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A One-Sentence Nudge Against Present Focus

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ABSTRACT
We test whether a single, neutral sentence reduces 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 a smaller immediate amount and larger amounts 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. Descriptively and in OLS regressions, treated participants switch to the later–larger option at lower premia (effect size ≈ 0.1–0.2 SD), as hypothesized, but effects are not statistically significant. We interpret this as evidence that the prompt was too weak at the stakes and two-week horizon studied.

JEL codes: C90; D01; D9
Keywords: Experiment; Framing; Nudge; Present bias; Present focus

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Egy mondatos ösztönzés a jelenre fókuszálás ellen

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ÖSSZEFOGLALÓ

Azt vizsgáljuk, hogy egyetlen, semleges mondat csökkenti-e a jelenorientált időbeli döntéseket. Egy előregisztrált, 210 fős osztálytermi kísérletben (Budapesti Corvinus Egyetem, elsőéves hallgatók) a résztvevők nyolc ösztönzött választást tettek kisebb azonnali és nagyobb, két hét múlva megkapható összegek között. A kezelés egy egysoros, nem-irányított ösztönzést tartalmazott – *„Gondolja alaposan végig, hogy a pénz milyen lehetőségeket biztosíthat”* – amelynek célja az volt, hogy a figyelmet a pénz érkezésének idejéről annak felhasználási lehetőségeire terelje. A hipotézisünkkel összhangban leíró statisztikák és OLS regressziók alapján a kezelt résztvevők kisebb kompenzáció mellett váltanak a későbbi, nagyobb összegre (hatásnagyság ≈ 0,1–0,2 szórás), de a hatások nem szignifikánsak. Ezt úgy értelmezzük, hogy az ösztönzés túl gyenge volt az alkalmazott kifizetések és a két hetes időhorizont mellett.

JEL kódok: C90; D01; D9

Kulcsszavak: Kísérlet; Keretezés; Lökés (Nudge); Jelentorzítás; Jelenorientáltság

A One-Sentence Nudge Against Present Focus

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Abstract

We test whether a single, neutral sentence reduces 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 a smaller immediate amount and larger amounts 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. Descriptively and in OLS regressions, treated participants switch to the later–larger option at lower premia (effect size ≈ 0.1–0.2 SD), as hypothesized, but effects are not statistically significant. We interpret this as evidence that the prompt was 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, the postponement of tasks despite long-term benefits. This bias has been associated with adverse outcomes in education (e.g., Kim and Seo, 2015), labor markets (e.g., Paserman,

[1]Hubert János Kiss acknowledges support from the Hungarian Academy of Sciences' Momentum Grant (LP2021-2). We gratefully acknowledge financial support from Corvinus University of Budapest.

[2]The OSF page (https://osf.io/2sfp8/) contains the preregistration, instruction, data, variable description, and Stata do-file for this study.

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 way to tackle this issue.

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." This wording does not prescribe a particular option but may reduce the salience of immediacy.

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 risk attitude, financial distress, perceived social status, math skills, and trust, along with age and gender, as controls. 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).

Framing is a well-established lever on intertemporal choice: reallocating attention across attributes (amount vs. date), altering reference points (delay vs. speed–up), or changing the construal of time systematically shifts choices. Illustrative manipulations include the explicit/hidden-zero opportunity-cost frame (Radu et al., 2011; Magen et al., 2014; Zhao et al., 2015); "investment" language that casts the later/larger option as the return on the smaller/sooner amount (Read et al., 2012); delay–speed–up reframing that flips the default (Loewenstein, 1988; Weber et al., 2007); date-versus-delay descriptions that alter the time metric (Read et al., 2005; DeHart and Odum, 2015); and numeric presentation tweaks (e.g., rounded vs. decimal amounts; summarized by Lempert and Phelps, 2016).

Two closely related studies inform our design. Breuer and Soypak (2015) implement a *delay vs. speed-up* framing: the same trade-off is described either as waiting to receive or pay (delay) or as bringing a future receipt or payment forward (speed-up), which implicitly changes the status quo. They find modest but persistent shifts, especially for negative outcomes, and show external relevance via links to household borrowing and saving across 54 countries. Faralla et al. (2017) test "nudge-style" micro-cues. In their main treatment the *immediate* option is labeled "today *with a penalty* of €X," where the penalty equals the foregone difference relative to waiting, thereby

making opportunity costs salient and pushing choices toward patience. Unlike Faralla et al. (2017)'s penalty-labeling nudge, which explicitly highlights opportunity costs, our intervention tests a leaner, non-directive approach: a neutral prompt ("Think carefully about all the possibilities that money would provide you") embedded in a standard multiple-price-list. This redirects attention from *when* money arrives to *what* it enables, without referencing penalties or recommending options.

