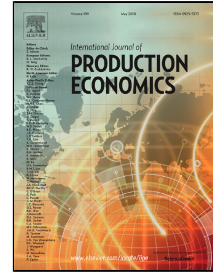


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Endogeneity, heterogeneity, and determinants of inefficiency in Norwegian crop-producing farms



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Endogeneity, heterogeneity, and determinants of inefficiency in Norwegian crop-producing farms

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Abstract

This paper addresses the endogeneity of inputs and output (which is mostly ignored in the stochastic frontier (SF) literature) in the SF panel data model under the behavioral assumption that firms maximize returns to the outlay. We consider a four component SF panel data model in which the four components are: firms' latent heterogeneity, persistent inefficiency, transient inefficiency and random shocks. Second, we include determinants in transient inefficiency. Finally, to avoid the impact of distributional assumptions in estimating the technology parameters, we apply a multi-step estimation strategy to an unbalanced panel dataset from Norwegian crop-producing farms observed from 1993 to 2014. Distributional assumptions are made in second and third steps to predict both persistent and transient inefficiency, and their marginal effects.

Keywords: Efficiency, endogeneity, returns to the outlay, panel data

JEL Classification No.: D21, D22, Q12

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