

The Mediating Role of Covid-19 Environment on Portfolio Allocation Decision. A Case Study in Malaysia.

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Abstract

Economic and financial theories presume that individuals make decision based on bounded rationality, by taking into all the available information. Economists believe in classic models of rational market behaviour in decision making process and so do not consider irrational behaviour. The fact that uncertainty causes people to make irrational decisions, however, shows that there is an element lacking from traditional theories of rational market behaviour. Therefore, it is essential to carry out study on the behavioural aspects that affect people's decision-making in developing countries like Malaysia, which previous studies have neglected. This study fills in the gaps in the literature by looking at the major five behavioural traits (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism- OCEAN) and how they affected the portfolio allocation decision in five Malaysian states during the COVID-19 outbreak. The findings indicate that Openness and Agreeableness have a statistically significant positive relationship with investors' decisions regarding portfolio allocation and that COVID-19 does mediate the cause-and-effect relationship between OCEAN and decision-making. A total of 199 survey questionnaires were collected through random sampling and analysed using SPSS and SPSS AMOS. Structural equation modelling (SEM) was used to validate the measurement model and test the hypothesis.

Keywords: Epidemic, Financial traits, Individual investors, Pandemic, Personality, Traits.

1. Introduction

COVID-19 pandemic had hit hard on the global economy, leaving everyone an insecure feeling, not knowing where the economy is heading to. The outbreak of COVID-19 on the 30th of January 2020 significantly disrupted human life in every aspect. It has dramatically impacted the financial market

too. It spread so quickly that government across the world has to take the most challenging decision of lockdowns. The pandemic is having a rapid impact on Malaysia's economy (Hasanat, 2020). One of the most affected sectors is the Malaysian Stock Exchange (MSX).

Behavioural finance explains why individuals do not always make rational decision as what they are expected to behave and why financial market do not behave, the way it should be. According to recent studies, average investors make judgements based on emotion rather than logic. The majority of investors buy based on excessive speculation and sell based on panic. According to psychological studies, the joy of earning is less than the anguish of losing money in an investment. As a result, behavioural finance qualities have a significant impact on individuals' investment decisions.

(Wang, 2014) and (Muhammad Zubair Tauni & Zia-ur-Rehman Rao & Hong-Xing Fang & Minghao Gao, 2017) were the first two publications based on ASEAN countries, published on investing and behavioural finance. Personality qualities were explored as a modulator between investors' emotions and investing results by (Wang, 2014). It was a descriptive analysis research. The researcher gathered information by distributing 1403 questionnaires in 35 different municipalities in China. In this research, (Wang, 2014) revealed that positive emotions have positive relationship with investment return and vice versa. He also shown that neuroticism's moderating influence is significant.

Using a questionnaire survey of 333 individual investors, (Tauni, 2015) studied the big five personality framework as a moderator between information acquisition and trading frequency in the China future market. Extraversion and conscientiousness, according to (Tauni, 2015), positively impact the link between information acquisition and trading.

Unfortunately, the majority of current behavioural finance research contributes to market personality traits by focusing on investors risk and return expectations. Moreover, these studies were conducted in other parts of the world and in the absence of the global health disaster. To the authors' best of knowledge, there are very limited investigation on this topic that has been conducted, especially during the COVID-19 pandemic and this field of research remains relatively under-examined.

Based on the underlying theories of Modern Portfolio Theory (MPT), Efficient Market Hypothesis (EMH), Prospect Theory, and the Five Basic Personality Theory, this research aims to investigate where investors fall on the personality spectrum and how that influences their investment decisions during the COVID-19 pandemic. The main research question is:

- To what extent OCEAN affects the retail investors portfolio allocation decisions during COVID-19 pandemic in Malaysia?
- Does COVID-19 explain for the variation in the independent variables and dependent variable in a substantial way?

2. Literature Review

2.1 Behavioural Finance and Investment Review

According to G.C Seldon 1912, the stock market is made up to 75% psychological factors and 25% financial factors. The author believes that market price movements are heavily influenced by one's

mental attitude. Followed by (Festinger, 1957) study of Cognitive Dissonance, which has generated hundreds and hundreds of studies about the determinants of attitudes and beliefs, values, consequences of decisions, and other psychological factors. Risk aversion and utility function are described by (Pratt, 1964).

