

Where Have all the Teen Drivers Gone: Problems with Driver License Data in North Carolina and Beyond

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Raleigh, NC
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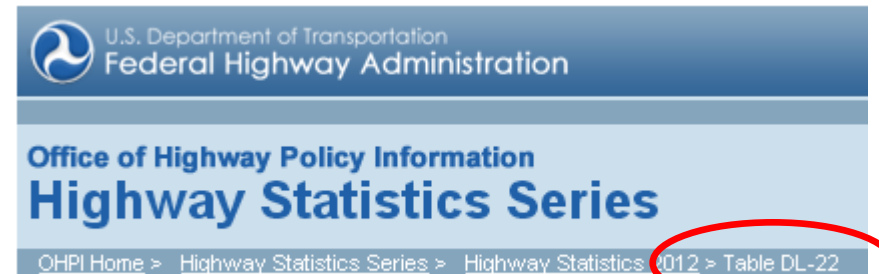
Exposure data critically important

Rates require an appropriate denominator

Population is poor exposure measure for teen drivers

Counts of licensed drivers only other broadly available measure in U.S.

But ...

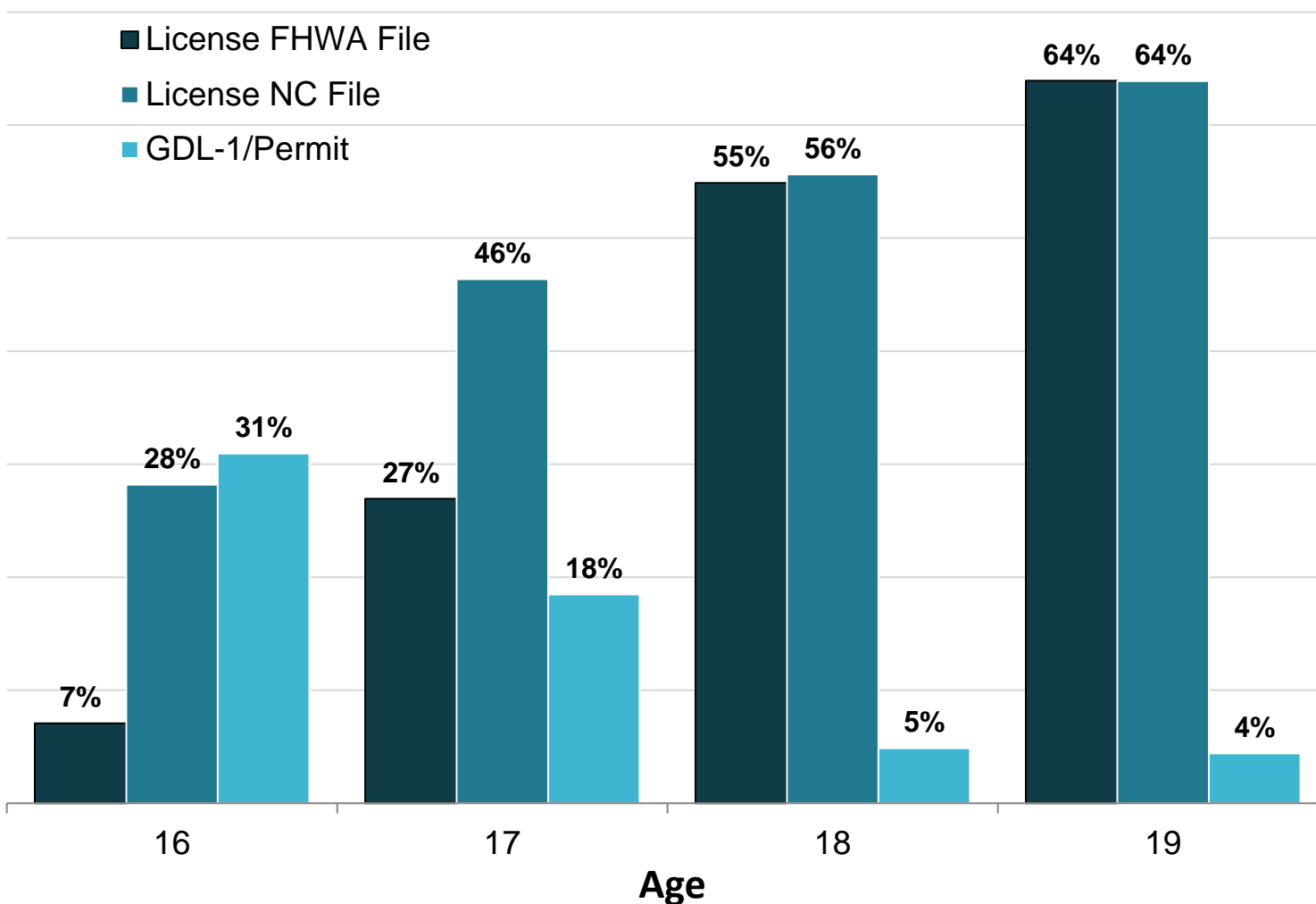


we have a serious problem!



What % of teens licensed to drive in NC?

