

# Status quo and loss aversion: Are people less conservative to avoid a loss?

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## Abstract

A growing literature has emerged to report the impact of the status quo bias on the most real decisions. However, previous studies do not provide direct evidence on the effect of the status quo by considering the distinction between a gain frame and a loss frame. Thus, we investigate whether the extent of the status quo choice is frame-dependent. We use a between-subjects design experiment based on lottery choices in a gain-framing versus a loss-framing. Our experimental results show the existence of the status quo in both frames. However, the status quo option is significantly more observed in the gain frame than in the loss frame. Our findings are consistent with the observation that, in the loss domain, individuals tend to be more risk-seeking. Our paper presents implications for research and practice. In particular, the examination of status quo bias, gain-loss framing, and the interplay between the two, contributes to the management and organization literature. Nevertheless, higher amounts, more choices, and more ranges of ages may be used to investigate the robustness of our findings.

## Keywords

loss aversion, status quo, experiment, logistic regression, Poisson regression

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## 1. INTRODUCTION

It is often said that the only thing that is constant in life is change. The ability to effectively and efficiently change orientation and make decisions in response to an evolving situation is unanimously considered key to survival. Charles Darwin put it very clearly “*It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change*” (see Mogale (2018), p. 1). From this perspective, challenging usual procedures and acting beyond routines to cope with the continuous turbulence of the global markets (Frese & Fay, 2001; Parker *et al.*, 2006) is regarded as a very valuable behavioral feature. This active, ultimately pro-active behavior is considered very important for organizations (Morrison & Milliken, 2000) either in terms of performance or well-being (Cangiano *et al.*, 2016; Thomas *et al.*, 2010). Moreover, at the individual level, daring to change implies generating inspiration and a desire for self-starting activities that put individuals on new paths of new experiences.

Despite its vital importance, people and organization are inclined to stick to the no-change default option. This preference for the current situation, called status quo bias (SQB), is widespread and acts in an unreflective manner; yet exhibiting difficulties in moving toward change ultimately implies having difficulties in meeting the condition of individual and organizational survival. From this perspective, studying hindrances to change becomes a privileged axis of research. What prevents individuals from acting (pro) actively? What refrains them from adjusting their decision according to conditions change? To what extent and in which conditions are individuals more inclined to be cloistered in the status quo? This article follows the same vein of questions.

By focusing on impediments to (pro)-active behavior, our research seeks to contribute to a better understanding of how to challenge the status quo from the perspective to enhance organization. There are several rationales behind why and how this inertia affects individuals. Loss aversion (i.e. people value losses deeper than gains) is cited as a root of this bias, yet potential causes are also advanced to explain this tendency; including psychological commitment (Samuelson & Zeckhauser, 1988), regret avoidance (Korobkin, 1997), decision avoidance (Anderson, 2003) and transaction costs (Tversky & Kahneman, 1991).

In this article, our focus is on the status quo (SQ) option in gain-loss framing (Kahneman & Tversky, 1979). We hypothesize that preferring the SQ option when the choice is about gaining a certain advantage is perceptually different from choosing SQ when the situation implies losing money. To the best of our knowledge, no other research has focused on the effect of SQ by considering the distinction between a gain frame and a loss frame. To respond to this research question, we use an experiment based on lottery choices where the frame changes (lottery to seek gain versus lottery to limit loss); all other influences are held constant, permitting us to test our principal hypothesis. To induce the SQ option for the subjects, we follow the technique of Dean *et al.*, (2017) in both treatments (gain frame versus loss). Thus, the preferences of the subjects are initially elicited through pair-wise comparisons without the SQ option. Then they may stick with their choices or switch them.

The remainder of this paper is organized as follows. The following section provides a literature review. The third section presents the empirical strategy. The fourth section discusses the results. The fifth section highlights the discussion, and the sixth section concludes the paper.

## 2. LITERATURE REVIEW

Three streams of research related to our study: status quo bias, framing, and loss-gain framing, and the potential interplay between status quo bias and loss-gain framing. Thus, in the following section, we reviewed literature relevant to each stream.

## 3. STATUS QUO BIAS

A large and growing body of literature has been devoted to understanding how people make decisions. In this context, Samuelson and Zeckhauser (1988) were the first to introduce the SQB term, which is the tendency of individuals to stand by their previous choice, even in the face of a more beneficial option. Three main explanations have been devoted to explain SQ (Kahneman *et al.*, 1991; Kahneman & Tversky, 1984; Samuelson & Zeckhauser, 1988; Tversky & Kahneman, 1991). The first one, status quo bias may be due to rational deci-

sion-making (i.e., the effect of transition costs or the presence of uncertainty). The second one, it may be explained by cognitive misperceptions (i.e., loss aversion). The third one, it may be due to psychological commitment (i.e., sunk costs, self perception-theory).

The SQB has been observed in electric services (Hartman *et al.*, 1991), retirement savings (Madrian & Shea, 2001), insurance (Kahneman *et al.*, 1991), healthcare (Schweitzer, 1995), venture capital investments (El Harbi & Tournia, 2020), private equity investment decisions (Tournia & El Harbi, 2021), financial decision (Agnew *et al.*, 2003; Tekçe *et al.*, 2016), and management and organization research (Burmeister & Schade, 2007; Camilleri & Sah, 2021; Fox *et al.*, 2009; Li *et al.*, 2019; Lu & Xie, 2014; Nicholson-Crotty *et al.*, 2019; Proudfoot & Kay, 2014; Woods *et al.*, 2017) to cite just a few examples.

