

Supplementary materials

Power analysis

The power analyses conducted for the experiments were performed using the GPower software (version 3.1.9.2., 2014), developed by the University of Kiel, Germany (Faul et al., 2007). GPower is freely available at <http://www.gpower.hhu.de/> and provides the capability to calculate and generate power analysis plots for various categories of statistical tests. In our particular case, the analysis computed the required sample size (N) for the experiment, based on the data derived from the original study conducted by (Shafir et al., 1997), utilizing the X^2 family of tests.

The parameters adopted for two-tailed tests were: $\alpha = 0.05$, $1 - \beta = 0.95$, and degrees of freedom = 1. Sample sizes were computed for all four problems; however, the final determination was predicated on problem 4, which exhibited the smallest effect sizes. For the comparison between the contract terms (real and nominal), an effect size of 0.45 was used (based on the original study data), resulting in a total number of 65 participants in each of the terms. As there are three conditions in problem 4, the final sample resulted in 195 participants (65×3). As the questionnaires were conducted via the Internet, the planned sample was increased to 250 participants, thus having a safer margin of error.

As it turned out, a substantial number of participants responded to the first and second problems but left the remaining ones unanswered. To address this imbalance in the sample distribution, we opted to reverse the order of task presentation, commencing with the 4th problem and concluding with the 1st. Consequently, there were varying 'n' values for each problem throughout the task, as illustrated in Table S1.

Translation and cultural adaptation

In the development of the materials, the scenarios from the original study conducted by Shafir et al. (1997) were translated into Portuguese and adjusted to align with the Brazilian context and culture. Numerous meetings were convened to address various aspects of translation and adaptation, including rectifying spelling and coherence issues and modifying the question flow.

The assignment to translate the original questionnaire (in English) was divided among three researchers proficient in Portuguese (Brazilian) and English. Each section was subsequently reviewed by a researcher who had not participated in the initial translation process. In addition to translating English to Portuguese, minor adjustments were introduced to the questionnaire to enhance its alignment with the Brazilian context. Examples of these modifications included changing the city in problem 4 and updating certain dates. Furthermore, the names of the characters in the scenarios were adapted as follows: Maria (Ann) and Carolina (Barbara) in problem 1; André (Adam), Bento (Ben), and Marcelo (Carl) in problem 2.

After achieving consensus on all the translated sections, the research team revised the questionnaire to rectify any errors (for both the Portuguese and English versions, refer to Table S2). Upon completing the translation and adaptation of the questionnaire, a pilot study was conducted to assess the questionnaire's coherence and understandability, with the collected data excluded from the final analysis. Following the feedback of the pilot study participants, further refinements were made to the questionnaire's last details, ultimately resulting in the final version.

Table S1: Total number of participants who answered the verification question by scenario correctly.

Problem	n (total)	N (only participants who got the verification question right)	Hit rate
1	342	271	79.2%
2	269	208	77.6%
3	264	155	58.7%
4	257	168	65.4%

Table S2: Questionnaires in English and Portuguese translation used in the present study.

Problem 1 description	Economic Terms	Happiness	Job Attractiveness	Dependent Variable
Consider two individuals, Ann and Barbara, who graduated from the same college a year apart. Upon graduation, both took similar jobs with publishing firms. Ann started with a yearly salary of \$30,000. During her first year on the job there was no inflation, and 150 in her second year Ann received a 2% (\$600) raise in salary. Barbara also started with a yearly salary of \$30,000. During her first year on 139 the job there was a 4% inflation, and in her second year Barbara received a 5% (\$1500) raise in salary.	As they entered their second year on the job, who was doing better in economic terms?	As they entered their second year on the job, who do you think was happier?	As they entered their second year on the job, each received a job offer from another firm. Who do you think was more likely to leave her present position for another job?	Ann or Barbara
Problem 2 description			Dependent variable	
<p>Suppose Adam, Ben, and Carl each received an inheritance of \$200,000, and each used it immediately to purchase a house. Suppose that each of them sold the house a year after buying it. Economic conditions, however, were different in each case:</p> <ul style="list-style-type: none"> When Adam owned the house, there was a 25% deflation—the prices of all goods and services decreased by approximately 25%. A year after Adam bought the house, he sold it for \$154,000 (23% less than he paid). When Ben owned the house, there was no inflation or deflation— prices had not changed significantly during that year. He sold the house for \$198,000 (1% less than he paid for it). When Carl owned the house, there was a 25%inflation—all prices increased by approximately 25%. A year after he bought the house, Carl sold it for \$246,000 (23% more than he paid). <p>Please rank Adam, Ben, and Carl in terms of the success of their house-transactions. Assign ‘1’ to the person who made the best deal, and 3 to the person who made the worst deal.</p>			The participant would relate the numbers (1-3) to the individuals (Adam, Ben and Carl)	
Problem 3 description	Buy	Sell	Dependent variable	
Changes in the economy often have an effect on people’s financial decisions. Imagine that the U. S. experienced unusually high inflation which affected all sectors of the economy. Imagine that within a six-month period all benefits and salaries, as well as the prices of all goods and services, went up by approximately 25%. You now earn and spend 25% more than before.	Six months ago, you were planning to buy a leather armchair whose price during the 6-month period went up from \$400 to \$500 (25%).	Six months ago, you were also planning to sell an antique desk you own, whose price during the 6-month period went up from \$400 to \$500 (25%).	More Same Less	
	Would you be more or less likely to buy the armchair now?	Would you be more or less likely to sell your desk now?		
Problem 4 description	Dependent variable	Real Terms	Nominal Terms	Neutral Terms