In the 1980s, a new paradigm called Behavioural Finance emerged, which “studies how people actually behave in financial situation.” It is a study of how psychology influences financial decisions, organizations, and financial markets in particular” (Nofsinger, 2001). Behavioural finance attempts to combine classical finance theories with cognitive psychology in order to develop a more comprehensive account of human behaviour in the decision-making process (Thaler, 2005).

(Shefrin, 2000) investigated how psychology influences financial decision-making and the stock market. (Ricciardi, 2000) investigated the emotional biases of investors and the extent to which they influence their decision-making process.

2.2 Personality Traits and Investment Review

(Priyadharshini, 2020), investigated on the psychological characteristics influencing investment choices, in a study “Influences of Big 5 Personality Traits on the Investment Decision of Retail Investors.” This study revealed, investors are influenced by conscientiousness trait 64%, openness 59%, agreeableness 56%, neuroticism 34%, and no extraversion effects influences investors investment decision.

(A. Seetharaman & Indu Niranjana & Nitin Patwa & Amit Kejriwal, 2017), indicated that Asset Familiarity and Investment Objectives have the strongest impact on investors behavioural, influencing the choice of portfolio allocation. (Raheja, 2017), analysed the relation between the investors’ behavioural traits, behavioural biases, and investment decision. The study revealed, the relation between behavioural traits and behavioural biases to be statistically significant.

(Chitra, 2011) squabble that the influences of behavioural traits on investment decisions is more, as averse to the demographic variables. (Lin, 2011) investigated the impact of demographic factors and psychological effects on the psychological behaviour bias of stock investors. Conscientiousness, extraversion, neuroticism, and openness were found to have a substantial impact on investor behaviour in this study.

2.2.1 Independent Variables Hypothesis Development

People who are open to trying new things, "thinking outside the box," and engaging in intellectual and imaginative pursuits are described as open. As a result, persons who fall under this category are positively connected with intelligence and achievement (Douglas, 2016). Furthermore, this group of people values consistency and is averse to change or attempting new things. According to studies, people with the openness characteristic are information searchers (Heinstrom, 2003), clever, knowledgeable, and capable of critical problem-solving thinking. As a result, they avoid overtrading and make the best selections possible (Borgatta, 1964); (Zhang, 2014).

Investors with the openness attribute are willing to adjust their portfolio allocation based on current market movements and absorb fresh market knowledge (Pak, 2015). As a result, this research concluded that openness is positively connected to excessive trading, and that, these investors would make the best investment portfolio decisions during the COVID-19 pandemic due to market conditions and daily fresh information releases. (Zhang, 2014); (Borgatta, 1964).

H1: Openness has a significant positive impact on retail investors' decision on portfolio allocation.

Conscientiousness narrates a persons' ability to synchronize their impulse control to engage a goal-driven behaviour (Morse, 2019). Conscientiousness people are considered competence, dutifulness, organized, achievement striving, self-discipline, and deliberation, whereas non-conscientiousness people are considered unenthusiastic in goal-driven behaviour and pleasure-seeking (Costa, 2008).

Some research has found a link between conscientiousness and investment decision-making (Priyadharshini, 2020), whereas others have found no such link. People that are conscientious are very attentive, confident, and have very clear investment goals, according to (Pak, 2015); (Zhang, 2014). As a result, they do not invest excessively in a single investment. These individuals make decisions based on sufficient information and experience, and they manage their temptation to invest when stocks are high and sell when stocks are low (Camgoz, 2011). As a result, H2 was created to investigate the impact of conscientiousness on decision-making in the setting of the COVID-19 pandemic.

H2: Conscientiousness has a significant positive impact on retail investors' decision on portfolio allocation.

Extraversion people are positive thinkers and seeks interaction with environment. Extraversion people are considered sociable, excitement seeking, enjoy being in centre of attraction and outgoing, but lack in critical analysis because overly focused on external events. People who are not extraversion prefers solitude, reflective, reserved, shy, and prefer to be alone, but not necessarily suffer from social anxiety or unhappy (Costa, 2008).

(Durand, 2008) shown that people with the extraversion characteristic make fair investing judgments because their social nature allows them to receive adequate information on the market environment. As a result, this research hypothesised that extraversion investors are emotionally stable and seek assistance on decision-making processes, making them more attuned to investment information and, as a result, making appropriate portfolio allocation decisions during the global health crisis.

H3: Extraversion has a significant positive impact on retail investors' decision on portfolio allocation.