Proudfoot and Kay (2014) concluded that the status quo might have positive or negative consequences for both organizations themselves and their individual members. However, Cossette (2014) ascertained that status quo bias has received limited attention in empirical entrepreneurship studies. Burmeister and Schade (2007) used an experimental study on 427 students, 240 entrepreneurs, and 135 bankers. Their results reveal that bankers are more affected by the status quo than both entrepreneurs, and students. In the same vein, Gibbons and O'Connor (2005) ascertained that the experience of the chief executive officer of small- and medium-sized enterprises was positively related to their commitment to the status quo. El Harbi and Tournia (2020) highlighted the presence of status quo bias in venture capital investments by using the aggregate approach. Tekçe *et al.*, (2016) showed that sophisticated investors are more influenced by the status quo than sophisticated individuals. Woods *et al.*, (2017) surveyed 270 small business decision-makers from the United States in 2014 and mentioned the existence of the status quo in small businesses. Li *et al.*, (2019) conducted two experimental studies. In the first one, they surveyed 62 managers during 10 consecutive workdays. In the second one, they conducted a vignette-based experiment with 198 managers. They suggested that depleted managers are less likely to endorse employee voices due to status quo bias and confirmation bias. Lu and Xie (2014) concluded that personal decision-makers are more influenced by the status quo than advisors. This may be explained by the fact that advisors are less loss-averse. However, Nicholson-Crotty *et al.*, (2019) compared the behavior of public managers and private sector counterparts. They found that public managers stick with the status quo more often than private managers. In the same vein, Camilleri and Sah (2021) affirmed that managers whose age and seniority increase are more attached to the status quo option. The attachment to the status quo leads managers to make quick decisions and reduces risk-taking (Gärtne, 2018). Thus, all decision processes will be affected (Dean *et al.*, 2017). To protect companies from status quo dependence, practices should be taken to prevent managers from working in the same department, position, and company for many years (Camilleri & Sah, 2021).

#### **4. FRAMING AND LOSS-GAIN FRAMING**

Tversky and Kahneman (1981) found that when the outcome of the scenario was framed positively, a majority of individuals had a risk-averse preference; however, when the same outcome was framed negatively, a majority of individuals had a risk-seeking preference. This framing effect may be explained by the prospect theory introduced by Kahneman and Tversky (1979). According to prospect theory, “*losses loom larger than*

*gains*” Anderson (2003) stated that the loss aversion and regret avoidance (anticipatory emotions) mechanisms become less operational when the individual perceives him (her) self in a loss situation. More explicitly, the loss aversion and negative emotion resulting from potential expected (new) loss will be perceived as less relevant when the initial situation is a loss. Thus, the SQ strategy can’t fully work. Samuelson and Zeckhauser (1988) concluded that loss aversion causes the SQ. Kahneman *et al.* (1991) explained that the impact of the loss of SQ weights is more important than the potential gain of a change. This finding is consistent with the prospect theory developed by Kahneman and Tversky (1979). Baron and Ritov (1994) used completely described outcomes. They found that omission bias and SQ provide independent influences on behavior. More precisely, irrespective of the gain/loss domain, the preference for omission increased by worse outcomes. Other contributions (Schneider, 1992; Yechiam & Hochman, 2013a, 2013b; Yechiam *et al.*, 2015) found that in the loss domain individuals switch choices more frequently in decisions from experience. In the gain domain, participants prefer the sure gain gamble rather than the uncertain alternative; this tendency is risk aversion. However, in the loss domain, participants choose the risky option rather than the definite alternative (Jou *et al.*, 1996); this tendency is risk-seeking (Tversky & Kahneman, 1981). Yechiam *et al.* (2015) coined this tendency “*loss restlessness*” and considered two explanations relevant to our study as well: The first one is that participants have different criteria for accepting options, and in the loss domain, the SQ is below this threshold. That’s why it is more likely to be switched (Schneider, 1992). The second one is related to the fact that losses draw more attention than gains (Yechiam & Hochman, 2013a, 2013b). However, Gal and Rucker (2018) affirmed the absence of evidence supporting the fact that losses are more impactful than gains. They concluded that participants have already accepted a degree of loss when they are in the loss domain. Therefore they will be risk-seeking. They explained that reducing their losses is more important than losing more money. However, in the gain domain, participants are risk-averse because gaining more money is less impactful than reducing their gain. Indeed, Harinck *et al.* (2007) used a series of three experiments and found gains loom larger than losses for small outcomes. Overall, our finding is interesting and warrants being reported in the literature.

## 5. THE POTENTIAL INTERPLAY BETWEEN STATUS QUO BIAS AND LOSS-GAIN FRAMING

Kahneman *et al.*, (1991) reviewed many experiments that demonstrated the effect of loss aversion and argued a correlation between SQ and loss aversion. Nevertheless, Anderson (2003), in his seminal article, proposed what he qualified as a “*rational-emotional model*” of the explanatory factors behind the human predisposition to do nothing. This model accounts for both pure rational factors (i.e. cost/ benefit calculation) and less rational influences (i.e. the anticipatory negative emotions, counterfactual thinking, anticipated regret, and selection difficulty). He considered the status quo as a manifestation of decision avoidance alongside decision deferral and decision omission to avoid a difficult decision. Two main rationales have been proposed to explain decision avoidance. Preference stability means that individual value, at least to a certain degree, remains the same over time. The anticipated regret describes the tendency to minimize potential regret resulting from decisions. Henceforth, as Anderson

(2003, p. 148) put it “*status quo choices, omission choices, and choice deferral are likely candidates for selection when anticipated regret is an attribute under consideration*”. Ritov and Baron (1992) noted that SQB extends omission bias, and it has been generally confounded with the omission option. When questions were constructed to separate these two dimensions of the status quo (i.e. unchanging circumstances and inaction), individuals preferred the option that required no action, regardless of whether it represented the status quo or a change. However, Schweitzer (1994) showed that status quo and omission biases are independent, a position that Baron and Ritov (1994) gave credit to. Anderson (2003) argued that regret theory and norm theory might explain the status quo preferences. From one part, people incorporate regret avoidance into their preferences and from the other part; they tended to weigh potential losses greater than potential gains of the same amount. These two influences implied that the utility of potential rejoicing experienced because the change would be less than the potential increased regret. This particular tradeoff led to an increased preference for the status quo. Dean *et al.*, (2017) added that both attention and psychological constraints are necessary to explain the impact of SQ on choice. Contrary to Bewley (1986), Maltz and Romagnoli (2017) found that individuals do not exhibit SQB when both the SQ option and the alternative are ambiguous. However, Roca *et al.* (2006) affirmed that ambiguity seeking is a result of the status quo bias.

A closer look at the literature reveals the importance of the status quo. Thus, we test the following two main hypotheses in our experiment:

*Hypothesis 1:* SQB is affected by the framing options as gains or losses.

*Hypothesis 2:* Subjects keep their SQ option in the gain frame more than they would do with the loss frame.

## 6. METHOD

This section is divided into two sub-sections. The first one presented the participants and the experimental design. The second one described the procedure and the materials.

### Participants and Design

We run the experiment at the University of Sousse between November 2020 and January 2021 with 155 undergraduate business and economics students (License and Master's Students). The participants were split into eight groups which are four groups in the gain frame ( $N_{\text{groupe1}} = 21$ ,  $N_{\text{groupe2}} = 20$ ,  $N_{\text{groupe3}} = 25$ ,  $N_{\text{groupe4}} = 14$ ) and 4 groups in the loss frame ( $N_{\text{groupe5}} = 25$ ,  $N_{\text{groupe6}} = 20$ ,  $N_{\text{groupe7}} = 15$ ,  $N_{\text{groupe8}} = 15$ ). We decide to split subjects into groups due to the size constraints of the laboratory. We use a between-subjects design by which every participant is only subjected to a single treatment. This study may reduce learning effects. The experiment was carried out using a paper and pen procedure. In our sample, most participants are female (81.29%), 83.87% are single, 94.19% live in the urban area, and 78.7% have a monthly income from 50 to over 150 DT.

The subjects remain anonymous throughout the experiment. The experience takes about 20 minutes. The round, according to which the payment is made, was selected randomly at the end of each session by using colored coupons. Each lottery had either one or two prizes, varying in value from 1 to 9 DT. On average, subjects earned 4 DT. Cash payments were made privately after the experiment. The same female experimenter carried out all sessions.

## 7. PROCEDURE AND MATERIALS

To create the SQ situation, we adapt the technique used by Samuelson and Zeckhauser (1988) and Dean *et al.*, (2017). The subjects choose simultaneously, and without communication, a lottery. First, the participants were presented with a group of two lotteries. To control the SQ, the lottery offered in the first stage of a SQ session comprised of a targeted lottery and a decoy one. The Expected Value (EV) of the decoy lottery is smaller than the target lottery to ensure that the target lottery was usually chosen, and thus becomes the status quo option in the next round. After making their choice, we present a new lottery C. Then, the subjects face two decisions: either to keep their previously chosen lottery or to switch it to another one. To identify if there is an effect of gain-loss framing on the SQ choice, we use symmetric payoffs for the gains and losses. Following Dean *et al.*, (2017), we decide to discard any choice set/status quo pair in which a decoy lottery was chosen over a targeted lottery one. So, data from 45 participants will be excluded from the regression results.

The gain frame corresponds to a straightforward situation where subjects were told that they have to choose one option and bear the monetary outcome it induces. To create a loss frame, we start by informing the participants that they have been offered 10 DT. We explain that this amount of money is their own and that they have to use it in the coming game. Particularly, we explain that their choices may make them lose (a part of) this money. They are also asked to choose between lotteries A, B, and C, but the probabilities were about the threat of losing money and not about gaining like in the gain frame.

We argue that the SQB exists if the choice of the subject remains unchanged (i.e. if the participant, in the gain's context frame, still choosing the first option instead of depicting option C). Appendixes 1 and 2 give information about the design of the experiment for the gain (respectively loss) frame such as the prize, the probability, the EV, the percentage of choosing the dominated option, and the percentage of choosing option C. Overall, in the gain frame, 88.75% of the subjects chose A over B and 11.25% chose B over A. However, in the loss frame, 84.33% of the subjects chose B over A and 15.67% chose A over B.

It is also interesting to note that subjects keep their SQ option more frequently in the gain frame. In particular, we found 250 (respectively 121) decisions among the 320 (respectively 300) decisions made in the gain (respectively loss) frame were a SQ option.

Drawing on Prospect theory (Kahneman and Tversky, 1979), Tversky and Kahneman (1981) argued that the evaluation of probabilities and outcomes produces predictable shifts of preference when the same problem is framed in different ways. In other words, the framing of the alternative decision outcome significantly influenced the choice between two decision alternatives of equal expected value. In the same vein, we conducted an experiment with symmetric payoffs for the gains and losses (i.e. the expected value in the gain and loss frames should be similar in absolute values). Thus, we avoided possible confounding in the gain and loss domain gambles.