While prior intertemporal framing studies emphasize *when* (e.g., delay/speed-up or opportunity costs), our prompt shifts focus to *what* (the payoff's prospective uses), reducing the immediacy bias underlying present focus, consistent with attention-to-attributes accounts (Lempert and Phelps, 2016). By testing a minimal, non-suggestive cue, we explore the "tipping point" of framing's influence on intertemporal choices, informing experimental design and practical strategies for promoting future-oriented behavior.

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 (control and treatment) were distributed, both containing QR codes that led participants to the online platform, printed in equal numbers. 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 the payment selection and to link responses. One randomly drawn decision from the eight choices determined actual payouts. After presenting the experiment, students had 12 minutes to complete the survey, most finished within 10 minutes.

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 bias, and is consistent with earlier studies on Hungarian students (Horn et al., 2022). Choices were shown one per page. The first switch from the immediate option to the later–larger option defined the individual switching point (lower values = earlier acceptance of the later–larger option), which is equivalent to an individual two-week discount factor given by $\frac{10{,}000}{\text{later option at the switching point}}$. Ten randomly selected participants were paid based on one randomly selected decision. Selected participants who chose the immediate payment received HUF 10,000 immediately after the class. For those who opted for the later–larger amount, we placed the amount in a sealed envelope and returned two weeks later to deliver it.

The questionnaire also elicited sociodemographic and behavioral measures:

- Mathematical ability: "On a scale of 1 to 5, with 1 standing for 'I can't really grasp it' and 5 meaning 'I'm excellent at it', how would you describe your overall capabilities in mathematics?" Responses: 1, 2, 3, 4, 5.

- Risk attitude: "Using a scale from 1 to 5, where 1 indicates 'Not willing at all' and 5 stands for 'Very willing', how willing are you to take risks?" Responses: 1, 2, 3, 4, 5.

- Perceived social status: "Please rank your family on a social ladder from 1 to 5, where 1 represents the lowest status and 5 signifies the highest status. Consider factors such as income, education, and job market status when assigning your rank." Responses: 1, 2, 3, 4, 5.

- Financial distress: "On a scale of 1 to 5, where 1 means 'I have no financial distress' and 5 means 'I am in significant financial distress', how would you rate your financial situation?" Responses: 1, 2, 3, 4, 5.

- Future orientation: "Would you consider yourself willing to give up something that is currently of benefit for you to gain more from it at a later period?" Responses (4-point): Definitely not; More likely not; More likely yes; Definitely yes.

- Trust: "In general, would you say that most people can be trusted?" Responses (4-point): Definitely not; More likely not; More likely yes; Definitely yes.

Age (open-ended) and gender ("Man," "Woman," "Other," "Prefer not to say") were also recorded.

From 228 initial responses, we removed incomplete observations and, as pre-registered, those with multiple switching points, yielding 210 valid observations (107 control; 103 treatment). Because allocation via instruction sheets could have induced imbalance, we tested for successful randomization. Descriptive statistics and randomization tests appear in Table 1.

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

Table 1: Summary statistics. Means with standard deviations in parentheses. Below each p-value, the corresponding test.

Randomization checks show no significant differences between control and treatment groups across observed covariates. We also observe a sizable difference in switching points in the expected direction (treated participants switch earlier, i.e., accept later–larger amounts for a smaller premium), but the difference is not statistically significant.[3] Figure 1 corroborates this pat-

[3]Restricting to those who switch yields the same qualitative pattern with a non-

tern: treated participants are more likely to switch at lower amounts, and the share of those who never switch is higher in the control group, although the difference in distributions is not significant (Fisher's exact test, $p = 0.393$).

