

# **Comments on “Sunk Costs, Managerial Incentives and Firm Productivity — Empirical Evidence for German Corporations”**

By Valdemar Smith \*

Based on a panel of 361 German manufacturing companies covering the period 1991–1996 the authors examine the influence of ownership, product market competition (supplier concentration) and financial pressure (discipline of debt) on firm productivity. In addition special attention is paid to asset specificity, i.e., the direct influence of potential sunk costs on productivity and indirectly through the influence of other explanatory factors on productivity. Furthermore, it is assumed that ownership identity as well as ownership concentration affect productivity in an independent way.

Assuming an augmented Cobb-Douglas production function it is found that supplier concentration and discipline of debt both have positive and significant effects on firm productivity. However, the overall influence of ownership concentration is weak and insignificant, and the evidence on the influence of ownership type is ambiguous. Furthermore, a split sample methodology is used to test for the influence of high/low intangible/tangible sunk costs. In general, except for firms with changing owners and intangible sunk costs, the level of sunk costs in most cases seems to play only a minor role for the influence of the (other included variable).

The paper includes a good theoretical discussion on the expected influence on productivity of the included factors in the model. In addition earlier empirical work on the issue is carefully discussed. In the empirical part of the paper solid econometrics using fixed firm and time specific effects has been applied and as an alternative estimations on change rates from the base year 1991 to 1996 have been carried through. In future it would be of interest to repeat the analysis and give empirical evidence for firms in other countries — especially on the effects from ownership type and ownership concentration.

## **Specific comments**

1. High/low tangible sunk costs firms are defined by industry leasing expenditures. However, are the firms really free to determine their leasing costs? If it is assumed that an entrant has lower productivity compared to incumbent firms because of scale effects and furthermore less financial resources, this firm could choose to lease capital equipment in order to reduce commercial risks. But would the most productive firms choose leasing at all? Normally, leasing of capital equipment is more expensive than buying the capital equipment. And if the firms really were more productive, there would be less commercial risk in investing in capital goods compared to unproductive firms. So, productivity could determine the strategy concerning leasing.
2. The next comment is on the concept of intangible sunk costs, i.e. industry R&D intensity. Firms with a high R&D-intensity need not always have high intangible sunk costs compared to other firms. In some industries knowledge from research and especially experimental development is usable for producing other goods or services, e.g. the ICT sector. In line with this: is process oriented R&D less sunk than product oriented R&D in all industries?
3. Concerning the split sample methodology. It is unclear if there is correlation between tangible and intangible sunk costs. How many firms belong to industries with high sunk costs in terms of both definitions? If there is significant correlation, horizontal comparisons in tables 2–4 should be made with caution.
4. It is unclear why ownership identity is not included as a separate factor in the regression analysis, especially in table 4. In addition, is the owner identity correlated with ownership concentration, e.g. family owned firms have high concentration, mixed ownership is characterised by low concentration?

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\* Department of Economic Research, Aarhus School of Business and Centre of Industrial Economics, University of Copenhagen.