2011





USA Today, March 1&2, 2005



The hazards of teen driving

SEND TO A FRIEND ☐ CLOSE ☐

DAY 1

DAY 2

► INTRODUCTION

► NOV. 1, 2003

▼ CRASH RATES BY STATE

► AUDIO & PHOTOS

► LAWS BY STATE

Crash rates by age

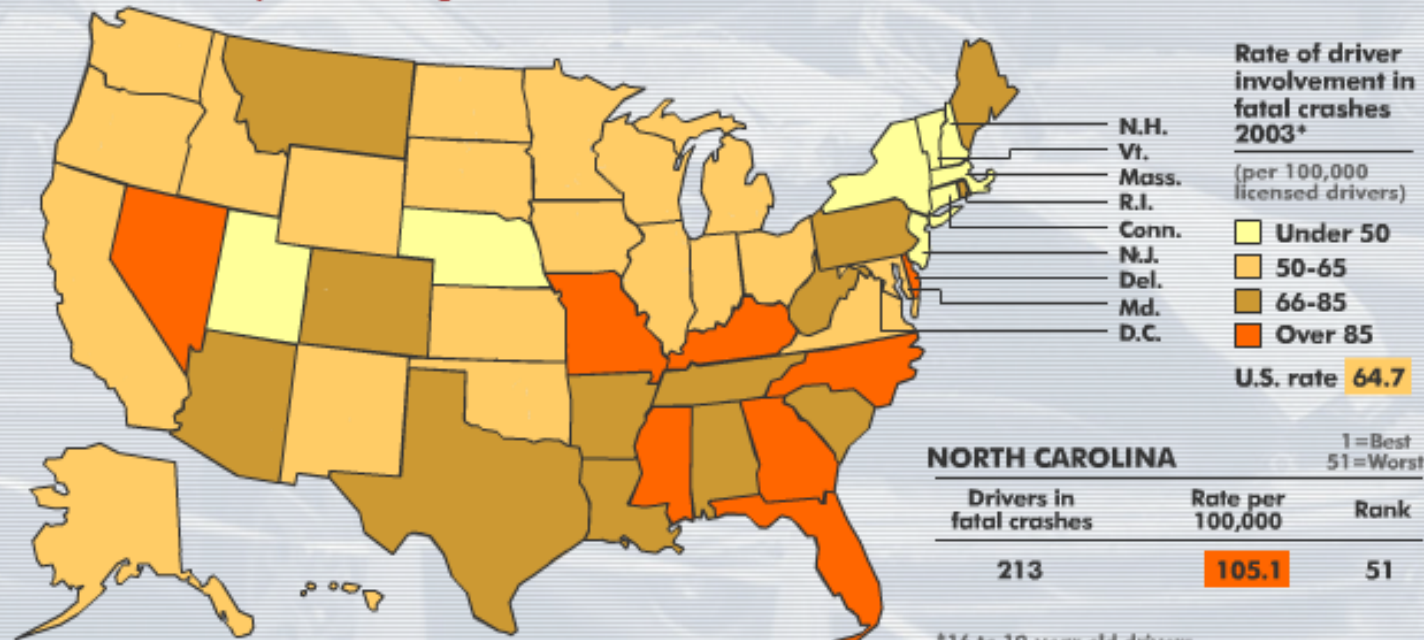
A deadly day

State rankings

One family's story

License programs

The number of drivers age 16-19 that were involved in fatal crashes in 2003 and the rate per 100,000 licensed drivers.
Roll over a state shape or name to get details for that state.



*16 to 19-year old drivers

Note: Includes all types of motor vehicles. Ranks based on more precise number than shown.

▲ CREDITS



NC fatal crash involvement rate

allegedly 62% higher than nation as a whole

U.S. rate 64.7		
NORTH CAROLINA		
1 = Best 51 = Worst		
Drivers in fatal crashes	Rate per 100,000	Rank
213	105.1	51
*16 to 19-year old drivers		
Note: Includes all types of motor vehicles. Ranks based on more precise number than shown.		



Investigation

NC had among best GDL in nation

Numerous studies indicated success

How could this be?



Finding

FHWA database of licensed drivers undercounted
licensed 16- & 17-yr-old drivers in NC

... **by about 50,000 a year!**

Other minor errors

e.g., out-of state driver crashes included in numerator



National Safety Council, June 27, 2005:

NC deadliest in the nation for teenage drivers!



**For Immediate
Release,**

6/27/2005

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Communications Director
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kathy.lane@nsc.org

Physician Group & National Safety Council Issue Chilling List of Deadly States for Youth-Related Driving Fatalities

Write Prescription to Make Roads Safer for Teen Drivers

Chicago, IL – The physician-led traffic safety advocacy group called End Needless Death on Our Roadways and the National Safety Council today issued a ranking of the deadliest states in the country for youth-related driving fatalities. The list is based on the percent of young drivers involved in fatal crashes adjusted by each state's 16-20 year-old driving population.

NHTSA Issues Erroneous Young Driver Crash Report, July 2006



DOT HS 810 596

A Brief Statistical Summary

July 2006

16-Year-Olds have Highest Fatal Crash Involvement Among Young Drivers

From 2000 through 2004, 16-year-old drivers had a higher involvement rate in fatal motor vehicle crashes than any other age among young drivers (age 16 through 20). These data are from the National Highway Traffic Safety Administration's Fatality Analysis Reporting System (FARS). Previous reports based on FARS data have shown that young drivers as a group have the highest involvement rate in fatal crashes when compared to all other age groups (DOT HS 809 919).

Table 1 shows that in 2004 the involvement rate per 100,000 licensed drivers was highest (76.99) for 16-year-old drivers and lowest (54.21) for 20-year-old drivers, as they are in each of the four preceding years. Rates for 17- and 18-year-old drivers are close to

16- to 20-Year-Old Drivers Involved in Fatal Crashes by State, Age and Rate* - 2004

State	Driver Age									
	16		17		18		19		20	
	Drivers	Rate*	Drivers	Rate*	Drivers	Rate*	Drivers	Rate*	Drivers	Rate*
New York	11	32.99	57	55.48	68	50.33	54	35.23	61	37.57
North Carolina	42	433.48	53	145.87	70	94.38	76	86.45	65	72.14



IHS stops using FHWA driver licensing file, June 2006

6 Status Report, Vol. 41, No. 5, June 13, 2006

Unreliable FHWA data prompt Institute to stop use and warn others

"Garbage in, garbage out" holds true when it comes to the data used to assess crash risk and track changes in crash rates over time. Unreliable driver licensure data published by the Federal Highway Administration (FHWA) are being used by researchers, reporters, and others. The resulting conclusions follow the "garbage in, garbage out" rule. They're erroneous.

For example, last year *USA Today* ranked states by crashes per licensed driver 16-19 years old. North Carolina came out worst. When researchers in this state disputed the ranking, the Institute began an inquiry that not only sided with the state researchers but also uncovered pervasive problems with FHWA's licensure data.

These discrepancies prompted Institute researchers to compare FHWA's licensure data with data obtained directly from six states. The results confirm the problems because data from only two of the states closely resembled what FHWA was reporting. In the other states there were numerous and sometimes large differences. FHWA generally undercounted licensed drivers.

