INVITED COMMENTARY

Cultivating New Directions: 
The Changing Role of Tobacco in North Carolina’s Economy

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Citing potential economic harm to the state, the tobacco industry has a history of opposing tobacco control efforts in North Carolina. This commentary discusses the changing role of tobacco in North Carolina’s economy, argues that tobacco control causes little economic harm to the state, and explores development of alternative industries.

Tobacco use is the leading cause of preventable death and disease in North Carolina and nationally [1]. Its use is causally related to diseases of almost all organs of the body, impairs immune function, and can cause adverse reproductive outcomes [2]. In North Carolina, 14,200 people died from smoking in 2014 and an estimated 180,000 youth under 18 years of age now living in the state will die prematurely from smoking [3]. Approximately 30% of all cancers can be attributed to smoking in the state [4]. Tobacco use also incurs large economic costs. In North Carolina, smoking causes $3.8 billion in annual health care expenditures and $4.2 billion in productivity losses [3, 5]. North Carolinians pay an extra $821 yearly in taxes due to tobacco-related government expenditures (eg, Medicaid) [5].

Despite the significant public health harm of tobacco to the state, North Carolina lags behind other states in tobacco use prevention and control activities. Excise taxes are the primary tool governments can use to raise tobacco prices, yet at just 45 cents per pack, North Carolina’s state cigarette excise tax is far below the national average of $1.71 [1]. Higher prices for tobacco are associated with reduced initiation and consumption of tobacco products [6]. Although 33 states require licensing of tobacco product retailers, North Carolina does not [7]. Licensing helps generate fees to support enforcement of laws regarding sales to minors and can facilitate restrictions on the density and location of tobacco retailers. In fact, North Carolina even preempts local governments from placing restrictions on smoking in private work sites and certain public spaces, tobacco advertising, and youth access to tobacco. Preemption undermines county and municipal government authority to enact tobacco policies that are stronger than those implemented by the state [8].

The tobacco industry has a history of partnering with a network of legislators and agricultural interest groups to challenge tobacco control, citing potential economic damage caused by such legislation [9]. Such arguments are based on beliefs that tobacco is central to North Carolina’s economy and that tobacco control causes economic harm. Tobacco is a part of North Carolina’s history and economy, but its role in the state’s economy is evolving, and new industry is taking its place.

North Carolina, the “Tobacco Country?”

Although tobacco has a deep-rooted history in North Carolina, the nickname “Tobacco Country” now appears to be a misnomer for the state. The number of tobacco farms in North Carolina has shriveled from 150,000 farms in 1954, to 18,000 in 1992 and 1,682 in 2012 [10, 11]. The average acreage per tobacco farm has increased, likely a result of the reduction in small tobacco farm operations and consolidation of larger farm entities [12]. Despite growth in size, the percentage of farm cash receipts from tobacco has dropped from 27% in 1983 to 6.8% in 2015 [13, 14]. Although tobacco was the leading cash crop in North Carolina, accounting for $647 million in 2016, it was followed closely by soybeans ($572 million), corn ($491 million), sweet potatoes ($342 million), and hay ($185 million) [13]. The majority (68%) of North Carolina’s total farm income in 2015 came from dairy, livestock, and poultry [13].

The decline in tobacco farms and revenues can be partly attributed to the Tobacco Transition Payment Project, commonly known as the tobacco buyout. The Project provided payments to tobacco farmers from 2005 to 2014 to help them transition from the federally-regulated tobacco quota program. As a result, many tobacco farmers went into retirement or diversified their crops [15]. Among flue-cured tobacco farms in the United States, the number of commodities per farm increased from 3.3 to 4.6 from 2004 to 2007. The number of commodities per farm among burley tobacco farms increased from 2.8 to 4.1 [15]. Although tobacco farmers have diversified, the average revenue per acre of alternative crops is often lower than that of tobacco [16].

Electronically published February 5, 2018.
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North Carolina also ranks first in the United States in total number of tobacco manufacturing jobs, yet this workforce is shrinking [10]. North Carolina is home to R.J. Reynolds Tobacco Company and was home to Lorillard Tobacco Company, which was acquired by Reynolds in 2015. Tobacco product manufacturing employed 6,033 persons in the state in 2013, down from 9,257 in 2003 [10]. Total compensation for tobacco manufacturing employment was $340.9 million in 2013, which accounted for less than 2% of total state compensation for manufacturing employment. Rather than being attributable to tobacco control, the tobacco industry itself has been cited as responsible for the reduction in tobacco manufacturing employment, as mechanization of cigarette production plants and their decision to purchase imported, as opposed to locally grown, tobacco has led to declines in tobacco-related employment levels [17].

**Tobacco Control and the North Carolina Economy**

Despite the relatively modest contribution of tobacco to the state’s agriculture, and even less so to manufacturing employment, tobacco control is perceived as detrimental to North Carolina’s economy. Arguments that tobacco control will result in profound job loss are typically based on studies funded by the tobacco industry [18]. Most tobacco control, however, does not cause economic harm. An economic analysis performed by the North Carolina Department of Health and Human Services found that the Smoke-free Restaurants and Bars Law enacted in 2010 actually had a positive impact on restaurant and bars’ income [19]. Another study projected the impact of raising the minimum age of tobacco sales to 21 years in the United States [20]. Such a policy was estimated to decrease total cigarette sales by an immediate 2%. The authors noted that the gradual aging of young adults would allow local business to adjust to market changes, as was done in the alcohol industry when the legal age was raised [20]. A simulation study examined the economic effects of declining cigarette consumption among all smokers and showed minimal to no impact on tobacco retailer (eg, convenience stores) employment [12]. Research examining the economic effects of higher state cigarette taxes also showed no adverse impact on tobacco retailer business [21].

