

Antecedents of and Relationship between Financial Literacy and Investment Behavioral Intention: a TPB Perspective

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Abstract

This study developed a broad conceptualization on antecedents of financial literacy and investment behavioral intention from the perspective of theory of planned behavior (TPB). A survey of 1,233 undergraduates and graduates was conducted in 25 public higher education institutions located in Guangxi, China to test the relationships. The results show that financial attitudes and attitudes toward money, financial socialization and financial self-efficacy, and financial confidence and financial information seeking behavior are antecedents of financial literacy. And financial attitudes, financial self-efficacy, and financial confidence are antecedents of investment behavioral intention. The findings of this study reveal that attitudes, financial subjective norms, and perceived financial behavior control have significant positive effects on financial literacy. The results further indicate that attitudes, financial subjective norms, and perceived financial behavior control have significant negative, significant positive, and no effect on investment behavioral intention, respectively. Financial literacy is found to have positive effect on investment behavioral intention.

Keywords: Financial literacy, Investment behavioral intention, Theory of planned behavior, Attitudes, Subjective financial norms, Perceived financial behavioral control



Introduction

During the last two decades, the worldwide researchers have been paying more and more attention on financial literacy and there are 325 related articles published in 2019 alone (Xin, 2022). Some studies have provided evidence that financial literacy has a significant effect on financial behavior including investment intention (Tanuwijaya & Setyawan, 2021) and entrepreneurial intention (Aldi et al., 2019). College students who have higher financial literacy are found to have higher entrepreneurial intention (Aldi et al., 2019). However, Grohmann (2018) concludes that most papers on financial literacy focus on people in developed countries. Fu (2020) mentions that only a handful of studies have attempted to explore empirical evidence on determinants of financial literacy of individuals, and there is a lack of the context of developing countries such as China.

In recent years, Chinese government and academics have increasingly attached importance to the evaluation and promotion of the financial literacy of individuals. For instance, the People's Bank of China set up a Consumer Financial Literacy Questionnaire in 2016, this was followed by three nationwide surveys in 2017, 2019, and 2021. However, the research on financial literacy in China is not enough, especially for different groups, and the questionnaire does not take into account the specific characteristics of the respondents (Ding, 2018). There is a relative lack of research on financial literacy among college students in China (Lu, 2018).

A fundamental proposition of financial literacy is that individuals' financial

literacy has a positive effect on their financial performance, national economic development (Xin, 2022; Zou, Zhao & Peng, 2019; Wei, 2018; Lusardi & Mitchell, 2014). Yet there is little agreement on what constitutes individuals' financial literacy, and it is not defined at all in many studies (Huston, 2010). The lack of a generally accepted conceptualization of financial literacy represents a major gap in the existing literature. It can be seen from the survey contents of financial literacy in the literature that financial literacy is only defined as a kind of knowledge or (and) ability needed for financial management, whereas financial values or attitudes are not taken into account (Xin, 2022). This study will follow the concept of financial literacy proposed by Xin et al. (2018, 2020) to explore antecedents of financial literacy and investment intention from the perspective of the theory of planned behavior (TPB).

Therefore, this paper has two objectives: 1. to develop a broad conceptualization on antecedents of financial literacy and investment behavioral intention of Chinese college students; and 2. to study the relationship between financial literacy and investment behavioral intention of Chinese college students. The results from this paper are expected to benefit the Chinese financial literacy and investment related authorities and educators to set up future policies or education content to improve Chinese college students' financial literacy and increase their investment intention.

Literature review

Theory of planned behavior (TPB)

TPB states that an individual's behavior



intentions are shaped by attitudes , subjective norms , and perceived behavioral control (Ajzen, 1991). Many researchers have applied TPB to study the antecedents of and relationship between financial literacy and investment intention such as Setiyani and Solichatun (2019), Shim et al. (2009), and Akhtar and Das (2019), etc. Attitudes, subjective norms, and perceived behavioral control consist of different dimensions in different papers. This study chose different dimensions from the literature to be antecedents of financial literacy and investment intention.

Financial literacy

At present, there is no unified definition of financial literacy, which is still a state of divergent views. Huston (2010) summarizes eight common definitions of financial literacy where financial knowledge and ability are the main common components. The Pisa (OECD, 2012) survey defines financial literacy as knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts. Xin et al. (2020) consider value as another component. Therefore, this study combines above views and defines that individual financial literacy is composed of financial knowledge, capability and value.

