

The framing of information nudge and students effort: A behavioral economics approach

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ABSTRACT

One of the important fields for achieving the goals of the higher education system is to use new methods to influence students' motivation. Therefore, the main goal of this study is to investigate the impact of the framing of information nudge on students' efforts using the behavioral economics approach, taking into account the theories of social psychology. To investigate this goal, a 2*2*2 factorial model including; two levels of framing effect (positive or negative), two levels of regulatory focus (promotion or prevention) and two levels of test difficulty (difficult or easy) were considered. The independent variables of this study are the negative frame, the promotion focus and the difficulty of the test and the dependent variable is the anticipated effort in a hypothetical exam. The random sampling of this research included 400 students of Ilam and Allameh Tabatabai University. The results of the estimation of the ordinary least squares model showed that the promotion focus frame increases students' effort compared to the prevention focus frame. The negative frame increases student effort relative to the positive frame, but without controlling for regulatory focus, it has no independent effect on student effort. The results of the estimation of interaction variables also showed that the variable of negative frame * promotion focus has a negative and significant coefficient. This result shows that the joint condition of negative frame and promotion focus increases students' effort less than negative frame and prevention focus. In other words, the negative frame increases students' effort both in the promotion focus and in the prevention focus, but the effect of the negative frame is greater in the prevention focus. It also confirms that students experience regulatory fit under the common conditions of prevention focus and negative frame, but regulatory fit is not confirmed under the common conditions of promotion focus and positive frame. In order to strengthen students' motivation and performance, policy makers and planners in higher education can use behavioral economics tools such as framing of information nudge appropriate to subjects such as exam preparation, education plan, choosing a field at higher levels of education, etc.

Keywords: Framing effect, Regulatory Focus, Information Nudge, Behavioral Economics.



Introduction

To improve students' motivation level, their behavior should be influenced. Since motivation is the most important factor to influence people's behavior. For this reason, using behavioral economics, it is possible to create the necessary motivation for students' behavior based on cognitive and emotional biases. According to the ideas of Kahneman and Tversky (1979), cognitive and emotional biases are behavioral errors that can affect people's beliefs and change people's behavior. According to the ideas of Thaler and Sunstein (2008), these biases can be used as a nudge to improve behavior. Therefore, cognitive and emotional biases can act as a nudge. One of these biases, which is used in various subjects, is the framing effect. The framing effect based on the prospect theory of Kahneman and Tversky's (1979) states that losses have a greater emotional impact than a gain of the same amount (Halamish et al, 2008). Hence, it is expected that negative frame (such as loss or failure) will increase the motivation of students more than positive frame (gain or success). But adding an important layer of social psychology to different frames may change people's acceptance of a positive or negative frame (Keller & Szakál, 2023). Based on previous studies (Cesario et al., 2004; Latimer et al., 2008), it is assumed that promotion focus with positive framing and prevention focus with negative framing will increase people's motivation. Therefore, the present research examines the impact of framing effect considering regulatory focus on students' effort.

Methodology

The experiment is designed as a $2 \times 2 \times 2$ factorial model. That is, eight experimental groups are considered for eight main frames. The framing of the main nudge in each group is in the form of a message of the test results statistics which students receive before the hypothetical test. Question dimensions in each experimental group included one type of frame (positive or negative), one type of regulatory focus (promotion or prevention), and one type of exam difficulty (difficult or easy). According to Keller and Szakál (2023), each group answered a main question and supplementary information questions (age, gender, education). The random sample of this research is 400 students of Ilam University and Allameh Tabatabai University. OLS model is considered. We cluster standard errors by groups (Keller & Szakál, 2023). The dependent variable of the research is student's anticipated effort to pass the hypothetical exam. The independent variables include the negative frame, regulatory focus and the exam difficulty. Control variables include age, gender and education of students.

Findings

The results of the estimation of the ordinary least squares model showed that the promotion focus frame increases students' effort more than the prevention focus frame. The negative frame variable compared to the positive frame increases students' effort, but without controlling for regulatory focus, it has no independent effect on students' effort. The results of the estimation of interaction variables also showed that the variable of negative frame and promotion focus has a negative and significant coefficient. This result shows that the joint condition of negative frame and promotion focus increases students' effort less than negative frame and prevention focus. In other words, the negative frame increases students' effort both in the promotion focus and in the prevention focus, but the effect of the negative frame is greater in the prevention focus.

Conclusion

The main purpose of the present study is to investigate the impact of the framing of information nudge on students' efforts using the behavioral economics approach, taking into account the theories of social psychology. The random sample of this study was 400 students of Ilam and Allameh Tabatabai University. The independent variables of this research include the negative frame, the promotion focus, and the exam difficulty, and the dependent variable is the anticipated effort in a hypothetical exam. To examine the effectiveness of the variables on students' efforts, the ordinary least squares model was used considering cluster errors. The estimation results of the models showed that the promotion focus frame (Whether without control variables or with control variables) has a positive and significant effect on students' effort compared to the prevention focus frame. Regarding the negative frame variable, the results showed that the negative frame increases the students' effort compared to the positive frame, but the negative frame has no effect on the students' effort without controlling regulatory focus.

Examining the interaction variables showed that the coefficient of the interactive variable of negative frame and promotion focus is negative and significant, which indicates that the joint conditions of negative frame and promotion focus are less than the joint conditions of negative frame and prevention focus increase students' efforts. That is, the negative frame still has a positive and significant effect on students' efforts in both promotion and prevention focus, but the effect of the negative frame is greater in the prevention focus.

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