Agreeableness trait refers to how a person treat others. People who falls under Agreeableness trait are sympathetic and willing to help others who are in need, and believe that others will do the same. They are straightforward, trustworthy, compliance, modesty, and empathy. Contrast to that, people who do not have Agreeableness trait are sceptical, demanding, belittle others, stubborn, unsympathetic, show-off and competitive rather than cooperative (Costa, 2008).

Numerous studies states that Agreeableness investors tend to invest more compared to investors who don't fall under this category (Durand R. N., 2013); (Zhang, 2014); (Tauni, 2015). However, they find it difficult to make their own decisions and follow others that lead to herding behaviour. A most recent study (Chang, 2020) and (Kizys, 2021) highlighted significant herding behaviour in investment allocation during COVID-19 pandemic. Therefore, this hypothesis was developed to study if

Agreeableness traits engage investors to make the right decision on portfolio allocation in the global health crisis.

H4: Agreeableness has a significant positive impact on retail investors' decision on portfolio allocation.

Individuals with neuroticism are emotionally unstable. People with the neuroticism trait are illogical, fragile, anxious, and have significant mood swings. They are more likely to experience unpleasant emotions like rage and fear. People who lack this feature, on the other hand, are more emotionally stable, confident, and capable of facing challenges and hardship without becoming agitated (Costa, 2008). Neuroticism has a negative impact on decision-making, according to (Priyadharshini, 2020). Investors with the Neuroticism attribute invest less, according to (Durand R. N., 2013). Many researchers, on the other hand, disagreed. Investors with high levels of neuroticism demonstrate intense emotion, impulsive behaviour, and a proclivity to invest more, especially when they receive investing advice from financial consultants (Durand R. N., 2008); (Tauni, 2015); (Tauni M. F., 2017) and (Zhang, 2014). As a result, the goal of this study was to see if neuroticism influenced their portfolio allocation decisions during the COVID-19 epidemic. They invest more when they receive investing advice from financial consultants (Durand R. N., 2008); (Tauni M. Z., 2015) & (Tauni M. F., 2017); (Zhang, 2014)

H5: Neuroticism has a significant negative impact on retail investors' decision on portfolio allocation.

2.3 Impact of Pandemic COVID-19 Crisis on Investment Review

During COVID-19, (Wang F. Z., 2021) investigated the impact of investment behaviour on financial markets in the UK. The association between risk perception and general risk to tolerance over COVID-19 uncertainty was investigated by the author. They discovered that COVID-19 has a moderating effect on the connection between the variables. The findings suggest that financial risk tolerance is taken into account as an attitudinal factor while making financial decisions.

Another study by (Gurbaxani, 2021), looked at how the COVID-19 epidemic has influenced investment and financial decisions in small towns in developing countries like India. Individual income is affecting significantly by the country's attempts to limit the spread of COVID-19. According to the study, such policies have a negative impact on people's saving and investing habits. Investors were more risk averse, preferring a safe, low-risk investment with a moderate return.

According to a study done in Shanghai by (Naseem, 2021), investors psychology was negatively related to three selected stock market under psychological resilience and pandemic pressure. Individuals were more concerned about their lives and less about leisure and wealth. The finding proves that, people tend to develop avoidant behaviour and strictly follow the social norms due to the pandemic severe effects (Cao, 2020); (Lai, 2020); (Sarfraz, 2020). As a result, it affected the economic condition and financial position of individual and global investors.

The author, (Parveen, 2021), concluded that the pandemic created fear and uncertainty among the market participants and behavioural heuristics and biases negatively influenced investors decisions on Pakistan Stock Exchange. This research was proven by using structural equation model.

A numerous study has been conducted in 2020 and 2021, on the behavioural finance and portfolio allocation decision by individual investors before and during COVID-19. For example; (Himanshu, 2021) studied on the risk and return expectations of individual investors on reallocating their portfolios. The study was conducted in Delhi and Mumbai. Their findings concluded that during COVID-19, risk-free investment avenues were more popular. Insurance investments were the top preferred investment. Most of the investors stated to relocate their portfolios towards a conservative portfolio.

Another study by (Puvannambehay, 2021), investigated the performance of equity unit trust funds and fixed income unit trust funds during COVID-19. This finding revealed that average systematic risk for a fixed income is lower than the systematic risk for an equity fund.

