

Bounded rationality in education

[Education](#)



I am inspired most by the cognitive bias and the risk control of the decision-making while learning this course. Having been engaged in the financial industry for years, I am deeply aware of the fact that most individual investors tend to perform those bounded rationalities for characteristics of decision-making while making investment, but I can't find out the reason for their existence.

After learning this course, however, I feel suddenly enlightened. The phenomenon that has bothered me so long is caused under the influence of the cognitive bias and emotion which will affect the risk assessment and judgment made to the investment object. In western countries, most families make investment mainly in dominant financial assets including stock, bond, real estate and insurance and have strong awareness of the risk averse in above fields.

Meanwhile, there're many organizations and books about the decision-making that are referred to by the individual investor. In Chinese families, in addition to the above investment of the financial assets, the investment of the family education, as a special form which involves all Chinese people, takes a large proportion. This is because a long-term funding is made by parents ever since their kids are born as a result of the non-free education in China. "Never let children lose at the starting line" and "education is the largest investment" are two popular education ideas in our country, which comprehensively reflect the current situation of Chinese families' investment to the children education. As parents put the entire earning into their kids, a good return is surely expected. But since income is accompanied with risk, Chinese education investment, therefore, belongs to the risk investment and,

meanwhile, has the specific characteristic that is not covered in western theory.

The invest object in this essay is mainly about the education domain in China, I think it's also necessary to apply the theory of this course to avoiding the influence of the cognitive bias as well as the mental trap and the irrationality in the education investment. By introducing the behavioral motive of the education investors, I intend to master its pattern and make judgment of the irrational behavior, which, I believe, will help protect the interest of the family investor. Finding

The misunderstanding of the family education investment in China is generated mainly because investors, i. e. parents, make blind investment without thinking about their economic conditions, the investment risk as well as the personalized growth of their children. In traditional Chinese culture, parents' education investment to their children is unconditional and selfless, which lead to a lack of scientific and rational planning as well as decision in the education investment in many families and, meanwhile, cause some misunderstandings.

The “ following blindly” phenomenon of purely pursuing high and abroad education is becoming more and more violent. Considering the cognitive bias of investors, the education investment with high expectation and input, instead of bringing expected return to the family members, leads to extra economic burden and, at the same time, might influence the development of the educatees' career in the future.

As attention has been paid to the generation of the misunderstanding of the education investment behavior, many scholars make analysis in terms of the government policies, the social environment, the high education and other macro level. Through learning the course, I, on the other hand, would like to say that the education investment is mainly from the cognitive bias while investors make their decision. The cognitive bias includes all kinds of decision-making bias caused by the restraint of investors' cognitive psychology and external environment.

The cognitive bias of the decision-making of the family education investment is generated under the influence of the external environment and socio-cultural background with the asymmetric information as well as the cognitive level and personal preference of investors, which causes the lean on Heuristic. Bazerman argued that the misapplication of heuristics to inappropriate situations leads people astray. It's difficult to calculate the specific input and output of the family education investment in a quantitative way, resulting in the ambiguity of the assessment of the effect of the education investment.

As there're a large number of variables of the non-monetary cost-benefit in the education investment, our estimation has to be adopted to judge the cognitive part SYSTEM 1. Analysis Despite the difference in the investment object between the education and the traditional investment, the behavior of the education investment of a family which is as a micro investor, is subject to the risk of the expected return of the investment, the risk as well as the influence of other corresponding factors, which has common character with the investment behavior in the decision-making.

The science of behavior and decision-making, as a course between the marginality of the psychology and the economics, tries to involve the behavior of the irrational complex investors into the standard theory of the decision-making by making amendment to the assumption of the traditional management theory according to the research findings in the psychology. In our study, we find the decision-making theory laying more emphasis on people's "bounded rationality".

It explains the investor behavior and makes it more close to reality based on the theories of the cognitive psychology and the behavioral science as well as related principles of the economics. Under the condition of uncertainty, some cognitive factors will influence people to make their decision. The most common way is to make decision by adopting "the elicitation method" by investors. It's not easy to make a rational investment while facing the risk mainly because it can't avoid the heuristic bias in the decision of the family education investment.