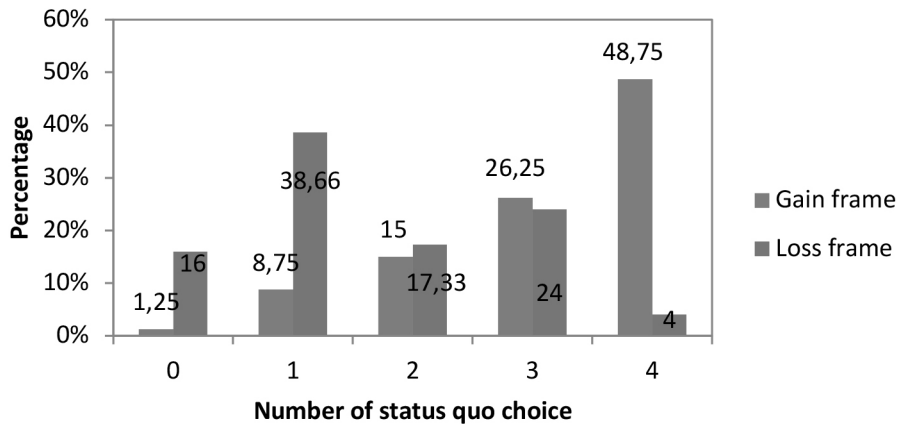
A sample set of instructions is included in Appendix 3.

## 8. RESULTS

The results section contained four subsections: (1) SQ per time; (2) Status quo and loss-gain framing; (3) Status quo as a binary variable; and (4) Status quo as a count variable. The output and tests were realized with the help of STATA software version 14.

## 9. SQ PER TIME

We start our analysis by looking at the choice proportions of sticking to the SQ per time (i.e. subjects may choose 0, 1, 2, 3, or 4 times the status quo option). More precisely, we identified the subject's behavior towards the status quo choice by measuring the percentage of same choices kept by participants for the four sessions in both treatments (gain frame versus loss). Figure 1 shows that, in the gain frame, the proportion of participants that adopt the SQ for the four decision tasks is the highest (around 48.75%). However, the proportion of individuals that act in complete rationality in the four decision tasks is very tiny (1.25%). This situation is completely inverted in the loss framing where the proportion of individuals that have acted rationally by avoiding the SQ in the four decision tasks is around (16%) whereas those who have chosen the SQ option in the four decision tasks make up a very tiny proportion (around 4%). The modal value in the gain frame corresponds to four (i.e. all the decisions correspond to the SQ). The modal value in the loss frame is 1 which is one decision between the 4 proposed is the SQ option; the other decisions are rational ones.



**Figure 1.** Frequency of the status quo choice per time

**Note:** The figure displays for five times (0, 1, 2, 3, or 4) the percentage of same choices kept by participants in both treatments (gain frame versus loss).

## 10. STATUS QUO AND LOSS-GAIN FRAMING

Table 1 provides a descriptive overview of our results when we test for the existence of the SQB by considering the variable “the mean of SQ choices per participant” between T0 and T1.

**Table. 1** Tests of hypotheses

Treatments	Participants	Number of observed SQ	Mean	Rank sum	Expected
T0	80	$N_{GSQ} = 250$	0.781	8199	6240
T1	75	$N_{LSQ} = 121$	0.403	3899	5850
Combined	155		0.598	12090	12090

diff = mean(Loss) - mean(Gain)	$t = -8.6107$
Ho: diff = 0	degrees of freedom = 153
Ha: diff < 0	Ha: diff != 0
Pr(T < t) = 1.0000	Pr( T  >  t ) = 0.0000
Mann-Whitney U test	Ha: diff > 0
	Pr(T > t) = 0.0000
	Ho: Mean SQB (T1) = Mean SQB (T0)
	$z = -7.179$ , Prob >  z  = 0.0000

**Note :** SQB is a binary variable that takes on 2 values; the value 1 if the subject chooses the same decision, 0 otherwise. T0 is the gain frame. T1 is the loss frame. Mann-Whitney U test is a non-parametric test. It is used for comparing differences between the two treatments (gain frame versus loss).

It is important to note that we find a significant difference between T0 (Gain Frame) and T1 (Loss Frame) (either using the two-sided Mann-Whitney-U-test;  $p = 0.0000 < 0.001$  or by using the T-test). More precisely, the SQ choice is significantly more frequently observed in the gain frame than in the loss frame. Henceforth, the frame matters in individual choices. In what follows, we approach the SQ (i) by considering the 620 observations, and in this case; we treat the SQB as a binary variable, and (ii) by considering the number of SQB choices made by each participant, in which case we treat the SQB as a count variable. Our endogenous variable, which is the SQ behavior, may be expressed as both a binary variable and a count variable; we use the logistic regression for the first case and the Poisson regression for the second.

## 11. STATUS QUO AS A BINARY VARIABLE

Our main independent variable of interest is “*Treatment*” which is an indicator variable that equals one if the treatment is a gain frame and zero if the treatment is a loss frame. A significant dependence could also be because of other characteristics such as gender and age of the participants. Wong and Carducci (1991) stated that males take greater financial risks than females. Moreover, Grable (2000) found that older individuals are more risk-tolerant to financial issues than younger ones. More specifically, if the age increases, the levels of risk tolerance will decrease (Dahlback, 1991). Nevertheless, we randomly select our sample and it reflects the real distribution of the student population in Tunisia (Most students are female with very low age variability). Almost all participants (99.35%) are in their twenties, and we need a much larger range of ages to examine the decision-making of the elderly. The gender and age analyses are meaningless (given the homogeneity and lack of theoretical basis). Thus, it does not make any sense to consider it in the regressions.

