

# Malaysian Public Sector Employees' Gold Investment Intention as a Mediator in Gold Investment Behaviour

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## Abstract

One strategy to increase income among households is through investment. The financial and economic well-being of households among investors may increase due to their decisions. Investment in gold is one attractive investment due to its stability in an uncertain economy. This study applied the Theory of Planned Behaviour and included the gold investment knowledge factor. The potential factors, such as financial risk tolerance, gold investment knowledge, attitude, subjective norms, perceived behavioural control, and intention, are determined by their significance of influence on gold investment behaviour. Multi-stage random sampling was used to select urban public sector employees in Peninsular Malaysia, and 403 respondents responded to a self-administered questionnaire. A structural equation modelling analysis revealed that gold investment attitudes and perceived behavioural control significantly influence employees' gold investment behaviour through the intention to invest in gold. Hence, gold investment intention mediates the influence of attitudes and perceived behavioural control. Meanwhile, gold investment subjective norms, gold investment intention, and employees' financial risk tolerance directly influence gold investment behaviour. However, gold investment knowledge does not significantly influence gold investment intention or behaviour. These influential factors on gold investment are information that may be included in programme development to improve employees' financial well-being. In conjunction with this study, future research may focus on other groups of investors. Studies may also include product characteristics such as perceived risk and perceived use, and trust in others, as the potentially influential factors of gold investment.

**Keywords:** financial risk tolerance, gold investment, intention, knowledge, perceived behavioural control, subjective norms

## 1.0 Introduction

One strategy to increase income among households is through investment. The financial and economic well-being of investors'



households may improve as a result of their decisions on how to allocate their income between expenses, savings, and investments (Sadiq Sohail & Al-Otaibi, 2017). History has shown that the economic downturn in 1997 caused a large reduction in share prices, affecting stockholders' investment returns (International Monetary Fund, 1998). The financial markets have faced a series of market turbulence in several countries, including the United Kingdom's referendum in 2016, the 2015 to 2016 stock market selloff in the United States, and the 2015 to 2016 Chinese stock turbulence. Earlier, there were the 2007 to 2012 economic crises and the 2010 European sovereign debt crisis (Ghazali et al., 2020).

However, the prices of precious metals such as gold are stable. In uncertain markets like the COVID-19 pandemic, gold and silver assets are proven to be prudent financial investments during disruptions (Forbes, 2021). Silver's year-to-date gains are about 44.6 percent, while gold is increasing by 23.8 percent as compared to the U.S. equity market, which has an increase of only 14.6 percent. During a pandemic, leading to an economic downturn due to the MCOs, gold has been the asset class sought by investors. Gold-backed ETFs were popular in 2020 among investors, having recorded 877 tonnes added to global holdings, priced at €40 billion or US\$48 billion (Funds Europe, 2021). It was approximately US \$1,714 per ounce or 55 per gramme of gold in early 2020, which experienced a significant increase following COVID-19 strikes and later stabilised in 2021 and 2022 during COVID-19's endemic period, as shown in Figure 1.

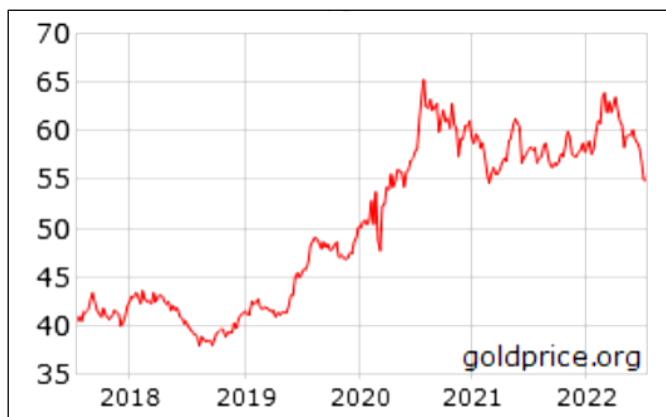


Figure 1 : 5-Year Gold Price per gram in USD  
Source: GoldPrice.Org

The gold price had a significant effect due to the increase in COVID-19 cases shown by the Granger causality test. By referring to the exponential growth in COVID-19 cases of 17.38 percent average growth per day during the period from 1 January 2020 to 31 March 2022, a 0.2885 percent increase in the gold price per day was due to COVID-19 cases (Gautam et al., 2022). Thus, gold investment has been attracting individuals who search for quite a high return with lower risk investment as their long-term plan. Their investment mix includes gold, which is available in several different forms, as it is perceived by them as a safe haven asset (Baur & McDermott, 2016).

