

An Empirical Study on the Relationship between Different Motivations of Stock Investors and the Investment Decision Behavior

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Abstract - From the China's stock market formal establishment, the investors' number is increasing exponentially. It need to be further studied what is the motivation for these ordinary investors. We know the motivation would impact people's behaviour significantly. But the relationship between stock investors' motivation and stock investment behaviour is not clear. Based on this, this paper carries on the empirical research through questionnaire survey. It found that stock investors have three basic motivations: intrinsic motivation, extrinsic motivation and amotivation. The intrinsic motivation can be divided into epistemic motivation, achievement motivation and experience motivation; extrinsic motivation can be divided into external regulation and injective regulation. There is a positive relationship between stock investors motivation and stock investment behaviour. However, different types of motivation have different effects on the stock investment behaviours. This study contributes to the stock management and sales organizations to deepen understanding of investor psychology and behaviours and to take appropriate marketing strategies affect the investors' behaviours of specific types of motivation.

Index Terms - Stock Investors; Intrinsic Motivation; Extrinsic Motivation; Amotivation; Investment Decision Behaviours

I . Introduction

Since the establishment of Chinese stock market from the 1980s, the number of Chinese investors is growing almost by geometric. So many people in the stock market and most of them are ordinary investors. Why do so many ordinary investors would play in the stock market? From the behavioural finance theory, due to the difference of age, education, occupation and money, there was great variation of ordinary investors' motivations^[1]. We generally believed that investors' motivations are mainly divided into two kinds: One is investment. The investors hope to gain difference in price and dividend yield higher than bank interest through equity investment. The other is venture. The investors expect the stock can raise a lot in a short period of time and earn a large amount of money. But from the history data of the stock investment, ordinary investors obtained dividend yield from the market is very low, even 0. Then maybe investment has become the most important motivation for ordinary investors. If we do some in-depth analysis, we will find ordinary investors' motivations may be far more than these. Even after 2007 stock market downturn, although a few investors cancel

the accounts, the total number of shareholders was still increasing, and most of the investors never cancel the accounts after they enter the stock market. What does this mean? Do ordinary investors only have investment and gambling motivations? Is there any other motivation? What is the relationship between these motivations and stock investors' behaviours? There is no clear answer.

II . Relevant Literature Research

A) Stock Investors' Motivation

In early 1936, Keynes had concluded that the basic motivation of people's investment includes: prevention, foresight, calculation, improvement, independent, pride and greed. Later, some scholars got three basic motivations of people's investment: to prevent (need to save for safety and stability); anticipate (for the future); calculation (consider capital appreciation, rather than provide income for the current)^[2]. Aspara and Tikkanen (2011) found, individual investors not only in the pursuit of economic returns, but also have motivations of self-expression, emotion benefits and emotional self affine^[3]. Zhao-yong Lin (1997) indicated that Chinese residents have four kinds of investment motivations: pursuit of profit maximization; balance property structure and reduce the risk; gambling; precautionary^[4]. Xiao-gang Long(2003) and Mao-wei Xu (2005) pointed out, investors have nine motivations: capital increment, venture, flexibility, choices, participation, self-expression, curiosity and challenge, safety, and security tax avoidance^{[5][6]}.

In psychology and sociology, we generally divided motivations into intrinsic motivation, extrinsic motivation and amotivation^[7]. Intrinsic motivation, derived from the inner psychological needs, because of the activity itself has the attraction or hate nature caused people to pursuit or avoid. It includes three dimensions: epistemic motivation, achievement motivation and experience motivation. Extrinsic motivation, from an external stimulus, is caused by activities besides the goal. Extrinsic motivation divided into three dimensions: external regulation, interjected regulation and identified regulation. Amotivation means people don't perceive the casual relationship between behaviour and results. People feel incapable of control the situation.

B) Investors' Decision Behaviours

Investors have three kinds of basic decision behaviours in stock market: the stock selection behaviour; the stock adjustment behaviour; the stock holding behaviour [8].

