

A Study of Psychological Mechanisms and Relevant Application Research of Status Quo Bias

Zihan Li ^{1, *, †}, Zexuan Wang ^{2, †}, Yina Zeng ^{1, †}

¹ Guangdong University of Foreign Studies, Guangdong, China

² University of California San Diego, San Diego, USA

* Corresponding author email: sophie@nbgchina.com

†These authors contributed equally to this article

Abstract. This paper introduces a phenomenon in which individuals are unwilling to change their current state after period of directed choices. We call it status quo bias. Status quo bias is an influential theory in behavioral economics, where people's reluctance to risk common sense in the face of unknown choices is explained by a combination of loss aversion and regret theory, causing the choices to look better than its alternatives. We choose to utilize examples of Coca-Cola company and European organ donation as the basis of our study to concentrate on the deeper influence of status quo bias on some degree of significance to the individuals or companies concerned who are affected by it as the study method. Meanwhile, the reason we choose to study this topic is that it is a classic and important basic theory in behavioral economics, and it has an unshakable position in the current industrial structure and economic development environment of most enterprises, and it is also widely use in daily life. We also analyze the pros and cons in terms of losses and gains, and we demonstrate through examples that gains do outweigh losses when following the status quo bias. From the application of this paper, we can conclude the following points: the study of the theory of status quo bias can help us better understand the behavior of micro-actors in the market and improve the theories about consumer behavior and other related areas in the direction of economics; decision makers can respond to people's tendency of status quo bias in practical areas such as marketing industry, administrative fields or public policies and so on. To sum up, it is significant to grasp well in both the comprehension and interpretation of everyday decision-making behavior of status quo and its application in various practice areas.

Keywords: Status Quo Bias, Loss Aversion, Decision Making.

1. Introduction

Status quo Preference was coined by researchers William Samuelson and Richard Zeckhauser in 1988 in the academic article "Status quo Bias in Decision Making." They did a decision experiment in which participants were given a choice between two hypothetical decision scenarios (one neutral or one present). In the neutral version of the decision scenario, suppose you inherit A fortune from your uncle that you plan to invest, and you have four portfolio options to choose from: medium-risk Company A; A high-risk company B. Treasury bills; Local government bonds. In the status quo version of the decision scenario, suppose you inherited A group of investment assets from your uncle, shares of medium-risk Company A, with the same four portfolio options available to you. But the first option in the status quo scenario is the status quo scenario where you own the medium-risk company A and expect the same return as the neutral scenario. The remaining three options are the same as in the neutral version. It turns out that more people chose Company A in the status quo version than in the neutral version. The status quo version of the decision situation only described the stock of investment company A as the status quo, thus leading to the subject's preference for this option. And when the other three alternatives were presented as the status quo option in the status quo version, participants tended to choose the status quo option. In addition, they confirmed the existence of the bias in water resource allocation, office migration, career choice and other decision-making situations. Experiments have consistently shown that when given a choice between the status quo and a new option, individuals are more likely to stick with what they already know.

Status quo bias is an emotion-based cognitive bias in which individuals have a tendency to do nothing and maintain current or previous decisions when making decisions. There are loss aversion theory and regret theory as well as self-perception and cognitive dissonance theory to explain the psychological mechanism of status quo deviation. This definition reveals individuals' preference for the current state of affairs when making decisions, their reluctance to make any changes, and their tendency to choose the status quo when faced with a range of decision options. Change naturally brings risks, and people feel uncomfortable putting themselves in situations where the outcome is uncertain. This tendency to maintain the status quo can have a considerable impact on how people behave in almost any aspect of their lives.

In different decision environment, the current choice is an unavoidable choice for decision makers. Policymakers are often faced with the choice between continuing with the status quo, following past decisions, or choosing something else. Many previous studies have shown that in the decision-making environment of investment, management, consumption, insurance and career choice, individuals have a high preference for the current situation and a strong preference for the current situation. The two historical cases selected in this paper can also provide theoretical help and application enlightenment for our decision making.

