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A one-sentence nudge against present focus

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Abstract

We test whether a single neutral sentence can reduce present-focused intertemporal choices. In a pre-registered classroom experiment ($N=210$) at Corvinus University of Budapest, first-year students made eight incentivized choices between HUF~10,000 immediately and larger amounts paid in two weeks. The treatment added a one-line, non-directive prompt---"Think carefully about all the possibilities that money would provide you"---intended to shift attention from *when* money arrives to *what* it enables. Treated participants switch to the later--larger option at lower premia (about \$0.1\$--\$0.2\$ SD), but estimates are imprecise and not statistically significant. We interpret the pattern as consistent with a small effect, suggesting that this minimal prompt may be too weak at the stakes and two-week horizon studied.

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1. Introduction

Present focus—the tendency to overweight immediate rewards relative to future gains—is closely linked to procrastination and other behaviors with long-run costs. This bias has been associated with adverse outcomes in education [e.g., Kim and Seo, 2015], labor markets [e.g., Paserman, 2008], and health [e.g., Bradford et al., 2017]. Hence, it is of interest to understand how to counteract present focus and promote behavior conducive to better outcomes. The use of commitment devices [O’donoghue and Rabin, 1999, Cobb-Clark et al., 2024] is the best-known approach.

In this study, we test whether a single neutral framing sentence can mitigate present-focused behavior. In the control group, participants completed a canonical intertemporal multiple-price-list task, while in the treatment group we added a short, non-directive prompt: “Think carefully about all the possibilities that money would provide you.” Unlike stronger framing manipulations, this wording does not alter the economic meaning of the options or explicitly highlight foregone gains. Instead, it is intended as a minimal attention cue that may shift attention away from the timing of payment and toward the uses that money enables.

We conducted a classroom experiment with first-year Management students at Corvinus University of Budapest. Participants made eight incentivized choices between immediate and later-larger rewards. We also elicited age, gender, and several brief control measures. The experimental design was pre-registered at AsPredicted (<https://aspredicted.org/4t4h-pxxg.pdf>) and approved by the Research Ethics Committee of Corvinus University of Budapest (KRH/59/2025).¹

Framing can shift intertemporal choice by reallocating attention across attributes, changing reference points, or altering how delays are construed. Prior work shows that patience can be increased by making opportunity costs salient, reframing delay as speed-up, or describing options in investment-like terms [Loewenstein, 1988, Read et al., 2005, Radu et al., 2011, Read et al., 2012, Magen et al., 2014, Zhao et al., 2015, Breuer and Soypak, 2015, Faralla et al., 2017, Lempert and Phelps, 2016]. Our intervention differs from these stronger manipulations in that it is deliberately minimal: it does not quantify foregone gains, alter the economic meaning of the options, or suggest what participants should choose. Instead, it tests whether a single neutral sentence can shift attention from payment timing to the uses that money enables.

In a preregistered classroom experiment with real payments and a two-week horizon, we find effects in the predicted direction but small and imprecise. The results suggest that, at the stakes and horizon we study, a single neutral sentence may be too weak to generate a reliable shift toward patience. At the same time, the findings are informative about the limits of very weak framing interventions and help indicate how strong a prompt may need to be before it produces reliable behavioral effects.

The rest of the paper is organized as follows. Section 2 describes the experimental design, procedures, and data. Section 3 presents descriptive evidence and regression results. Section 4 concludes and discusses implications for future research on minimally intrusive

¹The preregistration mentioned an online validation sample. These data were not collected due to logistics and timing and are therefore not available on OSF. We report only the classroom experiment.

nudges.

2. Experimental Design and Data

The subject pool comprised first-year Management students at Corvinus University of Budapest who attended a Macroeconomics class on February 24, 2025. Students drew instruction sheets on arrival that described an intertemporal-choice task: choosing between HUF 10,000 (around €25 at the time) immediately or a higher amount in two weeks. Two versions of the instruction sheet (control and treatment) were printed in equal numbers and distributed on entry. Each contained a QR code linking to the online questionnaire. All instructions and the online questionnaire were administered in Hungarian.

