

The Introduction of Loss Aversion and Applications in Business, Sports and Government

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Abstract. The theory of loss aversion has been developed for a long time. Loss aversion has been widely used in real life and our economic development. This article provides a detailed introduction to loss aversion in behavioral economics. To give people a better understanding, this article will show three applications which are including business, sports and government so that prove loss aversion makes people more afraid of losing than gaining. We believe that this paper will make everyone better understand their hesitant behavior in making decisions and avoid big losses due to small mistakes. This paper puts forward some suggestions to provide some reference for everyone to make better decisions in government departments.

Keywords: Loss aversion; Business; Sports; Government.

1. Introduction

1.1 Background and Definition

Loss aversion is an important theory in behavioral economics. It has been widely used in people's daily life, including shopping and consumption, as well as many governments decisions. People are born with fear of failure, which creates loss aversion bias. Loss Aversion Bias is a cognitive bias that refers to the psychological aversion that people feel when they lose money and others valuable. People are loss averse and prefer to avoid losses rather than gain. In most cases, the pain people feel when they lose something is made up for by twice the joy of getting the same thing (Thaler & Sunstein, 2008). Loss aversion is very important in our daily life. People face risks in every decision they make and they need to be able to take them. Loss aversion prevents us from avoiding risk to make the best choice. It will let us make choices that are not logical. Just as many investors hold stocks too long or too short and miss out on the best opportunity to sell.

The shopping habits of millions of consumers around the world have changed to using Internet-enabled smartphones and mobile devices (Mehra et al., 2020). Let us suppose you are swiping your phone to buy a T-shirt for yourself. You find there are two stores are selling the same T-shirt you like. The first store sells 90 dollars each T-shirt, but there is 10 dollars shipping fee. T-shirts from the second store are 100 dollars a piece with free shipping. And both stores have high praise and credibility. Which store would you choose to buy from? Exactly, they are the same T-shirts, but most people will choose the second one. Survey evidence shows that shipping is the main complaint of more than 50% of online shoppers, and more than 60% of shoppers abandon their orders after adding shipping (LEWIS, 2006). Even if the merchant adjusts the shipping fee of first store to 8 dollars and the total price is 98 dollars, more people will choose the second store with free shipping. In fact, we all know that products with free shipping add the shipping fee to the total price, but we will still be unhappy about paying the shipping fee. Even for free shipping, buy more products that you do not need. Shipping fee triggers our loss aversion, even for the same price, because there is so much free shipping, paying for shipping fee makes us feel like it's a loss.

1.2 Contribution

There have been many studies on behavioral economics in the past, but the analysis of the theory and practice of loss aversion in behavioral economics is still relatively small. This article will explore some of the applications of loss aversion in business, sports and government. This paper will be a meaningful addition to related theory in behavioral economics. The paper also presents some important implications. On the one hand, it provides help and advice for government departments and

individuals to make more scientific decisions. On the other hand, it warns everyone not to be afraid of failure when hesitating to make decisions and avoid losing a great deal through trying to save a little.

2. Applications

2.1 Loss aversion in Business

In business, Insurance is a representative. Simply saying, Insurance is a means of protection from financial loss. For example, health insurance, an ex-ante measure which can lower the future risks for oneself (Jorgensen & Siegel, 2019); Life insurance, a protective tool to protect the financial interests of the insured in the event of an untimely death of the insured disability insurance (Wei et al., 2020); homeowners and renters insurance and auto insurance. All these insurances can lower the probability of losing risk.

Insurance is a type of risk management. Our lives are inseparable from insurance. Employee should negotiate with the employer about the insurance, like the endowment insurance, medical insurance, employment injury insurance and so on. “Compulsory Insurance for Motor Vehicle Traffic Accident Liability” is a necessary condition for cars to be driven on the road. Loss aversion is often used by salesmen as a marketing technique. A good salesman will use loss aversion to get you to buy insurance.

