Policy environment for intangible investment: what can we learn from cross-country analysis?

Comments prepared for the RIETI-Hitotsubashi G-COE symposium, Oct. 2, 2009 by Eric Bartelsman (Vrije Universiteit Amsterdam)

- Previous speakers have highlighted the role of intangible investment at the firm level for aggregate productivity (growth/levels)
    - Firms make intangible investments to boost expected future production/sales/profits
    - Intangible investment generally has a fixed cost component: future scale increases are important
    - Not much hard data available about level of intangible investment or its drivers at the firm level
    - Intangible investment patterns likely are very heterogeneous across firms
- How should policy makers try to determine what policies promote optimal intangible investment rate (at the firm-level and aggregate)
    - Asking companies is not very fruitful: firms optimize given policy and economic environment and do not have a clear view of general equilibrium or social welfare issues
    - Policy experiments are difficult and at best may get an estimate of direct effect on firm behavior but miss overall aggregate effects
    - Effect of changes in policy over time are difficult to evaluate: we only observe difference in 'before' and 'after' firm outcomes, with many other observable and unobservable variables also changing.
    - (an aside: optimal intangible investment rate is difficult conceptually, because of: spillovers, stepping on toes, congestion, business stealing)
- Cross-country analysis of firm-level outcomes may provide 'laboratory' to evaluate policy (given that changes occur in different places at different times)
    - Theory: What is mechanism through which policy is thought to affect firm-level intangible investment?
    - Data: Which observables at the firm or industry level provide information on intangible investment? Which observables provide information on desirable outcomes? What indicators from firm-level datasets match variation expected from theory?
- Theories and data point towards the variability of firm outcomes to be increasing in the level of intangible investments
    - Variance of profits across firms with high IT investment vs low IT investment (Brynjolfsson et al. 2009)
    - Variance of sales growth of firms is higher in industries with higher broadband penetration (Bartelsman 2008)
- The option to exit is valuable for firms that embark on a high-risk intangible investment strategy
    - Cross-country and time variation in (policy induced) exit costs is negatively correlated with riskiness and with resources allocated to risky endeavors. (Bartelsman, Perotti, Scarpetta 2008; Bartelsman, Gautier, de Wind 2009)
    - A 'level playing field' improves the allocation of resources across firms, but more importantly provides the proper ex-ante selection of firms with heterogeneous investment strategies.