<p>Imagine that you are the head of a corporate division located in Singapore that produces office computer systems. You are now about to sign a contract with a local firm for the sale of new systems, to be delivered in January, 1993.</p> <p>These computer systems are currently priced at \$1000 apiece but, due to inflation, all prices, including production costs and computer prices, are expected to increase during the next couple of years. Experts' best estimate is that prices in Singapore two years from now will be about 20% higher, with an equal likelihood that the increase will be higher or lower than 20%. The experts agree that a 10% increase in all prices is just as likely as a 30% increase.</p> <p>You have to sign the contract for the computer systems now. Full payment will be made only upon delivery in January, 1993. Two contracts are available to you. Indicate your preference between the contracts by checking the appropriate contract below:</p>	Risky contract in real terms (riskless in nominal terms)	Contract A: You agree to sell the computer systems (in 1993) at \$1200 a piece, no matter what the price of computer systems is at that time. Thus, if inflation is below 20% you will be getting more than the 1993-price; whereas, if inflation exceeds 20% you will be getting less than the 1993-price. Because you have agreed on a fixed price, your profit level will depend on the rate of inflation. [19%]	Contract C: You agree to sell the computer systems (in 1993) at \$1200 apiece, no matter what the price of computer systems is at that time. [41%]	Contract E: You agree to sell the computer systems (in 1993) at \$1200 a piece, no matter what the price of computer systems is at that time. [46%]
	Riskless contract in real terms (risky in nominal terms)	Contract B: You agree to sell the computer systems at 1993's price. Thus, if inflation exceeds 20%, you will be paid more than \$1200, and if inflation is below 20%, you will be paid less than \$1200. Because both production costs and prices are tied to the rate of inflation, your "real" profit will remain essentially the same regardless of the rate of inflation. [81%]	Contract D: You agree to sell the computer systems at 1993's price. Thus, instead of selling at \$1200 for sure, you will be paid more if inflation exceeds 20%, and less if inflation is below 20%. [59%]	Contract F: You agree to sell the computer systems at 1993's prices. [54%]

Problema 1 - descrição	Termos Econômicos	Felicidade	Atratividade do trabalho	Variável Dependente
Considere dois indivíduos, Maria e Carolina, que se formaram na mesma faculdade com um ano de diferença. Depois da graduação, ambas tinham trabalhos semelhantes em firmas de editoração. Maria começou com um salário mensal de R\$3 000 (reais). Durante seu primeiro ano de trabalho, não houve inflação, e	Ao ingressar em seu segundo ano no emprego, <u>quem estava melhor em termos econômicos?</u>	Ao ingressar em seu segundo ano no emprego, <u>quem você acha que está mais feliz?</u>	Ao ingressar em seu segundo ano no emprego, ambas receberam propostas de emprego em empresas diferentes. <u>Quem</u>	Maria or Carolina

em seu segundo ano Maria recebeu um aumento de 2% (R\$60) em seu salário. Carolina também começou com um salário mensal de R\$3 000 (reais). Durante seu primeiro ano de trabalho, houve uma inflação de 4%, e em seu segundo ano Carolina recebeu um aumento de 5% (\$150) em seu salário.			<u>você acha que estava mais suscetível a deixar o trabalho atual para começar a trabalhar na nova empresa?</u>	
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Problema 2 - descrição	Variável dependente
<p>Suponha que André, Bento e Marcelo receberam, cada um, uma herança de R\$200.000 e a usaram para comprar uma casa. Suponha que cada um deles vendeu a casa um ano após comprá-la. As condições econômicas, no entanto, eram diferentes em cada caso:</p> <ul style="list-style-type: none"> Quando André possuía a casa, existia uma deflação de 25% - os preços de todos os bens e serviços caíram por volta de 25%. Um ano após André comprar a casa, ele vendeu por R\$154.000 (23% menos do que ele pagou). Quando Bento possuía a casa, não existia nem inflação nem deflação - os preços não mudaram significativamente durante aquele ano. Ele vendeu a casa por R\$198.000 (1% menos que o quanto ele havia pago) Quando Marcelo possuía a casa existia uma inflação de 25% - todos os preços subiram aproximadamente 25%. Um ano após ele comprar a casa, Marcelo a vendeu por R\$246.000 (23% a mais do que ele pagou). <p>Ranqueie André, Bento e Marcelo em termos de qual obteve maior sucesso na sua transação de compra e venda na casa, assinalando 1 para a pessoa que fez o melhor negócio e 3 para a pessoa que fez o pior.</p>	O participante deve relacionar o número (1-3) aos indivíduos (André, Bento e Marcelo).

Problema 3 descrição	Compra	Venda		Variável dependente
Mudanças na economia frequentemente afetam as decisões financeiras das pessoas. Imagine que o Brasil experienciou uma alta anormal na inflação que afetou todos os setores da economia. Imagine que dentro de um período de 6 meses, todos os benefícios e salários, assim como os preços de todos os bens e serviços, aumentaram em 25%. Agora, você ganha e gasta 25% mais do que antes.	6 meses atrás, você estava planejando comprar uma poltrona de couro que, durante esse período de 6 meses, aumentou de preço (de R\$400 para R\$500/ 25%).	6 meses atrás, você estava planejando vender uma poltrona de couro que, durante esse período de 6 meses, aumentou de preço (de R\$400 para R\$500/ 25%).		Mais Igual Menos
	Você estaria mais ou menos suscetível a comprar essa poltrona agora?	Você estaria mais ou menos suscetível a vender essa poltrona agora?		
Problema 4 descrição	Variável dependente	Termos reais	Termos nominais	Termos neutros
Imagine que estamos em 2011 e que você é o diretor de uma divisão corporativa na Zona	Contrato arriscado em termos reais (menos arriscado	Contrato A: Você concorda em vender os	Contrato C: Você concorda em vender os	Contrato E: Você concorda em vender os

<p>Franca de Manaus, que produz computadores. Você está prestes a assinar um contrato com uma empresa local para a venda de novos computadores que serão entregues em Janeiro de 2013.</p> <p>Esses computadores possuem, atualmente, o valor de \$1000 a peça, mas devido à inflação, os preços, incluindo custos de produção e preços de computadores, tendem a crescer nos próximos anos. A melhor estimativa, segundo especialistas, é de que os preços em Manaus estejam 20% mais altos em dois anos, com uma mesma probabilidade de que este aumento seja maior ou menor que 20%. Os especialistas concordam que um aumento de 10% nos preços é tão provável quanto um aumento de 30%.</p> <p>Você deve assinar o contrato agora. O pagamento integral só será feito a partir da entrega em Janeiro de 2013.</p> <p>Dois contratos estão disponíveis para você. Indique sua preferência dentre os contratos abaixo, avaliando qual deles é apropriado.</p>	em valores nominais)	computadores (em 2013) por \$1200 a peça, independente do preço dos computadores na época. Sendo assim, se a inflação estiver abaixo de 20%, você estará ganhando mais do que o preço de 2013; todavia, se a inflação ultrapassar 20%, você estará ganhando menos do que o preço de 2013. Uma vez que você concordou com um preço fixo, seu lucro vai depender da taxa de inflação.	sistemas de computador (em 2013) a R\$1200 a peça, independente do preço dos sistemas de computador na época.	sistemas de computador (em 2013) a R\$1200 a peça, independente do preço dos sistemas de computador na época.
	Contrato menos arriscado em valores reais (arriscado em valores nominais)	Contrato B: Você concorda em vender os computadores no preço de 2013. Sendo assim, se a inflação ultrapassar 20%, você será pago mais do que \$1200, e se a inflação for inferior a 20%, você será pago menos do que \$1200. Como ambas despesas de produção e preços estão ligadas a taxa de inflação, seu lucro "real" permanecerá essencialmente o mesmo independente da taxa de inflação.	Contrato D: Você concorda em vender os sistemas de computador no preço de 2013. Sendo assim, em vez de vender a \$1200 com certeza, você será pago de acordo com a taxa de inflação. Se a inflação passar 20%, você ganhará mais. Se ela for inferior, você ganhará menos.	Contrato F: Você concorda em vender os sistemas de computador no preço de 2013.

Table S3: Verification questions used in the four problems.

