FACTORS AFFECTING THE PERSONAL SAVING BEHAVIOR

AMONG UTAR STAFFS DURING COVID-19

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DECLARATION

We hereby declare that:

(1) This undergraduate FYP is the culmination of our efforts, and all sources of information, whether printed, electronic, or personal, are acknowledged in citations.

(2)No part of this FYP was submitted in support of an application for any other degree or qualification at this school, any other university, or any other institution of study.

(3) Each group member contributed equally to the completion of the FYP.

(4) The word count of this study report is 16073 words.

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DEDICATION

This work done is especially dedicated to:

Dr.Dinesh Kumar A/L Saundra Rajan

and

To our families and our loved ones,

Thanks for being there when we needed you the most.

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UTAR	Universiti Tunku Abdul Rahman
BEA	Bureau of Economic Analysis
MCO	Movement Control Orders
MdI	Malaysia Department of Insolvency
LCH	Life Cycle Hypothesis
IBM	International Business Machines Corporation
SPSS	Statistical Package for Social Science
CA	Cronbach's alpha
PhD	Doctor of Philosophy
PSB	Personal Saving Behavior
FK	Financial Knowledge
FSE	Financial Self-efficacy
RP	Risk Perception
IL	Income level
TARUC	Tunku Abdul Rahman University College

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ABSTRACT

This study is carried out to discover the factors affecting the personal saving behavior among UTAR staffs during Covid-19. The factors affecting the personal saving behavior among UTAR staffs during Covid-19 which included the independent variables of financial knowledge, financial self-efficacy, risk perception and income level. Social Cognitive Theory of self-regulation, Risk Perception Theory, Theory of Planned Behavior and Life Cycle Hypothesis will be used to explain the independent variables and dependent variables. The target respondents are academic staffs from UTAR Kampar campus who are between the ages of 21 and 70, with an aim to collect at least 217 of the questionnaire survey respondents. In this study, SPSS was used to help with data analysis. In the data analysis, the Reliability Test, Central Tendencies Measurement of Constructs, Pearson Correlation Analysis, and Multiple Regression Analysis are used. The findings revealed that independent variables such as financial knowledge, financial self-efficacy, and risk perception have a significant relationship with personal saving behavior among UTAR employees during Covid-19, with the exception of income level, which has an insignificant relationship with personal saving behavior among UTAR staffs during Covid-19. The independent variables can explain 0.556, or 55.6 percent of the variable in the dependent variable, according to R square. The research's limitations and recommendations are also included in this study for future researchers to gain a better understanding of UTAR staffs' personal saving behavior during Covid-19.

CHAPTER 1: RESEARCH OVERVIEW

1.1 Research Background

Saving behavior has been defined as studying how people save in a country in an attempt to comprehend that country's economic condition (*Saving Behaviour: Research Study,* 2018). It is generally known that as people save more, their individual discretionary income increases. The globally averaged saving rate has been declining since the first oil shock in the early 1990s. People can now open Savings Accounts, Money Market Accounts, Certificates of Deposit, Savings Bonds, and other common types of savings accounts. According to McKinnon and Shaw (1973), interest rates rose as a result of financial liberalisation, equating the demand and supply of deposits. Rising interest rates encourage people to save more and use financial services to increase the efficiency of their savings and investments. Greater real interest rates enhance the amount of financial services, which boosts the economic growth in emerging countries (*Saving Behaviour: Research Study*, 2018).

According to Jin et al. (2021), the current Covid-19 pandemic is causing harm on the global economy. Governments all throughout the world have made economic recovery a priority. According to studies, people's consumption habits during pandemics are frequently disordered and chaotic (Arafat et al., 2020). Individuals, on the other hand, can set aside resources and improve their saving habits in order to better deal with future uncertainties and hazards. During the Covid-19 lockdown, individuals choose to preserve money rather than spend it, which is detrimental to economic growth and recovery. High savings lead to wealth accumulation, enable individuals to improve their living standards, and can help them survive in this pandemic era. The pandemic encourages more people to lean toward saving behavior because savings can be used to solve urgent problems and

can be used to survive during lock-in periods. For instance, according to a Chinese research, as a result of the epidemic, over than 50 percent of the nation's households raised their savings and decreased overall spending, when compared to the corresponding the previous year, when the Covid-19 did not exist, the average savings of the youth of today jumped by 34%. (Survey and Research Centre for China Household Finance, 2020). Even those Americans who are famous for their rejection to save money demonstrate the same pattern of behavior. The personal savings rate in America hit an all-time high of 33 percent in April 2020, based on the data from the Bureau of Economic Analysis (BEA), up from 12.7 percent in March 2020 (Jin et al., 2021).

Movement Control Orders (MCO) have been enforced a few times during the Covid-19 outbreak that began on March 18, 2020, which has a bad influence on the financial status of employees. The long-term consequences of the pandemic could include lower retirement incomes, a devaluation of assets in pension funds, as well as a reduction in one's capability to donate to pension fund programmes, and even a postponement of retirement because most staff are in financial trouble (Lim et al., 2021).

Most facets of Malaysian life have been significantly affected as the Covid-19 effects continue to emerge. Covid-19 has caused Malaysia's unemployment rate among individuals to climb to 5.3 percent in May this year, up from 3.3 percent in the same period last year, resulting in the joblessness of over 826,100 people since last May, while other surviving workers have experienced salary cutbacks (Jaafar, 2020).

Malaysians may require more than one to four months' worth of money to get them through the crisis. Since its beginning in December, the Covid-19 outbreak has remained unabated. Moreover two-thirds of self-employed respondents (71.4 percent) have less than a month's worth of savings. Wellian Wiranto, an economist at OCBC Bank, considers the high percentage of people who say they do not have enough money to last a month "astonishing." In terms of savings, the longer an employee has worked, the more prepared he or she is. Individual bankruptcy has gotten a lot of attention in Malaysia in recent years (Goh, 2020).

According to the Malaysia Department of Insolvency (MdI), 116,488 persons were declared bankrupt between 2007 and September 2013. In reality, the number continued to rise year after year. Workers' debt is now growing at a greater rate than inflation. Workers must decide not merely how much to save for retirement, as well as how to use the pension resources, given the decline in employment prospects, income unpredictability, and diminished purchasing power of Malaysian employees (Delafrooz & Paim, 2011).

As a result, determining the drivers affecting employees' saving behavior in Malaysia is critical in order for employees to have appropriate savings in order to live a comfortable life, particularly during the epidemic (Lim et al., 2021). This report, we will study what are the factors that affect personal saving behavior among UTAR staffs during the Covid-19 pandemic. After a thorough review of literature review, financial knowledge, financial self-efficacy, risk perception and income level are the four significant determinants examined. In this study, we would like to find out the relationship between financial knowledge, financial self-efficacy, risk perception, income level and personal saving behavior.

1.2 Problem Statement

In order to curb the spread of Covid-19 infection in Malaysia, the Malaysia government implemented movement control orders across the country. In this case, many staffs are unable to work, including UTAR staffs. During Covid-19, this indirectly affected the saving behavior of staffs, because staffs were more willing to spend more than save during this period (Zhao, 2021). Research on the saving behavior of Malaysian staffs is limited. The fundamental logic of this occurrence is currently unknown given the deficiency of relevant study. Therefore, in regard to the outbreak of Covid-19, this study aims to study the factors that affect the personal saving behavior of UTAR staffs during the Covid-19 period. There are four factors that will be discussed in the problem statement. The four factors

include financial knowledge, financial self-efficacy, risk perception, and income level.

Factors like financial knowledge could also affect the personal saving behavior of UTAR staffs during Covid-19. Financial knowledge is also known as financial literacy and there were many different opinions from many researchers. Financial knowledge, according to Lusardi and Mitchell (2014), is related to a person's financial behaviour, and a person's borrowing, saving, and investment decision. It is evident that financial knowledge is essential to saving behaviors. Financial knowledge is important for an individual to make financial decisions and long-term financial security. Generally, financial knowledge may have an impact on financial decisions because it is necessary to learn financial knowledge to make correct financial decisions (Nguyen, Rózsa, Belás & Belásová, 2017). A person who is well-versed in finance would be better able to make sound financial decisions and plan ahead of time. During Covid-19 pandemic, financial knowledge would play an important role for individuals to have better financial planning especially for the saving plan. Significantly, a person's higher financial knowledge does not lead to great financial management except if life values are developed alongside financial knowledge growth (Qamar, Khemta & Jamil, 2016).

Besides, financial self-efficacy examines psychological trends that encourage behavioral patterns that result in improved financial conditions and financial judgments. The studies stated that the individual with self-efficacy will not only have a sense of happiness in physical and mental health but also affect behavior changes such as savings. People with financial self-efficacy normally have fewer financial problems, therefore have a higher amount in terms of savings. Financial self-efficacy affects saving behavior because an individual who has financial self-efficacy, the self-efficacy may affect their financial decisions. In the case of Covid-19 epidemic, individual with financial self-efficacy usually only purchase high-quality and cheaper price necessities and save the cost of meals, because in their perceptions, savings money is very important since they are not sure whether their income will be affected, whether they will be unemployed in the future, or whether they will face a financial crisis in the future. In order to reduce the trouble of facing financial problems, individuals with financial self-efficacy will make preparations in advance, such as saving money (Ismail et al., 2020).

Moreover, risk perception also one of the factors affecting the personal saving behavior of UTAR staffs during Covid-19 Based on the risk perception concept, when people perceive external threats, they will naturally take steps to minimize those risks. Research has shown that individuals may take a safe and traditional approach to cope with their risk (Yu, 2020). Most of the conservative or safe and traditional approaches are strategically allocating resources and strengthening resource reserves. Hence, under the impact of risk perceptions which are affected by the Covid-19, individual's desire to save increases and their desire to spend decreases, as a result, they are more controlling over the unpredictable situation and ensure that they have sufficient available funds to use in the future. Besides that, pandemic can evoke personal perceptions of the risk of death. Research has found that when people nearby die, they are more preferred to long-term advantages as compared with short-term advantages, and thus save more money than they spend (Zhao, 2021).

Furthermore, the income level of an individual is also one of the factors that might affect personal saving behavior. Generally, people that have higher income are indicating that they will plan to save more, however, some of the individuals will have higher consumption when they have higher income. Since the Covid-19 pandemic has affected the income of individuals which means that some of the individuals will be forced to change their saving behavior to maintain life hood (Lim, 2020). Therefore, income level will affect a person's saving behavior especially during the Covid-19 pandemic. There are many employees facing the problem of income reduction. They are categorized into three categories of income level which include a higher, a middle, and a lower income group. There is also different cost of living among different groups of income levels that might affect the saving behavior. According to Flavin, he stated that if income changes, consumption should change by the same time (Kim, 2010).

1.3 Research Objective

1.3.1 General objectives

The objective of this study is to investigate and determine the factors that affect personal saving behavior among UTAR staffs during Covid-19.

1.3.2 Specific objectives

1. To examine how financial knowledge affect the personal saving behavior among UTAR staffs during Covid-19.
2. To determine how financial self-efficacy affect the personal saving behavior among UTAR staffs during Covid-19.
3. To evaluate how risk perception affect the personal saving behavior among UTAR staffs during Covid-19.
4. To explore how income level affect the personal saving behavior among UTAR staffs during Covid-19.

1.4 Research Question

1. Does financial knowledge affect the personal saving behavior among UTAR staffs during Covid-19?
2. Does financial self-efficacy affect the personal saving behavior among UTAR staffs during Covid-19?
3. Does risk perception affect the personal saving behavior among UTAR staffs during Covid-19?
4. Does income level affect the personal saving behavior among UTAR staffs during Covid-19?

1.5 Significance of study

This study is conducted to identify the factors affecting personal saving behavior among UTAR staffs during Covid-19. People were discovered to be more frugal with their money. As a result, identifying saving behavior is critical, as people prefer to spend rather than save. Overspending can have a variety of consequences, including bankruptcy if a person is unable to make timely payments to creditors. People require personal-finance management in their lives because actions taken in early adulthood have long-term consequences, particularly those that negatively affect credit and finances. The objective of this study is to identify and determine the factors that affect UTAR staffs' personal saving behavior during Covid-19. In this Covid-19 pandemic, it is crucial to understand people's saving habits because they would rather save money than spend it, which is advantageous for crises, future consumption, and retirement.

Besides, savings will almost certainly play a key role in encouraging real development. Several empirical investigations have indicated that the saving rate has a favourable impact on long-term growth. Savings, in particular, help to smooth out unexpected income fluctuations, reducing the impact of shocks on consumption. Savings also act as a vehicle for social mobility and the expansion of future income earning opportunities. Savings do have an impact on household welfare, macroeconomic progress, and growth. Nevertheless, in Malaysia, it has been discovered that the savings rate fluctuates over time.

The first findings of this study that are significant to the factors that affect personal saving behavior among UTAR staffs during Covid-19 is the financial knowledge. Knowledge can be obtained from a number of different sources. Education can help people understand the necessity of saving. These include official education, such as high school or college courses, outside-of-school seminars and training sessions, as well as informal sources like parents, friends, and job. The quantity of money saved has been linked to knowledge, which is derived from education, wealth, income, and age. People who have a good

understanding of money are more likely to make sound financial decisions. Individuals make the same mistakes in not saving their money over and over again due to a lack of understanding of the value of saving money.

Next, financial self-efficacy also will have an impact on personal saving behavior. Financial self-efficacy is defined as a person's ability to handle their finances. It is related to one's confidence in themselves and could reflect financial ability. Financial self-efficacy is crucial while attempting to make sound financial decisions because it can influence those judgments. Furthermore, self-efficacy is a crucial concept in social psychology that relates to the sensation of being able to effectively react to a situation. There is also financial self-efficacy, which examines the psychological tendency that promotes behavioral habits that lead to better financial health and choices. Individuals who have a higher level of self-efficacy in coping with financial challenges are more confident and competent than those who have a lower level of self-efficacy. Apart from that, people with a high level of self-efficacy are predicted to accomplish well-being in terms of not only physical and intellectual health, but also behavioral changes. Individuals who have a high level of financial self-efficacy are capable of managing their finances and seek help if needed.

