

The Impact of Experiencing Money Versus Time Scarcity on Tradeoffs

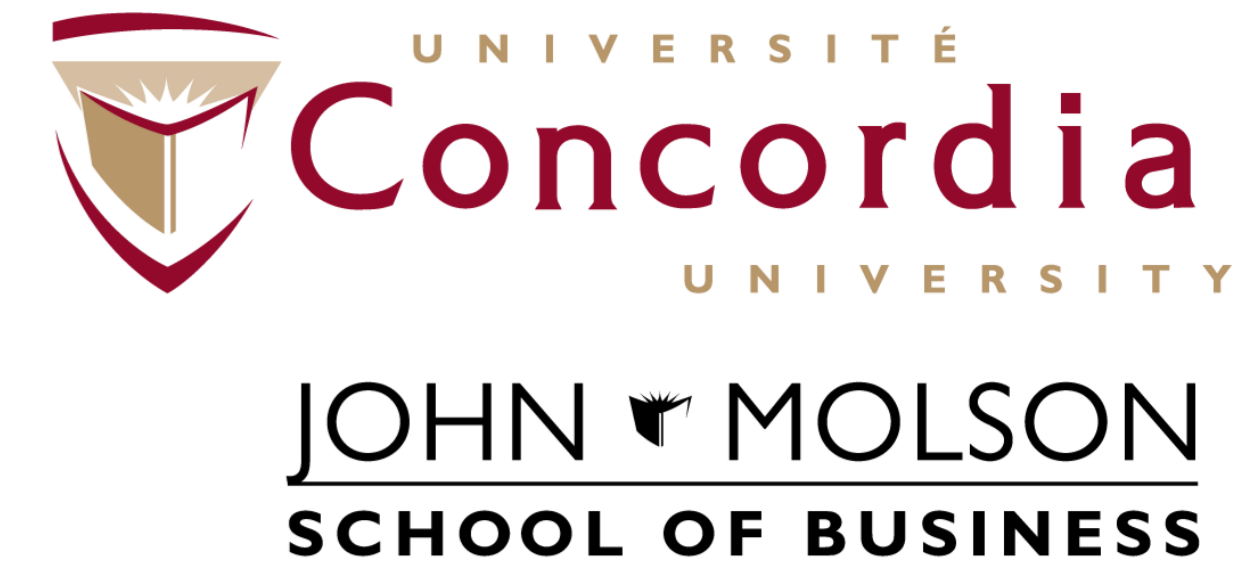


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Objective: Even if similarities between money and time scarcity can be observed in prior work, these phenomenon have mostly been studied separately. This research thus to investigates the potential interactive effects of experiencing money and time scarcity on tradeoffs between both resources.

Hypothesis 1: People are more prone to underestimate the value of time than that of money, no matter the type of scarcity experienced.

Hypothesis 2: People with a higher ability to manage their emotions (high emotional intelligence score), are less prone to undervalue their time over money.

Study 1

IV: Episodic recall task adapted from Roux, Goldsmith & Bonezzi (2015)

Scarcity: Recall three to four times you felt resources were scarcity or you didn't have enough of something.

Control: Recall three to things you did in the past week.

DV: Four scenarios adapted from Becker, DeGroot & Marschak (1964)

Type 1: Spend money to gain time (taxi & gift card)

Type 2: Spend time to gain money (moving & flight)

Imagine that, this Saturday at 12 pm, a local electronics stores is going to have a huge promotional event: The store will be giving away gift certificates of a value of \$65 to the first 500 customers, which can be used to purchase anything inside the store.

The event is expected to be very popular, so you would have to wait in line early in order to be able to receive one of the gift certificates.

Based on the amount of people who usually line up for these kinds of promotions, you believe that you would need to wait in line at least 4 hours in advance in order to be among the first 500 customers. Someone in the cue however offers you to save your spot for a certain amount of time for a fee.

For each option below, indicate whether you would prefer to pay the fee to save some time or wait in line:

Skip 15 min of waiting for \$6 wait 4+ hours

Skip 30 min of waiting for \$18 wait 4+ hours

Skip 1 hr of waiting for \$24 wait 4+ hours

Imagine that you are at the airport on a Friday, on the way to a long weekend trip to Las Vegas. You are due to arrive in Las Vegas at 4 pm. However, the attendant at the gate tells you that your flight has been overbooked.

