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Dynastic entrepreneurship, entry, and non-compete enforcement

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ABSTRACT

We investigate entry in a dynastic entrepreneurship (overlapping generations) environment created by employee spinoffs. Contracting failures, caused by non-verifiability of profits from new activities in original firms and overall profits from subsequent entrants, may lead respectively to implementation of new employee ideas in spinoffs and constraints on borrowing to buy out non-compete agreements. If borrowing constraints are not binding, enforcement of non-compete agreements unambiguously improves social welfare outcomes, increasing the entry of both original firms and subsequent generations of spinoffs. However, if employees are unable to buy out their non-compete covenants, enforcement of these agreements shuts down socially profitable spinoff firms. Non-enforcement sacrifices entry of original firms that would be marginally profitable in the absence of employee spinoffs, but otherwise clearly improves social welfare outcomes over enforcement in the presence of binding finance constraints.

1. Introduction

Employee spinoffs are widely recognized to be a major mode of entrepreneurship in high-tech manufacturing (Klepper and Sleeper, 2005; Franco and Filson, 2006). Recognition of their importance in the rest of the economy has been growing (Phillips, 2002; Eriksson and Kuhn, 2006; Hvide, 2009; Muendler et al., 2012). Muendler et al. were the first to tabulate employee spinoffs for an entire economy: depending on definition, employee spinoffs account for between one-sixth and one-third of all new formal private sector firms in Brazil during the period 1995–2001. They found that, regardless of definition, employee spinoffs perform better on average than new firms without (identifiable) parents: their sizes at entry are larger and their survival rates are higher.

Employee spinoffs often go into direct competition with their parent firms. This is natural since they build on knowledge of technology, clients/markets, and suppliers acquired during employment at their parents (Klepper and Sleeper, 2005; Franco and Filson, 2006; Muendler and Rauch, 2014). Parents therefore have an incentive to prevent spinoffs through enforcement of restrictive employment clauses such as non-compete covenants (hereafter simply called non-competes). Outside the high-tech sector the knowledge acquired by spinoffs is unlikely to be protected by patents,[1] and Stone (2002) finds that trade secret protection is sufficiently difficult and uncertain that non-compete enforcement is more likely to

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[1] Table 5 in Hirakawa et al. (2010) shows that for their preferred spinoff definition, covering new firms with five or more employees, employee spinoffs were indeed more prevalent in high-tech manufacturing, but that this sector constituted a small share of new firm formation so that the number of spinoffs was dominated by the rest of the economy.

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substitute for trade secret protection than the other way around.[2] In developing countries where large extended families are common, employers may try to restrict spinoff opportunities to family members to at least keep the employee spinoff profits in the family (Shieh, 1992), but even there a tradeoff exists because family members may be less able than professional managers (Bertrand and Schoar , 2006).

A tentative consensus has formed in the literature in favor of not enforcing non-competes (Acs et al., 2008). Yet this consensus is based on narrow empirical evidence, mainly for high-tech industry, where circulation/spillover of ideas through employee mobility is especially important (Fallick et al., 2006; Gilson, 1999; Marx et al., 2009). A broadly-based counter-argument is that enforcement of non-competes gives employers greater incentives to invest in their employees. It can be objected, however, that non-enforcement gives employees greater incentives to innovate, or more generally make investments of their own (Motta and Roende, 2002; Baccara and Razin, 2009; Kräkel and Sliwka, 2009). Garmaise (2011) finds that executive compensation is negatively related to strength of non-compete enforcement, which he interprets as evidence that increased incentives for employees to invest in their general human capital empirically dominate reduced incentives by employers to invest in their employees' firm-specific human capital. We will see that the model developed in this paper is consistent with his results and interpretation.