The instruction sheets stated that participation was voluntary, anonymous, and could be terminated at any time. Informed consent was confirmed upon entering the online questionnaire, which was accessible only during class. Each instruction sheet displayed a unique ID used only for payment selection and to link responses across the paper sheet and the online questionnaire.

After introducing the task, students had 12 minutes to complete the survey. Most finished within 10 minutes. The study was conducted in a classroom setting, and the available sample was therefore constrained by course enrollment. We implemented the experiment in one of the largest available first-year courses at our university.

Participants faced eight binary choices between a constant immediate payment of HUF 10,000 and a larger payment received in two weeks. The later amounts were HUF 10,200, 10,400, 10,600, 10,800, 11,000, 11,300, 11,600, and 12,000, corresponding to two-week returns of 2%, 4%, 6%, 8%, 10%, 13%, 16%, and 20%. This range captures realistic short-term rates, allows detection of extreme present focus, and is consistent with earlier studies on Hungarian students [Horn et al., 2022]. Choices were shown one per page.

The treatment consisted of adding the following one-sentence prompt to the standard multiple-price-list task: “Think carefully about all the possibilities that money would provide you.” The control group completed the same task without this sentence. The intervention was intentionally minimal: it did not alter the economic meaning of the options, quantify foregone gains, or explicitly recommend one choice over the other.

The first switch from the immediate option to the later-larger option defined the individual switching point, where lower values indicate earlier acceptance of the later-larger option. A participant who first chose the later option at the third row, for example, was assigned a switching point of 3. Participants who always chose the immediate option were coded as “never switch” and assigned a value of 9 in the main analysis. The switching point can also be interpreted as implying an individual two-week discount factor equal to

$$\frac{10,000}{\text{later amount at the switching point}}.$$

For incentives, one randomly drawn decision out of the eight determined actual payment, and ten randomly selected participants were paid. Participants selected for payment who chose the immediate option received HUF 10,000 immediately after class. Those who chose the later-larger option received the corresponding amount two weeks later in a sealed

envelope. Additional details on the payment protocol are reported in Appendix A.

The questionnaire also elicited several sociodemographic and behavioral measures used as controls: mathematics, risk attitude, perceived social status, financial distress, future orientation, trust, age, and gender. Exact wording and response scales are reported in Appendix B.

From 228 initial responses, the final analysis sample contains 210 observations (107 control and 103 treatment). In ordered multiple-price-list tasks, a single switch is the pattern consistent with monotonic preferences over the sequence of trade-offs. Accordingly, and in line with our preregistration and the standard treatment of MPL responses in the literature, we restrict attention to participants who do not switch multiple times. We define “multiple switching” as more than one switch between the immediate and later options. Reconstructing switching behavior directly from the eight MPL choices shows that, in the final cleaned sample used for estimation, all participants display either zero or one switch. Thus, the broad analysis sample consists of monotonic response patterns only: respondents either never switch, always choose the later option, or switch once. No multiple-switch observations remain in the estimation sample.

Because treatment assignment occurred through paper instruction sheets distributed at the beginning of class, we tested for balance across observed covariates. Descriptive statistics and randomization tests appear in Table I. We find no statistically significant differences between control and treatment groups in age, gender, mathematics, risk attitude, perceived social status, financial distress, trust, or future orientation. The treatment group switches earlier on average (lower switching point), and the share of never-switch responses is also lower in treatment (17.5%) than in control (23.4%), although the raw differences are not statistically significant. An exact test of independence for the full 9×2 contingency table (switching-point category $\times$ treatment; Fisher–Freeman–Halton) does not reject equality of distributions ($p = 0.393$).

Figure 1 shows the distribution of switching points by treatment. The relatively large share of “never switch” responses admits multiple interpretations, including genuinely extreme present focus, misunderstanding, low engagement, or the use of a simple heuristic such as always choosing the immediate option. Because the data do not allow us to distinguish cleanly among these possibilities, the analysis reports results both for the full sample and, as a robustness exercise, for the subset of participants who choose the later option at least once.

3. Findings

We hypothesized that the one-sentence prompt would mitigate present focus, leading treated participants to accept the later-larger option at lower premia (that is, at a lower switching point). In line with Figure 1, switching points are lower in the treatment group, but the difference is not statistically significant in a Wilcoxon rank-sum (Mann–Whitney) test ($p = 0.151$; $p = 0.330$ among switchers only). We next quantify the magnitude and precision of this pattern using OLS regressions.