On the one hand, some people are willing to buy insurance. Survey results show that young people in Afghanistan are more willing to buy insurance than older people after learning about insurance (Behzad et al., 2022). They will be worried about potential large risks and economic losses that may occur in the future, so they will choose insurance as a risk management tool to hedge against large economic losses that may occur in the future. For example, professional athletes need medical insurance to prevent more cost from bodily injuries. This is how loss aversion affects us. We are afraid of loss more, so pay less at the beginning.

On the other hand, some people are reluctant to buy insurance because they think that if there is no accident or risk within the period, the premium will be wasted. In fact, this is also loss aversion, and these people are not willing to waste these insurance costs in vain.

The clever salesmen would not tell customers that participate in a certain insurance so that to avoid the losses caused by ten major diseases and get a coupon of 1,000 dollars. Although it is a fact, it is not attractive and hard to encourage someone to buy insurance. However, the salesmen prefer to tell customers the probability of suffering from these ten major diseases is very high. And any one of these diseases will require hundreds of thousands or even millions of treatment costs. Moreover, listing a few unfortunate cases at last. Customers will be very afraid if they will have the similar experiences and do not want to cost so much money in the future. In this way, the willingness of customers to buy insurance will be greatly improved. The pain of loss is so great that people are willing to ignore this little premium in exchange for lower risk to themselves in the future. Consumers typically exhibit loss aversion when losses outweigh gains (Kahneman & Tversky, 1979). Loss aversion can explain the need to commit to an insurance plan, even if the losses outlined in the plan are unlikely to occur.

2.2 Loss Aversion in Sports

Football is the largest ball game in the world that the influence cannot be underestimated. FIFA World Cup™ reached 3.5 billion viewers, one billion watched final in 2018 (Technical Study Group, 2018). In sports, the decisions that head coach made are very important. And head coaches will be influenced by loss aversion as well. Loss aversion is also often present in football games. In football games, there was maximum 3 substitutions per game before, due to the epidemic it changes to 5. Main reason for substitution can be divided into 2 reasons. First, the physical problems, including the injury. Second, the team will change formation and tactical. Usually, the first way is passive substitution, while the second is active. This study will focus on the second one. There are many

impressive tactical substitutions every year. For example, in 2010 South Africa world cup, Netherlands against Costa Rica, Netherlands coach Louis Van Gaal replaced the starting goalkeeper Cillessen in 120 minutes, and Tim Krul came on as a substitute. Krul saved two penalties in penalty shoot-out to help the Netherlands advance to the semi-finals. That was an amazing substitution.

Assuming two situations, Team Red is currently leading by 2 goals in condition. The first situation is Team Blue scored 2 goals in a row, shortening the gap between the two teams. In the second situation, Team Blue scores 3 goals in a row and overtakes Team Red. In the second situation, Team Red will play more aggressive and take more long passes and long shoots. It is because of loss aversion. It seems to be a completely win when Team Red lead 2 goals. However, Team Red is going to lose, it prompts teammates to save the situation actively, they are reluctant to lose the game in the lead situation. Sink or swim, even the head coach will substitute three attackers.

Conversely, in the first situation, Team Red usually decreases their times of shoot and pay more attention on defense. It is because of lose aversion and risk aversion. There is a nuanced difference between risk aversion and loss rules (Bonilla & Fica, 2022). Team Red do not want to lose more and choose to take less risk. A slight lead is also a lead, the previous goals were defensive errors. The fear of losing the ball prevents Team Red from spending too much attention on attack. Positional warfare is always harder to concede the ball than a quick counterattack. Because of loss aversion and risk aversion, the head couch of Team red will substitute more defenders to lower the risk and keep the victory.

The leading side often changes formation and substitutes more defenders at the end of the game. Trying to stop the opponent's attack and keep the victory until the end of the game. In the same way, the team trailed prefer to substitute more forwards to strengthen the attack.

As Moskowitz & Wertheim (2011) mentioned, the coaches in NBA will substitute their players on the pitch who had already fouled 5 times and in America football will choose to give up attacking and substitute a punter in fourth part.

