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## Positional concerns and framing effects in financial preferences

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### Highlights

- We examine the relevance of relative standings in the financial domain and test.
- Using a quasi-experimental survey in Algeria, we test whether framing (gain versus loss, risk level, amounts versus percentage, and money origin) affects stated positional preferences.
- We found that egalitarian concerns prevail in financial preferences among participants, but positional and absolute states are also selected by a significant proportion of respondents.
- Positional preferences are affected by the loss/gain and risk framing.

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**Abstract:** We examine the relevance of relative standings in the financial domain. We introduced innovative hypotheses by testing whether framing (gain versus loss, risk level, amounts versus percentage, and money origin) affects stated positional preferences. Based on a quasi-experimental survey in Algeria (North Africa), our results show that while egalitarian concerns are prevalent in financial preferences among participants, positional and absolute states are also selected by a significant proportion of respondents. We also found some support to the insight that positional preferences are affected by framing, since loss/gain and risk framings are found to be significant. In other words, the proportion of respondents having positional preferences was found to be significantly higher in the gain (respectively, risky) framing, compared to a symmetric loss (respectively, certain) situation.

**Key-words:** Algeria; financial preferences; framing; positional concerns.

**JEL codes:** D0; D1.

## Positional concerns and framing effects in financial preferences

### 1. Introduction

In his basic form, the *homo oeconomicus* only acts in his own self-interest and does not care about others' situations. Nevertheless, considerable evidence suggests that human behavior is strongly influenced by status considerations (Loch et al., 2001), leading, for instance, *Scientific American* to title an article as follows: '*For the Brain, Cash Is Good, Status Is Better*'.<sup>1</sup> Indeed, in many situations, people compare themselves to others and are interested not by getting more in an absolute sense but more than others and ultimately improving their status.

Positional concerns have been examined in a wide range of domains and have allowed explaining several otherwise irrational decisions (Anderson et al., 2015; Barbara et al., 2017; Wouters, 2015). For instance, in 1987, a business magnate, Robert Campeau, attempted to acquire Bloomingdale's parent company Federated Department Stores. A highly public bidding war ensued between R. Campeau and his rival R.H. Macy, leading the Wall Street Journal to observe "we're not dealing in price anymore but egos. What's been offered is top dollar, and beyond what anyone expected" (Wall Street Journal, 25/3/88). In this irrational escalation, greatly fueled by status seeking, R. Campeau made a so high offer that he went into bankruptcy (Rothschild, 2000). Given that several papers have recently reviewed the literature devoted to status or positional concerns (e.g. Anderson et al., 2015), we focus on contributions that help us formulating challenging hypotheses. Among major findings of previous studies, let us first indicate

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<sup>1</sup> Swaminathan, N. 2008. For the brain, cash Is good, status is better. *Scientific American* (April, 24), <https://www.scientificamerican.com/article/for-the-brain-status-is-better/>.

that empirical evidence has been accumulated to support that position matters in many real-life situations and that these concerns are relatively robust across various cultural contexts even if magnitude differences exist (Solnick and Hemenway, 1998, 2005; Barbara et al., 2017; Akay et al., 2012; Wouters, 2015). People seek status *per se* and not only for instrumental reasons. Positional preferences allow explaining several behaviors that will otherwise appear as irrational. A second important finding is that position matters more or less according to the domains (e.g., goods vs bads, private vs public, kids versus oneself). Third, most studies have found that socio-economic variables are poor explicative determinants of positional concerns, except for some items (Barbara et al., 2017).

Nevertheless, as far as we know, no paper has specifically examined whether positional concerns matter in financial preferences, such loans, investment or taxes, in spite of their paramount importance.<sup>2</sup> We contend that considering positional concerns in the financial domain can help understanding what would otherwise seem strange. For instance, it has been reported that positional concerns generated unintended consequences, such as the failure of mergers because two CEOs could not decide who would get the top job (Loch et al., 2001). Hayward and Hambrick (1997) found that corporate acquisitions tend to produce firms that are too big and less efficient, because CEOs are motivated by status conferred with presiding over a bigger company and in another study Maug et al. (2011) stressed that they are even ready to earn less in exchange of a higher social status. Doukas and Zhang (2016) found empirical evidence that merger wages in the bank industry are motivated by social comparison between acquiring top executives on relative payoffs. Positional concerns can also explain why people oppose Pareto improving policies or refuse changes that will adversely affect their relative standings (Salhi et al., 2012).