Additionally, risk perception will act as an important role that affects the personal saving behavior among UTAR staffs. The public's mental reaction when they sense danger to their life, wealth, or other assets during an emergency is known as risk perception. The intensity of a catastrophic event is directly connected with an individual's risk perception, based on the psychometric paradigm. The Covid-19 pandemic's impacts are huge and extensive, like in a traditional public health crisis, posing a severe damage to life and wealth, as well as citizens' physical and emotional health. People believe the surrounding world is filled with unpredictability and could have much further effects since they are dealing with a difficult pandemic control issue. As a result of the pandemic's influence, UTAR staffs' risk perception would rise. Furthermore, the social aspect of emergencies will rise or strengthen citizens' risk perception, according to the risk social amplification paradigm..

Lastly, this study is significant to income level. This is due to lower-income households having distinct saving habits, middle-income households could have distinct habits, and higher-income households could also have distinct habits. Higher income groups will save less than lower- and middle-income groups, owing to the fact that higher income parents prefer their children to attend well-known institutes in their areas, therefore they will forfeit more savings than lower- and middle-income groups. Increased income frequency may result in more efficient short-term spending and is regarded as less of a burden because it is spread out over a shorter period of time. For instance, given the same living conditions, more income gives customers more opportunities to save larger amounts, hence this variable was taken into account in the study.

CHAPTER 2: LITERATURE REVIEW

2.1 Underlying Theories

2.1.1 Social Cognitive Theory of self-regulation

In the theory of social cognition, human behavior is extensively regulated and motivated by continuous self-influence exercises. The social cognitive theory of self-regulation points out that self-efficacy impacts behavior by interacting with the mental functions of the self-regulation system. Self-regulation system works through the process of self-monitoring of the behavior of an individual, influence and determinant of an individual, judging one's own behavior and emotional self-reactions based on environmental and personal standards conditions. It acts as a controller and influences the attitude and behavior of an individual (Badaru, 1986). Because of this interaction, self-efficacy affects how individuals establish their goals, evaluate activities, react to positive or negative performance evaluation, monitor behaviors, and judge behavior outcomes (Bandura, 1991). More specifically, individuals with self-efficacy in specific tasks tend to set ideal goals, persevere in the face of troubles and failures, and attribute success to personal ability and effort. According to Bandaru (1978), individuals with financial self-efficacy rarely experience financial situations since the self-efficacy affects their financial decisions. Individuals with financial self-efficacy will save more money through the mental function of the self-regulation system when they are facing uncertain financial conditions or uncertain futures to ensure that they will not face financial problems. Therefore, self-efficacy plays a main role in saving behavior.

2.1.2 Risk Perception Theory

According to Raude et al. (2005), the public's emotional reaction when they believe their lives, wealth, and other things are at stake is known as risk perception. According to the research, the risk perception of individuals is highly related with severity of the catastrophic events (Burns & Slovic, 2012). Public health emergencies like the Covid-19 pandemic pose a major threat to people's bodily and mental well-being, just as a regular public health emergency (Rana et al., 2020). Due to the severe situation of epidemic prevention and control, people think that the external environment is full of unpredictability and could lead to severe aftermath. Hence, under the impact of the Covid-19 pandemic, the risk perception of people has naturally increased. When people's perception of external risks continues to increase, they take action such as strengthening their resource reserves to reduce the risk of facing financial problems. In this condition, saving money is preferable than spending money among the general public (Shi & Kim, 2019).

2.1.3 Theory of Planned Behavior

According to the Ajzen (1991), Theory of Planned Behavior indicating the behavior begins with the intention which is the intention to save. Based on the theory, an individual will express an attitude toward future behavior based on the evaluation of this behavior, and this evaluation is determined by the perception of the outcome of this behavior (Xiao, 2008). The evaluation on the behavior might depend on the financial knowledge of an individual, it is varying from person to person which financial knowledge would cause different saving behavior among them. Since financial literacy is described as an individual 's confidence and ability to apply financial knowledge and make personal financial choices over which he or she has control. The Theory of Planned Behavior is used to comprehend how the financial literacy process operates (Huston, 2010; Lusardi &

Mitchell, 2014). An individual with financial knowledge will be better at controlling their financial use such as they might save some of their income for future emergencies. This ability is an attitude dimension in Theory of Planned Behavior because of financial literacy not only related with the knowledge and ability but also cognitive ability of a person (Supanantaroek, Lensink & Hansen, 2016). Knowledge such as managing funds, rational consumption, and future financial awareness will be reflected on personal savings attitude and behavior.

2.1.4 Life Cycle Hypothesis

The Life Cycle Hypothesis (LCH) is a type of economic concept that explains people's purchasing and saving habits throughout their lives (Kenton, 2020). According to Beverly (1997), the theory of Life Cycle Hypothesis is assuming that individuals and families are worried about long-term consumption options, therefore savings and consumption are explained in terms of expected future earnings. In other words, the theory is stated that when the current salary is less than the average anticipated income., individuals will tend to reduce saving and they might even borrow to finance consumption. However, when the income is higher than the average income level, then individuals might plan to save more. The Life Cycle Hypothesis makes several assumptions on individual saving behavior. One of the assumptions is that those with high incomes have higher ability to save and are more proficient in finance than those on lower incomes (Kenton, 2020). Because they think that individuals with lower income will face more debt and have less disposable income.

2.2 Reviews of Variables

2.2.1 Dependent Variable

2.2.1.1 Personal Saving Behavior

Saving is an essential behavior that fosters long-term economic development, especially among individuals and households. In fact, a sufficient savings amount will provide extra financial stability, investment options, and future budgeting. Saving, in Keynesian economics, is understood as disposable income minus expenditure costs. Savings are critical to the economy because they promote long-term economic growth (Aghion, Bacchetta, Rancie, Rogoff, 2009). Saving occurs when a person is able to save some money from their income rather than overspending. Furthermore, saving entails sacrificing some present consumption in order to increase future living standards. However, the pandemic of Covid-19 had affected most of the people's saving behavior due to several reasons such as job loss. According to Suriya (2020), the 2020 RinggitPlus Malaysia Financial Literacy Survey has mentioned that less than half of respondents said they would still spend what they earned or more, while just over half said their savings would not last for more than three months if they lost their jobs. Therefore, it is essential to figure out the factors that may affect the saving behavior among Malaysians and this research will investigate these elements among UTAR staffs.

According to Ismail et al. (2020), every staff, whether in the public or private industry, must be able to handle their money effectively. This is due to the fact that it is more difficult to manage income than it is to earn or generate income. Every person should be able to handle their money in terms of saving and investing. If individuals do not save and handle their finances effectively, they may face financial difficulties, such as bankruptcy. Bankruptcy is a big issue in Malaysia, particularly among government employees.

According to Niwanthika (2016), every country wishes to have a higher savings rate. As a result, determining the determinants of saves and determining the

determinants of low savings is critical for a country. Savings, on the other hand, have a direct impact on investments, which in turn have a direct impact on the country's development. As a result, motivating people to save is critical in developing countries.

2.2.2 Independent Variables

2.2.2.1 Financial Knowledge

According to Fernando (2021), financial knowledge is the ability to understand and apply a wide range of financial concepts and abilities, such as personal financial planning, budgeting, and investment. Furthermore, financial knowledge is the basis of your financial relationship, and this is a lifelong learning process. As the education is the secret to financial success, the sooner you start, the better off you will be. Researchers have found that financial knowledge does not affect financial behavior. The study discovered that having financial knowledge does not always imply good financial conduct and having a high degree of financial knowledge does not always imply making the best financial decisions and managing one's finances well (Radiant, Effrata, & Dewi, 2020). Even if the respondents have a good understanding of finance, they are nonetheless unable to keep a tight grip on their expenditures.

Moreover, saving behavior is linked to financial knowledge, both directly and indirectly (Widjaja, Arifin, & Setini, 2020). Saving intention and attitude toward saving are used to mediate indirect effects. Saving behavior is positively related to the direct association between the variables of financial knowledge. This demonstrates the importance of financial understanding, saving goal, and attitude toward saving in encouraging saving behavior. As this indicator contributes the most to the financial knowledge variable, boosting the ability to control financial statements will support the positive link between financial knowledge and saving behavior.

Furthermore, the importance of financial knowledge in explaining attitudes toward saving was discovered (Delafrooz & Paim, 2020). Even after taking into consideration a variety of demographic factors such as education, marital status, family size, income, race, and sex. Financial understanding continues to be a critical factor in planning. Recognizing that many have poor financial literacy and fail to plan for retirement may cause an inevitable problem of mistakes. It may be necessary to focus on these populations and develop programs that are more suited to their needs and savings barriers.

According to Sabri and MacDonald (2010), financial knowledge was connected with greater saving behavior and was also adversely related to financial problems among Malaysian college students, as expected. Those who saved more were also less likely to run into financial difficulties. Students with more and earlier consumer experience in childhood reported more saving behavior, but they also reported more financial difficulties. Financial knowledge had the greatest positive impact on financial management, since it had the expected benefits for both savings and financial issues. Financial knowledge may also have an indirect impact on financial issues because it is linked to increased savings and saving reduces financial problems.

Arifin (2017) found that there is a positive and strong relationship between financial knowledge and financial behavior, which suggests that the more knowledge a person has, the better their financial behavior will be. Greater financial management, more discipline in paying bills, a deeper dedication to meeting family basics and conserving residuals, and better financial planning for the future are all examples of this type of conduct. Then, the study of Kadir et al. (2021) showed that the role of financial knowledge, which has received a lot of attention, appears to be a key component in motivating people to save and proved that financial knowledge positively affected investment practices and saving. This means that respondents who are financially literate understand how to spend, save, and invest their money properly.

2.2.2.2 Financial Self-Efficacy

Definitely, financial self-efficacy is a person's ability to handle finances. Financial self-efficacy influences financial behavior in a favourable way. Individuals' attitudes about managing their finances, known as financial self-efficacy, appear to greatly affect their financial management (Radianto, Effrata & Dewi, 2020). Individuals who are more confident in their financial management abilities are better able to make sound financial decisions. In a financial emergency, people will believe they can meet their financial needs, thus they will spend their money wisely by prioritizing their needs over their wants.

In contrast, self-efficacy has no bearing on saving behavior (Kadir et al., 2021). This is owing to the fact that the results show that self-control has a negligible impact on saving behavior. Most respondents nowadays choose to spend their money on recreation rather than conserving it. Respondents cannot stop themselves from keeping up with the latest trends and technologies, which are expensive. As a result, most respondents are unable to manage their desires, resulting in excessive expenditure.

Based on the research of Ismail et al. (2020), every person's financial self-efficacy could be increased to encourage saving behavior. Individuals with a higher degree of self-efficacy are more certain in their ability to manage their finances and deal with financial difficulties. Some with poor financial self-efficacy, on the other side, struggle to manage their finances and will be incapable to look for help when necessary. Furthermore, people who have higher financial self-efficacy experience lower debt. less financial problems, are less stressed financially, and save more.

According to Farrell, Fry and Risse (2016), a woman's personal finance behavior is influenced by her financial self-efficacy. In their study, women with higher financial self-efficacy are more likely to have an investment, mortgage, or savings account, whereas having a loan or credit card is less likely. However, a woman's likelihood of possessing any of the insurance products is discovered to be irrelevant to her degree of financial self-efficacy. Furthermore, the strength of the connection between a woman's financial self-efficacy and her likelihood of to own financial products has seemed to be cumulative, which means that higher levels of

financial self-efficacy are linked to a higher probability of owning at least two, if not all three, of the investment, mortgage or savings group of products, while the lower levels are linked to a lower probability of owning all three (Farrell, Fry & Risse, 2016). Furthermore, degrees of financial self-efficacy were discovered to have no influence on the likelihood of a woman in our sample purchasing private health or life insurance.

The findings of Kusairi et al. (2019) reveal that families with higher financial efficacy choose to save through savings accounts, fixed deposits, and banking. Because their money surplus is tiny, B40 families are less inclined to choose riskier savings. Long-term or higher risk saving instruments are preferred by families with formative financial experience. Their findings show that those with better financial efficacy who are faced with risk will accept the difficulty of making decisions and have a higher chance of succeeding.

2.2.2.3 Risk Perception

The inclination to pick a risky or less risky choice is known as risk perception. Risk perception is a concept that economists and financial professionals use to make investment and financial decisions. Personal risk perception is attitude and readiness to take a financial risk whether he or she has money saved for savings or investment. According to Kusairi et al. (2019), their findings stated that the risk perception of households influences the choice of saving tool for saving expenditure. Their findings show that those with better financial efficacy who are faced with risk will accept the difficulty of making decisions and have a higher chance of succeeding. Urban families choose to save with long-term or higher-risk instruments, according to geographic features. Short-term or lower risk saving devices are preferred by households with a larger reliance ratio.

Before deciding to save, Thai savers were well-informed on the perceived dangers of various saving instruments (Termprasertsakul & Kulsiri, 2011). Their findings suggest that the bigger the risk associated with saving instruments (such as mutual

funds, cooperative shares, and stock purchases), the more concerned people are about how to save. The findings are reinforced by the concept of risk aversion, which states that investors dislike taking risks. As a result, investors will be cautious when investing in high-risk financial instruments. Furthermore, consumers are less likely to buy things with a high perceived risk. On the other hand, if the product's perceived risk is minimal, it is more likely to be embraced.

According to Nyström and Romberg (2017), attitudes toward financial risk have an impact on financial behavior. Their findings suggest that having a higher financial risk attitude leads to better financial behavior, whereas general risk attitudes have no effect on financial behavior. Buying stocks and investing in funds are likely to be related with financial risk taking, which the respondents claim is a positive sort of risk and a part of good financial behavior. They discovered that making risky decisions had little impact on financial behavior. This is an intriguing discovery. According to Nyström and Romberg (2017), not only because it underlines the differences in risk measurement methods, but also because it sheds light on the disparity between how humans perceive behavior and how humans actually behave.

Furthermore, individual risk preferences are likely to influence their savings (Dahlbäck, 1991). Money saved could be used as a hedge towards economic risks, and various types of saving carry varying degrees of risk. Dahlbäck (1991) showed that cautious people had a lower debt burden and more funds in their bank accounts than less cautious people. There are no strong connections between people' willingness to accept risks, their overall net capital, or their ability to handle unexpected, additional expenses.

