67. doi: 10.1080/14241270309390019.

Gatewood, Elizabeth J., Kelly G. Shaver, Joshua B. Powers, and William B. Gartner. 2002. "Entrepreneurial Expectancy, Task Effort, and Performance." *Entrepreneurship Theory and Practice* 27 (2):187-206. doi: 10.1111/1540-8520.00006.

Geisser, Seymour. 1974. "A Predictive Approach to the Random Effect Model." *Biometrika* 61 (1):101-107. doi: 10.2307/2334290.

Ghorban, Zahra Seyed, and Hossein Tahernejad. 2012. "A Study on Effect of Brand Credibility on Word of Mouth: With Reference to Internet Service Providers in Malaysia." *International Journal of Marketing Studies* 4 (1):26.

Gilly, Mary C., John L. Graham, Mary Finley Wolfinbarger, and Laura J. Yale. 1998. "A Dyadic Study of Interpersonal Information Search." *Journal of the Academy of Marketing Science* 26 (2):83-100. doi: 10.1177/0092070398262001.

Goggins, Richard W., Peregrin Spielholz, and Greg L. Nothstein. 2008. "Estimating the Effectiveness of Ergonomics Interventions Through Case Studies: Implications for Predictive Cost-Benefit Analysis." *Journal of Safety Research* 39 (3):339-344. doi: 10.1016/j.jsr.2007.12.006.

Gonser, Phillipp, Thomas Fuchsberger, and Ulrich Matern. 2017. "Usability Tests in Medicine: A Cost-Benefit Analysis for Hospitals Before Acquiring Medical Devices for Theatre." *Surgical Innovation* 24 (4):343-348. doi: 10.1177/1553350617702308.

Gorla, Narasimhaiah, Toni M. Somers, and Betty Wong. 2010. "Organizational Impact of System Quality, Information Quality, and Service Quality." *The Journal of Strategic Information Systems* 19 (3):207-228. doi: 10.1016/j.jsis.2010.05.001.

Gray, Nicola J., Jonathan D. Klein, Peter R. Noyce, Tracy S. Sesselberg, and Judith A. Cantrill. 2005. "Health Information-Seeking Behaviour in Adolescence: The Place of the Internet." *Social Science & Medicine* 60 (7):1467-1478. doi: 10.1016/j.socscimed.2004.08.010.

Gray, Peter H., and Darren B. Meister. 2004. "Knowledge Sourcing Effectiveness." *Management Science* 50 (6):821-834.

Guan, Lili, Zhao Hongliang, Xu Ping, Xie Liyong and Zhang Wen. 2017. Problems and Suggestions of Rural Information Service Platform Construction in China. Proceedings of the 2017 2nd International Conference on Automation, Mechanical and Electrical Engineering (AMEE 2017), Atlantis Press. doi: 10.2991/amee-17.2017.53

Guthrie, Gerard. 2010. *Basic Research Methods: An Entry to Social Science Research*. India: SAGE Publications

Hadi, Purnomo Sutrisno, and Kusnandar. 2018. "Barriers to Acceptance of Information and Communication Technology in Agricultural Extension in Indonesia." *Information Development*:0266666918767484. doi: 10.1177/0266666918767484.

Hair, Joe F Jr, Lucy M. Matthews, Ryan L. Matthews, and Marko Saestedt. 2017. "PLS-SEM or CB-SEM: Updated Guidelines on Which Method to Use." *International Journal of Multivariate Data Analysis* 1 (2):107.

Hair, Joe F., Matt C. Howard, and Christian Nitzl. 2020. "Assessing Measurement Model Quality in PLS-SEM Using Confirmatory Composite Analysis." *Journal of Business Research* 109:101-110. doi: 10.1016/j.jbusres.2019.11.069.

Hair, Joe F., Christian M. Ringle, and Marko Sarstedt. 2011. "PLS-SEM: Indeed a Silver Bullet." *Journal of Marketing Theory & Practice* 19 (2):139-152. doi: 10.2753/MTP1069-6679190202.

Hair, Joe F., Marko Sarstedt, Christian M. Ringle, and Jeannette A. Mena. 2012. "An Assessment of the Use of Partial Least Squares Structural Equation Modeling in Marketing Research." *Journal of the Academy of Marketing Science* 40 (3):414-433. doi: 10.1007/s11747-011-0261-6.

Hair, Joseph F. 2019. "Rethinking Some of the Rethinking of Partial Least Squares." *European Journal of Marketing* 53 (4):566-584. doi: 10.1108/EJM-10-2018-0665.

Hair, Joseph F., W. C. Black, B. J. Babin, and R. E Anderson. 2010. *Multivatiate Data Analysis: A Global Perspective* Pearson Education.

Hair, Joseph F., T. M. Hult, M. Ringle Christian, and Marko Sarstedt. 2017. *A Primer on Partial Least Square Structural Equation Modeling (PLS-SEM)*. Los Angeles: Sage Publications.

Hair, Joseph, F. Jr., Marcelo Luiz Dias da Silva Gabriel, and Vijay K. Patel. 2014. "Amos Covariance-Based Structural Equation Modeling (Cb-Sem): Guidelines on its Application as a Marketing Research Tool." *Revista brasileira de marketing* 13 (2):44-55. doi: 10.5585/remark.v13i2.2718.

Hair, Joseph, F., J. Risher Jeffrey, Marko Sarstedt, and M. Ringle Christian. 2019. "When to Use and How to Report the Results of PLS-SEM." *European Business Review* 31 (1):2-24. doi: 10.1108/EBR-11-2018-0203.

Hair, Jr Joe F., Marko Sarstedt, M. Matthews Lucy, and M. Ringle Christian. 2016. "Identifying and Treating Unobserved Heterogeneity with FIMIX-PLS: Part I – Method." *European Business Review* 28 (1):63-76. doi: 10.1108/EBR-09-2015-0094.

Halili, Siti Hajar, and Hamidah Sulaiman. 2018. "Factors Influencing the Rural Students' Acceptance of Using ICT for Educational Purposes." *Kasetsart Journal of Social Sciences*. doi: 10.1016/j.kjss.2017.12.022.

Hammer, Tove Helland, Per Saksvik, Empty, ystein, Kjell NytrØ, Hans Torvatn, and Mahmut Bayazit. 2004. "Expanding the Psychosocial Work Environment: Workplace Norms and Work-Family Conflict as Correlates of Stress and Health." *Journal of Occupational Health Psychology* 9 (1):83-97. doi: 10.1037/1076-8998.9.1.83.

Hammond, Michelle, Nicole Neff, James Farr, Alexander Schwall, and Xinyuan Zhao. 2011. "Predictors of Individual-Level Innovation at Work: A Meta-Analysis." *Psychology of Aesthetics, Creativity, and the Arts* 5:90-105. doi: 10.1037/a0018556.

Hamzah, Isa. 2010. "Effective Institutional Arrangement in Rural Development: Malaysia."Master, University of Glasgow.

Hansjürgens, Bernd. 2004. "Economic Valuation Through Cost-Benefit Analysis – Possibilities and Limitations." *Toxicology* 205 (3):241-252. doi: 10.1016/j.tox.2004.06.054.

Hardy, Andrew P. 1982. "The Selection of Channels When Seeking Information: Cost/Benefit vs Least-Effort." *Information Processing & Management* 18 (6):289-293. doi: https://doi.org/10.1016/0306-4573(82)90014-0.

Hassan, Zailinawati Abu, Peter Schattner, and Danielle Mazza. 2006. "Doing A Pilot Study: Why Is It Essential?" *Malaysian Family Physician : The Official Journal of the Academy of Family Physicians of Malaysia* 1 (2-3):70-73.

Hauser, John R., Glen L. Urban, and Bruce D. Weinberg. 1993. "How Consumers Allocate Their Time When Searching for Information." *Journal of Marketing Research* 30 (4):452-466. doi: 10.1177/002224379303000405.

He, Jun, and Lee A. Freeman. 2010. "Understanding the Formation of General Computer Self-Efficacy." *Communications of the Association for Information Systems* 26 (12):225-244. doi: 10.17705/1CAIS.02612.

Hemminger, Bradley M., Dihui Lu, K. T. L. Vaughan, and Stephanie J. Adams. 2007. "Information Seeking Behavior of Academic Scientists." *Journal of the American Society for Information Science and Technology* 58 (14):2205-2225. doi: 10.1002/asi.20686.

Henderson, Karla A. 2011. "Post-Positivism and the Pragmatics of Leisure Research." *Leisure Sciences* 33 (4):341-346. doi: 10.1080/01490400.2011.583166.

Henseler, Jörg, and Wynne W. Chin. 2010. "A Comparison of Approaches for the Analysis of Interaction Effects Between Latent Variables Using Partial Least Squares Path Modeling." *Structural Equation Modeling: A Multidisciplinary Journal* 17 (1):82-109. doi: 10.1080/10705510903439003.

Henseler, Jörg, Christian M. Ringle, and Marko Sarstedt. 2015. "A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling." *Journal of the Academy of Marketing Science* 43 (1):115-135. doi: 10.1007/s11747-014-0403-8.

Hertzum, Morten, Hans H. K. Andersen, Verner Andersen, and Camilla B. Hansen. 2002. "Trust in Information Sources: Seeking Information from People, Documents, and Virtual Agents." *Interacting with Computers* 14 (5):575-599. doi: 10.1016/S0953-5438(02)00023-1.

Hertzum, Morten, and Jesper Simonsen. 2019. "How is Professionals' Information Seeking Shaped by Workplace Procedures? A Study of Healthcare Clinicians." *Information Processing & Management* 56 (3):624-636. doi: 10.1016/j.ipm.2019.01.001.

Hinton, Perry, Isabella McMurray, and Charlotte Brownlow. 2014. *SPSS Explained*. London: London: Routledge.

Hirsh, Sandra, and Jamie Dinkelacker. 2004. "Seeking Information in Order To Produce Information: An Empirical Study at Hewlett Packard Labs." *Journal of the American Society for Information Science and Technology* 55 (9):807-817.

Hoff, Eva V., and Natalie K. Öberg. 2015. "The Role of the Physical Work Environment for Creative Employees – A Case Study of Digital Artists." *The International Journal of Human Resource Management* 26 (14):1889-1906. doi: 10.1080/09585192.2014.971842.

Howlader, Ahmadul Islam, and Md Anwarul Islam. 2019. "Information-Seeking Behaviour of Undergraduate Students: A Developing Country Perspective." *IFLA Journal* 45 (2):140-156. doi: 10.1177/0340035219842312.

Humphrey, Stephen, Jennifer Nahrgang, and Frederick Morgeson. 2007. "Integrating Motivational, Social, and Contextual Work Design Features: A Meta-Analytic Summary and Theoretical Extension of the Work Design Literature." *The Journal of applied psychology* 92:1332-56. doi: 10.1037/0021-9010.92.5.1332.