Investment behavioral intention

Investment intention is an indication of an individual's willingness to perform a specific behavior (Yadav and Pathak, 2017). Specific investment behavior is defined differently in different papers.

The study conducted by Akhtar and Das (2019) uses the TPB to analyze Indian individual investors' investment intentions in stock market. Aren and Hamamci (2020) define investment intention as the desire of individuals to invest in risky market or asset, such as stock. People's investment intention is defined as investing in the stock market in Lim et al. (2016). Thus, stock investment intention is defined as one component of investment behavior intention in this paper.

According to the TPB, entrepreneurial intention (EI) indicates the effort that the person will make to carry out that entrepreneurial behavior (Liñán & Chen, 2009). Wu and Wu (2008) define EI as the possibility of individuals starting to create a new business or add value to an existing organization in the future. EI has been defined and studied by other papers such as Aldrich and Martinez (2007), Choo and Wong (2006), Krueger and Brazeal (1994), Lu, Song and Pan (2021) and Thompson (2009). Following these papers, this study defines EI as entrepreneurial effort, actions and tendency of individuals choosing entrepreneurship from now to future.

Houses are regarded as one kind of safe assets with higher returns by many Chinese households (Dong et al., 2021). Some researchers state that the choice of buying houses is more likely to be driven by investing demand rather than living demand (Dong et al., 2021). A house presents a strong source of personal identity and home-ownership intention has a greater association with the actual buying behavior (Karunarathne & Ariyawansa, 2015). House-purchasing intentions are associated with purchasing houses during the following year (Choen et al, 2009). Thus, in this study, house-purchasing intentions represent a person's motivation in the sense of his or



her desire and conscious plan or decision to make choices of buying houses in following years.

Hence, stock investment intention, EI, and house-purchasing intention are three components of investment behavioral intention in this study.

Antecedents of financial literacy and investment behavioral intention

Based on TPB, antecedents of financial literacy and investment behavioral intention can be attitudes, subjective financial norms and perceived financial behavioral control. Attitudes consist of financial attitudes (Setiyani & Solichatun, 2019) and money attitudes (Amagir et al., 2018; Shim et al., 2010). Subjective financial norms have two dimensions as financial socialization (Setiyani & Solichatun, 2019; Sharif & Naghavi, 2020) and financial self-efficacy (Amagir et al., 2018; Shim et al., 2010). Similarly, there are two dimensions for perceived financial behavioral control: financial confidence (Setiyani & Solichatun, 2019) and financial information seeking behavior (Amagir et al., 2018; Sharif & Naghavi, 2020).

Shim et al., (2009) find that college students' financial attitudes, parental normative expectation (subjective norm), and perceived behavioral control are related to financial literacy as well as several components of financial literacy. Ameliawati and Setiyani (2018) conclude that there is positive influence of financial attitude, financial socialization, and financial experience toward financial literacy. Sohn et al., (2012) reveal that adolescents who choose media as their primary financial socialization agent, and those who have a bank account, exhibit higher levels of financial literacy, and

those who view money as goods or as a reward for efforts tend to report higher levels of financial literacy, while those perceiving money in terms of avoidance or achievement have lower levels of financial literacy. Sharif and Naghavi (2020) conclude that financial information seeking behavior contributes to college students' financial literacy. This means that active seeking for financial information plays a role in college students' financial literacy. Earl et al. (2015) find that retirement self-efficacy is positively related to financial literacy.

Based on the above literature results, the following hypotheses can be drawn regarding the antecedents of financial literacy:

H₁: individual financial literacy can be affected by their attitudes, subjective financial norms and perceived financial behavioral control.

H_{1a}: ① Chinese college students' financial attitudes have a positive effect on financial literacy. ② Chinese college students' attitudes toward money have a positive effect on financial literacy.

H_{1b}: ① Chinese college students' financial socialization has a positive effect on financial literacy. ② Chinese college students' financial self-efficacy has a positive effect on financial literacy.

H_{1c}: ① Chinese college students' financial confidence has a positive effect on financial literacy. ② Chinese college students' financial information seeking behavior has a positive effect on financial literacy.

