

CHRISTIAN KORTH

FAIRNESS IN BARGAINING AND MARKETS

Lecture Notes in Economics and Mathematical Systems 627.

Springer-Verlag, Heidelberg 2009.

xv + 175 pages.

ISBN 978-3-642-02252-4.

There exists a field of economic research intensively exploiting mathematical tools and mathematical models. It can be, or at least frequently is, classified among the advanced methods of Operations Research or to their close neighbourhood, in some cases these methods form a special sort of economic theoretical research. In any case, the intensive application of mathematical tools, as well as the construction of multilevel structural models, locates these economic methods in the scope of interest of cybernetics, with special stress on so called “new cybernetics” developed in the last few decades. The referred book can be evaluated also from this point of view.

It is motivated by the endeavour to harmonize two basic approaches to the general economic problems. Namely, the formal mathematical models, and their counterpart, the simulations used in so called “experimental” or also “laboratory” economy. The frequently confirmed observation shows that their results often differ in a significant way. This task demands a careful study and analysis of relatively distant fields like mathematical game theory, ordering relations, market and decision-making models, on one hand, and psychology, sociology and social anthropology on the other. The fairness appears to be one of the most crucial concepts linking both sides of the problem. The referred volume contributes to its study respecting both points of view and their interrelations.

Relatively thin booklet is divided into seven main chapters including many subchapters and sections. The first chapter, *Bargaining Theory* introduces and discusses the basic approaches to the bargaining models, namely the axiomatic and strategic ones. It is followed by chapter 2, with the title *Game Theory and Fairness Preferences*, presenting the concept of fairness from the point of view of the strategic behaviour. It includes, namely, modern approach to the concept of preferences, and also the experimental observations regarding the economic research of social utility. The presentation is focused on two treatments of the fairness in bargaining, which were briefly introduced in the first chapter, already – namely, on the “equity-based” and “intention-based” ones.

The third chapter named *Reciprocity – an Indirect Evolutionary Analysis*, is focused on the behavioural and evolutionary models of games, and on their adequacy to the analysis of bargaining procedures. The main sections regard the stability of human and social preferences generated by evolution, and the role of compromises and ultimate in the preferences forming.

It is assumed that the context of bargaining effects on the behaviour of agents. This hypothesis is tested in chapter 4, *Fairness Norms in Ultimatum Exchanges*, and the referred experimental studies point at the significance of the fairness norms for the evaluation of such context. The preference of reciprocity belongs to the norms of the prior importance.

The fifth chapter, *Fairness, Price Stickiness, and History Dependence in Decentralized Trade*, brings the concepts of trade and market into the considered model of bargaining. Let us note that the concept of trade differs from the classical market models concentrated on stability of growth and prices. In this case, the attention is oriented on the bargaining problems regarding wages, prices, interpersonal problems, etc. The trade is analysed in the last two chapters, too. Their headings are *Generalization and Extension of the Decentralized Trade Model* and *Price Rigidity in an Experimental Market*. The former one of them deals with various extensions of the classical trade model. These extensions consist in

the weakening of some of the traditional assumptions, like the existence of some common reference prices or of the discount factor, stronger preference for fairness, etc. The latter of these two chapters, *Price Rigidity in an Experimental Market*, is devoted to several methods of checking robustness of the bargaining strategies. For example, the conformity between results of theoretical model and its “laboratory” simulation. The discussion of the topic regards the mutual inference between these two approaches to the bargaining procedures.

The volume is completed by the *Index*, and by lists of symbols, figures and tables. The presentation of the theoretical parts respects the mathematical models with their typical attributes including the symbols, formulation of results, and precise structure of conclusions. On the other hand, also the outcomes of the experimental simulations are precisely described, and their interpretation is lucid. Nevertheless, the mathematics used in the book is not difficult and it is accessible for every reader with solid education in college mathematics. The organization of the main chapters respects the demands of good textbook. They are parted into short segment due to which the orientation in particular topics is easy, and the theoretical explanations, as well as lucid illustrative examples, are completed by more than fifty figures.

The referred book can be recommended for everybody wishing to study the advanced methods of construction of realistic bargaining models displaying both – the mathematical exactness, and the subjectivity of natural human reasoning.

Milan Mareš