Problem	Question	Answers (correct alternative highlighted)
1	What was the increase (in Brazilian Reals, R\$) received by Maria and Carolina respectively?	<ul style="list-style-type: none"> • 100 e 50 • 90 e 60 • 70 e 120 • 60 e 150 • 30 e 90
2	After how long did they sell the house?	<ul style="list-style-type: none"> • 1 year • 2 years • 5 years • I don't know
3	What happened to the price of the armchair?	<ul style="list-style-type: none"> • Increased • Decreased • Continued the same • I don't know
4	Regarding increases in inflation in Manaus, which option is most likely to occur in 2013?	<ul style="list-style-type: none"> • 10% • 20% • 30% • 40% • I don't know

Table S4: Mean age and gender distribution

	N	Mean age	Gender (% female)	Gender (% male)	Gender (% other)
Total	446	31.6	67%	32%	1%

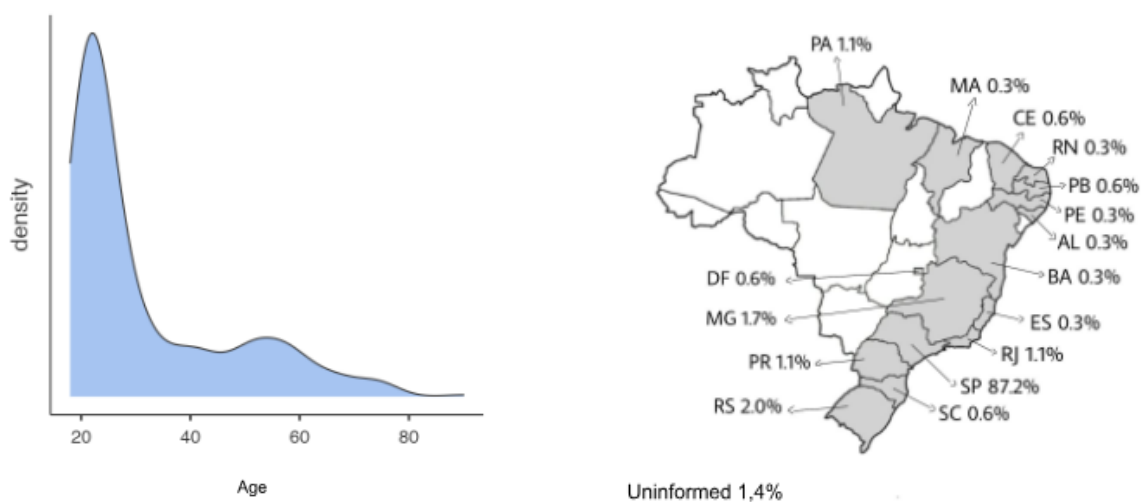


Figure S1: Density plot showing the ages of 446 participants (left side) and the sample distribution by state (right side).

Table S5: Educational level distribution

Educational level	N (%)	
	Incomplete	Completed
Basic Education	3 (0.8%)	2 (0.5%)
High-school	4 (1%)	23 (6%)
Undergrad	154 (40%)	85 (22%)
Graduate	23 (6%)	88 (23%)
Total	382	

