

The effects of tobacco tax and anti-smoking policy have been discussed widely in the previous studies. Taiwan is not an exceptional case. Based on the latest report of Ministry of Health and welfare (MHW) in 2016, tobacco-related illnesses deprive at least 20,000 people of lives annually in Taiwan. The estimated national medical expenditure spent on tobacco-related diseases is 6%-15%, which is a huge burden on the national financing for medical care. Therefore, the major objectives of this study are to evaluate both short-term and long-term effects of a series of government pricing and regulation policies for cigarette smoking from 2006 through 2014 on tobacco consumption in Taiwan. This study uses a nationally representative repeated cross-sectional data in Taiwan, called "Survey of Family Income and Expenditure (SFIE)", from 2006 to 2014, when tobacco surcharge has been raised twice and stricter amendment of anti-smoking policy has been implemented. To estimate the effects of policy in different time periods, this study adopts the dynamic linear model and estimates the parameters by Bayesian method with Markov chain Monte Carlo (MCMC) techniques. This study found that household with lower income, lower education level, higher alcohol consumption are more likely to smoke in Taiwan. Also, males, living or working in urban areas tend to smoke more. As regards policy impacts, the results of this study show that raising tobacco surcharge in 2006 and 2009 does not seem to last long and it could not reduce tobacco consumption anymore after 2012. Further, stricter indoor no-smoking policy would not keep reducing tobacco consumption in longer periods. Rather, more restrictive policies for on smoking outdoor might be effective to encourage more people to attend cigarette cessation program, which would have negative contemporaneous and cumulative effects on tobacco consumption.