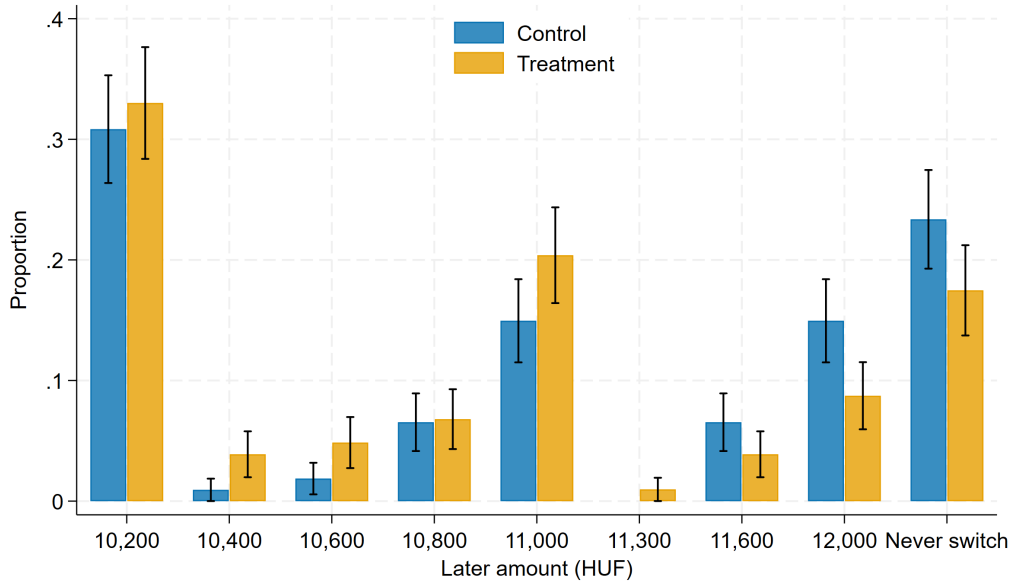

Figure 1: Distribution of switching points by treatment. Bars show within–treatment proportions; vertical caps indicate ±1 standard error.

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 (i.e., a lower switching point). Descriptive comparisons are consistent with this prediction: the treatment group exhibits earlier switching on average and a smaller fraction of "never switch" responses (Figure 1), although mean differences are not statistically significant (Table 1).

To gain a clearer insight, 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 for the subset of

significant difference.

participants who switch at least once, since "never switch" responses may reflect inattention or a decision rule like "always choose the immediate option regardless of the premium" rather than smooth trade-offs. Note that refusing to delay for two weeks even at a 20% premium (effective annual rate $> 11{,}000\%$) indicates very strong present focus.

Note that we include control variables, several of which have been shown to correlate with time preferences: math skills (Falk et al., 2018), risk attitudes (Horn et al., 2022), socioeconomic status (Falk et al., 2021), financial distress (Meier and Sprenger, 2010), and trust (Falk et al., 2018; Horn et al., 2022).

Across specifications, the treatment coefficient is negative (from -0.35 to -0.70 switching-point units), aligning with our hypothesis of earlier switching to the later–larger option, but this effect is not statistically significant at conventional levels (Table 2). Using the pooled standard deviation of the switching point (approximately 3.2 from Table 1), the point estimates correspond to roughly 0.1–0.2 standard deviations.[4] Control variables are occasionally significant (e.g., future focus negatively associated with the switching point; trust and the female indicator positive in some specifications), but these associations are not central to our question and are not robust across columns. The non-significance of the control variables may be due to the relatively homogeneous university-student population under study. Results are similar with ordered logit regression.

The point estimates suggest a small shift toward patience in the treated group, but the precision of our estimates does not allow us to reject the null of no effect. Given the brevity and neutrality of the prompt, the results imply that a single non-directive sentence may be insufficient, on its own, to reliably counteract present focus in monetary choices at the stakes and horizon studied.

4. Conclusion

We tested whether a single, neutral framing sentence—designed to redirect attention from *when* money arrives to *what* it enables—can counteract

[4]Post-hoc power analysis reveals that with $N = 210$ (107 treatment, 103 control) and a two-sided $\alpha = 0.05$, we had 80% power to detect a standardized effect of about 0.39 SD—roughly 1.24 switching-point units given the pooled SD ≈ 3.2—whereas our point estimates are 0.10–0.20 SD.

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

Table 2: OLS regressions of switching point. Lower values indicate earlier acceptance of the later-larger option; 9 denotes "never switch."

present focus in an incentivized intertemporal choice task. Choices moved in the expected direction (earlier switching to the later–larger option), but the average effect was not statistically significant.

This suggests that a minimalist, neutral sentence may be insufficient to reliably alter intertemporal choices at modest stakes (HUF 10,000) and short horizons (two weeks). By contrast, Faralla et al. (2017) show that an explicit opportunity-cost label reliably shifts choices toward patience. Taken together, the evidence suggests that the tipping point for effective framing lies between our neutral cue and a penalty/foregone-gain label. Future work should calibrate the minimal effective dose by varying phrasing, intensity, timing and exposure, stakes, and horizon, and by examining heterogeneity (e.g., baseline future orientation). Pinpointing this threshold could enable low-cost, non-coercive nudges—for example, subtle prompts in retirement tools or budgeting apps—to promote future-oriented behavior in education, health, and finance.

5. Declaration of Competing Interest

None.

6. Declaration of Generative AI and AI-assisted Technologies in the Writing Process

During the preparation of this work the authors used ChatGPT in order to clarify the wording of the research text and improve the coding in Stata. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

7. CRediT authorship contribution statement

Ilia Aliaev: Conceptualization; Methodology; Software; Formal analysis; Writing – original draft.
Hubert János Kiss: Conceptualization; Supervision; Formal analysis; Funding acquisition; Writing – review & editing.

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