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Employment IP and Innovation: A Dynamic Model of Optimal Human Capital Flows

Traditional economic models view restrictive covenants, which attempt to control trade secrets and employee turnover -- including NDAs, non-competes and patent holdover clauses --,as a necessary limitation stemming from the fact that absent such contractual protection, employers would under-invest in research, development and training (Rubin & Shedd 1981; Glick 2002; Posner & Triantis 2003). This study seeks to enrich the analysis of human capital development and optimal flows. It adds a dynamic perspective to the model by looking at the investment incentives of both the employer and the employee. The paper integrates several hypothesis in a dynamic model. It then provides empirical support for the new model.

Time 0 (During employment relationship):
1) Restrictive covenants encourage firms to invest in their managers' human capital.
2) Restrictive covenants discourage managers to invest in their own human capital.
3) The absence of restrictive covenants encourages alternative compensation forms that are performance-based.

Time 1 (Post-employment):
4) Restrictive covenants prevent loss of valuable employees and misappropriation of proprietary information.
5) Restrictive covenants reduce mobility, "new blood," and positive knowledge spillovers.

Almost half a century ago, Nobel laureate Kenneth Arrow argued that competition, not central control, is what fuels innovation. Writing specifically about human capital, Arrow observed that "mobility of personnel among firms provides a way of spreading information." Contemporary markets and new scientific studies provide empirical bases for Arrow's assertion. Drawing on new experimental and empirical data, this article argues that under certain conditions non-competes will reduce overall investment. In time 0, this will happen when self-investments in one's human capital, stimulated by external prospects and/or internal performance incentives, is of greater effect than the investment of a company (Amir & Lobel 2010; Garmaise 2009; Lobel & Feldman 2010). In the repeat game represented by time 1, overall gain happens when the effects of positive spillovers outweigh the negative externalities of human capital and information flows.

Recent field data provides evidence of such occurrences in both stages of the single firm level and the repeat game of job mobility at the industry and regional levels. Further, in several experiments, in collaboration with On Amir and Yuval Feldman, we aim to provide insights on behavioral effects that support the dynamic double-perspective model. In the first series of experiments, in collaboration with On Amir, we simulate market employment and seek to identify the effect of restrictive covenants, including non-competes, non-disclosures and training reimbursement agreements, on performance and motivation. In collaboration with Yuval Feldman, we seek to study motivation and perception of roles within the workplace in relation to ownership over employee invention.
The project is part of my larger project examining employment intellectual property and innovation, INNOVATION'S EDGE (under contract YALE UNIVERSITY PRESS 2011) and related experimental studies comparing monetary and intrinsic motivations of individuals within organizations (e.g., Feldman & Lobel, The Incentives Matrix, A Study of the Comparative Effectiveness of Monetary Rewards as Compliance Systems, forthcoming Texas Law Review (2010)).