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## The functioning of hard cores in microeconomic theories of consumer behavior

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In the introduction to this thesis we presented two theories from the field of consumer behavior, representing two bodies of knowledge. The first one we took was the microeconomic textbook case, which we labeled 'the Hicks-Allen theory'. A second body of knowledge we represented by the consumer choice process, which can be characterized by sequential phases such as problem recognition, search and choice. We wanted to identify differences among these theories and relations between them. Also, we wanted to identify areas of application of the theories and differences between them. We formulated questions such as: Do these two conceptions of the consumer diverge or not? And if so, does this mean differences in logic, applicability, descriptive or prescriptive power etc., or would it mean incomparability? If we want to compare bodies of knowledge we need a methodology to guide such a comparison.

In the first two chapters, a methodology, based on Lakatos' methodology of scientific research programs was developed. Chapter 1 contained a brief introduction to Lakatos's methodology and to the criticism it received. In chapter 2 an elaboration of this methodology was presented, using Putnam's schemata, which meets part of the criticism. Our methodology recognized four possible functions of hard cores, a prescriptive function and three descriptive functions in the derivation of predictions, in the drawing of inferences and in the trial and error method for solving the explanatory problem. To compare bodies of knowledge, in our conception hard cores, we can try to find out which hard core to use for which purpose.

In chapter 3 we introduced the Hicks-Allen theory as a first hard core, and we investigated whether it has the potential for functioning as a hard core. It appeared that the Hicks-Allen theory must either incorporate all variables influencing the decision process, or it must identify which variables it does not incorporate and consider these constant, or it must assume a separable utility function. In this last case it is not necessary to identify variables which are not incorporated, provided that they are separated from the other decision variables. If one of these three requirements is met the Hicks-Allen theory can function as a hard core. We took the most general version of the Hicks-Allen theory as our starting point, since that version provides the highest degree of coherence between the concepts it introduces (see chapter 2).

In chapters 4 and 5 we investigated how the Hicks-Allen theory can perform the functions we identified in chapter 2. Although the Hicks-Allen

capacities for descriptive applications can be doubted. A number of reasons for this were given. We also saw that the only manner for at least maintaining a limited form of the Hicks-Allen theory is given by the assumption of separable preferences. In addition, our viewpoint of methodological individualism was made explicit.

Still speaking about the descriptive applications of hard cores, we introduced in chapter 6 an alternative hard core. Recognizing that part of the criticism of the Hicks-Allen theory refers to the limited information gathering and processing capacities of an individual, we presented a theory in which an individual first simplifies and then solves his choice problem. That is, a decision process in phases is built. In each phase the individual uses decision rules. We identified 'other decision rules' used for simplifying the set of alternatives, and we identified rules used in 'explicit economizing' for ordering the limited set of alternatives. It appeared that, for the sake of consistency, the limited set of alternatives must be separated from the set of alternatives which is ruled out in the first phases. Again we the separability condition is encountered.

In the chapters 7 and 8 we discussed the descriptive use of the alternative hard core. In chapter 7 the derivation of statements or predictions and in chapter 8 the drawing of inferences. We saw in chapter 7 that the Hicks-Allen theory in its general version *can*, but need not, be derived from the alternative hard core in two ways. Firstly, the Hicks-Allen theory can be the endpoint of a repeated process in which the consumer consecutively solves gradually extending choice problems. Secondly, the Hicks-Allen theory can be the possible aggregate result of the use of the alternative hard core at the individual level. In both cases it appeared that the alternative hard core can be seen as a substructure or a prerequisite on which the Hicks-Allen theory can be built. Using the alternative hard core we can formulate the conditions under which the Hicks-Allen theory will materialize or not. In chapter 8 we saw how poorly the alternative hard core functions in the drawing of inferences, since we lack the tools to do it properly. All we have is based on the one-phase Hicks-Allen theory, whereas the alternative hard core is a multi-phase theory. We saw that the alternative core has more degrees of freedom than the Hicks-Allen theory, which makes it more suited for descriptive applications.

Notwithstanding its descriptive flavour we discussed the prescriptive capacities of the alternative core in chapter 9. We saw there that it may be useful in the descriptive-prescriptive connection at a low level of precision. Finally, it was concluded in chapter 10 that the differences between the two hard cores, as well as the differences between their areas of application, are mainly due to the differences in their structure. The Hicks-Allen theory, which is a multi-phase theory, can be derived from the alternative hard core, being a more-phase theory, but not the other way around. This difference accounts for the differences in degrees of freedom, in descriptive or prescriptive functioning, in the capacities for drawing inferences etc. A main conclusion drawn from the conclusions in section 10.5 was that different fields of research based on the different hard cores which we considered may complement each other, as different fields of research may pose different questions at different levels of aggregation and require different hard cores for different applications.