First of all, the analysis of the current bias can help us better understand and explain the daily decision-making behavior. At the same time, the current bias can also help us better understand the acceptance and elimination process in the selection strategy. Secondly, according to the current preferences of consumers, corresponding countermeasures can be formulated in terms of sales, management and public policy formulation. Researchers can use status quo bias to explain the reasons for user resistance in the implementation of information systems, and thus propose effective management strategies (Kim&Kankanhalli,2009) [1].

This paper is based on the status quo research paradigm proposed by William Samuelson and Richard Zeckhauser, focusing on the two applications of Coca-Cola's failure to launch new products and the difference in the willingness of different countries on organ donation. This paper analyzes two classic applications in which the status quo preference theory has exerted influence in history. By understanding the process and results of real cases, readers can further understand how the status quo preference theory affects people's judgment and choice in economy and life.

The rest of this paper is divided into four parts in detail: First, it introduces the origin and framework of the status quo bias theory. Then, it introduces two real cases to help you understand how this mechanism works in reality. Then, by reviewing the case analysis and the process of effect, we can deepen the impression and understanding of the status quo preference theory and better remember the practical effect of this theory. Finally, by summarizing the full text and highly summarizing the content, readers can better understand the context of this paper and the meaning they want to convey.

2. Literature Review

2.1. Origin of Status Quo Bias

Status quo bias is the human tendency towards current conditions. Even when the reality is worse than the alternatives, or when the information is incomplete, people choose to stay as they are and tend to see any change as a loss. (Samuelson & Zeckhauser, 1988) [2].

According to the source of the status quo, the status quo bias can be divided into two categories: external status quo bias and internal status quo bias. The external status quo bias is mainly manifested by inaction or maintaining the current decision, while the internal status quo bias is mainly manifested by maintaining the past choice. Samuelson and Zeckhauser first proposed the concept of status quo bias, and confirmed the existence of this bias in laboratory experiments and field experiments (Liu & Xu, 2010) [3].

The status quo bias tends to apply to behavioral economics, behavioral finance, and the humanities and social sciences. The bias of being content with the status quo exists in both risk and risk-free

situations. It is a universal bias in all kinds of decision-making situations. For example, in stock investment, although investors seek stocks with better trading, they continue to hold the previous stocks, and ignore the stock information that can bring higher potential returns shows the status quo bias, thus failing to maximize investment returns (Brown & Kagel, 2009) [4].

2.2. The Basic Framework of Status Quo Bias

Status quo bias is an aspect of cognitive bias, which refers to the tendency of individuals to manifest themselves, maintain their current or previous decisions when making decisions. This theory undoubtedly has implications for individual decision making, but it is not limited to superficial human decision-making theories, but has far-reaching implications in, for example, behavioral economics and political science fields. Status quo bias also includes both endogenous and exogenous status quo bias. Researchers currently use these two notable theories, loss aversion and regret theory, to explain the emergence and application of status quo bias (Liu et al, 2010) [5].

The factors influencing status quo bias include the quantity of alternatives, the decision maker's emotions, and cognitive and motivational characteristics. The status quo bias is beneficial to the comprehension of daily decision-making behavior and has prominent research value in practical areas such as marketing, management, or public formulation fields. By becoming aware of how status quo bias affects individual decisions and behaviors, individuals can find ways to reduce bias in their routine choices (Kendra, 2022) [6].

2.3. Application of Status Quo Bias

Companies apply the status quo bias when selecting an insurance plan. Pepsi uses it to introduce additional insurance plans and select options. Pepsi employees use the status quo bias theory in selecting insurance options (Jung & Lim, 2021) [7]. The staff members often prefer the old insurance plan and ignore new plans.

