Time Versus Money: Differential Use of Heuristics

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We experimentally demonstrate that decision making is more heuristic in situations that involve spending time rather than money. Relative to participants in the money condition, those in the time condition show a higher propensity to choose a compromise option, and rely on an arbitrary anchor. We also offer evidence for the underlying process.

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EXTENDED ABSTRACT

Economists usually treat time in a manner similar to their treatment of money—as just another scarce resource which people spend to achieve certain ends (Becker 1965). However, time and money are often treated differently by consumers. For instance, choices are risk-seeking for losses of money but relatively risk-averse for losses of waiting time (Leclerc, Schmitt, and Dube 1995). Relatedly, while studying time as a medium of exchange, Okada and Hoch (2004) find that when individuals pay in time rather than money, they display greater willingness to pay for riskier options. In the context of sunk costs, the consideration of past investments has been found to be relatively weaker for time (Soman 2001). Finally, extending prior work by Soman (1998), Zauberman and Lynch (2005) show that time costs are discounted more than money costs because of a difference in how slack (i.e., perceived surplus) changes from the present to the future; change in slack is greater for time than in money. To sum up, prior research reveals that when information such as magnitude of risk, prior investments, or time delay is processed by individuals in the context of time versus money, there are quantitative differences in how this information is utilized to arrive at judgments and decisions. We contribute to this stream of research by demonstrating that a qualitatively different form of decision making—making decisions based on quick and easy heuristics—gains prominence when one works with time rather than money. We show that this is largely driven by the fact that temporal (vs. monetary) information is harder to process.

The two heuristics we examine—compromise and anchoring—have been very well documented in the consumer research literature, and we focus on them to test our proposed theory. The compromise effect is a type of menu dependence (Huber, Payne, and Puto 1982; Simonson 1989) in which preferences are irrationally influenced by the menu of options in the choice set. This effect runs counter to the following notion of similarity: Given two options B and C, the inclusion of an option A, which is more similar to B than to C, ought to reduce the preference for B (relative to C) because some of those who earlier chose B can now choose A. Simonson (1989) demonstrates that including A can increase the preference for B. Because B is now in the middle of the [A, B, C] menu, it represents an easy-to-justify compromise. The other heuristic we examine, anchoring (Tversky and Kahneman 1974), is the tendency to rely heavily, or anchor, on one piece of information in order to arrive at a decision. For instance, the willingness to pay for a product can be influenced by an arbitrary anchor such as the last two digits of one’s Social Security number (Simonson and Drolet 2004). In a series of experiments, we examine whether such heuristics are used more in time than in money.

Experiment 1 shows that when a compromise option is made available, people rely substantially more on the heuristic of choosing the middle option, the compromise, when people expect to spend time rather than money. Experiment 2 shows a similar effect for the anchoring heuristic. When an anchor provides an easy way to make a decision, those in the time condition are more likely to rely on this anchor than those in the money condition. Experiment 3 replicates the results of the anchoring heuristic and provides direct evidence for the process that heuristics are used more in time because, compared to monetary expenditures, temporal expenditures are harder to account for. Consistent with this proposition, when participants in both time and money conditions are primed to account for their expenditures, they no longer differ in their use of heuristics. The associated response times offer additional process evidence.

Our findings add to literature on the use of heuristics in decision making. The reliance on heuristics has been found to vary with factors such as level of involvement (Chaiken 1980), constraints on processing capacity (Ratneswar and Chaiken 1991), and type of emotion (Tiedens and Linton 2001). We believe that the factor we explore—currency—is significant because a considerable portion of people’s spending decisions relate to time and, therefore, they might be driven more by heuristics.

Implications also arise for practice. Consumers sometimes have the choice to expend either money or time. When trying to sell a house, one could either pay a real-estate agent or spend one’s own time looking for the highest bidder. If people spend time instead of money, and use different decision processes, it has implications for both consumers (i.e., home buyers) and businesses (i.e., real-estate firms). To sum up, people often make spending decisions. Our results suggest that the nature of the currency is important in determining how those decisions are made.

References