Hunt, Shelby D., Richard D. Sparkman, and James B. Wilcox. 1982. "The Pretest in Survey Research: Issues and Preliminary Findings." *Journal of Marketing Research* 19 (2):269-273. doi: 10.2307/3151627.

Ikoja-Odongo, Robert, and Janneke Mostert. 2006. "Information Seeking Behaviour : A Conceptual Framework." *South African Journal of Libraries and Information Science* 72 (3):145-158. doi: 10.10520/EJC139832.

Isaya, Elizabeth L., Robert Agunga, and Camilius A. Sanga. 2016. "Sources of Agricultural Information for Women Farmers in Tanzania." *Information Development* 34 (1):77-89. doi: 10.1177/0266666916675016.

Islam, Md Shariful, and SM Zabed Ahmed. 2012. "The Information Needs and Information-Seeking Behaviour of Rural Dwellers: A Review of Research." *IFLA Journal* 38 (2):137-147. doi: https://doi-org.dbgw.lis.curtin.edu.au/10.1177/0340035212444513.
Ismail, Adila Binti, and Habee Bullah Bin Affandy. 2013. "The Use of ICT in Rural School Libraries." *Journal of Asian Scientific Research* 3 (6):587.
Israel, Glenn D., and Jessica L. O'Leary. 2020. "The Savvy Survey #12: Telephone Surveys." University of Florida. https://edis.ifas.ufl.edu/pd076.
Jackson, Michael C. 2003. *Systems Thinking: Creative Holism for Managers*. England: John Wiley & Sons, Inc.
Jacobsen, Jens Kr Steen, and Ana María Munar. 2012. "Tourist Information Search and Destination Choice in a Digital Age." *Tourism Management Perspectives* 1:39-47. doi: https://doi.org/10.1016/j.tmp.2011.12.005.
Jakobsen, Morten, and Rasmus Jensen. 2015. "Common Method Bias in Public Management Studies." *International Public Management Journal* 18 (1):3-30. doi: 10.1080/10967494.2014.997906.
Johari, Zaheera. 2020. "Grouses Over Poor Internet Access." *Borneo Post Online*. https://www.theborneopost.com/2020/07/19/grouses-over-poor-internet-access/.
Johnson, and Barbara K. Kaye. 1998. "Cruising is Believing?: Comparing Internet and Traditional Sources on Media Credibility Measures." *Journalism & Mass Communication Quarterly* 75 (2):325-340. doi: 10.1177/107769909807500208.
Johnson, Sheri L., Jordan A. Tharp, Andrew D. Peckham, Amy H. Sanchez, and Charles S. Carver. 2016. "Positive Urgency is Related to Difficulty Inhibiting Prepotent Responses." *Emotion* 16 (5):750-759. doi: 10.1037/emo0000182.
Jones, William, and Brian H Ross. 2007. "Personal Information Management." *Handbook of Applied Cognition*:471-496.
Joshi, Ankur, Saket Kale, Satish Chandel, and D. K. Pal. 2015. "Likert Scale: Explored and Explained." *Current Journal of Applied Science and Technology* 7 (4):396-403. doi: 10.9734/BJAST/2015/14975.
Jun, Jinhyun, Jaewook Kim, and Liang Tang. 2017. "Does Social Capital Matter on Social Media? An Examination Into Negative e-WOM Toward Competing Brands." *Journal of Hospitality Marketing & Management* 26 (4):378-394. doi: 10.1080/19368623.2017.1251869.
Kahlor, Lee Ann. 2007. "An Augmented Risk Information Seeking Model: The Case of Global Warming." *Media Psychology* 10 (3):414-435. doi: 10.1080/15213260701532971.
Kahn, Beverly K., Diane M. Strong, and Richard Y. Wang. 2002. "Information Quality Benchmarks: Product and Service Performance." *Communications of the ACM* 45 (4):184-192. doi: 10.1145/505248.506007.
Kankam, Philip Kwaku. 2019. "The Use of Paradigms in Information Research." *Library & Information Science Research* 41 (2):85-92. doi: 10.1016/j.lisr.2019.04.003.
Kawakami, Norito, Takashi Haratani, and Shunichi Araki. 1992. "Effects of Perceived Job Stress on Depressive Symptoms in Blue-Collar Workers of an Electrical Factory in Japan." *Scandinavian Journal of Work, Environment & Health* 18 (3):195-200.
Keary, Mae. 2000. "Document Management:New Technologies for the Informaiton Services Manager." *The Electronic Library* 18 (2):137-146. doi: 10.1108/el.2000.18.2.137.7.
Kempf, Angela M., and Patrick L. Remington. 2007. "New Challenges for Telephone Survey Research in the Twenty-First Century." *Annual Review of Public Health* 28 (1):113-126. doi: 10.1146/annurev.publhealth.28.021406.144059.
Khan, Asadullah. 2006. "Project Scope Management." *Cost Engineering* 48 (6):12-16.
Kim, and Thomas J Johnson. 2009. "A Shift in Media Credibility: Comparing Internet and Traditional News Sources in South Korea." *International Communication Gazette* 71 (4):283-302.
Kim, and Linda S. Niehm. 2009. "The Impact of Website Quality on Information Quality, Value, and Loyalty Intentions in Apparel Retailing." *Journal of Interactive Marketing* 23 (3):221-233. doi: https://doi.org/10.1016/j.intmar.2009.04.009.
Kim, and Gene Leon Roth. 2011. "Novice Teachers and Their Acquisition of Work-Related Information." *Current Issues in Education* 14 (1):1-28.

Kingma, Sytze. 2018. "New Ways of Working (NWW): Work Space and Cultural Change in Virtualizing Organizations." *Culture and Organization* 25 (5):383-406. doi: 10.1080/14759551.2018.1427747.
Knight, Shirlee-ann, and Janice Burn. 2005. "Developing a Framework for Assessing Information Quality on the World Wide Web." *Information Science Journal* 8 (5):159-172.
Kock, Ned 2015. "Common Method Bias in PLS-SEM: A Full Collinearity Assessment Approach." *International Journal of e-Collaboration* 11 (4):1-10. doi: 10.4018/ijec.2015100101.
Kock, Ned, and Gary Lynn. 2012. "Lateral Collinearity and Misleading Results in Variance-Based SEM: An Ilustration and Recommnedations." *Journal of the Association for Information Systems* 13 (7):1-40.
Koopmans, Leon V. E., Claire M. Bernaards, Vincent H. Hildebrandt, Stef van Buuren, Allard J. van der Beek, and H. Vet. 2013. "Development of an Individual Work Performance Questionnaire." *International Journal of Productivity and Performance Management* 62 (1):6-28. doi: 10.1108/17410401311285273.
Koopmans, Linda, Claire M. Bernaards, Vincent H. Hildebrandt, Henrica C. W. de Vet, and Allard J. van der Beek. 2014. "Construct Validity of the Individual Work Performance Questionnaire." *Journal of Occupational and Environmental Medicine* 56 (3):331-337. doi: 10.1097/jom.0000000000000113.
KPLB, Kementerian Pembangunan Luar Bandar. 2020. "Dasar Pembangunan Luar Bandar." https://www.pmo.gov.my/wp-content/uploads/2019/07/DPLB-2019-Ringkasan-Eksekutif.pdf.
KPLB, Ministry of Rural Development. 2019. "List of KPLB Entrepreneurs." https://www.rurallink.gov.my/en/.
Krejcie, Robert V., and Daryle W. Morgan. 1970. "Determining Sample Size for Research Activities." *Educational and Psychological Measurement* 30 (3):607-610. doi: 10.1177/001316447003000308.
Kristensen, Nicolai, Christophe Kolodziejczyk, Iben Bolvig, and Kurt Houlberg. 2017. "The Efficiency Potential in Social Programs: Accounting for Heterogeneity in Benefit-Cost Analysis." *Journal of Benefit-Cost Analysis* 8 (1):1-23. doi: 10.1017/bca.2017.1.
Kristensen, Tage S., Harald Hannerz, Annie Høgh, and Vilhelm Borg. 2005. "The Copenhagen Psychosocial Questionnaire-a tool for the assessment and improvement of the psychosocial work environment." *Scandinavian Journal of Work, Environment & Health* 31 (6):438-449.
Krosnick, Jon A. 2018. "Questionnaire Design." In *The Palgrave Handbook of Survey Research*, edited by David L. Vannette and Jon A. Krosnick, 439-455. Cham: Springer International Publishing.
Krosnick, Jon A., and Stanley Presser. 2010. "Question and Questionnaire Design " In *Handbook of Survey Research*. Bingley, UK: Emerald Group Publishing Limited
KrzyŻAnowska, Krystyna, and SŁAwomir Wawrzyniak. 2019. Media Sources of Information and their Use by the Inhabitants of Rural Areas. *Roczniki (Annals)* 2019 (3). Accessed 2019. doi:10.22004/ag.econ.302777.
Kuhlthau, Carol C. 1991. "Inside the Search Process: Information Seeking From the User's Perspective." *Journal of the American Society for Information Science* 42 (5):361-371. doi: 10.1002/(sici)1097-4571(199106)42:5<361::Aid-asi6>3.0.Co;2-#.
Kuhn, Thomas S. 1970. *The Structure of Scientific Revolutions*. 2 ed. Vol. 2. London: University of Chicago press.
Kumar, Mukesh, Salim Abdul Talib, and T. Ramayah. 2013. Business Research Methods. Oxford Fajar/Oxford University Press.
Lavoie-Tremblay, Mélanie, Renée Bourbonnais, Chantal Viens, Michel Vézina, Pierre J. Durand, and Louis Rochette. 2005. "Improving the Psychosocial Work Environment." *Journal of Advanced Nursing* 49 (6):655-664. doi: 10.1111/j.1365-2648.2004.03339.x.
Lecheler, Sophie, and Sanne Kruikemeier. 2015. "Re-evaluating Journalistic Routines in a Digital Age: A Review of Research on the Use of Online Sources." *New Media & Society* 18 (1):156-171. doi: 10.1177/1461444815600412.
Leckie, J. Gloria, E. Pettigrew Karen, and Sylvain Christian. 1996. "Modeling the Information Seeking of Professionals: A General Model Derived from Research on Engineers, Health

