

Reviews – Polemics

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**Agnieszka Bezat-Jarzębowska i Włodzimierz Rembisz:
MIKROEKONOMIA RELACJI
CZYNNIKÓW PRODUKCJI W ROLNICTWIE.
UJĘCIE ANALITYCZNE MECHANIZMÓW
(MICROECONOMICS OF RELATIONS
OF PRODUCTION FACTORS IN AGRICULTURE.
ANALYTICAL APPROACH TO MECHANISMS)**

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Agnieszka Bezat-Jarzębowska and Włodzimierz Rembisz, employees of the Institute of Agricultural and Food Economics – National Research Institute in Warsaw, became interested in the issues dedicated to relations and emerging changes in efficiency, which they decided to present in a descriptive way, supported by the theoretical and cognitive approach.

The peer-reviewed book is monograph constructed in a form of a theoretical-empirical study of 274 pages of text. The book has been divided into ten chapters, whose titles indicate the issues which are subsequently considered separately but are, nonetheless, interconnected. Their proposed order attests to deep thinking and reasonable position. The content of the work also includes the introduction, summary and references. Each chapter could work as a separate whole, although it concerns and is closely linked to the

general subject-matter of the study, in which the Authors decided to include generally the relations constituting the essence of production efficiency, its changes in agricultural producers and in the sector. They also take good care of making this approach sufficiently general and thus properly protected against being outdated too quickly due to market developments. It should also explain the essence and foundations of observable values, such as viability, profitability or competitiveness of agricultural production.

Previous works by both Authors also focused on the issues related to microeconomics, economics and agricultural policy. They included studies on investment analysis, productivity, efficiency and technical changes in agriculture; the impact of agricultural policy on decisions of agricultural producers as regards revenues and investment; the choice of policy and its impact on decisions of agricultural producers in analytical terms with elements of empirical verification; selected analytical forms of the production function in assessing the factor-factor and factor-product relations for FADN farms and demand conditions of the agri-food production growth model. In the Polish literature, we can find studies which more broadly deal with and describe the agricultural production growth models, by authors such as: Czyżewski and Kułyk (the impact of macroeconomic developments on agricultural development), Woś and Zegar (socially sustainable agriculture – looking for a new model for Poland), Tomczak and Ziętara (model of the Polish agriculture against current challenges). On the global scale, these issues were addressed by authors such as: O’Headay, Dilon, Fuglie and Wang (productivity increase in agriculture – international perspectives), Kawagoe and Hayami (comparative analysis of the interbranch efficiency of agricultural production), Fulginiti and Perrin (agricultural productivity in developing countries) or Battese (empirical applications in agricultural economics). However, these works, especially foreign ones, were carried out several decades ago and many of them are outdated.

The proposed title of the book indicates that its content will consider theoretical mental constructs which, as it turns out, have been expressed in a form of analytical formulas and, as the Authors stress by themselves, they allow, in a general and abstract sense, to explain the mechanisms relevant to agricultural economics and policy. The proposed design of the book creates a kind of approach consisting in deduction and speculation, but it is very clearly supported by a wide analysis of reality with an extensive algebraic approach. This approach, in a form of deriving most analytical formulas, has allowed the Authors to create a comprehensive mental model which leads to general considerations relating to the most significant relations and conditions of measurable nature. The Authors indicate that their analysis includes abstraction at a high level of generality, and the reasoning is carried out based on predetermined assumptions evidenced by themselves or adopted from the literature. The main objective of the paper was achieved within the framework of microeconomics, in the so-called modern stream, and although it was shown at a high level of generality, it mostly concerns the economics of agriculture and specific relations and connections characteristic of agricultural producers and agriculture. The Authors also clearly pointed out that the “...method of theoretical analysis in the book is also a certain alternative or complement to traditional verbal reasoning in the economics of agriculture, as in the literature of microeconomics such approaches are dominant today and the same applies to modern economics of agriculture, especially as seen in America” (p. 11). The objective of a peer-reviewed

paper adopted by the Authors, its legitimacy and reasonableness, stemming from the state of research and known research methods, as well as the adopted chronological and substantive scope of analysis should be considered highly useful for the development of the economic sciences with an indication of agro-economic sciences.

The peer-reviewed monograph consists of ten independently structured chapters, each of them having a separate title and consisting of several subchapters. In each of them, the Authors took care of introducing the reader properly into the content considered, by providing the chapter with an appropriate holographic introduction and trying to logically explain the content addressed in it and simplify the understanding of the subject-matter.

The authors begin with the issue of the microeconomic basis for the conditions of demand for agri-food products, where they describe the consumer choice mechanism, treating it as a basis for the development of demand conditions for the agricultural sector. They put forward a hypothesis that consumer choices explain the demand conditions and changes in the demand in a specific direction and at a specific rate. They believe that explaining the basis of demand conditions can be considered as a starting point in understanding the mechanisms of changes in the relationships of factors and their productivity both in producers and in the whole agricultural sector (p. 37). The sequence of logical relations being a basis for implementing the agricultural producer's objective function, with an indication of general mechanisms for their formation, are further considerations of the Authors, in which endogenous and exogenous conditions are explained (pp. 52, 58). The emerging adaptation changes in agricultural producers and in the whole sector include the interrelation of production factors concerning their remunerations. This hypothesis is supported by a broad explanation by the Authors of the production function treated as an analytical tool in the economics of agriculture, as well as the universal mental construct necessary in describing economic and production processes in agriculture at the producer and sector level. It has a multilateral application, particularly in the issues of analysis of production efficiency, production factors productivity and production techniques (p. 75-90). This section indicates a need to consider the relations between the involved production factors, i.e. manufacturing factors and the product obtained, on the one hand, and, on the other, the relation between the manufacturing factors involved in achieving the assumed production level and generally considered as a manufacturing technique, modernity of management or the "costs" of the economic growth achieved. The Authors point to the important role of agricultural producers themselves, who can endogenously shape the production efficiency, and this efficiency can, in turn, compensate for the effect of decreased product prices as it is a sustainable source of agricultural income. Agricultural producers, while taking care of the increase in revenues, are forced to use opportunities in the sphere of changes in the productivity of production factors, which significantly supports the production efficiency in total (pp. 108-112).