Shim et al. (2009) find that college students' financial attitudes, parental normative expectation (subjective norm) and perceived behavioral control are related to financial behavioral intention. Setiyani and Solichatun (2019) display



that financial socialization, financial attitude, and financial confidence also have a positive effect on financial behavior in college student. Shih and Ke (2014) find that attitudes toward money lead to high-risk financial decisions. College student' financial behavior is found to be directly and indirectly influenced by perceived financial confidence and attitudes toward money (Susilowati & Latifah, 2017). Rejikumar (2017) proves that information seeking behavior causes satisfaction modification intentions. Hoffmann and Plotkina (2020) point out that consumers' financial information affects financial planning intentions. Deng et al. (2020) prove a positive relationship between information seeking and behavior intention of Chinese consumers based on a college students sample. Akhtar and Das (2019) suggest that financial self-efficacy plays a role on stock investment intention; subjective norms, on the other hand, exerts a weak positive effect on stock investment intention.

Therefore, the hypotheses regarding the antecedents of investment behavioral intention are:

H2: individual investment behavior intention can be affected by their attitudes, subjective financial norms and perceived financial behavioral control.

H2a: ① Chinese college students' financial attitudes have a positive effect on investment behavioral intention. ② Chinese college students' attitudes toward money have a positive effect on investment behavioral intention.

H2b: ① Chinese college students' financial socialization has a positive effect on investment behavioral intention. ② Chinese college students' financial self-efficacy has a positive effect on investment behavioral intention.

H2c: ① Chinese college students' financial confidence has a positive effect on investment behavioral intention. ② Chinese college students' financial information seeking behavior has a positive effect on investment behavioral intention.

Financial literacy and investment behavioral intention

Xin et al. (2018, 2020) find that financial knowledge, financial ability and financial values could explain financial behavior. Chaulagain (2015) shows that financial literacy has short and long term effects on financial behavior. Lusardi, Mitchell and Curto (2010) and Scheresberg (2013) argue that financial literacy is a strong predictor and contributor of financial behavior of individuals. Theodora (2016) states that generally, financial literacy is critical to help someone managing money independently and making the appropriate financial planning. Knowledge and understanding related to personal finances would affect students in making good and wise financial decisions (Gunardi, Ridwan, & Sudarjah, 2017). There is a significant positive influence of financial literacy on investment intention (Tanuwijaya & Setyawan, 2021). Financial literacy influences entrepreneurial intention as well (Aldi et al., 2019). They find that college students with high financial literacy would have higher entrepreneurial intention than students with low financial literacy in a sample of 382 undergraduate students in Musamus University.

Atkinson and Messy (2012) show a significant correlation between financial knowledge and financial behavior that individuals with more financial knowledge have more financial market



participation. Akhtar and Das (2019) conclude a positive relationship of financial knowledge and investment intention in stock market. Hasan et al. (2020) find that financial literacy has a positive effect on students' entrepreneurial intentions in a sample of 420 students of the Economic Education Study Program who come from public and private tertiary institutions in Makassar City, South Sulawesi, Indonesia.

Financial capabilities are found to be positively correlated with individual income and all kinds of financial management behaviors, such as whether or not to invest in financial management (Xin et al., 2020). Adiandari et al. (2020) reveal a significant positive effect of financial capability towards e-commerce entrepreneurial intentions.

Financial value is an individual's understanding of the value norms that should be observed in his/her financial activities. It is a value system that affects the individual's cognition, evaluation and choice of his/her financial activities (Xin et al., 2018). Xin et al. (2020) find that financial values and financial behavior variables have significant positive correlation, the higher the financial values score, the higher the income, the more prone to financial behavior; however, wealth values and financial

ethics are negatively correlated with materialism and self-interest belief, and positively correlated with public welfare donation. Further, Xin et al. (2020) find that financial value (wealth values and financial ethics) could predict a wide range of investment behaviors.

Based on the above literature results, the hypotheses regarding the relationship between financial literature and investment behavioral intention are proposed as:

H₃: Financial literacy of Chinese college students has a positive effect on investment behavioral intention.

H_{3a}: Financial knowledge of Chinese college students has a positive effect on investment behavioral intention.

H_{3b}: Financial capability of Chinese college students has a positive effect on investment behavioral intention.

H_{3c}: Financial value of Chinese college students has a positive effect on investment behavioral intention.

Research model

All of the above variables and hypotheses are summarized in the research model shown in Figure 1, which includes 3 main hypotheses and 9 sub-hypotheses.