Care Professionals, and Lawyers." *The Library Quarterly: Information, Community, Policy* 66 (2):161-193.
Lee, Yang W., Diane M. Strong, Beverly K. Kahn, and Richard Y. Wang. 2002. "AIMQ: A Methodology for Information Quality Assessment." *Information & Management* 40 (2):133-146. doi: 10.1016/S0378-7206(02)00043-5.
Lee, yi-Hsuan, Hsiao Chan, and Sutrisno Hadi Purnomo. 2014. "An Empirical Examination of Individual and System Characteristics on Enhancing E-Learning Acceptance." *Australasian Journal of Educational Technology* 30 (5):562-579. doi: https://doi.org/10.14742/ajet.381
Lee, Young Lyoul, and Seokwoo Song. 2010. "An Empirical Investigation of Electronic Word-of-Mouth: Informational Motive and Corporate Response Strategy." *Computers in Human Behavior* 26 (5):1073-1080. doi: 10.1016/j.chb.2010.03.009.
Levin, Kate Ann. 2006. "Study Design III: Cross-Sectional Studies." *Evidence-Based Dentistry* 7 (1):24-25. doi: 10.1038/sj.ebd.6400375.
Lim, H. Min, Wong S. Shiuan, Yip K. Chun, Chang F. W. Si, Chin A. J. Zhi, Teo C. Hai, Abdullah Adinaand Ng C. Jenn. 2022. "Online Health Information-Seeking Behaviour of Patients Attending a Primary Care Clinic in Malaysia: A Cross-Sectional Study." Fam Pract **39**(1): 38-45. doi: 10.1093/fampra/cmab099
Liu, Matthew Tingchi, Yongdan Liu, and Ziying Mo. 2020. "Moral Norm is the Key." *Asia Pacific Journal of Marketing and Logistics* 32 (8):1823-1841. doi: 10.1108/APJML-05-2019-0285.
Lo Destro, Calogero, Marina Chernikova, Antonio Pierro, Arie W. Kruglanski, and E. Tory Higgins. 2015. "Practice Benefits Locomotors: Regulatory Mode Complementarity and Task Performance." *Social Psychological and Personality Science* 7 (4):358-365. doi: 10.1177/1948550615616171.
Loughry, M., and C Eyber. 2003. "Psychosocial Concepts in Humanitarian Work with Children: A Review of the Concepts and Related Literature." *National Academy of Sciences*.
Lukyanenko, Roman, Andrea Wiggins, and Holly K. Rosser. 2020. "Citizen Science: An Information Quality Research Frontier." *Information Systems Frontiers* 22 (4):961-983. doi: 10.1007/s10796-019-09915-z.
MacKenzie, Scott B., and Philip M. Podsakoff. 2012. "Common Method Bias in Marketing: Causes, Mechanisms, and Procedural Remedies." *Journal of Retailing* 88 (4):542-555. doi: 10.1016/j.jretai.2012.08.001.
MalayMail. 2019a. "Gobind: RM21.6b National Connectivity Plan to Provide Equal Internet Sccess to Urban Rural Areas." *MalayMail*. https://www.malaymail.com/news/malaysia/2019/08/28/gobind-rm21.6b-national-connectivity-plan-to-provide-equal-internet-access/1785009.
MalayMail. 2019b. Govt to Establish Agency to Help Market Products of Rural Entrepreneurs.
Maresova, Petra, Vladimir Sobeslav, and Ondrej Krejcar. 2017. "Cost–Benefit Analysis – Evaluation Model of Cloud Computing Deployment for Use in Companies." *Applied Economics* 49 (6):521-533. doi: 10.1080/00036846.2016.1200188.
Matthews, Lucy. 2017. "Applying Multigroup Analysis in PLS-SEM: A Step-by-Step Process." In *Partial Least Squares Path Modeling: Basic Concepts, Methodological Issues and Applications*, edited by Hengky Latan and Richard Noonan, 219-243. Cham: Springer International Publishing.
Matthews Lucy, M., Marko Sarstedt, F. Hair Joseph, and M. Ringle Christian. 2016. "Identifying and Treating Unobserved Heterogeneity with FIMIX-PLS: Part II – A Case Study." *European Business Review* 28 (2):208-224. doi: 10.1108/EBR-09-2015-0095.
Maulana, Aiman. 2020. "Rural Areas in Malaysia Suffer from Poor Internet Connection Due to Theft and Vandalism." https://pokde.net/system/service/telco-isp/poor-internet-connection-malaysian-rural-areas.
McGee, Jeffrey E., and Olukemi O. Sawyerr. 2003. "Uncertainty and Information Search Activities: A Study of Owner–Managers of Small High-Technology Manufacturing Firms." *Journal of Small Business Management* 41 (4):385-401. doi: 10.1111/1540-627X.00089.
McGregor, Sue L. T., and Jennifer A. Murnane. 2010. "Paradigm, Methodology and Method: Intellectual Integrity in Consumer Scholarship." *International Journal of Consumer Studies* 34 (4):419-427. doi: 10.1111/j.1470-6431.2010.00883.x.

MCMC, Malaysia Communications and Multimedia Commission. 2019a. "Pusat Internet Terus Tingkat Taraf Hidup Komuniti Setempar." https://www.mcmc.gov.my/ms/media/press-releases/pusat-internet-continues-to-uplift-local-communiti.

MCMC, Malaysian Communications And Multimedia Commission. 2019b. Internet Users Survey 2018: Inforgraphic.

Michaelidou, Nina, Nikoletta Theofania Siamagka, and George Christodoulides. 2011. "Usage, Barriers and Measurement of Social Media Marketing: An Exploratory Investigation of Small and Medium B2B Brands." *Industrial Marketing Management* 40 (7):1153-1159. doi: 10.1016/j.indmarman.2011.09.009.

Miller-Jansön, H. E., and M. Stander. 2011. "PIN41 Cost-Benefit Analysis of Regional Procured Essential Medicines in the Southern African Development Community (SADC) with a Focus on Access to Antiretroviral Drugs." *Value in Health* 14 (7):A272-A273. doi: 10.1016/j.jval.2011.08.228.

Min, Jinyoung, and Byoungsoo Kim. 2015. "How Are People Enticed to Disclose Personal Information Despite Privacy Concerns in Social Network Sites? The Calculus Between Benefit and Cost." *Journal of the Association for Information Science and Technology* 66 (4):839-857. doi: 10.1002/asi.23206.

Mohammed, Badamasi B., and Francis Garaba. 2019. "An Investigation on the Forms of Information Sources and Services Utilised Among Rural Dwellers from Public Libraries in the North-West Zone of Nigeria." *South African Journal of Information Management* 21:1-13.

Mohd Nor, Rohaya , Teddy Edwin Chapun, and Constance Rinen Justin Wah. 2013. "Malaysian Rural Community as Consumer of Health Information and Their Use of ICT." *Jurnal Komunikasi: Malaysian Journal of Communication* 29 (1):1-27.

Molina, Arturo, Mar Gomez, and David Martin-Consuegra. 2010. "Tourism Marketing Information and Destination Image Management." *African Journal of Business Management* 4 (5):722-728.

Moore, N. 2007. "Community Information and Technology Centres: Focus on South-East Asia." *Bangkok: UNESCO. Retrieved November* 10:2015.

Mortimer, Kathleen. 2013. "Consumer Information Search and Credence Services: Implications for Service Providers." *Journal of Services Marketing* 27 (1):49-58. doi: 10.1108/08876041311296374.

Mshana, G., K. Hampshire, C. Panter-Brick, and R. Walker. 2008. "Urban-Rural Constrasts in Explanatory Models and Treatment-Seeking Behaviours for Stronke in Tanzania." *Journal of Biosocial Science* 40 (1):35-52. doi: 10.1017/S0021932007002295.

Mu, Lan, Muge Mou, Heyan Tang, and Shengrong Gao. 2023. "Exploring Preference and Willingness for Rural Water Pollution Control: A Choice Experiment Approach Incorporating Extended Theory of Planned Behaviour." *Journal of Environmental Management* 332:117408. doi: 10.1016/j.jenvman.2023.117408.

Mueller, Milton. 1999. "Digital Convergence and its Consequences." *Javnost - The Public* 6 (3):11-27. doi: 10.1080/13183222.1999.11008716.

MyGovernment. 2020. "Connectivity: National Broadband Program." https://www.malaysia.gov.my/portal/content/30046.

Nakahara, Shinji, Yukari Nakajima, and Tetsuya Sakamoto. 2018. "Child Restraint Orientation: Accuracy of Information on Japanese Websites." *Pediatrics International* 60 (10):966-968. doi: 10.1111/ped.13692.

Nicholas, David, Paul Huntington, R. Jamali Hamid, Ian Rowlands, and Maggie Fieldhouse. 2009. "Student Digital Information-Seeking Behaviour in Context." *Journal of Documentation* 65 (1):106-132. doi: 10.1108/00220410910926149.

Nicholas, David, Paul Huntington, Hamid R. Jamali, and Anthony Watkinson. 2006. "The Information Seeking Behaviour of the Users of Digital Scholarly Journals." *Information Processing & Management* 42 (5):1345-1365. doi: 10.1016/j.ipm.2006.02.001.

Nijp, Hylco H., Debby G. J. Beckers, Karina van de Voorde, Sabine A. E. Geurts, and Michiel A. J. Kompier. 2016. "Effects of New Ways of Working on Work Hours and Work Location, Health and Job-Related Outcomes." *Chronobiology International* 33 (6):604-618. doi: 10.3109/07420528.2016.1167731.

Niu, Zhaomeng, and Jessica Fitts Willoughby. 2018. "Examining Cultural Identity and Media Use as Predictors of Intentions to Seek Mental Health Information Among Chinese." *Asian Journal of Communication* 28 (4):360-376. doi: 10.1080/01292986.2018.1441319.

North, David, and David Smallbone. 2000. "Innovative Activity in SMEs and Rural Economic Development: Some Evidence from England." *European Planning Studies* 8 (1):87-106. doi: 10.1080/096543100110947.

Oggero, N., et al. (2020). "Entrepreneurial Spirits in Women and Men. The Role of Financial Literacy and Digital Skills." Small Business Economics **55**(2): 313-327. doi: 10.1007/s11187-019-00299-7

O'Reilly, Charles A. 1980. "Individuals and Information Overload in Organizations: Is More Necessarily Better?" *Academy of Management Journal* 23 (4):684-696. doi: 10.5465/255556.

O'Reilly, Charles A. 1983. "The Use of Information in Organizational Decision Making: A Model and Some Propositions." *Research in Organizational Behavior* 5:103-139.

Ocholla, Dennis N. 1996. "Information-Seeking Behaviour by Academics." *International Information & Library Review* 28 (4):345-358. doi: 10.1080/10572317.1996.10762407.

Omar, Dasimah, Kamarul Ariff Omar, Zuriyati Kamaludin, Saberi Othman, and Zaharah Mohd Yusoff. 2018. "Rural Development and the Level of Public Facilities Provision for Youth in Malaysia." *PLANNING MALAYSIA JOURNAL* 16 (7).

Pandey, Priyanka, Sangeeta Goyal, and Venkatesh Sundararaman. 2008. *Community Participation in Public Schools: The Impact of Information Campaigns in Three Indian States*: The World Bank.

Park, Yoon Soo, Lars Konge, and Anthony R. Anrtino. 2020. "The Positivism Paradigm of Research." *Academic Medicine* 95 (5):690-694. doi: 10.1097/ACM.0000000000003093.