According to a recent study, "What Drives Excess Trading During the COVID-19 Epidemic?" (Nie Chin, 2021), underlying psychological and sociological characteristics such as openness and agreeableness have a substantial impact on trading frequency during the pandemic. Gender, age, marital status, education level, and income level are all mediator characteristics that have a substantial positive link with trading frequency.

2.3.1 Mediator Hypothesis Development

Few research on investment behaviour in the context of COVID-19 have been conducted in the recent two years, and it has been discovered that there is a change in investment choice during COVID-19. In India, (Gurbaxani, 2021) discovered a 43 percent drop in SIP investment. Investors begin reallocating their portfolio during COVID-19, according to (Himanshu, 2021). As a result, COVID-19 is thought to mediate the causal relationship between the 5 Big Behavioural Finance traits and investors' decision on portfolio allocation.

H6: COVID-19 mediates the outcome of the cause-and-effect relationship between the 5 Big Behavioural Finance factors and decision on portfolio allocation.

3. Material and Methods

The research method employed in this study is based on the (Saunders, 2009) which starts with research philosophy, then carries on to research approaches, research types, research strategies, research choices, time horizons, data collection techniques, and finally study analysis. The sample of respondents consisted of retail investors over the age of 18 from Penang, Perak, Kuala Lumpur, Selangor, and Negeri Sembilan in Malaysia. A pilot test was conducted to ensure the reliability of the online survey questionnaire that was used to gather the data for this investigation. 199 retail investors were chosen for sampling using a random sampling strategy. For model fitting and analysis, Excel, IBM SPSS, and SPSS AMOS software have been utilised. This study's analysis included descriptive statistics, multiple regression, Cronbach's alpha, exploratory factor analysis (EFA), and structural equation modelling (SEM). Confirmatory Factor Analytical (CFA) was used during the pilot test phase to ensure that the quantities of components recovered by the analysis technique and those created by pre-existing theories (Liu, 2009).

4. Results and Discussion

4.1 Demographic Analysis

The 199 reported respondents, of which 59.8% (n=119) are female and 40.2% (n=80) are male, provided a response rate of 66.33%. Selangor has the highest percentage of respondents (49.7%, n=99), followed by Kuala Lumpur and Pulau Pinang (13.1%, n=26), Negeri Sembilan (12.6%, n=25), and Perak (11.6%, n=23). The majority of the respondents are young adults under 51 years old, and 70.9% (n=141) of them are married, with a high school diploma or certificate as a minimum, 174 respondents (or 97.5%) are regarded as having decent education. Out of this, 63.3% (n=126) respondents are now investing for a period of time longer than 5 years in investments with high, moderate, or low risk. Only 15.1% want their investment rate to grow quickly and prefer high risk investments, while 48.2% (n=96) prefer moderate risk and 40.2% (n=80) want low risk. This implies that the majority of them favour stable growth rate investments.

4.2 Frequency Analysis

The personality qualities are divided into two groups for this study: low score traits and high score traits. Those with low score traits choose a value between 1 and 3, whereas those with high score traits select a value between 4 and 6. The study's findings demonstrate that all four traits, Openness, Conscientiousness, Extraversion, and Agreeableness, are skewed toward the high-scoring categories, with the exception of neuroticism, which has a larger value in the low-scoring category. The frequency of retail investors' decision on portfolio allocation suggests that respondents are generally optimistic about investing but are wary about high-risk investments and risk-taking behaviour. The investing pattern mostly remained consistent, according to the COVID-19 mediating factor's frequency study. 68.8% (n=136) of investors still favour low risk, while 53.3% favour moderate risk. The poll also reveals that 38.2% (n=76), a mere 7% decline from previously, still choose high-risk investments and are satisfied with their earnings.

4.3 Descriptive Analysis

The results of the descriptive analysis demonstrate that the traits of Openness, Conscientiousness, Extraversion, and Agreeableness have a mean ranging from 3 to 5 (SD= 0.9 to 1.5), indicating that responders in each of the variables have a high score trait and the variables have moderate to high influence. The neuroticism trait, on the other hand, has a low score, with a mean value ranging from 2 to 3 (SD= 1.3 to 1.6), indicating that the factor has a low impact. In the dimension of decision making, all the 11 items have a moderate degree of impact with mean of each variable ranging from 3 to 5 (SD= 1.1 to 1.5). Except for the Neuroticism trait, which has a positive skewness, skewness analysis shows that all four independent variables—Extraversion, Openness, Agreeableness, and Conscientiousness—and dependent variable are negatively skewed. The mediating variable exhibits a positive skewness. However, the kurtosis analysis reveals that every variable is platykurtic.