On the other hand, there are benefits to the economy that can be expected from tobacco control. Taxing tobacco products is one of the most effective ways to reduce tobacco use, and it provides significant government revenue. Although North Carolina has the fifth lowest cigarette tax in the country, the state still received $294.8 million in tax revenues in 2012 [3]. These funds, along with the $141 million in tobacco settlement payments from the Master Settlement Agreement (the largest civil litigation settlement in US history where tobacco manufacturers agreed to make annual payments to 46 states, 5 US territories, and the District of Columbia to compensate for tobacco-related health care costs), are used to support diverse state programs, including grants focused on economic development and job creation in the state. Only a small proportion of these funds are recycled back into tobacco control [22]. In 2017, $4.4 million in state and federal funds were allocated toward North Carolina tobacco control programs, just 4.4% of the Centers for Disease Control and Prevention recommended amount and about 1% of state tobacco-related revenue [1]. This funding is dwarfed by the money that the tobacco industry spends yearly to market tobacco products in the state. Raising the tobacco state excise tax to levels on par with other states and earmarking a portion to tobacco control would reduce tobacco use initiation among youth, promote quitting, and raise other needed revenue for North Carolina.

Brief interventions to encourage cessation can also save the state money by reducing health care costs from treating tobacco-related illnesses. Brief, one-time tobacco counseling is estimated to save $65 per smoker counseled [23]. Repeated counseling can expect savings of more than $500 per smoker. Despite expected savings, the state does not adequately invest in these services [1, 23, 24]. North Carolina provides just $0.97 per smoker in funding for QuitlineNC (the state’s smoking cessation support program), which is below the national average of $3.46 for similar programs [1]. Primary and secondary prevention can be cost-effective since the management of tobacco-related diseases are expensive due to high cost therapies and the often chronic nature of such diseases [25].

**New Industry**

New industries have developed in North Carolina. The “Big Five” (ie, technology, pharmaceuticals, banking, food processing, and vehicle parts sectors) rose in the late 20th and early 21st centuries as tobacco declined [26]. An important change in these industries is the labor requirements. Tobacco was dependent on low-cost labor. The “Big Five” industries require more skilled and higher educated workers, especially in the technology, pharmaceutical, and banking industries [26]. This has led to an increase in the proportion of North Carolina workers holding positions that require higher education degrees and a decrease in those holding blue collar occupations [26]. Investment in community colleges and workforce training may help prepare or retrain residents who previously might have found work in the tobacco industry for jobs in new industries.

Some of the features of North Carolina that served the tobacco industry can easily be repurposed for new industry. For example, the state has excellent soil for producing tobacco, but this same soil is also optimal for other crops, such as sweet potatoes, cotton, and corn. In fact, North Carolina is the top producer of sweet potatoes in the country [13]. Cash farm receipts for fruits and nuts increased over the past few years in the state, suggesting opportunity for further growth in these commodities [13]. Meanwhile, agriculture technology represents a nice blend of the state’s older and new leading industries. Farmers with experience
in tobacco production could be good resources for collaborating in the development of innovative technologies, given their familiarity with local agriculture. Investment in research and technology that supports lucrative crop diversification will help North Carolina continue to transition away from tobacco.

Growth in the health care industry can also be expected. A state with above-average smoking rates and significant tobacco-related health costs will place large demands on the health care system [1]. Durham, North Carolina, or the “City of Medicine,” has already declared itself a leader in health care and research. This branding is a far cry from its history as the epicenter of tobacco. Durham was home to the American Tobacco Company, the largest manufacturer of cigarettes in the United States in the late 19th and early 20th centuries [27]. The American Tobacco Company, founded by James Buchanan Duke, held a monopoly over the US cigarette market until the company was divided into separate firms after the 1911 Supreme Court antitrust decision [27]. Durham’s turn toward health care was a strong economic decision for the city: Durham has more than 300 medical and health-related companies and practices that have an annual payroll of over $1.5 billion [28]. A robust health care system, as well as a sizable health care workforce, will be needed statewide. Health care professionals are particularly needed in rural and less-developed areas as physicians and other health care professionals tend to cluster around universities or cities [29].

Conclusion

North Carolina is disproportionately burdened by tobacco use and the state lags behind in key areas of tobacco control. Tobacco’s role in North Carolina’s agriculture and manufacturing sectors has been declining due to changing state and federal regulations as well as automation and outsourcing of tobacco farming. As a result, small tobacco farms are less common in the state and other commodities have become more dominant. Despite tobacco industry claims otherwise, enhancing state tobacco control is unlikely to significantly harm the economy and provides health and economic benefits. Raising the tobacco excise tax and increasing funding for tobacco control programs could raise government revenue and reduce tobacco-related health costs. As industries change in the state, North Carolina should consider the education and training needs of new industry professions and their impact on all North Carolinians. 

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Acknowledgments

Potential conflicts of interest. Dr. Mills receives funding from the Cancer Control Education Program at the UNC Lineberger Cancer Center. Funding for Dr. Ribisl was provided by the University Cancer Research Fund to the UNC Lineberger Comprehensive Cancer Center. Dr. Ribisl serves as an expert consultant in litigation against tobacco companies. All other authors declare no conflicts of interest.

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