As shown in table 2, pooled logit regression and the random-effects logistic regression give similar results. The sign of the variable “*Treatment*” coefficient is significant and positive, showing



that the probability of choosing the SQ option is greater when the individuals are under gain conditions. For random-effects logistic regression, the treatment has an odds ratio equal to 13.183, which is strictly positive (superior to one). Therefore, participants in a gain frame are 13.183 times more likely to be affected by the SQB than those in the loss frame. Moreover, we compute the marginal effects and we find that the probability that a person chooses the SQ option increases by 69.8% as treatment changes from 0 to 1. For pooled logit (respectively random-effects logistic) regressions, the chi-squared values generated by the LR test, with a chi-squared of 107.39 (60.99) are less than the used criterion of 5%. Thus, we can reject the null hypothesis showing that the coefficients are not simultaneously equal to zero. So, our model is statistically significant.

**Table 2.** Empirical results on the whole sample ( $N_{\text{all}}=440$ )

Dependent variable: SQ	Pooled Logit		Random-effects logistic regression		
	Estimates (P-value)	Odds ratio (95% CI)	Estimates (P-value)	Odds ratio (95% CI)	dy/dx
Treatment	2.177*** (0.000)	8.819 [5.7-13.7]	2.579*** (0.000)	13.183 [6.7-26.1]	0.698 [0.4-1.02]
Constant	-0.59*** (0.000)	0.550 [0.4-0.7]	-0.71** (0.001)	0.492 [0.3-0.8]	
Number of observations	440		440		
Number of groups			110		
Log-likelihood	-239.827		-234.671		
LR chi2 (1)	107.39		60.99		
P-value	(0.0000)		(0.0000)		
Wald chi2 (1)			54.87		
P-value			(0.0000)		
Sigma <sub>u</sub>			0.976		
Rho			0.225		
AIC	483.653		475.342		
BIC	491.827		487.602		
Rank	2		3		

**Note: Standard** errors are reported in parentheses. Values in square brackets indicate the 95% confidence interval for each regression weight. Statistical significance is highlighted by: \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ . SQ is a binary variable where 1 signifies that the participants choose the status quo option and 0 otherwise. Treatment is binary and equals 1 for the gain frame and 0 for the loss frame. The result shows that framing has an influence on decision-making and that the status quo bias is more prevalent in the gain frame than in the loss frame.

In general, these estimation results are consistent with the findings in previous literature. Our results support the hypothesis that SQB is affected by the framing options as gains or losses (hypothesis 1). Moreover, we found that the gain-loss framing has a strong significant

impact on the subject's choice to select the SQ option. More precisely, subjects keep their SQ option in the gain frame more than they would do with the loss frame (hypothesis 2 is confirmed).

## 12. STATUS QUO AS A COUNT VARIABLE

In table 3, we change perspective and consider the variable “SQ choice” as a count one. We use the Poisson regression because our dependent variable was not found to have an over-dispersion. More precisely, from the negative binomial regression, the log-likelihood test could not reject the null hypothesis that this over-dispersion parameter was zero ( $\alpha = 0$ ). Thus, from the test for the over-dispersion parameters, we argue that the equi-dispersion assumption holds and the Poisson regression may be applied. Both linear and Poisson regressions give almost similar results. To avoid redundancy, we present the following interpretation related to the Poisson results.

**Table 3.** Empirical results on the whole sample ( $N_{\text{all}}=110$ )

Dependent variable: Number of SQ choices	Linear regression Esti- mates	Poisson Regression	
		Estimates	Incidence-Rate-Ratios
Treatment	0.2967*** (0.001)	0.843*** (0.000)	2.324 [1.772-3.048]
Constant	0.52*** (0.000)	0.35*** (0.001)	1.42 [1.125-1.791]
Number of observations	110	110	
Log-likelihood		-173.724	
F(1, 108)	12.08		
Prob>F	(0.0007)		
LR chi2 (1)		41.49	
Prob>chi2		(0.0000)	
AIC	136.412	351.449	
BIC	141.813	356.850	
Rank	2	2	

**Note: Standard** errors are reported in parentheses. Values in square brackets indicate the 95% confidence interval for each regression weight. Statistical significance is highlighted by: \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ . The dependent variable is the number of SQ choices. It is a count variable and represents the number of times the status quo is chosen by each individual for the four scenarios. Treatment is a binary variable and equals 1 for the gain frame and 0 for the loss frame. The result confirms the reported finding in table 2.

Table 3 shows that the treatment has an incidence rate ratio equal to 2.324 which is strictly positive and superior to one. Thus, participants tend to exhibit SQB in the gain frame 32.4% more than the other in the loss frame. We find that the small value of the LR chi2 test's p-value (equal to 0.0000) shows that at least one of the estimates differs significantly from 0. Nevertheless, to check the robustness of this finding (the SQB is affected by the framing of options as gains or losses), we also use a one-way ANOVA (the dependent variable is the number of SQB choices made by each participant and the independent variable is the treatment). The result shows a significance level of 0.0000 ( $F(1, 108) = 12.08, p = 0.0000$ ). Therefore, there is a statistically significant difference between the two treatments. Our finding is also confirmed by the Kruskal-Wallis test (chi-squared = 47.741 with 1 d. f;  $p = 0.0001$ ).