"We've stopped using these data in our research, at least for now. It's a hardship because it isn't practical to go state by state for data to conduct each individual study. We need the federal database, but we urge other researchers to beware until FHWA's reporting problems are fixed," McCartt says.





WalletHub anoints Utah *safest*, Indiana *worst* for teen driver safety, June 2014

2014's Best and Worst States for Teen Drivers

by John S Kiernan

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Least Teen Driver Fatalities per Licensed Teen Drivers

1. Utah
2. Delaware
3. Connecticut
4. Vermont
5. Washington



Most Teen Driver Fatalities per Licensed Teen Drivers

46. Montana
47. North Dakota
48. New Mexico
49. Kentucky
50. Indiana

Best State vs Worst State = 33X Difference



Why are all these findings wrong?

FHWA license data highly erratic (unreliable)

Demonstrably wrong in many cases (invalid)

Hence rates/licensed driver often wrong



Where did this problem come from?

Changing meaning of “license” in GDL era

Originally, license = “unrestricted”

Drive unsupervised from 5 a.m. – midnight*

*Adopted 1989



FHWA Changes since 2005

Some effort to address GDL licenses

If anything, made matters worse

Some states now counting Learner Permits

Others still not counting Intermediates

Dramatic changes in what *some* states report

But no clear improvement in accuracy

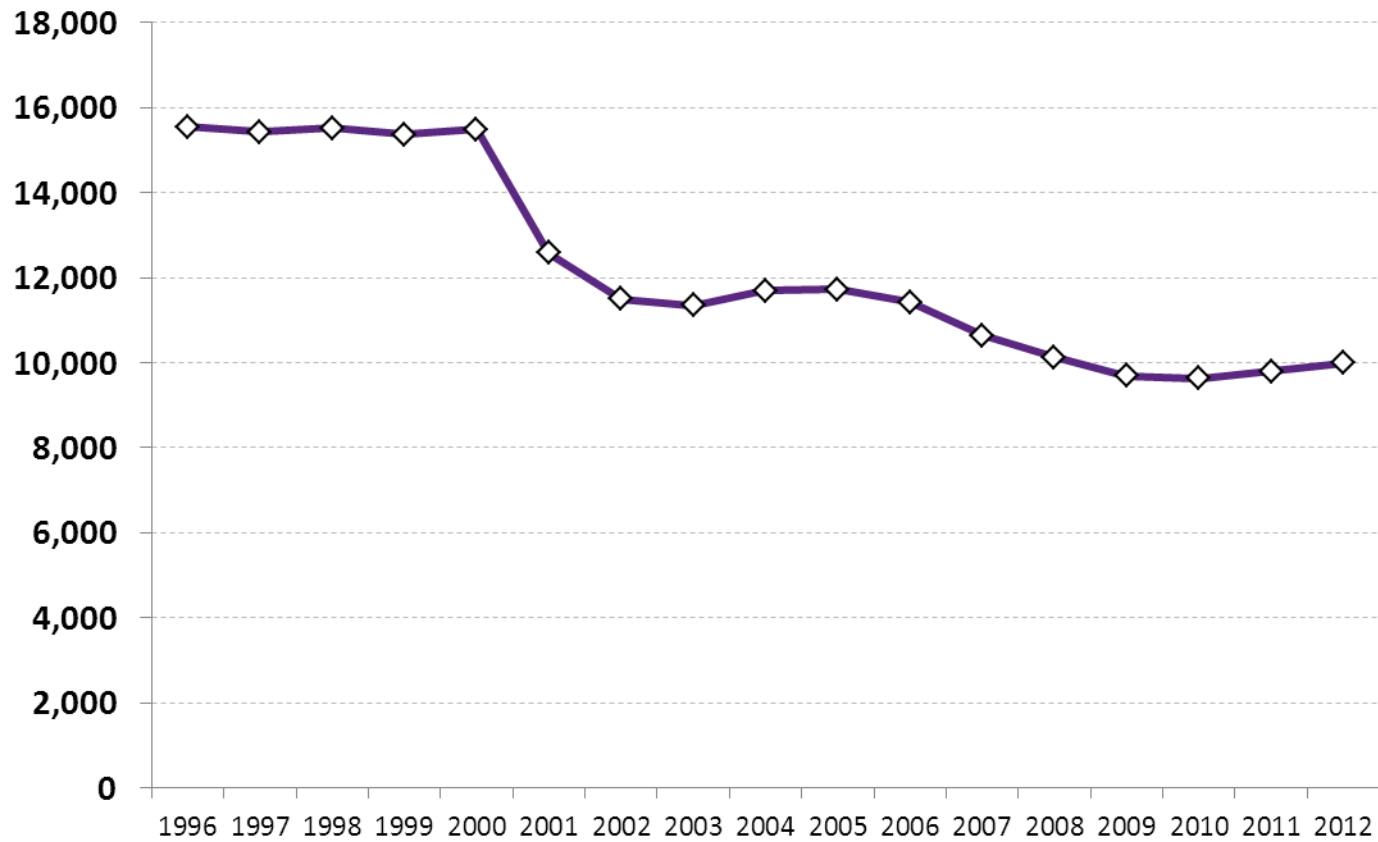


Licensed 16-year-old drivers, 1996 - 2012

Some examples ...

