Debtor Rights, Credit Supply, and Innovation

by

G. Cerqueiro, D. Hegde, M.F. Penas, R.C. Seamans

Discussion by

Enrico Santarelli
University of Bologna – Department of Economics

First European Workshop on Entrepreneurship Economics – Amsterdam, 15-16 November 2013

Research questions

- *Personal* bankruptcy law among the most important institutional aspects affecting (small firms') incentive to innovate;
- Debtor friendly (e.g. Chapter 7 of U.S. bankruptcy law until 2005) laws/rules :
  - Should lead ex-ante to more incentives to innovate, by reducing the downside risk of innovation *(tolerance-for-failure* effect)*;*
  - But may increase the risk to the lender of providing finance in general, and in particular in the case of innovative projects; as a result, creditors may reduce the availability of funds for inventor's risky projects *(negative credit supply* effect).
  - If the second effect prevails, debtor friendly rules may ultimately lead to lower levels of innovation by small firms.

Empirical strategy

- Focus on state-level changes in bankruptcy exemptions (**1995-2005**) to identify the effect of debtor protection laws on innovation:
  - Under the hypothesis that they may affect the capital constraints of individual innovators and <u>small firms</u>;
    - Complements study by Acharya and Subramanian (*RFS*, 2009) showing that debtor-friendly corporate bankruptcy codes foster innovation in <u>large firms</u>;
- The Authors choose period 1995-2005 because in between deregulation of bank branching and approval of a more creditor/friendly bankruptcy law in 2005.
- →

U.S. personal bankruptcy law

- Before 2005:
  - Chapter 7: all of the debtor's *future* earnings are exempt from the obligation to repay;
    - Gives the debtor a «fresh start»
- After 2005 (BAPCA – Bankruptcy Abuse Prevention and Consumer Protection Act):
  - The law becomes less debtor/friendly. Fewer debtors are allowed to file under Chapter 7, the aim being to prevent debtors from abusing the bankruptcy laws using them to clear debts that they can afford to pay;

U.S. personal bankruptcy law

- Before 2005:
  - Up to the court to determine if a case qualifies for Chapter 7 bankruptcy;
- After 2005:
  - Personal income subject to a two-part means test:
    - To determine whether the debtor can afford to pay 25 percent of her "non priority unsecured debt“ (e.g. credit card bills);
    - To compare the debtor’s to her state's median income.
  - Debtor don't allowed to file for Chapter 7 if her income is above her state's median and she can afford to pay 25 percent of her unsecured debt;
  - More debtors forced to file under Chapter 13.

Data

- Personal bankruptcy law: exemptions;
- Patent counts: patents applied by small firms with <500 employees and large firms with ≥500 employees:
  - *Although widely used in studies on SMEs at least since Acs – Audretsch (AER, 1988) does not allow to single out the truly entrepreneurial fraction of SMEs;*
- Extensive vs. intensive margins: Number of small firms that applied for patents; ratio of patents by small firms to number of small firms;
- Patent quality: measures of citation to patent; measures of pervasiveness;

Data

- Most and Least cited patents: top/bottom 25th percentile of the distribution of five-year forward citations by subclass and year;
  - *Are self-citations included? Self-citations more important for SMEs (statistically significant relationship with the market value of a patent) than for large firms (Harhoff et al., ResPol 2003);*
- Firm exploration: Avg. number of subclasses in which firms patent:
  - *Serendipity; more likely to capture innovative activities of large firms;*
- Credit market: external financing; bank market.

Methodology

- Poisson models:
- Although commonly employed with count data when dealing with patent analysis, as shown by Crepon and Duguet (*JAE*, 1997) the basic Poisson model has various weaknesses, since it:
  - does not allow for individual effects possibly correlated with the independent variables;
  - assumes that the independent variables are exogenous;
  - does not allow for serial correlation of the residuals;
  - restricts the response variable to having a mean equal to its variance;
- *Present results from Pearson's χ^2 dispersion;*
- *Consider the possibility to use alternative specifications, such as the negative binomial.*

Methodology

- Specification in which the level of analysis is MSA/state-subclass-year (concentration in local bank markets) (Tables 9 and A1):
  - Test whether the negative effect from the changes in exemptions is amplified in concentrated banking markets, either at the MSA or the state level;
- *Why don't take into account possible cross-border effects? Allowing for the possibility that a firm's propensity to undertake innovative activities is also influenced by bank market concentration in adjacent MSAs/states.*

Policy implications

- Counter-intuitive: more lenient bankruptcy laws may ultimately lead to lower levels of innovation (by small firms) if credit supply tightens:
  - Examples are *procedure de sauvegarde* (2005) in France and *nuovo concordato preventivo* (2005) in Italy;
- Does Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 move in the "right" direction?

ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

Enrico Santarelli

Department of Economics

enrico.santarelli@unibo.it

www.dse.unibo.it