### 13. DISCUSSION

Instead of considering the different alternatives and making a decision, individuals are inclined to stick to the no-change, default option. This tendency is known as the status quo bias (Samuelson and Zeckhauser, 1988). In the present study, we examined whether the status quo bias is affected by the framing of options as gains or losses. We hypothesized that when we use symmetric payoffs for the gains and losses, participants will be affected by the status quo in both frames (Hypothesis 1). Additionally, Subjects will keep their status quo option in the gain frame more than they would do with the loss frame (Hypothesis 2).

The results showed that hypothesis 1 was corroborated. The gain/loss frame has a strong significant impact on the choice of subject to select the status quo option. These estimation results are consistent with the findings in previous literature such as Samuelson and Zeckhauser (1988) and, Tversky and Kahneman (1981). Our second option was also supported. More precisely, we have shown that keeping the status quo option is more frequently observed in the gain frame than in the loss frame. Thus, we confirm results from previous studies (e.g., Schneider, 1992; Yechiam & Hochman, 2013a, 2013b; Yechiam *et al.*, 2015) which imply that individuals switch choices more frequently in the loss domain than in the gain domain. For instance, Yechiam *et al.* (2015) found that choice switching rates are more important in tasks with losses compared to tasks with no losses. They showed that losses improve performance and argued that this performance improvement is not equivalent to loss aversion but also involves attention and contrast-based processes. The authors concluded that losses improve individual cognitive performance.

As mentioned earlier, we don't examine whether age and gender imply the well-known tendency to stick with the status quo option in both frames. The majority of participants are young female students with very low age variability; the age interval of our subject is over 10 years (from 19 to 31 years old). Our results don't seem to suggest that this period is enough to display a significant difference in the decision results. We cannot confirm the general consensus which is taking place indicating that older people are more likely to stick in the current situation, whereas younger ones are more open to process the "*new state of affairs*". Further ranges of ages are needed to confirm this consensus. Furthermore, at the academic level, there is no conclusive empirical evidence to prove which gender is most suitable for which decision-making styles. Thus our results may open the area for further potential research related to the potential gendered decision-making process.

## 15. CONCLUSION

In this article, we investigate how SQB is affected by the framing of options as gains or losses. As far as we know, no previous research has investigated the effect of the status quo by considering the distinction between a gain frame and a loss frame. We have shown that decision-making is vulnerable to the power of framing. Elsewhere, we show that keeping the SQ option is more observed in the gain frame than in the loss frame. Thus our findings are consistent with the observation that individuals switch choices more frequently in the loss domain (Schneider, 1992; Yechiam & Hochman, 2013a, 2013b; Yechiam et al., 2015). In our paper, this is particularly relevant because the non-SQ option had the highest EV. Therefore, the tendency of participants to maximize more in the loss domain is consistent with the attentional account.

In one word, SQB unconsciously leads minds to equate most changes with loss. From this perspective it can drag businesses into a stagnant wasteful mode of operating, letting fear, instead of entrepreneurial orientation determine their strategy. To mitigate this effect, our results indicate that it would be better to frame the actual situation as a loss one to avoid the pitfalls of this seemingly pervasive bias. Of course, this doesn't imply that a loss frame alone induces changes (this necessitates among other things a real incentive-compatible scheme) but our point is that a loss framing helps to accomplish change. Though, standardizations and quality management dictate a strict application of routines as a guarantee of high-quality provision, challenging routines and adopting change is also considered key feature of entrepreneurial organizations. Organizations need to be aware of such a dilemma to take steps to manage it. Clearly, this subtle tradeoff has bottom-line consequences for organizations. How to deal with this dilemma? What's the right mix between temporizing and acting? These questions remain to be determined.

The recognition of such behavior anomalies can have an impact on the prediction of both individuals and organizations (Burmeister & Schade, 2007; Camilleri & Sah, 2021; Fox *et al.*, 2009; Hartman *et al.*, 1991; Li *et al.*, 2019; Lu & Xie, 2014; Madrian & Shea, 2001; Nicholson-Crotty *et al.*, 2019; Proudfoot & Kay, 2014; Samuelson & Zeckhauser, 1988; Woods *et al.*, 2017). More precisely, the status quo affects firms by leading them to search less than would be optimal and make quick decisions (Gärtne, 2018; Samuelson & Zeckhauser, 1988). Thus, managers must dedicate time and resources to identify new opportunities that are tailored to the strategy of the firms. This tendency to stick with the current decision will make the employee to stick with the same and low-paying job because searching for a better one can be uncertain, costly, and slow (Samuelson & Zeckhauser, 1988). So they will miss out the potential benefits that may even exceed the risks. Samuelson and Zeckhauser (1988) added that, regardless of the presence or absence of transition costs, both firms and workers are confronted by the presence of exit barriers. For example, managers are reluctant to end unprofitable products or divisions; also, they don't leave noncompetitive industries. Indeed, Samuelson and Zeckhauser (1988) claimed that even if there are many competitors, the presence of the status quo will reduce the degree of market competition. For instance, they observe the state of competition in the long-distance telephone market and report the fact that the status quo option is chosen by 75% to 80% of all customers. Moreover, it is well known that the status quo helps managers to make quick decisions, reduces risk-taking, and affects all decision processes (Dean *et al.*, 2017; Gärtner, 2018). Nevertheless, it is considered as an obstacle to innovation (i.e. status quo bias can hinder progress by impeding the introduction of new technologies). In the same context, Burmeister and Schade (2007) affirmed

that entrepreneurs should not stick with the status quo option when changes in competition, demand, new product technology, and product innovations are concerned. More precisely, the company will become less competitive if the entrepreneur does not learn to adapt to those changes. So, the knowledge of this phenomenon is especially important since it enables the design of behavioral mechanisms and institutions that would reduce the amount or costs of the status quo in situations involving potential improvement.