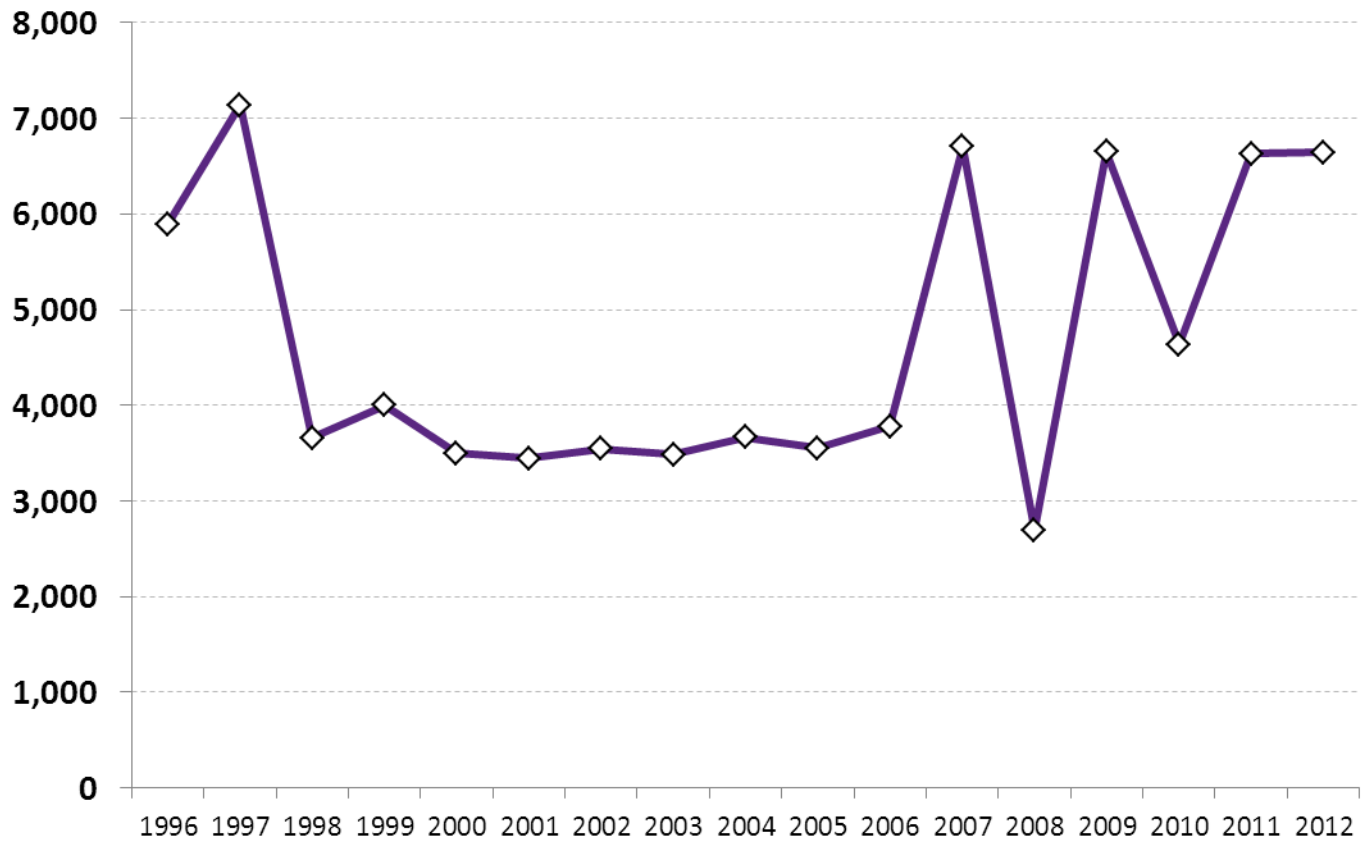
Idaho

16-year-old licensees



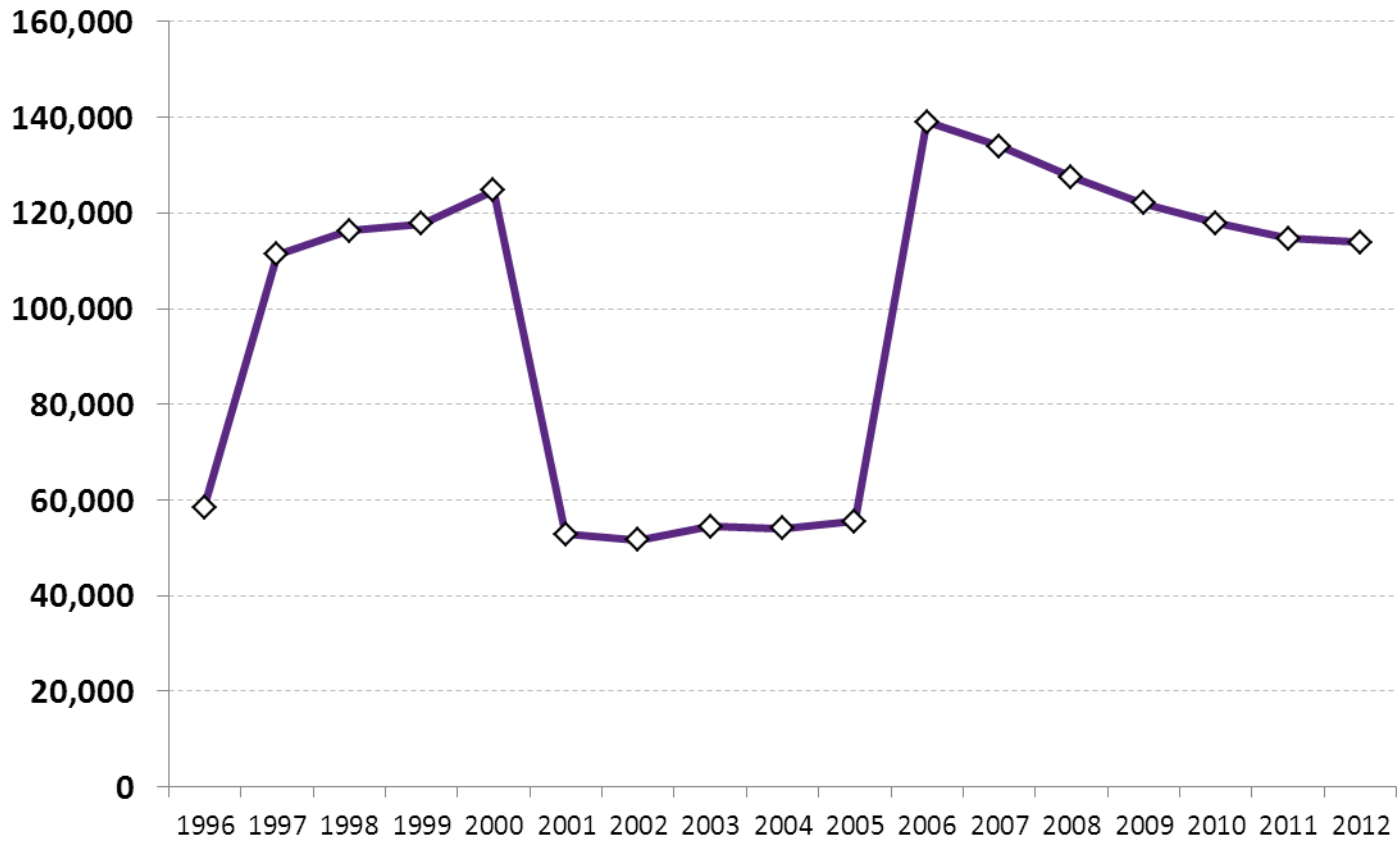
Delaware

