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RE: Post-Doctoral Fellowship, PIE Program, NBER

## Dear Colleagues:

I strongly recommend Cong Xie to you as a Post-Doctoral fellow in the Innovation Policy area. It would be wonderful to integrate him tightly at NBER as he pursues academic positions, hoping to embed him at any early point where he might have more opportunity to become strongly involved at NBER. Cong is among the top handful of PhD students I have trained in the broad interdisciplinary area I work in, which includes sociology, economics, social psychology and public policy. In creativity of approach and measurement, as well as the drive to excel, he is among the top two or three students since my appointment as a faculty member at UCLA about 40 years ago. Cong is centrally interested in scientific and technological innovation and its diffusion, and has a real talent for assembling original databases designed to explore research questions that are highly original. Since Cong joined my research team last spring, he has stimulated and encouraged other students to innovate, and generously teaches others the skills he has learned in the process of his inventive research. At the same time, he quickly picks up new skills when offered by others on my research team.

I met Cong last year when he took a seminar/workshop with me, and was immediately struck with his enthusiasm and originality. His interests tie in nicely with my main focus on organization theory and institutions, and early on I helped Cong further develop his empirical research focusing on the impact of different organizational forms created through organizational transformation (by firm merger and acquisition of other firms) on transfers of patents between organizations. Such transfers involve reassignment of patent rights among organizations, which is much more frequently done than most of us would assume. Using this broad approach, Cong explores the market for firms that is simultaneously a market for inventions, a market that has been largely untracked and unnoticed by others, even though it is a major source of diffusion of innovation and new technologies accounting for roughly 80% of all U.S. patent reassignments. He compares and contrasts this market for firms with the much smaller direct market for purchase or trade of individual patents, practiced mainly by small firms.

We have been working on defining the topic and collecting the data for joint research since late spring 2014. We are currently focused on measuring the impact of tacit knowledge embedded in scientific discovery on patent characteristics and their joint impact on whether or not patent reassignment occurs and the type of that reassignment. The greater the tacit knowledge, commonly present in major discoveries, the more likely patent reassignment is likely to include continuing access to those who invented it. Thus, how "deep in the science" a patent is may determine how likely reassignment of patent rights will occur through purchase of the firm, thus simultaneously giving automatic access to many of the inventors for some period after acquisition of the firm. When a single patent is reassigned, there is unlikely to be one of the inventors in the firm that

now holds the patent. While Cong has already explored this topic, I expect that we will both add considerably to the initial work he and I have each done in separate areas.

Cong Xie is a thoughtful and active participant in many different aspects of departmental, university and professional life, participating in organized programs, attending workshops and other talks, and always involved in the on-going activities of his department and the university. Cong also makes a strong, very involved, team member on my interdisciplinary research team

In sum, Cong would be a benefit to any postdoctoral training program, bringing his expertise and strong motivation to his research plan and interactions/joint work with others. I give him my highest recommendation. I am sure he would add greatly to our Innovation Policy program.

Sincerely Yours,

Lynne Zucker

Professor of Sociology and Public Policy

Lynne St. Zucher

If you need further information, please do not hesitate to contact me at 310-463-4514 (cell) or send a query via email to zucker@nicco.sscnet.ucla.edu or lynne.g.zucker@gmail.com