An Overview of Status Quo Bias and Its Applications

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Abstract. Behavioural economics has highlighted various biases that impact decision-making processes, including the pervasive status quo bias. This paper explores the impact of status quo bias indecision-making and its implications for policy interventions. The first section provides an overview of the status quo bias, its underlying mechanisms, and its prevalence across different domains. The second section investigates the consequences of status quo bias on individual decision-making, such as inertia, suboptimal choices, and resistance to change. Additionally, it discusses how status quo bias can lead to market inefficiencies and hinder social welfare. The third section explores potential policy interventions to mitigate the negative effects of status quo bias, including default options, nudges, and information provision. It also discusses the ethical considerations and potential limitations of these interventions. Understanding the role of status quo bias and its implications is crucial for policymakers and individuals alike, as it can inform the design of interventions that promote better decision-making and improve overall societal outcomes.

Keywords: Behavioral economics; status quo bias; investment decisions; consumer loyalty; energy consumption.

1. Introduction

Behavioural economics, as practical economics, is important for economic and human social development. Regarding the origin of behavioural economics, Hosseini believes that BE (behavioural economics) existed before the 1950s. In 1984, Gilad, Kaish and Loeb's articles were a milestone in the development of BE. As trailblazers of BE, Akerlof, Thaler, and Frank have also made significant contributions. Hosseini also indicated that the research of Kahaneman and Tversky found many violations of the principles of dominance and invariance of the common utility axiom, Dickens applied new behaviouralism to consumer and job security issues, Werner, Thaler, Scharter, and Hood studied the performance of BE in the stock market [1].

Many biases in behavioural economics have an impact on people's decisions. This paper focuses on one of these biases, the status quo bias. Status quo bias refers to an excessive tendency to select previously chosen alternatives [2]. This means that even if other choices may bring better results, people are more likely to maintain the current status quo rather than make changes.

The SQB (status quo bias) is reflected in many fields, and this paper focuses on three of them, which are investment, branding, and energy. In investment decisions, SQB is reflected in investors' preference for traditional investment approaches. In consumers' choice of brands, SQB is reflected in consumers' preference for older brands. In terms of energy selection, SQB is reflected in people's preference for energy based on existing experience. SQB is a simple liking for the familiar and a type of cognitive resistance. This can have a negative impact, as it tends to prevent people from making changes and leads to the loss of better choices. In the above three areas, status quo bias would make people overlook more innovative and efficient investment strategies, better brands and greener energy.

2. Investment Decisions

Status quo bias, a cognitive bias that is prevalent in investment decisions, can have a significant impact on an investor's financial goals. This bias reflects a preference for traditional investment

approaches, which can lead investors to overlook more innovative and efficient investment strategies, such as passive investing. The status quo bias is rooted in the human tendency to favor familiarity and stability, which can result in an aversion to change and a reluctance to depart from established practices.

The study examined whether entrepreneurs are more susceptible to status quo bias in their decision-making compared to non-entrepreneurs. [2]. The study compared the choices made by entrepreneurs and non-entrepreneurs in an experimental setting when presented with a default option and an alternative option. The study had 362 participants, with 181 entrepreneurs and 181 non-entrepreneurs.

The research utilized experimental methods where participants had to make decisions in various scenarios, and their choices and susceptibility to the default option were recorded. The data was analyzed utilizing descriptive statistics and chi-square tests.

The results showed that entrepreneurs were more gullible to status quo bias than non-entrepreneurs. In the first experiment, 62% of entrepreneurs selected the default option, while only 48% of non-entrepreneurs did the same. In the second experiment, even when presented with a better alternative option, 50% of entrepreneurs selected the default option, while only 35% of non-entrepreneurs did the same. Additionally, the study found that experienced entrepreneurs were more susceptible to status quo bias than less experienced ones (see Table 1).

Table 1. Descriptive Statistics and Chi-square tests of Default and Alternative Option

Experiment	Default Option Selected (%)	Alternative Option Selected (%)
Experiment t1	Entrepreneurs: 62	Entrepreneurs: 38
	Non-entrepreneurs: 48	Non-entreneurs: 52
Experiment t2	Entrepreneurs: 50	Entreprenurs: 50
	Non-entrepreneurs: 35	Non-entrepreneurs: 65

The study's findings suggest that entrepreneurs need to be aware of their susceptibility to status quo bias and take measures to overcome it. The study provides a new perspective on the decision-making behavior of entrepreneurs and highlights the impact of status quo bias. However, the study's main limitation is the subjective definition and classification of entrepreneurs, and the results may be influenced by the specific experimental conditions. Future research can explore other biases that may impact entrepreneur decision-making and develop more effective measures to overcome them.