16-year-old licensees



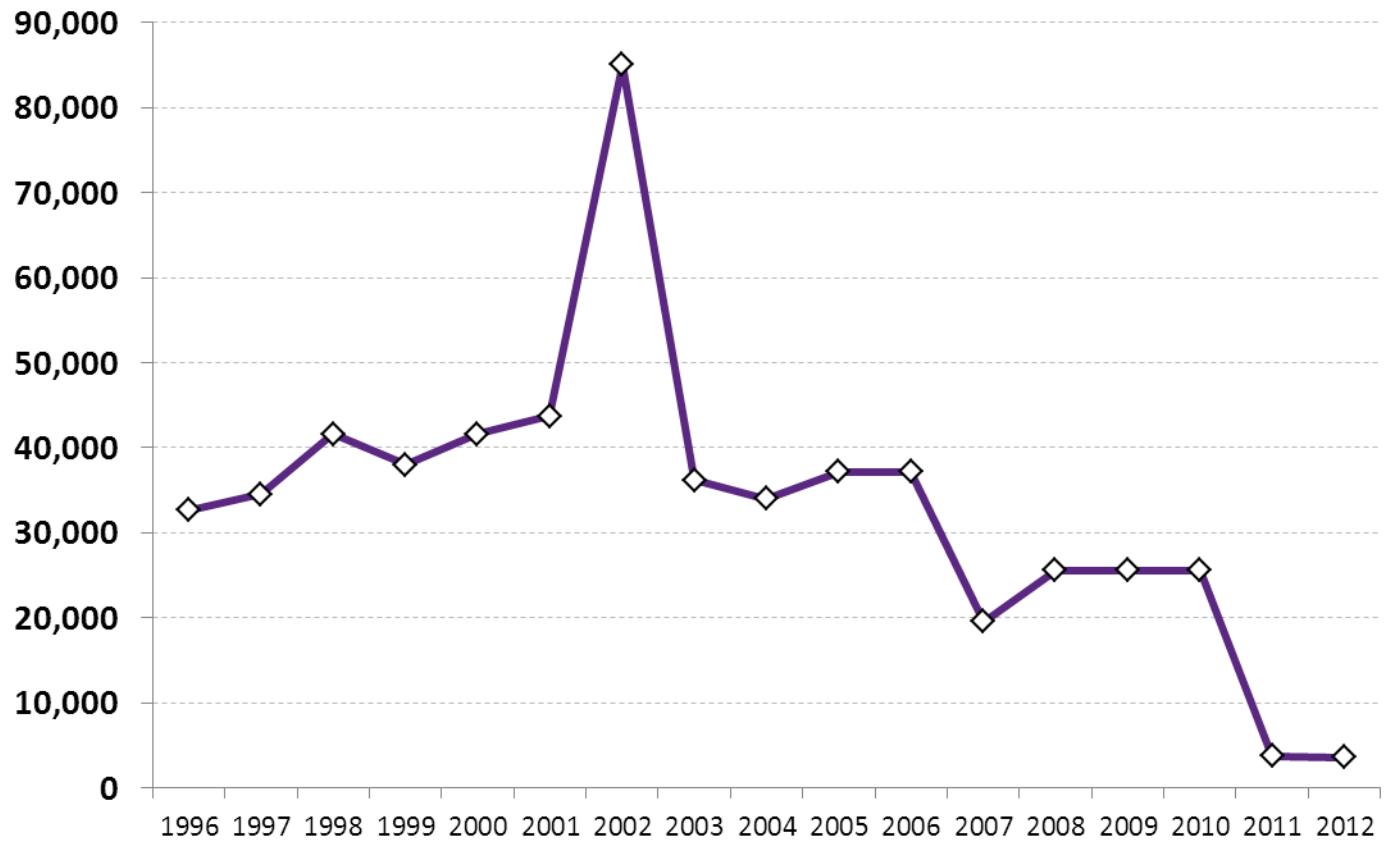
Florida

16-year-old licensees



