

RURAL BREADWINNERS' FINANCIAL INVESTMENT DECISION-MAKING BEHAVIOR IN HEBEI PROVINCE: THE INFLUENCE OF FINANCIAL KNOWLEDGE, RISK PERCEPTION AND SOCIAL FACTORS

YONGQIANG XU^{1,2,*}, THIEN SANG LIM¹ AND KUN WANG³

¹Faculty of Business, Economics and Accountancy
University Malaysia Sabah
Kota Kinabalu, Sabah 88400, Malaysia
tslim@ums.edu.my

²School of Management Engineering and Business
Hebei University of Engineering
No. 19, Taiji Road, Handan 056038, P. R. China

*Corresponding author: xuyongqiang@hebeu.edu.cn

³Department of Management
Handan Polytechnic College
No. 141, Zhuhe Road, Handan 056001, P. R. China
uthz2013@163.com

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ABSTRACT. *The paper studies the financial investment decision-making behavior of breadwinners in rural areas of Hebei Province. The research framework is based on the Theory of Planned Behavior (TPB) with further support from the risk decision-making models. The current study introduces the psychological factors, economic characteristics, and individual characteristics variables, and constructs a rural breadwinners' financial investment decision-making behavior model, which includes 7 factors, as financial investment intention, objective knowledge, subjective knowledge, social factors, risk tolerance, risk perception, and financial investment decision. The structural equation model was used to analyze the questionnaire of 731 rural breadwinners. The findings showed that the breadwinners' financial knowledge, risk perception, social factors, and risk tolerance all had a significant impact on their investment decision-making behavior. Risk perception was a mediating variable in the model, and it was significantly negatively correlated with risk intention and investment behavior. In addition, the paper found the influence path of breadwinners' financial decision-making behavior.*

Keywords: Risk perception, Financial knowledge, Social factors, Decision-making

1. Introduction. Effective financial planning can quickly realize the appreciation of individual assets with a good economic environment, and minimize the loss in the event of financial crises, without affecting the quality of family life. That attracted the attention of financial consumers [1]. However, the ordinary financial consumers were usually inexperienced investors. Their decision-making errors were caused by lack of risk awareness, vague behavior and attitude. In addition, TPB pointed out that the most direct factor affecting individual behavior is behavioral intention, which is usually influenced by behavioral attitude, subjective norms and perceived behavior. And existing studies have shown that individual investment decisions are related to financial knowledge, risk perception, risk tolerance and social factors [2]. Normally, urban investors are easier to make investment decisions than rural investors. According to this logic rural breadwinners may be the hardest ones to make financial decisions.

The rural breadwinners, financial decision-making behavior as the context of the study was very rare, and the actual decision-making process of breadwinners belonged to the scope of TPB, so, the paper based on TPB, incorporated variables such as financial knowledge, social factors, risk tolerance, risk perception, investment intention and financial investment decision behaviour into the unified framework to build breadwinners' financial investment decision behaviour model. Meanwhile, focus on the rural breadwinners in Hebei Province, accept the psychological measurement paradigm to develop a questionnaire, use the structural equation model to test the hypothesis, reveal the internal mechanism of each variable and financial investment decision-making behavior, and do path analysis of breadwinners, decision-making behavior.

2. Literature Review and Research Hypothesis.

2.1. Financial knowledge. Lack of financial knowledge could lead to ineffective investment decisions. Financial knowledge was the information that is learned, organized, expressed, and stored in memory. Investors could retrieve, use and update their financial knowledge, and applied it to financial decision-making. Brucks divided customer knowledge into objective knowledge and subjective knowledge [3]. Meanwhile, philosophical and sociological studies also showed that two types of knowledge are the best results for humans to understand society. Following the above studies, the paper also describes the concept of financial knowledge from the perspective of objective knowledge and subjective knowledge.

Objective financial knowledge usually includes interest rate calculation, inflation understanding, and risk prevention [4]. Existing studies have proved that objective financial knowledge is an important factor affecting the financial resource collocation. Moreover, lack of objective knowledge was often associated with poor debt conditions, high borrowing costs, and excessive debts. Individuals with less objective financial knowledge were more likely to choose high-cost mortgage products. They were less involved in financial markets but often made bad financial decisions. As for rural areas, the knowledgeable breadwinners achieved more efficient resource allocation, wealth accumulation, and higher household income. They were more likely to understand financial indexes and avoid the uncertain financial risks [5]. In short, with a good objective financial knowledge level, their investment and financial decision behaviors were mostly based on objective facts and data; they had good intention and risk perception towards financial investment. Based on the above analysis, the paper puts forward the following hypothesis.