Previous research has also shown that status quo bias is prevalent when making decision. Future research can further explore the impact of other biases and suggest more effective methods to overcome them.

The study's practical implications suggest that entrepreneurs and managers need to be aware of the influence of status quo bias and take measures to overcome it to make better decisions and improve business performance.

The study aimed to compare the effect of numerical information presented in percentage format versus numerical format on investment decisions.

The study consisted of 80 participants who completed a simulated investment task. The study used a within-subject design where participants made investment decisions under two conditions: percentage format and numerical format. The study measured the participants' susceptibility to the disposition effect and status quo bias in both conditions.

The data was analyzed using descriptive statistics and a mixed-design ANOVA. The results showed that participants were more likely to engage in the disposition effect and status quo bias when presented with numbers displayed in percentage in comparison to numerical format alone, therefore suggesting that the format of numerical statistics can significantly influence investment decisions hence leading to biases.

The study's findings provide insight into the role of numerical information format in investment decisions and its implications for the disposition effect and status quo bias. The study has implications

for investors and financial advisors in presenting numerical information to clients and for policymakers in designing financial disclosure regulations.

The limitation within the study includes the small sample size and the utilization of a simulated investment task, hence is not fully reflect real-world investment decisions. Future research can explore the impact of different numerical information formats on other types of financial decisions and investigate ways to mitigate the disposition effect and status quo bias.

Another study examined the effect of the number of alternatives on the status quo bias in the mutual fund industry [3]. The study aimed to investigate whether having more alternatives increases the likelihood of investors sticking with their current investments, even if better alternatives are available.

The study utilized a sample of 1,100 mutual funds and their investors and analyzed the changes in mutual fund investments over time. The study measured the investors' susceptibility to the status quo bias and the impact of the number of alternatives on their investment decisions.

The data was analyzed using regression analysis and control variables. The results showed that investors were more likely to stick with their current investments when presented with a larger number of alternatives. The study also found that investors were more likely to switch to a better alternative if the current investment was performing poorly.

The study's findings provide insight into the impact of the number of alternatives on investment and the role of status quo bias in the mutual fund industry. The study has implications for investors, financial advisors, and mutual fund managers in designing investment options and presenting them to clients.

The study's limitations include the use of a limited sample size and the potential influence of other factors on investment decisions. Further extending to a more specific influence that status quo bias has on passive and active investment.

Passive investors, in contrast, endeavor to replicate the performance of the market instead of outperforming it. Despite growing evidence that passive investment strategies, for instance exchange-traded funds (ETFs) and index funds, and offer potential benefits, including lower fees and higher returns, many investors remain biased towards active management strategies. This bias can be attributed to a preference for familiar investment approaches or a reluctance to depart from established practices. For instance, empirical research from the Journal of Banking and Finance, explores a sample of 2,359 funds found that active funds had an average annual return of 4.8%, while passive funds had returns of 7.2% [4]. The data obtained for passive funds was much less volatile, with a lower standard deviation, indicating that passive investment is more efficient. Despite this evidence, the status quo bias leads investors to persist in their conventional ways of investing, thereby overlooking the potential benefits of diversification and asset allocation, which are two critical components of passive investment strategies.

Another manifestation of status quo bias in investment decisions is a reluctance to make significant changes to investment portfolios, even when there is evidence that the current portfolio may not be suitable for prevailing market conditions or may not align with the investor's objectives and risk tolerance. A study in the Journal of Asset Management has empirical research on European mutual funds from 2004 to 2015 found that active funds, on average, underperformed passive funds. Nevertheless, investors may still prefer active funds, possibly due to a preference for traditional investment approaches or a reluctance to deviate from familiar practices [5,6]. This data underscores the detrimental impact of high management fees on the performance of active funds and suggests that investors may favor these funds due to status quo bias.

These studies portray the effect of status quo bias on investment decisions and the importance of being aware of this bias. By comprehending cognitive biases and taking steps to mitigate their influence, thus allowing investors to establish more informed and effective investment choices. Investors can also consider seeking the guidance of financial advisors who can help them navigate cognitive biases and identify investment options that align with their financial goals.

3. Consumer Loyalty

In one of the papers, it mainly focusses on the role of status quo bias in consumer brand loyalty in the field of information and communication technologies (ICT)product and points out that cognitive lock-in and deliberate inertia are two forms which status quo is commonly shown [7]. Researchers hypothesize that consumers have a very strong preference to keep using the ICT product they are using currently, that is, the company product they were used to consuming, and have a large possibility of using it even when more advanced technology devices are launched and established. The target consumers are focusing on people who use iPhones and Samsung. The study is carried out by using questionnaires, in which question answers were according to a Likert-scale ranging from "disagree" to "agree", which is ranged from 1 to7. Control variables included the brands of phones that the participants are using, the time duration of using the status quo phone and the brand of status quo phone. The study aimed to gather data from smartphone consumers representing various occupations. A total of 1,500 paper questionnaires were distributed through government, listed companies, small enterprises, universities, and high schools in China. Additionally, questionnaires online were created and sent through emails. After a month, with the collecting of questionnaires, the findings indicate that deliberate inertia, in other words, status quo bias, has a positive effect on consumers' loyalty and surely plays an important role. As shown in data, researchers have designed Model A by deleting the effect of deliberate inertia. The results revealed that Model A was supported by statistical evidence, although it explained a lower percentage of variance (R2 = 0.451 or 45.1%). It is notable that, when deliberate inertia is not considered, the prediction power for consumer brand loyalty declined to 15.7% (see table 2)

Table 2. Relation between Original Model and Model A

Hypothesis	Original model	Model A
Using status quo smartphone	-0.026	0.038
Using status quo brand	-0.025	0.028
Trust => Brand loyalty	0.032	0.108
Trust => Inertia		
Trust => Commitment		
Inertia => Brand loyalty	0.525	
Commitment => Brand loyalty	0.568	0.419
Lock-in => Trust	0.310	0.251
Lock-in => Inertia	0.393	
Lock-in => Commitment	0.325	0.331
Lock-in => Brand loyalty		
R^2	0.608	0.451
ΔR^2	/	-15.7

The study highlights the significance of deliberate inertia and cognitive lock-in in understanding and influencing consumer brand loyalty. Marketers need to recognize and address these factors to effectively maintain and strengthen brand loyalty among consumers.

Also, the study identifies areas for improvement such as the inclusion of other ICT products, comparative analysis of international and domestic brands, consideration of cultural factors, and the need for larger samples and longitudinal studies.

Furthermore, another study conducted by the researchers involved administering surveys through questionnaires [8]. The research aimed to validate the findings previously observed in the economic phenomenon and the analysis of decisions associated with people's current retirement life and health plans. The questionnaire consisted of decision questions where participants were presented with a description of a decision scenario involving individuals, managers, or government policymakers. For each scenario, participants can make decisions toward different actions and policies. In part one, the phenomenon of decision making was framed in a way that "status quo" is present in one of the options.

In Part Two of the questionnaire, participants engaged in decision tasks without the presence of Status quo. Then, they chose one alternative from the set of options. The results of the survey confirmed the presence of status quo effects. The study's findings highlight that status quo effects play a significant role in many different economic phenomena. They emphasize the challenges associated with altering public policies, the preferences for specific marketing tools, and the dynamics of competition within markets. Based on the regression results, the researchers come up with two conclusive equations: Status Quo= 0.17 +0.83NEUT and non-status quo = 0.83NEUT (NEUT=neutral). These equations indicated the advantage that the status quo option provided along with the relative bias diminished as the response rate in the neutral setting increased.

Furthermore, in another study, it described its purpose is to find the role that status quo bias plays in the context of marketing [9]. The researchers recognized that individuals are prone to bounded rationality and cognitive misperceptions when making decisions about whether to stick with their current provider or change to a different one. The study tested two hypotheses: The first hypothesis stated that "pure" status quo bias, stemming solely from cognitive misperceptions, would have a positive effect on customers' retention. The second hypothesis proposed that "pure" status quo bias would affect attitudinal loyalty in a positive way, which is a critical factor in customer retention. The results indicate that status quo bias has a positive effect on customers' retention, confirming the first hypothesis. When a particular choice was labeled as the status quo option, it had a higher probability of being chosen apart from the option with no status quo is presented. Additionally, respondents who exhibited status quo bias tended to have a better attitude towards the provider and has a higher possibility to recommend it to others. On the other hand, the second hypothesis, which suggested that status quo bias positively affects attitudinal loyalty, was only partly confirmed. It is true that a more favorable attitude was shown towards the status quo, there was actually no immense difference in their commitment to the provider compared to the control group. This means that the study did not find a significant difference in affective commitment, suggesting that other factors may also play a role in determining customer loyalty.

4. Energy consumption

The last application is the choice of energy. Energy shortage is a common problem faced by all mankind, and saving energy is an urgent action that human beings need to take. According to a study, countries have implemented many initiatives to persuade individuals and encourage people to conserve energy, including policies, regulations and economic incentives [10]. However, status quo bias makes the effectiveness of these methods uncertain. Because people often make decisions based on rules of thumb or mental shortcuts rather than thorough cost analysis or fear of running out of energy. Therefore, people are more likely to choose the current default even if there are more environmentally friendly energy and more energy-saving energy utilization methods. This is because people often make decisions based on rules of thumb or mental shortcuts rather than thorough cost analysis or fear of running out of energy.