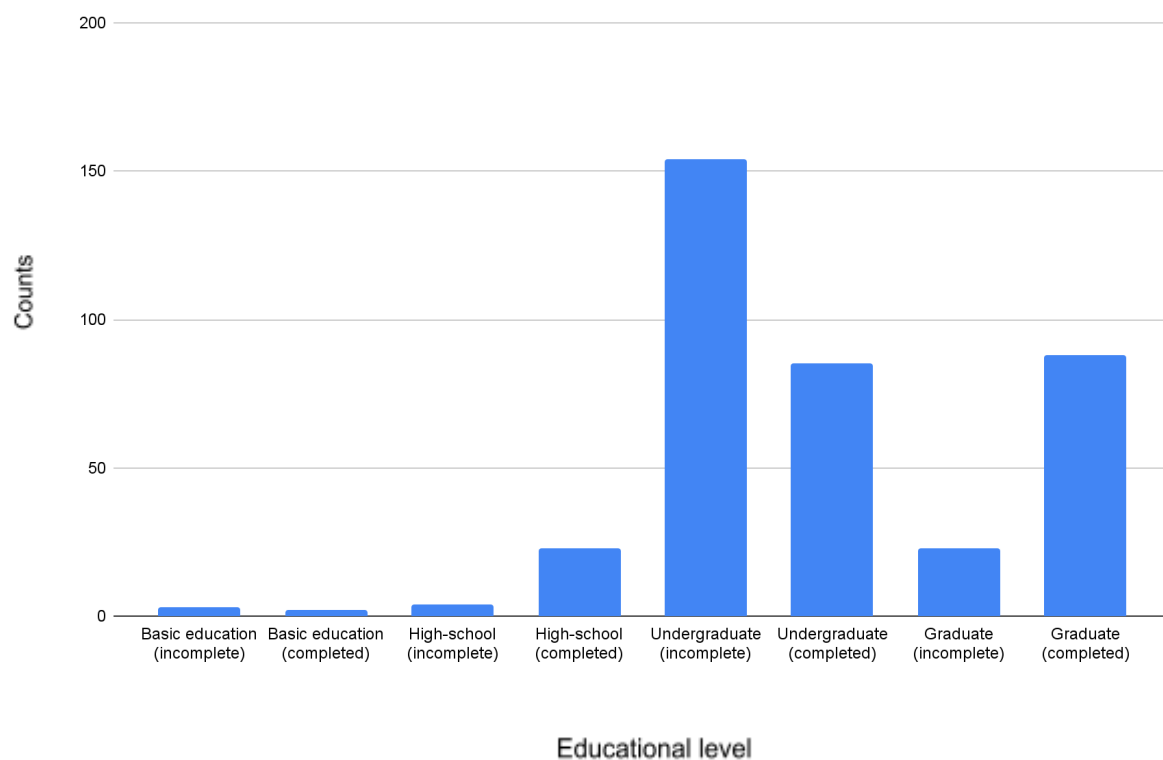


Figure S2: Frequency of the sample according to educational level.

Table S6: Socioeconomic Status (SES) by minimum wage

SES*	0	0-1	1-3	3-6	6-9	9-12	12-15	>15	Total
n (%)	4 (1.1%)	3 (0.8%)	39 (11%)	58 (16.3%)	61 (17.2%)	55 (13%)	43 (12.1%)	109 (30.7%)	372

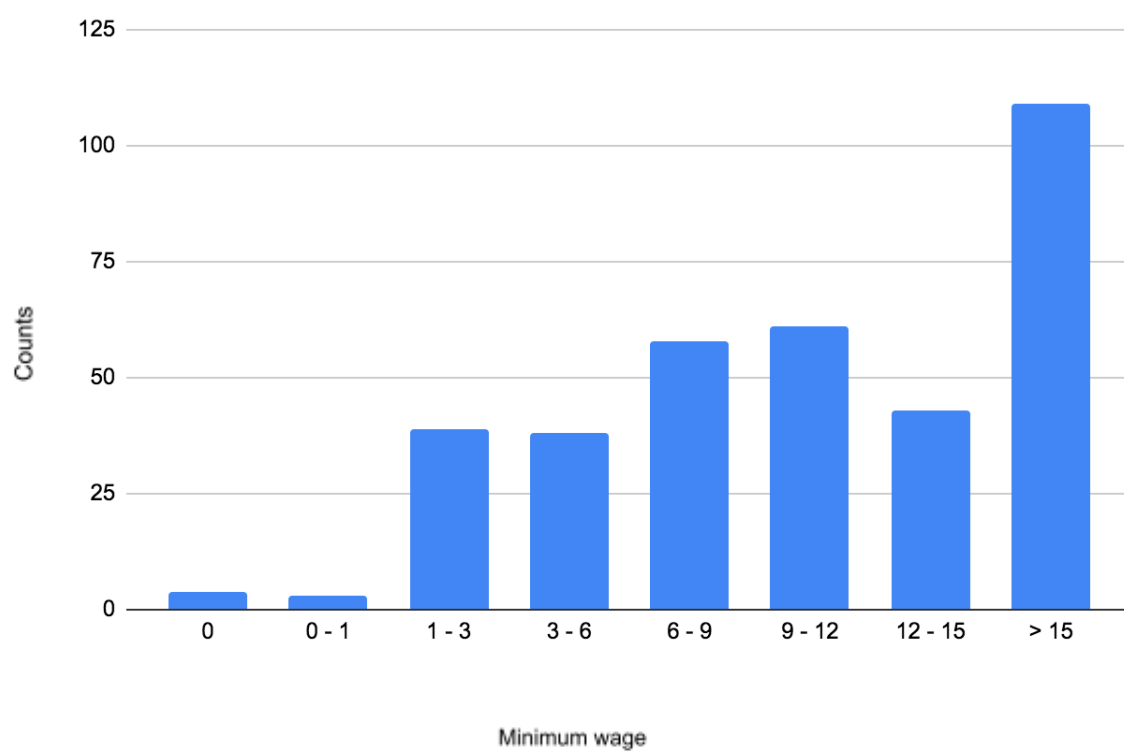


Figure S3: sample distribution by socioeconomic status - minimum wage.

Table S7: Chi-Square test comparing participants' choices (only the ones who got the verification question right) between Maria or Carolina in each condition of Problem 1 (different terms) and across conditions.