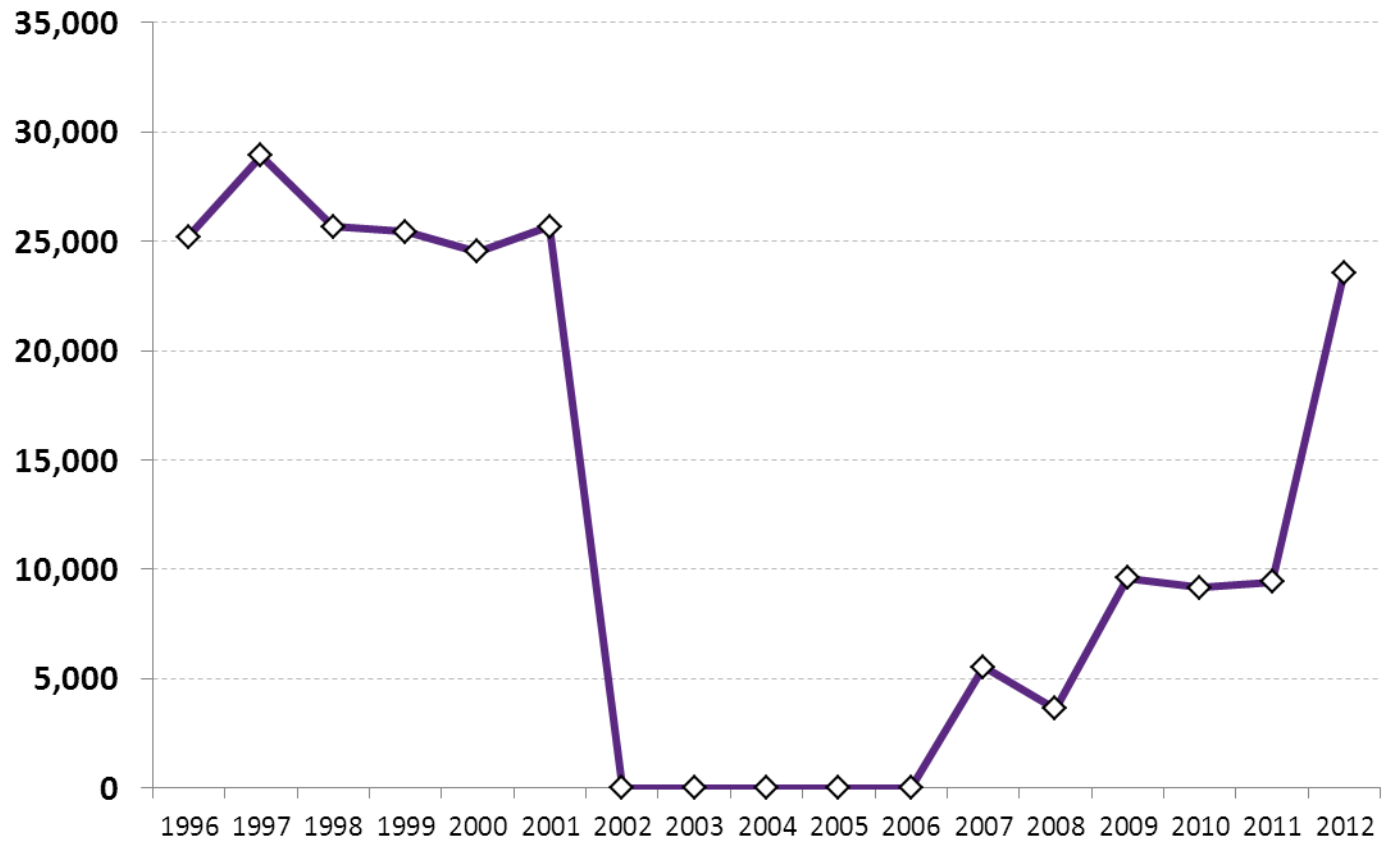
Indiana

16-year-old licensees



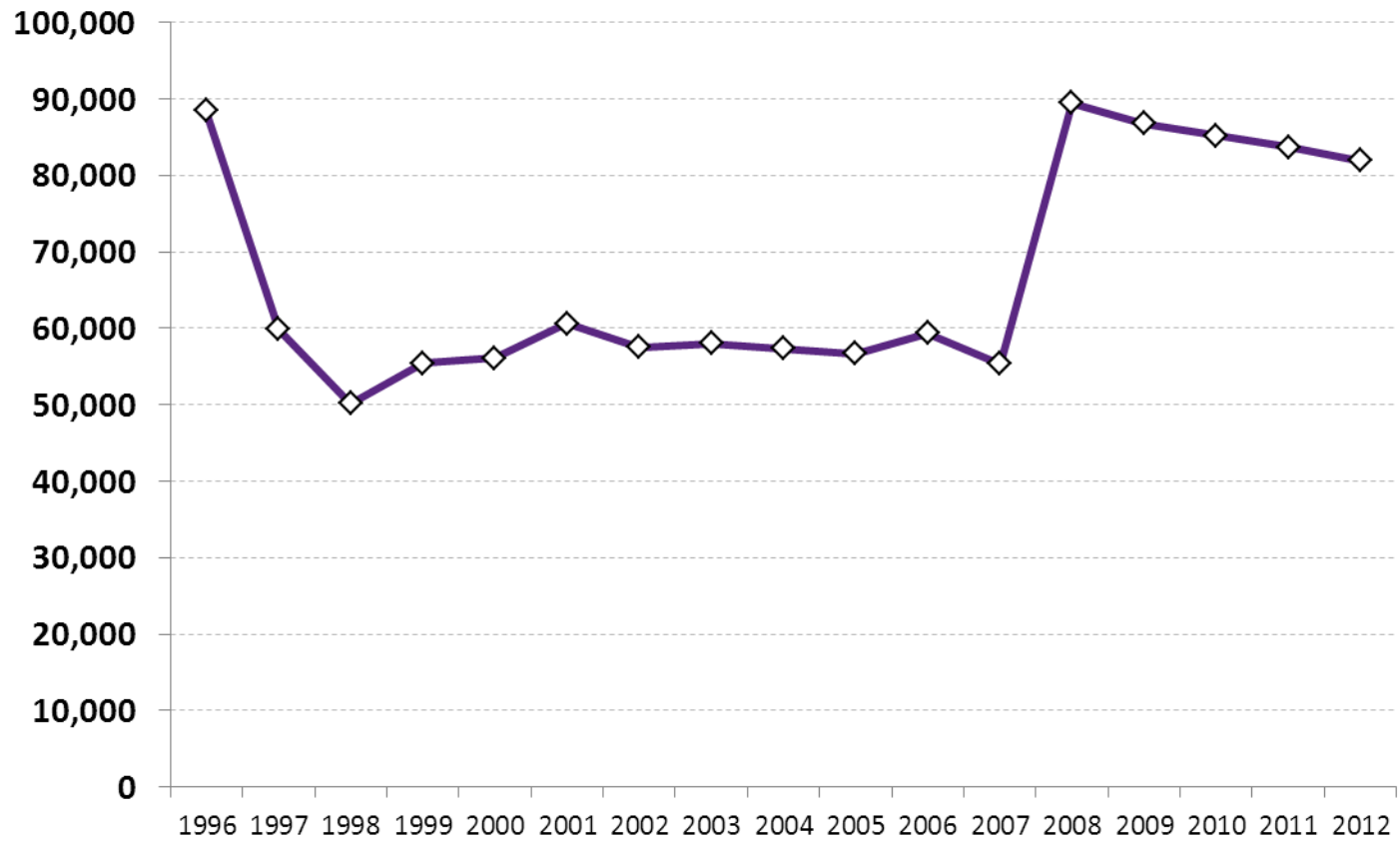
Louisiana