2.2.2.4 Income Level

According to Delafrooz and Paim (2020), household income has a beneficial impact on the likelihood of saving. Households should also be taught how to establish saving guidelines that are appropriate for their circumstances, such as

saving a set percentage of a second earner's salary or a certain percentage of household income to meet certain savings goals. Personal involvement in the development and implementation of saving rules enhances the possibility that the rules will be practical and effective in growing household savings.

Besides, Arifin (2017) illustrated that income has no bearing on financial conduct, implying that one's income, whether large or poor, has no bearing on one's financial behavior. This phenomenon can be interpreted by the truth that people with high income levels are not always able to control their expenses well due to irresponsible financial conduct and a proclivity to think quickly. As a result, even those with a high level of income frequently face financial difficulties. When an individual's income rises, his or her expenditures rise alongside it, sometimes even exceeding the additional income.

Pieterse (2019) showed that there is insufficient evidence to show that being present biased and having a different income frequency affect their personal annual savings rate. Participants, on the other hand, express a desire for more frequent income (i.e. weekly). The findings add to previous research by focusing on characteristics that influence a consumer's annual savings rate. Furthermore, there is evidence of a preference for frequent income payments, which the participants believe will encourage consumption smoothing and promote saving behavior. Savings activity is not significantly different for more regular income payments, according to evidence. As a result of their short-sightedness, the respondents have a biased preference for more frequent disbursement, implying that they overestimate their future selves and consider weekly income as an easier way to save.

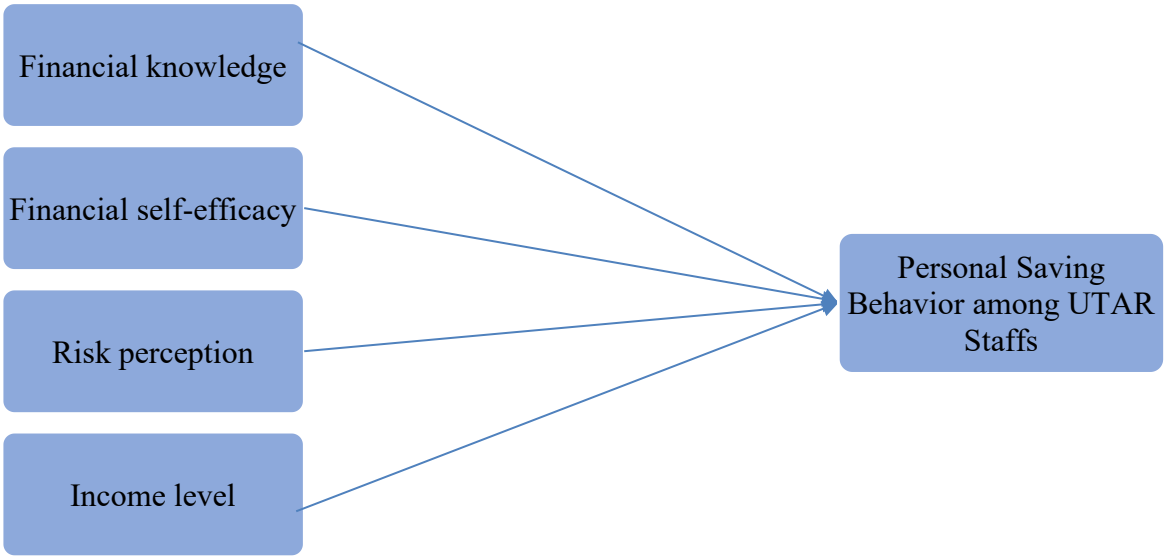
Income levels were evaluated to have an impact on people's saving behavior, but they were not significant in the study's spatial (geographical) and contextual scope (Mensahklo, Kornu, & Dom, 2017). Lower-income households have distinct saving habits, middle-income households could have different habits, and higher-income households could also have different habits. Higher income groups will save less than lower and middle-income groups, owing to the fact that higher income parents prefer their children to attend well known institutes in their areas,

therefore they will forfeit more savings than lower and middle-income groups. As a result, income did not have a significant impact on people's saving habits.

From the research of Masson, Bayoumi and Samiei (1995), another issue is the relationship between income growth and the amount of money saved. With constant saving rates among age groups, a greater growth rate (whether owing to population or productivity growth) will boost total saving as it would raise the total income of those employed relative to those not working (including retired persons living off their accumulated assets). Saving appears to be positively related to income growth, as fast-growth countries such as Japan and Korea have high saving rates. Individual saving rates, on the other hand, are only fit in this context with myopic future income projections. Employees should desire to consume more today if they accurately predict their income to increase in the future. As a result, it is feasible that individual saving rates among working people will decline enough to counteract the aggregate effects of higher growth (Masson, Bayoumi & Samiei, 1995).

2.3 Conceptual Framework / Proposed Theoretical

Independent Variables Dependent Variable



2.4 Hypothesis Development

In this study, four hypotheses of study are proposed to study the association between dependent variables (personal saving behavior), and the other four independent variables (financial knowledge, financial self-efficacy, risk perception, and income level).

2.4.1 Financial knowledge

H0: There is no significant relationship between financial knowledge and the personal saving behavior among UTAR staffs during Covid-19.

H1: There is significant relationship between financial knowledge and the personal saving behavior among UTAR staffs during Covid-19.

2.4.2 Financial self-efficacy

H0: There is no significant relationship between financial self-efficacy and the personal saving behavior among UTAR staffs during Covid-19.

H1: There is a significant relationship between financial self-efficacy and the personal saving behavior among UTAR staffs during Covid-19.

2.4.3 Risk perception

H0: There is no significant relationship between risk perception and the personal saving behavior among UTAR staffs during Covid-19.

H1: There is a significant relationship between risk perception and the personal saving behavior among UTAR staffs during Covid-19.

2.4.4 Income level

H0: There is no significant relationship between income level and the personal saving behavior among UTAR staffs during Covid-19.

H1: There is a significant relationship between income level and the personal saving behavior among UTAR staffs during Covid-19.

CHAPTER 3: METHODOLOGY

3.1 Research Design

A research design serves as the foundation for approaches and procedures. Researchers might focus on research procedures that are suited for the topic and construct their studies to be successful. There are three main sorts of study designs: Data collection, measurement, and analysis are all part of the process. A good designed study provides low bias in data and increases confidence in the accuracy of the information acquired. The research design's goal is to develop an appropriate framework for a study. The research strategy decision is a critical step in the research design process because it determines how relevant information for a study will be gathered; nevertheless, the research design process comprises numerous related decisions (Sileyew, 2019).

Furthermore, quantitative design will be concentrated on our study. The cause-and-effect link between our dependent variable, the personal saving behavior among UTAR staffs during Covid-19, and our independent variables, financial knowledge, financial self-efficacy, risk perception and income level are the grounds for using quantitative design in our study. By using quantitative research, theories could be "measured" and compared with the work in the past. Furthermore, it could be able to generalize to external validity and the breadth of coverage of a large population. Surveys, observations, and secondary data, such as company records, are the most prevalent sources of quantitative data. A number of statistical methodologies are available for analysing quantitative data, ranging from simple graphs to examining correlations between two or more variables to statistical significance. Two more techniques include cluster analysis, which is useful for discovering connections between groups of individuals when no obvious hypothesis exists, and hypothesis testing, which is used to assess whether there are actual differences between groups.

The data collection is based on primary data. Researchers obtain primary data directly from primary sources utilising methods such as interviews, surveys, and experiments. Questionnaires will be used as the major source in this study. Primary data is often collected directly from the source of the data and is regarded as the most valuable sort of data in research. Hence, UTAR staffs is our target population to fulfil the needs of the study project.

3.1.1 Dichotomous Question

This method is providing the respondent with two choices of responses such as yes or no and these types of questions are helpful in collecting facts. Dichotomous questions will be used to collect the data about the engagement in saving and how the UTAR staffs think the pandemic affects their personal saving behavior. This gives us a preliminary judgment on how the respondent thinks the Covid-19 affects their saving behavior.

3.1.2 Multiple Choice Questions

This type of question will provide two to five alternative responses to each of the questions for the respondent to choose. Besides, it is also useful for gathering people's opinions and views. Multiple choice questions will be used to classify the sample size data such as age, marital status, and education level to ease the analysis based on different categories. For instance, the different marital status of the staffs might have different saving behavior.

3.1.3 Five Likert Scale

The likert scale is most commonly used to measure mental structure, which is an aspect of a person's emotion or cognition that can be manipulated and measured (Nemoto & Beglar, 2014). Respondents are provided answers along with a continuum such as strongly disagree to strongly agree to choose. The questionnaire will provide a clear statement based on the dependent variable and independent variable for respondents to rank to gather more information about the personal saving behavior among the UTAR staffs. For example, " do you agree financial knowledge plays an important role in saving behavior during Covid-19 pandemic?", this kind of question can help us to further understand how the independent variables are affecting the dependent variable and know the saving behavior before and during Covid-19.

3.2 Sampling Design

3.2.1 Target population

According to Lavrakas (2008), the target population for a survey is the entire collection of units for which survey results will be used to form inferences. As a result, the target population determines the units for which the survey's findings are supposed to be generalizable. The first step in creating a survey is determining the study goals. The target population should be defined in the second stage. The definition of target populations is critical since it determines whether or not sampled cases are eligible or ineligible for the survey. The geographic and temporal characteristics of the target population, as well as the types of units to be

included, should all be described. In other cases, the target audience is limited to keep out those who would be difficult or impossible to interview. The selected target group is based on the theme of research design, which is UTAR staffs who work at the Kampar campus. Setting the UTAR staffs as our target respondent is because staffs have more knowledge and experience with personal saving behavior as well as facing the present challenges, during the Covid-19 pandemic. Besides, choosing UTAR staffs as our target respondent is because it is easier for us to collect the data since this covid 19 pandemic, it is hard for us to get corporate with other institutions. Furthermore, it also included the factor of time constraint for us to complete the project, if set UTAR staffs as our target respondent, it would benefit us some time advantage because it would be able to reach the UTAR staffs in a shorter time by using microsoft team or mail to contact them. Approximately, 500 UTAR academic staffs who work in the Kampar campus will be the targeted population in this study (*Universiti Tunku Abdul Rahman* , n.d.).

3.2.2 Frame and Location Sampling

According to Lewis-Beck and Bryman (2007), a sample frame is a collection or other device used by a researcher to narrow down the population of interest. A sampling frame is a set of items from which a researcher can select a sample of the target population. A sample frame, after all, is a list of the whole of the population. It is a thorough list of everybody or everything you want to learn more about. The difference between a population and a sample frame is that the earlier is more general and the latter is more specialised. The sampling frame is aimed for the UTAR staffs who work in the Kampar campus.

For the location of the sampling, our research team had decided to conduct the study via online platforms such as google form during this movement control period as well as to reduce the contact between each other. Online will be the most

suitable platform for us to collect the data as each of the UTAR staffs will have a UTAR e-mail and also Microsoft Teams account.

3.2.3 Technique of Sampling

A variety of ways to sample collection may be used depending on the requirement and situation. There are numerous sampling processes, which are classified into two categories: sampling probability sampling and non-probability sampling. The sole distinction between the two is whether or not the sample is chosen at random. Randomization ensures that every element has an equal probability of being selected and included in the study sample. Probability sampling will be conducted in our study.

Simple random sampling is preferred to use in this study. With this, every element has the same chance of being chosen as a part sample. If do not have any prior information on the target demographic, then it is considerate to use. According to Krejcie and Morgan (1970) sampling method, the target is 500 academic staffs in Kampar campus, then will get 217 as sample results.

Besides, stratified sampling is also preferable to use in this study. This strategy divides the population's components into smaller subgroups (strata) based on resemblance, so that the elements inside the group are homogeneous while the elements in the other subgroups are heterogeneous. After that, the elements are drawn at random from each of these strata. Previous knowledge about the population is required to establish subgroups. There are five groups of UTAR staffs in Kampar campus: Student Affairs Team, Club & Societies Unit (CSU), Counselling & Guidance Unit (CGU), Sports & Recreation Unit (SRU) and Student Services Unit (SSU). Stratified sampling means by randomly selecting the representation of each group member.

3.2.4 Sampling Size

The keyword "sample size" is often applied in statistics and market research, and it is always included when surveying a large group of people. It has to do with the manner in which large-scale research is carried out. The sample size is crucial for achieving reliable, statistically relevant data and completing the project effectively. UTAR owns more than 2,000 academic and administrative staffs. Approximately, the population of the academic staffs who work in Kampar campus is 500 people, at least 217 questionnaires are required to perform the study. According to Krejcie and Morgan (1970), the sample size target is to collect 217 questionnaires in order to eliminate problems with missing data and improve the precision of the study outcomes.

3.3 Data Collection Method

The data collection is based on primary data which will conduct the questionnaire survey to collect the data from UTAR staffs. Questionnaires can be structured and unstructured. The questionnaire of this study will be using structured questionnaires which both of the question and responses are provided for respondents to pick up the correct responses (Sadan, 2017). Constructing dichotomous questions, multiple choice questions, and rank order questions will be involved in our survey. This survey will get the response from UTAR staffs in Kampar campus. In addition, the questionnaire survey will be conducted using google form (e-survey) which the questionnaire will be mailed to a large sample population.

3.3.1 Pilot Test

As for the primary data, the pilot test is decided to be used to conduct the preliminary works to test on our study before a full-scale performance. Specifically, the pilot or small-scale study are usually performed before major trials to evaluate the effectiveness of the study in large-scale clinical studies (In, 2017). According to the role thumb of results, mentioned that the acceptable level of reliability is the value of Cronbach's Alpha, α must be greater than 0.7. If the α value is 0.8 or greater, it represents a very good level. If the α values above 0.95 are not necessarily good as it may indicate redundancy ("Cronbach's Alpha: Simple Definition, Use and Interpretation", n.d.). A pilot study is an important instrument in a research project for identifying potential issue areas and shortcomings in research tools and protocols prior to full-scale research study deployment (Hassan, Schattner, & Mazza, 2006). Furthermore, it is important to ensure that the questionnaire design appropriately addresses the study issue. The pilot also assessed whether the questionnaire is simple to comprehend and appropriate, as well as whether the questions are properly described, understood, and presented consistently. The respondent's ability to understand the information statement is also tested by a pilot test. In this study, the researcher collected 30 sample questionnaires from the Kampar UTAR staffs.