Hence, using an up-to-date quasi-experimental survey *à la* Tversky and Griffin (1991) and Solnick and Hemenway (1998) with an appropriate egalitarian option (see Section 2), we fill the literature gap by investigating positional issues in the specific financial domain. In addition, unlike several other papers on positional concerns that have mainly considered developed countries, our study is conducted in a developing country, namely, Algeria (North Africa). Moreover, another important feature of our contribution is that we introduce innovative hypotheses that have not been tested before, by testing whether certain framing affects positional preferences. Indeed, based on the seminal work of Tversky and Kahneman (1981), scholars provided evidence to the relevance of framing in decision-making. In other words, we examine whether the pursuit of status is affected or not by the framing of choices individuals are faced to. This investigation can usefully add to the growing literature supporting that subtle differences in framing can considerably affect people's preferences and decisions. These framing effects violate the principle of 'invariance'. They also indicate that preferences may not exist in any

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<sup>2</sup> A notable exception is a paper of Duflo and Saez (2002) who found support that social comparisons influence behavior related to investment plans, even if they do not explicitly consider positional concerns.

clearly defined way, independent of the elicitation process, which is very important for researchers interested in assessing people's value (Jones et al., 1998). Preferences are frequently constructed in the moment and are susceptible to fleeting situational factors that can be manipulated (Ariely and Norton, 2008). Among the potential framing effects candidates, we focus on gain versus loss, risk level, amounts *versus* percentage, and money origin effects. Concretely, we formulate the hypotheses below:

*H1*: Position matters for financial preferences and matters more on some items compared to others.

*H2*: Framing affects positional preferences.

- ✓ *H2-a*: In the specific case of gain/loss framing and thanks to prospect theory (Kahneman and Tversky, 1979), we contend that position matters more for gain situations than for symmetric loss situations.
- ✓ *H2-b*: Position matters less in risky situations compared to non-risky ones. Moreover, due to loss aversion, we contend that position matters more for risky goods than for risky bads.
- ✓ *H2-c*: We contend that expressing the same objective value in absolute amount or in percentage is likely to affect positional preferences, but we cannot predict in which direction.
- ✓ *H2-d*: Position matters more for windfall money than earned money. Due to mental accounting (Thaler, 1999), we expect that people will give more importance to positional concerns for windfall money than earned money.

The remainder of this paper is organized as follows. The next section is devoted to the empirical strategy. Section 3 exposes the main results and discusses them in order to draw some economic and managerial implications. Section 4 concludes and suggests directions for further research.

## 2. Empirical strategy

In order to test the above-formulated hypotheses, we conducted in December 2016 a self-administered survey with a between design (see below) among a sample of 147 students from a faculty of management in Algiers (Algeria). To avoid a student sample selection bias, we also surveyed 168 managers from various companies in the Algiers metropolitan area. The whole sample is relatively gender balanced, since 57% of respondents are male, and the average age is 31 years old.

We designed a short quasi-experimental survey *à la* Tversky and Griffin (1991) and Solnick and Hemenway (1998, 2005). Several authors argued that hypothetical or quasi experimental surveys are a powerful tool to generate interesting qualitative insights at a low cost (Bekir et al., 2015; Rubinstein, 2013). We concur with several authors (e.g., Camerer and Hogarth, 1999; Rubinstein, 2013) that findings can be similar with those obtained in conventional incentivized experiments, especially if the

research aims at a better understanding of some specific preferences. As stated by Rubinstein (2001, p. 626) “paying subjects will change the distribution of responses, however, assuming that we only want to confirm the existence of a plausible pattern of reasoning it seems unlikely that whether or not we pay the subjects will effect results more than an infinite number of other factors (such as, gender, age, profession, time of day, mood, etc.)”.