This main purpose of this paper, however, is to evaluate a very different counter-argument: insofar as employee spinoffs hurt their parents, failure to enforce non-competes may reduce entry by parent firms. This in turn may reduce the very spinoff entrepreneurship that the non-enforcement policy was supposed to encourage. I will investigate entry in a dynastic entrepreneurship (overlapping-generations) world. I find that, if employees can buy out their non-compete contracts, enforcement of non-compete agreements unambiguously increases entry of both original (parent) firms and all subsequent spinoffs. However, if employees are finance-constrained and hence unable to buy out their non-compete contracts, enforcement of these agreements prevents startup of socially profitable spinoff firms. Non-enforcement sacrifices entry of original firms that would be marginally profitable in the absence of employee spinoffs, but otherwise clearly improves social welfare outcomes over enforcement in the presence of employee finance constraints by facilitating entry of socially profitable spinoff firms.

The market frictions that drive my model are the results of non-verifiability of profits: non-verifiability of profits from a new activity initiated by an employee in an original firm, and non-verifiability of overall profits for subsequent entrants. Non-verifiability of profits from the employee's new activity leads to inability to infer and contract on his effort, generating suboptimal effort and profits that can cause the employee to implement his idea in a new firm instead. This motive for employee spinoffs is in the spirit of Acs et al. (2009), who write (p. 17), “Our results show that entrepreneurial activity is strongly influenced by knowledge created but not exploited by incumbent firms.” Non-verifiability of firm-level profits for subsequent entrants leads to inability to borrow to buy out non-compete contracts.

Franco and Mitchell (2008) also investigate theoretically the impact of non-compete enforcement on entry of both parent and spinoff firms. My model differs from theirs in several important respects. First, as already mentioned I recognize that spinoff entrepreneurship implies a dynastic environment: like any other firm, a spinoff can have a spinoff. The “family tree” spawned by Fairchild Semiconductor is a famous example.[3] Second, spinoffs in my model are caused by non-verifiability of employee effort, rather than by asymmetric information regarding employee ability to learn parent firm technology. Third, instead of differing by this privately known ability, agents in my model differ by their commonly known profitability of entry (driven by differences in their startup costs). Fourth, I analyze the case in which finance constraints on employee-entrepreneurs prevent them from buying out their contracts with their employers, without which enforcement of non-competes does not pose a barrier to (socially beneficial) spinoffs (Rauch and Watson, 2015). Thus in Franco and Mitchell (2008) enforcement achieves the social optimum even with the contracting friction caused by asymmetric information. Interestingly, it is my results with finance constraints that are consistent with Franco and Mitchell: enforcement leads to more entry of original firms and eliminates spinoffs. Without finance constraints, however, enforcement does better than non-enforcement in all respects, unlike in Franco and Mitchell: there is more entry of both original firms and spinoffs.[4]

Without finance constraints, the importance of a dynastic (overlapping generations) rather than two-period analysis in my framework becomes especially clear. Enforcement of non-competes is predicted to increase the rate of spinoffs from original entrants relative to non-enforcement, whereas in a two-period setting enforcement would have no effect on this rate. This positive prediction has corresponding normative consequences: enforcement improves social welfare relative to non-enforcement because of both increased original firm entry and increased rate of spinoffs, rather than only because of the former as would be the case in a two-period analysis. The dynastic model also brings out an interesting contrast with the patent literature, specifically Bessen and Maskin (2009). In their “sequential” model, original innovation, subsequent

[2] She writes (p. 747), “The historical link between non-compete covenants and trade secrets is somewhat paradoxical because disclosure of trade secrets and confidential information can be restrained in the absence of a covenant. However, it has been argued that, for procedural reasons, it is difficult to obtain enforcement of a trade secret, so that a restrictive covenant provides employers with important additional protection. At the same time, some scholars have posited that courts are more likely to enjoin misappropriation of a trade secret or confidential information in the face of a covenant not to compete because the existence of a covenant permits the court to avoid the difficult legal issue of determining what constitutes a trade secret.”

[3] Systematic investigation of spinoffs is hampered by the fact that the time dimension of a typical firm-level panel data set is short relative to the length of a typical spinoff “generation.” Klepper and Sleeper (2005) find that the highest rate of spinoffs in the laser industry is from firms aged 11 to 15. The average age of parents at birth of (first) spinoff in the Brazilian data set used by Muendler et al. (2012) is 15 years, and the median age is nine years.

[4] It follows that whether enforcement increases or reduces spinoffs indirectly reveals the salience of finance constraints. I discuss this further in my Conclusions.