Table 3.1:

Result of Reliability Statistics

Context	No. of item	Cronbach's Alpha
Financial Knowledge	4	0.611
Financial Self-efficacy	4	0.694
Risk Perception	4	0.760
Income Level	4	0.753

Source: Developed in study

Table 3.2:

Total of Pilot test result

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha based on standardized items	N of items
0.723	0.744	4

Source: Developed in study

According to table 3.1, it showed that Cronbach's Alpha values of risk perception and income level are 0.760 and 0.753 respectively. This indicates that they have a good result in reliability analysis since both of their Cronbach's Alpha values are greater than 0.7. However, based on table 3.1, it showed that the Cronbach's Alpha values of financial knowledge and financial self-efficacy are 0.611 and 0.694 respectively. This represents that both of them are not considered as reliability's acceptable level. Hence, the questionnaires on financial knowledge and financial self-efficacy are being adapted into actual study prior to distribution. Based on the table 3.2, total results for all variables showed good results as the Cronbach's Alpha value exceeded 0.7.

3.4 Proposed Data Analysis Tool

In this study, there are two statistical methods that will be used to analyze data, which are descriptive statistics and inferential statistical analysis. According to Hayes (2021), descriptive statistics can assist in describing and comprehending the properties of a specific data set by providing a brief summary of data samples

and measurements When utilising descriptive statistics, researchers should describe the data using a combination of graphical description, tabulated description, and statistical commentary. The most recognized types of descriptive statistics are centrality measures which include mean, median, and mode. Hence, descriptive statistics used to identify the mean value that can help to analyze each statement in this study. The inferential statistical analysis used as a method to examine the research hypotheses in this study. In order to examine the relationships between the dependent variable (personal saving behavior among UTAR staffs) and independent variables (financial knowledge, financial self-efficacy, risk perception and income level), there were several tests carried out in this study. To achieve the goals of this study, IBM SPSS Statistics version: 28.0.1.1 (14) software used to run the data.

3.4.1 Descriptive Analysis

Transform the original data into a format that is simple to comprehend and explain, for instances rearranging and processing the data to provide insightful information about the data provided. Descriptive analysis is a sort of data analysis that aids in the description, summarization, or presentation of data points in a constructive manner such that each condition of the data is met. After conducting the questionnaire from the respondents, the descriptive analysis helped to analyze the data collected and provided a simple summary to interpret the huge amounts of data with the pie charts. The respondents' characteristics (gender, ages, education levels, income level and marital status) interpreted by the percentage analysis. Moreover, central tendencies also applied to interpret data in this study.

3.4.1.1 Reliability Test

Reliability refers to the level to which a tool produces consistent and dependable results. It has a lot to do with the reliability of the tests. Precision can be defined as the degree to which measurements are error-free. Test validity refers to the extent to which the test assesses the proposed underlying construct. Reliability is not a test's continuous quality; rather, several degrees of reliability exist for distinct populations at varying levels of the construct being examined (Franzen, 2011). Test-retest reliability, parallel form reliability, inter-rater reliability, and internal consistency reliability are the four types of reliability tests.

Firstly, test-retest reliability is a measurement of consistency obtained by administering the same test to the same group of people repeatedly over a period of time. The stability of the test over time can then be determined by evaluating the scores from Time 1 and Time 2. A test in psychology, for example, that examines student learning could be given to a group of students twice, with the second administration taking place a week after the first. The obtained correlation coefficient demonstrates the dependability of the scores. Following that, parallel forms reliability is a measure of consistency gained by administering several versions of an assessment tool to the same group of people (both versions must contain items probing the same construct, skill, knowledge base, etc.). The scores from the two versions can then be compared to assess how consistent the results are between versions. For example, if you wanted to test the reliability of a critical thinking assessment, you could create a large list of questions that all pertain to critical thinking and then divide the questions at random into two sets that represent the parallel forms. Thus, inter-rater reliability is a consistency measure that analyses how well different judges or raters agree on their evaluation conclusions. Inter-rater reliability is crucial because human observers do not always perceive responses the same way; raters may disagree on how well certain responses or materials demonstrate understanding of the construct or skill being evaluated. Finally, internal consistency reliability is a measure used to determine how similar test items exploring the same construct yield similar results (Phelan & Wren, 2005).

In research, reliability is an important feature of inspection standardization. This is due to the fact that researchers will be able to boost transparency and eliminate bias in their studies (Shekhar Singh, 2014).

3.4.1.1.1 Cronbach's alpha (CA)

Cronbach's alpha is a measure of internal consistency, or how closely connected a set of variables are. It is thought to be a scale dependability indicator. The reliability of multiple-question Likert scale surveys is determined using Cronbach's alpha testing. These questions examine latent factors or hidden or unobservant characteristics such as a person's conscientiousness, neurotic tendencies, or openness. In practice, these are exceedingly difficult to quantify. Cronbach's alpha determines how closely a group of test items are related (Glen, 2021).

The alpha coefficient of reliability, which ranges from 0 to 1, provides a comprehensive assessment of a measure's reliability. If all of the scale items are fully uncorrelated, alpha equal to 0; if all of the items have significant covariance, alpha approaches 1 as the scale's number of items approaches infinity. A high alpha score may suggest that the test items are highly connected. The amount of items in a test, on the other hand, influences alpha. A larger number of objects can result in a larger alpha, whereas fewer things can result in a smaller alpha. It is feasible that the questions are redundant if alpha is high. A low alpha rating may imply that there are not enough questions on the test. More relevant elements in the exam can help to enhance Alpha. Low values can also be produced by weak interrelationships between test items, as well as assessing more than one latent variable. The table below illustrates a general rule for reading alpha. A score greater than 0.7 is usually regarded as satisfactory. However, some writers argue for higher values in the range of 0.90 to 0.95 (Glen, 2021).

Cronbach's alpha	Internal consistency
α ≥ 0.9	Excellent
0.9 > α ≥ 0.8	Good
0.8 > α ≥ 0.7	Acceptable
0.7 > α ≥ 0.6	Questionable
0.6 > α ≥ 0.5	Poor
0.5 > α	Unacceptable

Figure 3.3: Scale of Cronbach's Alpha

Source: (Glen, 2021)

In addition, the existence of a "high" alpha value does not necessarily imply that the measure is unidimensional. Additional investigations, in addition to establishing internal consistency, can be performed to demonstrate that the scale in question is unidimensional. Exploratory component analysis is one method for determining dimensionality. Cronbach's alpha is a coefficient indicating reliability, not a statistical test or consistency. (Tavakol & Dennick, 2011).

3.4.2 Inferential Analysis

The research project makes use of inferential statistics. Inferential statistics refers to the process of using data from a sample to draw conclusions about the population to which the sample belongs. For example, the study is interested in personal saving behavior among UTAR staffs, but it is not possible to collect data from all UTAR staffs, so the study must use a smaller sample size of UTAR academic staffs (220 individuals) to represent the entire population data of all UTAR staffs.

Some populations are not captured by sample data because the sample size is always smaller than the population size. The difference between the true population value called parameter and the measured sample value is called

sampling error (statistic). Even if the sample is random and unbiased it will also experience sampling error. As a result, inferential statistics are always subject to some uncertainty (Bhandari, 2021). To summarise, the sample of data from the population is critical for generalising the population because obtaining a complete set of data from all UTAR staffs is difficult. Pearson correlation and multiple regression analysis will be used to estimate and measure the sample. However, because of some limitations in the techniques, it is difficult to measure the population with zero error using the sample. A data analyst can never be certain that the statistics being calculated are correct because the data being analysed comes from a population that has not been fully measured. The process of using values measured in a sample to infer values that will be measured from the general population is known as inferential analysis. The second limitation is inferential analysis requires the analyst or researcher to make educated guesses based on theories to run the tests. There will be some repercussions on the reliability of the results of some statistical tests, similar to the first limitation (Calvello, n.d.). In short, Pearson correlation coefficient and multiple regression will make use in this inferential analysis.

3.4.2.1 Pearson's Correlation Analysis

Correlation coefficients measure the strength of the linear link between two variables, x and y. The correlation coefficient has a possible range of values ranging from -1.0 to 1.0. In other words, the values cannot be greater than 1.0 or less than -1.0. A correlation of -1.0 indicates that there is a perfect negative connection, whereas a correlation of 1.0 indicates that there is a perfect positive correlation. If the correlation coefficient is larger than zero, there is a positive association. When the value is less than zero, the connection is negative. A value of 0 indicates that no relationship exists between the two variables (Nickolas, 2021).

There are various forms of correlation coefficients, but the Pearson correlation r is the most frequent. It is a parametric test that should only be used when the variables are normally distributed, and their relationship is linear. Otherwise, Non-parametric Kendall and Spearman correlation tests should be used instead. Pearson correlation (r) is a method for determining the degree and direction of a linear relationship between two variables. This can be accomplished mathematically by dividing the covariance of the two variables by the product of their standard deviations (Jaadi, 2019).

To get a conclusion, executing a statistical significance test is a must. The significance test determines whether or not the sample is expected to be true in the population, and it can be performed through a hypothesis test. If the P-value is less than the significance level (0.01), the null hypothesis is rejected. Therefore, the conclusion is the relationship is statistically significant (Jaadi, 2019).

The table below shows how to interpret the correlation coefficient results.

Size of Correlation	Interpretation
.90 to 1.00 (−.90 to −1.00)	Very high positive (negative) correlation
.70 to .90 (−.70 to −.90)	High positive (negative) correlation
.50 to .70 (−.50 to −.70)	Moderate positive (negative) correlation
.30 to .50 (−.30 to −.50)	Low positive (negative) correlation
.00 to .30 (.00 to −.30)	negligible correlation

Figure 3.4: interpretation of correlation coefficient results

Source: Parvez Ahammad

3.4.2.2 Multiple Regression Analysis

Econometric Model

$$\hat{y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$$

Where:

$\hat{y}$ = Personal Saving behavior

β_0 = Intercept

X_1 = Financial Knowledge

X_2 = Financial Self- efficacy

X_3 = Risk Perception

X_4 = Income Level

$\beta_1, \beta_2, \beta_3, \beta_4$= Slope coefficient

Based on the econometric model created above, it represented the relationship between the personal saving behavior (dependent variable) and financial knowledge, financial self-efficacy, risk perception, and income level (independent variables). According to Moore and Wong (2006), stated that the multiple regressions are a common statistical approach for examining the relationship between single dependent variable and multiple independent variables. In this study, multiple linear regression applied as the approach of examining the relationship between dependent variable and independent variables. By applying this approach, it provides a more exact and precise understanding of the relationship between each of them. Besides that, by applying this approach, it also ensures that it would not be easily affected by dummy variables (Keith & Marill, n.d.).

CHAPTER 4: DATA ANALYSIS

4.1 Introduction

According to the collected questionnaire, the data analysis will be performed with several tests which the results of the descriptive analysis, reliability analysis. Besides that, inference analysis will be explained clearly here. SPSS was applied to run the tests. With the powerful function of SSPS, it is believed that it can determine the factors affecting personal saving behavior among UTAR staffs during Covid-19. A total response of 220 have been collected among the UTAR academic staffs.

4.2 Descriptive Analysis

Descriptive analyses had summarized the characteristics of survey participants' responses to the study. It included respondent demographics collected from distributed surveys. The result of demographic data of respondents will be presented by using a pie chart.

4.2.1 Respondent Demographic Profile

4.2.1.1 Gender

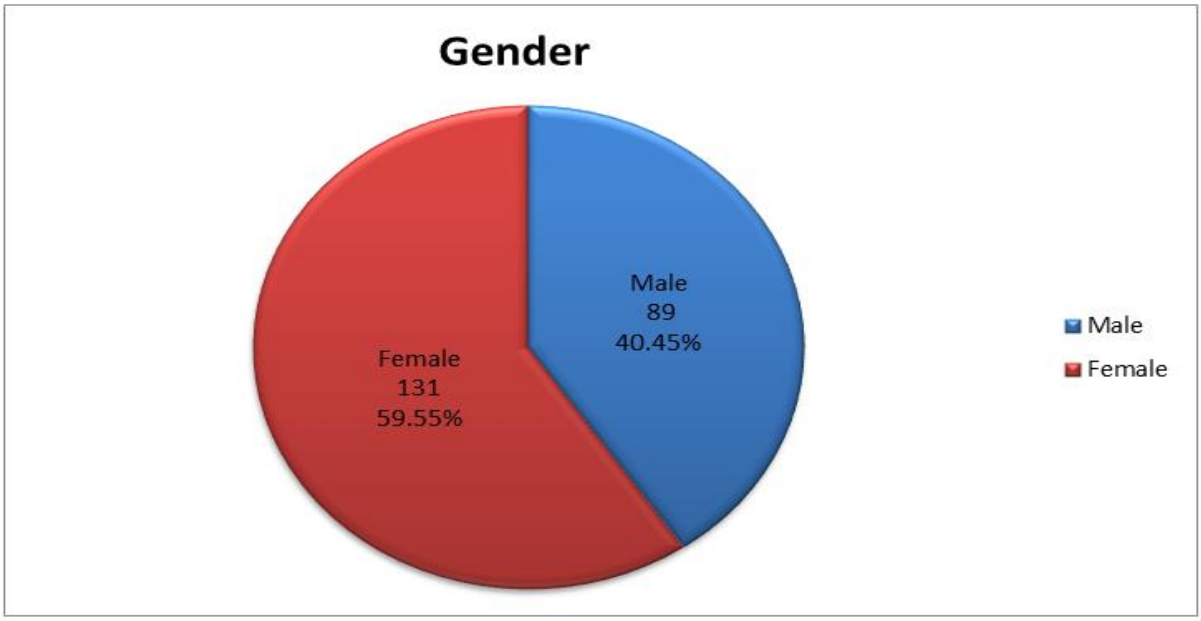


Figure data 4.1: Data of Gender

Source: Developed in study

The figure data 4.1 presents the number of persons and the percentage of survey participants by gender. The intended interest group consists of UTAR Kampar employees. A total of 220 people responded to the survey via a Google form questionnaire. As a result, the number of male respondents is 89 (40.45 percent) and the number of female respondents is 131 (59.55 percent).

