HERDING BEHAVIOR IN STOCK MARKET: A CASE IN MALAYSIA

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DECLARATION

We hereby declare that:

(1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) Equal contribution has been made by each group member in completing the research project.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
AVE	Average Variance Extracted
CAC	Cotation Assistée en Continu
CAPM	Capital Asset Pricing Model
CDS	Central Depository System
CSAD	Cross Sectional Absolute Standard Deviation
CSSD	Cross-Sectional Standard Deviation
EMH	Efficient Market Hypothesis
ESI	Economic Sentiment Indicator
EXP	Experience
FBF	Faculty of Business and Finance
GMM	Generalized Method of Moments
HB	Herding Behavior
HTMT	Heterotrait-Monotrait Ratio of Correlations
IBM	International Business Machines
INF	Information
LOGIT	Logistic Regression
LSV	Linear Sweep Voltammetry

MS	Market Sentiment
NC	National Culture
OC	Overconfidence
OLS	Ordinary Least Squares
PCA	Principle Component Analysis
PLS	Partial Least Squares
SEM	Structural Equation Modelling
SPSS	Statistical Package for the Social Sciences
UTAR	Universiti Tunku Abdul Rahman
VCAC	Volatility Cotation Assistée en Continu
VIF	Collinearity Statistics
VIX	Chicago Board Options Exchange Volatility Index

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PREFACE

This research project is submitted as a fulfilment of the requirement for the pursuit of the Undergraduate of Bachelor of Finance (Hons). This research took two semesters to accomplish. The topic of this research is "Herding Behavior in Stock Market: A Case in Malaysia". The five independent variables used in this research project are information, overconfidence, market sentiment, national culture and experience while the dependent variable for this study is the herding behavior. Herding behavior in stock market defined as a process by which market participants base their investment decisions on collective actions alone, suppressing their own beliefs. This behavior pattern may make market inefficient and lead to investment bubbles. Hence, this study aims to examine the factors which influence the herding behavior of investors in Malaysia stock market.

ABSTRACT

Herding behavior in stock market occurs when investors mimic other's action in their investment decision making. This causes the market inefficient and leads to investment bubbles. The main goal of this study is to examine the factors which influence the herding behavior of investors in Malaysia stock market. Questionnaires is randomly distributed to the targeted respondent in bank institution and crowded area in Kuala Lumpur, Penang and Johor. Smart PLS software is used to analyze the data. The indicators in the measurement is acceptable after outer loadings run. Findings of this study show that information, market sentiment, national culture and experience are positively related to herding behavior while overconfident is insignificant with herding. Based on the result, government should enhance Capital Market and Services Act 2007 to prevent the publication of misleading information. Besides, investors are suggested to apply contrarian strategy in order to gain above-average profit. A higher experience investor should avoid to timing the market as the market movement did not consistent with expectations. Investors are suggested to resolve their limits of thinking by advancing the understanding of different culture. In this study, other types of research method are recommended in order to gain larger sample size. Sampling location should be expanded so that the data accuracy increase. Besides that, the targeted respondent should not only focus from one market. Others financial market participants such as money market investor should be involved so that they able to provide a more complete view of investors.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

The purpose of this study is to identify the relationship between herding behavior and the factors which influence herding behavior among investors in Malaysia stock market. This chapter is divided into six parts which included research background, problem statement, objectives of study, research questions, significance of study as well as chapter layout. The detail of each part will be presented in the following sections.

1.1 Research Background

Malaysia is favored by both foreign and local investors as Malaysia stock market offers promising investment chances to earn incentive profits (Mohammad & Noor, 2017). According to a survey of Nielsen Holdings in year 2014, 71% of Malaysian consumers use at least 20% of their monthly income for their saving and investments in order to achieve their financial goals. At the same year, establishment of Bursa Marketplace by Bursa Malaysia creates a platform for investors to share their ideas and drives up the number of retail investors in stock markets. When time goes to year 2017, a large number of young investors enter to the market. The overall participation rate in stock trading activity reaches 23%, which increase 3% compared to year 2016 (Aruna, 2017). In light of these evidences, there is an uptrend in number of Malaysian involve in stock investment throughout the years. However, investors are not always make their own

investment decision based on the fundamentals due to the huge uncertainties and inevitable fluctuations in stock market. The trend may be a result of market noises, the fad, and common belief towards the information among the investors.

In behavioral finance's perspective, investors are influenced by their emotions in making decisions and judgements while they are exposed to risks and uncertainties. It stresses the necessity of involving human psychology components in all financial studies as human behavior is considered as a catalyst in price movements. Investors are more often trade on emotional impulse. Herding behavior is categorized as one of the behavioral biases among investors under behavioral finance. According to Wallace (2003), humans are having a sign in adopting herding behavior from the early Iron Age, which around 1200s. It is an omnipresent part of human behavior since individuals start to migrate and build tribes in collective way. At the same time, it is perceived as a human instinct and always occur in human decision-making process. Remarkably, there is no specific strict definition of herding behavior. It is generally acknowledged that herding behavior is considered as a social behavior which neglecting one's personal information and mimicking the decision carry out by a crowd (Bikhchandani, Hirshleifer &Welch, 1992).

Although the study of herding has a variety of applications, herding behavior in the stock market obtains most of the attention, particularly in the boom-busts cycle, with emphasize on the irrational exuberance among investors (Raafat, Chater & Frith, 2009). A notable bubble that can be explained by herd instinct is the Dot-Com bubble which hits United States in the late 1990s and early 2000s. Dot-Com bubble illustrate the herding behavior of venture capitalists by investing substantial amount of money into internet related companies such as Yahoo!, Google, eBay and Amazon although these dotcoms company do not have a well financial position (Miller, 2008). As internet has created elated hopes for the prospect of online business in that time, investors have a common belief that the dot-com companies were going to have a high worth in the future and poured their money into the market. The market is overwhelmed by easy capital and investors' overconfidence. Yet, the fact is many dot-com companies did not succeed as what investors expected. Those were successful were highly overvalued as well. By the end of 2001, this fad-based investment bubble burst, around $5 trillion of investment capital evaporated.

In fact, herding trend has been frequently noticed in stock exchanges all the way through centuries. For instance, Mandal (2011) found a significant herding in Indian stock market due to the information asymmetries while Almeida, Costa and Costa (2012) found the presence herding behavior in Chilean, United States, Mexican and Argentinean markets. It is particularly strong during the period of market upturns and downturns. Although markets tend to show fundamental trends in a long-term duration, there are just a mixture of emotion, noise and information which influence herding behavior among investors in the short term. Volatility in the stock market can even drive the most judgmatical investors to make bad short-term decisions. Most of the investors in Malaysia are believed to be influenced by market rumors and economic development matters in investment decision-making (Amer, Wijaya, Khairul & Dayang, 2014). They often purchase shares based on the recommendation of others although they should purchase shares which tailored with their investment objectives. Therefore, the main objective of this study is to obtain knowledge regarding the key factors that have an impact on herding behavior among investors in Malaysia stock market.

1.2 Problem Statement

There are a plenty of misinformation disseminated through blogs, forum and social media platforms in this technology-advanced era. Yet, not every information in social media sites and message board has been taken time to enhance the accuracy. Bursa Malaysia warns investors to aware the wicked schemes that purposely pump and dump certain stocks at the expense of herd instinct among individual investors. They accumulate the shares at a lower price, then spread fake positive information to generate interest of investor in buying the shares, then drive up the price. Once the unsuspecting investors purchase the shares, it provides the perpetrators a chance to sell off the shares they hold at a profit and exit the market. The rallies or selloffs based on hype without sufficient fundamental evidence to justify the real performance of an underlying assets tend to be the primary factor of investment bubbles (Duggan, 2017).

Apart from this, generation nowadays merely looks for the fast and instant return without referring to any fundamental basis. Many of the millennial investors in Malaysia are overconfident in investing while they are lack of financial literacy (Khairani, 2017). They often have an overinflated belief in their own abilities and follow what other are doing with their investment without considering the consequences. They may believe that they can earn profit as well with making the same investment decision. This point of view is supported by Rajorshi (2017) who further elaborate that investors often assume that they know everything while the fact is their knowledge is insufficient. They tend to verify the quality of their information by themselves, thus influence their tendency in adopting herding behavior while making investment decision. Yet, the fact is there is no one-size-fits-all solution in investing.

Besides, even though fundamentals are not worsening, investors tend to react to market rumours that form a sentiment contagion among investors. In another words, investors are sensitive to the aggregate behavior in the market. During the time that stocks lose their momentum, uninformed investors will be spooked by the selloff by other investors and sell immediately even they will face a loss. This phenomenon

assembles the feeling of safety in numbers that ignores individual views and judgements. Investors who sell immediately when others are selling solely make their trading transitions based on market sentiment rather than asses market fundamentals. Other than facing financial loss, it may also lead investors to purchase investments that are not suitable for their personal financial goals or risk tolerance. It fosters changes in investment opportunity set and make investors unable to diversify their portfolio properly.

In fact, following the trends blindly is one of the general mistakes that investors make. When investors observe others are gaining some returns from the market, it is common that they will follow other investors' decisions in order to get a slice of the cake. Those inexperience investors who just enter the market are especially exposed in this scenario. Stock market can be extremely complicated. Most other investors have already taken the advantage of the newest trend by the time a herd investor knows about the newest trend. The potential profit has probably already peaked. Investors are facing a high possibility of buying shares above the true value. Those who bought the shares at inflated price will have to bear a huge financial loss when the hype eases.

Herding behavior is very difficult to conquer as it is largely hard-wired into investors' brains. The culture of nation creates a norm, makes investors refuse to think out of the box and not willing to behave differently in the crowd. Recently, finance scholars have started to considered cultural factors as a variable in explaining decision-making processes of individual investors. National culture will foster the herding behavior among investors based on the previous studies. Although Malaysia has a high score in power distance, masculinity and considered as a collectivistic society, the study on the relationship between national culture and herding behavior in Malaysia is still underdeveloped.

As stock market plays a significant role in providing investment opportunities and offer investors chances to maximize their wealth with an acceptable level of risk, it is crucial for the investors to understand the factors of herding behavior and how to deal with it. Hence, the main goal of this study is to investigate the potential factors

that influence herding behavior among investors, which are information, market sentiment, overconfidence and experience and national culture in Malaysia stock market.

1.3 Research Objectives

1.3.1 General Objective

The main objective of this study is to investigate the factors of herding behavior among investors in Malaysia stock market.

1.3.2 Specific Objectives

i. To identify the relationship between information and herding behavior among investors in Malaysia stock market.
ii. To identify the relationship between overconfidence and herding behavior among investors in Malaysia stock market.
iii. To identify the relationship between market sentiment and herding behavior among investors in Malaysia stock market.
iv. To identify the relationship between experience and herding behavior among investors in Malaysia stock market.
v. To identify the relationship between national culture and herding behavior among investors in Malaysia stock market.

1.4 Research Questions

i. Does information influence herding behavior among investors in Malaysia stock market?

ii. Does overconfidence influence herding behavior among investors in Malaysia stock market?

ii. Does market sentiment influence herding behavior among investors in Malaysia stock market?

iv. Does experience influence herding behavior among investors in Malaysia stock market?

v. Does national culture influence herding behavior among investors in Malaysia stock market?

1.5 Hypotheses of the Research

There are five developed hypotheses to test the relationship between the factors and herding behavior among investors in Malaysia stock market as follow:

H_1: Information is positively related to herding behavior among investors in Malaysia stock market.

H_2: Overconfidence is positively related to herding behavior among investors in Malaysia stock market.

H_3: Market Sentiment is positively related to herding behavior among investors in Malaysia stock market.

H_4: Experience is negatively related to herding behavior among investors in Malaysia stock market.

H_5: National culture is positively related to herding behavior among investors in Malaysia stock market.

1.6 Significance of Study

Herding behavior reflects how investors act collectively without a centralized direction, which may cause an excessive volatility and disruption on market stability (Bikhchandani & Sharma, 2001). Hence, it is important to understand herding behavior among investors and the factors which influence them to join the herd. The main goal of this study is providing a better understanding in the relationship between herding behavior and the gathered factors, which are information, market sentiment, overconfidence, experience as well as national culture.

National culture is significantly related to herding behavior among investors in stock market based on past studies. Individual's financing and investment decisions are dominated by the set of beliefs and norms in the nation. It influences investors' behavioral reactions towards information shock and may cause a big part of investors exhibit similar investment strategies in the stock market (Chang & Lin, 2015). Thus, the novelty of this study is the inclusion of national culture as there is limited study that carried out to investigate the impact of national culture on herding behavior among investors in Malaysia stock market.