To do so, we estimate OLS models of the switching point (1–8 for the eight later amounts; 9 = never switch), reporting robust standard errors. We present results for the full sample and, as a robustness exercise, for the subset of participants who choose the later option at

Table I: Summary statistics. Means with standard deviations in parentheses. Below each p-value, the corresponding test.

Variable	Control	Treatment	p-value
Age	19.41 (0.93) (N=107)	19.29 (0.71) (N=103)	0.294 t-test (unequal)
Female	0.49 (0.50) (N=106)	0.47 (0.50) (N=103)	0.722 Two-sample proportion
Mathematics	3.79 (0.71) (N=107)	3.93 (0.69) (N=103)	0.139 Mann-Whitney
Risk attitude	3.29 (0.85) (N=107)	3.39 (0.85) (N=103)	0.420 Mann-Whitney
Perceived social status	3.65 (0.73) (N=107)	3.50 (0.75) (N=103)	0.199 Mann-Whitney
Financial distress	1.96 (1.10) (N=107)	2.19 (1.19) (N=103)	0.142 Mann-Whitney
Trust	2.23 (0.71) (N=107)	2.28 (0.68) (N=103)	0.631 Mann-Whitney
Future orientation	3.14 (0.67) (N=107)	3.25 (0.52) (N=103)	0.304 Mann-Whitney
Switching point	5.15 (3.25) (N=107)	4.45 (3.07) (N=103)	0.151 Mann-Whitney

least once. In our sample, 43 of 210 participants (20.5%) never switched to the later option; the corresponding shares are 23.4% in the control group (25/107) and 17.5% in the treatment group (18/103). Because such responses may reflect either genuinely extreme present focus or other mechanisms that the data do not allow us to distinguish cleanly, we report both sets of results.

We include standard controls previously linked to time preferences, including mathematics, risk attitude, socioeconomic status, financial distress, and trust.

Across specifications, the treatment coefficient is negative (from -0.35 to -0.70 switching-point units), consistent with our hypothesis of earlier switching to the later-larger option, but it is not statistically significant at conventional levels (Table II). Using the pooled standard deviation of the switching point (about 3.2; Table I), the point estimates correspond to roughly 0.1–0.2 standard deviations. Thus, the estimates suggest a small shift toward patience, but they are too imprecise to rule out no effect. Given the classroom setting and resulting sample size, the study was not well powered to detect small effects precisely; details are reported in Appendix C.

Some controls are occasionally significant but not robust across columns. In particular, the negative coefficient on *Female* in column (3) indicates earlier switching (more patience) among women in this sample, while the positive coefficient on *Trust* points to later switching (less patience). Results are similar with ordered logit regression.

As a robustness check, we obtain the same qualitative conclusion when testing the treatment effect using (i) an ordered response model for the switching-point categories and (ii)

Table II: OLS regressions of switching point. Lower values indicate earlier acceptance of the later-larger option; 9 denotes “never switch.”

VARIABLES	Dependent variable: Switching point (1–8; 9 = never switch)			
	(1)	(2)	(3)	(4)
	All	Only switchers	All	Only switchers
Treatment	-0.703 (0.436)	-0.493 (0.409)	-0.620 (0.427)	-0.350 (0.416)
Mathematics			-0.427 (0.312)	-0.223 (0.293)
Risk attitude			0.197 (0.289)	0.297 (0.282)
Perceived social status			0.129 (0.301)	0.475* (0.280)
Financial distress			0.094 (0.200)	0.055 (0.199)
Future orientation			-0.848* (0.433)	-0.635 (0.419)
Trust			0.717** (0.315)	0.434 (0.291)
Age			0.127 (0.267)	0.262 (0.274)
Female			-1.708*** (0.478)	-0.637 (0.470)
Constant	5.150*** (0.314)	3.976*** (0.310)	4.891 (5.508)	-1.698 (5.671)
Observations	210	167	210	167
R^2	0.012	0.009	0.125	0.080

