Research Statement

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My research is in applied microeconomics with an emphasis on estimating various externalities, examining the effects of local public policies on growth, the environment, crime and health and studying the impact and regulation of new products. My primary fields include public economics (UNCG) and modern applied industrial organization (Duke; UNC-CH) with secondary fields in labor and econometrics (UVa.).

My current research focus is on estimating possible environmental externalities from leisure events, a topic intersecting areas of public, urban and environmental economics. Using daily data from the Air Quality System database maintained by the Environmental Protection Agency, I estimate the environmental impacts and health consequences experienced by cities that host well-followed and well-attended college football games. Current results for a single regular season indicate a small increase in pollution on and around game days relative to all other non-game days. The estimated health risks of which to cardiovascular health and other health factors are small. Future drafts will increase the sample by using additional air quality monitors and football seasons, include additional measures of air quality and estimate the number of people affected by poor air quality on and around game days. Similar future work includes analyzing possible direct and downwind air quality changes experienced by hosting and surrounding cities during NASCAR events and races. Additionally, I intend to examine possible air quality changes and changes in crime in cities that host internationally popular sporting events, particularly soccer.

Related current work includes analyzing the local economic benefits of hosting the Atlantic Coast Conference (ACC) Men's Basketball Tournament using available data on monthly county-level gross retail sales and tax revenues from 1960 until mid-2005. Time series results indicate a small increase in real county gross retail sales and real tax revenues. However, the magnitudes and signs are sensitive to the exact specification of the treatment and control months as well as the specific hosting county. Hence, the current results suggest the ACC tournament fails to generate large, substantial economic benefits to local firms and government. Future work includes using a panel data framework. The results have immediate local policy relevance due to recent reports on the possible relocation of the tournament to Madison Square Garden in New York City.

My research interests also include examining various topics in the US beer industry, alcohol use and alcohol regulation using empirical techniques that often intersect applied industrial organization and health economics. My current work includes estimating the health externalities and gateway effects of new beer brands—particularly ultra-light beers. The health implications of new ultra-light beer brands are subtle. To existing drinkers, switching to these new brands may offer a positive health effect in the form of reduced calories, carbohydrates and alcohol content, ceteris paribus. To new drinkers, positive health effects could derive from consuming appropriately small amounts of alcohol; however, if consumed in excess, the negative health effects include cirrhosis and an increased risk of various cancers. Other negative health effects include potential gateway effects if drinking increases other risky behavior including tobacco use, drug use and unprotected sex. These gateway

effects could be considerable given the role and nature of advertising in the beer industry and the possible targeting of younger consumers.

Currently, my work analyzes the initial ultra-light beers of Michelob Ultra and Bud Select using Information Resources Incorporated (IRI) UPC scanner data from 2001 to 2006. Specifically, I estimate a multinomial logit discrete-choice demand model and in turn consider counterfactual simulations to evaluate the extent to which Michelob Ultra and Bud Select attracted new drinkers. Counterfactual results based on a single market suggest that 68% of sales of Bud Select and 74% of sales of Michelob Ultra were due to new drinkers. Additionally, new drinkers of Bud Select seemed to prefer larger package sizes—specifically 12-packs over 6-packs—whereas the reverse held for Michelob Ultra. Future drafts look to implement a random coefficients logit demand specification that overcomes the known limitations of the multinomial logit model by allowing greater flexibility in cross-brand substitution patterns. Additionally, I will extend the counterfactual simulations to all markets in the sample and analyze the distribution of consumer characteristics—for example age—to investigate the possible gateway effects of these brands—in particular, the extent to which new ultra-light brands attract new younger drinkers.

Future related work will analyze the IRI household-level data to better describe beer consumption of existing and possibly new drinkers before and after the introduction of Michelob Ultra, Bud Select, any notable new flavored malt-beverages and any new higher-alcohol brands. These simple comparisons when grouped by consumer demographics, such as age, gender and income, may provide considerable insight to the possible gateway effects of new beer brands, especially the targeting of younger consumers.

Additional future related work includes investigating the effectiveness of various regulatory policies of new beer brands including package size restrictions, promotion restrictions and package-specific taxes. I intend to again use the market-level IRI data to estimate a random coefficients logit demand model and in turn evaluate the impact of these policies with counterfactual simulations. These simulations will evaluate the impact on total consumption—further broken down by the collection of brands and package sizes most affected—and the change in private consumer and producer surplus. The focus will continue to be on the introduction of Michelob Ultra and Bud Select but possibly extended to include any notable new flavored malt-beverages and new higher-alcohol brands. Lastly, the policy focus will continue to be on how these regulations change the possible positive marginal health effects resulting from existing drinkers switching in favor of ultra-light brands and the possible negative health effects resulting from new brands attracting new drinkers with an emphasis on the potential targeting of younger consumers.

A final area of future related work involves examining the impact of state regulations of the maximum alcohol content of beer on local industry structure and alcohol-related crime. For example, North Carolina in 2005 increased the maximum allowable alcohol content of beer and other malt-beverages sold in the state from 6% to 15%. I intend to examine how this policy impacted the number of North Carolina breweries, the number of beer brands and local beer prices using data from the IRI, industry publications and ncbeer.org. I also intend to explore how this policy impacted county-level crime, such as traffic accidents and fatalities involving alcohol, using data from the Fatalities Analysis Report System provided by the National Highway Traffic Safety Administration. The impact on local industry structure has policy relevance due to a possible increase in local consumer surplus via an increase in competition leading to lower prices or by the increased availability of new brands. The possible entry of new breweries may also lead to an increase in employment in direct and related industries. The local costs, however, could be considerable if the policy increased alcohol-related accidents and traffic fatalities.