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Factors that Influence Sales of Forestry-Related Specialty License Plates in Southern United States

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ABSTRACT

In recent years, vanity license plates have become an increasingly popular way to raise awareness and show support for a myriad of issues with which the plate is linked. Several states along with various forestry education provider organizations have developed a forestry license plate. Vehicle owners can purchase the plates to show their support towards forestry by buying that license plate, which generates revenue for the provider organization. Using county level data from 4 states in the United States, a statistical model was developed examine explanatory factors of forestry based specialty license plate sales in 2014. Using linear OLS model and elasticity model, we observed that the significant predictor variables are—income, population density, area of county in acres, acres of timberland in the county, percentage of people who are 65 or older, and the number of people associated with forestry related jobs. All these variables are found to be positively related to the increase of plate sales. After a certain level, plate sales started to decline with increasing number of people associated with forestry related jobs.

WHY LICENSE PLATES ARE INTERESTING?

- It generates revenue.
- It helps spread the message.
- It’s a way to identify peoples’ interest.
- It can act as an indicator of peoples’ awareness level.

OBJECTIVES

- To observe whether
- certain county characteristics causes change in the plate sales.
 - certain population characteristics causes change in the plate sales

METHODOLOGY

$$FLP_{ct} = f(X_{ct}, Y_{ct})$$

Where,
FLP = forestry based specialty license plates sold in a county in the period t
X_{ct} = characteristics of the county in the same period
Y_{ct} = characteristics of the population within that county in that period



GENERAL STATISTICS

State	No. of counties	No. of plates sold	Average sale
Alabama	67	3475	51.87
Florida	67	3382	50.48
Mississippi	82	743	9.06
Texas	254	214	0.84

WHICH FACTORS INFLUENCED THE SALE?

Plate sales increase was associated with...

- 1) Income – 1 more with every thousand dollars rise in income per capita
- 2) Population density – 1 more with 20 more people in 1000 acres.
- 3) County area – 1 more with 100,000 more acres in county area.
- 4) Timberland area – 1 more with 9,000 more timberland acres.
- 5) %65 or older – 1 more with every 1.37% increase in people with 65 years or older.
- 6) Forestry employment – 1 more with 50 more people in the forestry employment.

DISCUSSION AND CONCLUSION

In this paper, we tried to identify the factors that influence indicators of peoples’ decision to purchase forestry special license plates. Plate sales are likely to be positively correlated with the overall revenue generated by the organizations that supply it. Southern United States has a landscape filled with timberland and people here interact more with forestry activities. This geographic region has potential that can be utilized to support the forestry based organizations more than it already is. It was seen in our research that sometimes (in Alabama and Texas), income per capita didn’t play the lead role in plate sales. There are other variables at work; variables like peoples’ association with timberland and/or forestry employment (in Mississippi and Texas). Those people are likely to be interested in supporting forestry based organizations and more interaction with them is recommended to forestry officials. Further research can be done in this regard to determine whether factors like focus group meetings among landowners and forestry organizations, engaging in other natural resource based activities have any influence on plate sales or not or could be used to entice purchases of specific plates. An additional unresolved issue at this stage is how sensitive consumer demand is to the price of the plate. A larger, multi-state analysis that reflects more variation in plate prices would permit one to address both of these issues substantively.

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