PBM, Pentadbiran Bahagian Miri. 2020. "Miri Division Administrative." https://miri.sarawak.gov.my/modules/web/index.php?lang=en.

Pejtersen, Jan Hyld, Tage Søndergård Kristensen, Vilhelm Borg, and Jakob Bue Bjorner. 2009. "The second version of the Copenhagen Psychosocial Questionnaire." *Scandinavian Journal of Public Health* 38 (3_suppl):8-24. doi: 10.1177/1403494809349858.

Perneger, Thomas V., Delphine S. Courvoisier, Patricia M. Hudelson, and Angèle Gayet-Ageron. 2015. "Sample Size for Pre-tests of Questionnaires." *Quality of Life Research* 24 (1):147-151. doi: 10.1007/s11136-014-0752-2.

PMO, Prime Minister's Office of Malaysia. 2019a. "Government to Establish Agency to Help Market Products of Rural Entrepreneurs." https://www.pmo.gov.my/2019/10/government-to-establish-agency-to-help-market-products-of-rural-entrepreneurs/.

PMO, Prime Minister's Office of Malaysia. 2019b. Shared Prosperity Vision 2030. edited by Ministry of Economic Affairs. Malaysia.

Podsakoff, Philip M., Scott B. MacKenzie, and Nathan P. Podsakoff. 2011. "Sources of Method Bias in Social Science Research and Recommendations on How to Control It." *Annual Review of Psychology* 63 (1):539-569. doi: 10.1146/annurev-psych-120710-100452.

Post, The Rakyat. 2015. "MCMC Has Built Over 900 Telco Towers as of September." *The Rakyat Post*. https://www.therakyatpost.com/2015/10/27/mcmc-has-built-over-900-telco-towers-as-of-september/.

Potts, David. 2002. *Project Planning and Analysis for Development*: Lynne Rienner Pub.

Ramayah, T. , Jacky Cheah, Francis Chuah, Hiram Ting, and Miumtaz Ali Memom. 2018. *Partial Least Sqaures Structural Equation Modeling (PLS-SEM) using SmartPLS 3.0: An Updated and Practical Guide to Statistical Analysis*. 2 ed. Malaysia: Pearson Malaysia Sdn Bhd.

Rashid, M. F., Ngah and Misnan S. H. 2019. "Revitalizing Rural Areas in Malaysia: A Framework for Economic Revitalization." IOP Conference Series: Earth and Environmental Science **385**(1): 012004.

Ratchford, Brian T. 1982. "Cost-Benefit Models for Explaining Consumer Choice and Information Seeking Behavior." *Management Science* 28 (2):197-212. doi: 10.1287/mnsc.28.2.197.

Raz, N., and U. Lindenberger. 2011. "Only Time will Tell: Cross-Sectional Studies Offer No Solution to the Age-Brain-Cognition Triangle." *Psychol Bull* 137 (5):790-5. doi: 10.1037/a0024503.

Reddy, Madhu C., and Bernard J. Jansen. 2008. "A Model for Understanding Collaborative Information Behavior in Context: A Study of Two Healthcare Teams." *Information Processing & Management* 44 (1):256-273. doi: 10.1016/j.ipm.2006.12.010.

Regnér, Patrick. 2003. "Strategy Creation in the Periphery: Inductive Versus Deductive Strategy Making*." *Journal of Management Studies* 40 (1):57-82. doi: 10.1111/1467-6486.t01-1-00004.

Révész, Andrea, Nektaria-Efstathia Kourtali, and Diana Mazgutova. 2017. "Effects of Task Complexity on L2 Writing Behaviors and Linguistic Complexity." *Language Learning* 67 (1):208-241. doi: 10.1111/lang.12205.

Reynolds, Arthur J., Judy A. Temple, Dylan L. Robertson, and Emily A. Mann. 2002. "Age 21 Cost-Benefit Analysis of the Title I Chicago Child-Parent Centers." *Educational Evaluation and Policy Analysis* 24 (4):267-303. doi: 10.3102/01623737024004267.

Rigolizza, Michele, and Teresa Amabile. 2015. "Entrepreneurial Creativity: The Role of Learning Processes and Work Environment Supports." *Oxford Librar of Psychology*:61-78. doi: http://dx.doi.org.dbgw.lis.curtin.edu.au/10.1093/oxfordhb/9780199927678.013.0018.

Rodriguez, Lulu, Supathida Kulpavaropas, Devi Annamalai, Joyce Wright, and James F. Evans. 2015. "Trends in Information Needs and Communication Channel Use Among Rural Women in Africa, Asia, and Latin America, 2000–2012." *Journal of Agricultural & Food Information* 16 (3):221-241. doi: 10.1080/10496505.2015.1047496.

Rotundo, Maria, and Paul R. Sackett. 2002. "The Relative Importance of Task, Citizenship, and Counterproductive Performance ot Global Ratings of Job Performance: A Policy-Capturing Approach." *Journal of Applied Psychology* 87 (1):66-80. doi: 10.1037/0021-9010.87.1.66.

Rowley, Jennifer, Frances Johnson, and Laura Sbaffi. 2017. "Gender as an Influencer of Online Health Information-Seeking and Evaluation Behavior." *Journal of the Association for Information Science and Technology* 68 (1):36-47. doi: 10.1002/asi.23597.

Roztocki, Narcyz, Piotr Soja, and Heinz Roland Weistroffer. 2019. "The Role of Information and Communication Technologies in Socioeconomic Development: Towards A Multi-Dimensional Framework." *Information Technology for Development* 25 (2):171-183. doi: 10.1080/02681102.2019.1596654.

Roztocki, Narcyz, and H. Roland Weistroffer. 2016. "Conceptualizing and Researching the Adoption of ICT and the Impact on Socioeconomic Development." *Information Technology for Development* 22 (4):541-549. doi: 10.1080/02681102.2016.1196097.

Rugulies, Reiner. 2019. "What is a Psychosocial Work Environment?" *Scandinavian Journal of Work, Environment & Health* (1):1-6. doi: 10.5271/sjweh.3792.

Saffarinia, Mehrnaz, Ali Mohammad Mazidi, and Majid Saffarinia. 2016. "A Compariaon Between Spreading Internet Rumors and Narcissism Among Facebook, Internet, and Non-Internet Users " *Social Cognition* 5 (1 (9)):68-82.

Sagun, Rino S. de, William D. Talaa, Filoteo B. Franco Jr, and Rock P. Cordero. 2019. "Traditional Material Resources versus Digital Resources: The Choice of Information Sources of the FCMS Nursing Interns" *Creative Education* 10 (4):667-676. doi: 10.4236/ce.2019.104049

Saleh, Adam Gambo, and Fatima Ibrahim Lasisi. 2011. "Information Needs and Information Seeking Behavior of Rural Women in Borno State, Nigeria." *Library Philosophy and Practice* 18 (2).

Salthouse, Timothy A. 2011. "All Data Collection and Analysis Methods Have Limitations: Reply to Rabbitt (2011) and Raz and Lindenberger (2011)." *Psychol Bull* 137 (5):796-9. doi: 10.1037/a0024843.

Sampson Jr, James P., Janet G. Lenz, Robert C. Reardon, and Gary W. Peterson. 1999. "A Cognitive Information Processing Approach to Employment Problem Solving and Decision Making." *The Career Development Quarterly* 48 (1):3-18. doi: 10.1002/j.2161-0045.1999.tb00271.x.

Sardi, Junainah, N. Mithulananthan, M. Gallagher, and Duong Quoc Hung. 2017. "Multiple Community Energy Storage Planning in Distribution Networks Using a Cost-Benefit Analysis." *Applied Energy* 190:453-463. doi: 10.1016/j.apenergy.2016.12.144.

Sarstedt, Marko, Jan-Michael Becker, Christian M. Ringle, and Manfred Schwaiger. 2011. "Uncovering and Treating Unobserved Heterogeneity with FIMIX-PLS: Which Model

Selection Criterion PRovides an Appropriate Number of Segments? ." *Schmalenbach Business Review* 63 (1):34-62.
Sarstedt, Marko, Joseph F. Hair, Christian M. Ringle, Kai O. Thiele, and Siegfried P. Gudergan. 2016. "Estimation Issues with PLS and CBSEM: Where the Bias Lies!" *Journal of Business Research* 69 (10):3998-4010. doi: 10.1016/j.jbusres.2016.06.007.
Saunders, Mark, Philip Lewis, and Adrian Thornhill. 2016. *Research Methods for Business Students*. 7th ed: Pearson Education Limited.
Savolainen, Reijo. 1995. "Everyday Life Information Seeking: Approaching Information Seeking in the Context of "Way of Life"." *Library & Information Science Research* 17 (3):259-294.
Savolainen, Reijo 2005. *Encyclopedia of Library Information Science, Everyday Life Information Seeking*. Boca Raton: Taylor & Francis Group.
Schatz, Bruce R. 1997. "Information Retrieval in Digital Libraries: Bringing Search to the Net." *Science* 275 (5298):327. doi: 10.1126/science.275.5298.327.
Scotland, James 2012. "Exploring the Philosophical Underpinnings of Research: Relating Ontology and Epistemology to the Methodology and Methods of the Scientific, Interpretive, and Critical Research Paradigms." *English Language Teaching* 5 (9):9-16. doi: 10.5539/elt.v5n9p9
Scott, Lloyd M. 2016. "Theory and Research in Construction Education: The Case for Pragmatism." *Construction Management and Economics* 34 (7-8):552-560. doi: 10.1080/01446193.2016.1151539.
Sekaran, Uma, and Roger Bougie. 2016. *Research Methods of Business: A Skill-Building Approach*. United Kingdom: John Wiley & Sons.
Shaifuddin, Norshila, Masitah Ahmad, and Wan Nor Haliza Wan Mokhtar. 2011. "Rural Youth's Perceptions of Information Sources and Rural Library Services." *Library Philosophy Practice*

Shamlou, Zahra, Mohammad Karim Saberi, and Mohammad Reza Amiri. 2022. "Application of Theory of Planned Behavior in Identifying Factors Affecting Online Health Information Seeking Intention and Behavior of Women." *Aslib Journal of Information Management* 74 (4):727-744. doi: 10.1108/AJIM-07-2021-0209.
Sharma, Subhash, Richard M. Durand, and Oded Gur-Arie. 1981. "Identification and Analysis of Moderator Variables." *Journal of Marketing Research* 18 (3):291-300. doi: 10.2307/3150970.
Shi, Yanwei, Hui Zhang, Julan Xie, and Hongyu Ma. 2018. "Work-Related Use of Information and Communication Technologies After Hours and Focus on Opportunities: The Moderating Role of Work-Family Centrality." *Current Psychology* 40 (2):639-646. doi: 10.1007/s12144-018-9979-3.
Shyam, Sundar S., Haiyan Jia, T. Franklin Waddell, and Yan Huang. 2015. "Toward a Theory of Interactive Media Effects (TIME)." *The Handbook of the Psychology of Communication Technology*:47-86.
Smith, J.G. . 1991. "Theoretical Framework of Studying the Communication of Scientific Information in a Defined Community." *South African Journal of Library Information Science* 59 (2):84-94.