That's why Camilleri and Sah (2021) presented practices to protect firms from status quo dependence. In this context, Arun and Meenakshi (2009) give six techniques to avoid the effects of status quo flaws: (1) the executive should identify his goals and identify how the status quo may be beneficial, (2) he should identify besides the status quo option all other potential alternatives by examining their advantages and disadvantages, (3) he should ask himself if the status quo option is a new option, he would choose it or not, (4) he should not choose the status quo option because he exaggerates the effort or cost resulting by choosing a new option, (5) he should be aware that the desirability of status quo option is not constant over time, that's why it is important to evaluate his usefulness today and in the future, and (6) he should not choose the status quo option when there are other superior alternatives, but he should force himself to pick the best alternative.

Overall, this study contributes to identifying circumstances under which individuals are more tempted to keep the status quo option. However, rather than taking these findings as definitive, it would be interesting to look at whether our main finding is robust to different socio-cultural settings. Moreover, we can investigate the robustness of our findings for higher amounts, more choices, and more ranges of ages.

## Bibliography

- Agnew, J., Balduzzi, P., & Sunden, A. (2003). Portfolio choice and trading in a large 401 (k) plan. *American Economic Review*, 93(1), 193-215.
- Anderson, C. J. (2003). The Psychology of Doing Nothing: Forms of Decision Avoidance Result From Reason and Emotion. *Psychological bulletin*, 129(1), 139-167.
- Arun, K., & Meenakshi, N. (2009). *Organizational behaviour: A modern approach*. Vikas Publishing House.
- Baron, J., & Ritov, I. (1994). Reference points and omission bias. *Organizational Behavior and Human Decision Processes*, 59(3), 475-498.
- Bewley, T. F. (1986). Knightian Decision Theory: Part 1. *Cowles Foundation Discussion Papers*, 1050. <https://elischolar.library.yale.edu/cowles-discussion-paper-series/1050>
- Burmeister, K., & Schade, C. (2007). Are entrepreneurs' decisions more biased? An experimental investigation of the susceptibility to status quo bias. *Journal of Business Venturing*, 22(3), 340-362.
- Camilleri, A. R., & Sah, S. (2021). Amplification of the status quo bias among physicians making medical decisions. *Applied Cognitive Psychology*, 35(6), 1374-1386.
- Cangiano, F., Bindl, U. K., & Parker, S. K. (2016). The hot side of proactivity: A big picture perspective on a construct that matters. In U. K. Bindl & S. K. Parker (Eds.), *Proactivity at Work: Making Things Happen in Organizations* (pp. 355-384). Routledge.
- Cossette, P. (2014). Heuristics and cognitive biases in entrepreneurs: a review of the research. *Journal of Small Business & Entrepreneurship*, 27(5), 471-496.

- Dahlback, O. (1991). Saving and risk taking. *Journal of Economic Psychology*, 12 (3), 479-500.
- Dean, M., Kibris, O., & Masatlioglu, Y. (2017). Limited attention and status quo bias. *Journal of Economic Theory*, 100(169), 93-127.
- El Harbi, S., & Toumia, O. (2020). The status quo and the investment decisions. *Managerial Finance*, 46(9), 1183-1197.
- Fox, S., Bizman, A., & Huberman, O. (2009). Escalation of commitment: The effect of number and attractiveness of available investment alternatives. *Journal of Business and Psychology*, 24(4), 431-439.
- Frese, M., & Fay, D. (2001). 4. Personal initiative: An active performance concept for work in the 21st century. *Research in organizational behavior*, 23, 133- 187.
- Gal, D., & Rucker, D. D. (2018). The loss of loss aversion: Will it loom larger than its gain? *Journal of Consumer Psychology*, 28(3), 497-516.
- Gärtner, M. (2018). The prosociality of intuitive decisions depends on the status quo. *Journal of Behavioral and Experimental Economics*, 74, 127-138.
- Gibbons, P. T., & O'connor, T. (2005). Influences on strategic planning processes among Irish SMEs. *Journal of small business management*, 43(2), 170-186.
- Grable, J. E. (2000). Financial risk tolerance and additional factors that affect risk taking in everyday money matters. *Journal of business and psychology*, 14(4), 625-630.
- Harinck, F., Van Dijk, E., Van Beest, I., & Mersmann, P. (2007). When gains loom larger than losses: Reversed loss aversion for small amounts of money. *Psychological science*, 18(12), 1099-1105.
- Hartman, R. S., Doane, M. J., & Woo, C.-K. (1991). Consumer rationality and the status quo. *The Quarterly Journal of Economics*, 106(1), 141-162.
- Jou, J., Shanteau, J., & Harris, R. J. (1996). An information processing view of framing effects: The role of causal schemas in decision making. *Memory & Cognition*, 24(1), 1-15.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1991). Anomalies: The endowment effect, loss aversion, and status quo bias. *Journal of Economic perspectives*, 5(1), 193-206.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263-292.
- Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, 39(4), 341-350.
- Korobkin, R. (1997). Status quo bias and contract default rules. *Cornell Law Review*, 83(3), 608-687.
- Li, J., Barnes, C. M., Yam, K. C., Guarana, C. L., & Wang, L. (2019). Do not like it when you need it the most: Examining the effect of manager ego depletion on managerial voice endorsement. *Journal of Organizational Behavior*, 40(8), 869-882.
- Lu, J., & Xie, X. (2014). To change or not to change: A matter of decision maker's role. *Organizational Behavior and Human Decision Processes*, 124(1), 47-55.
- Madrian, B. C., & Shea, D. F. (2001). The power of suggestion: Inertia in 401 (k) participation and savings behavior. *The Quarterly journal of economics*, 116(4), 1149-1187.
- Maltz, A., & Romagnoli, G. (2017, February). Status Quo Bias under Uncertainty: An Experimental Study. (WP2017/6). <https://econpapers.repec.org/paper/hafhuedwp/wp201706.htm>
- Meggison, L. C. (1963). Lessons from Europe for American business. *The Southwestern Social Science Quarterly*, 44(1), 3-13.