The survey consisted in nine questions related to financial-related decisions or choices, namely investment, taxation, contracting a loan for oneself and one’s child, getting a reward at work, wage, unemployment insurance, cutting wages and benefiting from additional money (see Appendix A for the survey instrument). For each item, surveyed individuals were asked to choose among three options (egalitarian, absolute, and positional) the one they prefer while taking into account the situation of peers. Yet, compared to previous research, we refined the definition of the reference group, as other people similar to the respondent in terms of curriculum vitae, position and so on. For instance, the question regarding taxation was formulated as follows:

*You have to pay taxes each year. Considering the cost of living and power purchase of money are the same, what do you prefer?*

- A. You pay DZD 200000/year, others pay DZD 300000/year
- B. You pay DZD 200000/year, others pay DZD 200000/year
- C. You pay DZD 100000/year, others pay DZD 50000/year

Here, option A corresponds to the positional situation where the individual pays more taxes in absolute terms but less than others. Option C corresponds to the absolute situation where the individual pays less taxes even if it is more than others. Option B corresponds to the egalitarian situation. Indeed, compared to the survey instrument developed by Solnick and Hemenway (1998, 2005), we introduced an appropriate egalitarian option to distinguish egalitarian concerns from positional ones (Celse, 2012). We selected an egalitarian option for which the value proposed is equal to the value conveyed by the positional alternative for the surveyed individual. Thanks to this additional option, we rule out the possibility that an individual selects the positional option just to minimize the inequity gap (Fehr and Schmidt, 1999) and not for positional concerns. Noteworthy, we varied the order of proposed alternatives across questions to avoid any status quo bias (Solnick and Hemenway, 1998).

Moreover, in order to test sub-hypotheses *H2-a* to *H2-d* related to framing effects, we used a between design. In other words, for both the students and managers’ samples, half of the sample received on a random basis a version of the questionnaire (*VERSION 1*) and the other half another version (*VERSION 2*). More precisely, to test the gain/loss effect, individuals confronted to version 1 (respectively, 2) were told that due to a financial crisis (respectively, growth), wages will decrease (respectively, increase). In

order to test the effect of the risk level on positional choices, two questions were used related to rewards at work (a good) and cutting wages (a bad). Surveyed individuals were asked to indicate their preference about those two items without a risk in version 1 and with a risk in version 2. Regarding the amount versus percentage effect, respondents were asked to pick their choice about a return on investment framed as an amount in version 1 and a percentage in version 2. Finally, to test the effect of money origin, individuals were asked to choose the situation they prefer for a windfall (version 1) and earned money (version 2). It is here important to notice that for all the previous questions, the three options among which individuals had to pick the one they prefer were designed in a way that both scenarios are exactly similar, that is, the outcome for the individual and others in each state is the same across versions: only the framing of these outcomes vary. For instance, if the respondents choose the positional situation, their outcome would be the same, regardless of the framing. It is also worthy to notice that the questions about taxation, contracting a loan and unemployment insurance were exactly the same across versions.

Last but not least, before the questionnaire administration, we pre-tested it among experts and a dozen of individuals to assess whether the questions were understandable. Thanks to their feedback, we enhanced the questionnaire. For instance, given the reluctance of several participants of considering loans with interest rate because of common Islamic rules prohibiting these practices, we added a fourth alternative in loan related questions indicating that the individual prefers not using loans with interest rate at all. For similar reasons and to explore risk-taking in a context disconnected from money gambles, we introduced a question about participating in a random draw delivering to winners a permanent residency card for an attractive country (such as the Green Card Lottery in the United States).

### 3. Results

The results regarding the percentage of individuals choosing positional, absolute, and egalitarian options are reported in Table 1. For the questions about contracting a loan, we also report the percentage of individuals preferring not to do it, regardless of others' choices. Moreover, for the differently-framed questions, we report responses by version.

The main results from Table 1 are twofold. First, to some extent, the results support the hypothesis *H1* stating that position matters for financial preferences and matters more for some items compared to others. Indeed, the proportion of respondents choosing the positional situation ranges from 6% for wage (in the loss frame) to 45% for the random draw about getting a permanent resident card for an attractive country. Interestingly, the proportion of positional answers is nearly the lowest for the question about contracting a loan, and this figure holds for both individuals' choices and those relative to their children. Nevertheless, on most considered domains, a majority of respondents expressed egalitarian and absolute preferences. It is very interesting that the respondents prefer incurring a loss to guarantee equality, which can be partly explained by the socialist values that prevailed in Algeria for several decades (Barbara et al., 2017).