The hedging role of gold as a safe haven even in severe market fluctuations was documented by Raza et al. (2016). Ghazali et al. (2020) contended that gold acts as a diversifier, a hedge, or a safe haven. A portfolio of stocks, bonds, and a small percentage of gold is beneficial in terms of increasing returns and lowering risks (Arouri et al., 2015). The weak correlation of physical gold to bonds and stocks results in the price movement of gold not being in tandem with the price movement of bonds and stocks. In terms of riskiness level, gold investments are positioned at the lower end of the investment spectrum. The offline transaction has a lower risk and can be traded back if there is a discrepancy (Aco & Endang, 2017). However, a digital gold investment faces a higher risk environment (Nurul, 2021) unless the purchased digital gold can be printed into a physical form at an additional cost (Arif, 2020). In addition, a digital gold investment account can accept a low purchase threshold (Putri, 2019). As a result, gold investing will most likely attract conservative investors who are risk averse.

Another distinguishing feature of gold investment is its high liquidity. Following that, it is accepted as an effective wealth management instrument (Singh & Joshi, 2019). Fatmawati (2020) mentioned that among Indonesians, face-to-face cash payment transactions are preferred due to their liquidity. Economic volatility or any downturns will not affect it much as its value tends to stabilise during that time (Razimi et al., 2017). Other than being an effective risk diversification instrument, it also exhibits a competitive value-added investment instrument, providing a good return compared to other investment products (Shobha, 2017). Jewellery is the majority choice of gold investment, especially among women (Alfiah, 2020). It is more attractive than gold bars and is also used as an indicator of social status.



More than 400 companies or websites are listed as those illegally taking deposits from individuals for investment. A sizeable number of illegal deposits of more than RM2 billion involving many new investors have been reported (Bank Negara Malaysia, 2017). Reported gold investment frauds include late payments of returns to investors. The non-existence of virtual e-gold, fake gold certificates, and counterfeit gold coins are other examples of fraud. Illegal gold account deposit takings such as Geneva have also tarnished the gold investment industry. Understanding the investment concept is vital in deciding to purchase investment products. In the long run, a gold investment may incur a high return and has proven to be a better investment under uncertainties. Due to this, individuals prefer to invest in gold because it has a low expected risk, which may be beneficial for their mental well-being.

The study's goal is to identify the factors that influence employee gold investment behaviour. It will also test the mediating effect of gold investment intention between the predictors and gold investment behaviour as explained by the Theory of Planned Behaviour. Those predictors are financial risk tolerance, gold investment knowledge, attitude, subjective norms, perceived behavioural control, and intention. A null hypothesis on the mediation effect has been developed as follows.

H<sub>0</sub>: The influence of financial risk tolerance, gold investment knowledge, attitude, subjective norms, and perceived behavioural control on gold investment behaviour is not significantly mediated by gold investment intention.

## **2.0 Literature Review**

The Expected Utility Theory, describing making decisions under risk and how its outcome influences people's behaviour, was introduced by Daniel Bernoulli (Kahneman & Tversky, 1982). It also considers that a person may be risk averse and refuse to make choices for fear of losing. Due to this, risk tolerance plays a main role in the decision and may change with time. The theory underlies the decision under risk and states that consumers should decide on the option providing the highest expected outcomes. The more chances to obtain the expected results, the more interested the consumer will be in that option.



Financial risk tolerance occurs when individuals are willing to accept the uncertainties of their investment decisions. Then, individuals' tolerance toward financial risk will affect their investment behaviour (Ahmad Fauzi et al., 2017). An investor displaying a low-risk tolerance tends to participate in investments without understanding the financial risk he or she will face (Sarwar & Afaf, 2016). The risk-averse concept is the inverse of financial risk tolerance, stating that as a person avoids risks, financial uncertainty and level of comfort decrease (Ryack et al., 2016). Determinants of individual financial risk tolerance have been suggested, such as financial, social, cultural, physical, and ethical factors (Fisher & Yao, 2017; Yong & Tan, 2017). The level of risk tolerance or risk avoidance affects investors' investment behaviour. High-risk-tolerance investors are drawn to higher-value stocks. Lim et al. (2013) revealed that investors with low avoidance display the characteristics of being more flexible and willing to accept uncertainties and take risks. Thus, participating in higher-risk investments to gain expected higher profits implies high-risk tolerance and uncertainty.

Chavali and Mohanraj (2016) determined the impact of demographic variables and risk tolerance on investment decisions. A positive relationship was found between client financial risk tolerance and investment decision-making among financial adviser clients in Australia (Nguyen et al., 2016) and also between risk tolerance and investment decisions in Indonesia (Ainia & Lutfi, 2019). Financial literacy and demographic characteristics such as age, gender, education, and income level are significant determinants of financial risk tolerance. Gazali et al. (2019) also studied financial risk tolerance and how it affected bitcoin purchase intention. Risk tolerance significantly affected investment decision-making investors who attended the capital market school on the Indonesian Stock Exchange (Raihan et al., 2021). In investing in gold, investors' risk tolerance was found to be affecting gold futures investment decisions in a study involving other factors such as educational level, income, and attention to political factors (Thanyasunthornsakun, 2018). Investors with above-average risk tolerance preferred to invest in gold, and high-risk tolerance investors invested 20% of their total investment in gold in India (Praba, 2019). The preference for gold investment was determined using Friedman's test and the latter used Chi-square analysis. Thus, studies on financial risk tolerance gave similar results



for investments in risky or safe asset classes, including gold investment.