4.4 Factor Analysis

A total of 25 elements were broken down into 5 main components using factor analysis, with an average communality value greater than 0.4. KMO rating is at 0.895, which is considered good and acceptable. Indicating a high degree of correlation between variables, the Bartlett's Test of Sphericity is significant at a level less than 0.05. In order to align the results with the proposed measurement model, the variable consistency to the concept was assessed using exploratory factor analysis. After several iterations of removing unsuitable variables, the variables are grouped into five factors, with Eigenvalue > 1.089, KMO = 0.895 (sig. = 0.000), percent of total variance explained = 61.41 percent, and all factor loadings above 0.4.

4.5 Reliability Test Analysis

Using the Cronbach's alpha coefficient to measure inter-item consistency, the reliability value was found to be larger than 0.5 and the corrected item-total correlation for all items is greater than 0.30. The result found to be statistically significant (p value < 0.05).

4.6 Multiple Regression Analysis

R has a value of 0.621 and the R-square is 0.385. R is the coefficient of correlation between dependent variable (DV) and the independent variable, whilst R-squared is the square of this coefficient and represents the percentage of variation explained by the regression line out of total variation. The result shows that 38.5% of the total variation in Retail Investors Decisions' on Portfolio Allocation (DV), is explained by the regression and that DV and IV have a coefficient of correlation of 62.1%, as shown in table 1 below.

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.621 ^a	0.385	0.369	6.615	0.385	24.178	5	193	0.000
a. Predictors: (Constant), Total_Cons, Total_Neuro, Total_Open, Total_Agree, Total_Extra									
b. Dependent Variable: Total_DV									

Table 1: Multiple Regression Analysis Summary. Source: SPSS

According to a widely used benchmark, the R-square for this study is low; yet, the standardised residuals in the normal P-P plots of regression reveal a normal distribution, despite the low R-square value. This is seen in figure 1 below by the arrangement of the data along the straight diagonal line. It therefore suggests that there are no problems with normalcy or linearity. Any study that makes an attempt to forecast human behaviour is likely to have an R-square value of less than 50%, according to (Frost, 2018). R² is not a reliable indicator of the goodness of fit, according to (Ross Fonticella, 1999). We shouldn't disregard the data and search for trending information from other sources when R² is not higher than some arbitrary benchmark. As a result, this model was thought to be important for this investigation.

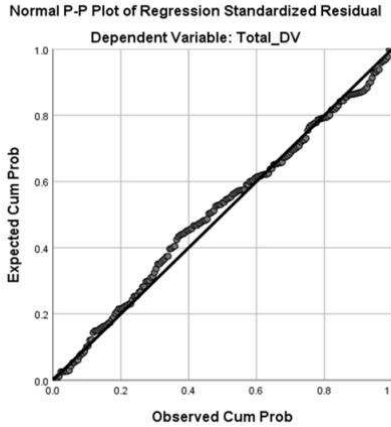


Figure 1: P-P Plot Regression Standardized Residual

The ANOVA (Table 2) results show statistical significance ($F=24.18$, $p < .005$), indicating that the population R-square is significantly higher than zero.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5289.367	5	1057.873	24.178	.000 ^b
	Residual	8444.553	193	43.754		
	Total	13733.920	198			
a. Dependent Variable: Total_DV						
b. Predictors: (Constant), Total_Cons, Total_Neuro, Total_Open, Total_Agree, Total_Extra						

Table 2: Multiple Regression ANOVA Analysis

The coefficient table (Table 3) shows that the Open and Agree t-statistics are statistically significant because the p-value is less than .05. However, as Extra, Neuro, and Cons have t-statistics greater than .05, these three variables are not statistically significant.