Outcome of investment is highly depending on the quality of investment decisions made by investors. Although investors often believe that they are rational in investing, their quality of decisions may affect by various personal factors unconsciously (Subravaniam & Velnampy, 2017). This study helps investors in understanding the factors which may cause them fall in conformity trap and reduce their tendency in adopting herding behavior. Thus, investors can beat the market from the insights of behavioral finance even the market environment become challenging.

Meanwhile, a big and well-functioning stock market provides necessary funds to investors, improves their financial capacity and facilitate the efficiency of trade which contributes to economic growth (Gurley & Shaw, 1955). This study provides government a better understanding on the factors that influence herd behavior among investors and enhance the policy in order to improve market stability and stimulate economic growth.

1.7 Chapter Layout

This study consists of five chapters. Chapter one discusses the overview of the study with research background, problem statement, objectives of study, research questions, significance of study. Chapter two shows the past studies in literature reviews and theoretical frameworks of this research. Chapter three illustrate the research design, data and methodology. Chapter four demonstrates the results obtained from the data collected and research method that proposed in chapter three. Last but not least, chapter five provides summary of major findings in this study, implications, limitations and recommendations for future study.

1.8 Conclusion

In conclusion, the research background introduced the overview of herding behavior among investors and background of stock market in Malaysia. Besides that, the issues and problems of herding behavior among investors in Malaysia stock market also discussed in the problem statement section. Next, this chapter comprises the research question and research objective about the factors of herding behavior in Malaysia stock market. Furthermore, the benefits and contributions of this research toward government, future investors, and future researchers also discussed in the significance of study section. At last, the chapter layout mentioned five chapters that included in this study.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In this chapter, we focus on the review of the literature, theoretical model and conceptual framework. Literature review is about the past studies that investigated the relationship between our dependent variable, which is herding behavior, and independents variables, which are information, market sentiment, overconfidence, experience and national culture. Besides, we discuss the theories and concept that relevant to our dependent variable and independent variable in review of theoretical model. Last but not least, theoretical framework and summary of this chapter will be discussed.

2.1 Review of the Literature

2.1.1 Herding Behavior

Herding behavior is a phenomenon where investors neglect their own beliefs and make their investment decision based on the collective actions (Chang, Cheng, & Khorana, 2000). It is a scenario where investors fall prey into a collective trading behavior even they perceive the group decision is wrong (Rook, 2006). Duasa and Kassim (2009) found that herding behavior among foreign investors exist in Malaysia capital market by applying Granger causality test. Besides, Mand, Janor, Rahim and Sarmidi (2018) found that trading volume of the market significantly affects the herding behavior of

investors in Malaysia Islamic stock market. On the other hand, Kaminsky and Schmukler (1999) suggest that herding is one of the reasons that cause chaotic financial environment in Malaysia during the crisis in year 1997. Other than that, Wong and Kok (2009) apply cross-sectional standard deviation (CSSD) model to examine the existence of herding behavior in the Malaysian equity market, but they could not find any proof herding behavior happen in the Malaysia market. Besides, according to CAPM method result carried out by Najmudin, Syarif, Wahyudi, and Muharam (2017), there is no herding behavior in Malaysia stock market because the result shows the stock returns obtained in this market is more stable and the investors carry lower risk.

2.1.2 Information

2.1.2.1 Source of Information

Information can be obtained through several sources such as newspaper, magazines, social media and word of mouth. Ankitha, Balasubramanian and Lakshimi (2017) found that there is a positive relationship between herding behavior and information from word of mouth from the OLS analysis result. They suggest that investors are having a higher tendency in showing herd behavior when they obtain relevant information through word of mouth compare to other sources of information. In line with their findings, Sharma and Bhowal (2017) also found a positive relationship between herding behavior and information through newspaper based on their Cronbach's alpha analysis result. It shows that the herd behavior among the investors majorly fostered by public information about the market. Meanwhile, technology advancement in smartphone,

computer and internet make websites, social media, online forum as well as applications become the most general and widespread platform for investors to gain information. Most of the investors prefer to get information on internet as it is convenient to search information anytime and anywhere (Chan & Hussien, 2017). Joseph and Ali (2015) found that the herding behavior among investors in Kenya is negatively affected by information from media by using reliability coefficients measurement.

2.1.2.2 Information Uncertainty

Saeedi and Chahardeh (2013) carry out a study to identify the impact of various level of information uncertainty on herding behavior in Tehran Stock Exchange. By applying the Spearman correlation test, they propose that is a positive relationship between information uncertainty and herding behavior. When the level of information uncertainty increases, herding behavior among investors raises. Besides, Taqadus, Tajalli, Hafsa and Amir (2014) also found a positive relationship between information and herding behavior among investors. Based on the ANOVA and logistic regression (LOGIT) result, they point out that when the information uncertainty decreases, the herding phenomenon starts to decrease in the market as well. They claim that investors will only have a high tendency to herd and overlooking their own information when the stocks do not have any public or insider information. Similarly, Fernandez, Merino, Mayoral and Vallelado (2011) state that there

is a positive relationship between information uncertainty and herding behavior among investors. They further explain that investors will especially tend to mimic others when there are only a few previous transactions in the market. This implies that the higher the information uncertainty, the higher the tendency investors herd.

2.1.2.3 Information Asymmetry

On the other hand, information asymmetry arises when the information hold by investors is imbalance. It will influence the investor to follow others which invest in the same market because he does not have much information than other investors (Choi & Skiba, 2014), thus increase the herding behavior in the market. In conditions of information asymmetry, investors are afraid to make a wrong decision and bear the potential loss. This result in disturbing their ability to analyse reasonably. Investors tend to avoid their uncomfortable by following another investors' decision at the end. Komalasari (2016) states that information asymmetry is positively related to herding behavior among investors in the Indonesia Stock Exchange. Investors particularly tend to herd when information is asymmetric. By applying VEC analysis, Ramli, Agoes, and Setyawan (2016) prove that information asymmetry has an impact on herding behavior as well. In contrast, Choi and Skiba (2014) found a negative relationship between information asymmetry and herding behavior among investors by applying LSV measurement and univariate regression analysis. This study shows that information asymmetry level is negatively related to herding behavior.

2.1.3 Overconfidence

Overconfidence associates with overrating the accuracy of information, abilities and the probability of success (De Bondt, 1995). Saeedi and Chahardeh (2013) carry out a study in Terhan Stock Exchange and suggest that there is negative relationship between overconfidence and herding behavior. In their data analysis, they perform logistics regression analysis to investigate the relationship between independent variables (overconfidence) and herding behavior as dependent variable. This result is supported by Gloede and Menkhoff (2011), they further explain that the negative relationship is due to investors' rational reaction to inferior information or ability by using ordinal logit model. In contrast, Shikuku (2010) determines there is strongly positive relationship between overconfidence and herding behavior. In their data processing, Statistical Package for Social Scientists (SPSS) is used. This study implied that those managers who are overconfident most probably will follow the others decision in their decision making.

Besides, Donkor, Akohene and Acheampong (2016); Fernandez et al. (2011); Hirshleifer, Subrahmanyam and Titman (1994) also propose that there is a positive relationship between overconfidence and herding behavior among investors. They used correlation analysis to measure the strength and direction of the overconfidence and herding behavior. In the result, they state that other investors do not face difficulties in their investment decision-making, they will tend to be overconfident and imitate the decisions of other investors. Hirshleifer et al. (1994) further explain with the timeframe of information. When they receive information earlier rather than other investor, most of investors choose to believe the information and make the investment decision before the information being clarify. Thus, this action contributes to herding behavior.

Moreover, according to Syed and Mohsim (2014), overconfidence has positive and significant impact on investment decision of individual

investor. This result is consistent with the result studies of Bakar and Amelia (2015) as well as Haroon and Tabassum (2015). They claimed that those overconfidence investors tend to trade more frequently because they think that their experience, knowledge or skill able to make the best investment decision and less focus on technical analysis on investment decision.

On top of that, Shusha and Touny (2016) prove overconfidence have no effect on adopting herd behavior. In the result, overconfidence seems to have no effect on adopting herd behavior in all models after testing of the F- test at 1% significant level. In their discussion, they state that the Dunning Kruger effect prove that overconfidence only will affect the experience. Level of fake overconfidence tend to decrease when the individual's experience has increased. Until a certain level, the overconfidence will raise according as the level of experience. Thus, they further suggest that the relationship between the overconfidence and herding behavior could be focused in future study.

2.1.4 Market Sentiment

Sentiment shows how people forecast future stock prices based on their beliefs with emotion, mood and cognitive bias. They may have irrational expectations towards the fundamental changes and selectively pay attention to the information that favorable to their preferences (Hu, Pan & Wang, 2013). Integrated sentiment of investors forms a market sentiment which represents the overall attitude, feeling or beliefs of investors towards a particular stock or the market. Blasco, Corredor and Ferreruela (2011) conducts a study to explore herding behavior among investors in Spanish stock market during year 1997 to 2003. Based on their results of Granger causality test, they state that the daily market sentiment is a crucial generating factor in herding behavior. Besides, Vieira and Pereira (2015) study on herding behavior in a small European in the period between years

2003 to 2011. By applying Ordinary Least Square model with European Economic Sentiment Indicator (ESI) index, they found that sentiment have a negative influence on herding. This consistent with when sentiment is high, investors feel there is no necessity to follow other investors' actions and tend to make decision based on their own opinions.

In order to investigate the presence of market sentiment on herd behavior, Berisha and Pavlovska (2015) take market sentiment into Cross Sectional Absolute Standard Deviation (CSAD) model to examine do investors tend to follow the crowd in an increased anxiety of upcoming market conditions period. They use Chicago Board Options Exchange Volatility Index (VIX) as a proxy to picture the uncertainty in future conditions. The results show that investors tend to herd when they are anxious about future market conditions. This consistent with the statement of Philippas, Economou, Babalos and Kostakis (2013) who suggest that market participants tend to follow the market consensus if investor sentiment become worsen. Nofsinger (2008) further suggests that investors may experience less disappointment when others also make the same decision even though this decision turns out not satisfying.

Kabir and Shakur (2018) also carry out a study to investigate herding behavior among investors in Asian and Latin American market. Their results show that investors tend to herd when VIX is high. Consistent with their paper, Huang and Wang (2017) also use VIX to study the impact of investors' fear on their investment behavior in Taiwan stock market. Based on their findings through CSAD method, herding behavior is said to be fostered by an increase in investors' fear. By applying CSAD model as well, Jlassi and Naoui (2015) show that herding behavior among investors tend to increase during period of fear sentiment.

On the other hand, Economou, Hassapis and Philippas (2018) test the influence of investors fear on herding estimations by examining herding in three developed stock markets. Their result shows that there is a significant impact of fear on herding estimations. Under market stress, when panic and fear overwhelming the market, individual investors tend to follow the herd.

Moreover, Litimi (2017) also carries out a study to investigate the herding behavior in French stock market with Granger causality test. CAC 40 Volatility index (VCAC) is employed as a proxy for market sentiment. VCAC index is regarded as the "fear gauge" of investors, it represents the market's expectation of future volatility. Based on their result, they suggest that market sentiment act as a herding-trigger during the entire studied period. Investor is more open to imitate other investors when he is facing the fear of market sudden move.

2.1.5 Experience

Based on the study of Menkhoff, Schmidt, and Brozynski (2006), experience is negatively related to herding behavior. By conducting ordered probit or tobit regression method for all the questions, they suggest that fund managers are realized that they are experienced investors and not to imitate other investors decisions. Besides, Nguyen and Schubler (2012) also find that a higher experience level indicates a lower probability of herding with multivariate test method. In other word, experience negatively affect herding. Experience investor will depend on their own opinions and skills to evaluate their investment decision rather than imitate other's decisions which is inconvincible viewed from experienced investor's point. In line with their result, Greiner (2013) suggests that the average experience of active lenders is negatively correlated with herding by adopting ordinary least squares (OLS) method and dynamic generalized method of moments (GMM). When a very low herding happened after the quite period, the negative effect developed from a natural rising experience of active lenders and the low level of herding.

On the other hand, Shusha and Touny (2016) find experience of investor acts as a moderator to manipulate the relationship between decision accuracy, hasty decision and investor mood with herd behavior with the method of Ordinary Least Square (OLS). Experience investor has positive impact for decision accuracy on adopting herd behavior while hasty decision and investor mood were the factors to exhibit herd behavior for investor with low level of experience. Moreover, Rekik and Boujelbene (2013) state that the experienced individuals are negatively influence herding behavior by Principle Component Analysis (PCA) method to run the multivariate analysis of survey questionnaire. They find that the most of the individuals who tend to display mimetic bias are less experienced young people.