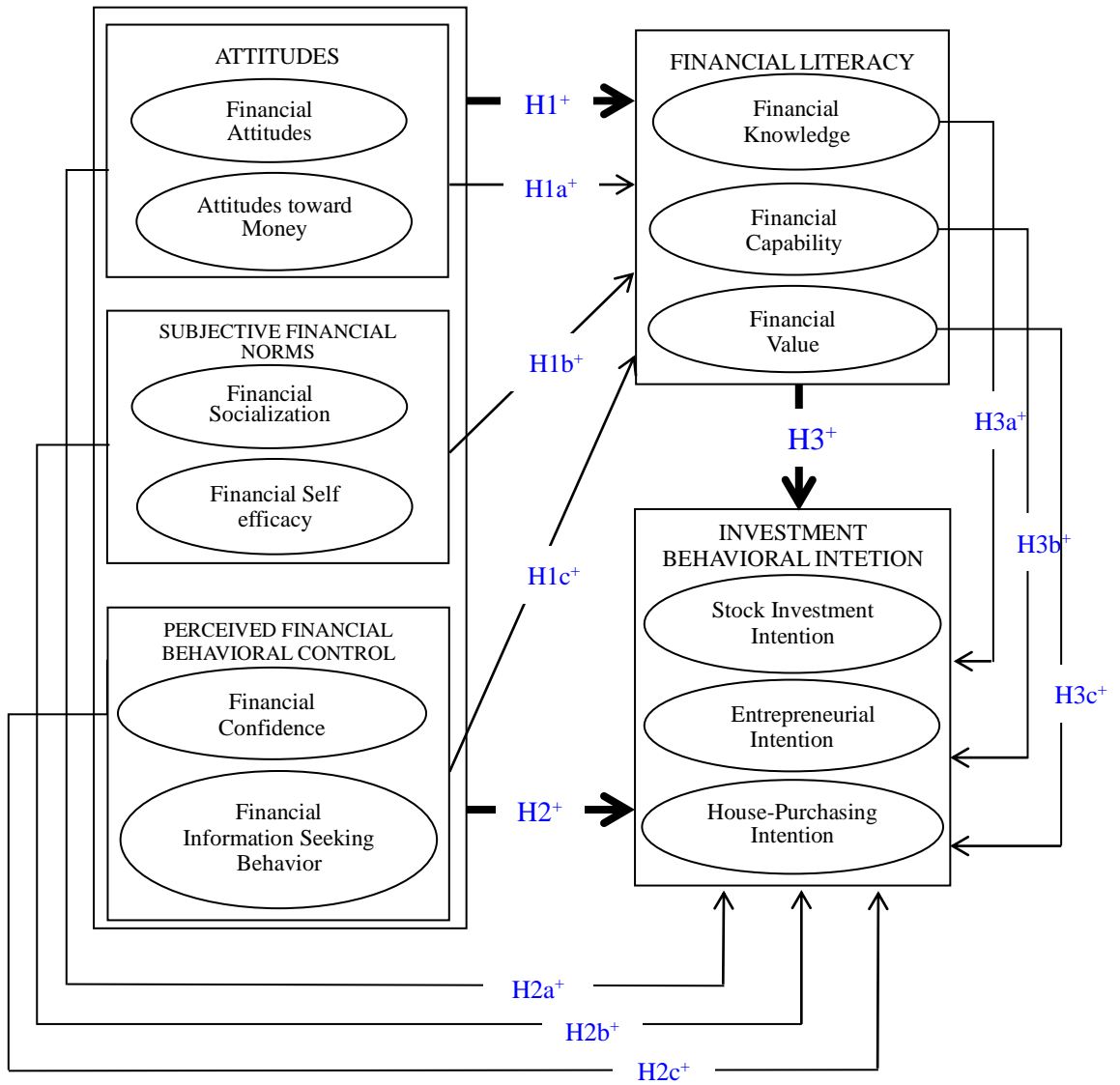


Figure 1 Research model



Methodology

Research design

This study adopts the quantitative research methodology and the questionnaire is used to collect the primary data. Hypotheses are tested by using path analysis.

The target population is the Chinese college students. One university could have students from all over the country, therefore, this study applied the convenience sample method by collecting data from universities in one province Guangxi, China. Currently there are total 25 public universities, which are Higher Education Institutions Offering Degree Programs, located in Guangxi Province, China. Data are collected from undergraduate and graduate students in these 25 public universities.

