ESTIMATION OF THE ROLE OF DIVERSIFICATION ON FARM EFFECTIVENESS BY MEANS OF MODELLING. AN APPLICATION TO BULGARIAN DISTRICT OF STARA ZAGORA

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ABSTRACT:

This paper estimates the effect of diversification on farm effectiveness through modelling using data from the National Statistical Institute of Bulgaria. The estimation of the role of diversification in agriculture is similar to this in corporate firms. The results show that the number of diversification activities has a significant effect on the final economic results. The introduction of the factor of lifetime of the firms with its effect on size of revenues from diversification activities is a new feature in this study.

The above mentioned provides an opportunity for adaptation and effective operation of the business in the variable market environment, as well as a useful referent for public responsibilities in order to design adequate supporting programmes.

On the other hand, this paper refines Berger and Ofek’s methodology by adapting it to the conditions of the agricultural production in Bulgaria. Main differences are related to the selection of the considered factors and the final economic result. The latter is extra revenue from diversification activities and the selected representative sample of firms is grouped by the criteria of number of diversification activities.

Key Words:  
Farm diversification; effectiveness; logarithmic modelling.

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1. INTRODUCTION:

Diversification is most often associated with the supplementation of new goods and/or services to currently existing range of products in an organization, aiming either an extension of attended markets or entering into new ones.

Nevertheless, even when a lot of attention has been paid to firm diversification in recent times –and specifically during last decade– (see, e.g. Martin and Sayrak, 2003), this phenomenon seems to be entering a declining effect. However, and unlike the situation in the corporate industry, diversification in the agricultural sector has not declined in the last few years.

There is a clear reason under this situation: farm diversification plays a very important role as frequently used risk management strategy (Harwood et al., 1999), what becomes essential for survival of agricultural exploitations at any time. What is more, the defensive role of diversification strategies comes to the fore in commercial environments as those determined by current situation at international markets (Georgiev, 1993), when most small and medium producers are powerless forced to see how their traditional markets and distribution channels are either directly lost or sharply reduced. The use of diversification as a stabilizing mechanism in firm operations is intended to minimize seasonal fluctuations and cycles in the sales which are typical of the agricultural sector.

According to this approach, present research has focused on those factors influencing farm diversification (Pope and Prescott, 1980; Mishra, El-Osta and Steele, 1999; Kurosaki, 2003), as well as about the effect of diversification on farm income (Purdy, Langemeier and Featherstone, 1997; Mishra, El-Osta and Johnson, 1999; Sumner and Wolf, 2002).

When designing the correlation model, a search to find a relation between business result (considered as net revenues from sales) and years of existence of the exploitation was conducted. On the other hand, when determining logarithmic models various production factors were used to evaluate their effect on the finally obtained results.

Finally, the use of regression analysis was aimed in order to determine mutual relations between the variables which in the context of the model applied can be interpreted as causing-resultant.

2. METHODOLOGY AND MODEL SPECIFICATION:

This section is devoted to outline the excess value model that was used to determine whether diversification enhances or decreases farm value. To be precise, this model is a modified version of the previous one by Berger and Ofek (1995), considering and taking account of the very specific characteristics of farms. In Berger and Ofek’s version of the model firms are matched at the segment level, whereas here farms are matched at the enterprise level.

Methodologically, this research also differs from Berger and Ofek’s contribution in the way that firms/businesses (farms) are valued. While firms –in a general sense, as in Berger and Ofek’s– are usually valued as the sum of the book value of debt and market value of equity, farms are here valued just as the market value of assets. Therefore, caution should be applied when comparing results for farm businesses and corporate firms in other researches.