Snell, Michael. 2011. "Basic Principles of Cost–Benefit Analysis." In *Cost–Benefit Analysis*, 1-12.
Söderlund, Magnus, and Sara Rosengren. 2007. "Receiving Word-of-Mouth From the Service Customer: An Emotion-Based Effectiveness Assessment." *Journal of Retailing and Consumer Services* 14 (2):123-136.
Spink, Amanda, and Charles Cole. 2006. "Human Information Behavior: Integrating Diverse Approaches and Information Use." *Journal of the American Society for Information Science and Technology* 57 (1):25-35.
Stansfeld, Stephen, and Bridget Candy. 2006. "Psychosocial Work Environment and Mental Health—A Meta-Analytic Review." *Scandinavian Journal of Work, Environment & Health* 32 (6):443-462.

Stats, Internet World. 2019. "Top 20 Countries in Internet Users vs. Rest of the World - 30 June, 2019." https://www.internetworldstats.com/top20.htm.
Stohl, Cynthis, Michael Stohl, and Paul M. Leonardi. 2016. "Digital Age | Managing Opacity: Information Visibililty and the Paradox of Transparency in the Digital Age." *International Journal of Communication* 10:123-137.
Straub, Detmar, Marie-Claude Boudreau, and David Gefen. 2004. "Validation Guidelines for IS Positivist Research." *Communications of the Association for Information Systems* 13 (1):24.
Sulemani, Solomon Bayugo, and Seth Agbeko Katsekpor. 2007. "Information Seeking Behavior of Health Sciences Faculty at the College of Health Sciences, University of Ghana." *Information Development* 23 (1):63-70.
Suseno, Yuliani, Craig Standing, Denise Gengatharen, and Diep Nguyen. 2019. "Innovative Work Behaviour in the Public Sector: The Roles of Task Characteristics, Social Support, and Proactivity." *Australian Journal of Public Administration* 0 (0). doi: 10.1111/1467-8500.12378.
Symonds, Percival M. 1924. "On the Loss of Reliability in Ratings Due to Coarseness of the Scale." *Journal of Experimental Psychology* 7 (6):456-461. doi: 10.1037/h0074469.
Taherdoost, Hamed. 2016. Validity and Reliability of the Research Instrument; How to Test the Validation of a Questionnaire/Survey in a Research. HAL.
Tan, Hwee Hoon, and Bin Zhao. 2003. "Individual and Perceived Contextual-Level Antecedents of Individual Technical Information Inquiry in Organizations." *The Journal of Psychology* 137 (6):597-621. doi: 10.1080/00223980309600637.
Tang, Simone, Meredith King, and Aaron C. Kay. 2018. "Fate as a Motivated (and De-Motivating) Belief: Evidence for a Link from Task Importance to Belief in Fate to Effort." *Organizational Behavior and Human Decision Processes* 144:74-84. doi: https://doi.org/10.1016/j.obhdp.2017.08.003.
Tayi, Giri Kumar, and Donald P. Ballou. 1998. "Examining Data Quality." *Communications of the ACM* 41 (2):54–57. doi: 10.1145/269012.269021.
Taylor, B., G. Sinha, and T. Ghostal. 2016. *Research Methodology - A Guide for Researchers in Management and Social Sciences*. New Delhi: PHI Learning.
Tehseen, Shehnaz, T Ramayah, and Sulaiman Sajilan. 2017. "Testing and Controlling for Common Method Variance: A Review of Available Methods." *Journal of Management Sciences* 4 (2):142-168. doi: 10.20547/jms.2014.1704202.
Teo, Timothy, and Jan Noyes. 2011. "An Assessment of the Influence of Perceived Enjoyment and Attitude on the Intention to Use Technology Among Pre-Service Teachers: A Structural Equation Modeling Approach." *Computers & Education* 57 (2):1645-1653. doi: https://doi.org/10.1016/j.compedu.2011.03.002.
Tokunaga, Robert S., and Abel Gustafson. 2014. "Seeking Interpersonal Information Over the Internet: An Application of the Theory of Motivated Information Management to Internet Use." *Journal of Social and Personal Relationships* 31 (8):1019-1039. doi: 10.1177/0265407513516890.
Tong, Vivien, David K. Raynor, and Parisa Aslani. 2014. "Gender Differences in Health and Medicine Information Seeking Behaviour: A Reivew." *Journal of Malta College of Pharmacy Practice* 20:14-16.
Trippl, Michaela, xf, Franz dtling, and Lukas Lengauer. 2009. "Knowledge Sourcing Beyond Buzz and Pipelines: Evidence from the Vienna Software Sector." *Economic Geography* 85 (4):443-462.
Urbach, Nils, and Frederik Ahlemann. 2010. "Structural Equation Modeling in Information Systems Research Using Partial Least Squares." *Journal of Information Technology Theory and Application* 11 (2):6-40.
Urbano, Richard C. 2013. *Using Secondary Datasets to Understand Persons with Developmental Disabilities and Their Families*. San Diego, UNITED STATES: Elsevier Science & Technology.
Useche, Sergio A., Luis Montoro, Francisco Alonso, and Juan C. Pastor. 2019. "Psychosocial Work Factors, Job Stress and Strain at the Wheel: Validation of the Copenhagen Psychosocial

Questionnaire (COPSOQ) in Professional Drivers." *Organizational Psychology* 10 (1531). doi: 10.3389/fpsyg.2019.01531.
UWO, Universiry of Western Ontario. 2002. "Surveys and Informed Consent." https://www.uwo.ca/research/_docs/ethics/nmreb_guidelines/1g003-guideline-surveys-and-consent-jan-2002.pdf.
Vakkari, Pertti, and Nanna Hakala. 2000. "Changes in Relevance Criteria and Problem Stages in Task Performance." *Journal of Documentation* 56 (5):540-562. doi: 10.1108/EUM0000000007127.
van den Heuvel, Swenne G., Goedele A. Geuskens, Wendela E. Hooftman, Lando L. J. Koppes, and Seth N. J. van den Bossche. 2010. "Productivity Loss at Work; Health-Related and Work-Related Factors." *Journal of Occupational Rehabilitation* 20 (3):331-339. doi: 10.1007/s10926-009-9219-7.
Varis, Miika, and Hannu Littunen. 2010. "Types of Innovation, Sources of Information and Performance in Entrepreneurial SMEs." *European Journal of Innovation Management* 13 (2):128-154. doi: 10.1108/14601061011040221.
Veinberg, Sandra. 2015. "Digital Native's Attitude Towards News Sources." *Public Relations Review* 41 (2):299-301. doi: https://doi.org/10.1016/j.pubrev.2014.11.004.
Venkatesh, Viswanath, Michael G Morris, Gordon B Davis, and Fred D Davis. 2003. "User Acceptance of Information Technology: Toward A Unified View." *MIS Quart* 27 (3):425-478.
Venkatesh, Viswanath, Jason D. Shaw, Tracy Ann Sykes, Samuel Fosso Wamba, and Mary Macharia. 2017. "Networks, Technology, and Entrepreneurship: A Field Quasi-experiment among Women in Rural India." *Academy of Management Journal* 60 (5):1709-1740. doi: 10.5465/amj.2015.0849.
Venkatesh, Viswanath, James Y.L. Thong, and Xin Yu. 2012. "Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology." *MIS Quarterly* 36:157-178. doi: 10.2307/41410412.
Visla, Jasmeen, Ashley Shatola, David H. Wisner, and Ulfat Shaikh. 2019. "Understandability and Actionability of Online Information on Hypertension." *Population Health Management* 22 (4):369-369. doi: 10.1089/pop.2019.0037.
Viswesvaran, Chockalingam, and Deniz S. Ones. 2000. "Perspectives on Models of Job Performance." *International Journal of Selection and Assessment* 8 (4):216-226. doi: 10.1111/1468-2389.00151.
Vukanovic, Zvezdan. 2018. "The Influence of Digital Convergence/Divergence on Digital Media Business Models." Entertainment Computing – ICEC 2018, Cham, 2018//.
Wamuziri, Sam. 2012. "Book Review: Cost–Benefit Analysis: a Practical Guide, 2nd Edn." *Proceedings of the Institution of Civil Engineers - Management, Procurement and Law* 165 (4):260-260. doi: 10.1680/mpal.11.00038.
Wang, Richard Y., and Diane M. Strong. 1996. "Beyond Accuracy: What Data Quality Means to Data Consumers." *Journal of Management Information Systems* 12 (4):5-33.
Wang, Wenjuan, Alex HB Duffy, and Mark Haffey. 2007. "A Post-Positivism View of Function Behaviour Structure." 16th International Conference on Engineering Design, Paris.
Wang, Yiwei, Shawon Sarkar, and Chirag Shah. 2017. "Investigating Information Seekers' Selection of Interpersonal and Impersonal Sources." *Proceedings of the 2017 Conference on Conference Human Information Interaction and Revival*:353-356. doi: 10.1145/3020165.3022151.
Wang, YuMin, Lin Hsin-Hui, Tai Wei-Chun, and Fan Yi-Ling. 2016. "Understanding Multi-Channel Research Shoppers: An Analysis of Internet and Physical Channels." *Information Systems and e-Business Management* 14 (2):389-413. doi: 10.1007/s10257-015-0288-1.
Welbourne, Theresa M., Diane E. Johnson, and Amir Erez. 1998. "The Role-Based Performance Scale: Validity Analysis of A Theory-Based Measure." *Academy of Management Journal* 41 (5):540-555. doi: 10.5465/256941.
White, Gary W., and Gregory A. Crawford. 1998. "Cost-Benefit Analysis of Electronic Information: A Case Study." *College and Research Libraries* 59 (6):502-509.

