

Response time and revealed information structure*

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January 16, 2020

Abstract

Consider a decision-maker who has an opportunity to wait for information before making a choice. He can obtain more information by waiting more, but this is costly. As a result, he endogenously determines the length of time to choose an alternative, which is called *response time*. The present paper models such a decision-maker as if he solves an optimal stopping problem. The model incorporates dynamic information structure formalized as evolving information partition, which we call subjective filtration. We axiomatically characterize the model using the behavioral data consisting of choices and response times that depend on choice situations. From the data, we partially identify subjective filtration as well as other parameters, by which we explain the data. This result implies that using response time somewhat helps us understand the human cognitive process.

KEYWORDS: Response time, Subjective learning, Information acquisition

JEL CLASSIFICATION: D01, D81, D83

*This paper was previously presented with the title "Response time and subjective filtration".

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