Stock selection is basic behaviour in stock investment decisions. Open and cancel the account are basic activities. To buy or sell a stock is extremely complex decision-making behaviour. Stock adjustment, refers to the number change of specific stock. Firstly, stock adjustment behaviour is a kind of positive feedback trading. Secondly, stock adjustment behaviour is sometimes an arbitrage. Thirdly, stock adjustment behaviour is a kind of speculative behaviour [9]. Stock holding period, which means the shareholders holding time on a stock, shows the duration of the stock investment activity. First of all, the stock holding period reflects investors' limited rationality. Secondly, the stock holding period reflects the expected utility of investors [10]. And then, stock holding period reflects people's judgment on the stock.

III. Theoretical Analysis and Research Hypothesis

A) Analysis of the Overall Relationship between Investors' Motivation and Stock Investment Behaviour

Motivations would have significant impact on people's behaviours [11]. Investors' stock investment decision-making behaviour is affected by corresponding motivation. Under the motivation, investors make decisions in stocks will combine their assets status, economic situation, consumption level, even friends and relatives persuading. In this process, some investors make rational decisions based on the judgement of the stock market and their economic capacity. But there are also many investors rashly decided to invest in the stock market though they know little about the stock situation. Therefore, we believe motivations have direct influence on investors' stock investment and put forward the hypothesis:

H1: there is positive relationship between motivations and investors' stock investment behaviours.

B) Analysis of the Relationship between Investors' Intrinsic Motivation and Stock Investment Behaviours

Epistemic motivation refers to the individual to participate in the activities is to experience enjoyable and satisfying from experiential learning, explore and try to understand new knowledge [11]. Sometimes in the beginning of stock investment, people just want to know more about the market, and it is to learn. Many investors have never traded equities. When they saw other people buying and selling stocks, they also want to experience, so enter the stock market. Most of the times ordinary investors make stock options are affected by reference groups, family members, information flow and the investment environment. Or they just follow the trend, and lead to emergence of "herd behaviour". Therefore, epistemic motivation affects people's stock selection behaviour directly.

Achievement motivation refers to the individual to participate in the activities is to attempt to do something, to create pleasure and satisfaction [11]. People have a special

passion in making money quickly. So people enter the market affected by achievement motivation. Achievement motivation demonstrated as investment, and on the other hand means arbitrage behaviours in stock market [12]. In order to achieve success, investors would do expected utility analysis for stock investment and full of confidence in the prospects for investment. So the achievement motivation of investors will have an important impact on the stock holding period and stock adjustment behaviour.

Experience motivation refers to the individual to participate in activities to experience pleasure and exciting [11]. The stock market change constantly, high risk and high returns attract some adventurous people rush into it and experience dangerous. We can see a large number of people are arbitrage and speculation in the stock market. Therefore, experience motivation affects investors' stock holding period and stock adjustment behaviour.

We get relationships between these variables (figure 1).

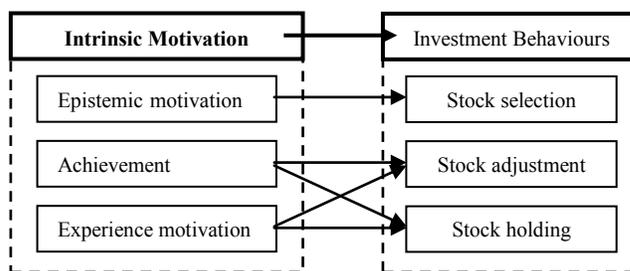


Figure 1 Model of investors' intrinsic motivation influence on behaviors

And we put forward some hypotheses:

H2: Investors' intrinsic motivations have positive effect on stock investment decision-making behavior.

H2a: Investors' epistemic motivation has positive impact on stock selection behaviour.

H2b: Investors' achievement motivation has positive effects on stock adjustment behaviour.

H2c: Investors' achievement motivation has positive effects on stock holding period.

H2d: Investors' experience motivation has positive effects on stock adjustment behaviour.

H2e: Investors' experience motivation has positive effects on stock holding period.

C) Analysis of the Relationship between the Investors' Extrinsic Motivation and Stock Investment Behaviours

External regulation is a kind of motivation which is formed by external factors. Individual behaviour is influenced by external reinforcement, external reward or punishment, rather than her decision or selection [7] [13]. In the stock market, investors exhibit significant irrational behaviours, so the market investment strategy is going to be the same [14]. At present, imitate behaviour between China's investor's is very common. Many people are like to keep consistent with others. They would like to buy or sell a particular stock at the same

time [10] [15]. Various external factors affect the ordinary investors' stock selection, stock adjustment and stock holding period significantly.

