 Essays on Industrial Organization and Microeconomic Theory  
Mingjian Wang

The first two chapters of this dissertation study the divestment process of the North America asbestos mining industry over 1968-2002, when the industry faced a long-run decline in demand. The third chapter studies a model of a committee of decision makers consulting an expert for more information before choosing over two alternatives.

1 Divestment Dynamics in U.S. and Canadian Asbestos Mining Industry  
(job market paper)

This paper empirically studies U.S. and Canadian asbestos mining firms’ divestment process when the asbestos industry faced a long-run decline in demand. I develop a dynamic oligopoly model of capacity adjustment and exit based on Ericson and Pakes (1995). I calibrate my model to a panel data of the U.S. and Canadian asbestos mining industry’s capacities and exit/stay status over 1968-2002, and evaluate the welfare effect of The Asbestos Mines and Mills Release Regulations enacted in Canada in 1990. I find that the 1990 Regulations decreased producers’ surplus by 0.37% and decreased consumers’ surplus by 0.22%, besides positive health effects. Specifically, through the channel of changing market structure, the Regulations led to a welfare gain of asbestos producers because it hastened the divestment process of the industry, resulting in an increase of 0.39% in industry’s profits.

2 Optimal Divestment Behavior of the North America Asbestos Mining Industry  
(in progress)

This paper examines the optimal divestment behavior of the North America asbestos mining industry from the viewpoint of maximizing industry profit as well as maximizing product market surplus. I calibrate a dynamic oligopoly model of capacity adjustment and exit, using a panel data of the U.S. and Canadian asbestos mining industry’s capacities and exit/stay status during 1968-2002. I solve for the optimal divestment and exit behavior among firms that maximize industry profit and I quantify the magnitude of delays of firms’ divestment behavior. I also compute for the optimal divestment behavior from the perspective of maximizing the total welfare of producers and consumers besides health effects.

3 Endogenous Information Acquisition and Voting Rules

This paper studies a model of a committee of decision makers consulting an expert for more information before voting over two alternatives. The expert makes an endogenous decision as to how much effort to put in to acquire a costly signal whose accuracy is dependent on the effort level. When decision makers observe both expert’s effort level and the realized signal, it is always at least desirable for a modestly biased decision maker to have an expert with an opposite bias or a modest bias in the same direction as an expert with an extreme bias in the same direction. When facing experts with opposing biases, a modestly biased decision maker attains at least the same expected payoff with an expert with a modest opposing bias as an expert with an extreme opposing bias. When decision makers observe
the signal realization but not expert’s effort level, it’s always at least desirable for them to have an expert who is less biased as an expert who is more biased in the same direction. For both settings, unanimity rule can dominate majority rule in terms of more information acquisition and overall welfare of the committee and the expert, and vice versa. I identify some scenarios where unanimity rule dominates majority rule, and vice versa, in terms of more information acquisition and overall welfare of the committee given that the expert bears the cost of signal.