The status quo bias is applicable in the investment plan. Amazon uses this model to resolve problems when evaluating new ideas or innovation. Approximately 2.5% of respondents shifted their allocation in any particular year, but various possibilities have varying levels of return (Vinney, 2018) [8]. The organization uses retirement plans to modify their investment allocation yearly at no cost.

Google uses the theory to avoid regrets among customers. People prefer to utilize the Web browser installed on their device instead of purchasing a new web browser (Mblevins, 2015) [9]. The model can reduce transformation risks while maintaining ads.

3. Application

3.1. Coca Cola Marketing Strategy

The Coca-Cola Company is a multinational beverage firm that manufactures and distributes nonalcoholic beverage concentrates. Status quo bias involves a powerful cognitive bias that dissuades people from making risky and costly decisions. The benefit of using a status quo pricing strategy in marketing includes little planning. Coca-Cola Company applies Status quo bias in marketing to outdo its competitors, such as Pepsi.

Coca-Cola applies an undifferentiated target market to attract consumers based on the status quo bias model. The company localizes its products to improve organizational appropriateness (Pendergrast & Crawford, 2020) [10]. The Coca-Cola company applies two primary marketing channels. The marketing strategies for Coca-Cola include personal and non-personal. The Coca-Cola brand strategy represents one of the most refreshingly delicious drinks. In 1985, Coca-Cola made New Coke, a new variant of the original coke flavor. The blind taste revealed that people like the new variant more than the old one (Jones et al., 2016) [11]. In contrast, they selected the old variant when the corporation told them to select which Coke they would purchase. This decision resulted in the discontinuation of New Coke in 1992. The experiment demonstrated that the status quo influences people's financial decisions by making them stick to old habits rather than try new ones. As a result,

status quo bias made Coca-Cola customers stick to the old Coke because they feared the uncertainties linked with changes.

Coca-Cola has used status quo bias to its advantage when faced with new ideas or opportunities. The company assumes success and tries to outdo its competitors. For example, Coca-Cola needs to respond to changing consumer tastes while preferring to maintain its status quo and waiting for consumers to adopt new products such as Diet Coke or caffeine-free drinks (Xiong, 2022) [12]. The company should always remain in the minds of consumers to stay successful and continue to sell its products. Coca-Cola managers can ensure that the company products remain among the customers' top preferences by using traditional methods such as advertising. These methods are known for being effective at keeping consumers interested in buying products from companies.

Coca-Cola Company considered abandoning the old Coke a loss since they attempted something new that the public wanted to avoid adopting. The decisions made by Coca-Cola consumers align with those of cognitive dissonance since they made an irrational choice to reject New Coke and remain with the status quo (Coke Classic) (Karakaya, 2000) [13]. The latter felt the discomfort of losing the old version, inhibiting them from noticing the benefits of the new one. In this regard, the status quo bias made consumers make irrational choices.

The company decided to offer the New Coke because Pepsi-Cola had advertised that it beats Coke in blind taste experiments. Since New Coke won over the Coke Classic in the blind taste tests, Coca Cola Company saw this as an opportunity to take over a larger share of the soft drink market. Cognitive dissonance indicated that clients had an emotional connection to Coke Classic. They reacted to the old Coke in more ways than blind taste tests could. Many had memories of sharing a Coke Classic as a bonding experience with older family members (Levine & Levine, 2022) [14]. Others talked about receiving an old Coke as a reward for good behavior or grades. Brands want to create memorable experiences, and Coke Classic achieves this by casually sharing a drink. The change in New Coke affected peoples' emotions because they believed it could not replace the memories created by Coke Classic (Leven & Levine, 1996) [15]. As a result, they strongly reacted against the new product due to the fear of trying something new. This situation made them stick with the old product and reject the new one. Coca-Cola has been one of the most popular beverage companies in the world for decades because it maintains status quo bias in its operations. Coca-Cola originated from a scientific need for a soda that was not overly sweet and marketed as a refreshing beverage. The firm focuses on its customers by promising them affordable drinks (Dean et al., 2017) [16]. The Company has two main competitors, Pepsi and Dr. Pepper, have developed distinct strategies to gain market share. However, Coca-Cola focuses on concentrated drinks as opposed to Pepsi, which emphasizes sports sponsorships and tea drinks.