Willems, Kim, Sara Leroi-Werelds, and Gilbert Swinnen. 2016. "The Impact of Customer Value Types on Customer Outcomes for Different Retail Formats." *Journal of Service Management* 27 (4):591-618. doi: 10.1108/JOSM-11-2015-0364.
William, Lan. 2005. "Self-Monitoring and Its Relationship with Educational Level and Task Importance." *Educational Psychology* 25 (1):109-127.
Willis, Gordon B. 2004. *Cognitive Interviewing: A Tool for Improving Questionniare Design*: Sage Publications
Wilson, TD 2006. "Information-Seeking Behaviour and the Digital Information World." *The Indexer* 25 (1):28-31.
Wilson, Tom D. 1999. "Models in Information Behaviour Research." *Journal of Documentation* 55 (3):249-270. doi: 10.1108/EUM0000000007145.
Wok, Saodah, and Shafizan Mohamed. 2017. "Internet and Social Media in Malaysia: Development, Challenges and Potentials." *The Evolution of Media Communication* doi: 10.5772/intechopen.68848.
Woolcock, Michael, and Deepa Narayan. 2000. "Social Capital: Implications for Development Theory, Research, and Policy." *The World Bank Research Observer* 15 (2):225-249. doi: 10.1093/wbro/15.2.225.
Woudstra, Lilian, Bart van den Hooff, and Alexander Schouten. 2016. "The Quality Versus Accessibility Debate Revisited: A Contingency Perspective on Human Information Source Selection." *Journal of the Association for Information Science and Technology* 67 (9):2060-2071. doi: 10.1002/asi.23536.
Woudstra, Lilian, Bart van den Hooff, and Alexander P. Schouten. 2012. "Dimensions of Quality and Accessibility: Selection of Human Information Sources From a Social Capital Perspective." *Information Processing & Management* 48 (4):618-630. doi: https://doi.org/10.1016/j.ipm.2012.02.002.
Wright, Kevin B. 2005. "Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services." *Journal of Computer-Mediated Communication* 10 (3). doi: 10.1111/j.1083-6101.2005.tb00259.x.
Wu, Liang. 2012. "An Empirical Research on Poor Rural Agricultural Information Technology Services to Adopt." *Procedia Engineering* 29:1578-1583. doi: https://doi.org/10.1016/j.proeng.2012.01.176.
Xia, Ling-Xiang, Xuliang Shi, Yi Zhang, and Steven Hollon. 2012. "Interpersonal Self-Support and Attentional Bias on Negative and Positive Interpersonal Information." *International Journal of Psychology : Journal International De Psychologie* 48. doi: 10.1080/00207594.2012.738299.
Xie, Julan, Hongyu Ma, Zhiqing E. Zhou, and Hanying Tang. 2018. "Work-Related Use of Information and Communication Technologies After Hours (W_ICTs) and Emotional Exhaustion: A Mediated Moderation Model." *Computers in Human Behavior* 79:94-104. doi: 10.1016/j.chb.2017.10.023.
Xu, Yunjie, and Zhiwei Chen. 2006. "Relevance Judgment: What Do Information Users Consider Beyond Topicality?" *Journal of the American Society for Information Science and Technology* 57 (7):961-973. doi: https://doi.org/10.1002/asi.20361.
Xu, Yunjie, Bernard C. Y. Tan, and Li Yang. 2006. "Who Will You Ask? An Empirical Study of Interpersonal Task Information Seeking." *Journal of the American Society for Information Science and Technology* 57 (12):1666-1677. doi: 10.1002/asi.20339.
Yeong, Sheng Tey, Mark Brindal, Elton Li, Gurjeet Gill, Johan Bruwer, Amin Mahir Abdullah, Alias Radam, Mohd Mansor Ismail, and Suryani Darham. 2018. "Factors Affecting the Selection of Information Sources of Sustainable Agricultural Practices by Malaysian Vegetable Farmers." *Journal of Agricultural & Food Information* 19 (2):162-175. doi: 10.1080/10496505.2017.1328310.
Yinghong, Wei, Gary L. Frankwick, Gao Tao, and Zhou Nan. 2011. "Consumer Adoption Intentions Toward the Internet in China." *Journal of Advertising Research* 51 (4):594-607. doi: 10.2501/JAR-51-4-594-607.

Yunan, Roshda Md. 2011. "Rural Broadband Initiatives in Malaysia." Last Modified 21-13 September 2011. https://aseanruralconnectivityconference2011.files.wordpress.com/2011/09/15-roshda-md-yunan-micc-malaysia.pdf.

Zare-Farashbandi, Firoozeh, Anasik Lalazaryan, Alireza Rahimi, and Akbar Hasssanzadeh. 2016. "The Effect of Contextual Factors on Health Information–Seeking Behavior of Isfahan Diabetic Patients." *Journal of Hospital Librarianship* 16 (1):1-13. doi: 10.1080/15323269.2016.1118266.

Zaremohzzabieh, Z., et al. (2016). "Information and Communications Technology Acceptance by Youth Entrepreneurs in Rural Malaysian Communities: The Mediating Effects of Attitude and Entrepreneurial Intention." Information Technology for Development **22**(4): 606-629. doi: 10.1080/02681102.2015.1128384.

Zawawi, Salina, and Majid Shaheen. 2001. "The Information Needs and Seeking Behaviour of the IMR Biomedical Scientists " *Malaysian Journal of Library & Information Science* 6 (1):25-41.

Zhang, Ting, Roger Stough, and Dan Gerlowski. 2022. "Digital Exposure, Age, and Entrepreneurship." *The Annals of Regional Science* 69 (3):633-681. doi: 10.1007/s00168-022-01130-0.

Zhang, Yan. 2014. "Beyond Quality and Accessibility: Source Selection in Consumer Health Information Searching." *Journal of the Association for Information Science and Technology* 65 (5):911-927. doi: 10.1002/asi.23023.

Zimmer, J. Christopher, Raymond M. Henry, and Brian S. Butler. 2007. "Determinants of the Use of Relational and Nonrelational Information Sources." *Journal of Management Information Systems* 24 (3):297-331. doi: 10.2753/MIS0742-1222240310.

Zuccon, Guido. 2016. "Understandability Biased Evaluation for Information Retrieval." European Conference on Information Retrieval Researhc, Switzerland.

APPENDICES

Appendix A: Questionnaire in English

Curtin University
Malaysia

Dear Participant,

I would like to invite you to participate in a survey. The purpose of this study is to determine the factors affecting the use of digital information sources among rural entrepreneurs in Malaysia. Please note that your participation is entirely voluntary. You have the right to refuse participating the survey.

The survey contains 5 sections, which may take about 10-15 minutes to complete. This survey is completely anonymous and does not contain any personal information that could identify you. The information collected will be kept for 7 years after the completion of the research according to the research and development policies of Curtin University.

Please answer all the questions in this questionnaire and give the most accurate views based on your experience. There is no right or wrong answer. Please note that your answer will be treated with strict confidentiality.

Curtin University Human Research Ethics Committee (HREC) has approved this study (HRE2020-0121). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email hrec@curtin.edu.au.

Thank you for your cooperation and valuable time.

Yeo Hui Hui

E-mail: huihui.yeo@postgrad.curtin.edu.my

☐	I have received information regarding this research and had an opportunity to ask questions. I believe I understand the purpose, extent and possible risks of my involvement in this project and I voluntarily consent to take part.

Curtin University
Malaysia

Section A: Indication of Tasks and Information Sources

1. Please rank the following statements on which task you involved or prioritize the most on the scale of 1 – "the most" to 7 – "the least").

____ Marketing Activities (e.g., Promoting Business, Advertisement)

____ Human Resource Activities (e.g., Recruitment. Policies and HR Records)

____ Logistics Activities (e.g., Transportation, Warehousing)

____ Accounting and Finance Activities (e.g., Balance Sheets, Budgeting)

____ Legal and Compliance Activities (e.g., Company's Policies and Procedures)

____ Production Activities (e.g., Processes, Quality Control)

____ IT Activities (e.g., Installation, Updates)

2. Please rank the following statements on which information source you use the most on the scale of 1 – "the most" to 3 – "the least".

____ Social Media (e.g., Facebook, Instagram)

____ Website (e.g., www)

____ Printed media (e.g., Magazines, Newspapers)

3. Please indicate how often you use digital information source on the scale of 1 – "do not use at all" to 7 – "several times a day".

Types of Sources	Do not use at all	About once in a month	About once in 2-3 weeks	About once a week	Several times a week	About once a day	Several times a day
Social Media	1	2	3	4	5	6	7
Website	1	2	3	4	5	6	7
Printed Media	1	2	3	4	5	6	7

4. On average, please indicate how much time you spend on work-related information seeking daily on the scale of 1 – "less than 1 hour" to 5 – "more than 5 hours".

Types of Sources	Less than 1 hour	About1-2 hours	About 3-5 hours	More than 5 hours
Social Media	1	2	3	4
Website	1	2	3	4
Printed Media	1	2	3	4

Section B: Factors Affecting the Use of Digital Information Sources

The term "task" in the following questions is based on the task you ranked as "the most involved" or "the 1st prioritized" in Section A Question 1.

Please rate the extent to which you agree or disagree, on the scale of 1 – "strongly disagree" to 5 – "strongly agree", with the following statements.

	Strongly Disagree				Strongly Agree
1. The task is important to me.	1	2	3	4	5
2. The task is important to my performance.	1	2	3	4	5
3. The task means a lot to me.	1	2	3	4	5
4. It takes a lot of time to access the digital information source.	1	2	3	4	5
5. It takes too long to access the digital information source.	1	2	3	4	5
6. It takes a lot of effort to reach the digital information source.	1	2	3	4	5
7. It is easy to access the digital information source.	1	2	3	4	5
8. The information I get from the digital information source is clear in meaning.	1	2	3	4	5
9. The information I get from the digital information source is easy to comprehend.	1	2	3	4	5
10. The information I get from the digital information source is accurate.	1	2	3	4	5
11. The information I get from the digital information source is credible.	1	2	3	4	5
12. My work is emotionally demanding.	1	2	3	4	5
13. I can tell a lot of people how to do the work.	1	2	3	4	5
14. I have clear objectives of my work.	1	2	3	4	5
15. I consider myself an expert in doing the work.	1	2	3	4	5
16. I often get help and support from my colleagues/partners to complete my work.	1	2	3	4	5

Curtin University
Malaysia

Section C: Task Performance

Please rate the extent to which you agree or disagree, on the scale of 1 – "strongly disagree" to 5 – "strongly agree", with the following statements.

	Strongly Disagree				Strongly Agree
1. I manage to plan my work so that it is done on time.	1	2	3	4	5
2. I am able to perform my work well with minimal time and effort.	1	2	3	4	5
3. I can complete my work in the shorter intended time.	1	2	3	4	5
4. Regarding my work in general, I am pleased with my work as a whole, everything taken into consideration.	1	2	3	4	5

Section D: Demographics

Please tick (√) ONE (1) answer ONLY for each question.

1. **Age**

☐1 18-24
☐2 25-29
☐3 30-34
☐4 35-39
☐5 40-44
☐6 45-49
☐7 50-54
☐8 55-59
☐9 60 and above

2. **Gender**

☐1 Male
☐2 Female

3. **Highest Education Level**

☐1 No formal education
☐2 Primary Education
☐3 Secondary Education
☐4 Tertiary Education

4. **Background Knowledge**

Please indicate how long have you been using digital information source for work-related information daily on the scale of 1 – "do not use at all" to 5 – "more than 4 years".

Types of Sources	Do not use at all	Less than a year	1-2 years	3-4 years	More than 4 years
Social Media	1	2	3	4	5
Website	1	2	3	4	5
Printed Media	1	2	3	4	5

5. **Type of Industry**

_____

6. **Average Sales Turnover for the Last 3 Years**

   RM _____

7. **Please state the number of full-time employees in your organization.**

   _____ employee(s)

8. **Establishment of Business**
   - ☐1 Under 1 year
   - ☐2 1-4 years
   - ☐3 5-10 years
   - ☐4 11-20 years
   - ☐5 Above 20 years

Section E: Open-ended Question

How have new technologies changed the way you look for work-related information?