The Modified Theory of Planned Behaviour (Ajzen & Fishbein, 2005) includes personal, social, and informational factors as the background factors in influencing intention and behaviour. Personal factors comprise general attitudes among the constructs, while knowledge is part of the information factors. Attitudes toward the behaviour, subjective norms, and perceived behavioural control are the main constructs influencing intention. Hrubes et al. (2001) suggest that the more favourable the attitude towards a specific behaviour is and the greater the subjective norms and perceived behavioural control, the stronger the behavioural intention and the behaviour. As for gold investment, the more favourable the gold investment attitude, subjective norms and perceived behavioural control, the greater the gold investment intention and behaviour.

Attitudes toward gold investment behaviour include an overall evaluation of the behaviour. Attitude is the extent to which a person has a favourable or unfavourable evaluation of a specific behaviour (Ajzen, 2008). A study conducted on students on entrepreneurial intention in Algeria noted that attitude has a stronger influence on intention compared to perceived behavioural control (Mohammed et al., 2017). Website trust and e-shopping attitude significantly affect e-shopping intentions and actual behaviour. These variables were influential factors in the behaviour of those purchasing garments online (Tang et al., 2021). A study in Malaysia on workers found that attitude did play a significant role in the intention to return to work (Yean et al., 2015). In a study on the Indonesian capital market, financial literacy and risk attitudes towards investor behaviour had positive and significant effects on saving motives (Ramandhanty, 2021). A close concept such as value-for-money perception among university students positively influenced the purchase intention of luxury goods (Aw et al., 2021). Sondari and Sudarsono (2015) proved a positive and significant relationship between attitude and subjective norms towards government employees' intentions in various investment instruments. Meanwhile, a study in Thailand was consistent with previous research that found significant effects of financial attitude, financial behaviour, and subjective norm on stock investment intention (Yoopetch & Chaithanapat, 2021). Similarly, using the PLS-SEM method, Tamaraa et al. (2021) revealed that attitude significantly affected the purchase intention of gold investment in e-commerce. The same study among



Indonesian consumers also found that perceived usefulness significantly affected their attitude towards gold investment. For the studies on investment decisions, only the study by Tamaraa et al. (2021) showed a significant influence of attitude on gold investment intention and not on gold investment behaviour.

Subjective norms are the perceptions of others or a peer reference group that approve or disapprove of the behaviour in gold investment. Individuals are motivated to engage in this behaviour by perceived social pressure (Ajzen, 2008). Ahmad Fauzi et al. (2016) stated that familiarity with the gold investment market may affect the intention to invest in gold. Other than product involvement, the subjective norm was found to have a significant effect on the investment intention of individual investors in Pakistan (Ibrahim & Imran, 2017). Rahadjeng and Fiandari (2020), who studied the effects of attitude, subjective norms, and control of behaviour towards intention in share investment, found significant effects of these variables. Meanwhile, the pressure from friends, family, and fellow investors positively influenced investors in East India to invest in the capital market (Raut et al., 2018). In line with this, a study among Indonesians by Sondari and Sudarsono (2015) showed a significant influence of subjective norms on investment intention. Also, a study in Thailand supported this result where Yoopetch and Chaithanapat (2021) found subjective norms significantly affected stock investment intention. A study on Taiwan's capital market revealed that social pressure from others affected investment behaviour (Lai, 2019). Previous studies on the effect of subjective norms on gold investment behaviour have not been found. However, a study by Nur Alfianto and Nugroho (2020) revealed a significant influence of subjective norms on gold investment intention among employees of Islamic financial institutions in the Regency of Magelang, Indonesia.

Ajzen (2008) stated that perceived behavioural control is the perceived ease or difficulty of performing a specific behaviour. Perceptions of behavioural control and personality traits influenced investment intentions among Indonesian millennials (Yanuar and Zainul, 2021). Rahadjeng and Fiandari (2020) discovered that behavioural control influenced share investment intention. For capital market research, the relationship between perceptions of behavioural control and the investment intentions of investors was established as having a positive and significant relationship (Claudia & Murniati, 2018; Ngadino et al., 2019; Pahlevi & Oktaviani, 2018). In contrast, there was



no significant relationship between perceived behavioural control and investor intentions in Pakistan (Ibrahim & Imran, 2017) or sharia mutual funds (Octarina et al., 2019). Perceived behavioural control influenced gold investment intention significantly (Tamaraa et al., 2021), showing a significant influence of perceived behavioural control on gold investment intention but not on gold investment behaviour.