The effect of the demonstration by example of the education investment income and the representativeness heuristic. Family investors usually care too much about the prominent, specific and typical information while neglecting the abstract and complex data. Therefore, parents often take typical cases learned through media as the foundation and reference for the decision-making, which might be influenced by the "representativeness heuristic bias".

For example, some families help their children study abroad considering the successful cases they know, though overseas study might not fit them at all. It is believed that people can find familiar modes to make judgment by

assuming that the circumstance in the future is similar to that in the past without thinking about the reason of how those modes happen or the repeat probability of those modes. Decisions and judgments made under the condition of uncertainty are not accurately calculated and analyzed by using the probability theory in the assumption of the “ Rational Man”.

It is firmly convinced by investors with “ representativeness bias” in the stock market that a “ good company” can surely produce “ good stock”, similarly some parents will believe that a “ good school” can foster “ good students”, which typically embodies the representativeness bias. The limitation of searching information by investors and the availability heuristic. Regarding the availability heuristic, some people think that it is generated due to the overwhelming memory and search bias, that is to say, not all information will be searched unbiasedly while related information is searched in memory.

Decision makers of families tend to use information that is easy to access, so the limitation in searching information is inevitable since people can't have a comprehensive knowledge about the professional quality of education providers, the demand for the education products in future market as well as the state of educatee's endeavor and intelligence. We can say that the characteristics of the information insufficiency and asymmetry really stand out.

Besides, there's a distinct asymmetry in the cost and benefit of the education investment caused by the hysteretic nature of the decision-making effectiveness of the education investment. The decision-making of the education investment, built based on the future expectation, is a

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subjective expected value by people. Information that is searched from memory in the first place will become the major foundation for people to make judgment and decision as this information has advantage in the stimulus frequency, novelty and vitality.

For example, high education means high income. Studying at college is, on a whole, positively correlated to the income obtained by children in the future. Parents tend to compare their children with the group of the same age in the education level, usually with those accessible ones such as relatives, colleagues or those reported in news media. Compared with the complicated and boring calculation and prediction as well as the omnibearing information search that waste time and energy, people would rather picking common reference object as the decision foundation.

Though it can simplify the process of decision-making and reduce its difficulty, the availability information has strong one-sidedness and bias can be seen in the behavior that the decision-makers pick the information itself. We can see from the above that the “ availability bias” is a key factor not to be neglected in the misunderstanding of the family education investment. The competitive psychology and anchoring effect of the education investment.

We often develop estimates by starting with an initial anchor that is based on whatever information is provided and adjust from the anchor to yield a final answer (Epley, 2004; Epley & Gilovich, 2001). Mussweiler and Strack (1999) showed that the existence of an anchor leads people to think of information that is consistent with that anchor. The competition in the education investment shows parents’ expectation for their children while the

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competitive psychology can influence decision-makers' normal investment behavior owing to the negative effect caused by the anchoring effect.

Decision-makers, for lack of the quantitative analysis, usually refer to the obscure reference foundation obtained from former experience and make comparison as well as judgment of the input and income from one or several points of view, which will become the key point in the decision-making of the education investment. The competitive psychology is necessary for the achievement of higher value in one's life.

Many families, however, ignoring the specific circumstance of educatees, take the education investment as an unrealistic comparison caused by the anchoring effect which influences the investors to rationally adjust the “ anchored” object. The family decision-makers will decide the investment direction and level according to the “ anchored” assessment result by choosing external reference objects which distract their normal decision-making. Therefore, an irrational conclusion is generated. The bias produced by the education investment object can directly influence the decision of the investee.

That is to say, the cognitive bias of the decision of obtaining employment appears among graduates, which consequently leads to the output of the education investment that is less than the expected return. Firstly, we can see the bounded rationality of the graduate employment from their overconfidence. The overconfidence might be the most stable psychological feature of human beings since it is indicated in many evidences that people tend to be overconfident for the estimation of the occurrence probability of uncertain events while making decision.

