



## A theory of haste

Isabelle Brocas\*, Juan D. Carrillo<sup>1</sup>

*Department of Economics, University of Southern California,  
3620 S. Vermont Ave., Los Angeles, CA 90089, USA*

Received 20 December 2001; received in revised form 20 February 2003; accepted 18 September 2003  
Available online 30 July 2004

---

### Abstract

We consider a hyperbolic discounting agent. At each period, he can undertake an irreversible consumption decision that yields an uncertain current benefit and a delayed cost. If he decides to defer consumption for the future, some information exogenously flows in. We show that the agent may rationally decide to consume with negative expected net present value (NPV), only to prevent himself from consuming in the future which could be profitable from a future perspective but highly detrimental from the current viewpoint. Comparative statics reveal that the value of information is U-shaped. © 2004 Elsevier B.V. All rights reserved.

*JEL classification:* A12; D83; D92; Q20

*Keywords:* Hyperbolic discounting; Haste; Investment under uncertainty

---

### 1. Introduction

Irreversible choices are quite common in economics. As the consequences of such decisions have usually some uncertainty component, looking for additional information before undertaking an action can be a sensible strategy. This simple observation is at the heart of the well-known “investment under uncertainty” literature, pioneered by Henry (1974) and further developed by Dixit and Pindyck (1994) among others. The literature shows that the

---

\* Corresponding author. Tel.: +1 213 740 8842; fax: +1 213 740 8543.

*E-mail addresses:* brocas@usc.edu (I. Brocas), juandc@usc.edu (J.D. Carrillo).

<sup>1</sup> Tel.: +1 213 740 3526; fax: +1 213 740 8543.

ability to delay an irreversible investment and obtain some information in the meantime affects the decision to invest. Basically, if an individual embarks on a project in the current period, he gives up the possibility of acquiring new information about its profitability, losing his *information value of waiting*. As a consequence, a project will be undertaken if and only if its expected benefit exceeds its cost by an amount at least equal to the value of keeping the option of deciding at a future date. As demonstrated in these papers, the information value of waiting is always positive and increases with the number of periods in which it can be exerted.

Starting from this observation, the goal of this paper is to explore whether there exist situations where the information value of waiting can be negative. More precisely, our objective is: (i) to present a rationale for *haste*, defined as the decision of an individual to embark on an irreversible activity anticipating a net expected loss; and (ii) to provide a systematic analysis of the type of stochastic environments in which this behavior is likely to occur.

Our theory relies on two building blocks. The first one, irreversible investment under uncertainty and exogenous flow of information, has already been introduced. Importantly, we assume that the irreversible action yields an uncertain current benefit and a delayed cost. This contrasts with the standard literature, where the timing of costs and benefits is irrelevant and only net expected payoffs matter.<sup>2</sup> The importance of this specific order will become clear when we present our results.

The second building block is a hyperbolic discounting of the flow of returns. A non-standard ingredient in utility theory, it states that the decision-maker has a taste for immediate gratification or, in other words, that he discounts short-term events relatively more heavily than long-term events. This type of non-exponential discounting is often accepted in the psychology literature as an accurate way of capturing the intertemporal rate of substitution of individuals. Given the substantial amount of experimental evidence (see, e.g. the survey by Frederick et al. (2002)), it is also becoming increasingly accepted in economics.<sup>3</sup> From a theoretical perspective, Strotz (1956) is the first study that accounts for the tendency of individuals to satiate instant gratification. Phelps and Pollak (1968) analyze the intertemporal coherence of decisions taken by governments in a model where ‘implicit’ social preferences are dynamically inconsistent. More recently, Laibson (1996) and Barro (1999) have analyzed standard models of consumption and growth under hyperbolic discounting. In both works, decisions of households are, in the absence of commitment devices, observationally equivalent to those obtained under exponential discounting. Hence, time inconsistency induces inefficiencies, but discrimination between hyperbolic and exponential discounting is possible only if agents possess some commitment technology.

The paper combines the two ingredients previously mentioned to provide a model of irreversible consumption under uncertainty and hyperbolic discounting. It shows that the consumption decision of a hyperbolic discounting agent will or will not be observation-

---

<sup>2</sup> From now on, we will not refer to an ‘investment’ but rather to a ‘consumption’ decision because the former term is often associated with corporate investment choices where costs come earlier than benefits while, in our setting, it is crucial that benefits come earlier than costs.

<sup>3</sup> However, it is still generating a fair amount of controversy, as witnessed by the criticisms of Rubinstein (2003) and Read (2001) among others.

Download English Version:

<https://daneshyari.com/en/article/10437939>

Download Persian Version:

<https://daneshyari.com/article/10437939>

[Daneshyari.com](https://daneshyari.com)