Gold investment knowledge is not introduced in the Theory of Planned Behaviour. However, Ajzen (2008) states that other predictors can be included if they have additional criteria such as being behaviour-specific, independent of the existing predictors of the theory, and could be causal factors in the measured behavioural intention or actual behaviour. Financial knowledge meets Ajzen's (2008) criteria to be added as a predictor (Kennedy, 2013). Past empirical studies on gold investment knowledge were not found; however, financial knowledge was a contributing factor to financial attitudes, financial decisions or behaviour, and financial well-being (Loke, 2017; Sabri & Zakaria, 2015; Yahaya et al., 2019; Zainul, 2017). In the investment context, Suprihati and Pradanawati (2020) studied the influence of knowledge, investment motivation, and investment understanding on student interest in the capital market. There was a partial effect of knowledge on student interest in investing in the capital market. Merawati and Wijayanti (2015) also stated that investment knowledge and income positively affected students' intention to invest in the capital market. Financial knowledge was also revealed as positively affecting investment decision-making investors in the capital market in Indonesia (Raihan et al., 2021). A local study that explored the factors influencing investment decision behaviour among young Muslim adults in Malaysia found a significant association between financial literacy and investment decision behaviour (Samsulbahri et al., 2021). In contrast, Riyadhhi (2016) found that education did not significantly influence investment decisions. Individuals with high knowledge of investment do not necessarily invest. Sabri et al. (2021) revealed that financial literacy positively influenced financial behaviour among local households. In another study by Grohmann et al. (2014), the effect of financial literacy in Bangkok was explored through regression analysis and stated that the higher the financial literacy of individuals, the higher the demand for more sophisticated financial products. A focus on Indonesian investors revealed a significant influence of investment knowledge and investment habits on the investment performance during the pandemic COVID period (Azis, 2020).





An empirical study testing the specific mediation effect of gold investment intention in the gold investment framework was not found. A mediation effect in the context of gold investing was only found for attitude in the relation between perceived usefulness and gold investment intention using the e-commerce platforms among Indonesian consumers (Tamaraa et al., 2021). Attitude was used as the mediator while the dependent variable was gold investment intention. In other contexts, such as purchasing garments online, website trust and e-shopping attitude variables significantly influenced the behaviour mediated by e-shopping intention. But e-shopping intention was not a mediator between subjective norms and e-shopping behaviour among working adults (Tang et al., 2021). Thus, only the e-shopping attitude was mediated by intention and not subjective norms. Tang et al. (2021) also showed that e-shopping intention affected e-shopping behaviour. Following that, for this study, the mediation effect of gold investment intention in the influence of factors on gold investment behaviour is novel. Moreover, it is used in advanced and robust analysis.

### 3.0 Methodology

A survey method was used to obtain cross-sectional data from a large sample of public sector employees in Peninsular Malaysia. The survey method involved primary data collected from samples in a population (Mathiyazhagan & Nandan, 2010). Public sector employees were chosen as they have a regular income and may not be affected much by the economic situation. Employees with a consistent and promising income are likely to be risk-averse and interested in low-risk gold investments. The cross-sectional data provided a snapshot of the variables included in the study at one particular point in time (Turner, 2013). A quantitative correlational research design is appropriate to answer the study objectives and to test the hypotheses on the influence of factors and the mediation effect of gold investing intention between the predictors and gold investment behaviour. Respondents were sampled through a multi-stage random sampling among urban employees as urban residents are perceived to have a higher motivation to invest due to the higher cost of living. More than 76% of Malaysia's population lives in cities (Ministry of Rural Development, 2018).

Four states in Peninsular Malaysia were randomly selected from 12 states in the first stage, which are Pulau Pinang, Selangor, Negeri



Sembilan, and Kelantan. By referring to a list of departments from the public sector websites, departments in urban areas were also randomly chosen in the second stage. A random sampling of the employees was conducted by liaison officers at each location based on the list of names in those departments. There are about 1.8 million civil servants in Malaysia (Department of Statistics, 2021) and Dillman's (2007) formula provided a minimum sample size of 384 at a five percent margin of error and a 95 percent confidence level. However, self-administered questionnaires were distributed to 600 potential respondents through these officers at their workplace. The return rate was 71 percent, with a total of 426 returned questionnaires, but only 403 were usable.

In measuring gold investment knowledge, information on gold investment was gathered from experienced individuals in gold investment, financial institutions' websites, and past studies (Kosares, 2012). The scales used for the responses were true and false. Financial risk tolerance used measurements developed by Jacobs-Lawson (2003) and this established the content validity of the measurement. The gold investment attitude adapted the measurements used by Hayhoe (1999), while statements to measure subjective norms, perceived behavioural control, intention, and behaviour were adapted from previous studies (Kennedy & Wated, 2011) and Kennedy (2013). Likert-type scales were used for these measurements, ranging from "strongly disagree" to "strongly agree." In terms of the influential factors on gold investment behaviour, descriptive analysis and structural equation models were used to answer the objectives and support the hypotheses.

Sample items for financial risk tolerance were "In terms of investing, safety is more important than returns." and "I am more comfortable putting my money in a bank account than in the stock market." For gold investment knowledge, the statements were, "Gold maintains its value from time to time." and "Investing in the form of a gold bar is the best method for gold investment." Gold investment subjective norms statements were "Most people who are important to me invest in gold." and "My friends invest in gold." For perceived behavioural control, some items were "If I wanted to, I could invest in gold." and "I have control over investing in gold." As for gold investment intention and behaviour, the statements were, "I intend to invest in gold." and "I invest in gold."



## 4.0 Results and Discussions

### 4.1 Socio-Economic Profile of Respondents

The socio-economic profile of the respondents is presented in Table 1. About one-third of the respondents are male employees, and three-quarters of them are married. One-third of the respondents earned a monthly income of less than RM2,500, while only one-fifth earned more than RM5,000 a month. This is the income for the respondents only, and for those who are married, their household income would be higher with a working spouse.

In general, the sample was almost fairly distributed in terms of work experience, education, and family size. For work experience, it is grouped into less than 10 years, and above 10 years while education is grouped into non-graduate and graduate. Family size, on the other hand, is categorised into less than five people and more than five people.

Table 1 : Socio-Economic Profile of Respondents

Socio-Economic Profile of Respondents		n (%)
Gender	Male	142 (35.2)
	Female	261 (64.8)
Work Experience	Less than 10 years	226 (56.9)
	More and equal to 10 years	177 (43.1)
Income	Less than RM2,500	139 (35.6)
	RM2,500 to less than RM3,500	86 (22.1)
	RM3,500 to less than RM5,000	84 (21.5)
	More and equal to RM5,000	81 (20.7)
Education	Non-graduate	173 (43.4)
	Graduate	230 (56.6)
Marital Status	Unmarried	94 (23.4)
	Married	307 (76.6)
Family Size	Less than 5 people	191 (50.0)
	More and equal to 5 people	191 (50.0)

### 4.2 Mediation Model by Gold Investment Intention on Behaviour

As Hair et al. (2014) suggested, there are three to four accepted indices required to provide adequate evidence of model fit. The full mediation gold investment behaviour model has proved to be a fit. Four of the fit indices for the gold investment behaviour model achieved values above the criteria set for a fit model as displayed in Table 2. The



ratio of chi-square value with degrees of freedom (CMIN/DF) is below the border value of 5.0 (CMIN/DF = 3.078) with two other indices, the Tucker Lewis index (TLI = 0.912) and the Comparative Fit Index (CFI = 0.922), which are above 0.9, thus fulfilling the fitness criteria. The Root Mean Square Error of Approximation also achieved the criteria to be a fit model with a value of less than 0.08 (RMSEA = 0.072).

Table 2 : Fitness Indices for the Mediated Gold Investment Behaviour Model

Fit Indices	Criteria for Fit Model	Model	Direct Model	Indirect Model
CMIN/DF	< 5.0	3.078*	4.000	3.228*
NFI	> 0.9	.890	.854	.883
TLI	> 0.9	.912*	.873	.906*
CFI	> 0.9	.922*	.886	.916*
PNFI	larger value	.785	.766	.789
RMSEA	< 0.08	.072*	.086	.074*
AIC	smaller value	1403.761	1770.180	1467.511

\* Fulfilled the border criteria

Figure 2 exhibits the Structural Equation Model diagram for the mediated gold investment framework. Gold investment intention is depicted as a mediator between the factors and gold investment behaviour. A high R-squared for gold investment intention of 0.64 shows that 64 percent of the variance in gold investment intention can be explained by the factors in the model. Similarly, 37 percent of the variance in gold investment behaviour can be explained by factors including gold investment intention. Cohen (1992) stated that a value of 0.26 of R-squared is considered to have a high value.