Meanwhile, Prosad (2014) finds the herd behavior practiced by investors with very low experience or very high experience in the study on the presence and impact of herding in the Indian Equity. In their primary data analysis, investors will exhibit herd behavior in their investment decision-making regardless they have lower or higher level of experience. This is because they always depend on their peers or perceptions from market experts as investor tend to being unconfident about their competency on investment decision or worry on the risk level associated on investment decision. Lastly, Subash (2012) applies Weighted Scoring Method, IBM SPSS Software, and Microsoft Excel method to conclude young and experienced investor types are equally to practice herding whereby younger investor that lack of experience will tend to imitate others who are more competence and knowledgeable toward market. Experienced investor will herd when they are unconfident with their decision and always unable to stand against the risk associated on their investment decision.

2.1.6 National Culture

National Culture is a set of attitude, behavioral norm, values or conventional belief that hold by member of certain country. The tendency of herding behavior differs in stock market of a country due to the differences in national culture of investors. Several past studies investigate the relationship between national culture and herding behavior by using the five dimension of national culture indexes that proposed by Hofstede (2011) which include power distance, individualism, masculinity, uncertainty avoidance, and long-term orientation.

According to Chang and Lin (2015), national culture has significant influence on investor herding behavior while the masculinity and power distance have significant and positive influence on investor herding behavior by using CSAD method and multinomial logistic regression analysis method. The result is similar with the study of Vasiliauskaite and Grikietyte-Cebataviciene (2017). They suggest that individualism, masculinity, uncertainty avoidance and long- term orientation index have positively related to the level of herding behavior whereas indulgence index has negative relationship with herding behavior. On the other hand, Maio (2014) also applies the CSAD method and states that national culture has impact on herding behavior of investor, those countries with higher masculinity, power distance and individualism index have negative relationship with herding behavior of investor. By using CSAD method and Iterated Principal Factor Analysis for factor extraction, Blasco, Corredor, and Ferreruela (2017) found that masculinity and individualism have negative and significant impact on herding behavior of investor. They further explain that a stock market of the country with high masculinity index, investors are more concern on material things. Men tend to be more confident and showing a strong desire to succeed which cause them to overestimate their own abilities and willing to take risk in investment.

Furthermore, Zhan (2013) use the synchronized stock market movements as a proxy of herding behavior and result of multivariate analysis show that individualism index of national culture has negative and significant relationship with synchronized stock price movement. Those countries that have lower individualism index have higher probability of synchronized stock price movements which implies herding behavior is more likely exist in those countries with lower individualism index. Meanwhile, according to Munkh-Ulzii, Moslehpour and Pham (2017), they found that Confucian culture has a significant and positively related to herding behavior in the 13 stock markets of six countries which considered to have Confucian culture by using Return Dispersion method and Ordinary Least Square method. They further explain that investor with Confucian culture more emphasis on teamwork or collectivism whereas western culture tends to more on individualism. Investor with Confucian culture tend follow other investor's decision if they are not confidence with their decision which has high tendency of herding behavior among investor.

2.2 Review of Relevant Theoretical Model

2.2.1 Behavioral Finance Theory

Behavioral Finance Theory is a famous theory that about irrational financial decision that made by people which impact the financial market and provide explanation based on the behavioral economics or financial psychology perspectives (Amar, 2013). It also suggests that psychology and emotion factor have a greatly effect on investment decision of investors. In another words, this theory provides a point of view by looking into herd behavior and

emotional side of investors to justify the movement of stock market (Birau, 2012). Those irrational investors usually ignore fundamentals of stock market and blindly follow the trends to trade the stocks.

2.2.2 Information Cascade Theory

Information cascade theory is a theory applied in the field of behavioral economics and other social sciences. Bikhchandani and Sharma (2001) state that the gaps in the information hold by each investor will cause herding behavior. This appearance is known as information cascade, where investors investigate other investors' behaviors, used it as own investment decision and neglect their personal information. It can be noticed in financial markets, politics, and business strategies (Pratik, 2018). When herding behavior is spreading in the market, information cascade will cause investors to adopt collective action which will affect the market efficiency badly (Banerjee, 1992).

2.2.3 Better-than-average effect

Better-than-average-effect refers to a social comparison that individual believe that their abilities and skills better than other people. Most of the people always evaluate themselves superior to others on certain personality traits like they believe they are more competent and talented than others (Stavrova, Koneke, Schlosser & Thomas, 2016). An investor might show his overconfidence by refusing to blindly follow the trend of stock market because he believes that he able to make the best decision for investment by making his own stock market assessment. However, some investor

overestimates their accuracy and depth of knowledge about the stock market may cause them making losses in investment. Furthermore, those overconfident investors over assurance from their past success in investing in the stock market which may leads to poor decisions. Due to their past success in investment, investor might ignore important information or opinion from others and just reliance on their own information and experience. Overconfidence of investor will reduce the herding behavior in stock market (Forbes Leadership Forum, 2013).

2.3 Proposed Conceptual Framework

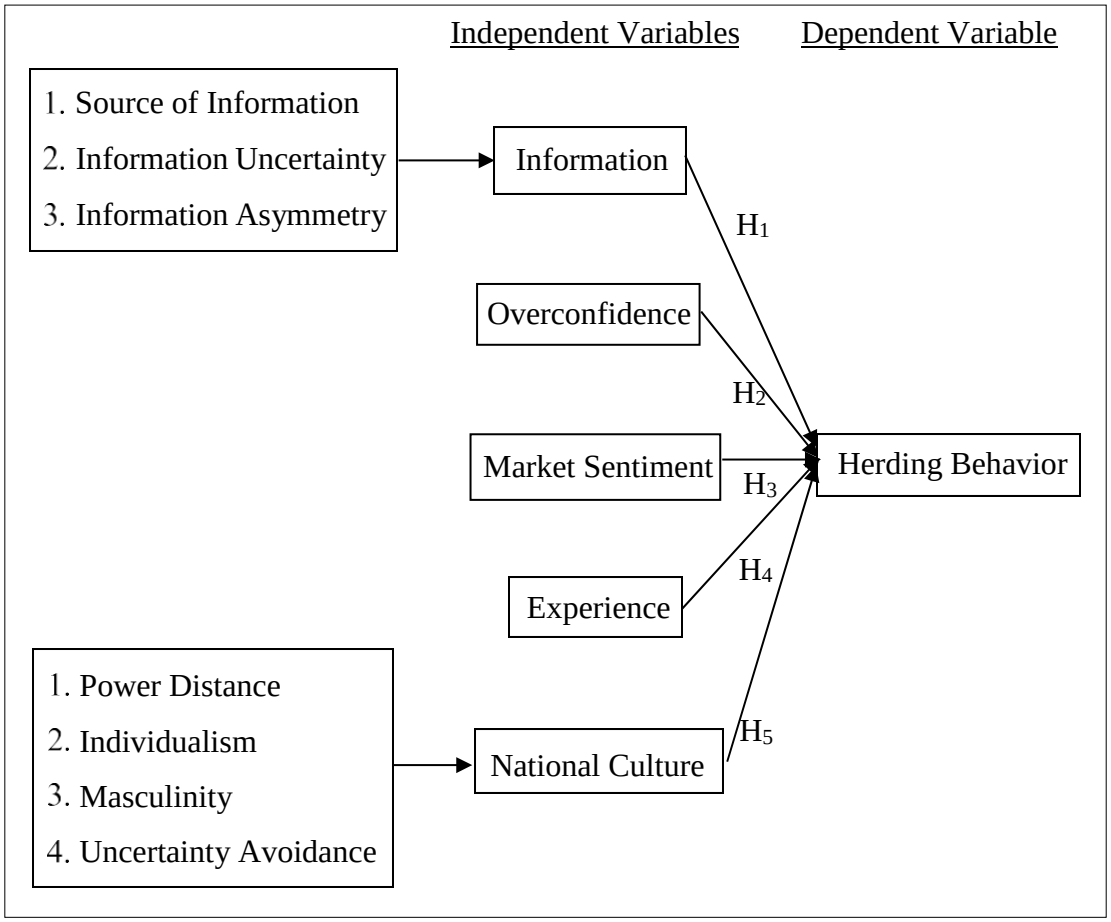


Figure 2.1: Factors affecting herding behavior among investors in Malaysia's stock market

Figure 2.1 shows the relationship between herding behavior and explanatory variables which are Information, Overconfidence, Market Sentiment, Experience and National Culture among investors in Malaysia stock market. Information comprises three dimensions which are source of information, information uncertainty, and information asymmetry while national culture comprises four dimensions which are power distance, individualism, masculinity, and uncertainty avoidance.

2.4 Hypotheses Development

2.4.1 Information

Majority of the studies show that three dimensions of information are positively related to herding behavior among investors (Ankitha, Balasubramanian & Lakshmi, 2017; Sharma & Bhowal, 2017; Saeedi & Chahardeh, 2013; Taqadus, Tajalli, Hafsa & Amir, 2014; Fernandez et al., 2011). Different sources of information will influence investors' investment decision-makings in different levels. Besides, investors tend to follow other investors' action if they are lack of information or facing an information uncertainty. Thus, we expect that information is positively related to herding behavior among investors.

H_1: Information is positively related to investors' herding behavior in Malaysia stock market.

2.4.2 Overconfidence

Most of the studies have concluded that overconfidence positively affects herding behavior among investors (Shikuku, 2010; Donkor et al., 2016; Fernandez et al., 2011; Hirshleifer et al., 1994; Syed & Mohsim, 2014; Suzaida & Amelia, 2015; Tabassum & Haroon, 2015). When investors do not face difficulties in their investment decision-making, they may tend to be overconfident and mimic other investors' decisions. Thus, we expect that overconfidence positively related to herding behavior among investors.

H_2: Overconfidence is positively related to investors' herding behavior in Malaysia stock market.

2.4.3 Market Sentiment

We expect the market sentiment is positively related to herding behavior among investors as majority of the studies show that market sentiment positively influences herding behavior (Jlassi & Naoui, 2015; Litimi, 2017; Huang & Wang, 2017; Kabir & Shakur, 2018, Berisha & Pavlovska, 2015; Economou, Hassapis & Philippas, 2018). When fear, anxious and panic sentiment is overwhelming the market, investors tend to mimic others' decisions in order to play safe, thus foster the herding behavior among investors.

H_3: Market sentiment is positively related to investors' herding behavior in Malaysia stock market.

2.4.4 Experience

Menkhoff et al. (2006), Nguyen and Schussler (2012), Shusha and Touny (2016), Greiner (2013) as well as Zhang and Liu (2012) suggest that experience is negatively related to herding behavior. When investors are experienced, they tend to make their own investment decision based on their analysis towards the market rather than mimic others' decisions. Therefore, we expect that experience is negatively related to herding behavior among investors.

H_4: Experience is negatively related to investors' herding behavior in Malaysia stock market.

2.4.5 National Culture

Many studies stated that national culture is positively related to herding behavior among investors (Chang & Lin, 2015; Vasiliauskaite & Grikietyte-Cebataviciene, 2017; Munkh-Ulzii et al., 2017). The tendency of herding behavior differs in stock market of a country due to the differences in national culture of investors. When national culture such as power distance and masculinity in a country increase, investors will tend to imitate others' investment decision. We expect there is a positive relationship between national culture and herding behavior among investors.

H_5: National culture is positively related to investors' herding behavior in Malaysia stock market.

2.5 Conclusion

In short, this chapter highlights the past findings that examined by previous researchers by using different methodologies in various countries. The relationship between dependent variable (Herding Behavior) and independent variables (Information, Overconfidence, Market Sentiment, Experience and National Culture) are supported by past empirical results. In addition, several theoretical models relevant to this study also discussed in this chapter. At last, conceptual framework illustrates the relationship between herding behavior and information, overconfidence, market sentiment, experience and national culture.

CHAPTER 3: METHODOLOGY

3.0 Introduction

Methodologies of research will be focused in this chapter. The method of data collection, data processing, sampling design, data analysis, and research instrument regarding this study are identified. A depth discussion for each element will be carried out in the following sections.