The attendant kindly asks you whether you would be willing to wait for a next available flight in exchange for a monetary compensation based on how long you wait, or if you would prefer to get on the flight that is about to leave.

For each row, indicate whether you would prefer to wait in exchange for a monetary compensation or leave right away to arrive on time:

Wait 30 min for another flight, get \$50, arrive at 4:30 pm Leave now and arrive at 4pm

Wait 1 hr for another flight, get \$100, arrive at 5 pm Leave now and arrive at 4pm

Wait 1 hr 30 min for another flight, get \$150, arrive at 5:30 pm Leave now and arrive at 4pm

TEIQue: 30 items measuring global trait emotional intelligence (trait EI; CITE), or the subjective ability to perceive and manage one's emotions (Petrides & Furnham, 2001)

Results:

N= 733 participants

Three-way interaction between scarcity, scenario, and choice ($\chi^2 = 5.63$, $SE = 0.006$, $p < .05$)

Interaction between scenario and choice ($\chi^2 = 213.12$, $SE = 0.008$, $p < .01$)

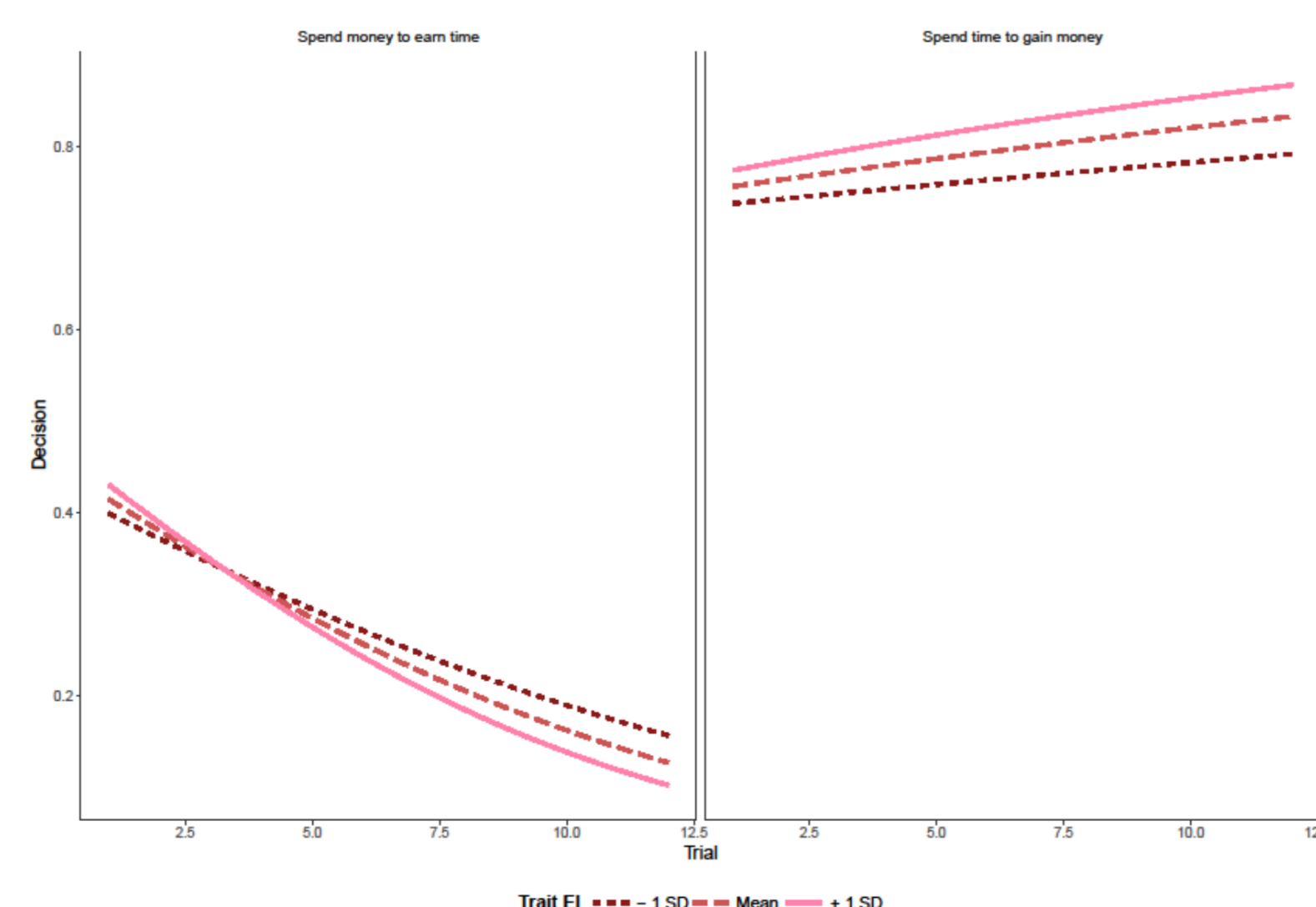
- Participants were decreasingly willing to invest money to save time ($\beta = -.14$, $p < .001$) as the amount of money required increased
- Participants were increasingly more prone to use time to gain money ($\beta = .04$, $p < .001$), as the amount of money they can earn increased

