

Preliminary Proposal Template

Title: Should we enforce non-competes?

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Prerequisites Checklist

1. I have read these research proposal guidelines.
2. I have corresponded with an RDC administrator about my prospective project.
3. I understand that the predominant purpose of this project must benefit the Census Bureau data programs.
4. I understand that there are usually lab fees for using an RDC.
5. I understand that work is performed in a restricted access environment and only cleared results are allowed to leave the RDC.
6. I understand that the approval process may take a considerable amount of time, for example, if review by other agencies or data owners is required or if data availability issues exist.

I have performed each checklist item above: Please initial __NFA____

Duration: 24 months

Funding Source: Princeton University's membership of NYRDC consortium

Description: The project will investigate the effect of enforcement of non-compete agreements on productivity growth, employment growth and welfare. A non-compete agreement is a clause in an employment contract which stipulates that an employee cannot work for a competing firm for a certain amount of time after termination of the current employment relationship.

Theoretical background:

There are theoretical arguments both for and against enforcing non-competes, echoing the patent literature. As with patents, the tradeoff is between ex-post efficiency and ex-ante efficiency. Ex-post (i.e. given the stock of knowledge capital), it is inefficient to enforce non-competes, since these constrain the reallocation of workers in the economy, in turn (1) reducing knowledge spillovers, (2) leading to less competitive labor markets, reducing the incentive for workers to develop their human capital, and (3) preventing workers from finding their "best fit" firm. However, ex-ante it can plausibly be more efficient to allow workers to commit not to use the knowledge they gain while employed to benefit a competitor, since this increases the value of knowledge capital (held by their original employer), leading to more knowledge capital produced in equilibrium. On top of all of this, in any model of endogenous growth through creative destruction, entrants which displace incumbents do not internalize their destructive effects on

their competitors, hence there can too much innovation effort by them (depending on parameters, such as the size of a typical quality improvement). Since non-compete contracts reduce the entry rate, it is possible that they can increase welfare also by mechanically reducing the resources inefficiently expended on entry due to the creative destruction externality. Finally, note the key difference with patents: these are contracts agreed upon by two parties who are free not to sign the contract if they so please, so it maybe possible that the decentralized equilibrium optimally or close-to-optimally allocates non-compete agreements to employment relationships. On the other hand, in a setting with endogenous growth, since we are far from the Arrow-Debreu world of complete markets for every contingent commodity, the decentralized equilibrium is far from optimal. A given employer-employee pair does not internalize the effect of their contracting decisions on the rest of the economy.

Existing work:

Existing empirical work (will include full literature review in complete data application) shows that states which do not enforce have higher employment, wages, steeper wage profiles for knowledge workers, more worker mobility, more CEO investment in their own human capital, and other measures which suggest non-enforcement is optimal for productivity growth and welfare. This holds not just in the cross section, where there are clear endogeneity issues, but also in studies which exploit quasi-experiments – most notably, a suite of studies exploiting Michigan’s accidental change from a non-enforcing to an enforcing regime in the late 1980s. These studies have led the profession to tentatively support the idea that we should not enforce non-competes. In fact, many believe that California’s Silicon Valley displaced Massachusetts’ Route 128 as the prime high-tech hub over the second half of the 20th century precisely because California does not enforce non-competes while Massachusetts does.

However, these studies cannot rule out the possibility that non-enforcing regions simply crowd out productivity and employment growth in enforcing regions. What is more, there is empirical work showing worker flows out of Michigan towards non-enforcing regions (in particular, California) after the state once again began enforcing non-competes – exactly what we would expect in this crowding out story. There is also theoretical work suggesting the plausibility of a pattern by which enforcing regions (like Rt 128) start out leading innovation, but are eventually displaced by non-enforcing regions as firms and workers flow out. Finally, from a legal perspective, it is worth noting that California often will refuse to enforce non-competes a worker signed with an out-of-state employer. So the legal situation is ripe for regulatory arbitrage of this kind. There is plenty of anecdotal data suggesting this as well, and this study will hopefully be able to confirm this with more rigorous data analysis (more on this below).

As is usually the case in empirical macroeconomics, the problem is the lack of a suitable control: a country like the US but where non-competes are enforced everywhere (and with no spillovers to the US). In the absence of such an experiment, we cannot directly get at the true “level” effect of states like California not enforcing non-competes, no matter how much we play with the cross-sectional variation in enforcement and outcomes. We can only identify differences in the outcomes depending on enforcement.

My proposal:

My proposal is to get a step closer to answering the question of optimal non-compete enforcement by using a structural model of the aggregate US economy. The plan is to (1) calibrate a model of endogenous growth using the results of the above-mentioned empirical work as well as moments from the datasets I requested; (2) assess the performance of the model by comparing its predictions to untargeted moments in the data; and finally (3) analyze the policy counterfactual of countrywide enforcement through the lens of the calibrated model. In order to calibrate realistically, I need the LEHD (and related datasets detailed below), as well as matching with the Crunchbase employer-employee dataset on company founders and C-level employees (hence the benefit to the Census).

The model I am developing is based on Klette & Kortum 2004, “Innovating Firms and Aggregate Innovation”, which in turn is based on Hopenhayn 1992, “Entry, Exit, and Firm Dynamics in Long Run Equilibrium”. The model currently emphasizes the channel of workers leaving established firms to found competing firms, but eventually I will incorporate workers flowing to competitors without necessarily founding them. In order to calibrate this aspect of the model, I will attempt to construct measures of spinouts and worker defection to competitors in enforcing and non-enforcing regions. To do this, I will match the census data to an employer-employee dataset (Crunchbase’s full dataset) containing information on the founding team and high-level employees of companies in a variety of industries across the US. I need to match workers and firms in these two datasets to each other in order to perform my analysis: I need to match firms in order to leverage the more precise industry classifications available in the LBD, and I need to match employees in order to identify when non-C-level workers leave firms to work at or start competitors (since these previous jobs are not in the Crunchbase dataset). I will match firms to the LBD by firm name (there may be some challenges here, of course). Matching employees is more challenging, since the LEHD does not contain employee names, only identifying numbers. I will attempt to do this by matching on employment start dates (are there privacy concerns here? Can we work around them somehow?). This is the source of benefits to the Census: 7 (linking external data to the Census Bureau), 9 (identifying /demonstrating the usefulness of collecting data on firm founders), and 11 (generating estimates of characteristics of specific populations, e.g. comparing firms that are founded by workers leaving competitors vs not.).

Census Datasets: JHF, ICF, ECF, LBD

Years of Data: 1985-2011, -2014 if possible

Primary RDC Location: NYRDC-Baruch

Secondary RDC Locations: FSRDC-Philadelphia

Benefits: 7, 9, 11

Research Team

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