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Product Diversification and Profitability in German Manufacturing Firms

By Nils Braakmann, Newcastle upon Tyne, and Joachim Wagner, Lueneburg

JEL D21; L60

Product diversification; profitability; Germany.

Summary

We use unique rich data for German manufacturing enterprises to investigate the product diversification – firm performance relationship. We find that an increase in the degree of product diversification has a negative impact on profitability when observed and unobserved firm characteristics are controlled for. The effects are statistically significant and large from an economic point of view. This helps to understand the fact that nearly 40 percent of all enterprises with at least 20 employees are single-product firms according to a detailed classification of products, and that multi-product enterprises with a large number of goods are a rare species.
Is the Boone-Indicator Applicable? – Evidence from a Combined Data Set of German Manufacturing Enterprises

By Alexander Schiersch and Jens Schmidt-Ehmcke, Berlin

JEL L12; L41; D43

Summary

Boone (2008a) proposes a new competition measure based on Relative Profit Differences (RPD) that, from its theoretical properties, proves to be more robust than the Lerner-Index. However, the proof of the empirical practicability and robustness of the Boone-Indicator is missing. To fill this gap, we use a rich, newly built, data set for German manufacturing enterprises and test its empirical validity using cartel cases. Since all of the identified cartels significantly restricted market competition, we expect fiercer competition after the uncovering. We assess the validity of the indicators by comparing the indicated competition levels before and after the cartels were uncovered and stopped. The Boone-Indicator is calculated as RPDs and as a beta coefficient of a log-log regression. The Lerner-Index is used as a benchmark. Our analysis finds that the Boone-Indicator, based on a simple regression approach, fails to correctly indicate competition. Since the Boone-Indicator, based on pure RPDs, proves to be inapplicable, we propose an augmented indicator based on size-adjusted RPDs, which performs better. However, our findings suggest that, given the information typically available in census data, the Lerner-Index is still the only measure that correctly indicates competitive changes.
Which Parameters Determine the Development of Farm Numbers in Germany?

Dependency of the Results on the Segmentation of the Data

By Norbert Röder, Braunschweig, and Stefan Kilian, Freising

JEL Q10; R14

Farm exit rates; agriculture; data mining; regionalisation; MAUP; zone effect.

Summary

In Germany, agricultural land use is very heterogeneous with respect to management orientation and productivity even at the local level. In addition, there is a wide variation in the reasons for farm exits. A review of the literature shows that a limited number of explanatory variables are generally accepted as being driving forces for farm exit rates. For the majority of indicators, ambiguous results are reported. In this paper, we analyse the determining factors of farm exit rates in Germany by examining municipalities from 1999 to 2007. We evaluate the robustness of the relationship between a set of explanatory variables and farm exit rates at different spatial scales. Our results indicate that the direction of impact of some variables (farm size, population density and the share of ruminants kept at low intensity as a fraction of the total ruminant stock) on farm exit rates is unambiguous throughout Germany. For the majority of the analysed explanatory variables, the strength of their impact on farm exit rates depends on their observation level or regional context.
Energy Use Patterns in German Industry: Evidence from Plant-level Data

By Sebastian Petrick and Katrin Rehdanz, Kiel, and Ulrich J. Wagner, Madrid

JEL Q40; Q41; Q43
Energy use; energy efficiency; manufacturing; microdata; CO₂ emissions.

Summary

This paper analyzes energy use and CO₂ emissions of more than 78,000 German industrial plants between 1995 and 2006. It is the first study to exploit exceptionally rich energy data that were recently matched to official micro datasets. We document that both energy use and intensity are highly dispersed across plants. When isolating the between-sector variation in energy intensity, there is a strong positive correlation with energy use, CO₂ emissions and emission intensity. Yet there is no evidence that the scale of an industry determines its energy intensity. The dispersion of energy use across plants of a given sector, normalized by the median, is positively correlated with that of gross output, but not with the median energy use. Similarly, there is no evidence that the median energy intensity is correlated with the within-sector dispersion of energy intensity or with that of CO₂ emissions. Looking at the fuel mix across sectors, we find that more energy intensive industries rely more on fuels other than electricity, although the variability among plants in those industries is extremely high. We also demonstrate that average fuel shares are sensitive to the skewness of the underlying distribution and recommend the use of median fuel shares for better representativeness.
Global Warming Induced Water-Cycle Changes and Industrial Production – A Scenario Analysis for the Upper Danube River Basin

By Christoph Jeßberger, Maximilian Sindram, and Markus Zimmer, Munich

JEL D24; R30; Q01; Q25; Q52; Q53

Environmental decision support system; climate change; water-cycle; river basin management.

Summary

Using the environmental decision support system DANUBIA, we analyze the effects of climate change on industry and compare the effectiveness of different adaptation strategies. The observed area covers Germany and Austria up to 2025. Since the main effects of climate change in this region are expected to be caused by changes in the water-cycle, we place a special focus on the exemplary region of the upper Danube catchment area. Industry is the main regional user of water resources. Water is an essential production factor and is used in almost every production process of a manufactured good. We apply estimates of regional production functions, based on AFdD-panel micro-data for Germany, to calibrate regional industrial production and water usage within DANUBIA. Thus, we are able to simulate region-specific effects of climate change and the impact of social scenarios using an innovative model of the reciprocal influences of a huge network of interdisciplinary research areas. Simulation results show wide regional differences in production site reactions as well as between differing scenarios. Comparing scenarios of moderate and serious climate change, we are able to illustrate the severe environmental effects in some regions and to determine considerable economic effects on regional economic growth.
The Economic Consequences of One-third Co-determination in German Supervisory Boards

First Evidence for the Service Sector from a New Source of Enterprise Data

By Franziska Boneberg, Lueneburg

JEL J50

Co-determination; board-level employee representation; Germany.

Summary

In Germany, the establishment of supervisory boards and, therefore, the board-level employee representation are mandatory, depending on the legal form and size of a company. However, the empirical analysis reveals that the bigger part of the companies observed (Limited liability companies with 500 to 2000 employees active in the West-German service sector) does not satisfy the law. This fact has strong impact on research questions in the co-determination field: Many studies have tried to analyze the economic consequences of the German co-determination laws (all examining the 1976 Co-determination Act). However, as the regulations are compulsory, compelling results are difficult to obtain. The bigger part of the studies compares companies that fall into the scope of different co-determination laws. This implies that mainly big companies are contrasted to smaller ones. It is not difficult to see that a comparison of such kind entails further irregularities. The study presented allows better analysis. The data is taken from two sources: the commercial Hoppenstedt Database and official German statistics. Due to the special kind of data it is possible to compare companies of same size, same legal form, active in the same sector that only differ in the existence or non-existence of a supervisory board. Therefore, the study at hand provides more accurate evidence of the economic consequences of the German 2004 Co-determination Act.