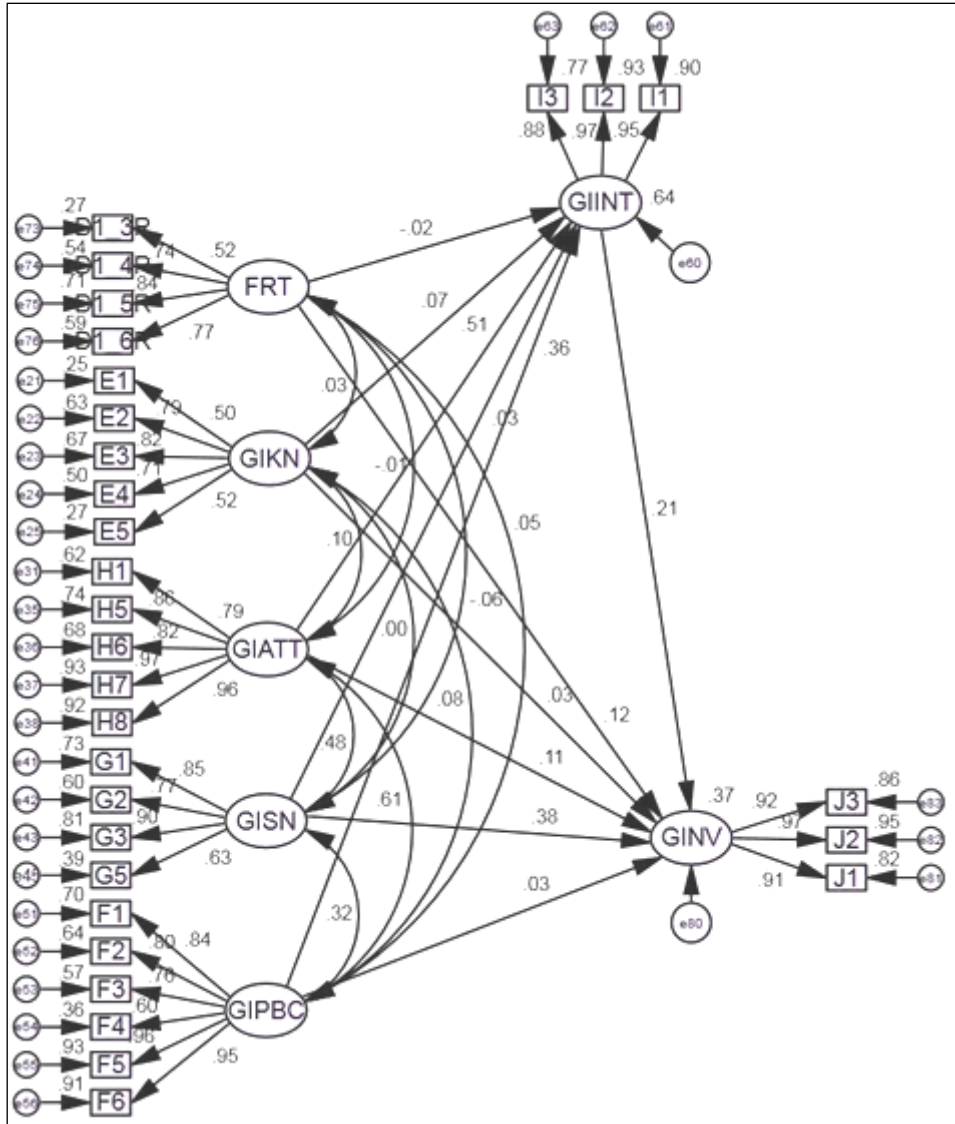


Figure 2 : Full Mediation Model for Gold Investment Behaviour with Standardised Coefficients

As shown in Table 3, a model comparison is performed prior to testing for mediation effect to determine the presence of mediation effect. The Full Mediation Model must be shown to be the better model as compared to the Indirect Model. The chi-square,  $\chi^2$  is 378.418 and the significance level of the chi-square ( $p = 0.0001$ ) for the Indirect Model is less than the significance level ( $\alpha = 0.05$ ), hence this result confirmed that the Full Mediation Model is a better model than the Indirect Model.

Table 3 : Model Comparison

Model	DF	CMIN χ <sup>2</sup>	P	NFI Delta-1	IFI Delta-2	RFI p-1	TLI p-2
Direct	6	378.418	.000	.035	.037	.038	.039
Indirect	5	73.750	.000	.007	.007	.006	.006

\*p = rho

The mediation effect of gold investment intention in gold investment behaviour was tested through individual paths by comparing the Direct Model with the Full Mediation Model. The influence of gold investment attitude or perceived behavioural control on behaviour in the Direct Model is found to be significant and in the mediation model is not significant. In the mediation models, both paths from gold investment attitude or perceived behavioural control to intention and from intention to behaviour are significant. Thus, among the factors, only gold investment attitude (GIATT) and perceived behavioural control (GIPBC) indicated a full mediation by gold investment intention (GIINT) between the factors and gold investment behaviour (GIINV). Table 4 and Table 5 show the results for gold investment attitude and perceived behavioural control.

Table 4 : Mediating Effect of Gold Investment Intention for Gold Investment Attitude

Path	b	S.E.	Beta, β	C.R.	p	Label
Direct Model						
GIATT → GINV	.270	.075	.216	3.596***	.000	AV
Mediation Model						
GIATT → GIINT	.842	.089	.507	9.491***	.000	AT
GIINT → GINV	.163	.056	.214	2.895**	.004	TV
GIATT → GINV	.137	.088	.108	1.548	.122	AV

\*\* significant  $p \leq .01$ ; \*\*\* significant  $p \leq .001$



Table 5 : Mediating Effect of Gold Investment Intention for Gold Investment Perceived Behavioural Control

Path	B	S.E.	Beta, $\beta$	C.R.	p	Label
Direct Model						
GIPBC → GINV	.136	.068		1.989*	.047	PV
Mediation Model						
GIPBC → GIINT	.591	.077	.356	7.720*	***	PT
GIINT → GINV	.163	.056	.214	2.895*	.004	TV
GIPBC → GINV	.040	.076	.032	.534	.593	PV

\*\* significant  $p \leq .01$ ; \*\*\* significant  $p \leq .001$

#### 4.3 Estimates for the Mediated Gold Investment Behaviour Model

The results of the structural equation model for gold investment behaviour exhibited in Table 6 reflected that gold investment attitude ( $b = 0.842$ ;  $p = 0.000$ ) and gold investment perceived behavioural control ( $b = 0.591$ ;  $p = 0.000$ ) were significantly influencing gold investment intention. In contrast, financial risk tolerance (FRT) ( $b = 0.153$ ;  $p = 0.008$ ) and gold investment subjective norms (GISN) ( $b = 0.481$ ;  $p = 0.000$ ) were found to be significantly influencing gold investment behaviour directly. The influence of gold investment knowledge (GIKN) was found to be not significant in the direct and indirect influence.