3.1 Research Design

Quantitative research method is applied in this study as it can quantify behaviors and attitudes into numeric form as well as generalize the results from a sample. Questionnaires are distributed to target respondents in order to determine the relationship between dependent variables and explanatory variables. This method enables data collection from a large audience. Throughout the design in the quantitative research, the descriptive and correlation research is applied. Descriptive research is a suitable way to describe the behavioral pattern of targeted population and it is often been chosen by the researcher. The correlation research act as a non-experimental research to define statistical relationship between the variables.

3.2 Data Collection Method

The method of data collection used in this study is face-to-face questionnaire distribution to targeted respondents. The survey will be conducted based onsimple random method. Prior to the data collection, a supporting document will be obtained from faculty general office, FBF UTAR Kampar campus. The supporting document will be shown to the management to get their permission before collecting the data. The targeted respondents are Malaysia stock market investors. Question will be asked to ensure the respondents are investors and involved in Malaysia stock market. In order to avoid interface, a short briefing or explanation will be given before the respondents fill up the survey form. Each set of questionnaires will take around 5-10 minutes. The data collection process is in volunteer basis.

3.3 Sampling Design

3.3.1 Target populations

The targeted population in this study is Malaysian investor.

3.3.2 Sampling Frame and Sampling Locations

The sampling locations of this study are Penang, Kuala Lumpur and Johor which represent north, central and south of Malaysia. While selecting the sampling location, population in the state will be concerned. According to the source of Malaysia's Official Statistic, Johor and Kuala Lumpur has a larger population in the south and center of Malaysia. Although Kedah have a large population compare with Penang state in the north of Malaysia, but the development of financial investment institution in Penang are better than Kedah, therefore Penang is chosen as the sampling location in this study.

Besides the population in states, the number of financial institutions in the state also being concerned. According to source of Bank Negara Malaysia, the number of investment bank branches set up in Kuala Lumpur, Penang and Johor are more than other states. There are total 67 investment banks set up in Kuala Lumpur, 37 investment banks in Penang and 16 investment banks in Johor. Thus, with number of investment bank and the population in the state, the number of investors in these three states are higher compare with other state in Malaysia.

3.3.3 Sampling Element

In order to determine whether the herding behavior exist in Malaysia stock market, the investors involved in Malaysia stock market will be our targeted respondents.

3.3.4 Sampling Technique

In the process of data collection, simple random sampling is applied. Simple random sampling is a technique of sampling that every sample has an equal probability or chance of being chosen from the population. It is easy to be conducted and has a high level of accuracy at the same time (Saunders, Lewis & Thornhill, 2012). Moreover, this method is suitable to be applied when the sampling size is over hundred.

3.3.5 Sampling Sizes

There are 2.49 million investors involved themselves in Malaysia stock market (Aruna, 2017). Table 3.1 show that the effective sample size with confidence level of 95% for population 1,000,001 and 10,000,000 is 384. Therefore, the sample size of 384 is targeted to ensure the accuracy of results. At the end of data collection process, 400 sets of questionnaires are successfully collected back from the targeted respondents.

Table 3.1: Sample size of difference population size at 95 percent confidence level

Krejcie and Morgan table				
	Margin of error			
Population	**5%**	**3%**	**2%**	**1%**
50	44	48	49	50
100	79	91	96	99
150	108	132	141	148
200	132	168	185	196
250	151	203	226	244
300	168	234	267	291
400	196	291	343	384
500	217	340	414	475
750	254	440	571	696
1000	278	516	706	926
2000	322	696	1091	1655
5000	357	879	1622	3288
10000	370	964	19366	4899
100000	383	1056	2345	8762
1000000	384	1066	2395	9513
10000000	384	1067	2400	9595

3.4 Research Instrument

3.4.1 Purpose of Using Questionnaire

Questionnaire is a method that often used by researchers to gather the first-hand data. It enables researchers to get the current information from the respondents. Thus, the degree of accuracy in primary data will be higher compare with secondary data. With the questionnaire, the researcher also able to specific their information needed and let the respondent to determine their opinion towards the statement. Herding behavior is an individual

behavior pattern to mimic other's action, the targeted respondent able to share their opinion through agree or disagree to the statement by using scale measurement in the questionnaire. Questionnaire able to directly capture their attitude and behavioral pattern in Malaysia stock market. Therefore, it is suitable for us to use questionnaire method to collect the first-hand data of respondent hence determine whether the herding behavior exist in Malaysia stock market.

3.4.2 Questionnaire Design

There are two parts in this questionnaire. Section A consists of survey questions that relate to our dependent variable and independent variables. There are six constructs in the section. Five to eight questions will be asked accordingly in each construct.

The constructs are stated as below:

Table 3.2: Description of Constructs in Questionnaire

Constructs	Details
Construct 1	This construct representing the independent variable of information. This part will be divided into three dimensions which classified as public information, information uncertainty and information asymmetry. All the three dimensions consists of five questions respectively.
Construct 2	Overconfidence will be focus in this construct. Total of eight questions will be asked in this construct accordingly.

Construct 3	Market sentiment is focused in this part. There are five questions will be asked respectively. As most of the researchers are using secondary data, the idea of the questionnaire question in this construct is taken from the literature review and discussion of past studies.
Construct 4	National culture will be focused in this part. This construct will be categorized in four parts which are power distance, uncertainty avoidance, masculinity and individualism. Each dimension consists of five questions accordingly.
Construct 5	The main focus will be put on experience. Total of five questions will be asked in this construct accordingly.
Construct 6	Herding behavior of the investors in Malaysia stock market will be stressed. Total of 10 questions will ask accordingly.

In section B, respondent's demographical profile will be asked in order to understand the background of respondents. The variables included are gender, age group, race, marital status, level of income and investment experience. This enable to categorize respondents into different groups.

3.5 Constructs Measurement

Likert Scale is used in the data measurement of this study. It offers a range of answer options, which from strongly disagree to strongly agree for respondents. Five-point Likert Scale is applied in the answers option of every statement. Table 3.8 shows the answer for the options. According to Finstad (2010), five-point Likert Scale is suitable for the large respondents which more than 100. Thus, the time consuming for respondents to full up survey will reduce.

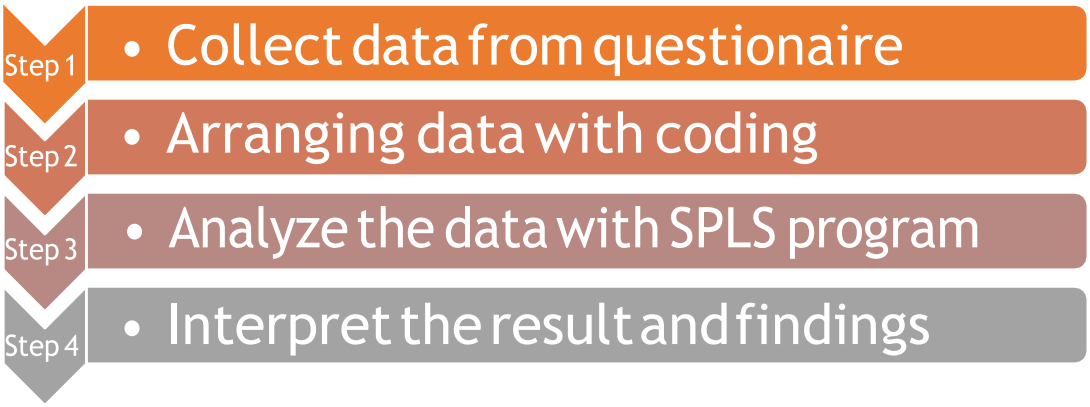
Table 3.3: Five-point Likert Scale

Likert Scale Point	
5	Strongly Agree
4	Agree
3	Neutral
2	Disagree
1	Strongly Disagree

3.6 Data Processing

The items of each construct in the questionnaire are adapted from past studies. The survey questions are categorized by codes in order to facilitate the process of data analysis. Demographics variables in section B is categorized with codes as well. Characteristics of investors are identified in terms of gender, age, income level, level of education, marital status and investment experience. A pilot test will be carried out before the questionnaire will be distributed to public. Diagram 3.1 show the step that will be taken after questionnaire distribution.

Figure 3.1: Steps of Data Processing



3.7 Data Analysis

3.7.1 Descriptive Analysis

Descriptive analysis is a process that transform raw data into a form for readers for better understanding and author for characterized and summarize. The data can be converted by common descriptive technique such as calculating the average, percentage and frequency distribution. After data collection, the Smart PLS program will be used to carry out the descriptive analysis. The information acquire from questionnaire will be transformed into frequency, mean and standard deviation. Frequency and percentage for demographic variables and mean for the constructs in the questionnaire. The statistic for demographic variable will be presented in the form of table.

3.7.2 Smart PLS

Smart PLS is an effective tool that used by researchers in calculate, create and validate the models. According to Chin (2010), Smart PLS is second SEM generation technique. Path model in Smart PLS able to describe the relationship between the variables and indicators through provide a clear diagram and support for researcher to demonstrate the result (Sander & Lee, 2014). Besides, Smart PLS did not required distributional assumption as other SEM (Shackman, 2013). This give the researchers more flexibility in data collection. Last but not least, both reflective and formative scales can be tested by using Smart PLS. Sander and Lee (2014) state that Smart PLS did not restrict to use formative and reflective model in one construct. Smart PLS is a valid tool to test a model and complex structures. Thus, in this study, Smart PLS is used for the data processing.

3.7.2.1 Outer loading

Outer loading is a test measurement for reflective models, which showing the paths from a factor to its representative indicator variables. Outer loading defined as a standardized path weight that connects the factors with the variables. The loading's result should be fall between zero and one. All the loadings should be significant. In theory, the stronger the reliability of the measurement model, the larger the loading (Hair, Hult, Ringle & Sarstedt, 2014). The measurement model only can be accepted when the outer loading is larger than 0.7, otherwise, it may cause AVE problem.

3.7.2.2 Composite reliability

Composite reliability is a test that can alternate Cronbach's alpha to examine the convergent validity of the reflective model. In the PLS based research, the composite reliability is preferred because it brings a higher estimate of reliability compare with Cronbach's alpha (Garson, 2016). The composite reliability must fall between zero and one, where one represents perfect estimated reliability. Theory states composite reliability must be greater than or equal to 0.6 due to the exploratory purposes of the model.

3.7.2.3 Average variance extracted (AVE)

AVE determines the convergent validity for each latent factor in the model. The model is considered as adequate when the AVE is above 0.5 (Chin, 1998; Hock & Ringle, 2006). AVE measures the amount of variance captured by a construct from each scale. A latent variable can be used to explain more than half of the variance of its indicators on average if the AVE values is at least 0.5 (Urbach & Ahlemann 2010).

3.7.2.4 Discriminant validity (Fornell–Larcker and Cross Loading)

Discriminant validity can be examined by using AVE criterion. The square root of AVE should be higher than its correlation with any other latent variable. In Smart PLS, discriminant validity will exist if the square root of AVE in any factor column is higher than the number in the column.

In a simple structure, an adequate model's intended loading should be greater than 0.7 and the cross loading should be under 0.3, but sometimes, the model does not achieve the simple structure. Therefore, cross-loading is an alternative for AVE to evaluate the discriminant validity of a reflective models. At a minimum, all indicator variable should have a higher correlation with its own latent variable and another latent variable. If one does not fulfil the requirement, the model is considered to be improperly specified.

3.7.2.5 Heterotrait-monotrait ratio of correlations (HTMT)

HTMT is an approach to assess the discriminant validity in structural equation modelling. When the discriminant validity is not established, the researchers unable to confirm the reality of hypothesized structural path. The criterion of HTMT is more advanced than classic approaches in discriminant validity evaluation method which are cross-loadings and Fornell-Larcker criterion that unable to detect the lack of discriminant validity.

3.7.2.6 Bootstrapping

Bootstrapping is a non-parametric procedure where the significance of statistical of various PLS-SEM results such as HTMT, path coefficients, R^2 values, and Cronbach's alpha can be tested (Mooney, 1996). In traditional, PLS-SEM does not assume that the data is normally distributed, it unable to apply the parametric significant test in identifying whether path coefficients, outer loadings and outer weights are significant. Hence, the bootstrapping is applied for testing the significance of estimated path coefficients in PLS-SEM (Davison & Hinkley, 1997).

3.7.3 Pilot Study

Pilot test will be done prior the distribution of questionnaires to targeted respondents. In this section, we will distribute the questionnaire to the investors Selangor area. We will go to the targeted investment bank to distribute the questionnaire. A short question will be asked to determine the individual involved themselves in the Malaysia stock market. A short briefing will be given to the investors before filling up the survey to avoid misunderstanding. At least 30 respondents will be collected in running the pilot test.