_____

_____

Appendix B: Questionnaire translated to Chinese language

Curtin University
Malaysia

亲爱的参与者，

你好！在此希望能邀请您参与这份问卷调查，本次研究的目的是测定马来西亚农村企业家使用数位资讯源的原因及影响。请注意，您的参与完全是基于自愿 原则，所以您有权拒绝参与本次问卷调查。

本问卷包含 5 个部分，可能需要占用您 10 到 15 分钟的时间来完成。本问卷是 完全匿名的，不会牵涉到可以辨别出您本人身份的个人信息。根据科廷大学所 制定的研究与发展政策，通过本次问卷搜集到的信息将会在研究结束后被保存 7 年。

请根据您的经验给予最准确的观点，并完整回答完问卷里的所有问题。答案没 有对错之分，您的回答将会被严格保密。

此次研究已经得到科廷大学人类研究伦理委员会（HREC）的批准（批准号：HREXX/XXXX）。如果您希望与没有直接参与研究的的人讨论该研究，特别 是关于研究的进行或者您作为参与者的权利的任何事项，或是希望做出保密的 投诉，您可以联系伦理办公室人员：(08) 9266 9223 或经理，电话：(08) 9266 7093，电子邮件：hrec@curtin.edu.au。

感谢您的合作和宝贵的时间！

杨惠妃

电子邮：huihui.yeo@postgrad.curtin.edu.my

☐	我已经收到有关这项研究的资讯，并有机会提出问题。我相信我了解参与此项目的目的，程度和可能的风险，因此我自愿同意参与。

Curtin University
Malaysia

A 部分: 任务和信息源的指示

1. 请按以下顺序对您所参与的任务或最优先的任务安由 1– "最常" 到 7 – "最少" 的等级排序。

____ 营销活动 (例如：促进业务，广告)

____ 人力资源活动 (例如：招聘，政策和人力资源记录)

____ 物流活动 (例如：运输，仓储)

____ 会计和财务活动 (例如：资产负债表，预算编制)

____ 法律和合规活动 (例如：公司的政策和程序)

____ 生产活动 (例如：过程，质量控制)

____ IT 活动 (例如：安装，更新)

2. 请在以下顺序上对您使用最多的资讯源进行排名，等级由 1 – "最常" 到 3 – "最少" 。

____ 社交媒体 (例如：面子书, Instagram)

____ 网站 (例如：www)

____ 印刷媒体 (例如：杂志，报纸)

3. 请指出您使用数位资讯源的频率为 1 – "完全不使用" 到 7 – "一天几次" 。

来源类型	完全不使用	大约每月一次	大约 2-3 周一次	大约每周一次	一周几次	大约一天一次	一天几次
社交媒体	1	2	3	4	5	6	7
网站	1	2	3	4	5	6	7
印刷媒体	1	2	3	4	5	6	7

4. 平均而言，请指出您每天花在与工作相关的资讯上的时间为 1 – "少于 1 小时" 到 4 – "超过 4 小时" 。

来源类型	少于 1 小时	约 1-2 小时	约 3-4 小时	超过 4 小时
社交媒体	1	2	3	4
网站	1	2	3	4
印刷媒体	1	2	3	4

B 部分: 影响数位资讯源使用的因素

以下问题中提及的“任务”一词将基于您在 A 部分问题 1 中的“最参与”或“第一优先”。

请按照以下陈述，以 1-“完全不同意” 到 5 – “完全同意” 的等级来评价您同意或不同意的程度。

	完全不同意				完全同意
1. 这项任务对我很重要。	1	2	3	4	5
2. 这项任务对我的表现很重要。	1	2	3	4	5
3. 这项任务对我意义重大。	1	2	3	4	5
4. 取得数位资讯源需要很多时间。	1	2	3	4	5
5. 取得数位资讯源需要花的时间很长。	1	2	3	4	5
6. 取得数位资讯源需要很费力。	1	2	3	4	5
7. 取得数位资讯源很轻松。	1	2	3	4	5
8. 我从数位资讯源获得的资讯含义明确。	1	2	3	4	5
9. 我从数位资讯源获得的资讯很容易理解。	1	2	3	4	5
10. 我从数位资讯源获得的资讯是准确的。	1	2	3	4	5
11. 我从数位资讯源获得的资讯是可信的。	1	2	3	4	5
12. 我的工作对情感要求很高。	1	2	3	4	5
13. 我可以告诉很多人如何做这项工作。	1	2	3	4	5
14. 我有明确的工作目标。	1	2	3	4	5
15. 我认为自己是从事这项工作的专家。	1	2	3	4	5
16. 我经常得到同事/合作伙伴的帮助和支持以完成我的工作。	1	2	3	4	5

Curtin University
Malaysia

C 部分: 任务执行

请按照以下陈述，以 1 – "完全不同意" 到 5 – "完全同意" 的等级来评价您同意或不同意的程度。

	完全不同意				完全同意
1. 我设法计划好工作，以便按时完成。	1	2	3	4	5
2. 我可以使用最少的时间和精力很好地完成工作。	1	2	3	4	5
3. 我可以在较短的时间内完成工作。	1	2	3	4	5
4. 关于我的总体工作，我对我的整体工作感到满意。	1	2	3	4	5

D 部分: 受众特征

以下问题请勾选(√) 一 **(1)** 个回答。

1. 年龄

☐1 18-24
☐2 25-29
☐3 30-34
☐4 35-39
☐5 40-44
☐6 45-49
☐7 50-54
☐8 55-59
☐9 60 或以上

2. 性别

☐1 男
☐2 女

3. 最高学历

☐1 没有正规教育
☐2 小学教育
☐3 中学教育
☐4 高等教育

4. 背景知识

请指出您每天将数位资讯源用于工作相关资讯的时间位 1 – "完全不使用" 到 5 – "超过 4 年"。

来源类型	完全不使用	不到 1 年	1-2 年	3-4 年	4 年以上
社交媒体	1	2	3	4	5
网站	1	2	3	4	5
印刷媒体	1	2	3	4	5

5. 行业类型

_____

6. **最近三年的平均销售量**

RM _____

7. **请说明您组织的全职员工数。**

_____ 位员工

8. 创业几年

☐1 1 年以下

☐2 1-4 年

☐3 5-10 年

☐4 11-20 年

☐5 20 年以上

E 部分: 开放式问题

新技术如何改变您寻找与工作相关的信息资讯？

_____

_____

Appendix C: Questionnaire translated to Malay language

Curtin University
Malaysia

Peserta yang dihormati,

Saya ingin menjemput anda untuk mengambil bahagian dalam kaji selidik. Tujuan kajian ini adalah untuk menentukan factor-faktor yang mempengaruhi penggunaan sumber maklumat digital di kalangan usahawan luar Bandar di Malaysia. Sila ambil perhatian bahawa penyertaan anda adalah sukarela. Anda berhak untuk menolak penyertaan kaji selidik.

Kajian ini mengandungi 5 bahagian, yang mungkin mengambil masa kira-kira 10-15 minit untuk disiapkan. Kajian ini adalah dilakukan dengan tidak diketahui siapa yang terlibat dan tidak akan mengandungi sebarang maklumat peribadi yang dapat mengenal pasti anda.

Maklumat yang dikumpul akan disimpan selama 7 tahun selepas selesai penyelidikan mengikut dasar penyelidikan dan pembangunan Curtin Universiti.

Sila jawab semua soalan dalam soal selidik ini dan beri pandangan yang paling tepat berdasarkan pengalaman anda, Tidak ada jawapan yang betul atau salah. Jawapan anda akan disimpan secara sulit.

Jawatankuasa Etika Penyelidikan Manusia Curtin University (HREC) telah meluluskan kajian ini (HRE2020-0121). Sekiranya anda ingin membincangkan kajian dengan seseorang yang tidak terlibat, terutamanya, apa-apa perkara yang berkaitan dengan kelakuan kajian atau hak anda sebagai peserta, atau anda ingin membuat aduan sulut, anda boleh menghubungi Pegawai Etika pada (08) 9266 9223 atau Pengurus Integriti Penyelidikan di (08) 9266 7093 atau e-emel ke hrec@curtin.edu.au.

Terima kasih untuk kerjasama dan masa yang berharga anda.

Yeo Hui Hui

E-mel: huihui.yeo@postgrad.curtin.edu.my

☐	Saya telah menerima maklumat mengenai penyelidikan ini dan mempunyai peluang untuk bertanya. Saya mempercayai bahawa saya memahami tujuan,peringkat dan risiko penglibatan saya dalam projek ini. Saya secara sukarela bersetuju untuk mengambil bahagian dalam penyelidikan ini.

Bahagian A: Petunjuk Tugas dan Sumber Maklumat

1. Sila mengklasifikasikan penyataan berikut mengenai tugas yang anda terlibat atau diutamakan pada skala 1 – "paling banyak" hingga 7 – "paling kurang".

____ Aktiviti Pemasaran (cth., Mempromosikan Perniagaan, Iklan)

____ Aktiviti Sumber Manusia (cth., Rekrutmen Dasar dan Rekod HR)

____ Aktiviti Logistik (cth., Pengangkutan, Pergudangan)

____ Aktiviti Perakaunan dan Kewangan (cth., Lembaran Imbangan, Belanjawan)

____ Aktiviti Undang-Undang dan Kepatuhan (cth., Dasar dan Prosedur Syarikat)

____ Aktiviti Pengeluaran (cth., Proses, Kawalan Mutu)

____ Aktiviti IT (cth., Pemasangan, Pembaharuan)

2. Sila mengklasifikasikan penyataan berikut mengenai sumber maklumat yang sering digunakan pada skala 1 – "paling banyak" hingga 3 – "paling kurang".

____ Media Sosial (cth., Facebook, Instagram)

____ Laman Web (cth., www)

____ Media Cetak (cth., Majalah, Akhbar)

3. Sila nyatakan berapa kerap anda menggunakan sumber maklumat digital pada skala 1 – "langsung tidak" hingga 7 – "beberapa kali sehari".

Jenis Sumber	Langsung tidak	Sekali sebulan	Lebih kurang sekali dalam 2-3 minggu	Lebih kurang sekali seminggu	Beberapa kali seminggu	Sekali sehari	Beberapa kali sehari
Media Sosial	1	2	3	4	5	6	7
Laman Web	1	2	3	4	5	6	7
Media Cetak	1	2	3	4	5	6	7

4. Secara purata, sila nyatakan berapa banyak masa anda meluangkan untuk mencari maklumat berkaitan dengan pekerjaan setiap hari pada skala 1 – "kurang daripada 1 jam" hingga 4 - "lebih daripada 5 jam".