Problem 1	n	Maria n(%)	Carolina n(%)	χ^2	p-value
Economic Terms	82	62 (75%)	20 (25%)	21.51	< .001*
Happiness	94	48 (51%)	46 (49%)	0.04	0.837*
Job Attractiveness	95	59 (62%)	36 (38%)	5.57	0.018*
Total	271			11.25	0.004*

*indicates the p-value to a binomial X^2 test against a proportion of 50%

** indicates the p-value relative to a X^2 test comparing condition vs person proportions.

Cramer V total (comparing the distribution from all scenarios) = 0.204 [0.110 - 0.327]

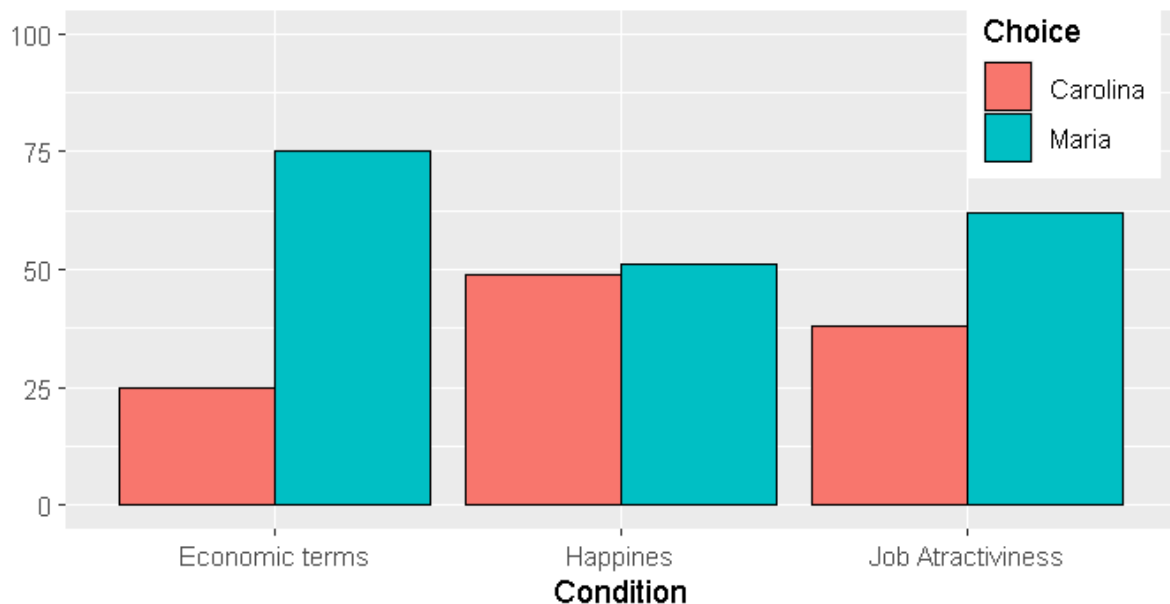


Figure S4. The frequency of participants' that got the verification question right choices within each condition in problem 1 considering only those who got the verification question right (n=271).

Table S8: Chi-Square test comparing participants' choices (only the ones who got the verification question right) ranking André, Bento and Marcelo on Problem 2

Problem 2	N	1° choice	2° choice	3° choice	X ²	p-value
André		72 (35%)	31 (15%)	105 (50%)	39.64	< .001*
Bento		42 (20%)	145 (70%)	21 (10%)	127.05	< .001*
Marcelo		94 (45%)	32 (15%)	82 (40%)	31.19	< .001*
Total	208				197.88	< .001**

*indicates the p-value to a binomial X² test against a proportion of 50%

** indicates the p-value relative to a X² test comparing condition vs person proportions.

Cramer V total (comparing the distribution from all scenarios) = 0.398 [0.344 - 0.454]