The cognitive bias affects people's decision-making by leading them to believe that changes in current conditions are unlikely. Coca-Cola has stood the test of time by applying this model to enhance its consumer base while generating maximum profits. Therefore, firm managers should observe the status quo bias when deciding to ensure that consumers continuously buy their products.

3.2. The Default Option of the European Countries' Organ Donation

In a study of European organ donation policies published in science, scientists found that although the vast majority of European citizens are relatively similar in ideology to some degree, influenced by geography and similar educational perceptions, the voluntary organ donation rates of citizens in different European countries vary by up to 70 percent. For example, in countries such as Austria and France, more than 90 percent of citizens chose to give their default consent when choosing whether to undergo organ donation, while in countries such as Denmark and the United Kingdom, only 20 percent of citizens were willing to donate their organs.

A major difference in the content of the organ donation consent form given to citizens in these countries is the usage of "opt-in" versus "opt-out" as the default option to choose from as different policies for citizens to participate in organ donation or not. Typically, opt-in countries ask "Please check the box if you would like to participate in an organ donation program." Whereas opt-out

countries ask "check the box if you do not want to participate in the organ donation program"(Yu, 2015) [16].

Participation in maintaining the status quo bias is evidence that suggests that individuals are directly involved in decision making without any reflection, which means that at this point individuals are not necessarily, or overwhelmingly, going to make decisions based on very arbitrary reasoning. It will also result in the person not being able to make a choice that is consistent with what they would otherwise be determined to do. In this case, always sticking to the default option can cause missing opportunities that are in the original favor (Bar et al, 2007) [17]. For example, if by default, countries such as Austria and France, where the default option on organ donation forms was simply "opt-in", added the option "opt-out" to the default option on the next consent form that citizens were asked to give, so that the default option will transform into two completely antipodal options, then a significant number of citizens will pay attention to the options they have checked rather than just simply leaving them, because they will get down to care about whether their choices are advantageous for them, which will lead to the organ donation rates in these countries will decline to some extent when they begin to believe that consenting to donate their organs will have a negative impact on their personal health or something else rights they already have for their own bodies. The citizen who chose to check the option of disagreeing to donate an organ was also influenced by the fact that every time they made the same choice in the past, they habitually favored the default option chosen, having ensured that they would never lose more than they would gain in this decision, which is the mechanism by which loss aversion works in social psychology.

At the same time, citizens who chose not to donate organs in the past did not suffer any loss because of their default choice, that is to say, they did not regret the decision they made in their favor, and when such a situation arises in which the benefits outweigh the costs, individuals will naturally be influenced by the theory of resting on their laurels and will be determined by their usual choice over and over again.

But in a broad perspective, the most salient thing is to be aware of the existence and beneficial effects of the status quo bias so that individuals can decide based on the analysis when to avoid making decisions and when to make the best decisions accordingly because of the unknown about the future. Being conscious of this bias can help individuals seize more information and resources than others in the process of using the bias so that they can continue to reevaluate previously made choices and reach more favorable decisions or conclusions on the basis of them. This is particularly important when the decision an individual makes is of great significance. In this application, if a small percentage of European citizens realize that choosing to become an organ donor contributes more to society than the "disadvantages" to their own bodies, it is also equating to more benefits than costs in the broader sense, except that the results and values resulting from the status quo bias theory are taken to a more profound level of significance (Samuelson & Zeckhauser, 1988) [18].