Significant interaction between scarcity and scenario found in all three conditions ($\chi^2_{Control} = 108.43$, $\chi^2_{Money} = 73.62$, $\chi^2_{Time} = 37.1$, all $ps < .001$)

- Participants were decreasing willing to spend money to gain time ($\beta_{Control} = -.17$, $\beta_{Money} = -.15$, $\beta_{Time} = -.11$, all $ps < .001$)
- Participants were increasingly willing to spend time to earn money ($\beta_{Control} = .05$, $\beta_{Money} = .06$, both $ps < .001$; $\beta_{Time} = .02$, $p > .1$)

Three-way interaction between choice, scenario, and TEIQue ($\chi^2 = 11.88$, $SE = .006$, $p < .001$)

- Participants with higher TEIQue scores were less prone to use money to save time, but more prone to use time to earn money



Study 2

IV: Financial/time constraint manipulation adapted from Haisley, Mostafa & Loewenstein (2008)

Financial constraint: Participants indicated how much money they get every week on a scale from \$0-\$2,000 (vs. \$100)

Time constraint: Participants indicated their amount of weekly leisure time on a scale from 0h-100h (vs. 10h)

DV: Two scenarios selected from Study 1 (one of each type)

TEIQue: Same as in Study 1

UPPS scale: 20 items measuring impulsive behavior (Whiteside, Lynam, Miller, & Reynolds, 2005)

Sensation Seeking subscale: 4 items measuring the tendency to enjoy and pursue activities that are exciting, and the openness to trying new experiences that may be dangerous

Results:

N=140 participants

Interaction between the resources manipulated (Time or Money) and the choice ($\chi^2 = 5.34$, $SE = .04$, $p < 0.01$)

