

Animus Imperat Corpori

How Time Preferences Shape Your Diet

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Abstract

Intentional weight-loss is the result of efforts to improve fitness or health or to change appearance by slimming. In moderation, it is known to reduce health risks of overweight and obese individuals. Losing weight is however a difficult process as people may suffer from lack of self-control and time inconsistency (i.e. acting against their own better judgement because of their inability to differ gratification).

Behavioral economists argue that quasi-hyperbolic preferences (Laibson 1997 [6]) can explain these pattern: future costs of obesity may be smaller than the current benefits of consuming food or avoiding the gym (Smith 2005) [10]. Although measurements of time preferences have proliferated in recent years (Andersen 2008a[2] Andersen 2008b [3]), there is no clear evidence of external validity of this measure relating economic (saving, retirement) and non-economic phenomena (addiction and self-regulation problems). [5].

The objective of this project is twofold: First, we aim to analyse the relationship between measurements of time preferences with ability to lose weight on a given period. We also aim to analyse the demand for self-funded commitment. More specifically, our goal is to understand why people fail at choosing the right commitment contract for themselves.

For that purpose, we first conduct a laboratory experiment in which we elicit monetary discounting. We follow the procedures of Andreoni & Sprenger [4] by using

convex time budget (CTB). We use two psychometric measures to assess impulsiveness (Barratt Impulsiveness Scale 11 [9]) and consideration of future consequences [11] (CFC 14). Those scales allow us to study to which extend these three different measures of time preferences are related to each other. Following Ameriks & al 2007 [1], we measure perceived-self control and perceived temptation (i.e. how individuals think how they will be tempted and how they will actually behave in a simple hypothetical choice scenario).

Following the laboratory experiment, we propose to subjects to participate in an on-line self-funded commitment to lose weight¹. In this diet reward program, people bet money in a group to achieve a 4% weight loss objective.

By merging data from the laboratory and data on weight-loss from the field we want to create a novel data set to estimate the relative importance of time preferences and the interplay between present-bias and sophistication in determining weight-loss outcomes. We use duration models to model failure of a weight-loss objective and to account for the dynamic nature of sequencing weight-loss process (Lancaster 1992 [7]). Such model allows us to infer on a relationship between present-bias and the probability of non-occurrence of weight-loss. This is an ongoing project and we expect to get the data set in May 2015.

References

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¹By joining a game on Dietbet, players have to bet a fixed amount of money. Once the game has begun, players have respectively 28 days or 6 months to lose 4% or 10% of their initial body weight. The winners of the game are those who achieve the goal of the game and they split the pool of money.

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