Application for Digital Economics and AI Tutorial

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Description of research interests and research projects in process

I am Minghao Yang, a third-year PhD student in real estate and finance at Berkeley Haas. My current research interests focus on household finance and innovation. Below, I describe my current research projects.

In a joint project with Karin Li and Bernardo Maciel at Haas, we study if marriage leads to wiser financial decisions through information acquisition. Using data from the Survey of Consumer Finances and a large discount broker database, our initial results suggest that married couples make more sophisticated financial decisions compared to single households. Specifically, they tend to diversify more, trade less, achieve higher returns, and hold more stocks and retirement savings.

In a joint project with Constantine Yannelis at Cambridge and Quentin Vandeweyer at Booth, we study the transmission of monetary policy to the stock market through investors' discount factors. We investigate the stocks that are dual-listed both in Hong Kong and Mainland China to isolate the effect of revisions in cash-flow expectations. We conduct event studies on the dual-listed stocks around FOMC announcements and find that discount factor channel is strong. It is particularly stronger when there is a surprise decrease in the policy rate. On average, a 100 basis point surprise change in monetary policy leads to a 30 basis point change in the ratios of stock prices over five days.

In a joint project with Amir Kermani and Tim McQuade at Haas, we are exploring if worker mobility contributes to the diffusion of new technologies across firms. Using patent data and LinkedIn profiles, we link inventors' career trajectories with the years when firms adopt relevant technologies. Our research involves identifying workers relevant to new technologies in each firm, and firms that have already adopted the technologies. I believe AI offers a promising approach to establishing these connections.

In another related project, I am interested in how innovations are sorted among firms. Specifically, innovations can be categorized by their scientific and economics values. Innovations of high scientific value may enhance social welfare but may not generate sufficient future cash flows for the firm. Inversely, innovations of high economic value may ensure private rent to the firm but may offer limited social benefits. To implement the framework, I will first need measures for scientific and economics values of innovations. Beyond existing metrics such as forward and backward citations or stock market responses, AI may assist in categorizing innovations effectively.

The upcoming tutorial presents an excellent opportunity to deepen my understanding of digital economics and AI, as well as the emerging research avenues enabled by these technological advances. Moreover, engaging with scholars from diverse backgrounds will also provide invaluable opportunities for research discussions and future collaborations. I believe my background positions me as a dedicated and enthusiastic participant in the tutorial.