Jenis Sumber	Kurang daripada 1 jam	Lebih kurang 1-2 jam	Lebih kurang 3-5 jam	Lebih daripada 5 jam
Media Sosial	1	2	3	4
Laman Web	1	2	3	4
Media Cetak	1	2	3	4

Bahagian B: Faktor-faktor yang Mempengaruhi Penggunaan Sumber Maklumat Digital

Terma "tugas" dinyatakan di soalan-soalan berikut adalah berdasarkan tugas anda mengklasifikasikan "yang paling terlibat" atau "yang diutamakan" dalam Bahagian A Soalan 1.

Sila menilai sejauh mana anda bersetuju atau tidak setuju dengan pernyataan berikut pada skala 1 – "sangat tidak bersetuju" hingga 5 – "sangat setuju",

	Sangat Tidak Bersetuju				Sangat Setuju
1. Tugas itu penting bagi saya.	1	2	3	4	5
2. Tugas itu adalah penting untuk prestasi saya.	1	2	3	4	5
3. Tugas itu sangat bermakna kepada saya.	1	2	3	4	5
4. Sumber maklumat digital mengambil banyak masa untuk diakses.	1	2	3	4	5
5. Sumber maklumat digital mengambil jangka masa yang lama untuk diakses.	1	2	3	4	5
6. Sumber maklumat digital memerlukan banyak usaha untuk diakses.	1	2	3	4	5
7. Sumber maklumat digital mudah diakses.	1	2	3	4	5
8. Maklumat yang diperolehi dari sumber maklumat digital adalah jelas dan bermakna.	1	2	3	4	5
9. Maklumat yang diperolehi dari sumber maklumat digital adalah mudah difahami.	1	2	3	4	5
10. Maklumat yang diperolehi dari sumber maklumat digital adalah tepat.	1	2	3	4	5
11. Maklumat yang diperolehi dari sumber maklumat digital boleh dipercayai.	1	2	3	4	5
12. Kerja saya sangat mendesak.	1	2	3	4	5
13. Saya boleh memberitahu ramai orang bagaimana melakukan kerja saya.	1	2	3	4	5
14. Saya mempunyai objektif yang jelas mengenai kerja saya.	1	2	3	4	5
15. Saya menganggap diri saya pakar dalam melakukan kerja saya.	1	2	3	4	5
16. Saya sering mendapati pertolongan dan sokongan daripada rakan sekerja saya untuk menyelesaikan kerja saya.	1	2	3	4	5

Bahagian C: Prestasi Tugas

Sila menilai sejauh mana anda bersetuju atau tidak bersetuju dengan pernyataan berikut pada skala 1 – "sangat tidak bersetuju" hingga 5 – "sangat setuju".

	Sangat Tidak Bersetuju				Sangat Setuju
1. Saya berjaya merancangkan kerja saya dan disiapkan pada waktu yang tepat.	1	2	3	4	5
2. Saya dapat melakukan kerja saya dengan baik menggunakan masa dan usaha yang minimum.	1	2	3	4	5
3. Saya dapat menyelesaikan kerja saya pada masa yang lebih singkat.	1	2	3	4	5
4. Secara umumnya, saya berpuas hati dengan kerja saya.	1	2	3	4	5

Bahagian D: Demografi

Sila tandakan (√) pada petak yang disediakan. Anda hanya boleh menandakan SATU (1) jawapan sahaja pada setiap solan yang diberi.

1. Umur

☐1 18-24
☐2 25-29
☐3 30-34
☐4 35-39
☐5 40-44
☐6 45-49
☐7 50-54
☐8 55-59
☐9 60 dan ke atas

2. Jantina

☐1 Lelaki
☐2 Perempuan

3. Tahap Pendidikan Tertinggi

☐1 Tiada
☐2 Pendidikan Rendah
☐3 Pendidikan Menengah
☐4 Pendidikan Tinggi

4. Pengetahuan Latar Belakang

Sila nyatakan berapa lama anda menggunakan sumber maklumat digital untuk memperolehi maklumat berkaitan dengan pekerjaan setiap hari pada skala 1 – "langsung tidak" hingga 5 – "lebih daripada 4 tahun".

Jenis Sumber	Langsung Tidak	Kurang Daripada Setahun	1-2 tahun	3-4 tahun	Lebih Daripada 4 Tahun
Media Sosial	1	2	3	4	5
Laman Web	1	2	3	4	5
Media Cetak	1	2	3	4	5

5. **Jenis Industri**

   _____

6. **Purata Hasil Jualan Bagi 3 Tahun yang Lepas**

   RM _____

7. **Sila nyatakan jumlah perkerja sepenuh masa di organisasi anda.**

   _____ pekerja

8. **Penubuhan Perniagaan**
   - ☐1 Kurang daripada 1 tahun
   - ☐2 1-4 tahun
   - ☐3 5-10 tahun
   - ☐4 11-20 tahun
   - ☐5 Lebih daripada 20 tahun

Bahagia E: Soalan Terbuka

Bagaimanakah teknologi baru mengubah cara anda mencari maklumat yang berkaitan dengan pekerjaan?

_____

_____

Appendix D: Script for Telephone Interview

Introductory Script

Hello, is this _____(name)?

[If the person is not available try to schedule a time to call back or If it is not the person speaking ask if you may speak to the person.]

My name is Yeo Hui Hui and I am a Research student from Curtin University Malaysia. My research topic is "Factors Affecting the Use of digital Information Sources Among Rural Entrepreneurs." I am conducting a brief survey on information seeking behaviour of rural entrepreneurs like you. This survey is voluntary and you may stop at any time. Your answers are confidential. The survey will take about 10-15 minutes to complete.

So, do you agree on participating in this short survey?

Developing the Telephone Questionnaire

First for **Section A**, I would like to find out the indication of task and information sources.

1. Please rank the following statement on which task you involved or prioritize the most on the scale of 1 – "the most to 7 – "the least".
   Your options are: Marketing Activities, Human Resource activities, logistics activities, accounting and finance activities, legal and compliance activities, production activities or IT activities.
2. Please rank the following statements on which information source you use the most on the scale of 1 – "the most" to 3 – "the least".
   Your options are social media, website or printed media.
3. Please indicate how often you use digital information source on the scale of 1 – "do not use at all", 2 – "about once in a month", 3 – "about once in 2-3 weeks", 4 – "about once a week", 5 – "several times a week", 6 – "about once a day" and 7 – "several times a day."
   So, how often do you use social media?
   Following on with, how often do you use the website?
   Lastly, how often do you use printed media?

4. On average, please indicate how much time you spend on your work-related information seeking daily on the scale of 1 – "less than 1 hour", 2 – "about 1-2 hours", 3 – "about 3-5 hours" and 4 – "more than 5 hours".
   How many hours do you spend time seeking for work related information daily on social media?
   Website?
   And printed media?

Moving on, is **Section B** which is the factors affecting the use of digital information sources.

In this section, the term "task" in the following questions is based on the task you rank as "the most involved" or "the 1st prioritized" in Section A Question 1.

Please rate the extent to which you agree or disagree, on the scale of 1 – "strongly disagree" to 5 – "strongly agree", with the following statements.

1. The task is important to me.
2. The task is important to my performance.
3. The task means a lot to me.
4. It takes a lot of time to access the digital information source.
5. It takes too long to access the digital information source.
6. It takes a lot of effort to reach the digital information source.
7. It is east to access the digital information source.
8. The information I get from the digital information source is clear in meaning.
9. The information I get from the digital information source is east to comprehend.
10. The information I get from the digital information source is accurate.
11. The information I get from the digital information source is credible.
12. My work is emotionally demanding.
13. I can tell a lot of people how to do the work.
14. I have clear objectives of my work.
15. I consider myself an expert in doing the work.
16. I often get help and support from my colleagues or partners to complete my work.

That's it for Section B. Moving on the **Section C** which is Task performance.

Please rate the extent to which you agree or disagree, on the scale of 1 – "strongly disagree" to 5 – "strongly agree", with the following statements.

1. I manage to plan my work so that it is done on time.
2. I am able to perform my work well with minimal time and effort.
3. I can complete my work in the shorter intended time.
4. Regarding my work in general, I am pleased with my work as a whole, everything taken into consideration.

Next is **Section D,** which is your demographics.

1. May I know how old are you?
2. What is your highest education level?
3. This is regarding your background knowledge of different sources. Please let me know about how long have you been using the following sources.
   Social Media
   Website
   Printed Media
4. What type of industry is your business?
5. What is your average sales turnover for the last 3 years?
6. How many full-time employees do you have in your organisation?
7. How long have your business been established?

Last but not least, **Section E** which is an open-ended question.

Based on your opinion, how have new technologies changed the way you look for work-related information?

Objection Handlings

Fall-back Statements

1. If in doubt
   - You were chosen as part of this survey in order to obtain opinions. It's bery important to learn how rural entrepreneurs feel about the digital information sources and how it may help the business.

2. I don't have time for this
   - I understand that you have a busy schedule but it's very important that we speak to busy people like yourself in order to get an accurate cross-section of people. We can do the interview at your convenience. How about tomorrow afternoon at 3pm or tomorrow evening at 8pm?

3. How can I be sure that this is legitimate?
   - I would be glad to give you the telephone number of my supervisors in charge of the research, who will provide you with more information. Her name is Dr Fidella, I am sure she would be happy to talk with you. The number to call her is +6085-650100 (ext: 2769).
   -
4. Respondent wants to break off the interview.
   - We have about ___ more questions left. If you would like, I can read the questions a little faster.
   - We have only a few more questions, if you'll just bear with me.

Call-back Statements

1. Introduction for a scheduled call back
   - I'm Yeo Hui Hui, research student from Curtin University Malaysia, we scheduled a call back to complete the interview. As you recall, we left off at question _____.

2. If the respondent is reluctant to finish the call back
   - We'd really appreciate your cooperation in completing/doing the interview we started. It will just take a few more minutes of your time.

Refusals

1. Too busy
   - This should take only a few minutes. I'm sorry to have caught you at a bad time. I would be happy to call you back. When would be a good time for me to call in the next day or two?

2. Bad health
   - I'm sorry to hear that but I would be happy to call you back at another time. Would it be okay to wait a few days and call back when you feel better?

3. Too old
   - Older people's opinion are just as important in this particulat survey as anyone else's. In order for the results to be representative for all the people that we serve, we have to be sure that older people have as much chance to give their opition as anyone else does. We really do want your opinion.

4. Don't know enough to answer
   - The questions are just simple. Some of the people we have already interviewed have had the same concern you have, but once we got started, they didn't have any difficulty answering the questions. Maybe I could read just a question or two to you and you can see what they are like.

5. Not interested
   - It's important that we get the opinions of everyone in the sample, otherwise the results won't be useful. So, I'd really like to talk to you.

Source: Israel and O'Leary (2020)