Analysis will be carried out after data collection. A reliability of 0.8 must be achieve in the test. Amendment will be done if the reliability of 0.8 did not achieve. Pilot test is a process to ensure the validity of the questionnaire so that there will no problems occur while data collecting.

Table 3.4: Result of reliability test for the questionnaire

Reliability Statistics	
Cronbach's Alpha	**N of Items**
0.931	65

Table 3.9 shows the overall result of pilot test towards our survey questionnaire before distribute to public. The Cronbach's Alpha value for all the items of every construct is more than 0.8 by referring to table above indicate the reliability of the questionnaire is attainable. Cronbach's Alpha value range of each question in the survey achieve from 0.929 to 0.932. Thus, data collection with the survey questionnaire sets can be proceeded.

3.8 Conclusion

Methodologies of this study is discussed in this chapter. The method of data collection, data processing, sampling design, data analysis, and research instrument are decided once the research design is confirmed. Smart PLS software is used for data processing. The result of data will be present and further discuss in following chapter.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

In this chapter, we will analyze the relationship between independent variable (information, market sentiment, overconfidence, experience, and national culture) and dependent variable (herding behavior) and interpret the findings of this research. This research consists three analyses which are descriptive analysis, scale measurement, and inferential analysis. The further explanation and interpretation will be presented in the following each of the section.

4.1 Descriptive Analysis

4.1.1 Demographic Characteristics of Respondents

4.1.1.1 Gender

Based on Table 4.1, male respondents occupy 51.25% while female respondents consist of 48.75% in the total number of Malaysia stock market investors. Khan (2017) finds out that female investors have been outperforming males in the past decade in big investment firm which could be a good time for female investor in Malaysia to notice and learn from it. This is because women are better in managing their emotions when comes to investing, tend to analyze

in a long term, understand their objective well and be risk averse on investments they know little about. This indicates that the awareness of female investors on Malaysia stock market are risen whereby female investor able to outperform male investor by involving themselves on Malaysia stock market increasingly compared to last decades.

4.1.1.2 Age Group

Age between 21 to 30 years old holds highest frequency which consist of 175 of total respondents. According to Aruna (2017), Bursa Malaysia has the intention to target the similar age group as the group has more disposable income for investment. Besides, Bursa Malaysia declare a 36% (27,252 account holders) increase in the number of Central Depository System (CDS) account holders who aged 25 years and below, which is the fastest expanding age group among CDS holders in 2016. The statistic of CDS account shows majority of Malaysia investor are between ages of 21 to 30. Besides, there are 95 respondents are between 31 to 40 years old. It is followed by the age between 41 to 50 years old, age between 51 to 60 years old and below 21 years old which occupy 13.5%, 8.5% and 8% respectively.

The least respondents are in the age of 61 and above which only comprises 11 respondents out of 400 respondents. According to Zarina (2017), chief executive officer of Bursa Malaysia states only four percent out of the 853 respondents had select to invest in stocks while the rest selected for less traditional investment tools whereby public's perspective on share investment are risky. This supports that the age group of 61 above prefer to choose the less risky financial product and highly conservative portfolio such as mutual fund and certificate of deposit. Thus, they will less invest in high risk income stock.

4.1.1.3 Race

Chinese respondents place the highest frequency that occupy 45% of the population while Malay respondents are slightly less than Chinese respondents which comprise 157 respondents out of 400 respondents. The race for 45 (11.25%) respondents in the study is Indian while 18 respondents (4.5%) are other races.

4.1.1.4 Marital Status

Single and married respondents nearly occupy the population which comprise of 49% and 48% of the study. There are only 11 respondents and 1 respondent out of 400 respondents consist of divorced and separated.

4.1.1.5 Monthly Personal Income

Respondents with a monthly personal income between RM 2,001 to RM 4,000 has the highest frequency in the study which comprise of 35.75%. According to Kaur (2017), an economist forecasts that middle income earners may face a tough year and are recommended to involve more in online shopping or build their own e-business. 2017 is the year transforming to Internet economy that relied more on Internet for saving and making money and it examines how the middle-income group search for cheaper alternatives in this tough year. Thus, the low and middle-income group of respondents in the study whose income between RM 2,001 to RM 4,000 use stock

investment as their alternative source of income.

There are 123 respondents out of 400 respondents have monthly personal income in the range from RM 4,001 to RM 6000 while 20% of the population earns more than RM 6,000 as their personal income in monthly basis.

Only 54 respondents in the study which represent the least in the population belong to the monthly personal income below RM 2,000. According to Ooi (2018), fresh graduates in Malaysia whose income range between RM2,300 to RM2,500 face difficulties to sustain living with the rising of cost living. Furthermore, Gen Y are overlooking the importance of financial planning such as preparing budget for expenses, income and savings. In fact, majority of them aware of the importance of investing as a way to expand their wealth but only seldom of them realize lacking of saving plans stop them from investment. Hence, those with monthly personal income below RM 2,000 is the least in the population due to the low consciousness on financial planning, lead to shortage of capital or disposable income to invest.

4.1.1.6 Experience in Investing

The respondents with 1 to below 3 years of investment experiences occupy the highest percentage in the population that consist of 146 respondents (36.5%) out of 400 respondents. It followed by 3 to below 5 years of investment experiences which comprise 23.25% (93 respondents) of the population. Thereafter, 70 respondents (17.5%) of the population belong to the respondents with less than one year of investment experiences and 49 respondents (12.25%) of the population belong to respondents have more than 7 years in investing.

There are only 42 respondents (10.5%) found with 5 to below 7 years of investment experiences.

Table 4.1: Respondent Demographic Profile

Demographic Characteristics		Frequency	Percentage (%)
Gender	Male	205	51.25
	Female	195	48.75
Age Group	Below 21	32	8
	Between 21 – 30	174	43.5
	Between 31 – 40	95	23.75
	Between 41 – 50	54	13.5
	Between 51 – 60	34	8.5
	61 and above	11	2.75
Race	Malay	157	39.25
	Chinese	180	45
	Indian	45	11.25
	Others	18	4.5
Marital Status	Single (never married)	198	49.5
	Married	192	48
	Divorced	11	2.75
	Widowed	0	0
	Separated	1	0.25
Monthly Personal Income	Below RM 2,000	54	13.5
	RM 2,001 – RM 4,000	143	35.75
	RM 4,001 – RM 6000	123	30.75
	More than RM 6,000	80	20
Experience in Investing	Below 1 year	70	17.5
	1 – below 3 years	146	36.5
	3 – below 5 years	93	23.25
	5 – below 7 years	42	10.5
	More than 7 years	49	12.25

4.1.2 Central Tendencies Measurement of Constructs

Table 4.2 presents the average score of responses for the dimensions of each construct and construct without dimensions are range from 3.3992 to 3.8820.

For Information construct, respondents on average response agree for Source of Information (3.6294) and Information Uncertainty (3.5830) items while response neutral for Information Asymmetry items (3.3992).

From the scores reacted for National Culture construct, respondents agree for Power Distance (3.5500), Uncertainty Avoidance (3.882) and Individualism (3.6202) items averagely and stand as neutral for Masculinity (3.4368) items.

Furthermore, respondents react neutrally on average for the questions of Overconfidence (3.4367) and Market Sentiment constructs (3.3838). Lastly, respondents on average response by agreeing Experience items (3.7495) and Herding Behavior items (3.6019).

Table 4.2: Mean of Constructs

Construct	Dimensions	Mean
Information (INF)	Source of Information (SI)	3.6294
	Information Uncertainty (IU)	3.5830
	Information Asymmetry (IA)	3.3992
National Culture (NC)	Power Distance (PD)	3.5500
	Uncertainty Avoidance (UA)	3.8820
	Masculinity (M)	3.4368
	Individualism (IND)	3.6202
Overconfidence (OC)	-	3.4367
Market Sentiment (MS)	-	3.3838
Experience (EXP)	-	3.7495
Herding Behavior (HB)	-	3.6019

4.2 Scale Measurement

4.2.1 Internal Consistency Reliability

Cronbach's Alpha and Composite Reliability function assesses the internal consistency reliability of reflective model. The value for Cronbach's Alpha is between 0 and 1, where 0.7 is considered as satisfactory while 0.8 or more than 0.8 is more desirable (Nunally, 1978).

Refer to Table 4.3, the Cronbach's Alpha for Herding Behavior (HB), Information (INF), Market Sentiment (MS), National Culture (NC) and Overconfidence (OC) fall in the range from 0.811 to 0.870 which are desirable while Experience (EXP) is 0.769 which means acceptable. In the perspective of Composite Reliability, the value should be higher than 0.708 but values 0.60 and 0.70 are acceptable in exploratory research. The values of composite reliability for Experience (EXP), Herding Behavior (HB), Information (INF), Market Sentiment (MS), National Culture (NC) and Overconfidence (OC) are higher than 0.708 which are in the range from 0.835 to 0.905 can be interpret as satisfactory.

Table 4.3: Cronbach's Alpha and Composite Reliability

	Cronbach's Alpha	Composite Reliability
EXP	0.769	0.835
HB	0.811	0.865
INF	0.819	0.861
MS	0.870	0.905
NC	0.816	0.855
OC	0.866	0.896

4.2.2 Indicator Reliability

Indicator's outer loading is used to evaluate the reliability of an indicator. The indicator's outer loading should be higher than 0.708 or else the outer loadings which range from 0.40 to 0.70 should be reviewed for drop unless the removal of indicators improves the composite reliability and AVE above the recommended threshold value. Besides, other factor that being considered whether to drop an indicator is the extent to which the effect of content validity after the removal carry on. Inadequate outer loadings are retained sometimes as their contribution toward content validity. Anyhow the indicators with outer loadings below than 0.40 should always be deleted from the construct (Bagozzi, Yi, & Philipps, 1991; Hair, Ringle & Sartedt, 2011).

The result shows some indicator's outer loading is below 0.40 which should be eliminated after the PLS Algorithm being carried out. Table 4.4 presents the indicators dropped as their outer loading below 0.40.

Table 4.4: Indicators with outer loading below 0.40

Construct	Indicators	Outer Loading
INF	SI 1	0.168
INF	SI 2	0.091
INF	IU 1	0.394
NC	M 4	0.240
NC	PD 5	0.395
NC	UA 2	0.386
NC	UA 3	0.316
NC	UA 4	0.311

Next, PLS Algorithm run again with the remaining indicators retain in the model after the dropping of eight indicators. Result shows all the indicator's outer loading is more than 0.40. However, there is inadequate AVE values for constructs Experience (EXP), Herding Behavior (HB), Information (INF) and National Culture (NC). Therefore, there are 13 indicators to be removed to improve the AVE values as the suggested threshold value. Table 4.5 shows the indicators being removed to improve AVE values while Table 4.6 presents AVE values for every construct after drop of 13 indicators.