Financial risk tolerance ( $b = -0.030$ ;  $p = 0.605$ ), gold investment knowledge ( $b = 0.109$ ;  $p = 0.065$ ) and gold investment subjective norms ( $b = 0.047$ ;  $p = 0.477$ ) were revealed to be non-significantly influencing gold investment intention. Meanwhile, gold investment knowledge, gold investment attitude, and gold investment perceived behavioural control were concluded as not having any significant influence on gold investment behaviour among public sector employees.

The standardised estimates show the relative influence of factors displaying gold investment attitude ( $\beta = 0.507$ ;  $p = 0.000$ ) as having a stronger influence on gold investment intention as compared to gold investment perceived behavioural control ( $\beta = 0.356$ ;  $p = 0.000$ ). As for the influence of factors on gold investment behaviour, gold investment subjective norms ( $\beta = 0.381$ ;  $p = 0.000$ ) has the highest standardised estimate among the three variables. Gold investment intention ( $\beta = 0.214$ ;  $p = 0.004$ ), which had a higher standardised estimate than financial risk tolerance ( $\beta = 0.121$ ;  $p = 0.008$ ), was a better predictor of gold investment behaviour. For the direct effects of influential factors on gold investment behaviour, gold



investment subjective norms have the strongest influence, followed by gold investment intention and then financial risk tolerance. Gold investors tend to follow others in their decision to invest, and those close to them, such as family members or friends, will be the main reference as compared to their intention or risk tolerance when they want to get involved in gold investment. If many around them invest in gold, then they will have a high tendency to do so, and vice-versa.

Table 6 : Structural Equation Model for the Mediated Gold Investment Behaviour

Path	B	S.E.	Beta, $\beta$	C.R.	p	Label
FRT → GIINT	-.030	.058	-.018	-.517	.605	FT
GIKN → GIINT	.109	.059	.065	1.849	.065	KT
GIATT → GIINT	.842	.089	.507	9.491*	***	AT
GISN → GIINT	.047	.065	.028	.711	.477	ST
GIPBC → GIINT	.591	.077	.356	7.720*	***	PT
FRT → GIINV	.153	.058	.121	2.645*	.008	FV
GIKN → GIINV	.041	.058	.032	.709	.479	KV
GIATT → GIINV	.137	.088	.108	1.548	.122	AV
GISN → GIINV	.481	.069	.381	6.926*	***	SV
GIPBC → GIINV	.040	.076	.032	.534	.593	PV
GIINT → GIINV	.163	.056	.214	2.895*	.004	TV

\*\* significant  $p \leq .01$ ; \*\*\* significant  $p \leq .001$

#### 4.4 Discussions of the Results

The final model has direct influences on financial risk tolerance and gold investment subjective norms on gold investment behaviour as well as the mediated influence of gold investment attitude and gold investment perceived behavioural control through gold investment intention. Gold investment knowledge results are not significant in influencing either gold investment intention or gold investment behaviour. Thus, the results of the analysis partially rejected the null hypothesis, stating that gold investment intention is not significantly mediating the influences of financial risk tolerance, gold investment knowledge, attitude, subjective norms, and perceived behavioural control on gold investment behaviour.





Though gold investment knowledge was included in the model as it fulfilled the required criteria suggested by Ajzen (2008), it was found to be not important in influencing gold investment intention or behaviour. Knowledge of investment aspects and products does not appear to influence the decision to invest in gold. This may be due to being unfamiliar with the gold investment market. Having a role model in investing in gold may help to drive individuals to venture into the gold investment market. Comparison of this study with previous studies is not possible as empirical past research specifically on gold investment factors influencing gold investment intention or behaviour was not found. However, past studies for other types of investment gave conflicting results. A study in the general investment context by Riyadhhi (2016) was parallel with this non-significant result of financial literacy on investment behaviour only but not on investment intention. However, several other studies which gave significant and positive results in other investment contexts such as the capital market and also for general investment were not in line with the results of this study (Azis, 2020; Merawati & Wijayanti, 2015; Raihan et al., 2021; Samsulbahri et al., 2021; Suprihati & Pradanawati, 2020).

Financial risk tolerance is not significantly affecting gold investment intention, which is not in line with a study by Praba (2019) on the preference to invest in gold in India. A gold investment may be perceived to be safe and low risk in comparison to a capital market investment. A less risk-averse individual or investor may prefer to invest in gold. The direction of influence would be a negative influence on the investment intention. This study does not prove the negative influence or the positive influence on intention as found by Praba (2019). However, a significant and positive effect of financial risk tolerance on gold investment behaviour is prevalent in this study. Thanyasunthornsakun (2018) and Praba (2019) had the same positive direction of influence as found in this study concerning gold investment behaviour. This result on gold investment behaviour is also concurrent with capital market investment and general investment studies (Ainia & Lutfi, 2019; Chavali & Mohanraj, 2016; Nguyen et al., 2016; Raihan et al., 2021). This positive effect of financial risk tolerance implies that investors who are tolerant of risk and would be able to take higher risks in their investment activity would invest more in gold. One would expect that individuals who are risk-seeking would be investing in risky investment products. This positive relationship result reflects that gold investment is perceived to be risky by individuals or investors.