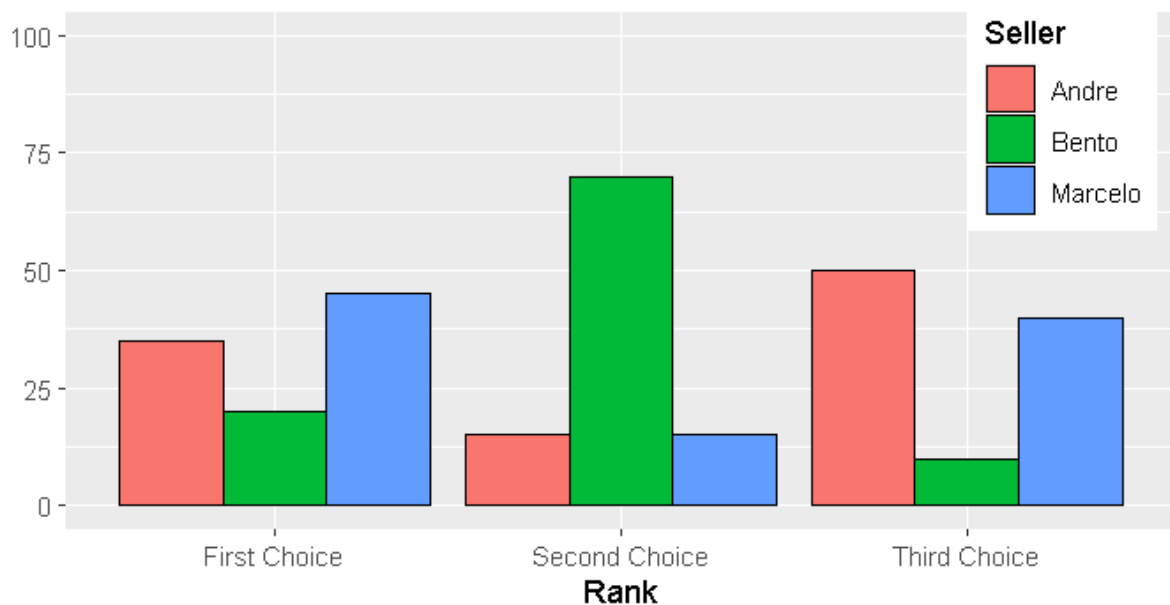


Figure S5. The frequency of participants' choices when ranking each seller in problem 2, considering only those who got the verification question right (n=208).

Table S9: Chi-Square test comparing participants' probability of buying or selling furniture pieces (considering only the ones who got the verification question right) on Problem 3.

Problem 3 (n= 155)	n	Buy (R\$)	Buy (%)	Sell (R\$)	Sell (%)	χ^2	p-value
More	69	4 (6%)	4 (5%)	27 (37%)	34 (42%)	-	-
Same	142	32 (42%)	32 (39%)	38 (51%)	40 (49%)	-	-
Less	99	38 (52%)	45 (56%)	9 (12%)	7 (9%)	-	-
-	-	Buy (R\$ + %)		Sell (R\$ + %)			
More	69	8 (5%)		61 (40%)			
Same	142	64 (41%)		78 (50%)			
Less	99	83 (54%)		16 (10%)			
Total	155 participants 310 choices					87.43	< .001*

* indicates the p-value relative to a χ^2 test comparing decision vs probability of buying/selling.

Cramer V total (comparing the distribution from all problems) = 0.531 [0.424-0.645]

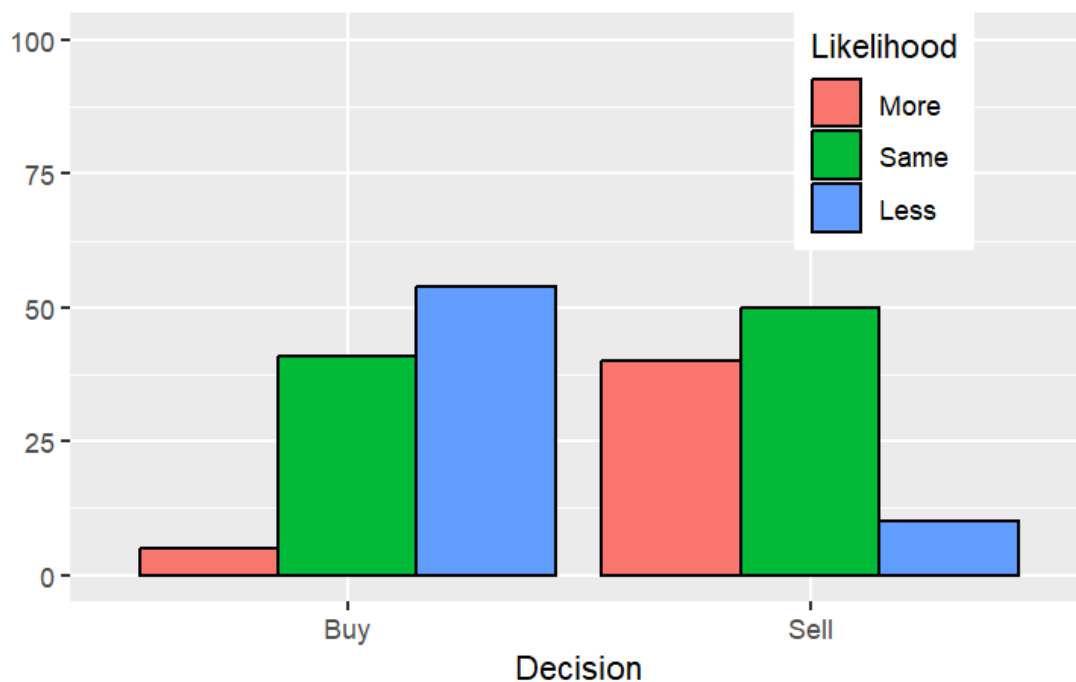


Figure S6. The frequency of participants' choices in problem 3, considering only those who got the verification question right (n=155).