4. Discussion

In both applications, status quo bias played a large role. In application 1, the failure of the new product launch of Coca Cola reflects that the status quo bias has a great influence on people's purchase, because the company makes customers feel uncomfortable about losing the old Coca Cola and inhibits their consumption desire for the new version. The status quo bias keeps customers sticking with the old Coke because they fear the uncertainty of change. Current conditions can make people stick to old habits rather than try new ones, which affects their economic decisions. In application 2, because different countries have different ways of asking citizens about organ donation, citizens' will be also very different. In the investigation, the premise given by one question is "agree", while the premise given by another question is "disagree", and citizens naturally answer according to the given premise. Different premises can lead people to make choices that are inconsistent with what they are determined to do. It also involves loss aversion and regret theory, both of which influence individual decision making to some extent.

The status quo bias is not only a trade-off between loss and gain, but also a trade-off between status quo and change. In order to avoid future negative emotional experience, individuals tend to choose not to act or maintain the previous decision. More directly, the expected effect is to feel that decisions that maintain the status quo result in less regret than decisions that change the status quo. In different decision-making environments, "status quo" is the inevitable choice of decision makers. Decision-makers usually have to make a choice between maintaining the status quo and maintaining previous decisions and choosing non-current choices. For the status quo bias, the result of adhering to the past decision is usually certain, and individuals prefer the result of certainty when making decisions. Therefore, individuals' pursuit of certainty may be the cause of the status quo bias in reality.

Based on the above two applications, the study of the status quo bias helps us to better understand and explain the daily decision-making behavior. Decision-makers can formulate corresponding coping strategies in marketing, management and public policy making in view of people's behavioral tendency to be content with the deviation of the status quo. The status quo bias has important research value both in the understanding and interpretation of daily decision-making behavior and its application in various practical fields.

5. Conclusion

The literature review comprises the basic framework of status quo bias and its application. Although this model has implications for individual decision-making, theorists do not constrain its implementation to human decision-making approaches. In this regard, researchers utilize regret theory and loss aversion to explore the emergence and implementation of status quo bias.

The factors affecting this model include the quantity of alternatives, motivational and cognitive facets, and the decision-makers' emotions. Firms implement this theory when choosing an insurance plan. Pepsi utilizes it in introducing additional insurance plans and select options. Its workers use status quo bias in determining insurance options (Jung & Lim, 2021) [19]. They prefer the old insurance plan and reject new plans. Amazon also utilizes it to address issues when examining new ideas or innovations. It also uses retirement plans to modify its investment allocation annually at no expense. On the other hand, Google uses status quo bias to prevent regrets among clients because they prefer a web browser installed on their devices rather than buying a new one.

Coca-Cola Company implements this model in marketing to outshine its rivals, including Pepsi. In 1985, the corporation made New Coke and conducted a blind taste to show how clients liked it more than the old one (Jones et al., 2016) [20]. However, they chose the old variant when the firm asked them to select the Coke they would purchase. This decision led to the removal of New Coke in 1992. The test revealed that the status quo affects individuals' monetary decisions by making them comply with old habits rather than adopting new ones. Status quo bias made Coca-Cola clients prefer the old Coke since they feared the uncertainties associated with changes.

The corporation utilized this model when faced with new opportunities or ideas. It should address changes in consumer preferences while maintaining its status quo and waiting for clients to adopt new products like caffeine-free drinks or Diet Coke. Coca-Cola Company needs to always remain in customers' minds to stay successful and continue to sell its commodities. Its managers should use traditional techniques to ensure that the products remain among the clients' top preferences.

The status quo bias theory is also applicable during organ donation. Organ donation agencies often involve people in making critical decisions by providing two options: opt-in and opt-out. This procedure enables individuals to avoid making arbitrary conclusions. However, sticking to default options can disadvantage people because they may miss better opportunities. The agencies or countries giving the two options should allow people to make rational decisions before donating their organs.

People need to consider the benefits of status quo bias during decision-making. They should understand when to avoid making decisions and when to make the best ones. Recognizing this bias can assist them in obtaining more resources and data than others during the bias process. When people

participate in retaining the status quo bias, they can directly engage in decision-making without any reflection. As a result, remaining in a default option can make them miss favorable opportunities.