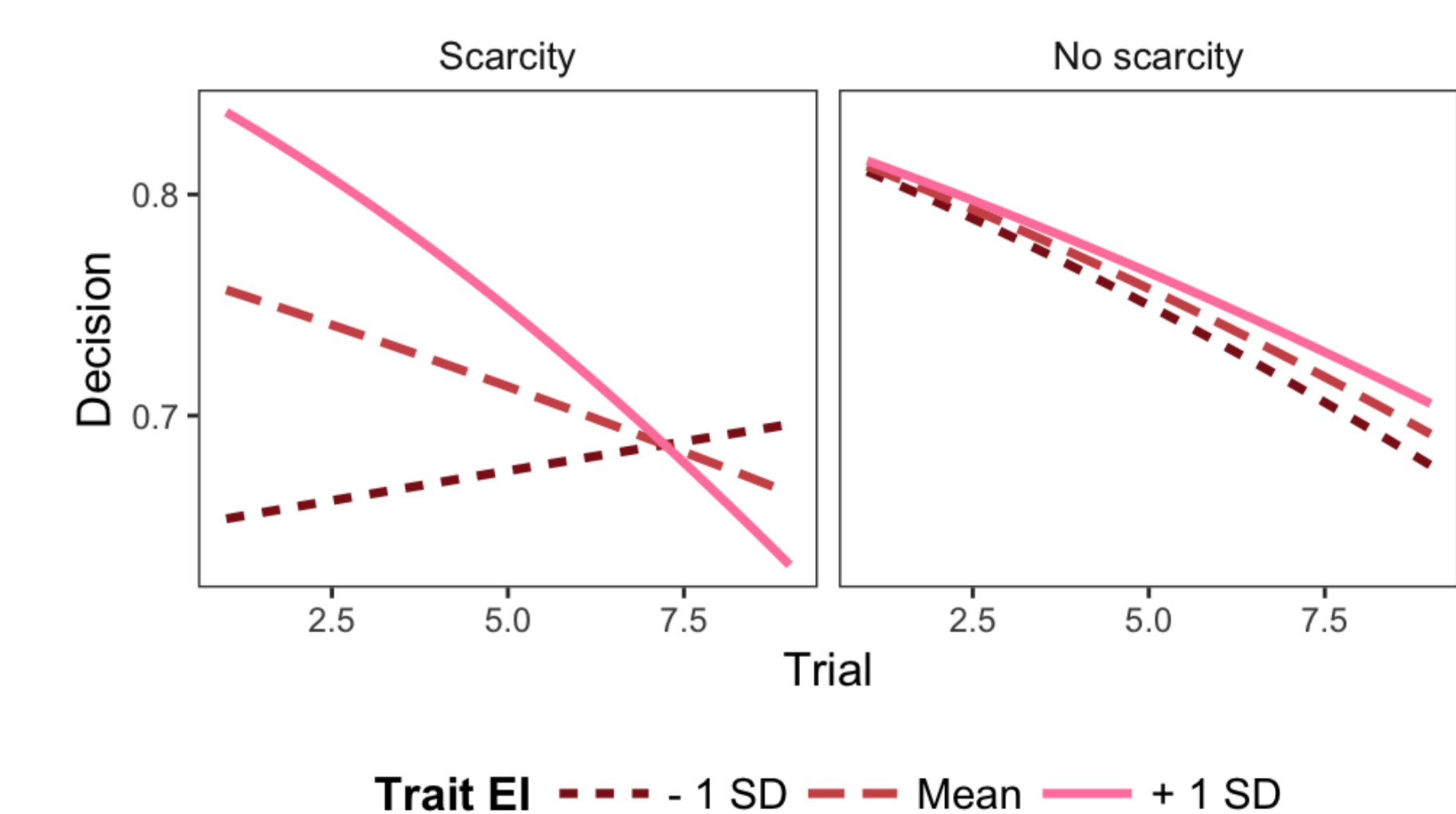
- Participants in the time conditions were more willing to spend time to earn money ($\beta = -0.11$, $p < .00$), replicating the results of Study 1

Significant interaction between the experimental conditions and the sensation seeking sub-scale ($\chi^2 = 4.89$, $p < 0.05$)

- Participants who scored lower on sensation seeking were more prone to use time in order to earn money, especially when not experiencing scarcity ($\beta = .74$, $p = .05$).

Three-way interaction between the experimental conditions, choice, and TEIQue ($\chi^2 = 5.37$, $SE = .05$, $p < 0.05$)

- When experiencing scarcity, participants with high emotional intelligence scores were more likely to use time to earn or save money, especially in the first trials
- Conversely, participants with lower emotional intelligence scores were progressively more prone to use time to make or save money



Main Takeaways

- People **undervalue time over money**, especially if they are experiencing scarcity.
- No matter the type of scarcity experienced**, people are more prone to fail to appreciate the value of time over that of money.
- Especially **problematic for people experiencing time (vs. money) scarcity**, as they are willing to sacrifice the time they feel they do not have for money, rather than preserving their time resource.
- Participants with **higher sensation seeking scores** were more likely to undervalue the importance of time.
- Participants with **higher emotional intelligence**, especially in the scarcity condition, were better able to value the importance of time.

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