Data collection

Due to Covid-19 pandemic situation, online survey was considered a good choice at the time of data collection. The online survey was conducted in 25 public universities in April 2022 on the web site: www.wjx.cn. To collect the data, invitation letters and questionnaire information were sent to managers of student affairs office of 25 public universities in Guangxi, then the managers helped organize their undergraduates and graduates to fill out online questionnaires. The managers of student affairs office distributed emails or WeChat messages to invite their students to complete the web-based survey. The

web site and the QR code of the web survey questionnaire were sent to students by managers of student affairs office. From the website, participants received instructions on how to complete the survey, a consent form, and items. A total of 1235 responses were received, of which 2 were excluded because they rated their agreement on all items with the same score. This yielded a final sample size of 1233.

Research results

Reliability and validity tests

Table 1 presents the results of validity and reliability tests. All constructs have an average variance extracted (AVE) above 0.50, which indicates that all constructs used in this study are valid (Fornell & Larcker, 1981). All constructs have a good level of composite reliability (CR) which is higher than 0.7 (Fornell & Larcker, 1981) and Cronbach's alpha is also above 0.70 (Nunnally, 1978; Kuijpers & Croon, 2013). Thus, the questionnaire used in the study is reliable because it shows a good level of consistency and accuracy (Hair Jr et al., 1995). It can be seen from Table 2 and Table 3 that the correlations among constructs are below 0.85 and the square root of AVE values for each construct is higher than the value of all correlations between one construct and any other construct. Thus each construct is unique and captures phenomena not represented by other constructs in the model (Hair Jr et al., 1995).



Table 1 Results of reliability and validity tests

	Cronbach's Alpha	CR	AVE
First-order construct:			
Financial attitudes	0.777	0.786	0.554
Attitudes toward money	0.888	0.879	0.510
Financial socialization	0.894	0.895	0.630
Financial self-efficacy	0.895	0.889	0.574
Financial confidence	0.88	0.852	0.658
Financial information seeking behavior	0.836	0.907	0.765
Financial Knowledge	0.896	0.900	0.505
Financial capability	0.847	0.880	0.554
Financial Value	0.948	0.947	0.651
Stock investment intention	0.943	0.942	0.803
Entrepreneurial intention	0.944	0.944	0.74
House-purchasing intention	0.889	0.893	0.681
Second-order construct:			
Attitudes	0.859	0.916	0.523
Subjective Financial Norms	0.919	0.942	0.600
Perceived Financial Behavior Control	0.842	0.936	0.712
Financial Literacy	0.792	0.798	0.577
Investment Behavior Intention	0.792	0.798	0.577

Table 2 Correlation, and Discriminant Validity First-Order Construct

	1	2	3	4	5	6	7	8	9	10	11	12
1. Financial attitudes	0.744											
2. Attitudes toward money	0.311**	0.714										
3. Financial socialization	0.467**	0.315**	0.794									
4. Financial self-efficacy	0.384**	0.215**	0.629**	0.758								
5. Financial confidence	0.317**	0.212**	0.472**	0.664**	0.811							
6. Financial information seeking behavior	0.327**	0.311**	0.482**	0.518**	0.457**	0.875						
7. Financial Knowledge	0.338**	0.237**	0.515**	0.701**	0.550**	0.587**	0.711					
8. Financial capability	0.317**	0.188**	0.481**	0.674**	0.635**	0.483**	0.710**	0.744				
9. Financial Value	0.444**	0.382**	0.486**	0.436**	0.449**	0.519**	0.447**	0.511**	0.807			
10. Stock investment intention	0.095**	0.102**	0.245**	0.376**	0.231**	0.270**	0.468**	0.366**	0.104**	0.896		
11. Entrepreneurial intention	0.185**	0.075**	0.353**	0.475**	0.309**	0.341**	0.502**	0.418**	0.272**	0.561**	0.860	
12. House-purchasing intention	0.157**	0.106**	0.317**	0.451**	0.323**	0.307**	0.518**	0.423**	0.241**	0.542**	0.643**	0.825

NOTE: ** indicates $p < .01$ (two-tailed test). Numbers on the diagonal represent square roots of the AVE; the inter-construct correlations are below the diagonal.