Introjected regulation is the beginning of individual internalization of action; it is influenced with all external events (expectation from parents, friends and colleagues). After internalization, people began to adopt some behaviours consciously and unconsciously [7][13]. People, who invest in stocks obtain a more lucrative return, will have a positive impact on others. Other people, who have not entered the stock market or freshman, believe that as long as they study the market more carefully and invested more time, they will have high returns. They gradually invested more time, energy and money. Investors' decision affected by outside world and they began to have their own thinking, and so gradually internalization. Therefore, the introjected regulation will influence stock selection and stock adjustment.

Identified regulation is a kind of behaviour engaged in self-regulation and self-determination. The behaviour is caused by identity and not be induced by external rewards. [7][13]. Lots of stock investors who experienced the investment and often communicate with friends, would gradually realize the stock investment is an important way of managing money. The average rate of return is higher than other forms of investment. So they became more recognition of the stock investment, which is not only from the flexibility, but also because of safety concerns. In the premise of ensuring the capital appreciation and for flexibility, investors prefer securities investment [5]. therefore, identified regulation will influence shareholders stock selection and stock adjustment.

We get relationships between these variables (figure 2).

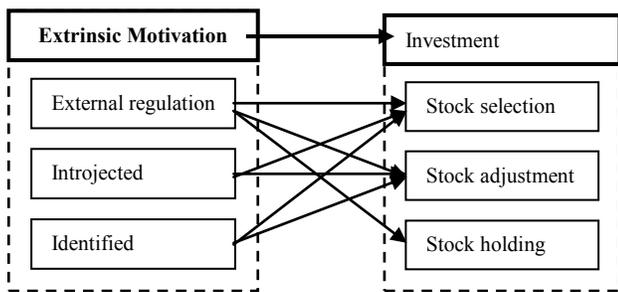


Figure 2 Model of investors' extrinsic motivation influence on behaviors

And we put forward some hypotheses:

- H3: Investors' extrinsic motivations have positive effect on stock investment decision-making behaviour.
- H3a: Investors' External regulation has positive impact on stock selection behaviour.
- H3b: Investors' External regulation has positive effects on stock adjustment behaviour.
- H3c: Investors' External regulation has positive effects on stock holding period.
- H3d: Investors' Introjected regulation has positive effects on stock selection behaviour.
- H3e: Investors' Introjected regulation has positive effects on stock adjustment behaviour.

- H3f: Investors' Identified regulation has positive effects on stock selection behaviour.
- H3g: Investors' Identified regulation has positive effects on stock adjustment behaviour.

D) *Analysis of the Relationship between the Investors' Amotivation and Stock Investment Behaviours*

In real stock market, ordinary investors are only small molecules of the stock market. Ordinary investors completely unable to control the stock price and stock investment decisions sometimes become swim with the stream, only show amotivation. Investors' amotivation will also affect the decision-making behaviour, as shown in figure 3.

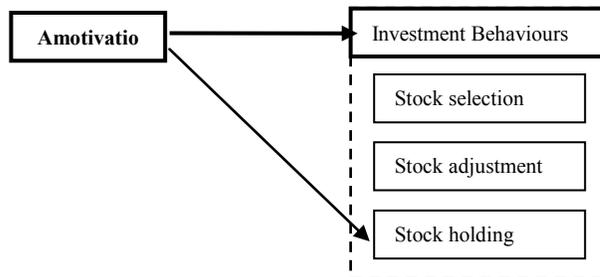


Figure 3 Model of investors' amotivation influence on behaviors

Based on the analysis, we put forward some hypothesis:

- H4: Investors' amotivation have positive effect on stock investment decision-making behaviour.
- H4a: Investors' amotivation has positive impact on stock holding period.

IV . Empirical research and hypothesis test

A) *Design of Research Tools*

Firstly, we need to design investors' motivation scale. Based on Deci (1975) and Deci and Ryan (1985) research on motivation and classification [7]. We also learn a lot from questionnaire designed by Robert J. Vallerand et al. (1993) and Luc G. Pelletier et al. (1995) [11][16]. We borrowed the core variables and indicators from their research tools and designed our own survey scale which combine with intrinsic motivation, extrinsic motivation and amotivation and includes seven dimensions and twenty-eight survey items.