4.2.1.2 Age

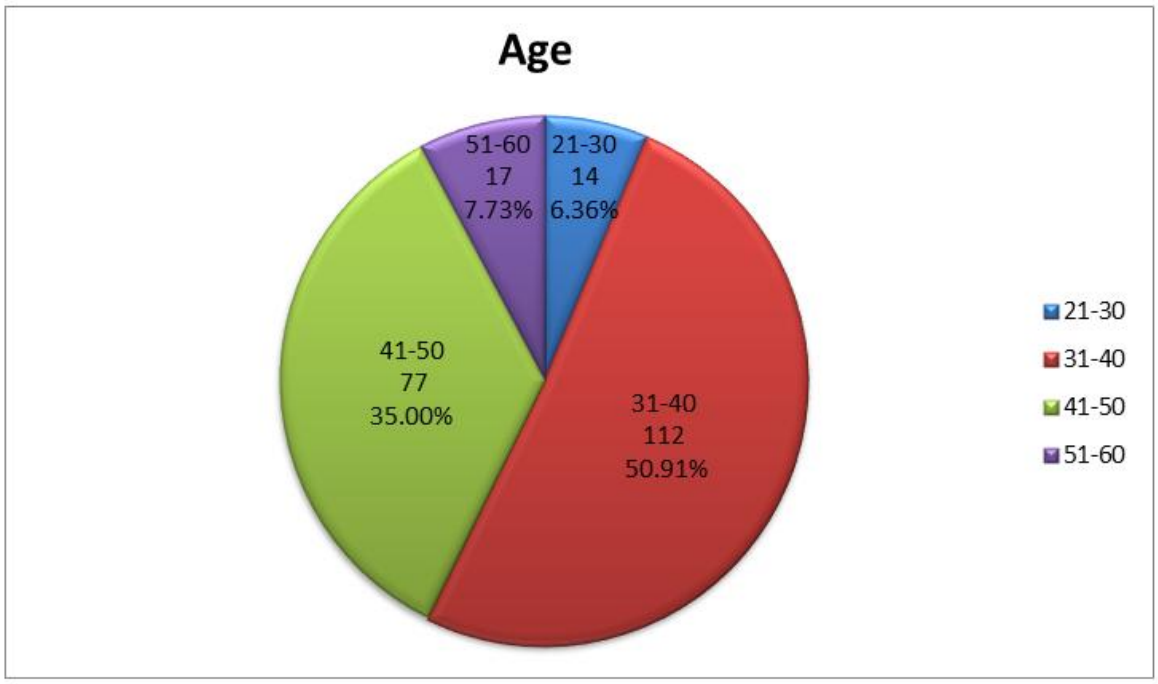


Figure data 4.2: Data of Age

Source: Developed in study

The respondents' age are represented in the figure above in terms of numbers and percentages. According to the figure data 4.2, the biggest percentage of respondents in this survey is between the ages of 31 and 40, with 112 respondents (50.91 percent) falling into this category. The second-highest percentage of respondents is between the ages of 41 and 50, with 77 respondents (35 percent). In addition, 17 respondents (7.73 percent) in the survey are between ages of 51 and 60 years old. The lowest percentage of responses is between the ages of 21 and 30 years old, with 14 respondents (6.36 percent).

4.2.1.3 Education Level

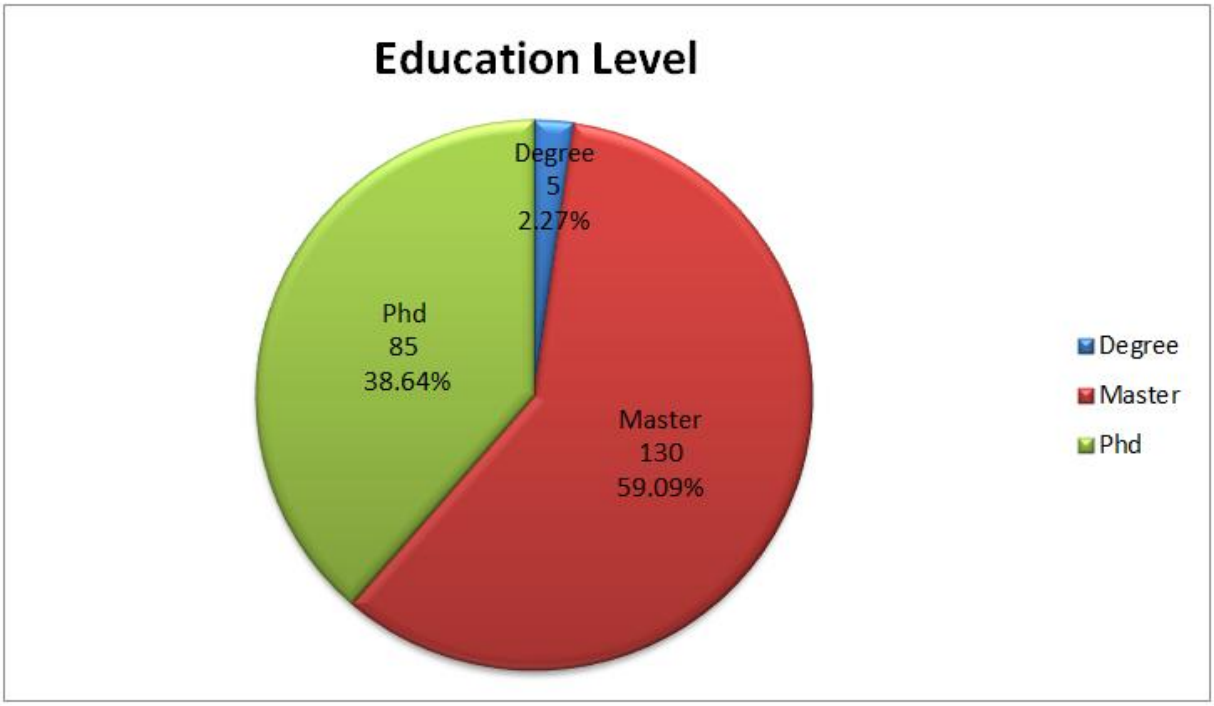


Figure data 4.3: Data of Education Level

Source: Developed in study

The outcome of the target population's education level is depicted in the figure data 4.3 above. The majority of those who took part in this study (130 people) had a master's degree (59.09 percent). The PhD education level has the second-highest percentage of respondents with 85 respondents (38.64 percent), and the degree holder education level has the lowest percentage of respondents which is 5 respondents (2.27 percent).

4.2.1.4 Marital Status

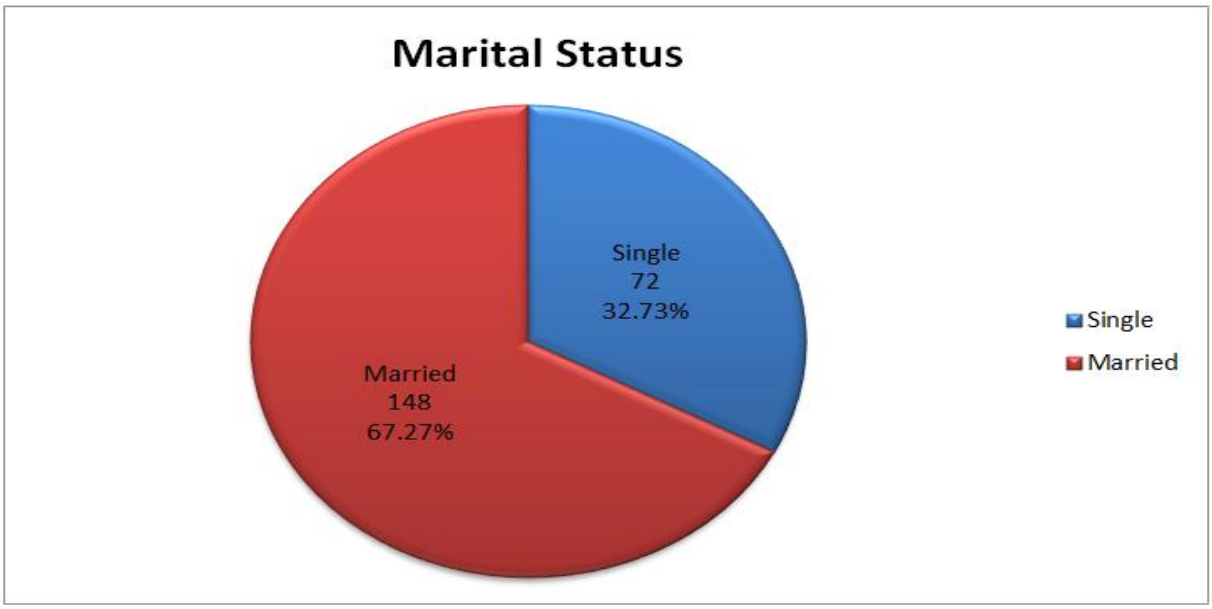


Figure data 4.4: Data of Marital Status

Source: Developed in study

Figure data 4.4 shows the percentage of marital status of the respondent who took part in this study. A total of 148 persons (67.27 percent) are married and a lower percentage of respondents is single with the number of 72 (32.73 percent).

4.2.1.5 Engagement in Saving

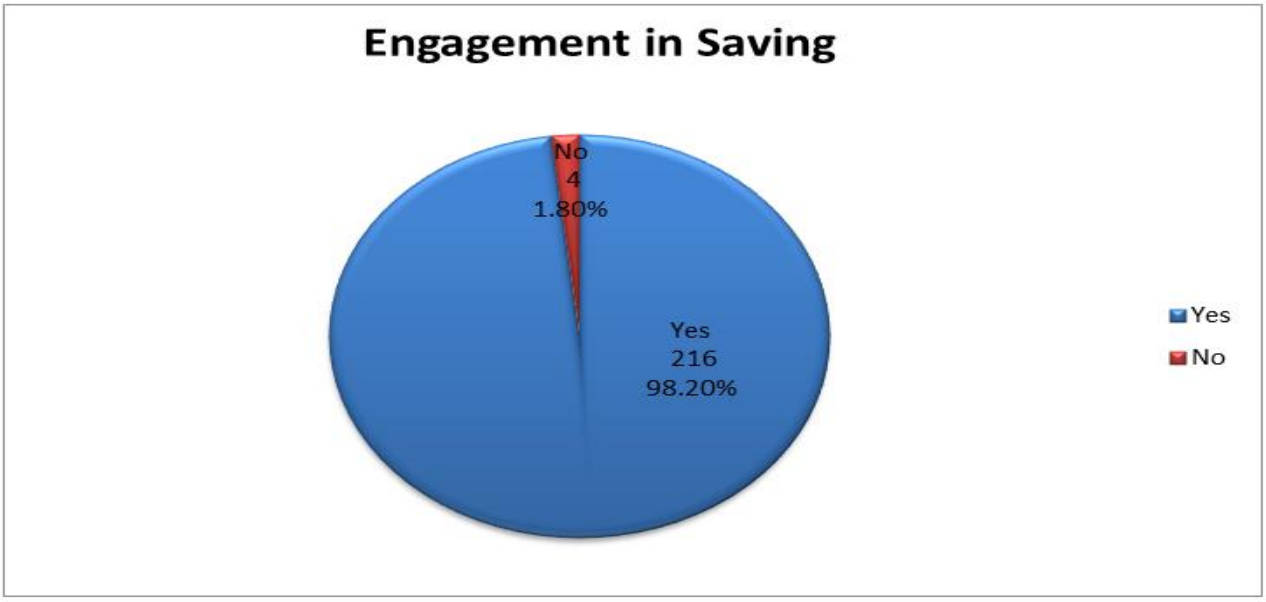


Figure data 4.5: Respondent Statistic (Do you engage in saving?)
Source: Developed in study

The figure 4.5 shows the engagement in saving among UTAR staffs. 216 respondents (98.2 percent) out of the sample size of 220 respondents reflect that they have the behavior of saving while 4 (1.8 percent) of them do not engage in saving.

4.2.1.6 Does Covid-19 Affect Saving Behavior

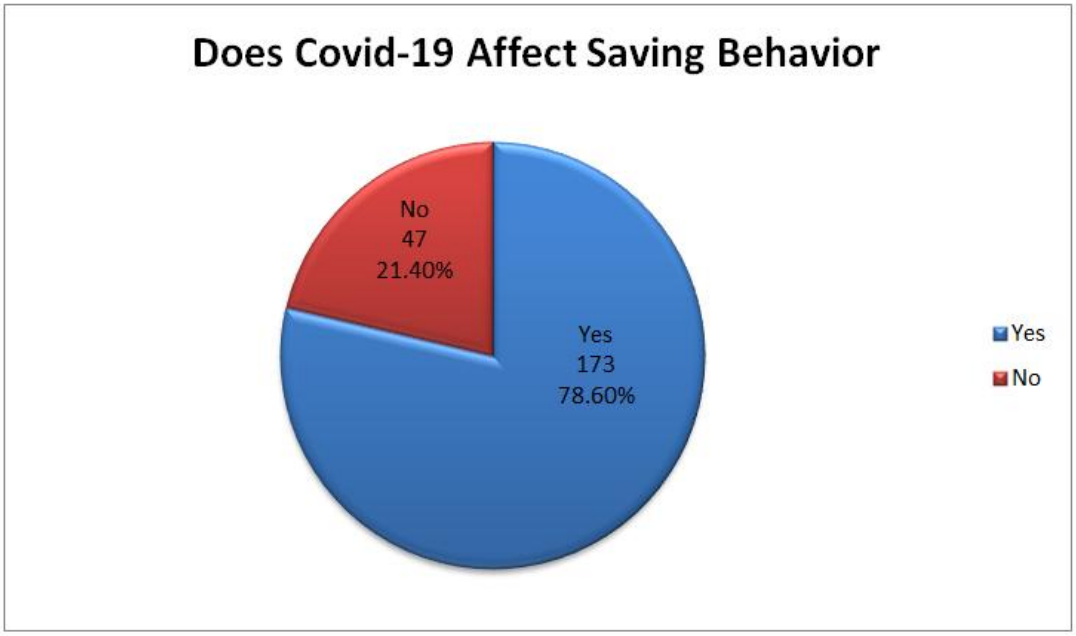


Figure data 4.6: Respondent Statistics (Do you think the Covid-19 pandemic affects your saving behavior?)

Source: Developed in study

The figure 4.6 above has shown the percentage of respondent's saving behavior had been affected by the pandemic Covid-19. Most of the respondents have responded that their saving behavior has been affected by the pandemic which accounted for 78.6 percent (173 people). However, there are 47 respondents (21.4 percent) say that the Covid-19 did not affect their saving behavior.