We identified very few papers that have finance-related questions *with* an egalitarian option in addition to absolute and positional options to allow a meaningful comparison, notably, Celse (2012) and Barbara et al. (2017) who included questions on income with an egalitarian option. Using a sample of students and faculty from the Burgundy School of Business (France), Celse (2012) found that the positional (egalitarian) answer about income was chosen by about 26% (44%) of respondents. Barbara et al. (2017) on a sample of Algerian students obtained similar results with the percentage of participants selecting a positional (egalitarian) answer regarding income oscillating between 25 (34%) and 29% (30%). The percentage of positional answers on the income questions in these two papers are slightly higher than those obtained in our survey for the closest question about wage (20%).

Second, our findings *V2* partly support our hypothesis *H2* stating that framing matters. On one hand, the gain/loss framing (*H2-a*) was found to be significant. In the question about wages, the proportion of respondents choosing the positional option is significantly higher in the gain framing, compared to a symmetric loss situation. This result suggests that positional preferences can be affected by subtle manipulations such as the loss/gain framing of a similar situation. Moreover, relative standing was found to be more relevant when the question was framed as likely or risky (*H2-b*) but the difference is only significant for cutting wages (bads) and not for rewards (goods). Even if it is preliminary to over-interpret these results, they can indicate that position matters more for risky bads than for risky goods, as predicted. On the other hand, the two other framing effects (amounts *versus* percentage [*H2-c*] and windfall *versus* earned money [*H2-d*]) are found to be not significant. We also checked whether sub-samples (students versus staff, men versus women) exhibit different patterns, but the results at the group level are similar to those found at the aggregate level<sup>3</sup>.

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<sup>3</sup> We run multinomial logistic regressions to explore the effect of socio-demographic variables (i.e. employment status, gender, age, education, and earnings, number of siblings, marital status) on the choice of positional and

#### 4. Conclusion

Thanks to a quasi-experimental survey, we found that positional concerns matter in the domain of financial preferences and matter differently according to the considered items. Even if we were firstly interested in positional concerns, a large proportion of respondents also expressed egalitarian and absolute preferences. Our results echo the findings of Barbara et al. (2017) that egalitarian preferences are prevalent in the Algerian context. This may be explained by the socio-cultural background of the country. Islam is the main religion and conventional Islamic teachings are mandatory in public schools. Some of the Islamic teachings promote egalitarian attitude towards others such as a widely spread quote of the Prophet Mohamed: “No one of you becomes a true believer until he likes for his brother what he likes for himself” (see also Akay et al., 2012). Our results have significant implications. Given that people do not always maximize as supposed in conventional reasoning, the marketing of some financial products and services can benefit from considering and taking into account these other considerations. Beyond the narrow definition of self-interest focusing only on material payoffs, in some situations, others’ choices can be used to activate conformity to a social norm or at the contrary to stimulate the desire to be out of the crowd. Our contribution suggests that financial decisions (e.g., investment portfolios, CEO compensation) must not be considered as isolated decisions only guided by self-interest. Including in our analysis framework social comparison effects is more realistic and likely to explain some otherwise puzzling and vexing findings. Moreover, rather than letting social comparisons become a source of counterproductive behaviors, managers can find original ways to turn the drive for status or equality into a powerful motivator serving the interests of the organization (Loch et al., 2001), e.g., by redirecting positional concerns towards rival organizations rather than rival individuals within the organization (Hill and Buss, 2006). Positional preferences can also constitute a leverage to encourage entrepreneurship by rewarding individual entrepreneurs, not only by earnings, but also by status benefits such as prestige conveyed by senior management titles like “Chief Executive Officer” or “Founder” (Wennberg, 2016).