Table 4.5: Indicators drop for improve AVE

Constructs	Indicators
EXP	EXP 1, EXP 4, and EXP 8
HB	HB 1, HB 3, HB 4 and HB 9
INF	IA 5, IU 4 and SI 3
NC	IND 4, M 5 and PD 2

Table 4.6: AVE after drop of indicators

	Average Variance Extracted (AVE)
EXP	0.504
HB	0.518
INF	0.413
MS	0.657
NC	0.333
OC	0.555

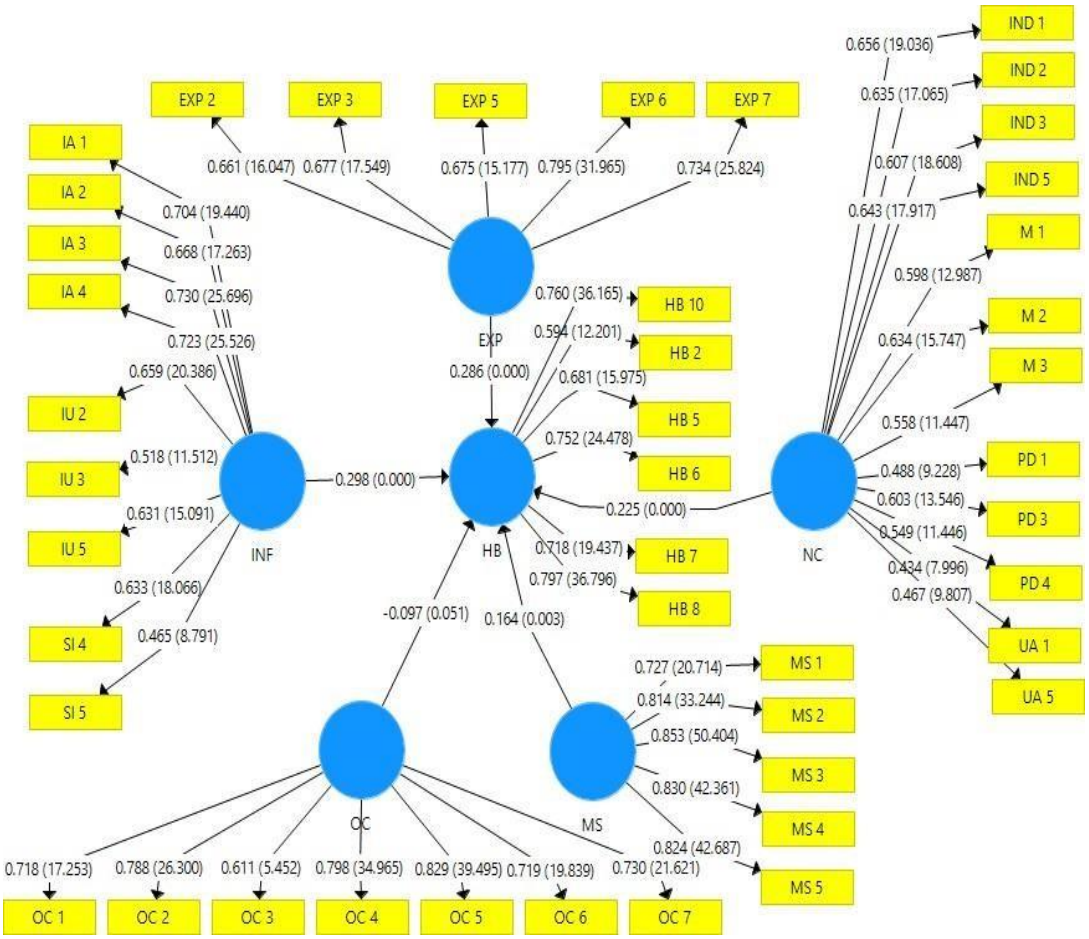


Figure 4.1: PLS-SEM measurement model with outer loadings, path coefficients, p-values and t-values (Final Model)

4.2.3 Convergent Validity

Convergent Validity is the degree to which an indicator correlates positively with another indicator of the same construct. For reflective measurement model, every indicator is viewed as different method to assess the same construct. Thus, the items act as indicators of a construct should converge or share a high proportion of discrepancy.

Table 4.7 shows the AVE values for Experience (EXP), Herding Behavior (HB), Market Sentiment (MS) and Overconfidence (OC) are found to be adequate as the values are estimated as 0.504, 0.518, 0.657 and 0.555 respectively. According to Fornell and Larcker (1981), 0.4 or below can be accepted in the case that AVE below 0.50, but the composite reliability is above 0.60, thus the convergent validity of the construct will still be considered adequate. Therefore, AVE value of Information (INF) which is 0.413 can be accepted. For National Culture (NC), the AVE is below 0.5 (0.333) which is inadequate, however composite reliability is as high as 0.855 to be accepted.

Table 4.7: Composite Reliability and Average Variance Extracted (AVE)

	Composite Reliability	Average Variance Extracted (AVE)
EXP	0.835	0.504
HB	0.865	0.518
INF	0.861	0.413
MS	0.905	0.657
NC	0.855	0.333
OC	0.896	0.555

4.2.4 Discriminant Validity

The discriminant validity assesses whether a reflective construct and its indicators has the strongest relationships in the comparison with other construct in the PLS path model (Hair, Hult, Ringle & Sarstedt, 2017). Besides, discriminant validity has become a generally accepted necessity to examine the relationship between latent variables. Fornell-Larcker criterion and the examination of cross-loadings are the dominant method for assessing discriminant validity in partial least squares model.

To assess cross loading, an indicator's outer loadings on a construct should be more than all its cross loadings with other constructs. Besides, the square root of the AVE of each construct should be more than its highest correlation with any other construct for the Fornell-Larcker criterion. However, the performance of cross loadings and Fornell-Larcker criterion reviewed as ineffective empirical research which unable to identify discriminant validity issues (Henseler, Hubona & Ray, 2015). Cross loading and Fornell-Larcker criterion fail in measuring discriminant validity whenever two constructs are perfectly correlated and the indicator loadings of the constructs under consideration only have slightly different.

As a solution, Henseler et al. (2015) suggest to examine the heterotrait-monotrait ratio (HTMT) of the correlations which is the ratio of the between- trait correlations to the within-trait correlations. HTMT criterion is a prediction of what the true correlation between two constructs in the case that they were perfectly measured. The confidence interval of the HTMT statistic should not involve the value 1 for all combinations of constructs. According to Table 4.8, the estimated values for HTMT statistic are range from 0.372 to 0.773. This proves that the discriminant validity is adequate.

Table 4.8: Heterotrait-Monotrait (HTMT) statistic

	EXP	HB	INF	MS	NC	OC
EXP						
HB	0.626					
INF	0.386	0.714				
MS	0.461	0.671	0.773			
NC	0.698	0.717	0.656	0.656		
OC	0.517	0.372	0.454	0.438	0.653	

4.3 Inferential Analyses

4.3.1 Collinearity Statistics (VIF)

Inner VIF values should be below 5 to interpret as absent of collinearity issue of the constructs. Refer to the Table 4.9, the inner VIF values for Overconfidence (OC), Experience (EXP), Information (INF), Market Sentiment (MS) and National Culture (NC) with Herding Behavior (HB) are 1.489, 1.562, 1.925, 2.001 and 2.214 respectively which are less than five indicating that none collinearity issues between the constructs.

Table 4.9: Inner VIF values

	EXP	HB	INF	MS	NC	OC
EXP		1.562				
HB						
INF		1.925				
MS		2.001				
NC		2.214				
OC		1.489				

4.3.2 Coefficient of Determination (R^2 Value)

Coefficient of Determination (R^2 Value) represent the predictive accuracy of a structural model and measure by the squared correlation between the actual and estimated values of a specific endogenous construct (Hair et al., 2014). R^2 provides the combined effects of independent variables on dependent variable which depict the degree of variance on endogenous construct explained by all the exogeneous constructs connected to it (Hair et al., 2014). R^2 close to 1 imply high predictive accuracy.

Table 4.10 shows the R^2 value of 0.531 indicates the combined effect of all the independent variables (Experience (EXP), Information (INF), National Culture (NC), Market Sentiment (MS) and Overconfidence (OC)) can lead to 53.1% variation in Herding Behavior (HB).

Table 4.10: R Square

	R Square
HB	0.531

4.3.3 f square

f^2 measures the change in R^2 value in the case where an exogeneous construct drops from the model for the purpose of examining the substantive impact of the dropped exogeneous construct on the endogenous construct (Hair et al., 2014). Evaluating different effect size where 0.02, 0.15 and 0.35 respectively depict the small, medium and large effects of the exogeneous latent variable (Cohen, 1977).

According to Table 4.11, f square of all the independent variables (Experience (EXP), Information (INF), National Culture (NC), Market Sentiment (MS) and Overconfidence (OC)) range from 0.013 to 0.112 show small (<0.15) effects on Herding Behavior (HB).

Table 4.11: f square

	EXP	HB	INF	MS	NC	OC
EXP		0.112				
HB						
INF		0.099				
MS		0.029				
NC		0.049				
OC		0.013				

4.3.4 Relevance and Significance of the Structural Model Relationships

There are five hypotheses developed to examine the relationship between the independent variables (Information, Market Sentiment, Overconfidence, National Culture and Overconfidence) and dependent variables (Herding Behavior). With the Smart PLS software, the bootstrapping calculation presents the path coefficient and p value to support the strength and significant of the relationship among the variables. Values of path coefficient are range between +1 to -1 to evaluate the strength of hypothesis relationship. Values nearer to +1 indicates a strong positive relationship while value close to 0 indicates a weak relationship.

Refer to Table 4.12 and Table 4.13, information ($\beta = 0.298$) and experience

(β = 0.286) have the strongest direct paths effects on herding behavior. Besides, they positively and significantly influence the herding behavior with p-values of 0.0000 ($\alpha < 0.05$). The hypothesis testing for information is supported with the findings that indicate a positive and significant relation between information and herding behavior in Malaysia stock market. In contrast, hypothesis testing of experience that proposed a negative relationship with herding behavior in Malaysia stock market is not supported where it found to be positive relationship.

On the other hand, national culture (β = 0.225) and market sentiment (β = 0.164) have weak direct path effects on herding behavior. Similarly, national culture (β= 0.225) is positively and significantly to influence herding behavior with p- values of 0.0000 ($\alpha < 0.05$) and there is a significant and positive relationship between market sentiment (β = 0.164) and herding behavior with p-values of 0.003 ($\alpha < 0.05$). The hypothesis testing suggests national culture is positively related to investor's herding behavior in Malaysia stock market is supported by the result. Same goes to the market sentiment, its hypothesis testing supported by the result where market sentiment is positively and significantly influence herding behavior in Malaysia stock market.

Last but not least, overconfidence (β = -0.097) has the weakest direct path effects on herding behavior. Furthermore, there is a negative relationship between overconfidence (β = -0.097)) and herding behavior but it is insignificant to influence herding behavior with p-values of 0.051 ($\alpha >$ 0.05). The hypothesis testing of overconfidence does not support by the finding as overconfidence is insignificant to affect herding behavior in Malaysia stock market.

Table 4.12: Path Coefficient and P- Values

	Original Sample (O)	P Values
EXP -> HB	0.286	0.000
INF -> HB	0.298	0.000
MS -> HB	0.164	0.003
NC -> HB	0.225	0.000
OC -> HB	-0.097	0.051

Table 4.13: Result of Hypothesis Testing

	Hypothesis	Path Coefficient	P value	Supported
H_1	Information is positively related to herding behavior among investors in Malaysia stock market.	0.298	0.000	Yes
H_2	Overconfidence is positively related to herding behavior among investors in Malaysia stock market.	-0.097	0.051	No
H_3	Market Sentiment is positively related to herding behavior among investors in Malaysia stock market.	0.164	0.003	Yes
H_4	Experience is negatively related to herding behavior among investors in Malaysia stock market.	0.286	0.000	No
H_5	National Culture is positively related to herding behavior among investors in Malaysia stock market.	0.225	0.000	Yes

4.4 Conclusion

In this chapter, we examined the relationship between five independent variables and herding behavior among investors in stock market of Malaysia by the test with Inferential Analysis. Descriptive analysis provided a better understanding for readers about the demographic characteristic of respondents. The reliable of questionnaire also examined with reliability test. In brief, all independent variables are positively related towards herding behavior among investors except the overconfidence variable is insignificant. The finding of this research, limitation, implication, and recommendation will be discussed in the next chapter.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

Chapter four comprises of the results for the relationship between herding behavior among investors and the five independent variable including information, market sentiment, national culture, overconfidence and experience in Malaysia stock market. The first section of this chapter is the summary of the result from the hypothesis testing calculated in the previous chapter. The second section is the discussion of the major findings in this study. The third section is the policy implication for different sectors. The fourth section is the limitation of this study, then continues to the recommendation for the future studies. The last section ends up with a conclusion which summarizesthe contents in this chapter.

5.1 Summary

There is an increasing number of investors invest in stock market throughout the years. However, investors may not always make their own investment decision under the varying market environment and uncertainty. Herding behavior is perceived as a human instinct and always occur in human decision-making process. It causes the rallies or selloffs based on hype without sufficient fundamental evidence, makes the market inefficient and leads to investment bubbles. Some investors may face huge financial loss by following the trend blindly. Hence, the main objective of this study is to identify the potential factors which influence

herding behavior among investors in Malaysia stock market. National culture is included as a factor in this study as it may cause the majority of investors make similar investment decision in stock market.

Theoretical model is discussed in chapter two. Behavioral Finance Theory is discussed as it provides explanation based on the behavioral economics or financial psychology perspectives. In order to strengthen the relationship between information and herding behavior, Information Cascade Theory is applied. The relationship between overconfidence and herding behavior is discussed with Better-than-average Effect as well. Meanwhile, there is limited study to investigate how national culture influence the herding behavior among investors in Malaysia stock market, hence, national culture acts as gap variable in this study.

Next, chapter three presents the methodology and the statistical test for the study. First, face to face questionnaire distribution to respondents with simple random method will be applied. Questionnaire is made up of six constructs while five-point Likert scale is applied. Each construct consists five to eight questions. 400 sets questionnaire is collected back from respondents. Smart PLS program is use for data processing. In order to determine the constructs reliability, outer loading is used. Bootstrapping is used to recognize the path coefficient of each construct.