16-year-old licensees



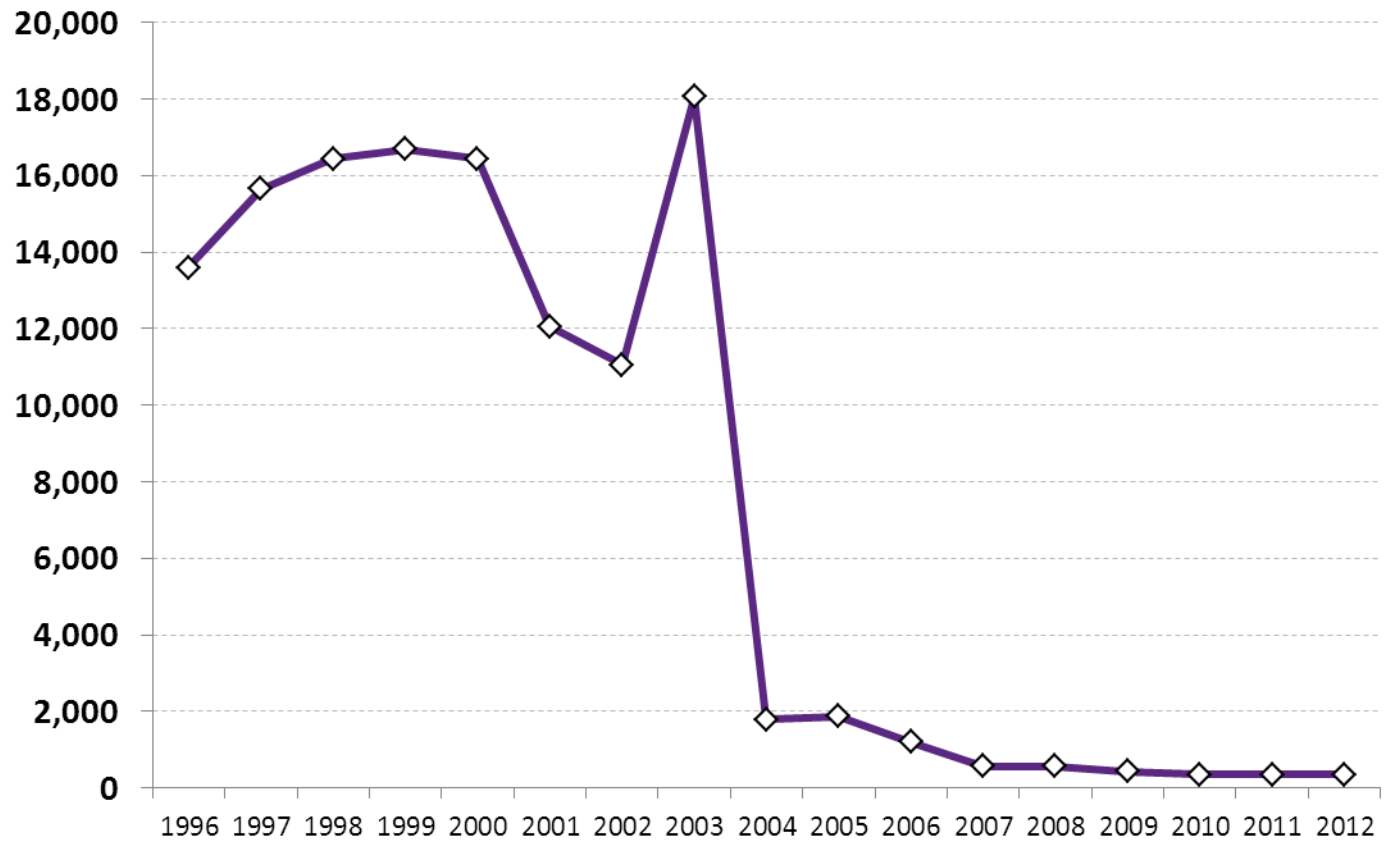
Michigan

16-year-old licensees



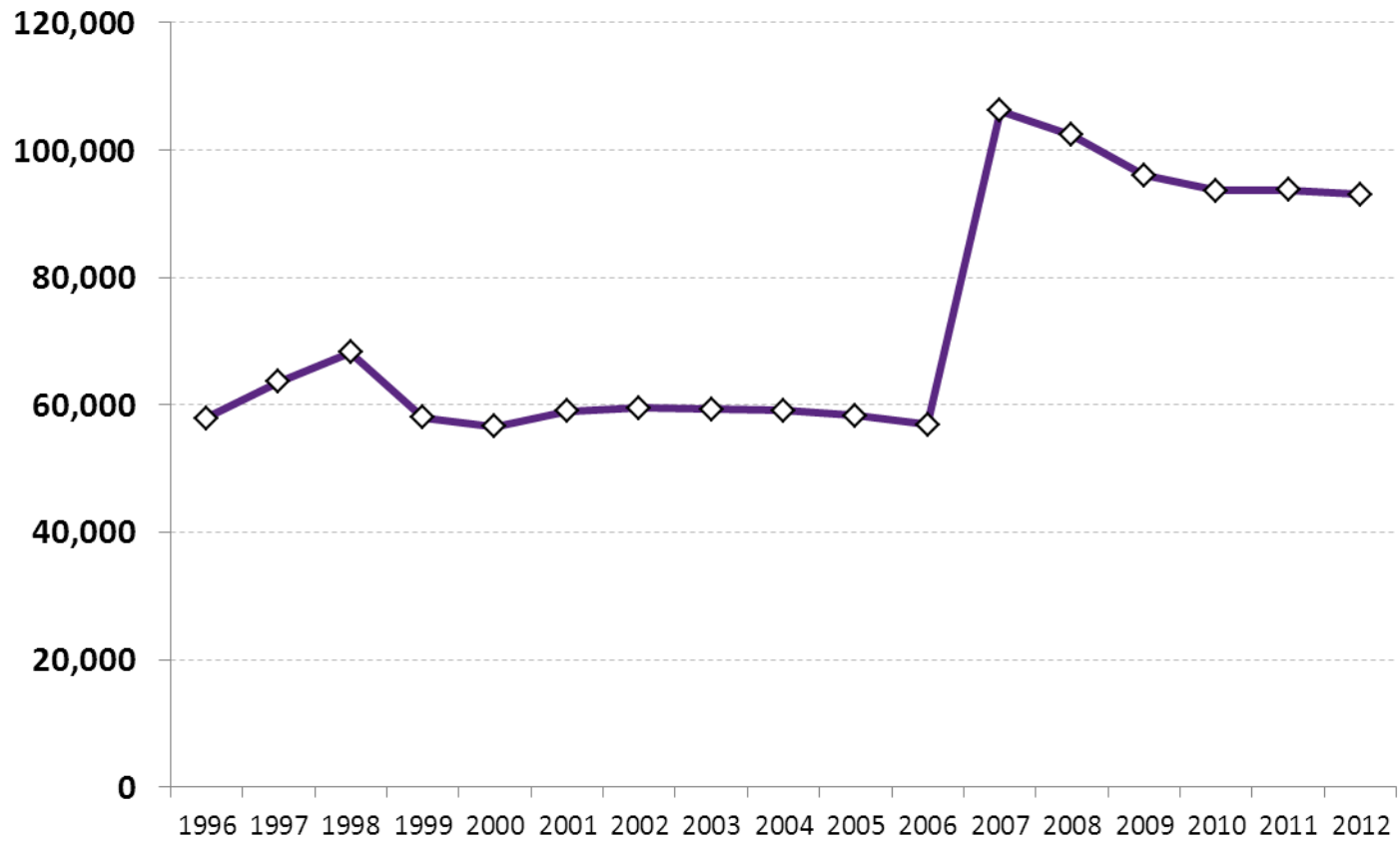
