

Marketing Colloquia

Thursday, September 20, 2012

Where: 741 JMHH

When: 3:00 PM to 4:20 PM

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Technology Adoption in Regulated Markets: An Empirical Study of the Southern California Dry Cleaning Industry

ABSTRACT: New technologies are crucial in dealing with the problem of air and water pollution, which is an increasingly important issue with serious health and environmental consequences. However, adoption of environmentally friendly technologies can be slow if the new technologies are not superior in terms of the firms' private incentives, if firms have long equipment replacement cycles, or if firms do not have sufficient information to evaluate whether or not a switch to a green technology is in their private interests. To evaluate these potential explanations and the policies designed to address them, I use an importance sampling technique with simulated maximum likelihood estimation to estimate a dynamic, durable good replacement model with entry and exit for garment cleaning firms in southern California, where alternative cleaning technologies have seen only limited adoption to date. I utilize a unique data set comprised of equipment permitting information, grant recipient lists, and product demonstration attendance lists, and I control for and exploit changing legislation to estimate the effect of fees and incentives on green equipment purchases, as well as the effect of the product demonstrations. The estimated model is used to perform counterfactual analyses to compare the predicted adoption and entry/exit decisions by firms under different regulatory regimes. While the model is tailored to the garment cleaning industry, it can be adapted to other applications involving the diffusion of technologies in regulated industries.