Smart PLS software is used for statistical analysis of 400 set of questionnaires in order to study the relationship between the independent variables (information, market sentiment, overconfidence, experience and national culture) with dependent variable (herding behavior) on Malaysia stock market in chapter four. Statistical analysis separated into two sections which is descriptive analysis and inferential analysis.

In the study, descriptive analysis is progressed on six demographic variables which consist of gender, age group, race, marital status, monthly personal income level and experience in investing. For gender, 51.25% is male respondents while 48.75% is female respondents. Majority of the respondents in the age between 21years old to 30 years old, which has 23.75% out of total respondents. Most of the respondent are

the Chinese and Malay, with the status of single and married. There are 35.75% of total respondents has RM 2,001 to RM 4,000 for their monthly personal income. They tend to use stock investment as their alternative source of income in this economic depression decade. Majority of the respondents has one to below three years of investment experience.

Based on inferential analysis, the inner VIF values shows there is none collinearity issues between the constructs. Besides, the R^2 value of 0.531 indicates the combined effect of all the independent variables lead to 53.1% variation in dependent variable. The outer loadings for overall indicators in the model are between 0.400 to 0.708 shows that the indicator's reliability is accepted. The findings show that information and experience have the strongest direct paths effects on herding behavior while there is weaker effect from national culture and market sentiment on herding behavior among the investors in Malaysia stock market. Information, experience, national culture and market sentiment are positively and significantly influence the herding behavior while overconfidence found to be insignificant to affect herding behavior.

5.2 Discussion of Major Findings

5.2.1 Relationship between Information and Herding Behavior

The result in this study states that there is a positive relationship between information and herding behavior among investors in Malaysia stock market. This is supported by the previous studies of Chan and Hussien (2017), Ankitha et al. (2017), Ali and Zeinab (2013), Fernandez et al. (2011), Komalasari (2016), Ishak, Sukrisno, & Ignatius (2016) and Ramli et al.

(2016). Investors are more likely to adopt the same decisions from the same information when the information is more attainable and easier to explain. Sharma and Bhowal (2017) suggest that most of the investors make their decision according to the public information. Besides, most of the investors in Malaysia overreact to the news about the election (Jacob, 2017). Herding behavior among investors occur when all of them analyze the news in the same way (Botsvadze, 2013). On the other hand, perfect information does not exist in this world, the feeling of uncertain leads investors perceive that others have a better information, thus follow others' investment decision.

5.2.2 Relationship between Overconfidence and Herding Behavior

Surprisingly, overconfidence is found to be insignificant on herding behavior among investors in Malaysia stock market. Shusha and Touny (2016) explain that overconfidence differs based on the level of experience by referring to Dunning-Kruger Effect (Kruger & Dunning, 2009). The level of fake overconfidence tends to decrease when the individual's experience has increased. Until a certain level, the overconfidence will raise with the level of experience. Meanwhile, most of investors in Malaysia stock market are being overconfidence (Noordin, 2018). They are often inflated in their own abilities and make their own decision in following others' investors decisions or not. On the other hand, descriptive analysis in this study shows that most of the investors are in the age group between 21 to 30. As most of the investors in this age group investors are generally educated, they choose to believe their own analysis and belief in deciding whether to join the herd or not. In this situation, overconfidence is believed does not contribute to herding behavior in Malaysia stock market.

5.2.3 Relationship between Market Sentiment and Herding Behavior

The positive relationship found in this study between market sentiment and herding behavior supports the hypothesis statement. The studies conducted by Economou, Hassapis and Philippas (2018), Kabir and Shakur (2018), Huang and Wang (2017), Litimi (2017), Berisha and Pavlovska (2015), Jlassi and Naoui (2015) also propose that market sentiment have a positive impact on investor herding behavior. As long as the market is participated by human instead of machines, every participant, markets as well as stocks are influenced by the wave of sentiment on a different degree (Jasman, Zamri & Hylmee, 2016). Malaysia's market sentiment remains weak due to the risk of trade war and election uncertainties. The uncertainties of Malaysia's politic during the period before GE14 caused a cautious sentiment in the market. Investors would seek safety in numbers when the market is overwhelmed in uncertainty and fear. This is in line with Zhou and Lai (2009) who point out that investors herd more often when market sentiment is poor. They tend to follow others in their investment decision making in order to play safe. In fact, herding is associated with dramatic changes in market conditions, particularly when the uncertainty is overwhelming. When there is a sudden change in the direction of market movement, the panic in the market may trigger herding, which greatly influence market direction (Wong, Poi & Kok, 2006).

5.2.4 Relationship between Experience and Herding Behavior

The result shows there is a positive relationship between experience and herding behavior in Malaysia stock market. Experienced investors in Malaysia stock market will assume Malaysia stock market is manipulated by hyping tactic of operators. According to Aruna (2017), Bursa Malaysia found manipulative activities conducted by operators through social media and Internet. Operators tend to propagate fake or misleading statements, news or rumors in investor blogs or chat groups to fascinate uninformed investors to call stocks which are touted as "hot" picks. Firstly, operators will call at lower price and start to being persuasive in chat groups to lure innocence investor to call the stock with the objective of accumulating large quantities and boosting up the prices. When the stock price is bubble up due to continuous rising of trading volume, the operators will put their stocks as their behind plot before the hype ends. Leaving of operators out of market will lead the price to fall greatly while cherry investors lose their capital as they call at high and put at low. Hence, experienced investors tend to make presumption on their technical analysis is insignificant to investment decision and thus, apply the tactic with herding concept to time the market. The positive effect of experience toward herding also supported by Steenbarger (2016), there is herd mentality practiced by professional money managers as well as individual investors due to they tend to become weak in term of critical thinking when exposed to opinion and advice from finance expert which has high persuasive power. Thus, the experienced investor will herd due to unconfident with their decision when exposed to professional advice and always unable to stand against the risk associated on their investment decision.

In contrast, it is different from the study conducted by Menkhoff, Schmidt, and Brozynski (2006), they clarify experienced fund managers in Germany will be more awareness and tend to less perform herding in fund

management companies. Nguyen and Schuessler (2012) found Cortal Consors, an online bank's investor experience is negatively influence herding. Tunisian investors that lack of experience tend to display mimetic bias (Rekik & Boujelbene, 2013). However, Subash (2012) clarifies that herding not an important variable to separate younger and experienced investors in Kerala, India as they are equally to practice herding in the decision-making process on portfolio.

5.2.5 Relationship between National Culture and Herding Behavior

This study found that national culture is positively related to herding behavior among investors. This is consistent with the past studies of Chang and Lin (2015) Vasiliauskaite and Grikietyte-Cebataviciene (2017), and Munkh-Ulzii et al. (2017). National culture is very important in determining the way of people thinking which may influence their action or decision regarding its characteristic. It also influences the investors' behavioral response to the information of market and investment decision (Zhang, 2015). According to the survey of Hofstede Insights, Malaysia score high in certain dimension of national culture which are power distance, masculinity index which categorized as collectivism society. In collectivism society, investors more emphasize about the opinion of other or public than their own opinion which cause their trading behavior easily affected by market consensus and cause the trend of herding behavior among investors in stock market. According to Chang and Lin (2015), the tendency of herding behavior is higher in country with high power distance and masculinity index. In order to earn higher profit to satisfy their greedy desire, investors tend to follow the information of transaction that made by other investors to buying high and selling low which encourage the trend of herding behavior in Malaysia stock market. Most people do not realize these

deep influences of their culture to their way of thinking. However, national culture has great impact on investors in many aspects such as entrepreneurship, attitudes to risk, creativity, adventure, collaboration and sharing of resources, and failure. Malaysian investors might make herd-like decision unconsciously to avoid their investment failure. Therefore, herding behavior arises among investors in stock market.

5.3 Implications of the Study

This study find that information has a positive and significant relationship with herding behavior among investors in Malaysia stock market. Investors are advised to have a clear mind set in verifying the appropriateness of information when making investment decision, but not blindly follow the disseminated information. In order to decrease the misleading information, government should enhance the law and regulation under Section 178 of the Capital Markets and Services Act to avoid those who disseminate inaccurate information in the internet purposely. Withthis action, opportunity for perpetrators that intend to drive the market will be reduce. Hence, the herding behavior of unsuspecting investor will tend to decrease.

Besides, market sentiment is found to be positively influence herding behavior among investors. Investors are suggested to adopt contrarian investment strategy as the company's likelihood of returning profitability are often understated when the market is overwhelmed with fear sentiment. Buy such distressed shares and sell them after the recovery of company can bring above-average profit. This is much better than imitate other's investment decision blindly that may cause them miss the chance to earn profit. With the positive effect between experience and herding behavior, investors with high investment experiences are advised to avoid joining the herd with an intention to time the market. They may encounter huge losses as the market movement may not always go to the direction they expected.

On the other hand, national culture is positively related to herding behavior among

investors in Malaysia stock market. As a guide, investors are suggested to resolve their limits of thinking by advancing the understanding of different culture. Besides, investors can have more interaction with people from different culture to improve their own accustomed thinking style in order to make a better decision for investment (Lee, 2017). Therefore, investors will not afraid of behave differently in the crowd to make their own decision without blindly follow the trend of market and reduce the tendency of herding behavior among investors.

5.4 Limitation of the Study

Limitation of study is very important for future researchers to investigate those similar topics in more comprehensive way. There are some limitations of this research that might affect reliability and credibility of result have been identified. These limitations can improve the future research and help future researchers to get more accurate result.

Firstly, the limited dimensions of national culture that included in this research. Four dimensions of national culture that created by Hofstede (2011) were used in this research which included power distance, individualism, masculinity, and uncertainty avoidance index. These four dimensions of national culture might not fully explain the impact of national culture toward herding behavior among investors in stock market of Malaysia. Therefore, the result of this research might affect by limited dimensions of national culture included.

Besides, one of the limitations is the compelled to limit the sample size due to economic and other reasons. The targeted sample size of investors that conducted in this research were 400 and only three states of Malaysia be chosen for the destination to distribute the questionnaire which included Kuala Lumpur, Johor, and Penang. However, there are many states of Malaysia do not cover in this research. The credibility and reliability of data might not accurate since the sample size do not totally represent all the perspective of investors in Malaysia.

5.5 Recommendation for Future Research

Recommendation able to provide some useful idea or guide for future researcher that not only solve certain problems, but also result in a beneficial outcome (Copland, 2016). Recommendations can be different because it depending on the research that using differences method, country, method of data collection and explanatory variable. In this research, there are several recommendations and suggestion that would benefit for those future researchers who doing the relevant research area.

Firstly, future researchers are recommended to use other types of research method for data collection other than questionnaire such as personal interview, telephone survey or mail survey. Structured interview is one of the types of interview which differs from questionnaire. It allows researcher to ask more complicated questions and the forms are filled in by researchers, not by the respondents. At the same time, data can be validated while the data collection process to improve the quality of data. Interviews can be conducted through many different types of data sources like by telephone or in person. Besides that, telephone survey can contain some short and easy questions and read it to respondents through the telephone. It has more chance get to the respondents at anywhere or any place and able to save a lot of travel time and cost compared to other method.

Next, there are only three states of Malaysia which are Kuala Lumpur, Johor, and Penang be chosen in this research which might not totally represent all the perspective of investors in Malaysia. In order to get more precision or accuracy of data, future researchers are recommended to increase the sample size and number of questionnaire and conduct the research that cover all the states of Malaysia. Furthermore, future researchers also encouraged to use more dimension of national culture as explanatoryvariable for herding behavior of investor such as indulgence dimension and long-term orientation dimension. Because there are very less researchers conduct the similar research by using national culture as independent variable in Malaysia.

Lastly, future researchers are suggested to involve all the type of investment in financial market of Malaysia instead of focus only one market since this research only emphasize and analyze the investors from stock market but there are still many different types of investment in Malaysia. Future researcher can investigate the behavior of investors of financial market such as bond market, derivatives market, money market, and foreign exchange market by targeting all type of investors which able to provide a more complete view of investors.

5.6 Conclusion

Firstly, the main purpose of this study is to identify the relationship between dependent variable which is herding behavior of investor and independent variables which included information, overconfidence, market sentiment, experience and national culture in stock market of Malaysia. This study uses primary data that collect by distribute the questionnaire to respondent in selected states of Malaysia. As a result, the positive and significant relationship between herding behavior of investor and all the independent variables (information, market sentiment, experience and national culture) have been confirmed in our result except the overconfidence is insignificant. The findings of this study could be an idea or guide that benefit the government and stock investors. Lastly, several limitations of this study have been discussed and some recommendation proposed for the improvement of future research.

