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Activity Based Costing and Georgescu-Roegen's Model of Production: a theoretical introduction and an empirical case

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Abstract: Farm management rests on the production theory inside which the funds-flows (f-f) approach founded by Georgescu Roegen could take place. The approach contemplates the division of factor of production in fund and flow factors: production is the result of the combination of these, on the basis on a defined technology prescription during a defined time; or, in other words, it is the result of a Production Process (P.P.). The combination of factors has structured on single technological acts during the time of the process, the "operation". The sequence of operations in a production process gives the technology and the time used is scheduled by the "labour calendar ".

Every production process implies revenues and costs so as a net income. In accounting revenues and costs has to be allocated on P.P. by apposite drivers.

We describe an integrated accounting system that has been used from several years in a big farm in the region of Umbria, which has a sub-system of management accounting structured on the P.P. analysis. Our proposal is to demonstrate how these systems can contribute to the assess the multifunctional performances of the production system, so as to demonstrate how the choice of drivers is important in order to get the right allocation of costs and obtain the exact economic result of P.P..

That accounting system is suitable to make an efficient cost/income control for every farm product and process as well to figure out quantitative and economic data to support process analysis, including consumption of natural resources and pollution potential.

Those data are not available in outputs got from "standard" accounting, because it focuses on the impact of management actions on farm assets and the resulting economic situation just in terms of value by item, excluding any operational analysis or input/output

quantitative analysis.

The strength point of this ABC system has been on examining the production process as a sequence of operations pointing out the use (in quantity and value) of materials (flow factors) and resources (fund factors), including the natural one's.

The weakness point of the application done was on the choice of some drivers used for allocating costs. Consequently, some different drivers have proposed for the allocation of operational costs, in order to get a better distribution.

The application of drivers more efficient has effectively given a more realistic result for the set of production processes included on the analysis, figuring out the relevance of their choice.

Keywords: Farm economics, farm management, funds flows model, natural resource, ABC, production process

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