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Thus bolstered by the availability of supportive evidence, we overestimated the accuracy of our knowledge and the truth of our tentative hypotheses (Koriat, Lichtenstein, & Fischhoff, 1980) This feature, however, can lead to an overestimation of their knowledge and ability, an underestimation of the existing risk as well as the exaggeration of their control ability of events and, what's worse, the decision bias. Besides, the “ Sheep-Flock Effect” that are based on information, reputation and reward can be found among graduates as a result of the herd mentality, which might influence graduates' decision-making of obtaining employment as well.

Second is the self-control bias. The so-called self-control means the control of emotion. Without the self-control, no rational decision can be made and, meanwhile, individuals tend to attribute success to themselves while failure to others or objective conditions. In obtaining employment, the failure is usually attributed to non-self factors such as the recruitment policy of enterprises or the stronger backstage of others instead of to students themselves or to the fact of whether they fit such enterprise culture and work environment.

With such bias, students, even though be hired by certain enterprise, will finally be eliminated due to their weak adaptation. Solutions Owing to the feature of the family education investment, the investor is not exactly the beneficiary. The beneficiary of parents' education investment is their children while its decision-makers are parents, so the quality and cognitive level of parents have an important influence to the investment behavior. With the strategies of our literature (Bazerman, Chapter 11), I supposed to provide three of them to solve our problem and increase the effectiveness of investor's decision-making processes.

In our case, parents should firstly DEBIAS JUDGEMENT to unfreeze their basic knowledge and psychology about the education investment and, by making analysis of typical cases, be guided to know the source and harm of various blind education investment as well as to think about the decision process and behavioral characteristic of themselves so as to avoid the herd mentality. The second solution should be provide to those administration department of the public.

They should strengthen the informatization construction, laystresson the policy advocacy and the public opinion's influence to the family education investment as well as construct the “ rational” environment of the education investment. Provided investors have enough accurate information, it will help avoid the generation of the bias and reduce the frequency of bias behavior. Meanwhile, the public opinion department should increase the information channels as well as the number of information issued and its promptness and accuracy so that media can correct the bias of investors' behavior.

Finally, Using expertise or taking a outsider's view can be a good choice for our investors. The planning and consulting industry of personal career and special agency of the family financial management should be rapidly developed to make up the lack of the cognition of investors. Owing to the long period length and the irreversibility of the education investment, family decision-makers have no chance to learn and improve their behavior one more time. In that case, a special agency should be adopted to guide decision-makers to be more rational by making analysis of their psychology.

As the decision-making of the family education investment is traditionally seen as a family issue that can only be decided by family members, a special

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agency is needed to make planning and guidance of the behavior with strong sense of subjectivity and irrationality. In some developed countries, the career planning companies as well as the assessment and testing agencies for the personality development of students are set up to make up the limitation of decision-makers' cognition about the educated.

There are a large number of institutional investors in the financial field which grasp detailed and accurate information as well as solid professional theoretical knowledge since they are professional investment organizations operated by technical investment staff with rich experience, so they usually can secure their ends in the market by their advantages compared to those medium and small investors. The latter has more “irrational” factors than institutional investors.

Every individual decision of the family education investment is like the “private investor” in the stock market while enquiry agencies equipped with professionals and technical evaluation software are like the “institutional investor” which can make put forward the advice of the rational education investment as well as the prediction of the future return on the basis of fully respecting the individualization growth of students through the scientific analysis made by professionals and the systematic evaluation with the help of professional software, in which way the misunderstanding of the behavior can be effectively avoided.

Conclusion In this essay, we have introduced the investment of the education in China, as a special investing form which involves all Chinese people, belongs to the risk investment and, meanwhile, has the specific characteristic that is not covered in western culture. Since it's difficult to

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calculate the specific input and output of the family education investment in a quantitative way, I depicted five typical cognitive biases to evaluate the misunderstanding in our investment. The first three biases the representativeness heuristic, availability heuristic and anchoring belong to the investor.

But the bias above produced by the education investors can direct influence the decision of the investee. The overconfidence and self-control bias become the main biases of the students when they graduated from school. With such biases, the utilities of the output always take disappointment. Owing to the biases, I also provide some strategies of our literature to solve our investing problem and increase the effectiveness of investor's decision-making processes. By using expertise or taking a outsider's view and debias judgment, investors are able to unfreeze their mindset and provide their children a better decision in education.

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