Robust standard errors in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

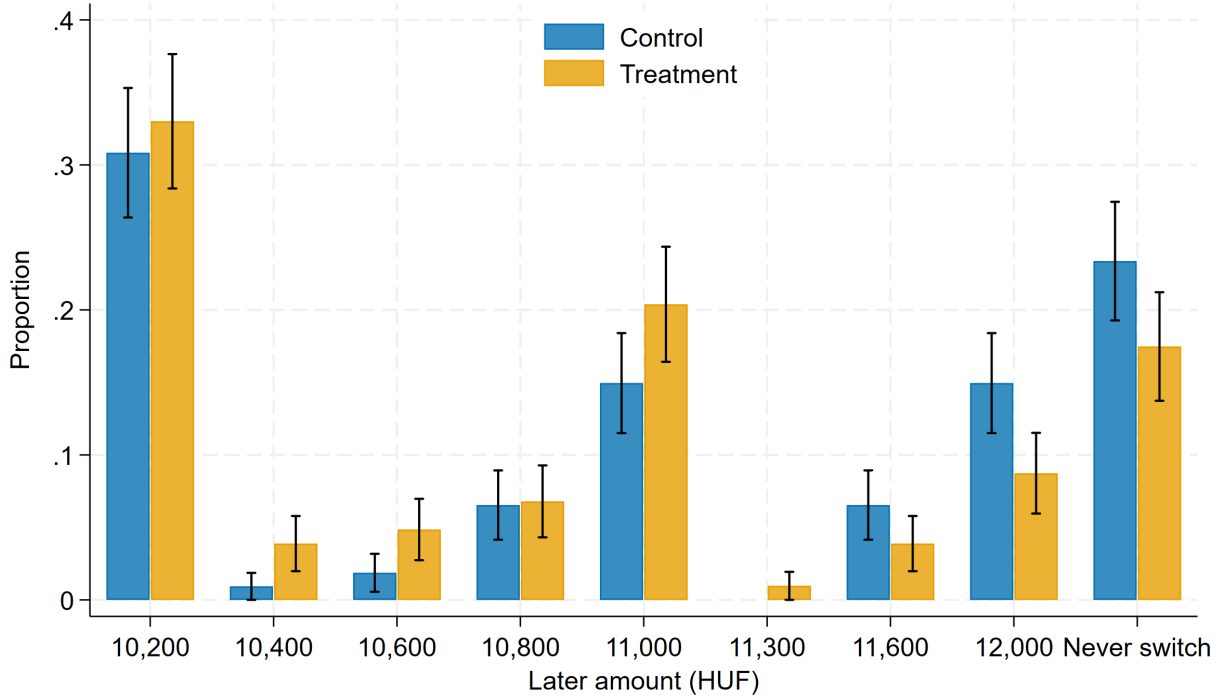


Figure 1: Distribution of switching points by treatment. Bars show within-treatment proportions; vertical caps indicate ± 1 standard error.

a binary outcome for “never switch” versus “switch”; neither specification yields statistical significance at conventional levels. The corresponding ordered-response regression outputs are available in the online supplementary materials.

4. Conclusion

We tested whether a single neutral framing sentence—designed to redirect attention from *when* money arrives to *what* it enables—can reduce present focus in an incentivized intertemporal-choice task. Choices moved in the predicted direction, with treated participants switching somewhat earlier to the later-larger option, but the estimated effects are small and statistically imprecise. At the stakes and horizon we study, this one-sentence prompt appears too weak to generate a reliable shift toward patience.

The contribution of the study is to provide evidence on the limits of a deliberately weak and easily deployable intervention. If framing affects these choices, the relevant threshold for a reliable effect likely lies above a neutral cue of this kind and closer to more explicit opportunity-cost or penalty-based interventions [Faralla et al., 2017]. Future work could test somewhat stronger prompts, different stakes and time horizons, and heterogeneity in responsiveness across individuals and contexts.

Several limitations should be noted: the sample consists of first-year students from a single university, the horizon is short, the payment rule is probabilistic, and the sample size limits precision. The results should therefore be interpreted as evidence on direction,

magnitude, and uncertainty rather than as a precise test capable of ruling out small effects.

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