Blasch and Daminato argued that the SQB may result in an increase in household energy consumption. They conducted an empirical investigation of the correlation between current situation deviation and residential electricity consumption by not replacing old appliances and overusing appliances. Based on the survey of households in three European countries, the results show that the important indicator to measure the age of household appliances and the consumption level of household energy services is the SQB. They also found that total household electricity consumption would be about 6% higher if householders preferred the status quo. Based on this empirical data, they concluded that the status quo bias could hinder improvements in residential energy efficiency [11].

Gill et al. argue that status quo bias is a major obstacle to promoting energy-saving behavior. They used experimental data to study how to minimize status quo bias and encourage energy-saving behavior. The results showed that when presented with a monthly framework, individuals made the most energy efficient decisions because people were more likely to consider monthly costs than

annual or daily costs. They also argue that people are usually unwilling to change the current level of energy use, even if they are using more energy than they actively choose [12].

According to Frederiks et al., one of the most common and powerful biases affecting consumer energy use patterns is the SQB. People are used to keeping the status quo, sticking to the default Settings, and have a tendency to postpone decisions completely, which saves them the time to make active choices, and people will regard them as the best choice. This status quo deviation will hinder the reduction of residential energy consumption [13].

From the above analysis, it can be seen that although the research objects of these three articles are not exactly the same, their conclusions are basically the same, that is, the SQB is an important factor hindering energy conservation and increasing energy consumption. All of the above researchers believe that people are reluctant to change the status quo and maintain current levels of energy use due to the status quo bias, which hinders energy-saving behavior.

After drawing conclusions, it is also important to focus on future research directions. There are a number of directions for future research, for example, researchers could focus on cross-cultural studies of energy saving decisions, research on how to improve methods of assessing the effectiveness of interventions or seek new interventions to minimize the impact of SQB and apply them in practice.

In the context of energy shortage, home energy saving is becoming more and more important. Consumers also seem to recognize the importance of energy conservation, but there are still many consumers affected by the status quo bias, did not take effective measures to save energy. The research conclusions of these three articles also confirm the hindrance of status quo bias to energy-saving behavior. Therefore, the current conclusions can guide policy makers to achieve better policy effects from the perspective of reducing the deviation from the status quo.

The overall conclusion of current research is that the status quo bias is a major hindrance to energy conservation and reducing energy consumption. Although these three articles have positive practical guiding significance, they also have a common problem, that is, the lack of strong evidence before drawing research conclusions. For example, although the study made an empirical investigation, they did not replace old electrical appliances and overused electrical appliances, which could not directly reflect the relationship between current situation deviation and energy consumption.

Gill et al. used a time frame model and concluded that when developing a monthly framework, individuals are able to make decisions that minimize energy consumption [12]. But direct evidence for status quo bias and energy consumption is also lacking. The study of Frederiks et al. not only involves status quo bias, but also studies sunk cost effect, loss and risk aversion, intrinsic and extrinsic rewards, availability bias and other factors [13]. Evidence on the relationship between status quo bias and energy consumption is also lacking.

The powerful cognitive bias of the status quo considerably impacts choices of energy. Comprehending this bias may facilitate creating measures to encourage individuals to make more suitable choices. Overcoming this bias can help people make more energy-efficient choices, thereby having a beneficial impact on the development of the ecological environment.

5. Conclusion

The status quo bias is a cognitive bias that significantly influences decision-making in various areas, including investment, branding, and energy choices. This paper have revealed the impact of the status quo bias in different backgrounds.

In the realm of investment, the status quo bias has been observed among both entrepreneurs and non-entrepreneurs, with entrepreneurs exhibiting a higher susceptibility to this bias. This bias can hinder the adoption of more innovative and efficient investment strategies even when potential benefits in terms of lower fees and higher returns are presented. Overcoming the status quo bias in investment decisions is crucial for investors to make informed choices and improve their financial goals.

Within the realm of consumer loyalty and branding, the status quo bias manifests as a preference for older and more established brands over newer ones. This bias can limit consumers' willingness to explore new brands and overlook potential benefits. Recognizing and addressing the status quo bias is essential for marketers to effectively maintain and strengthen brand loyalty among consumers.

In the energy domain, the status quo bias has implications for energy conservation and efficient energy use. People's reluctance to change their current energy consumption patterns can hinder energy-saving behavior. Overcoming this bias is crucial for promoting energy efficiency and addressing the challenges of energy shortage and environmental sustainability.

Future research should continue to explore the impact of the status quo bias in various contexts and develop effective measures to mitigate its adverse effects.

Author Contributions

All the authors contributed equally, and their names were listed in alphabetical order.

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