4.2.2 Central Tendencies Measurement of Constructs

According to Frost (2018), defined that the central tendency's measure as a single value and it attempts to describe a set of data by identifying the central location within it. Therefore, the central tendency's measure is also referred to as the central location's measure. There are three measures of central tendency which are mean, mode, and median. The mean is usually the central tendency of the selection. Mean and standard deviation have a close relationship. Throughout this study, mean was applied to identify the central tendency and the standard deviation was applied to describe the dispersion. The lower the standard deviation represents that the data points are typically very close to mean. The higher the standard deviation represents that the data points are more dispersed. (Kate, 2017).

Table 4.7:

Statistical summary

Dependent Variable	Mean	Standard deviation
Personal Saving Behavior (PSB)	4.56	0.498
	4.18	0.627
	4.19	0.648
	4.23	0.664
	3.95	0.738

Source: Developed in study

The personal saving behavior's statistical summary result has shown in table 4.7. Based on table 4.7, it presented that PSB 5 has the highest standard deviation of 0.738 with the lowest mean value at 3.95. Besides that, it also presented that PSB 1 has the lowest standard deviation of 0.498 with the highest mean value at 4.56.

Table 4.8:

Statistical summary

Independent Variable	Mean	Standard deviation
Financial Knowledge (FK)	4.99	0.116

	4.97	0.176
	4.23	0.636
	4.51	0.501
	4.07	0.749
	4.15	0.685
	3.97	0.790

Source: Developed in study

Table 4.8 has shown the financial knowledge's statistical summary result. According to table 4.8, it showed that the highest mean value of FK 1 is 4.99 with the lowest standard deviation of 0.116. In addition, it also showed that the lowest mean value of FK 7 is 3.97 with the highest standard deviation of 0.790.

Table 4.9:

Statistical summary

Independent Variable	Mean	Standard deviation
Financial Self-efficacy (FSE)	5.00	0.000
	4.95	0.209
	4.47	0.500
	4.08	0.708
	4.11	0.639
	4.19	0.639
	2.11	1.196

Source: Developed in study

The financial self- efficacy's statistical summary result has shown in table 4.9. Based on table 4.9, it presented that FSE 1 has the lowest standard deviation of 0.000 with the highest mean value at 5.00. Other than that, the table above also showed that FSE 7 has the highest standard deviation of 1.196 with the lowest mean value at 2.11.

Table 4.10:

Statistical summary

Independent Variable	Mean	Standard deviation
Risk Perception (RP)	4.67	0.172
	4.62	0.611
	3.78	0.660
	3.82	0.669
	3.88	0.615

Source: Developed in study

Table 4.10 has shown the risk perception's statistical summary result. According to table 4.10, it showed that the lowest mean value of RP 4 is 3.82 with the highest standard deviation of 0.669. On the other hand, it also showed that the highest mean value of RP 1 is 4.67 with the lowest standard deviation of 0.172.

Table 4.11:

Statistical summary

Independent Variable	Mean	Standard deviation
Income level (IL)	4.25	0.444
	4.02	0.581
	4.02	0.597
	3.94	0.645
	3.70	0.684

Source: Developed in study

The income level's statistical summary result is shown in table 4.11. Based on table 4.11, it showed that IL 5 has the highest standard deviation of 0.684 with the lowest mean value at 3.70. In contrast, it also showed that IL 1 has the lowest standard deviation of 0.444 with the highest mean value at 4.25.

4.3 Scale Measurement

4.3.1 Reliability Analysis

Reliability is a measurement technique which allows researchers to assess the stability of the measurement. Cronbach's Alpha is a reliability test performed in SPSS to measure internal consistency (Chetty & Datt, 2015). According to the role thumb of results, mentioned that the acceptable level of reliability is the Cronbach's Alpha value, α must be above than 0.7. If the α value is 0.8 or above, it represents a very good level. If the α values above 0.95 are not necessarily good as it may indicate redundancy ("Cronbach's Alpha: Simple Definition, Use and Interpretation", n.d.).

Table 4.12:

Reliability analysis's result

Construct	No. of item	Cronbach's Alpha
Personal Saving Behavior	5	0.621
Financial Knowledge	5	0.632
Financial Self-efficacy	5	0.660
Risk Perception	5	0.726
Income Level	5	0.708

Source: Developed in study

Table 4.13:

Total of Reliability test result

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha based on standardized items	N of items
0.719	0.730	5

Source: Developed in study

Refer to table 4.12, it showed that Cronbach's Alpha values of personal saving behavior, financial knowledge, and financial self-efficacy are 0.621, 0.632 and 0.660 respectively. However, all are less than 0.7, but they still can be considered as acceptable levels. According to the research, it stated that the general accepted rule is that α is about 0.6 to 0.7. If α falls between 0.6 to 0.7, it is still considered as an acceptable level of reliability (Ursachi et al., 2015). Hence, personal saving behavior, financial knowledge, and financial self-efficacy are considered as acceptable reliability levels. Besides that, based on table 4.12, it showed that Cronbach's Alpha values of risk perception and income level are 0.726 and 0.708 respectively. It directly indicated that both of them are under reliability's acceptable level. Lastly, the overall value of Cronbach's Alpha is 0.719. Hence, it's reflecting the high reliability of this measuring instrument and also proves that the internal consistency of a particular construct is high.

4.4 Inferential Analysis

4.4.1 Pearson Correlation Analysis

The correlation coefficient can range between -1.0 and 1.0. In other sentences, the values cannot be greater than 1.0 or lower than -1.0. A correlation of -1.0 indicates a perfect negative correlation, whereas a correlation of 1.0 indicates a perfect positive correlation. If the correlation coefficient value is greater than zero, this is

considered as a positive relationship. In contrast, there is a negative relationship if the correlation coefficient value is less than zero. If the value of correlation coefficient is equal to 0, it indicates that no link exists between two variables (Nickolas, 2021).

Correlations						
		Mean Financial Knowledge	Mean Financial Self-Efficacy	Mean Risk Perception	Mean Income Level	Mean Personal Saving Behavior
Mean Financial Knowledge	Pearson Correlation	1	.488**	.174**	.247**	.724**
Mean Financial Self-Efficacy	Pearson Correlation	.488**	1	.248**	.319**	.459**
Mean Risk Perception	Pearson Correlation	.174**	.248**	1	.343**	.276**
Mean Income Level	Pearson Correlation	.247**	.319**	.343**	1	.228**
Mean Personal Saving Behavior	Pearson Correlation	.724**	.459**	.276**	.228**	1
**. At the 0.01 level, correlation is significant (2-tailed).						

Table 4.14 Pearson Correlation Analysis

Source: Developed in study

According to Table 4.14, it indicates the magnitude of association between the dependent variable, which is the personal saving behavior of UTAR staffs during Covid-19 and the independent variables, which are the financial knowledge, financial self-efficacy, risk perception, and income level.

It indicates a significant relationship between the financial knowledge and personal saving behavior of UTAR staffs during Covid-19. It is because the P-value is equal to 0.001 and less than the alpha value of 0.01. Moreover, the correlation coefficient's value is 0.724, which falls between the coefficient range

of 0.60 to 0.799. This means that the financial knowledge and the personal saving behavior of UTAR staffs during Covid-19 have a strong positive relationship according to the rules of thumb.

It indicates a significant relationship between the financial self-efficacy and the personal saving behavior of UTAR staffs during Covid-19. There is a significant relationship because the P-value is 0.001 and less than the alpha value of 0.01. Moreover, the value of correlation coefficient is 0.457, which falls between the coefficient range of 0.40 to 0.599. This means that the financial self-efficacy and the personal saving behavior of UTAR staffs during Covid-19 have a moderate relationship according to the rules of thumb.

It indicates a significant relationship between the risk perception and the personal saving behavior of UTAR staffs during Covid-19. It is because the P-value is equal to 0.001 and less than the alpha value of 0.01. Moreover, the correlation coefficient's value is 0.276, which falls between the coefficient range of 0.20 to 0.399. This means that the risk perception and the personal saving behavior of UTAR staffs during Covid-19 have a weak positive relationship according to the rules of thumb.

It indicates a significant relationship between the income level and the personal saving behavior of UTAR staffs during Covid-19. There is a significant relationship because the P-value is 0.001 and less than the alpha value of 0.01 Moreover, the value of correlation coefficient is 0.228, which falls between the coefficient range of 0.20 to 0.399. This means that the income level and the personal saving behavior of UTAR staffs during Covid-19 have a weak positive relationship according to the rules of thumb.

4.4.2 Multiple Regression Analysis

According to Indeed Editorial Team (2021), a multiple regression analysis is defined as a statistical assessment of multiple regression, which is a variant of

linear regression. In statistics, linear regression is a method for predicting the value of a variable whose value is influenced by another variable. As a result, the predictive variable is a dependent variable, as it is influenced by another variable. In multiple regression analysis, the value of the dependent variable is influenced by two or more external variables. Multiple regression analysis is essentially a way for assessing the data obtained through regression measurement. According to Petchko (2018), multiple regression analysis can be used by researchers to assess the significance of the relationship between a finding (the dependent variable) and several regression coefficients, as well as the importance of each predictor to the relationship.

Table 4.15:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	$.746^{a}$	.556	.548	.28491

a. Predictors: (Constant), mean Financial Knowledge, mean Financial Self-Efficacy, mean Risk Perception, mean Income Level

b. Dependent Variable: mean Personal Saving Behavior

Source: Developed in study

The coefficient of determination (R-square) is a statistical tool applied to identify how much variation in the independent variables can be interpreted by variance in the output. As a result, R square (R^2) cannot be used alone to identify which predictors should be included in a model and which should be excluded. R square can only be a number between 0 and 1. The number of 0 representing that none of the independent variables can accurately predict the outcome while the number of 1 representing that all of the independent variables can accurately predict the outcome. Our multiple regression model presented a value of 0.548 in adjusted R square. On the other hand, R square obtained a value of 0.556 in the regression test.

4.4.2.1 ANOVA

Table 4.16:

$ANOVA^a$

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.899	4	5.475	67.440	$< .001^b$
	Residual	17.453	215	.081		
	Total	39.352	219			

Dependent Variable: mean Personal Saving Behavior

Predictors: (Constant), mean Financial Knowledge, mean Financial Self-Efficacy, mean Risk Perception, mean Income Level

Source: Developed in study

According to Riffenburgh (2006), the significance level α was determined at the start of the study. 0.05 is commonly used as a convention. The table 4.16 presented above showed that the value for P-value (Sig $< .001^b$) was less than the value of alpha determined is 0.05. The study outcome presented that all the variables of independence can significantly explain the factors affecting the personal saving behavior among UTAR staffs during Covid-19. The result is sufficiently supported by the data and it would be accepted.

4.4.2.2 Coefficients

Table 4.17 *Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.709	.345		-2.058	.041

	mean Financial Knowledge	.841	0.68	.649	12.388	<0.001
	mean Financial Self-Efficacy	.164	.079	.112	2.076	0.039
	mean Risk Perception	.148	.052	.141	2.878	.004
	mean Income Level	-0.19	.058	-.017	-.329	.742

Dependent Variable: mean Personal Saving Behavior

Four independent variables obtained different values of beta. Financial knowledge obtained a beta value of 0.649 (β=0.649), while financial self-efficacy obtained the beta value of 0.112 (β=0.112). Besides, risk perception obtained the beta value of 0.141 (β=0.141). The last independent variable in this model, which is income level obtained a beta value of -0.017 (β= -0.017). The beta value presented in four of the independent variables which is financial knowledge, financial self-efficacy, risk perception, and income level. Financial knowledge, financial self-efficacy and risk perception showed that they are positively related to the factors affecting the personal saving behavior among UTAR staffs during Covid-19. On the other hand, income level showed that it is negatively related to the factors affecting the personal saving behavior among UTAR staffs during Covid-19.

According to Riffenburgh (2006), the significance level α was determined at 0.05. H1 showed that there is a significant relationship between financial knowledge and the factors affecting the personal saving behavior among UTAR staffs during Covid-19 was accepted at P-value<0.05. Besides, the H1 of financial self-efficacy also showed that there is a significant relationship between financial self-efficacy and the personal saving behavior among UTAR staffs during Covid-19 was also

accepted at P-value<0.05. Moreover, H1 of risk perception indicated that there is a significant relationship between risk perception and the personal saving behavior among UTAR staffs during Covid-19 was accepted at P-value<0.05. Last but not least, the H0 of income level presented that there is no significant relationship between income level and the personal saving behavior among UTAR staffs during Covid-19 since that was not accepted when P-value>0.05. This is because most of the UTAR staffs who work in Kampar campus's income level remain unchanged during the Covid-19 pandemic.

4.5 Hypothesis Summary

Hypothesis	Decision
H1: There is significant relationship between financial knowledge and the personal saving behavior among UTAR staffs during Covid-19	Accepted
H1: There is significant relationship between financial self-efficacy and the personal saving behavior among UTAR staffs during Covid-19	Accepted
H1: There is significant relationship between risk perception and the personal saving behavior among UTAR staffs during Covid-19	Accepted
H0: There is no significant relationship between income level and the personal saving behavior among UTAR staffs during Covid-19	Accepted

4.6 Summary of Chapter

In order to examine the demographic characteristics of UTAR employees, the four independent variables were examined using frequency analysis and measures of central tendency. Furthermore, reliability tests revealed that all the construct measures in this study are likely to produce consistent results. Meanwhile, Reliability Test, Pearson Correlation Analysis, and Multiple Regression Analysis have displayed that financial knowledge, financial self-efficacy and risk reception have a significant relationship while income level have an insignificant relationship between the factors that affecting personal saving behavior of UTAR staffs during Covid-19 in this study.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.1 Introduction

The study comes to an end with this chapter. In this chapter, the findings and discussion will be presented. The contents include explanations and supporting details for the relationship between dependent variable (personal saving behavior) and independent variables (financial knowledge, financial self-efficacy, risk perception and income level). This chapter will also include the study's implications, limitations, and recommendations for future researchers to improve or enhance their investigations. Finally, a conclusion will be written to summarize the overall findings of this study.