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	7.905	3.681		2.148	0.033	0.645	15.165
	Total_Extra	0.210	0.172	0.108	1.221	0.224	-0.130	0.550
	Total_Neuro	0.142	0.099	0.087	1.441	0.151	-0.053	0.337
	Total_Open	0.619	0.149	0.325	4.154	0.000	0.325	0.913
	Total_Agree	0.573	0.156	0.292	3.661	0.000	0.264	0.881
	Total_Cons	0.013	0.142	0.008	0.092	0.927	-0.268	0.294
a. Dependent Variable: Total_DV								

Table 3: Multiple Regression Coefficients Analysis

4.7 Mediator Effect Analysis

The direct effect ($b=.5731$, $se=.0832$, $p<.001$) from Openness trait to mediator was positive and statistically significant. The path (direct effect) from Openness to investors' decision was positive and statistically significant ($b=.6130$, $se=.1052$, $p<.001$) in the total investors' decision outcome, indicating that those who scored higher on the Openness trait are more likely to have an impact on investment decision than those who scored lower on the measure. COVID-19 (Mediator) has a positive and statistically significant direct influence on investment choice ($b=.7575$, $se=.0808$, $p<.001$), indicating that COVID-19 pandemic is more likely to have an impact on investment decision. The indirect impact ($IE=.4341$) is statistically significant in this circumstance; 95 percent confidence interval (.2668, .6259).

The direct effect ($b=.3213$, $se=.0734$, $p<.001$) from Conscientiousness trait to mediator was positive and statistically significant. The path (direct effect) from Conscientiousness to investors' decision was positive and statistically significant ($b=.4221$, $se=.0836$, $p<.001$) in the total investors' decision outcome, indicating that those who scored higher on the Conscientiousness trait are more likely to have an impact on investment decision than those who scored lower on the measure. COVID-19 (Mediator) has a positive and statistically significant direct influence on investment choice ($b=.8485$, $se=.0775$, $p<.001$), indicating that the pandemic is more likely to have an impact on investment decision. The indirect impact ($IE=.2726$) is statistically significant in this circumstance; 95 percent confidence interval (.1489, .4269).

The direct effect ($b=.5181$, $se=.0873$, $p<.001$) from Extraversion trait to mediator was positive and statistically significant. The path (direct effect) from Extraversion to investors' decision was positive and statistically significant ($b=.4928$, $se=.1080$, $p<.001$) in the total investors' decision outcome, indicating that those who scored higher on the Extraversion trait are more likely to have an impact on investment decision than those who scored lower on the measure. COVID-19 (Mediator) has a positive and statistically significant direct influence on investment choice ($b=.8207$, $se=.0812$, $p<.001$), indicating that a COVID-19 pandemic is more likely to have an impact on investment decision. The indirect impact ($IE=.4253$) is statistically significant in this circumstance; 95 percent confidence interval (.2542, .6150).

The direct effect ($b=.5228$, $se=.0880$, $p<.001$) from Agreeableness trait to mediator was positive and statistically significant. The path (direct effect) from Agreeableness to investors' decision was positive and statistically significant ($b=.6279$, $se=.1054$, $p<.001$) in the total investors' decision outcome, indicating that those who scored higher on the Agreeableness trait are more likely to have an impact on investment decision than those who scored lower on the measure. COVID-19 (Mediator) has a positive and statistically significant direct influence on investment choice ($b=.7824$, $se=.0786$, $p<.001$), indicating that a COVID-19 pandemic is more likely to have an impact on investment decision. The indirect impact ($IE=.4091$) is statistically significant in this circumstance; 95% confidence interval (.2422, .6107).

The direct effect ($b=.0460$, $se=.0795$, $p > .001$) from Neuroticism trait to mediator was positive but statistically insignificant. The path (direct effect) from Neuroticism to investors' decision was negative and statistically insignificant ($b=-.0855$, $se=.0877$, $p > .001$) in the total investors' decision outcome, indicating that those who scored lower on the Neuroticism trait are more likely to have a negative impact on investment decision than those who scored higher on the measure. COVID-19 (Mediator) has a positive and statistically significant direct influence on investment choice ($b=.9681$, $se=.0785$, $p<.001$), indicating that a COVID-19 pandemic is more likely to have an impact on investment decision.

The indirect impact (IE=.0446) is statistically significant in this circumstance; 95% confidence interval (-.1177, .1870).

