Firms oversee market structures and choose the optimal strategic behavior in entry and exit to maximize profits. Understanding market structure and the role it plays in determining the extent of competition benefits both policymakers and firms. Policymakers use market structure knowledge to set regulations on industries that may hurt consumer welfare, while firms use such knowledge to estimate market capacity. My dissertation seeks to model and provide insights for three such problems in the education and banking industries.

In the first chapter, titled “Understanding the Impact of Rising Online Bank Channels on Exit of Bank Branches,” I examine the impact of the increasing adoption of digital banking channels and of the information transferring cost on the shrinking brick-and-mortar branch network in the banking industry. When digital financial channels become more common to consumers, banks close branches to reduce personnel and occupancy expenses; however, banks incur a cost to transfer the consumer-specific information and relationships from the closing branch to other branches. Using detailed data on consumer transactions, I estimate a model of demand for branch services and find that consumers are sensitive to the travel distance to the branch. I then use the demand and cost estimates with the network distances to predict a bank’s profits under the observed and counterfactual network configurations. Using a moment inequalities approach, I find that it costs the bank between $0.019 and $0.065 to transfer one dollar of transactions per mile. I also demonstrate that increasing digital channel adoption reduces the demand for branches and transferring cost and accelerates the branch closing process.

In the second chapter, titled “Understanding the Effects of Bank Branch Closures on the Local Loan Market,” to study the effects of bank branch closings on the local loan market, I use a unique small business loan application data set and difference-in-difference framework to estimate the post-intervention effects in both the supply and demand sides. The results show that branch closings have negative effects on the bank’s business sector, especially in cities and areas with a high density of competitors’ branches when loan seekers can apply for business loans in many other places. The bank tends to loosen its reviewing process to approve more loans to offset the loss of demand for business loans in the cities with branch closings. I also show that the bank’s loan application processing time gets longer after branch closings, when the soft information and relationships between the local businesses and the branch are difficult to transfer and replace. Moreover, I find that the loan seekers in the areas which already have limited availability of banking services are more difficult to get their loans approved by the bank after branch closings.

In the third chapter, titled “Understanding the Supply Side of For-Profit Colleges: Structural Analysis,” I study the market entry of private for-profit colleges in the United States from 2005 to 2013. I empirically show that for-profit schools in a larger population or higher median income market often choose to enter the market earlier. Moreover, my results reveal that both the federal and state regulations regarding for-profit colleges’ recruiting process have a negative impact on for-profit schools’ payoff; therefore, for-profit
colleges often choose to delay their timing of market entry. Furthermore, my model suggests that the competitive effects from other for-profit and community colleges in the same market are substantial and likely to push back the entry time for new for-profit colleges. As a result, I show that the proposal made by former President Obama regarding free community college has the greatest negative impact on the for-profit college industry compared to existing federal and state regulations.