NBER Economics of Digitization Student Tutorial Application

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I am a 4th year graduate student in economics at Northwestern University. Thus far my research interests are in the area of labor economics and economic history, with emphasis on media in the historical context. My coursework consists of field courses in labor economics, industrial organization, political economy and economic history. My research interest in economic of digitization is two fold.

First, I am interested in digitization in of itself and especially its implication for the labor market. Broadly, with increasing digitization, there is growing reallocation of business activities from the physical space to the digital. Subverting the rigidity of salaried professions and more formally organized transactions, the ``gig'' or micro job, economy, fueled by decentralized marketplaces, offers and fills an array of paid errands and tasks. Platforms that feature and foster decentralized user content creation is already a visible component of many industries and labor is a critical resource for these enterprises that is growingly incentivized and compensated for.

A consequence of the digitization of service and content provision is a proliferation in ability to monetize traditionally hobbyist pursuits. In my paper "**Labor Supply Decisions of Online Broadcasters**", I study intertemporal labor supply in the setting of a novel digital market, broadcasters on Twitch.tv. Similar to taxi drivers, broadcasters are not paid a fixed hourly wage but face fluctuating wage rate as a function of stochastic viewership. Generally I find that individuals work more when wages are temporarily high and an implied intensive elasticity of .26. I document that female broadcaster exhibit loss averse labor supply behavior and, for both genders, elasticities grow substantially with experience but decrease with ability, suggesting coexistence of behavioral learning and daily wealth effect. Lastly, I adapt structural stopping models to the broadcasting setting and design an econometric test for a particular type of preferences previously unexplored in the literature: reference dependence with respect to the marginal utility of wealth.

As digital labor engagements become permanent fixtures, their implication for consumption smoothing and labor decisions in the broader labor market across business cycles becomes more pronounced. Understanding how labor supply is determined in the digital setting becomes a

crucial and requisite preliminary step to understanding the inter linkages between online and traditional labor markets, which I hope to explore further in future work.

Second, I am interested in economics of digitization because of the methodology employed. With the study of digitization there is increasing use of machine learning and sophisticated data mining techniques, I am interested in the possibility of leveraging these techniques in, ironically, economic history. I think by exploiting the computational techniques and natural language processing algorithms, it's possible to extract more information from historical data sources and gain more mileage out of existing data. This is particularly salient in the study of economics of media and is something I hope to pursue.

Consequently, because of my dual interests I think the NBER Economics of Digitization tutorial will be an excellent experience for me. And I would be grateful for opportunity to grow professionally and personally under the guidance of the faculty in the program as well as opportunity to interact with fellow students.