Macro foundations of micro-economics

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Summary. This paper attempts to circumvent the nonsense of the representative agent that occurs in macroeconomics. It recognises that macro data are relevant to agents' decisions, and so excess demands should contain macro variables as arguments. The macro variables I consider are the price index, unemployment and GNP. This paper should be regarded as a tentative beginning to make macroeconomic theory literate.

Keywords and Phrases: Representative agents, Price index, Labour market search.

JEL Classification Numbers: E13, E24, E31.

1 Introduction

If one asks “What does microeconomics contribute to our understanding and study of an economy?” the answer is that it furnishes us with a theory of the actions, and inter-actions, of agents. Moreover, it seeks to account for any regularities in the aggregated behaviour of agents. At present the simple aggregation into a representative agent who behaves just like any other agent leaves one bereft of understanding why microeconomics should not suffice. And indeed it seems to have done so, (for instance, real trade cycle theory). Moreover the representative agent allows meaning to be given to perfect foresight or rational expectations. Also one can legitimately apply rigorous theory to this fictional character and, I suppose, hope for the best.

All these difficulties of aggregation are of course well known, but it is surprising that so little attention has been paid to them by the proponents of classical macroeconomics.

I am delighted to contribute to this Festschrift for Mordecai now that he has reached the appropriate age.
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economics. The aggregation seems to be of the essence of producing a macro-
economics of the kind we have become used to, and yet there is no justification
for endowing the abstract aggregate with the behaviour satisfying the rigorously
modelled individual. It occurs to one that this may be due to a quite unclear notion
of what macro-economic theory is to be about. On the one hand we could think of it
as an attempt to simplify sufficiently for civil servants and politicians to understand
the fundamentals of the economic world they observe. On the other there may be
the much grander project of explaining why certain macro-variables appear to be
subject to a certain regularity. The first project is so loose that one really should not
object to anything as long as one doesn't practise it oneself. It requires intuition,
wisdom, experience and judgment, and not the skills of technical economics.

My purpose is limited: it is to show that in general macro variables need to enter
the relations explaining the actions of agents. Moreover there is very little theory
to tell us exactly how they enter. So that it will be difficult to deliver a 'new' theory
with any of the certainty of classical macro-economics.

2 Macro variables as signals

The idea that I want to put forward is this: an agent cannot observe every single price
nor form an expectation of its future value. This it would have to in a canonical
sequence economy version of GE theory. Not only is it implausible that any agent
has enough information to learn the history of all prices but also to form a view of
whether any one sequence is stationary. [Kurz (1994) has noted the difficulties in
learning the true character of any non-stationary process from empirical evidence.]

In the spirit in which macro-economists proceed, price expectations are always
expectations concerning a price index. But if this is to be recognised as useful one
needs to be given a good deal of argument. For instance why should a perfectly
competitive motor car manufacturer base his supply decision on the value he expects
a price index, which includes prices of all sorts of goods not related to cars, to have?
It may be so, but it surely requires a good deal of justification, especially if one is
searching for "micro-foundations".

In any case I here reject such short cuts and take the "foundation" question
seriously, indeed so seriously that I want the answer to relate to GE. On the other
hand I shall not be searching for conditions of 'perfect' aggregation since Gorman
(1953) and others have taught us that they are far too demanding for a practising
macro-economist.

Surprisingly there is a great deal of theory already where macro-variables enter
into the functions describing the decisions of agents. I shall briefly discuss two
examples.

(a) A labour search model

Consider the simplest labour search model. Workers know the distribution of job
openings and whether potential employers have a vacancy. They also know their
preferences for different jobs, which give them utility. The problem is solved by the following
model: