BUSINESS R&D SUBSIDIES IN GERMANY: THE MORE THE BETTER? (SUMMARY)

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Recommended Citation
Available at: http://digitalknowledge.babson.edu/fer/vol30/iss18/3
SUMMARY

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Principal Topic

Federal initiatives finance new and existing technology-oriented firms to foster their R&D capabilities and to strengthen their competitive position. Compared to the size of those programs the effort to evaluate the economic benefits and costs of R&D subsidies has been rather modest (Klette et al. 2000). This research gap is filled by analyzing the dynamics and outcomes of a federal R&D scheme for SME in Germany.

Method

The sample consists of 107 SME technology firms (168 R&D projects) who received a total of 24.5 mio. Euro of R&D subsidies during the period 1993-2007. Each R&D project is evaluated with different criteria (R&D risk, chance of success, degree of Innovation, job preservation, market- and technology transfer potential) on ordinal rating scales. To analyze the sample descriptive statistics, a multinomial logistic regression, frequency distribution and an analysis of qualitative data to sharpen the quantitative findings are used.

Results and Implications

By analyzing the subsidy frequency distribution a potential pattern is discovered. The sample is divided into three subgroups, group A (n=69) received a grant once, companies in group B (n=27) twice and in group C (n=11) between three and seven times. A multinomial logistic regression with the dependent variable received subsidy frequency (either A=1, B=2 or C=3-7 time(s)) is performed. The criteria of the internal appraisals of the R&D projects are used as independent variables. The model fit reaches satisfying levels of pseudo $r^2$ measures (Cox and Snell=.422; Nagelkerke=.480; Mcfadden=.259).

Especially the criteria degree of innovation, job preservation, market potential and technology transfer deliver significant results on a 90% confidential level that the null hypothesis can be rejected. The model’s forecasting power is 38% higher than the assignment by chance. Group C companies tend to apply with R&D projects of an incremental nature. Their R&D projects have a comparable lower degree of innovation.

Receiving R&D subsidies has become a convenient way of funding regular, non-radical research for group C companies. But their higher market proximity doesn’t seem to provide a shield against failure as indicated by their higher insolvency ratio. This might indicate that R&D grants delay the competitive selection process when they are awarded three or more times.

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