Entry, Exit and Patenting in the Software Industry

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We examine the effects of software patents on entry and exit in 27 narrowly-defined classes of software products, using a dataset with comprehensive coverage of both mature public firms and small privately held firms between 1994 and 2004. Reflecting the complex economics underlying the relationship between patent protection, entry costs and industry structure, we find that patents have a mixture of effects on entry and exit. Controlling for firm and market characteristics, firms are less likely to enter product classes in which there are more software patents. However, all else equal, firms that hold software patents are more likely to enter these markets. The net effect on entry of increasing the number of software patents is difficult to measure precisely: estimates of the effect of an across-the-board 10% increase in patent holdings on the number of entrants into the average market in this sample range from -5% to +3.5%, with quite large standard errors. Evidence on exit and survival is consistent with these findings—holding patents appears to enhance the survival prospects of firms after entering a market.

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