

Written Exam at the Department of Economics winter 2019-20

Science of Behavior Change

Re-Exam

February 6, 2020

(2-hour closed book exam)

Suggested answers.

Answer 1

- a) We have seen and discussed several strategies for reducing failures of self-control: reminders, goal setting, planning, social norms, if-then plans, planned interruptions/breaks, active choices, defaults, paternalism, temptation bundling and commitment devices.

For instance, a commitment device is a choice that an individual makes in the present which restricts his own set of choices in the future, often as a means of controlling future impulsive behavior and limiting choices to those that reflect long-term goals.

Note: the student has to define three different strategies.

- b) Examples of commitment devices discussed in class are: prepayment to gym, software to block internet temptations, study in a public space (library), buying small and expensive portions of food, noisy alarm clocks (clocky).
- c) Each strategy can be classified as “self-deployed”, if agents are sophisticated and thus able to take deliberate actions to improve their decisions (e.g. goal setting) or “other-deployed”, if agents are passive and other parties take actions on their behalf (e.g. default).
Moreover, they can be classified according to when they enter in action: before impulses, thus modifying the situation (e.g. commitment devices) or after the impulses, thus helping agents to resist the temptation (e.g. social norms).

Answer 2

- a) The authors partnered with Society for Family Health (SFH) to evaluate their female condom distribution program in Lusaka (Zambia). SFH's strategy uses social marketing to promote and distribute health products via community-based agents with connections to the local community. Specifically, they asked hairdressers and barbers in Lusaka to promote female condoms through their shops.

They tested the effect of both financial and non-financial rewards on the selection and performance of agents engaged in promoting female condoms by randomly assigning 1,222 hair stylists to one of four groups:

1) Small financial reward treatment: Individuals received ZMK50 (US\$0.01) for each condom pack sold.

2) Large financial reward treatment: Individuals received ZMK450 (US\$0.09) for each condom pack sold.

3) Non-monetary rewards treatment (stars): Individuals received a star for each condom pack sold. Each stylist was provided with a thermometer, akin to those used in charitable fundraisers, which they were instructed to post in a visible location in the salon. Each sale was rewarded with a stamp on the thermometer. In addition, stylists who sold more than 216 packs in a period of one year were invited to a special ceremony at SFH headquarters.

4) Comparison Group - This group received no incentives, financial or otherwise.

It is important to notice that information was collected on all agents who could have applied for the job, to test whether different incentive contracts attract different agents' type. Agents' performance was measured monthly over a one-year horizon, to test whether changes in behavior may be due to a novelty effect. Moreover, a modified altruism (dictator) game yielded direct and quantitative measure of the agents' motivation for the cause, and tested whether financial incentives reduced performance by crowding out intrinsic motivation.

- b) This Figure shows that stylists in the star treatment sell twice as many packs over the year. Regression analysis confirms that this result is robust to the inclusion of stylist-, salon- and area characteristics, and is not driven by outliers in the star treatment group. Interestingly, neither financial-incentive treatment seems to affect sales: agents in the high and low financial reward treatments were not more likely to sell at least one pack than agents in the control group.

The authors then discuss the two mechanisms of impact. First, non-financial incentives seemed to leverage intrinsic motivation for the cause - they were more than twice as effective for stylists who are motivated by the cause, as measured both by their donation in the altruism game and by personal characteristics correlated with motivation. Second, non-financial incentives appear to have facilitated social comparison among stylists - the impact of the incentives increased with the number of neighboring salons that received the same treatment.

- c) In class we have discussed extensively about incentives. In particular, we have seen several examples of incentives that produced unwanted effects (e.g. Israeli Day care study, the

Donation experiment, incentives and IQ test, blood donations, etc.). Contrary to other papers seen in class, the authors found no evidence that financial incentives crowded out intrinsic motivation. On the contrary, high financial rewards were more effective for agents who scored higher on a measure of motivation.

Answer to Question 3:

This question has not a correct answer a priori. This question gives the student the possibility to show that he/she can use his/her competencies for solving practical problem.

Students should:

- a) define the context in which the intervention is going to happen (when, where and who is the target agent).
- b) briefly think through the behavior change and articulate the specific behavior that he/she wants to change as a result of the intervention (*a specific and measurable behavior*).
- c) map the decision making process: different stages that people go through; various frictions and possible bottlenecks.
- d) make a linkage between that map that he/she has just drawn, the process that he/she has just identified, and some of the concepts that we discussed in this course.
- e) describe the intervention in detail
- f) describe the design of an experiment that can test the intervention and present how to organize the data analysis.