H1a: Objective financial knowledge has a significant positive effect on risk perception.

H1b: Objective financial knowledge has a significant positive effect on investment intention.

H1c: Objective financial knowledge has a significant positive effect on financial decision-making behavior.

Subjective knowledge refers to an individual's subjective evaluation of the amount of product-related information stored in memory [6] or an individual's self-reported knowledge. Even, it is related to product-related experience and whether consumers are confident in their ability to make effective decisions [7], that is, people who think they know more are more confident. People with high subjective knowledge tended to ignore risk perception due to their increased confidence, and they showed great efficiency in dealing with financial problems, even though they knew very little. So, investors with the high level of subjective knowledge were actively engaged in financial investment activities. Based on the above review, the following assumptions are made.

H2a: Subjective financial knowledge has a significant positive effect on risk perception.

H2b: Subjective financial knowledge has a significant positive effect on investment intention.

H2c: Subjective financial knowledge has a significant positive effect on financial decision-making behavior.

2.2. Risk perception. To explain the risk behaviors of investors, Bauer introduced the concept of risk perception [8]. Later, risk perception is also applicable to the understanding of financial behaviors. And it was used to measure the subjective judgment of investors in the financial decision-making process. In other words, investors' risk behaviors were very sensitive to the level of risk perception. From some exiting studies, there was a negative correlation between individual financial risk perception and investment participation in decision-making. The higher the level of individual risk perception, the lower the expectation of financial market returns, so the lower possibility of participation in the financial market. That is, when investors perceive greater risks, their investment intentions may be small, and even, they will reduce their investment. Based on the above analysis, the hypotheses are proposed.

H3a: Risk perception has a significant negative effect on investment intention.

H3b: Risk perception has a significant negative effect on financial decision-making behavior.

2.3. Social factors. Some scholars attributed social factors to family influence, peer influence, and Internet influence [5,9]. In rural areas, the breadwinners were the pillar of families, they paid more attention to members' opinions or family situation when they made financial decision-making. They also discussed financial investment with members, peers, and friends, family, and peers' suggestions and behavior greatly influenced the breadwinners' investment views and decisions. It should also be noted that the Internet influence, with the popularization of the Internet and intelligent terminals, communication between people had become efficient and frequent, and even investors could get the desired information related to financial investment through the circle of friends and the Internet [10]. Hence, the paper assumed that social factors (including family influence, peers influence, and Internet influence) had a significant positive impact on risk perception.

H4a: Family influence has a significant positive effect on risk perception.

H4b: Peers influence has a significant positive effect on risk perception.

H4c: Internet influence has a significant positive effect on risk perception.

2.4. Risk tolerance. Moreover, some literature has pointed out that the risk tolerance characteristics of investors should also be considered when making decisions. Grable defined risk tolerance as "the maximum degree of uncertainty that an individual is willing to accept when facing financial decisions" [11]. Risk tolerance was considered as an individual characteristic change over time, and risk-averse people tend to overestimate the negative outcomes of investment decisions. In other words, risk-averse individuals (with a low level of risk tolerance) had a higher risk perception of investment products. Focusing on the rural area in China, few breadwinners participated in wealth management. Most of them were risk-averse. Nguyen et al.'s study also showed that the higher the level of risk tolerance, the lower the level of risk perception [12]. So, the paper proposed the following hypothesis.

H5: Risk tolerance has a significant negative effect on risk perception.

2.5. Investment intention. To better explain the process of planning and behavior, Ajzen put forward the Theory of Planned Behavior (TPB) [13], based on the expected value theory, and expressed individual decision-making behavior process from the perspective of information processing. The theory has been widely applied to the study of individual complex behavioral intention. The most relevant to financial behavior was financial intention, which was usually affected by behavioral attitude, subjective norm,

and perceived behavior. Moreover, many studies using TPB have concluded that intention and decision-making behavior have a positive impact. Therefore, according to the existing research conclusions, the paper made the following hypothesis.

H6: Investment intention has a positive influence on financial decision-making behavior.