- Mogale, R. (2018). "It is not the strongest of the species that survives, nor the most intelligent. It is the one that is most adaptable to change." Charles Darwin. *SA Pharmaceutical Journal*, 85(5), 61-61.
- Morrison, E. W., & Milliken, F. J. (2000). Organizational silence: A barrier to change and development in a pluralistic world. *Academy of Management review*, 25(4), 706-725.
- Nicholson-Crotty, S., Nicholson-Crotty, J., & Webeck, S. (2019). Are public managers more risk averse? Framing effects and status quo bias across the sectors. *Journal of Behavioral Public Administration*, 2(1). <https://doi.org/10.30636/jbpa.21.35>
- Parker, S. K., Williams, H. M., & Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of applied psychology*, 91(3), 636-652.
- Proudford, D., & Kay, A. C. (2014). System justification in organizational contexts: How a motivated preference for the status quo can affect organizational attitudes and behaviors. *Research in organizational behavior*, 34, 173-187.
- Ritov, I., & Baron, J. (1992). Status-quo and omission biases. *Journal of risk and uncertainty*, 5(1), 49-61.
- Roca, M., Hogarth, R. M., & Maule, A. J. (2006). Ambiguity seeking as a result of the status quo bias. *Journal of Risk and Uncertainty*, 32(3), 175-194.
- Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of risk and uncertainty*, 1(1), 7-59.
- Schneider, S. L. (1992). Framing and conflict: aspiration level contingency, the status quo, and current theories of risky choice. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 18(5), 1040-1057.
- Schweitzer, M. (1994). Disentangling status quo and omission effects: An experimental analysis. *Organizational Behavior and Human Decision Processes*, 58(3), 457-476.
- Schweitzer, M. (1995). Multiple reference points, framing, and the status quo bias in health care financing decisions. *Organizational Behavior and Human Decision Processes*, 63(1), 69-72.
- Tekçe, B., Yılmaz, N., & Bildik, R. (2016). What factors affect behavioral biases? Evidence from Turkish individual stock investors. *Research in International Business and Finance*, 37, 515-526.
- Thomas, J. P., Whitman, D. S., & Viswesvaran, C. (2010). Employee proactivity in organizations: A comparative meta-analysis of emergent proactive constructs. *Journal of occupational and organizational psychology*, 83(2), 275-300.
- Toumia, O., & El Harbi, S. (2021). Does the Status Quo Affect the Private Equity Investment Decisions? *Global Journal of Management And Business Research*, 21(16), 45-53.
- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211(4481), 453-458.
- Tversky, A., & Kahneman, D. (1991). Loss aversion in riskless choice: A reference-dependent model. *The quarterly journal of economics*, 106(4), 1039-1061.
- Wong, A., & Carducci, B. J. (1991). Sensation seeking and financial risk taking in everyday money matters. *Journal of business and psychology*, 5(4), 525-530.
- Woods, J. A., Gottschall, R., Matthews, C. H., & Carsrud, A. L. (2017). The influence of industry association involvement on technology decision-making in small businesses. *Journal of enterprising culture*, 25(03), 317-337.
- Yechiam, E., & Hochman, G. (2013a). Loss-aversion or loss-attention: The impact of losses on cognitive performance. *Cognitive Psychology*, 66(2), 212-231.

- Yechiam, E., & Hochman, G. (2013b). Losses as modulators of attention: review and analysis of the unique effects of losses over gains. *Psychological bulletin*, 139(2), 497-518.
- Yechiam, E., Zahavi, G., & Arditi, E. (2015). Loss restlessness and gain calmness: Durable effects of losses and gains on choice switching. *Psychonomic bulletin & review*, 22(4), 1096-1103.

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*Titre* : Statu quo et aversion à la perte : les gens sont-ils moins conservateurs pour éviter une perte ?

*Résumé* : Une littérature de plus en plus abondante fait état de l'impact du biais de statu quo dans les décisions réelles. Cependant les études antérieures ne fournissent pas de preuves directes de l'effet du SQ en considérant la distinction entre le cadre de gain et le cadre de perte. Ainsi cherchons-nous à déterminer si l'étendue du choix du statu quo dépend de l'effet de cadrage. Nous utilisons une expérience de conception inter-sujets basée sur des choix de loterie dans un cadrage de gain versus un cadrage de perte. Nos résultats concordent avec l'observation selon laquelle, dans le domaine des pertes, les individus ont plus tendance à chercher les risques. Notre article présente les implications pour la recherche et la pratique. En particulier l'examen du biais de statu quo, de l'effet de cadrage (gain-perte) et de l'interaction entre les deux, contribue à la littérature sur la gestion et l'organisation. Néanmoins, des sommes d'argent plus importantes, plus de choix et plus de tranches d'âges peuvent être utilisés pour étudier la robustesse de nos résultats.

*Mots-clés* : aversion de perte, statu quo, expérience, régression logistique, régression de Poisson

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