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Behavioral foundations for the Keynesian consumption function ☆

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ABSTRACT

This paper has two main goals. The first is to investigate the role that behavioral principles play in the micro-foundation of Keynes's consumption theory, the second to discuss the possibility of grounding a Keynesian-type aggregate consumption function on the basis of (some of) the principles underlying contemporary behavioral models.

1. Introduction

In his Nobel Lecture, emphasizing the increasing role that behavioral principles play within contemporary macroeconomics, Akerlof argues that "in the spirit of Keynes' *General Theory*" behavioral macroeconomists are substituting the "primitive" New Classical micro-foundations of macroeconomics with more realistic behavioral assumptions "grounded in psychological and sociological observation" (Akerlof, 2002, p. 413). Starting from this observation our paper aims to investigate (i) the role that behavioral principles play in the micro-foundation of Keynes's consumption theory; and (ii) the possibility of grounding a Keynesian-type aggregate consumption function on (some of) the principles underlying contemporary behavioral models.

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To pursue the first goal we adopt a history-of-ideas perspective, performing textual analysis of Keynes's works. We draw the conclusion that Keynes's representation of economic behavior appears firmly grounded on consideration of the psychological aspects of human beings. And that, in the particular case of Keynes's consumption theory, not only are references to maximizing behavior totally absent, but the theory appears to have more points in common with behavioral economics than with the traditional neoclassical approach, in particular for the crucial role attributed to "rules of thumb". Our main conclusion is that behavioral, rather than maximizing, principles can be legitimately considered as possible micro-foundations for Keynes's consumption function.

To pursue the second goal we adopt a theoretical perspective. We investigate contemporary behavioral literature in search of the psychological motivations for individuals' consumption decisions referred to by behavioral economists, and conclude that, in addition to the standard *maximizing behavior*, the other major psychological motivations are *preference for procrastination*, *cognitive scarcity*, *myopia and prodigality, mental budgeting*, and *debt aversion*. These motivations are fairly close to some of the subjective factors referred to by Keynes when studying the determinants of individuals' consumption behavior, and the attempt to build a Keynesian-type consumption function based on behavioral principles therefore appears feasible. Since each of these principles can best be formalized applying a different behavioral economics approach (in particular, *hyperbolic discounting*, *heuristics* and *imitation*, *short horizon and "Good Samaritan" models*, *mental accounting*, and *double entry mental accounting*), we suggest that a robust Keynesian/behavioral consumption function should be based not only on a multiplicity of behavioral principles, but also on a multiplicity of behavioral models. The consumption function we propose answers to these requirements.

The paper is organized as follows. Section 2 discusses Keynes's approach to individuals' behavior in general and investigates the presence of behavioral principles in Keynes's consumption theory. Section 3 discusses whether an empirically robust aggregate consumption function can be obtained within the traditional (maximizing) approach. Section 4 explores the possibility of building an aggregate consumption function of Keynesian flavor on the basis of behavioral assumptions, and hence outside the traditional (maximizing) approach. Section 5 sums up the main results and draws the conclusions.

2. Maximizing or behavioral principles in Keynes's approach?

2.1. The impact of 'fundamental uncertainty' on individuals' decision processes

One of the main criticisms Keynes leveled at neoclassical theory is its lack of realism and its theoretical inability to account for the actual functioning of contemporary economic systems (see, e.g. Keynes, 1973a, pp. 3 and 378). This criticism is crucially based on the argument that the neoclassical theory (built on the fundamental pillar of the maximizing principle) applies to an institutional context which Keynes called a "real-exchange economy", i.e. "an economy which uses money but uses it merely as a neutral link between transactions in real things and real assets and does not allow it to enter into motives and decisions" (Keynes, 1973b, p. 408). In this context, which historically existed before modern capitalism, the financial structure was less developed and the link between the financial and real sectors less strong. As a consequence, money had the mere role of medium of exchange and there was no 'fundamental uncertainty' in market transactions. At the beginning of the 20th century the institutional structure substantially changed, mainly through the full development of financial markets, and the increasing role of large-scale speculation, bringing about an intrinsic instability in the economic system (see Fantacci, Marcuzzo, & Sanfilippo, 2010; Mini, 1994). Society became a "monetary economy of production" or an "entrepreneurial economy" – as Keynes defined it – in which any prediction whatsoever about the future proves extremely difficult or even impossible (Keynes, 1979, pp. 52–54; 66–79; 87–101; 1973b, pp. 397 and ff.). The evolution of the capitalistic system was also highly significant with respect to consumption. In the case of economies in the early stages of development, representation in economic theory of the consumer's choice as a maximization procedure fitted very well with reality because the members of those societies sought satisfaction of their primary needs, preferences were not interdependent and the basic wants were readily identified, being quite straightforward. By contrast, in the more developed societies – where primary needs are satisfied – many other factors (mainly of a psychological nature) influence and shape individuals' consumption decisions. In these societies individuals' preferences became interdependent, wants less "objective" and so less predictable, and a standard maximizing procedure appears not only difficult to apply but fundamentally unable to represent the actual decision-making process of economic agents. In Keynes's words: "The orthodox theory assumes that we have a knowledge of the future of a kind quite different from that which we actually possess. This false rationalization follows the lines of the Benthamite calculus. The hypothesis of a calculable future leads to a wrong interpretation of the principles of behavior which the need for action compels us to adopt, and to an underestimation of the concealed factors of utter doubt, precariousness, hope and fear (Keynes, 1937, p. 222)".

The *Treatise on Probability* (Keynes, 1921, *The Collected Writings of John Maynard Keynes*, CWK thereafter, VIII) contains Keynes's strongest criticism of the neoclassical theory of choice, which sees every individual driven in his/her economic actions by the principle of maximization. This principle has been taken in two slightly different ways, according to the context assumed as benchmark. If economic agents operate in a context of perfect knowledge and certainty, they should simply, given a set of preferences and a known set of constraints, compare the utilities deriving from different conducts and their future (known) consequences and choose the behavior which gives rise to the greatest level of personal utility. If, more realistically, a context of uncertainty is assumed, the maximization procedure has still its full validity as a guiding rule for behavior,