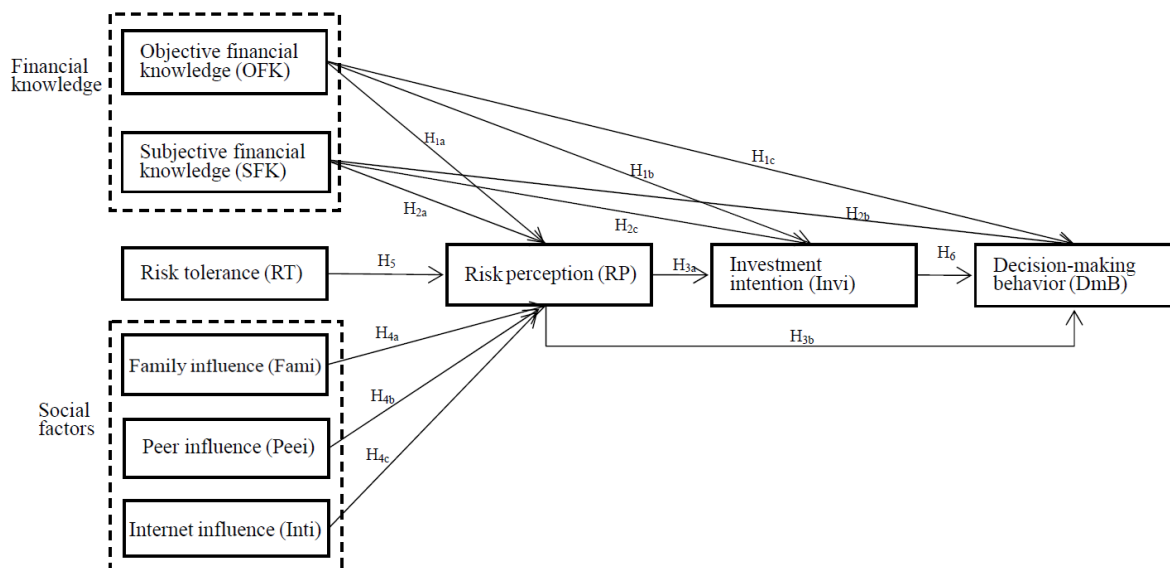


FIGURE 1. Theoretical model framework

3. Methods. The measure variables used in this paper were objective financial knowledge, subjective financial knowledge, family influence, peer influence, Internet influence, risk perception, risk tolerance, investment intention, financial decision-making behavior. All variables were derived from previous studies, which were designed to ensure data quality. Besides, considering the differences between Chinese culture and Western culture as well as the limitations in time and language, the objective knowledge scale was measured using the exploratory factor analysis to ensure the scale was suitable and feasibility of scale. As for the questionnaire, apart from the direct measurement of objective knowledge, other variables were observed using multiple questions and measured using the Likert scale. The respondents were rural breadwinners in Hebei Province, and purposive sampling was employed in this paper. The survey included an online questionnaire and face-to-face interview. as the main method. A total of 800 questionnaires were sent, 757 were recovered, and 731 were effective, with an effective recovery rate of 91.4%. The respondents' profiles are presented in Table 1.

4. Results and Discussions. The paper used AMOS 24.0 to evaluate variables' discriminant validity by first-order confirmatory factor analysis. The model fitting index showed that $\chi^2/df = 2.013 < 3$, RMSEA (Root Mean Square Error of Approximation) = 0.064 < 0.08, GFI (Goodness-of-Fit Index) = 0.811 and AGFI (Adjusted Goodness-of-Fit Index) = 0.847 were all greater than 0.8; NFI (Normed Fit Index) = 0.915, CFI (Comparative Fit Index) = 0.941, RFI (Relative Fit Index) = 0.914, and TLI (Tucker-Lewis Index) = 0.926 above 0.90. All of that explained the goodness of fit between the measurement model and the sample data was good. Besides, Table 2 showed that all items have good loadings above 0.50, so there was an apparent linear relationship between items. The Composite Reliability (CR) value was between 0.70 and 0.90, which further confirmed that the internal consistency reliability of the construct was acquired, and the AVE value of all constructs were greater than 0.50. That meant the convergence validity is established.

TABLE 1. Profile of respondents (N = 731)

Demographic variables		Percentage	
Gender			
Male		52.1	
Female		47.9	
Marital status			
Single		6.3	
Married		93.7	
Education level			
Primary school		28.1	
Secondary school		67.8	
University or junior college		4.1	
Age	Min	Max	Mean
	21	59	44.6

TABLE 2. Results of first-order confirmatory factor analysis

Construct	Question items	Loadings	CR	AVE
Subjective Financial Knowledge (SFK)	SFK1	0.859	0.731	0.511
	SFK2	0.873		
	SFK3	0.721		
	SFK4	0.812		
	SFK5	0.737		
Risk Tolerance (RT)	RT1	0.941	0.821	0.664
	RT2	0.831		
	RT3	0.884		
	RT4	0.798		
Family Influence (Fami)	Fami1	0.873	0.766	0.617
	Fami2	0.748		
	Fami3	0.822		
Peer Influence (Peei)	Peei1	0.837	0.853	0.627
	Peei2	0.85		
	Peei3	0.81		
	Peei4	0.882		
Internet Influence (Inti)	Inti1	0.766	0.881	0.667
	Inti2	0.834		
	Inti3	0.879		
	Inti4	0.904		
	Inti5	0.802		
Risk Perception (RP)	RP1	0.743	0.722	0.521
	RP2	0.787		
	RP3	0.838		
	RP4	0.727		
Investment Intention (Invi)	Invi1	0.739	0.812	0.658
	Invi2	0.73		
	Invi3	0.891		

The results of the hypothesis test are shown in Table 3.

