### RUBAIYAT ALAM

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#### EDUCATION

Ph.D. Candidate, Economics, Boston University 2023 (expected) Dissertation Title: *Competition and endogenous product choice in healthcare markets* Dissertation Committee: Marc Rysman, Jihye Jeon, Randall P. Ellis

B.S.S/M.S.S in Economics, University of Dhaka

2017

#### FIELDS OF INTEREST

Empirical Industrial Organization, Health Economics

#### WORKING PAPERS

Quality choice with reputation effects: Evidence from hospices in California (Job market paper) Entry and pricing with fighting brands: Evidence from the pharmaceutical industry (with Rena Conti)

### WORK EXPERIENCE

Research Assistant for Yuhei Miyauchi, Boston University	Spring 2020
Research Assistant for Andrey Fradkin, Boston University	Summer 2021
TEACHING EXPERIENCE	
Instructor, EC 387: Health Economics, Boston University	2021-2022
Teaching Assistant, EC 709: PhD Applied Econometrics, Boston University	2019-2022
Teaching Assistant, EC 304: Empirical Economic Analysis II, Boston University	2018-2019
Teaching Assistant, EC 303: Empirical Economic Analysis I, Boston University	2018-2019
DEPARTMENTAL SERVICE	
Organizer, Empirical IO Reading Group	2020-2021

#### LANGUAGES: English (fluent), Bengali (native)

**COMPUTER SKILLS:** Julia, R, Matlab, Stata, LaTEX

**CITIZENSHIP:** Bangladesh/F1

#### References

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# **Quality choice with reputation effects: Evidence from hospices in California** (Job Market Paper)

Using firm-level data from California for 2002-2018, I study quality choice by hospices, uncover the importance of hospice reputation for consumers, and explore counterfactual policies that can incentivize higher hospice quality. Hospices - firms which give palliative care to dying patients are a potential source for large cost savings and welfare improvement of terminally ill patients. A hospice's quality of service is measured by the average number of visits it makes to its patients. I define reputation of a hospice to be a nonlinear function of its past quality choices, meaning that a hospice can accumulate reputation over time by consistently choosing high quality. To see if reputation matters to consumers, I first estimate a structural model of hospice choice by consumers. I find reputation to have a strong influence on consumer demand and estimate that it decays at an annual rate of 53%. I incorporate this into a dynamic oligopoly model of hospices choosing quality to compete on reputation against rivals, and estimate it using Bajari et al (2007) to recover hospices' cost functions. I find that an additional visit costs a hospice around \$200, for-profits enjoy an efficiency advantage over non-profits, and hospices in rural counties suffer a cost disadvantage compared to those in urban counties. I use the estimated structural model to study counterfactual policies that can incentivize higher hospice quality. As reputation becomes more persistent, hospices choose higher quality. Hospices also choose higher quality as prices increase, but the response depends on how differentiated it is in terms of characteristics compared to its rivals. Finally, a hybrid per-day per-visit hospice reimbursement scheme can feasibly achieve the same quality at a lower cost than the current per-day scheme.

# Entry and pricing with fighting brands: Evidence from the pharmaceutical industry (with Rena Conti)

In the pharmaceutical industry, branded drug manufacturers can compete with generics by releasing an Authorized Generic (AG), which is identical to the branded drug but without the brand label attached. This is used to price discriminate between consumers of different preferences, with the branded drug charging high price and AG charging low price to compete with generics. Such "fighting brand" strategies are common across many industries and has significant effects on rival firms' choices. In this paper I analyze how AG and generics interact in a strategic setting. Using total drug sales and revenue data on US for 2004-2016, I uncover product release and pricing patterns after generic entry begins. I use these to motivate a structural model of drug entry and pricing. First, I estimate a random-coefficients discrete choice demand model to quantify the heterogeneity in brand valuation and price sensitivity among consumers. Next, I build a two-stage supply model. In the first stage, generic manufacturers make a static entry decision on whether to enter a molecule-formulation market. In the second stage a dynamic game begins where every period, generics who decided to enter are randomly approved for entry by the FDA and the branded drug manufacturer decides whether to release an AG. I solve this model by backward induction, and as a result allow for AG and generics to form expectations about each others' entry and pricing decisions when making a choice. The structural model is used to conduct counterfactuals exploring factors that affect AG release decision. First, I change demand primitives to study responses by generics and AGs in these alternative environments. Second, I show that the decision to release an AG depends mostly on the difference in marginal and per-period operating cost between generics

and the AG - the higher the AG's marginal cost and operating cost relative to generics, the less likely it is to enter. Third, I show that the AG's ability to enter immediately in contrast to generics that have to wait for FDA approval gives branded drug manufacturers an additional incentive to release an AG. Fourth, I show that a faster generic approval rate leads to greater generic entry, lower likelihood of AG being released, and lower prices. Finally, I study what happens to market outcomes if AGs are banned, as has been discussed in policy circles and argued for by generic firms. Conditional on AG and generics having the same marginal cost, I find that banning AG leads to higher market prices.