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Appendix 3.1 Questionnaire Survey Form

Dear Respondent,

Warmest greeting from Universiti Tunku Abdul Rahman (UTAR)

We are currently conducting our final year project to do research on herding behavior in Malaysia's stock market. In order to determine the factors which, increase herding behavior tendency, we need to collect data to measure and make a conclusion.

Voluntary nature of the study:

Participation in this research is entirely voluntary. All information collected is treated as strictly confidential and will be used for the purpose of this study only.

Please be informed that in accordance with Personal Data Protection Act 2010 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.

Acknowledgement of notice:

☐ I have been notified by you and that I hereby understood, consented and agreed per UTAR notice.

☐ I disagree, my personal data will not be processed.

Yours sincerely,

Soh Zi Han
Faculty of Business and Finance
Universiti Tunku Abdul Rahman (UTAR)
Jalan Universiti, Bandar Barat, 31900 Kampar,
Perak Darul Ridzuan.

Please indicate your agreement for the following items based on the Scale of 1 to 5 (1: Strongly Disagree; 5: Strongly Agree). Each item represents a commonly held opinion. Indicate your agreement to each statement by ***selecting the most appropriate answer.***

1	2	3	4	5
Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)

Section A: This section is about each construct on DV

Construct 1: Information

Source of Information

No.	***Code***	***Item***	***SD***	***D***	***N***	***A***	***SA***
1	SI1	I rely on the smartphone applications to get information of the stock market.	1	2	3	4	5
2	SI2	I get information of stock market from the Internet.	1	2	3	4	5
3	SI3	I usually get the information from radio and TV news and analyze it before making investment decision.	1	2	3	4	5
4	SI4	I often consider the information through word of mouth when making investment decision.	1	2	3	4	5
5	SI5	I usually obtain the information of the stock market through the newspaper or magazines.	1	2	3	4	5

Information Uncertainty

No.	***Code***	***Item***	***SD***	***D***	***N***	***A***	***SA***
6	IU1	I will investigate other investors' decision when I have information uncertainty problem.	1	2	3	4	5
7	IU2	I hold some shares in a firm but suddenly I hear some bad rumors about the firm, so I decide to sell the shares before the rumors are confirmed.	1	2	3	4	5
8	IU3	When selecting the stocks, I always choose the ones which I usually purchase.	1	2	3	4	5
9	IU4	I usually unwilling to try another stock because lack of information on it.	1	2	3	4	5
10	IU5	When I am uncertain how to act in stock market, I look to the behavior of others.	1	2	3	4	5

Information Asymmetry

No.	*Code*	*Item*	*SD*	*D*	*N*	*A*	*SA*
11	IA1	I will follow other investors' decision because the information that he/she obtains are wider than me.	1	2	3	4	5
12	IA2	I will follow the majority investors' decision who believe that the stock will provide benefits.	1	2	3	4	5
13	IA3	I purposely follow other investors' decision in order to protect my own interest because I believe their decision are greater informed.	1	2	3	4	5
14	IA4	I will choose to follow group behavior in risky financial products.	1	2	3	4	5
15	IA5	Brokers do not provide me accurate information about stock market.	1	2	3	4	5

Construct 2: Overconfidence

No.	*Code*	*Item*	*SD*	*D*	*N*	*A*	*SA*
16	OC1	I have sufficient knowledge of stock market investment.	1	2	3	4	5
17	OC2	I am sure that I can make the correct stock market investment decision.	1	2	3	4	5
18	OC3	I am confident of my ability to pick better stocks than others.	1	2	3	4	5
19	OC4	With my past investment successes, I act more confident by investing more in stocks.	1	2	3	4	5
20	OC5	I forecast the changes in stock prices in the future based on the recent stock prices.	1	2	3	4	5
21	OC6	My successful investment strategies play an important role in generating my investment return.	1	2	3	4	5
22	OC7	I believe that the market trend is often consistent with my perspectives.	1	2	3	4	5

Construct 3: Market Sentiment

No.	*Code*	*Item*	*SD*	*D*	*N*	*A*	*SA*
23	MS1	I will follow other investors' decision when there is an increased anxiety of upcoming market condition period.	1	2	3	4	5
24	MS2	I believe that follow other investors' decision may let me experience less disappointment even though the decision turns out not satisfying.	1	2	3	4	5
25	MS3	I will follow other investors' decision when stock market is overwhelmed by panic and fear.	1	2	3	4	5
26	MS4	I will make a similar choice with other investors when I am facing the fear of market sudden move.	1	2	3	4	5
27	MS5	I will follow other investors' decision when the future market volatility is expected to be high.	1	2	3	4	5

Construct 4: National Culture

Power Distance

No.	*Code*	*Item*	*SD*	*D*	*N*	*A*	*SA*
28	PD1	I receive information in unequal conditions with high power distance environment.	1	2	3	4	5
29	PD2	I should follow the decisions of other investors who have better performance in investment unconditionally.	1	2	3	4	5
30	PD3	I agree that investors in higher positions should make most decisions without consulting investors in lower positions.	1	2	3	4	5
31	PD4	I agree that investors in lower position are more likely to accept information shared by others and follow their decision.	1	2	3	4	5
32	PD5	I agree that beginner-investors are afraid to express opinions that different with experienced investors.	1	2	3	4	5

Uncertainty Avoidance

No.	*Code*	*Item*	*SD*	*D*	*N*	*A*	*SA*
33	UA1	I enjoy taking risk in investment to get higher return.	1	2	3	4	5
34	UA2	I am worried when facing unknown situations in the stock market.	1	2	3	4	5
35	UA3	It is important for me to plan before I make any decision to invest.	1	2	3	4	5
36	UA4	I agree that investor must be proficient in the knowledge of investment before he or she want to invest a stock.	1	2	3	4	5

37	UA5	It is important for me to follow instructions and procedures of stock market.	1	2	3	4	5

Masculinity

No.	***Code***	***Item***	***SD***	***D***	***N***	***A***	***SA***
38	M1	I agree that male investors usually invest with logical analysis whereas female investor usually invest with intuition.	1	2	3	4	5
39	M2	I agree that the decisions of male investors are more accurate than female investor.	1	2	3	4	5
40	M3	I agree that male investors usually are risk-taker whereas female investors are risk-averse.	1	2	3	4	5
41	M4	I prefer an investment with high risk and high return than an investment with low risk and low return.	1	2	3	4	5
42	M5	I agree that investors are more focus on high earning of investment to satisfy their greed.	1	2	3	4	5

Individualism

No.	***Code***	***Item***	***SD***	***D***	***N***	***A***	***SA***
43	IND1	I think that rewards for individuals are more important than the welfare of the group.	1	2	3	4	5
44	IND2	I am more likely to care more about my own opinions than public opinions.	1	2	3	4	5
45	IND3	I believe more on my own assessment rather than those assessments done by other investors.	1	2	3	4	5
46	IND4	I should share my information and discuss with other investor to make decision together.	1	2	3	4	5
47	IND5	I agree that it is important for investor to pursue their own interests more than considering others people interest.	1	2	3	4	5

Construct 5: Experience

No.		***Item***	***SD***	***D***	***N***	***A***	***SA***
48	EXP1	My past investment successes are resulted from my own expertise and comprehension.	1	2	3	4	5
49	EXP2	I will make my own investment decision as I have sufficient knowledge in Malaysia stock market with my past experience.	1	2	3	4	5
50	EXP3	I will select the next investment based on my previous experience in the market.	1	2	3	4	5

51	EXP4	My past investment successes make me select the next investment on my own.	1	2	3	4	5
52	EXP5	Prior to the investment, I will analyze the past performance of a stock based on my own experience instead of blindly follow other's decision.	1	2	3	4	5
53	EXP6	I am more aware of other investors' investment decisions as I experience different trading situation for different market trend.	1	2	3	4	5
54	EXP7	I will imitate other investors' decisions whenever I am not confident.	1	2	3	4	5
55	EXP8	I believe that past investment experience reminds me about risk associated with every investment.	1	2	3	4	5

Construct 6: Herding Behavior

No.	***Code***	***Item***	***SD***	***D***	***N***	***A***	***SA***
56	HB1	I normally invest in companies I am familiar with.	1	2	3	4	5
57	HB2	Rumors in the market always influence my investment decision making.	1	2	3	4	5
58	HB3	I don't have enough knowledge about stock market.	1	2	3	4	5
59	HB4	I find that all investors are tend to imitate other's behavior.	1	2	3	4	5
60	HB5	I prefer to follow the better decisions made by other investors when invest in risky financial products.	1	2	3	4	5
61	HB6	I find it easy to imitate the behavior of other investors.	1	2	3	4	5
62	HB7	I would like to invest in the stocks which my friends or family have done the investment.	1	2	3	4	5
63	HB8	My conservative attitude makes me forced to follow the investment decision of other investors.	1	2	3	4	5
64	HB9	I do not have enough information to decide my own decision to invest.	1	2	3	4	5
65	HB10	I would bid the same financial products as my friends.	1	2	3	4	5

Section B: Respondent's Demographical Profile

1. Please indicate your gender:

☐ Male ☐ Female

2. Age group:

☐ Below 21 ☐ Between 41 – 50

☐ Between 21 - 30 ☐ Between 51 – 60

☐ Between 31 - 40 ☐ 61 and above

3. Race:

☐ Malay

☐ Chinese

☐ Indian

☐ Others: (Please specify)
……

4. Marital Status:

☐ Single (never married) ☐ Widowed

☐ Married ☐ Separated

☐ Divorced

5. Please state your monthly personal income:

☐ Below RM2,000 ☐ RM4,001 – RM6,000

☐ RM2,001 – RM4,000 ☐ More than RM6,000

6. Experience in investing:

☐ Below 1 year ☐ 5 – below 7 years

☐ 1 – below 3 years ☐ More than 7 years

☐ 2 – below 5 years

Thank you for participating in this survey. Your participation is highly appreciated.

Appendix 3.2 Source of Questionnaire Construct 1: Information

Source of Information

Code	***Source***
SI1	Chan and Husssein (2017)
SI2	Sneha and Sanjay (2017)
SI3	Amlan and Amalesh (2017)
SI4 – SI5	Ankitha, Balasubramanian and Lakshmi (2017)

Information Uncertainty

Code	***Source***
IU1 – IU5	Ferna´ndez, Merino, Mayoral, Santos and Vallelado (2011)

Information Asymmetric

Code	***Source***
IA1 – IA 2	Puput (2016)
IA3	Amlan and Amalesh (2017)
IA4 – IA 5	Jose, Varghese and Surendran (2018)

Construct 2: Overconfidence

Code	***Source***
OC1	Prosad (2014)
OC2	Lin (2011)
OC3	Shusha and Touny (2016)
OC4	Prosad (2014)
OC5 – OC6	Shusha and Touny (2016)
OC7	Prosad (2014)
OC8	Shusha and Touny (2016)

Construct 3: Market Sentiment

Code	***Source***
MS1	Berisha and Pavlovska (2015)
MS2	Nofsinger (2008)
MS3	Hassapis and Philippas (2018)
MS4 – MS5	Litimi (2017)

Construct 4: National Culture

Power Distance

Code	***Source***
PD1	Enkh-Amgalan (2016)
PD2	Wu (2006)
PD3	Yoo, Donthu, and Lenartowicz (2011)
PD4	Wu (2006)
PD5	Yoo, Donthu, and Lenartowicz (2011)

Uncertainty Avoidance

Code	***Source***
UA1	Enkh-Amgalan (2016)
UA2	Yoo, Donthu, and Lenartowicz (2011)
UA3 – UA4	Enkh-Amgalan (2016)
UA5	Wu (2006)

Masculinity

Code	***Source***
M1 – M5	Enkh-Amgalan (2016)

Individualism

Code	***Source***
IND1	Enkh-Amgalan (2016)
IND2	Yoo, Donthu, and Lenartowicz (2011)
IND3 – IND4	Wu (2006)
IND5	Enkh-Amgalan(2016)

Construct 5: Experience

Code	***Source***
EXP1 – EXP2	Prosad (2014)
EXP3	Shusha & Touny (2016)
EXP4	Prosad (2014)
EXP5	Subash (2012)

Construct 6: Herding Behavior

Code	***Source***
HB1 – HB10	Jose, Varghese and Surendran (2018)