2.3 Loss Aversion in Government

Environmental protection is the duty and obligation of each of us. Loss aversion can not only apply to individuals and teams, but also to governments. There are many policies based on the idea of making people feel loss averse, so that cities can be better governed. The versatility, durability, strength and low cost of disposable plastic bags make them an indispensable companion for many consumers, but the use of disposable plastic bags is becoming increasingly controversial (Nielsen et al., 2019).

There is an example in Macau. The Macao SAR government continues to promote plastic reduction. Law No. 16/2019 "Restriction on the provision of Plastic Bags" entered into force on November 18, 2019. Studies have shown that the average lifespan of disposable plastic bags is only 12 minutes (NSW EPA, 2016). The government will also continue to carry out relevant publicity and education to create a plastic-reducing atmosphere in the society. Its specific approach is to refer to neighboring regions such as mainland China, Hong Kong and Taiwan, increasing and enforcing the charge for plastic bags by 1 mop. The fees are retained by the merchant. The Environmental Protection Agency (DSPA) also actively encourages merchants to use the relevant fees for environmental protection or charitable purposes, thereby enhancing their own green image.

The price of a plastic bag 1mop is many times more than the cost of a plastic bag. But the purpose of raising the price of plastic bags in this way is not to make money, but to make people see the high price of plastic bags and give up buying them. The cost-benefit rule can be considered a cornerstone of economic analysis (Sepulveda, 2020). Due to the basic principle of microeconomics, when prices go up and supply stays the same, demand decreases (Krugman, 1998). And let people develop the habit of carrying environmentally friendly bags by themselves. Such price increases would make people reluctant to pay such a high price for plastic bags, creating loss aversion.

Maybe you are skeptical about this new regulation, wondering if raising the price of plastic bags can improve everyone's attitude to actively participate in environmental protection. But in fact, such

an approach has been successfully implemented in the United States, and the expected results have been obtained. Chicago repealed its original ban (which banned disposable plastic bags) in 2017 and replaced it with a tax of 7 cents per disposable plastic bag. After the plastic bag tax starting, the impact of Chicago's tax is great. The behavior that consumers using disposable plastic bags reduced by about 33 percentage points (Polner, 2020). These small taxes have led to a dramatic reduction in the use of disposable plastic bags.

Similar, the UK government choose to add tax on plastic bags. Large shops in England must charge 5 pennies for single use plastic carrier bags from 5th October 2015. And the effect is significant. The new tax decreased the use of plastic bags by up to 85 percent in one year.

3. Conclusion

3.1 Discussion

This paper use three applications in business, sports and government to introduce loss aversion. It is found that loss aversion is all around us. And this paper shows us that loss aversion is a natural human tendency that exists to keep us from incurring losses. People always afraid of losing so that cannot make the logical decision.

3.2 Revelation

It is essential to know how to avoid loss aversion and its influence on decisions, especially when making decisions with potential gains. In addition to these examples, there are many other cases of loss aversion happening around us, such as the buy-one-get-one-free or the 20 dollars voucher activity that supermarkets do for marketing purposes. You certainly do not want to miss this opportunity when you see these enticing ads. Please make a rational analysis before making decisions and do not be blinded by loss aversion.

3.3 Limitations and Innovation

This paper also has many limitations that mainly analyzes loss aversion from a qualitative perspective and applications. We do not provide complex models and lack of data to prove loss aversion. Then future research can try to explain and analyze the specific application of loss aversion from the perspective of model design and mathematical methods.

Actually, loss aversion mainly applies in marketing. There are less applications in government and enterprise. In the process of enterprise management and production innovation, the specific application of loss aversion is relatively rare. We think that in future research, we can try to extend the understanding and application of this loss aversion to all aspects of enterprise production and development, so that enterprises would not be afraid to make rational development decisions. In this way, it will bring some reference to the decision-making and operation of the enterprise.

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