References

- [1] Kim H. W. & Kankanhalli A. (2009). Investigating user resistance to information systems implementation: A status quo bias perspective. *Management Information Systems Quarterly* 33.567 - 582.
- [2] Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*, 1 (1), 7 - 59.
- [3] Liu Tengfei, Xu Fuming. Psychological mechanism, Influencing factors and Application of status quo bias [J]. *Advances in Psychological Science*, 2010, 18 (10): 1636 - 1643.
- [4] Brown, A... & Kage, J. H. (2009). Behavior in a simplified stock market: The status quo biases the disposition effect and the ostrich effect. *Annals of Finance*, 5, 1 - 14.
- [5] Liu, T. F. et al. (2010). Psychological mechanisms, influencing factors and application sights of status quo bias. *Advances in Psychological Science*, 10, 1636 – 1643.
- [6] Kendra, C. (2022). How the status quo bias affects your decisions?. *Università statale dell'Idaho*.
- [7] Jung, H., & Lim, S. (2021). Status quo bias in ocean marine insurance and implications for Korean trade. *Journal of Korea Trade*, 25(5), 39-57. doi:10.35611/jkt.2021.25.5.39.
- [8] Vinney C. (2018, August 14). How status quo bias affects your decisions. Retrieved from <https://www.thoughtco.com/status-quo-bias-4172981>.
- [9] Miblevins. (2015, April 7). Status quo bias explained perfectly with APT examples. *Psychologize*. <https://psychologie.com/status-quo-bias-explained-with-examples>.
- [10] Pendergrast, M., & Crawford, R. (2020). Coke and the Coca-Cola Company. *Decoding Coca-Cola*, 11-32. <https://doi.org/10.4324/9781351024020-1>.
- [11] Jones, K., Ondracek, J., Saeed, M., & Bertsch, A. (2016). Don's mess with Coca-Cola: Introducing New Coke reveals flaws in decision-making within the Coca-Cola Company. *Ge-International Journal of Management Research*. 10 (4), 1 - 6.
- [12] Xiong, Y. (2022). Status quo bias in behavioral economics and its applications. *BCP Business & Management*, 25, 352-356. <https://doi.org/10.54691/bcpbm.v25i.1842>.
- [13] Karakaya, F. (2000). Market exit and barriers to exit: Theory and practice. *Psychology & Marketing*, 17 (8), 651 - 668.
- [14] Leven, S. J., & Levine, D. S. (1996). Multiattribute decision making in context: A dynamic neural network methodology. *Cognitive Science*, 20 (2), 271 - 299.
- [15] Dean, M., Kibris, Ö., & Masatlioglu, Y. (2017). Limited attention and status quo bias. *Journal of Economic Theory*, 169, 93-127. <https://doi.org/10.1016/j.jet.2017.01.009>.
- [16] Yu, K. K., (2015). How does the "bait" effect affect user decisions?, <https://zhuanlan.zhihu.com/p/449021549>.
- [17] Bar-Eli, M. et al. (2007). Action bias among elite soccer goalkeepers: The case of penalty kicks. *Journal of Economic Psychology*. 28 (5), 606 - 621.
- [18] Samuelson, W. & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*, 1 (1), 7 – 59.
- [19] Jung, H., & Lim, S. (2021). Status quo bias in ocean marine insurance and implications for Korean trade. *Journal of Korea Trade*, 25 (5), 39 - 57. doi: 10.35611/jkt.2021.25.5.39.
- [20] Jones, K., Ondracek, J., Saeed, M., & Bertsch, A. (2016). Don's mess with Coca-Cola: Introducing New Coke reveals flaws in decision-making within the Coca-Cola Company. *Ge-International Journal of Management Research*. 10 (4), 1 - 6.