Our findings also stress that some framing effects matter while others do not seem to affect respondents’ choice. Even if we cannot draw definitive conclusions and caution the reader against an over-interpretation of our results, we found support that the gain/loss framing and to some extent the risk framing affect positional preferences while money units (absolute amounts versus percentage) and money origin do not seem to play a role. Nevertheless, it would be challenging to replicate the same

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egalitarian options (absolute options are used as a reference) for each domain. Given the inconclusiveness of results already stressed in the literature (Barbara et al., 2017 and references therein), we do not report them. These results are available upon request from the authors.

survey in other countries in order to test the robustness of our findings, increase the generalizability, and draw more clear-cut conclusions. In addition, investigating the examined issues using a well-designed experiment with monetary incentives constitute a natural and potentially fruitful extension.

**Appendix A: Survey instrument translated from French (Version 1 (V1) and version 2 (V2) are identical except for items in italics that correspond to questions used in V2)**

*The aim of this survey is to understand your preferences related to financial decisions. The word 'others' corresponds to people in your society who are similar to you (age, diplomas, jobs, family situation and so on). Aside from the dimensions discussed in each question, all other dimensions are identical. Questions are independent of one another. Your participation is completely anonymous. We rely on your honesty in answering, because there is no right or wrong answer.*

**1. Investment:** Suppose you invested DZD 100,000 in a project, others also invested DZD 100,000 in a project. What do you prefer in terms of return on investment?

- A. You earn DZD 500,000; others earn DZD 500,000
- B. You earn DZD 500,000; others earn DZD 400,000
- C. You earn DZD 600,000; others earn DZD 800,000

*1. Investment (V2):* Suppose you invested DZD 100,000 in a project, others also invested DZD 100,000 in a project. What do you prefer in terms of return on investment?

- A. You earn 500% of the invested capital; others earn 500% of the invested capital
- B. You earn 500% of the invested capital; others earn 400% of the invested capital
- C. You earn 600% of the invested capital; others earn 800% of the invested capital

**2. Taxation:** You have to pay taxes each year. Assume that the cost of living and purchasing power of money are the same, what do you prefer?

- A. You pay DZD 200,000 / year; others pay DZD 300,000 / year
- B. You pay DZD 200,000 / year; others pay DZD 200,000 / year
- C. You pay DZD 100,000 / year; others pay DZD 50,000 / year

**3. Drawing lots:** You can participate in a random draw to obtain a permanent residence title in a country that attracts you. What do you prefer?

- A. Your chance of being selected is 6%; others' chance is 9%
- B. Your chance of being selected is 3%; others' chance is 2%
- C. Your chance of being selected is 3%; others' chance is 3%

**4. Loan I:** You contract a consumer loan of DZD 50,000. What do you prefer?

- A. You contract a loan with a real interest rate of 3.5%; others contract a loan with a real interest rate of 4.5%
- B. You contract a loan with a real interest rate of 3.5%; others contract a loan with a real interest rate of 3.5%
- C. You contract a loan with a real interest rate of 1.5%; others contract a loan with a real interest rate of 1%
- D. You prefer not to contract a loan, whatever the choice of the others

**5. Reward:** An additional mission is assigned to you, but you must choose your compensation formula while knowing the formula that will apply to others. What do you prefer?

- A. You earn DZD 20,000; others earn DZD 16,000
- B. You earn DZD 20,000; others earn DZD 20,000

C. You earn DZD 24,000; others earn DZD 28,000

□

5. Reward (V2): An additional mission is assigned to you, but you must choose your compensation formula while knowing the formula that will apply to others. What do you prefer?

A. You have a 20% chance of earning DZD 100,000; others have a 20% chance of earning DZD 80,000

B. You have a 20% chance of earning DZD 100,000; others have a 20% chance of earning DZD 100,000

C. You have a 20% chance of earning DZD 120,000; others have a 20% chance of earning DZD 140,000

6. Wage: Your wage is DZD 100,000 / month. Following a financial crisis, wages are falling. What do you prefer?

A. Your wage decreases by DZD 6,000 / month; others' wage decreases by DZD 6,000 /month

B. Your wage decreases by DZD 6,000 / month; others' wage decreases by DZD 8,000 /month

C. Your wage decreases by DZD 4,000 /month; others' wage decreases by DZD 3,000 /month

6. Wage (V2): Your wage is DZD 90,000 / month. Following a financial growth, wages are rising. What do you prefer?

A. Your wage increases by DZD 4,000 /month; others' wage increases by DZD 4,000 /month

B. Your wage increases by DZD 4,000 /month; others' wage increases by DZD 2,000 /month

C. Your wage increases by DZD 6,000 /month; others' wage increases by DZD 7,000 /month

7. Insurance: You have the choice between different kinds of unemployment insurance, in case of a job loss. The costs are the same regardless of the chosen package. What do you prefer?