4.8 Structural Equation Modelling Analysis

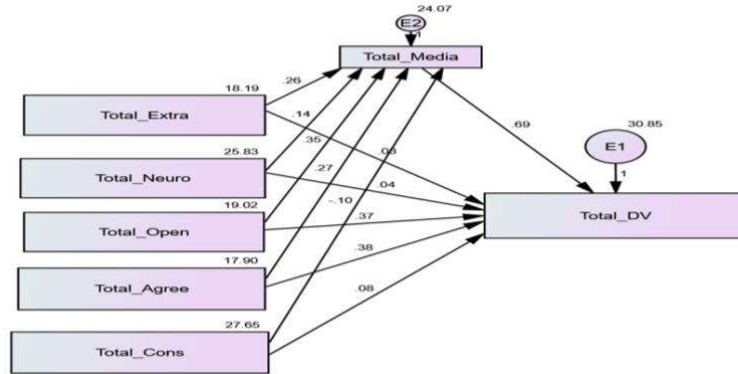


Figure 2: Structural Equation Modelling

Structural Equation Modelling (SEM) is used to depict relationships between variables. With GFI (Goodness-of-Fit Index) = 0.995, TLI (Tucker-Lewis Coefficient) = 0.979, CFI (Comparative Fit Index) = 0.998, RMSEA (Root Mean Square Error of Approximation) = 0.056, NFI = 0.995, CMIN/df = 1.619, SRMR = 0.041, P close 0.348, and p-value >.05, the structural model fit is considered as excellent. These indices show that the model has a high predictive validity for the surveyed data.

5. Conclusion

The empirical results suggest that Openness and Agreeability are the main factors influencing Malaysian investors' decisions concerning portfolio allocation, and the mediating effect of COVID-19 is statistically significant in mediating the impact of the cause-and-effect relationship between the five behavioural finance factors and portfolio allocation decisions.

Hypothesis	Relationship	Beta	S.E	t-value	p-value	Result
H1	Openness ---> Portfolio Allocation Decision	0.619	0.149	4.154	0.000	Accepted
H2	Conscientiousness ---> Portfolio Allocation Decision	0.013	0.142	0.092	0.927	Rejected
H3	Extraversion ---> Portfolio Allocation Decision	0.21	0.172	1.221	0.224	Rejected
H4	Agreeableness ---> Portfolio Allocation Decision	0.573	0.156	3.661	0.000	Accepted
H5	Neuroticism ---> Portfolio Allocation Decision	0.142	0.099	1.441	0.151	Rejected

Table 4: Hypothesis Analysis Result

	Standard Estimation	p-value	Result
Openness	0.5497	***	Significant Impact
Conscientiousness	0.4397	***	Significant Impact
Extraversion	0.4713	***	Significant Impact
Agreeableness	0.5282	***	Significant Impact
Neurotism	-0.025	0.7259	Insignificant Impact

Table 5: Mediating Effect Analysis

In conclusion, H1, H4, and H6 are accepted whereas H2, H3, and H5 are rejected. This study discovered that Malaysian individual investors are less risk-tolerant and gravitate toward generally safe investments while making investment decisions during the COVID-19 epidemic. As a result, it demonstrates that individual investors in Malaysia are generally optimistic and majority of them preferred low-risk investments.

This shift could be attributed to the current state of uncertainty, which includes not only the financial market environment but also global changes. Furthermore, the current financial situation surrounding COVID-19 has left everyone wondering what will happen next. People are afraid of the COVID-19 crisis since it is the first pandemic to strike the modern world. As a result, as evidenced by the findings of this study, psychological considerations have a significant impact on their decision-making. A person's personality traits are the result of a combination of elements such as upbringing, moral values, religious beliefs, and social conditioning factors applicable to the many social groups with which an investor identifies. As a result, these factors could be to accountable for the disparity in results when the same study was conducted in Malaysia.

In terms of its theoretical contribution, this research shows that, in the event of a global pandemic, investors act irrationally in order to maximise their wealth. Despite the pandemic, 42% of investors still favour high-risk ventures and are satisfied with the results. It shows that, in the face of uncertainty, Malaysian investors make irrational choices based on their beliefs. This study proves the pattern of investors' decision-making depending on their personality attribute that leads to emotional process, and to what extent it influences decision-making from a human perspective during a pandemic. The study shows that before the pandemic 71% of investors in Malaysia prefers high risk investment, 67.7% prefers moderate risk investment, and 16.1% prefers low risk investment. However, during the pandemic, 54.9% prefers low risk investment and 42% prefers high risk investment. Moderate risk investment was not preferred at all.

Practically, this study will help financial policymakers adjust their policies in light of current pandemic crises and plan for future pandemic situations. The research aids economists and financial market regulators in developing current regulations based on human behaviour when making investment decisions in the face of uncertainty. Financial planning and forecasting can have a favourable impact on financial planning and the market if done correctly. By analysing investors' personalities and suggesting the optimal investment for them, this research can also assist financial advisors in changing people's perceptions of greater uncertainty.

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