5.2 Discussion of Major Findings

5.2.1 Financial Knowledge and Saving Behavior

Table 5.1

Independent Variables	Hypothesis	Reject H0
Financial Knowledge	H0: There is no significant relationship between financial knowledge and the personal saving behavior among UTAR staffs during Covid-19	$\alpha = 0.05$ P-value = 0.001 (<0.05) There is significant relationship

Table 5.2

Independent Variables	Result	Past Studies		
		Significant		Not Significant
		Positive	Negative	
Financial Knowledge	Positive	Widjaja & Setini, 2020 Delafrooz & Paim, 2020 Sabri & MacDonald, 2010 Arifin, 2017 Kadir et al, 2021	-	-

Based on the table 5.1 above, H0 is rejected because its P-value (0.001) is less than 0.05, indicating that financial knowledge has a significant and positive

relationship with personal saving behavior among UTAR staffs during Covid-19. It means that if individuals have financial knowledge, they will engage in personal saving behavior during Covid-19. In other words, individuals who lack financial knowledge will not engage in personal saving behavior during Covid-19.

The outcome is supported by the past study of Widjaja et al. (2010), Arifin (2017), and Abdul Kadir et al. (2021) that the presence of positive and significant relationships exists in financial knowledge and personal saving behavior. According to Arifin (2017), there is a positive and strong relationship between financial knowledge and financial behavior, implying that the more financial knowledge an individual has, the better the financial behaviour will be. From the research by Kadir et al. (2021), it showed that the role of financial literacy, which has received a lot of attention, appears to be a key component in motivating people to save, and that financial knowledge has a positive impact on investment practices and savings. This means that financially literate respondents know how to spend, save, and invest their money wisely.

5.2.2 Financial Self-Efficacy and Saving Behavior

Table 5.3

Independent Variables	Hypothesis	Reject H0
Financial Self-Efficacy	H0: There is no significant relationship between financial self-efficacy and the personal saving behavior among UTAR staffs during Covid-19	$\alpha = 0.05$ P-value = 0.039 (<0.05) There is significant relationship

Table 5.4

Independent Variables	Result	Past Studies		
		Significant		Not Significant
		Positive	Negative	
Financial Self-Efficacy	Positive	Radianto et al, 2020 Ismail et al, 2020 Farrell et al, 2016 Kusairi et al., 2019	-	Kadir et al., 2021

Based on table 5.3, H0 is rejected. It is because the P-value (0.039) is less than 0.05 which indicates that financial self-efficacy has a significant and positive relationship with personal saving behavior among UTAR staffs during Covid-19. People with financial self-efficacy will have the capability to engage in personal saving behavior during Covid-19. On the other hand, individuals who lack financial self-efficacy will not have the ability to engage in personal saving behavior during Covid-19.

The past studies Radianto et al. (2020), Farrell et al. (2016) and Kusairi et al. (2019) support that there is a positive and significant relationship between financial self-efficacy and personal saving behavior. According to Ismail et al. (2020) research, an individual's financial self-efficacy can increase to encourage saving behavior. Individuals with a higher level of self-efficacy are more confident in their ability to manage their finances and deal with financial problems. In contrast, individuals with low financial self-efficacy will be unable to manage their finances and will be unable to seek assistance when it is required. Furthermore, people who have higher financial self-efficacy normally will have

less debt, less financial problems, less financially stressed issues and they will be saved more. Farrell, Fry, and Risse (2016) found that the financial self-efficacy of a woman influences her personal saving behavior. According to their findings, women who have higher financial self-efficacy tended to prefer to have investment, mortgage or savings accounts while women who have lower financial self-efficacy were less prefer to own a credit card or loan.

5.2.3 Risk Perception and Saving Behavior

Table 5.5

Independent Variables	Hypothesis	Reject H0
Risk Perception	H0: There is no significant relationship between risk perception and the personal saving behavior among UTAR staffs during Covid-19	$\alpha = 0.05$ P-value = 0.004 (<0.05) There is significant relationship.

Table 5.6

Independent Variables	Result	Past Studies		
		Significant		Not Significant
		Positive	Negative	
Risk Perception	Positive	Kusairi et al., 2019 Termprasertsakul& Kulsiri, 2011	-	-

		Nyström, & Romberg, 2017 Dahlbäck, 1991		

Based on table 5.6, the H0 of risk perception is rejected since the P-value is 0.004 which is lesser than 0.05. It showed that the relationship between risk perception and saving behavior is significant and positive among the UTAR staffs during Covid-19. Due to the positive relationship, we can assume that when the risk perception of UTAR staffs is high which means that they would be more likely to engage in saving. Otherwise, the UTAR staffs with low-risk perception will have lower engagement in saving.

The outcome agreed by Kusairi et al.(2019), Termprasertsakul et al. (2017), and Dahlbäck, O. (1991) found that the common factor that affects people's saving behavior is risk perception. According to Kusairi et al. (2019), their findings suggest that households' risk perceptions influence the savings tools chosen to save money. Their findings suggest that those who are more financially efficient at risk will be challenged with decision-making and have a higher chance of success. Other than that, according to Nyström and Romberg (2017), attitudes toward financial risk have an impact on financial behavior. Their findings recommend that higher financial risk attitudes would lead to better financial behaviour, whereas general risk attitudes have no influence on financial behaviour. Hence, it can be assumed that when facing the risk of Covid-19, UTAR staffs are more willing to engage in saving and have better financial behavior.

5.2.4 Income Level and Saving Behavior

Table 5.7

Independent Variables	Hypothesis	Reject H1
Income Level	H1: There is significant relationship between income level and the personal saving behavior among UTAR staffs during Covid-19	α = 0.05 P-value = 0.742 (>0.05) There is no significant relationship.

Table 5.8

Independent Variables	Result	Past Studies		
		Significant		Not Significant
		Positive	Negative	
Income Level	Negative	Delafrooz & Paim, 2020 Masson, Bayoumi & Samiei, 1995	-	Arifin, 2017 Pieterse, 2019 Mensahklo, Kornu & Dom, 2017

Based on table 5.7, H1 is rejected due to its P-value (0.742) is greater than 0.05 which means that there is an insignificant relationship between the income level and saving behavior among UTAR staffs during Covid-19. Due to the insignificant relationship between income level and saving behavior, this shows that no matter the income level of UTAR staffs increase or decrease, most of them would not change their saving behavior although it was during the pandemic of Covid-19.

The previous study of Arifin (2017), Pieterse (2019), and Mensahklo, Kornu & Dom, (2017) support this result. According to Arifin (2017), income has nothing to do with financial behavior, which means that a person's income, no matter how much, has nothing to do with the financial behavior of a person. This phenomenon can be interpreted by the fact that people with high income levels do not always have good control over their expenses due to irresponsible financial behavior and the tendency to think fast. When a person's income increases, so does his or her spending, sometimes exceeding the extra income. Besides that, Mensahklo, Kornu, & Dom (2017) had stated that income levels were assessed to have an effect on people's saving behavior, but were not significant across the study's spatial (geographical) and contextual scale. Different levels of income of families will have different saving habits. Higher-income groups save less than lower-middle-income groups because higher-income parents prefer their children to attend reputable institutions in their area, so they will lose more savings than lower-middle-income groups. As a result, income did not have a significant impact on people's saving habits.

5.3 Implication of Study

According to the research, the findings and outcome will bring some of the significant implications to our society at different aspects. Firstly, the first party to impact is the future researcher. Nowadays, there are more people seeking a way to save and more people tend to start saving due to more uncertainty. Therefore, study regarding the saving to figure out the interesting and hidden facts about the saving will be increased. There are four variables investigated in this study and three of them are significant and one of the variables was insignificant. Thus, this research can assist those future researchers to figure out the variables that affect the saving behavior of part of the employees in Malaysia during Covid-19. For instance, this study provided four variables which included financial knowledge, financial self-efficacy, risk perception and income level to investigate how these

variables could affect the saving behavior of employees during Covid-19. It could help the future researcher reveal the reasons behind these variables affecting the saving behavior of Malaysia's employees during Covid-19 and use them in their study. Other than that, this study could also help the future researcher to preclude or further research on the variables could affect saving behavior of employees.

Moreover, the second party that is impacted is society. This is due to the fact that in today's society, people of all ages require awareness or knowledge of personal saving behavior. Parents with children bear a great deal of responsibility in this regard. Because parents are the people closest to their children, they intentionally impart effective knowledge to them. Parents should teach their children proper financial knowledge. Parents must also demonstrate to their children the financial self-efficacy of their savings in order for them to grow up in such an environment and instill the virtue of saving in the next generation from an early age. Because our study found that financial knowledge, financial self-efficacy and risk perception are all positively and significantly related. Hence, the goal of our study is to better assist society in making good use of their financial knowledge to make wise decisions, and setting aside some emergency funds for the unforeseeable future. For example, in this Covid-19 epidemic, which has brought a lot of difficulties to society, if there is no emergency fund or reserve fund, people will lose their ability to survive because this epidemic has deprived many people of job opportunities. It is good to save early. In the event of an epidemic, what factor affects personal saving behavior. In this study, it has been analyzed for society. Although this is a study on employees, it is still feasible for society.

Last but not least, the third party that is impacted is the bank and government.This study can better help banks and governments to promote saving behavior, because in this study we have tested the effective factor (financial knowledge, financial self-efficacy, risk perception and income level) for personal saving behavior. Banks can arrange for some staffs to go to school or provide some courses for teachers to spread the benefits and importance of saving to the new generation, and cultivate the habit of saving of them from an early age on the impact and importance of financial knowledge, financial self-efficacy, risk perception and income level on personal saving behavior to raise their awareness of saving. In addition, the government can also use the results of this study to conduct a saving

campaign to raise the saving awareness of the general public. The government can also release awareness about saving through TV, news and newspapers, that is because many elderly people may not be good at using electronic products, then they can get the financial knowledge from offline platforms to improve saving awareness. Savings are age-neutral. Improving the public's knowledge of saving, as well as the public's willingness to save, contributes to the improvement of the country's economy.

5.4 Limitations of Study

There may be some limitations to this study, which shall be highlighted. The first will be a matter of time constraints. The time constraint refers to the study completion timetable, which contains deadlines for each phase of the study as well as the date of final submission. ("What are constraints in project management?" n.d.). Due to the need of meeting deadlines, the study is completed in a limited amount of time and the results of the study were acquired solely through the questionnaire survey and it was carried out online through emails. Also, as the respondents are only accessible during a specific time period, the amount of time available to explore a research problem and fully utilise the resources to improve the accuracy of outcomes has been restricted.

Next, the targeted respondents are one of the limitations. Since the purpose of the study is to identify the UTAR staffs' saving behavior, the study is conducted just in UTAR and only among UTAR staffs. This could lead to results from the study being less representative of the overall situation in a particular region of the country. As a result, if the study had been undertaken in another state, the results might have revealed a different pattern of saving behavior.

Furthermore, another limitation of the study is the methods used to form the survey questions. The methods of forming questionnaire questions have had a minor impact on the process of measuring variables. For example, after running

the test and obtaining the results, the income level has an insignificant relationship with the dependent variable. After reviewing the study's findings, it was discovered that it is important to address the survey questions from a different workable perspective and to include an important question in the survey in order to avoid influencing the results of a study.

5.5 Recommendations for Future Research

According to the above paragraphs, this study report had pointed out some limitations. One of the limitations presented in this study report is the issue of time constraints. Therefore, a recommendation given for future study is that the researchers should conduct mixed-methods study. The concept of paradigm wars between qualitative and quantitative research methods has given rise to mixed-methods research. Qualitative research methods can be interviewed and quantitative research methods can be questionnaires. The researchers should conduct quantitative and qualitative research methods together. According to Steven & Terrell (2012), proved that in this way, it would take less time to acquire data and the faults inherent in one design can be offset.

The second limitation is the targeted respondents. In this study, only UTAR staffs were focused. Hence, it is recommended for future study is to expand or widen the target group of respondents in the sample to improve results. If the questionnaires were distributed only to UTAR staffs, this had significantly limited the results of the survey. Most university staffs now have the habit of saving money. It is suggested that the questionnaire survey can be distributed to TARUC staffs in the same state as UTAR and distribute the questionnaire survey to university staffs in other states. It is believed that by expanding or wider the target respondents will be shown more representative of the overall situation in a particular region of the country and different patterns of saving behavior.

The last limitation of the study is the methods used to form the survey questions. The improper method of forming the questionnaire questions has had a minor effect on the study results. For example, the result showed that the relationship between the income level and the dependent variable is not significant. Under this condition, recommended for future study is that the researchers should refer to or study the way the researchers have formulated questions in the past. In this way, the researchers can learn how to create effective and correct methods of survey questions so as not to affect study results. Besides that, survey questions from a different workable perspective and to include an important question in the survey can also avoid influencing the results of a study.

5.6 Conclusion

In a summary, this study has revealed how each proposed determinant influences the personal saving behavior among UTAR staffs during Covid-19 pandemic. The factors that will affect the personal saving behavior among UTAR staffs in Kampar campus are financial knowledge, financial self-efficacy and risk perception. Furthermore, the study sample size was set at 220 respondents, and the data was analysed applying the Statistical Package for Social Science (SPSS) version 28.0.1.1. (14). Meanwhile, the data from the questionnaire was analysed applying the Reliability Test, Pearson Correlation Analysis, and Multiple Regression Analysis.

SPSS was utilised in this study to assess the factors influencing personal saving behaviour among UTAR staffs during the Covid-19 pandemic. After using the SPSS programme, it was discovered that financial knowledge, financial self-efficacy, and risk perception all have a strong and positive relationship with UTAR staffs' personal saving behaviour during the Covid-19 pandemic. On the other hand, income level has a weak positive relationship with UTAR staffs' personal saving behaviour during the Covid-19 pandemic.

As a result, it is vital for other scholars to undertake further research on this topic in order to investigate the factors that affect the personal saving behavior during the Covid-19 pandemic. Researchers will gain a better knowledge of the elements that influence personal saving behaviour during unexpected situations after studying this study. It is critical for everyone to develop a saving habit because saving assists you in being financially secure and ensuring that you and your loved ones are taken care of in the event of an emergency. As the Covid-19 epidemic has confronted humanity with more issues and dangers than ever before, saving is becoming increasingly crucial in assisting citizens in obtaining medicinal supplements, undergoing medical examinations, and maintaining a healthy lifestyle. The essential qualities that everyone has to improve in order to "Save for Safe" are improving financial knowledge, financial self-efficacy and risk perception.