Secondly, we need to design investors' decision-making scale. We learn a lot from the research of Joseph, Ming & Sophie (2002) [17] and Chui-lin Yi & Ling-ling Sun (2006). And then we developed the investors' decision-making scale which includes three dimensions and twelve items.

The answer items of two scales are make use of five point likert scale, in which "1 represents strongly disagree, 2 represents disagree, 3 represents no idea, 4 represents agree, 5 represents strongly agree."

B) *The Implementation of Empirical Research*

We implement a pre-test. Based on the data we adjusted the investor's decision-making scale and cancel the Identified regulation dimension because of the items were not In

accordance with the statistical requirements. And then we implemented the formal questionnaire survey from August 26 to September 15th, 2012. The survey was commissioned by some university students who were majoring in marketing. We send out 400 questionnaires and got back 316 questionnaires. At last we got 307 valid questionnaires.

Depending on the research hypothesis, we are mainly concern the relationship between independent variables and dependent variable. Therefore, regression analysis was carried out using SPSS software. In order to show results directly, we put the results data together in table 1.

From the significance results, we can see below 0.05 means significant, while above 0.05 means not significant. So most of the hypothesis were supported, some hypothesis were not supported. 7 of the total 17 hypothesis were not supported. Two hypotheses, H3f & H3g were due to the scale adjustment. So at last we had 10 hypotheses be supported.

TABLE 1 The Results of Regression Analysis

D.V.	I.V.	R ²	Adjust R ²	B value	Sig.	hyp*	Sup* not Sup
I.B.	I.M.	.081	.078	.290	.000	H1	Sup
I.B.	In. M.	.051	.048	.145	.000	H2	Sup
S.S.	Ep.M.	.001	-.002	-.022	.560	H2a	Not Sup
S.A.	A.M.	.084	.081	.262	.000	H2b	Sup
S.H.P.	A.M.	.015	.012	.081	.031	H2c	Sup
S.A.	Ex.M.	.027	.024	.157	.004	H2d	Sup
S.H.P.	Ex.M.	.013	.009	.078	.050	H2e	Sup
I.B.	Ext.M	.050	.046	.132	.000	H3	Sup
S.S.	E.R.	.014	.011	.077	.039	H3a	Sup
S.A.	E.R.	.037	.034	.161	.001	H3b	Sup
S.H.P.	E.R.	.005	.002	.043	.216	H3c	Not Sup
S.S.	I.R.	.011	.008	.076	.069	H3d	Not Sup
S.A.	I.R.	.028	.025	.158	.003	H3e	Sup
I.B.	I.A.	.004	.000	.032	.290	H4	Not Sup
S.H.P.	I.A.	.010	.007	.062	.083	H4a	Not Sup

Notice: D.V. is Dependent variable, I.V. is Independent variable; I.B. is Investors Behaviours, I.M. is Investors' Motivation; In. M. is Intrinsic motivation; S.S. is Stock selection; S.A. is Stock adjustment; S.H.P. is Stock holding period; Ep.M. is Epistemic motivation; A.M. is Achievement motivation; Ex.M. is Experience motivation; Ext.M. is extrinsic motivation; E.R. is External regulation; I.R. is Introjected regulation; I.A. is Investors' amotivation; "hyp" is short of "Hypothesis"; "Sup" is short of "Support"

V. Conclusions

Form the research we know investors' three important motivations: Intrinsic motivation, extrinsic motivation and amotivation. The Intrinsic motivation including epistemic motivation, achievement motivation and experience motivation; extrinsic motivation was divided into External regulation and Introjected regulation.

Investors' motivations would have positive impact on their behaviours. Investors' intrinsic motivations have positive effect on stock investment behaviour. Investors' achievement

motivation has positive effects on stock adjustment behaviour and stock holding period. Investors' experience motivation has positive effects on stock adjustment behaviour and stock holding period. Investors' extrinsic motivations have positive effect on stock investment behaviour. Investors' External regulation has positive impact on stock selection behaviour and stock adjustment behaviour. Investors' introjected regulation has positive effects on stock selection behaviour and stock adjustment behaviour.

The conclusion contributes to stock institutions to deepen understanding of investor psychology and behaviour. It would also help these institutions to classify the existing and potential stock investors, and to take appropriate marketing strategies affect the investors.

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