The result of this study revealed a non-significant relationship between subjective norms and intention, in contrast to a study by Nur Alfianto and Nugroho (2020), who revealed a significant effect of subjective norms on gold investment intention among employees of Islamic financial institutions in Indonesia. For share investment, the effect of subjective norms towards intention in share investment was significant (Rahadjeng & Fiandari, 2020). The difference may be due to the different focus of this study on gold investment among public sector employees, whereas Nur Alfianto and Nugroho (2020) studied employees of Islamic financial institutions. Many employees of financial institutions are exposed more to financial products, specifically gold investment, as compared to employees in other agencies, and many of them may have invested in gold in their early career in those financial institutions. New employees may have a high intention to follow suit with their colleagues' investment activities. This may be a possible explanation of the significant effect of subjective norms on gold investment intention.

The result here also shows that subjective norms do not influence behaviour through intention but rather have a direct influence on gold investment behaviour. The influence of subjective norms on gold investment behaviour was not found in past studies. However, a significant influence was found in another investment context, such as in the capital market, where Lai (2019) found that social pressure from others had an effect on investment behaviour among Taiwanese. Subjective norms are found to be significant in their influence on gold investment behaviour and not on gold investment intention. This direct influence on gold investing may be due to their close relationships with their family members or friends. The trust that they build in their long-term relationships may contribute to their participation in gold investment. They may not hold their intention to invest in gold for a long period and only invest in gold for a short period due to their trust in them when gold investment is recommended to them.

The effect of gold investment attitude on gold investment behaviour was found to be mediated by gold investment intention among these public sector employees. In the mediated model, the attitude significantly affects gold investment intention and the intention significantly affects gold investment behaviour. Though there are no past studies specifically in the gold investment context for this mediation effect, the result can be compared with a study in the context of purchasing garments online by Tang et al. (2021). E-shopping



attitude significantly influenced the behaviour mediated by e-shopping intentions. The Theory of Planned Behaviour also supports mediation by intention. Attitude can be formed from experience or learned from others to develop the attitude towards a particular product, so it requires time. Exposure to gold investment products through an advertisement, for example, would first create the intention to invest in gold before investing. Thus, before investing in gold, those having a positive attitude towards gold investment would be interested in investing and would most probably be gathering more information regarding the product.

The influence of gold investment perceived behavioural control on gold investment behaviour was found to be mediated by gold investment intention among these employees. In the mediated model, the perceived behavioural control significantly influences gold investment intention and, in turn, the intention significantly influences gold investment behaviour. There has been no previous research on the mediation effect of investment intention or gold investment intention on the influence of perceived behavioural control on investment or gold investment behaviour. However, perceived behavioural control was found to influence investment intention only and not investment behaviour (Claudia & Murniati, 2018; Ngadino et al., 2019; Pahlevi & Oktaviani, 2018; Rahadjeng & Fiandari, 2020; Yanuar & Zainul, 2021). Similar to other types of investment, a significant effect on gold investment intention was found by perceived behavioural control (Tamaraa et al., 2021). The Theory of Planned Behaviour also supported the mediation effect of intention on perceived behavioural control. Though individuals or investors believe that they have good control over their behaviour to invest in gold, they do not invest immediately but are interested in investing in the future.

## **5.0 Conclusion**

This study examined the factors influencing gold investment behaviour as justified by the Theory of Planned Behaviour among employees. Gold investment attitude and perceived behavioural control as suggested by the theory significantly predicted employees' intention and behaviour to invest in gold. The mediation effect of gold investment intention between gold investment attitude and perceived behavioural control was empirically tested in the gold investment context. The mediation effects on gold investment attitude and perceived behavioural control are the research gaps filled by this study in the gold



investment context. Financial risk tolerance and gold investment subjective norms are directly affecting gold investment behaviour. Previous research has found that financial risk tolerance has a positive relationship with gold investment. The effect of subjective norms on gold investment behaviour is also another gap that is filled by this study. The knowledge of gold investment is unable to be confirmed as its influence on the intention and behaviour of gold investment is unclear. This effect on investment decisions is the same as one particular past study, which contradicts most studies on investment. These findings are important pieces of information that may be incorporated into programme development focusing on upgrading their financial well-being through involvement in investment. Interested individuals considering investing in gold should be knowledgeable of the factors that influence investment decisions to enhance their financial well-being in the long run. Future research may focus on other investor categories and incorporate product features, such as perceived risk and perceived use, as well as confidence in others, as potentially influencing variables of gold investing.

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