Table S10: Chi-Square test comparing participants' choices of contracts (considering only the ones who got the verification question right) across the different terms framing on Problem 4

Problem 4 (n= 168)	AB (real)	CD (nominal)	EF (neutral)	N
Risky contract (A/C/E)	11 (19%)	12 (21%)	29 (56%)	52
Riskless contract (B/D/F)	47 (81%)	46 (79%)	23 (44%)	116
X ²	19.91	17.12	0.50	44.86
p-value	< 0.001	< 0.001	0.479	< 0.001

Cramer V total (comparing the distribution from all problems) = 0.231 [0.169-0.299]

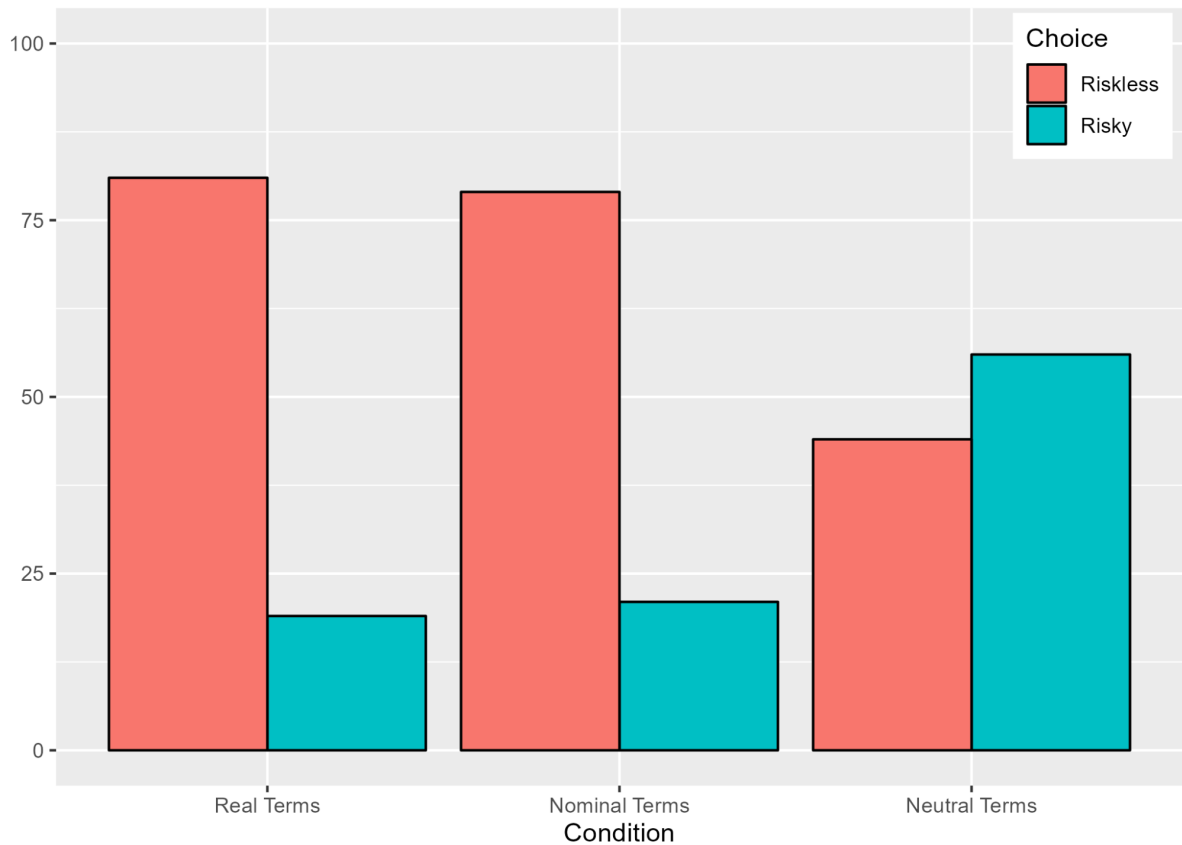


Figure S7. The frequency of participants' choices in problem 4, considering only those who got the verification question right (n=168).

Table S11: Comparison of effects sizes between replication and original study

Problem	Original Study		Replication		Replication Summary ¹
	effect size [95% CI]	n	effect size [95% CI]	n	
1	V = 0.26 [0.17, 0.37]	358	V = 0.24 [0.15, 0.35]	342	Signal-consistent
2	48% [42%, 52%]	431	43% [38%, 49%]	269	Signal-consistent
3 <i>Buy</i>	38% [33%, 43%]	362	48% [42%, 54%]	264	Signal-inconsistent (Stronger)
3 <i>Sell</i>	43% [38%, 48%]		33% [28%, 39%]		Signal-inconsistent (Smaller)
4	V = 0.25 [0.13, 0.42]	139	V = 0.19 [0.14, 0.24]	257	Signal-inconsistent (Smaller)

¹ Summary based on the criteria described in LeBel et al. (2019).

Problem 2: the effect size is the proportion of participants ranking the best nominal transaction as the best one overall

Problem 3a: indicates that the effect size is the proportion of participants being less likely to buy the armchair with high inflation.

Problem 3b: indicates that the effect size is the proportion of participants being more likely to sell the armchair with high inflation.

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