A. You have an unemployment insurance that covers 80% of your wage loss; others have an insurance that covers 90% of their wage loss

B. You have an unemployment insurance that covers 60% of your wage loss; others have an insurance that covers 60% of their wage loss

C. You have an unemployment insurance that covers 60% of your wage loss; others have an insurance that covers 40% of their wage loss

8. Loan II: Your child contracts a consumer loan of DZD 50,000. What do you prefer?

A. Your child contracts a loan with a real interest rate of 3.5%, others' children contract a loan with a real interest rate of 4.5%

B. Your child contracts a loan with a real interest rate of 3.5%, others' children contract a loan with a real interest rate of 3.5%

C. Your child contracts a loan with a real interest rate of 1.5%, others' children contract a loan with a real interest rate of 1%

D. You prefer that your child does not contract a consumer loan, whatever the choice of the others

9. Cutting wages: Suppose you have to suffer a wage cut of your monthly salary. What do you prefer?

A. You lose DZD 11,000; others lose DZD 11,000

B. You lose DZD 7,000; others lose DZD 5,000

C. You lose DZD 11,000; others lose DZD 14,000

9. Cutting wages (V2): Suppose you have to suffer a wage cut of your monthly salary. What do you prefer?

A. You have a 55% chance of losing DZD 20,000; others have a 55% chance of losing DZD 20,000

B. You have a 35% chance of losing DZD 20,000; others have a 25% chance of losing DZD 20,000

C. You have a 55% chance of losing DZD 20,000; others have a 55% chance of losing DZD 20,000

10. Windfall money: You find money that nobody claims and you become the owner. What do you prefer?

- A. You find DZD 10,000; others find DZD 10,000
- B. You find DZD 10,000; others find DZD 6,000
- C. You find DZD 16,000; others find DZD 20,000

10. Earned money (V2): You earn extra money thanks to a temporary job. What do you prefer?

- A. You earn DZD 10,000 more; others earn DZD 10,000 more
- B. You earn DZD 10,000 more; others earn DZD 6,000 more
- C. You earn DZD 16,000 more; others earn DZD 20,000 more

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**Table 1: Individuals' responses by item and version when appropriate** (Version 1 or V1: N=159; Version 2 or V2: N=156)

Item	Version	Positional	Absolute	Egalitarian	No
<b>Investment</b>	V1 (amount)	20	28	52	.
	V2 (percentage)	23 ns	28 ns	49 ns	
<b>Taxation</b>	Same framing	10	28	62	.
<b>Random draw</b>	Same framing	45	24	31	.
<b>Loan I (oneself)</b>	Same framing	8	16	28	48
<b>Reward</b>	V1 (without a risk)	23	39	38	.
	V2 (with a risk)	28 ns	42 ns	30 *	
<b>Wage</b>	V1 (loss)	6	44	50	.
	V2 (gain)	20 ***	50 ns	30 ***	
<b>Insurance</b>	Same framing	8	55	37	.
<b>Loan II (children)</b>	Same framing	7	18	26	49
<b>Cutting wages</b>	V1 (without a risk)	7	60	33	.
	V2 (with a risk)	12 ***	55 ns	33 ns	
<b>Additional money</b>	V1 (windfall)	19	51	30	.
	V2 (earned)	21 ns	53 ns	26 ns	
<b>Global</b>	V1	15	36	39	.
	V2	18 ns	37 ns	35 ns	

\* and \*\*\* stand respectively for significance at the 10 and 1 percent level of a paired t-test comparing V1 and V2 responses. ns stands for not significant.