Table 3 Descriptive statistics, correlation, and discriminant validity of second-order construct

	1	2	3	4	5
1 Attitudes	0.723				
2 Subjective Financial Norms	0.409**	0.775			
3 Perceived Financial Behavior Control	0.389**	0.700**	0.844		
4 Financial literacy	0.416**	0.739**	0.750**	0.760	
5 Investment Behavior Intention	0.154**	0.486**	0.407**	0.517**	0.766

NOTE: ** indicates $p < .01$ (two-tailed test). Numbers on the diagonal represent square roots of the AVE; the inter-construct correlations are below the diagonal.

Path analysis results

Antecedents of financial literacy and investment behavioral intention

Table 4 presents the results on antecedents of financial literacy and investment behavioral intention. It can be seen that financial attitudes and attitudes towards money, financial socialization and financial self-efficacy, and financial confidence and financial information seeking behavior can be considered as antecedents of financial literacy. As shown in Table 4, financial attitudes ($\beta=0.09$, $P<0.01$) and attitudes toward money ($\beta=0.06$, $P<0.01$) can influence Chinese college students' financial literacy significantly at the 1% level. Financial socialization ($\beta=0.07$, $P<0.01$) and financial self-efficacy ($\beta=0.36$, $P<0.01$) have positive effect on Chinese college students' financial literacy at the 1% significance level. Similarly, financial confidence ($\beta=0.22$, $P<0.01$) and financial information seeking behavior ($\beta=0.26$, $P<0.01$) have positive effect on Chinese college students' financial literacy at the 1% significance level. Therefore, Hypotheses 1a, 1b, and

1c are supported at the 1% significance level.

Furthermore, financial attitudes, financial self-efficacy, and financial confidence are found to be antecedents of investment behavioral intention at the 1% significant level. As shown in Table 4, financial attitudes ($\beta= - 0.09$, $P<0.01$) have significant negative effect on Chinese college students' investment behavioral intention. Financial self-efficacy ($\beta=0.32$, $P<0.01$) has significant positive effect on Chinese college students' investment behavioral intention. Financial confidence ($\beta= - 0.1$, $P<0.01$) has significant negative effect on Chinese college students' investment behavioral intention. However, the effects of other three constructs are not significant at all, i.e. attitudes toward money ($\beta= - 0.04$, $P=0.1$), financial socialization ($\beta=0.03$, $P=0.36$) and financial information seeking behavior ($\beta=0.05$, $P=0.14$) have no significant influence on Chinese college students' investment behavioral intention. The results of path analysis show that hypotheses 2a, 2b, and 2c are not supported.



Relationship between financial literacy and investment behavioral intention

It can be seen from Table 4 that financial knowledge ($\beta=0.51$, $P<0.01$) and financial capability ($\beta=0.14$, $P<0.01$) have positive effect on Chinese college students' investment behavioral intention at the 1% significant level, whereas financial value ($\beta= - 0.06$, $P=0.02$) has negative effect on Chinese college students' investment behavioral intention at the 5% significance level. Thus, financial knowledge, financial capability, and financial value can explain and predict investment behavioral intention. These path analysis results can be concluded that hypotheses 3a and 3b are supported at the 1% or 5% significance level.

Table 5 displays the results of path analysis for hypotheses 1, 2, and 3. Attitudes ($\beta=0.1$, $P<0.01$), subjective financial norms ($\beta=0.37$, $P<0.01$), and perceived financial behavior control

($\beta=0.45$, $P<0.01$) have significant positive effects on Chinese college students' financial literacy at the 1% level. Thus, H1 is supported at the 1% significance level. Also, attitudes ($\beta= - 0.13$, $P<0.01$) have significant negative effect on Chinese college students' investment behavioral intention at the 1% level, subjective financial norms ($\beta=0.26$, $P<0.01$) have significant positive effects on Chinese college students' investment behavioral intention at the 1% level. However, perceived financial behavior control ($\beta= - 0.02$, $P=0.64$) has no effect on Chinese college students' investment behavioral intention. Hence, H2 is not supported. Finally, Financial literacy ($\beta=0.39$, $P<0.01$) has significant positive effect on Chinese college students' investment behavioral intention. Thus, H3 is supported at the 1% significant level. Therefore, it can be summarized that attitudes, subjective financial norms, and financial literacy can explain and predict investment behavioral intention.

