November 27, 2015

Hiring Committee
NBER PIE Program

To the members of the hiring committee:

I am writing to apply for the position of Postdoctoral Fellow in Digitization at NBER. I expect to finish my doctoral work in economics at Columbia University in May 2016. My work uses tools from applied microeconometrics and computational linguistics to dig into questions at the junction of law, economics, and politics. In particular, my interest in digitizing legal texts for empirical analysis would be ideally suited to this position.

The broad goal of my research is to produce empirical evidence on how laws and contracts interact with human motivations and preferences to determine behavior and affect socioeconomic outcomes. An important piece of my graduate work (joint with Bentley MacLeod) has involved studying incentives and motivations in the judiciary. This NSF-funded project (SES-1260875) involved the construction of a new dataset on over 1.1 million judicial opinions written by state supreme court judges for the years 1947 through 1994. In the first paper using this data set (forthcoming in *Journal of Law and Economics),* we present evidence that judges are intrinsically motivated to provide high-quality work product. When they face less time pressure, they write more well-researched opinions that are cited more often by later judges.

We have a second paper that uses this data to focus on the issue of judicial elections. We show that judges selected by technocratic merit commissions write higher-quality opinions than elected judges. Further, we find their performance falters when they face election, which suggests electoral campaigns take time away from the business of judging rather than providing an incentive to produce higher-quality work. My future work on judicial behavior will look at finer-grained features of the text of judicial opinions to study aging and retirement, peer effects between judges in a panel, and hierarchical relations between lower courts and higher courts.

The first single-authored paper in my dissertation is on local property taxation. This paper, funded by the Lincoln Institute for Land Policy, aims to measure the effect of an exogenous change in property taxes on local labor market outcomes. The empirical strategy is to construct a set of instruments for property taxes using state-mandated property reassessment cycles, which are exogenous to current housing-market

fluctuations. I find that a rise in property taxes due to the instruments is associated with an increase in local government revenue, as well as local government expenditures on goods and services. In the labor market, these expenditure increases are associated with in-migration by both workers and firms. These results suggest that in contrast to what one hears in the media, property taxes are not too high; they are too low.

My job market paper looks at taxes from a completely different perspective: the text of the tax code. Natural language processing tools are used to construct a high-dimensional representation of tax code changes from a database of 1.6 million statutes enacted by state legislatures since 1963. Machine learning methods, combined with exogenous variation from Bartik-type instruments for legal text, are used to to recover the *effective tax code* – the textual features of the tax code that have the largest impact on revenue, holding major tax rates constant. I then test whether the political parties differ in the patterns of language they insert into the tax code when they control state government. Relative to Republicans, Democrats use revenue-increasing language for income taxes but use revenue-decreasing language for sales taxes – consistent with a more redistributive fiscal policy – despite making no changes on average to statutory tax rates. These results add to previous work in public finance demonstrating the importance of the tax base, and suggest that tax rates are politically difficult to change due to their relative salience.

This work demonstrates that computational text analysis is a rich and promising area for social science research. Besides judicial opinions and tax statutes, I am working on the text of congressional floor speeches (NBER Working Paper w21422), labor union contracts (NSF SES-1459932), CEO contracts, construction contracts, and criminal law statutes. I hope to continue to work on these and other projects as an NBER postdoc. Thank you for your consideration.

Sincerely,

Elliott Ash
Department of Economics
Columbia University