However, there are still some limitations found in this study. Firstly, time constraints will be one of the matters. Secondly, the targeted respondents are also one of the limitations that were found in this study. Thirdly, the methods utilised to form the survey questions are also a limitation of the study. However, there are some recommendations to overcome the limitations. To begin, good scheduling will be the first suggestion for overcoming time constraints. As a result, if the researchers are good at time management, they can schedule their time to do interviews or other primary data collection methods. To solve the issue of targeted respondents, the recommendation will be to enlarge or broaden the target group of respondents in the sample to improve outcomes. Finally, referring to or studying how researchers have constructed questions in the past will be a good tip to the researchers in order to prevent the wrong method of producing questionnaire questions that occurred throughout the results analysis.

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APPENDICES

Appendix 1.1 Survey Question Permission Letter

UNIVERSITI TUNKU ABDUL RAHMAN DU012(A)
Wholly owned by UTAR Education Foundation (200201010564(578227-M))
Faculty of Business and Finance
Jalan Universiti, Bandar Barat, 31900 Kampar, Perak
Phone: 05-468-8888 Fax: 05-466-7407
https://fbf.utar.edu.my/

16th August 2021

To Whom It May Concern

Dear Sir/Madam,

Permission to Conduct Survey

This is to confirm that the following students are currently pursuing their Bachelor of Business Administration (Honours) Banking and Finance program at the Faculty of Business and Finance, Universiti Tunku Abdul Rahman (UTAR) Perak Campus.

I would be most grateful if you could assist them by allowing them to conduct their research at your institution. All information collected will be kept confidential and used only for academic purposes.

The students are as follows:

Name of Student	Student ID
Chia Ali Lillien	18ABB04248
Fang Wei Yen	18ABB02217
Low Kai Chi	18ABB04250
Poon Tat Chi	18ABB04453
Tan Wei Li	18ABB04344

If you need further verification, please do not hesitate to contact me.

Thank you.

Yours sincerely,

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UNIVERSITI TUNKU ABDUL RAHMAN
FACULTY OF BUSINESS AND FINANCE
BACHELOR OF BUSINESS ADMINISTRATION (HONS) BANKINF AND FINANCE

Appendix 1.2 Survey

Question

FINAL YEAR PROJECT

Research Topic: Factors affecting the personal savings behaviour among UTAR staffs during Covid-19 pandemic

We are students from Universiti Tunku Abdul Rahman (UTAR) undergoing Bachelor of Business Administration (Hons) Banking and Finance program. Hereby, we are doing research regarding the factors affecting the personal savings behaviour among UTAR staffs during Covid-19 pandemic. The purpose of this study is to determine and investigate the factors affecting the personal savings behaviour among UTAR staffs during Covid-19 pandemic. This survey is private and confidential. Your responses are highly appreciated. Please tick one answer for each question unless otherwise specified. Thank you.

Instructions:

1. There are TWO (2) sections (A&B) in this questionnaire. Please answer ALL questions in ALL sections.

2. Complete of this form will take you approximately 5 to 10 minutes.

3. The contents of this questionnaire will be kept strictly confidential.

PERSONAL DATA PROTECTION STATEMENT

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to:-
   - For assessment of any application to UTAR
   - For processing any benefits and services
   - For communication purposes
   - For advertorial and news
   - For general administration and record purposes
   - For enhancing the value of education
   - For educational and related purposes consequential to UTAR
   - For the purpose of our corporate governance
   - For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan

2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.
2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.
3. You may access and update your personal data by writing to us at _____.

Acknowledgment of Notice

[ ] I have been notified by you and that I hereby understood, consented and agreed per UTAR above notice.
[ ] I disagree, my personal data will not be processed.

……
Name:
Date:

SECTION A: Demographic information

Please tick "/" in the boxes with relevant information.

1. Gender:

☐ Male

☐ Female

2. Age:

☐ 21 - 30

☐ 31 - 40

☐ 41 - 50

☐ 51 - 60

☐ 61 - 70

3. Education Level: ☐ Degree

☐ Master

☐ PhD

4. Marital Status: ☐ Single

☐ Married

5. Do you engage in savings? ☐ Yes

☐ No

6. Do you think the Covid-19 pandemic affect your savings behaviour?

☐ Yes

☐ No

SECTION B: Independent and Dependent Variables

Please circle your answer to each statement

[(1) = Strongly Disagree; (2) = Disagree; (3) Neither Agree nor Disagree; (4) Agree; (5) Strongly Agree]

Personal Saving Behavior (Dependent Variable)

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1.	During Covid-19 pandemic, I will set a saving goal and make sure I can achieve it.	1	2	3	4	5
2.	During Covid-19 pandemic, I always make sure to save for the event of emergency.	1	2	3	4	5
3.	During Covid-19, I survey different savings plans before I start saving my money.	1	2	3	4	5
4.	During Covid-19 pandemic, I plan to reduce my expenditure.	1	2	3	4	5
5.	During Covid-19 pandemic, I will follow my budget before I decide to make a purchase.	1	2	3	4	5

Financial Knowledge (1st Independent Variable)

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1.	Do you agree financial knowledge play as important role in saving behavior during Covid-19 pandemic?	1	2	3	4	5
2.	I have the basic financial knowledge to manage finances.	1	2	3	4	5
3.	I gain my financial knowledge from friends/socail media/families.	1	2	3	4	5
4.	I understand the importance of savings.	1	2	3	4	5
5.	During the Covid-19 pandemic, I know how to invest my money and the importance of it.	1	2	3	4	5
6.	I am able prepare my own weekly or monthly budget plan.	1	2	3	4	5
7.	During the Covid-19 pandemic, I know how to evaluate and adjust my financial plans on income while facing a decrease in income or unemployment.	1	2	3	4	5

Financial Self- Efficacy (2nd Independent Variable)

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1.	Do you agree financial self-efficacy plays an important role in saving behavior during Covid-19 pandemic?	1	2	3	4	5
2.	During the Covid-19 pandemic, I have self-control and manage to save money monthly.	1	2	3	4	5
3.	During the Covid-19 pandemic, my savings level has decreased as compared to before the pandemic.	1	2	3	4	5
4.	During the Covid-19 pandemic, I am able to maintain control over my financial planning and saving habits.	1	2	3	4	5
5.	During the Covid-19 pandemic, I tend to avoid overspending my financial budget.	1	2	3	4	5
6.	During the Covid-19 pandemic, I know how to prioritize my needs over wants and only spend money on necessary items.	1	2	3	4	5
7.	During the Covid-19 pandemic, I prefer spending money on entertainment instead of saving it.	1	2	3	4	5

Risk Perception (3rd Independent Variable)

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1.	Considering the risk of Covid-19, I save more than I spend during the pandemic.					
2.	Considering the risk of Covid-19, I prefer to use my money on saving.	1	2	3	4	5
3.	During the Covid-19 pandemic, I prefer switching to a lower-risk investing strategy	1	2	3	4	5
4.	Considering the risk of Covid-19, I would put my money in risk-free savings financial product.	1	2	3	4	5
5.	The risk of the Covid-19 has an impact on my saving behavior.	1	2	3	4	5

Income Level (4th Independent Variable)

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1.	My income level has decreased after Covid-19 outbreak.	1	2	3	4	5
2.	During the Covid-19 pandemic, I agree that my income level influences my savings level.	1	2	3	4	5
3.	During the Covid-19 pandemic, I aim to cut my expenditures and increase my savings.	1	2	3	4	5
4.	During the Covid-19 pandemic, I put a higher percentage of my income into savings rather than spending it.	1	2	3	4	5
5.	During the Covid-19 pandemic, I always use my income for investment rather than saving it or spending it.	1	2	3	4	5

Appendix 1.3 Sources of Questionnaires

	Variables	Question	Sources
PSB_1	Personal Saving Behavior	During Covid-19 pandemic, I will set a saving goal and make sure I can achieve it.	(Ariffin et al., 2017)
PSB_2		During Covid-19 pandemic, I always make sure to save for the event of emergency.	(Chepngetich, 2021)
PSB_3		During Covid-19, I survey different savings plans before I start saving my money.	(Gaisina & Kaidarova, 2017)
PSB_4		During Covid-19 pandemic, I plan to reduce my expenditure.	(Ariffin et al., 2017)
PSB_5		During Covid-19 pandemic, I will follow my budget before I decide to make a purchase.	(Ariffin et al., 2017)
FK_1	Financial Knowledge	Do you agree financial knowledge plays an important role in saving behavior during Covid-19 pandemic?	(Anand et al., 2021)
FK_2		I have the basic financial knowledge to manage finances.	(Gaisina & Kaidarova, 2017)
FK_3		I gain my financial knowledge from friends/social media/families.	(Kocsir et al., 2013).
FK_4		I understand the importance of savings.	(Chepngetich, 2021)
FK_5		During the Covid-19 pandemic, I know how to invest my money and the	(Thapa & Nepal, 2015).

		importance of it.	
FK_6		I am able to prepare my own weekly or monthly budget plan.	(Thapa & Nepal, 2015).
FK_7		During the Covid-19 pandemic, I know how to evaluate and adjust my financial plans on income while facing a decrease in income or unemployment.	(Kocsir et al., 2013).
FSE_1	Financial Self-Efficacy	Do you agree financial self-efficacy plays an important role in saving behavior during Covid-19 pandemic?	(Singh et al., 2019).
FSE_2		During the Covid-19 pandemic, I have self-control and manage to save money monthly.	(Farrell et al., 2016).
FSE_3		During the Covid-19 pandemic, my savings level has decreased as compared to before the pandemic.	(Lown et al., 2015).
FSE_4		During the Covid-19 pandemic, I am able to maintain control over my financial planning and saving habits.	(Farrell et al., 2016).
FSE_5		During the Covid-19 pandemic, I tend to avoid overspending my financial budget.	(Farrell et al., 2016).
FSE_6		During the Covid-19 pandemic, I know how to prioritize my needs over wants and only spend money on necessary items.	(Danes & Haberman, 2007)
FSE_7		During the Covid-19 pandemic, I prefer spending money on entertainment instead of saving it.	(Ismail et al., 2017).

RP_1	Risk Perception	Considering the risk of Covid-19, I save more than I spend during the pandemic.	(Jin et al., 2021)
RP_2		Considering the risk of Covid-19, I prefer to use my money on saving.	
RP_3		During the Covid-19 pandemic, I prefer switching to a lower-risk investing strategy	(Tawar et al., 2021)
RP_4		Considering the risk of Covid-19, I would put my money in risk-free savings financial product.	(Misra et al., 2022)
RP_5		The risk of the Covid-19 has an impact on my saving behavior.	(Jin et al., 2021)
IL_1	Income Level	My income level has decreased after Covid-19 outbreak.	(Tran et al., 2020)
IL_2		During the Covid-19 pandemic, I agree that my income level influences my savings level.	(Parker et al., 2020)
IL_3		During the Covid-19 pandemic, I aim to cut my expenditures and increase my savings.	(Bachas et al., 2020)
IL_4		During the Covid-19 pandemic, I put a higher percentage of my income into savings rather than spending it.	
IL_5		During the Covid-19 pandemic, I always use my income for investment rather than saving it or spending it.	(Buszko et al., 2020)

Appendix 3.1 Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

Appendix 4.1 Statistically Summary

Dependent Variable	Item	Mean	Standard deviation	N
Personal Saving Behavior (PSB)	PSB_1	4.56	0.498	220
	PSB_2	4.18	0.627	220
	PSB_3	4.19	0.648	220
	PSB_4	4.23	0.664	220
	PSB_5	3.95	0.738	220
Financial Knowledge (FK)	FK_1	4.99	0.116	220
	FK_2	4.97	0.176	220
	FK_3	4.23	0.636	220
	FK_4	4.51	0.501	220
	FK_5	4.07	0.749	220
	FK_6	4.15	0.685	220
	FK_7	3.97	0.790	220
Financial Self-efficacy (FSE)	FSE_1	5.00	0.000	220
	FSE_2	4.95	0.209	220
	FSE_3	4.47	0.500	220
	FSE_4	4.08	0.708	220
	FSE_5	4.11	0.639	220
	FSE_6	4.19	0.639	220
	FSE_7	2.11	1.196	220

Risk Perception (RP)	RP_1	4.67	0.172	220
	RP_2	4.62	0.611	220
	RP_3	3.78	0.660	220
	RP_4	3.82	0.669	220
	RP_5	3.88	0.615	220
Income Level (IL)	IL_1	4.25	0.444	220
	IL_2	4.02	0.581	220
	IL_3	4.02	0.597	220
	IL_4	3.94	0.645	220
	IL_5	3.70	0.684	220

Appendix 4.2 Result of Reliability Analysis

Construct	Statement	No. of item	Cronbach's Alpha
Personal Saving Behavior	PSB_1 PSB_2 PSB_3 PSB_4 PSB_5	5	0.621
Financial Knowledge	FK_1 FK_2 FK_3 FK_4	5	0.632

	FK_5 FK_6 FK_7		
Financial Self-efficacy	FSE_1 FSE_2 FSE_3 FSE_4 FSE_5 FSE_6 FSE_7	5	0.660
Risk Perception	RP_1 RP_2 RP_3 RP_4 RP_5	5	0.726
Income Level	IL_1 IL_2 IL_3 IL_4 IL_5	5	0.708

Appendix 4.3 Pearson Correlation

Correlations						
		Mean _FK	Mean _FSE	Mean _RP	Mean _IL	Mean _PSB
Mean _FK	Pearson Correlation	1	.488**	.174**	.247**	.724**
	Sig (2-tailed)		.000	.000	.000	.000
	N		220	220	220	220
Mean _FSE	Pearson Correlation	.488**	1	.248**	.319**	.459**
	Sig (2-tailed)	.000		.000	.000	.000
	N	220		220	220	220
Mean _RP	Pearson Correlation	.174**	.248**	1	.343**	.276**
	Sig (2-tailed)	.000	.000		.000	.000
	N	220	220		220	220
Mean _IL	Pearson Correlation	.247**	.319**	.343**	1	.228**
	Sig (2-tailed)	.000	.000	.000		.000
	N	220	220	220		220
Mean _PSB	Pearson Correlation	.724**	.459**	.276**	.228**	1
	Sig (2-tailed)	.000	.000	.000	.000	
	N	220	220	220	220	
**. At the 0.01 level, correlation is significant (2-tailed).						