Table 4 Results of path analysis for hypothesis 1a to hypothesis 3c

Hypothesis	Path analysis		Standardized path coefficients	S.E.	P	Results	
H1a	financial attitudes	→	financial literacy	0.09	0.02	***	Supported
	attitudes toward money	→	financial literacy	0.06	0.01	***	
H1b	financial socialization	→	financial literacy	0.07	0.02	***	Supported
	financial self-efficacy	→	financial literacy	0.36	0.02	***	
H1c	financial confidence	→	financial literacy	0.22	0.02	***	Supported
	financial information seeking behavior	→	financial literacy	0.26	0.02	***	
H2a	financial attitudes	→	investment behavioral intention	-0.09	0.03	***	Not supported
	attitudes toward money	→	investment behavioral intention	-0.04	0.03	0.10	
H2b	financial socialization	→	investment behavioral intention	0.03	0.04	0.36	Not supported
	financial self-efficacy	→	investment behavioral intention	0.32	0.04	***	
H2c	financial confidence	→	investment behavioral intention	-0.10	0.03	***	Not supported
	financial information seeking behavior	→	investment behavioral intention	0.05	0.03	0.14	
H3a	Financial knowledge	→	investment behavioral intention	0.51	0.04	***	Supported
H3b	Financial capability	→	investment behavioral intention	0.14	0.04	***	Supported
H3c	Financial value	→	investment behavioral intention	-0.06	0.03	**	Supported

Note: ***indicates $p < 0.01$ and ** indicates $p < 0.05$.

Table 5 Results of path analysis for hypothesis 1 to hypothesis 3

Hypothesis	Path analysis		Standardized path coefficients	S.E.	P	Results	
H1	attitudes	→	financial literacy	0.10	0.02	***	Supported
	subjective financial norms	→	financial literacy	0.37	0.02	***	
	perceived financial Behavior Control	→	financial literacy	0.45	0.02	***	
H2	attitudes	→	investment behavioral intention	-0.13	0.04	***	Not supported
	subjective financial norms	→	investment behavioral intention	0.26	0.05	***	
	perceived financial Behavior Control	→	investment behavioral intention	-0.02	0.05	0.64	
H3	financial literacy	→	investment behavioral intention	0.39	0.05	***	Supported

Note: *** indicates $p < 0.01$.



Conclusion and discussion

Conclusion

This paper studied antecedents of and relationship between financial literacy and investment behavioral intention of Chinese college students in 25 universities in Guangxi, China from the TPB perspective. The results show that financial attitudes and attitudes toward money, financial socialization and financial self-efficacy, and financial confidence and financial information seeking behavior are antecedents of financial literacy. Financial attitudes, attitudes toward money, financial socialization, financial self-efficacy, financial confidence, and financial information seeking behavior have significant positive effect on financial literacy. The results indicate that financial attitudes, financial self-efficacy, and financial confidence are antecedents of investment behavioral intention. Financial attitudes and financial confidence have significant negative effect on investment behavioral intention whereas financial self-efficacy has significant positive effect on investment behavioral intention.

The findings of this study reveal that attitudes, subjective financial norms, and perceived financial behavior control have significant positive effects on financial literacy. However, attitudes have significant negative effect on investment behavioral intention, subjective financial norms have significant positive effects on investment behavioral intention, and

perceived financial behavior control has no significant effect on investment behavioral intention.

Financial literacy is found to have positive effect on investment behavioral intention. Financial knowledge and financial capability are found to have significant effect on Chinese college students' investment behavioral intention. Financial value is found to have significant negative effect on Chinese college students' investment behavioral intention. Thus, financial knowledge, financial capability, and financial value can explain and predict investment behavioral intention of Chinese college students.

Discussion

The finding of this paper is consistent with the existing financial literacy literature (Amagir et al., 2018; Setiyani & Solichatun, 2019; Amagir et al., 2020; Sharif & Naghavi, 2020) and highlights the important role of attitudes, subjective financial norms, and perceived financial behavior control in enhancing financial literacy. In this study, the attitudes consist of financial attitude and attitudes toward money, subjective financial norms consist of financial socialization and financial self-efficacy, and perceived behavioral control consists of financial confidence and financial information seeking behavior. More specifically, it is shown that Chinese college students' financial literacy can be affected by their attitudes to finance and money, subjective norms from parents, teachers and peers, individual financial



self-efficacy, and financial confidence and financial information seeking behavior. This result adds evidence to support existing ideas concluded by Shim et al. (2009), Gutter et al. (2010), Sohn et al. (2012), Earl et al. (2015), Ameliawati and Setiyani (2018), and Sharif and Naghavi (2020) that college students' financial literacy and financial behavioral intention would be predicted by their attitudes toward financial practices and by the parental subjective norms and their own perceived behavioral control with respect to positive financial practices.

Further, this research applied TPB to study the investment behavioral intention in stock market, entrepreneurship, and house-purchasing of Chinese college students. The findings of this study reveal that all three antecedents (attitude, subjective norms and perceived behavioral control) of the behavior intention specified by the TPB are associated with the investment behavioral intention, which is consistent with Xiao (2008). The results imply that higher level of attitudes and confidences toward evaluation of the investment behavioral for Chinese college student would decrease the possibility of investment behavioral intention in stock investment, entrepreneurship, and house-purchasing. The results are in line with previous findings that Chinese college students in general are lack of financial literacy, lack of consumption planning, spending without rules, lack of internet risk screening and prevention, and having blind financial management

(Tan, 2018). Shim et al. (2009) find that college students' financial attitudes, parental normative expectation (subjective norm), and perceived behavioral control are related to financial behavioral intention. Thus, this study adds evidence that Chinese college students' financial attitudes and perceived behavioral control are significantly negatively related to financial behavioral intention, but subjective norms are significantly positively related to financial behavioral intention. These findings are consistent with existing findings that College student' financial behavior is directly and indirectly influenced by financial literacy, perceived financial confidence and attitudes toward money (Susilowati & Latifah, 2017).

The result also indicates that financial literacy leads to investment behavior intention, implying that financial literacy is an important factor to increase college students' financial behavior intention in stock market, entrepreneurship, and house-purchasing, which supports the existing literature in Lusardi, Mitchell and Curto (2010), Scheresberg (2013), Tanuwijaya and Setyawan (2021), Gunardi, Ridwan, and Sudarjah (2017), and Iqbal (2020). More specifically, financial knowledge and financial capability are found to have significant positive effect on investment behavioral intention, which are consistent with the existing literature as well (Akhtar & Das, 2019; Hasan et al., 2020; Adiandari et al., 2020). However, financial value is found to have significant negative effect on



investment behavioral intention in this study, implying the higher financial value scores, the lower prone to investment behavioral intention. This result proves findings conducted by Xin et al. (2020) that wealth values and financial ethics are negatively correlated with materialism and self-interest belief. Xin et al. (2020) find that financial value (wealth values and financial ethics) could predict a wide range of investment behaviors. Financial value is mainly embodied in the process of value judgment on the value of financial activities, the significance of wealth, and the ethical norms of financial activities. Thus, the finding of financial value having significant negative effect on investment behavioral intention reveals that Chinese college students are short of confidence to involve in high-risk financial activities and are intent to determine their financial choice in acceptable financial activities, having no priority to establish their investment intention in stock market, entrepreneurship and house-purchasing.

Management implications

The results of this paper can provide some suggestions to related authorities and educators in China regarding financial literacy and investment intention of Chinese college students. Based on the result that financial literacy has a positive effect on investment behavioral intention, authorities could issue a systematic financial literacy

education policy to play a leading role in guiding, strengthening, and standardizing financial literacy education activities. Then the education of college students' financial literacy would be paid more attention to and incorporated into the daily teaching system at universities. Universities could carry out systematic financial education activities to help college students establish correct wealth concept, increase the financial awareness, master and enrich financial knowledge, improve the financial capability, build up financial value to pursue financial investment intention. Based on the results of antecedents of financial literacy, the education content should be focused on financial attitudes and attitudes toward money, financial socialization and financial self-efficacy, and financial confidence and financial information seeking behavior to improve the Chinese college students' financial literacy. The results of antecedents of investment intention suggest that the education content should be focused on financial socialization and financial self-efficacy to increase the Chinese college students' investment intention.

Limitation and future research

There are three limitations in this study. First, only universities in Guangxi province have been chosen conveniently as the sample in this paper, thus universities in other provinces of China could be chosen as a sample to be studied in the future to reach more general results.



Second, the hypotheses testing didn't control for the differences of 25 universities, hence future research could take into account the differences to see whether the results are universal. Third, the hypotheses testing didn't control for

the students' major difference such as finance major and non-finance majors, therefore, future research could test whether this can be an influencing factor on financial literacy and investment intention.

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