The manufacturing factors in agriculture, their remuneration and productivity are another objective of the analysis carried out in the field of clarifying the principles and relationships determining the remuneration of the manufacturing factors in agricultural producers. In this section, the Authors seek to confirm the hypothesis that the remuneration of the manufacturing factors for agricultural producers is also, as in the case of other

factors, determined by their marginal productivity (pp. 113-138). Theoretical-cognitive considerations show the subject of the analysis more broadly than required by its conventional microeconomic scope and are supported in the next part by a description of the basic relations resulting from the involvement of labour, capital and land factors in production. Usually, changes in the involvement and relationships of production factors and their productivity are mutually dependent, as they determine the production efficiency. The analysis covers labour, capital and land factor, while maintaining the same level of generality and the same determinations (p. 156). The role of the land factor is particularly strongly emphasised as in agricultural economics it is of decisive importance in achieving the productivity level. The issue of productivity of the land factor is important, as its identification allows to identify observed phenomena and explain their economic nature, such as, for example, concentration or structural changes in the sector (p. 176).

The interrelations of the production factors identifying the manufacturing techniques in agriculture are the subject-matter of the next section, which emphasises that the nature of the manufacturing techniques and their changes are determined by the interrelations between the factors involved in the production, i.e. manufacturing factors. Demonstrating the interrelations and principles in this respect is the main objective of this analysis. The Authors note that the analysis of changes in the manufacturing techniques allows to better understand changes in the efficiency and profitability of production and the growth and structural processes in the agricultural sector, while the theory of production factors formulates the most general principles and quantitative relationships, taking into account their complementarity and substitutability (p. 198).

The conditions of changes in agricultural producers' incomes, their selection and sources are the subject-matter of the next part of the peer-reviewed book. It is assumed that they result from the remuneration of production factors and, above all, from the remuneration of the labour factor. What was separated were the conditions and factors of internal nature and those dependent on the agricultural producer (they refer to the used manufacturing techniques and the production efficiency) and also independent conditions and factors as external (concerning market regulation and related price ratios). The Authors adopted a distinction between two sources of income in agriculture. The first one, as related to efficiency, including productivity, which the Authors defined as the economic rent and the other as transfers and support implemented under the agricultural policy. The adopted reference point are revenues as a formal income base (p. 220). In summary, the Authors stated that "... As a result, (...) of interacting conditions, the viability of production and agricultural income tend to change" (p. 205). In the closing part, the Authors decided to present savings and investments of agricultural producers, i.e. how the relations and changes of production factors can affect growth processes. The Authors are of the opinion that it is possible to select a logical sequence of foundations of growth processes in agricultural producers which are determined by investments. They believe that of supporting importance in this process is the market, the income effects of the political rent, which in general forms the growth mechanism and mutual relationships of production factors (pp. 241-262).

It is fully possible to agree with the Authors of the book that on its pages they tried to show the readers a mechanism for changing the relations of the production factors in agriculture, which they outlined using the deductive and logical approach.

In the analytical context, most important were two demand conditions, namely the market in conditions of competitive equilibrium and the impact of agricultural policy instruments. The rationalism of the producers' conduct stemmed from the desire to maximise the objective function, which is strengthened by the logic of the formation of relationships between the given relation and productivity of the production factors, as well as their remunerations in relation to their prices. In view of the strictly economic considerations, we note that they can be located in such problems as allocation, relationship of factors and productivity as well as in the distribution and remuneration issues.

In general, it can be summarised that the structure of the paper is a logically and substantively combined study describing the issue of agricultural production factors and their mechanisms, which the Authors managed to present in analytical terms. The individual parts of the paper are interconnected in terms of the content discussed, which made it possible to present in detail the whole thematic area of the paper, even though each of the presented chapters could outline a separate problem, particularly from the point of view of the research objective. We should highly rate the selection of research methods used in the work, which, through the prism of the results obtained, justify their selection for the subject and scope of the study, and the selected ones can be placed in the canon of "methodological novelty". The Authors, when writing their book, also carried out a thorough review of literature, the scope and use of which gave the grounds for considerations and conclusions stemming from the studies. Many of the Authors' findings presented above can be considered to be novel and cutting-edge, and a large part of the paper can be regarded as epistemic, which allowed to open up new fields of exploration, even though some of them have been widely distributed in the widely understood economics. Nevertheless, the findings and conclusions of the Authors are strongly justified, compliant with the generally accepted standards, in a full and unambiguous manner worthy of being included in the scientific narrative.

Summing up, I would like to conclude that the reviewed book is an original study of many thematic aspects and an intriguing model of presenting scientific achievements in the area of the agronomic sciences, which makes me fully authorised to recommend it to you.

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