Both subjective financial knowledge and objective financial knowledge can significantly influence breadwinners' risk perception and investment intention, that is, H1a, H1b, H2a, and H2b have all been verified. Good financial knowledge enabled the breadwinners to

TABLE 3. Results of hypothesis test

Path hypothesis	Beta	S.E.	C.R.
	Estimate		(t-value)
H1a Objective Financial Knowledge → Risk Perception	0.014	0.012	6.521***
H1b Objective Financial Knowledge → Investment Intention	0.612	0.105	8.443*
H1c Objective Financial Knowledge → Decision-making Behavior	0.533	0.042	7.399
H2a Subjective Financial Knowledge → Risk Perception	0.412	0.093	7.342**
H2b Subjective Financial Knowledge → Investment Intention	0.634	0.113	8.475**
H2c Subjective Financial Knowledge → Decision-making Behavior	0.571	0.051	7.301***
H3a Risk Perception → Investment Intention	-0.711	0.116	-8.612*
H3b Risk Perception → Decision-making Behavior	-0.763	0.064	-8.245*
H4a Family Influence → Risk Perception	0.441	0.085	7.761*
H4b Peers Influence → Risk Perception	0.612	0.104	3.431
H4c Internet Influence → Risk Perception	0.542	0.078	4.112
H5 Risk Tolerance → Risk Perception	-0.526	0.089	-3.467**
H6 Investment Intention → Decision-making Behavior	0.615	0.059	8.512***

Note: Significance level * $p < 0.05$, ** $p < 0.01$, *** $p < 0.1$.

have a better perception and investment intention, and these key factors played very important roles in the financial decisions process. However, an interesting problem was found in terms of verifying the relationship between financial knowledge and decision-making behavior. The objective financial knowledge did not influence the decision-making behavior. The reason might be that the increase of objective knowledge enables breadwinners to have a deeper understanding of investment behaviors and risks, which leads them to give up or ignore investment decisions. The influence of subjective financial knowledge and decision-making behavior was significant (H2c is confirmed); in that case, breadwinners made decisions based on self-assessment. Although subjective knowledge is unlikely to provide efficiency in the search and interpretation of information, decision-makers were more likely to make risky behavior decisions with the help of confidence. In other words, subjective knowledge had a stronger driving effect on financial investment decision-making behavior.

Structural equation model results supported H3a and H3b, risk perception had a significant negative influence on investment intention and decision-making behavior. H3a and H3b were in line with real life. As the backbone of the family, the breadwinner needed to consider the needs of all family members when making financial investments. Coupled with their low incomes, their risk perception became sensitive. That made them wary of investing behavior.

About social factors, the results showed that only family influence and risk perception had significant effects (H4a was confirmed). The reason for this result might be that the breadwinner focuses on family members, and the influence of peers and the Internet on their investment were often ignored.

About H5, risk tolerance was negatively correlated with risk perception, and the result was consistent with previous studies. Investment intention could affect behavioral decisions (H6 was verified). Furthermore, the results were consistent with the relationship between intention and behavior in TPB theory.

5. Conclusions. Based on the theoretical analysis framework of TPB, the paper makes an empirical analysis of rural breadwinners' financial investment decision-making behavior in Hebei Province by using structural equation model, and has the following conclusions:

1) Financial knowledge, risk perception, social factors and risk tolerance all have a significant impact on breadwinners' investment decision-making behavior. 2) The influences of financial knowledge and social factors on financial decision-making are mainly made

by the breadwinners' risk perception. That is, risk perception seems to be a mediating variable. 3) The breadwinners' risk perception is significantly negatively correlated with risk intention and investment behavior. 4) The paths affecting breadwinners' financial decision-making behavior are Financial knowledge \rightarrow Risk perception \rightarrow Investment intention \rightarrow Decision-making behavior, and Family influence \rightarrow Risk perception \rightarrow Investment intention \rightarrow Decision-making behavior.

About the next step, the paper plans to introduce the breadwinner's psychology and risk attitude into the structural equation model, and another plan is to further optimize social factors. In a word, decision-making behavior is a complex progress. There are many other influences on the financial investment behavior, such as trust in financial products, value perception, and risk preference. The paper will continue to deepen the research in future work.

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