New Mexico

16-year-old licensees



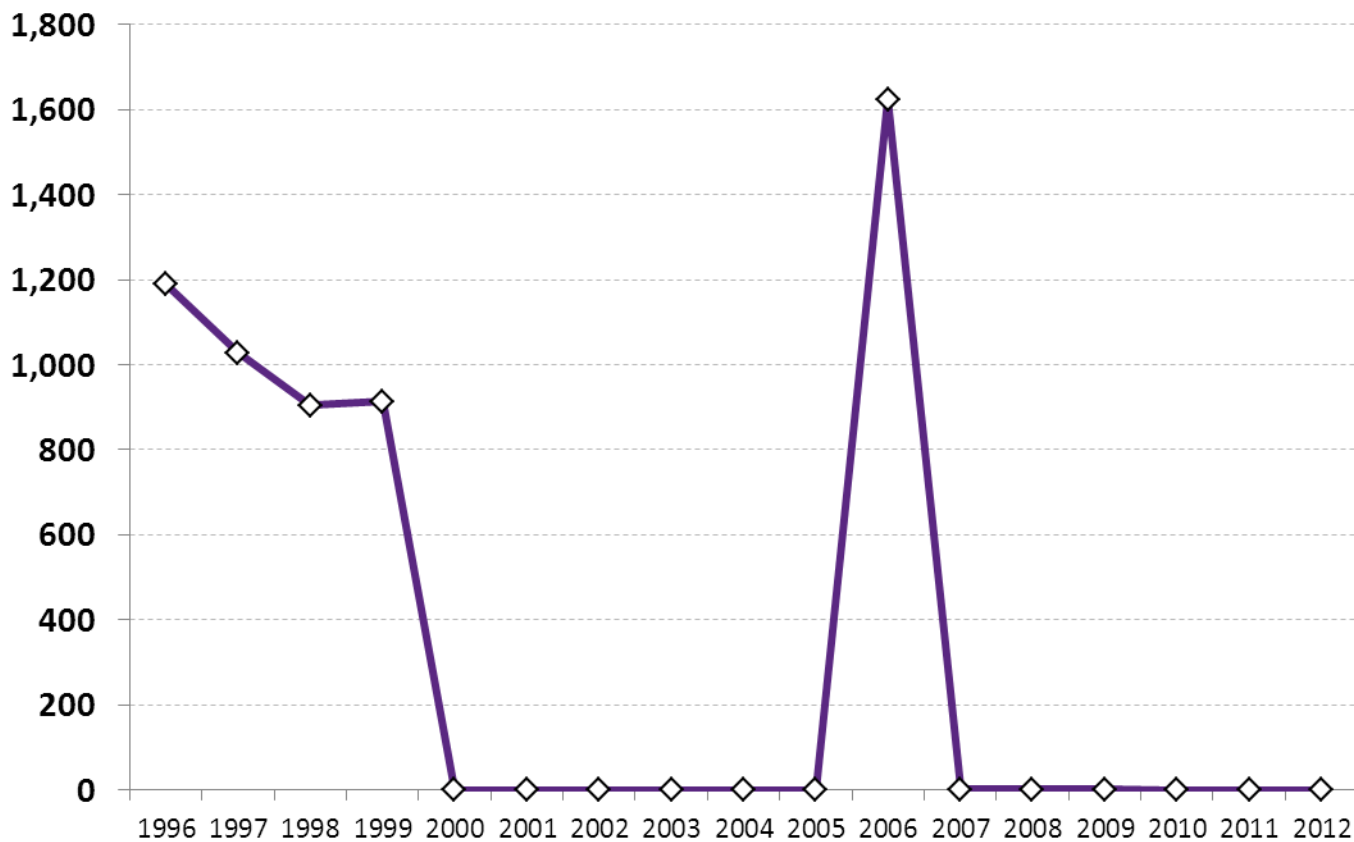
Ohio

16-year-old licensees



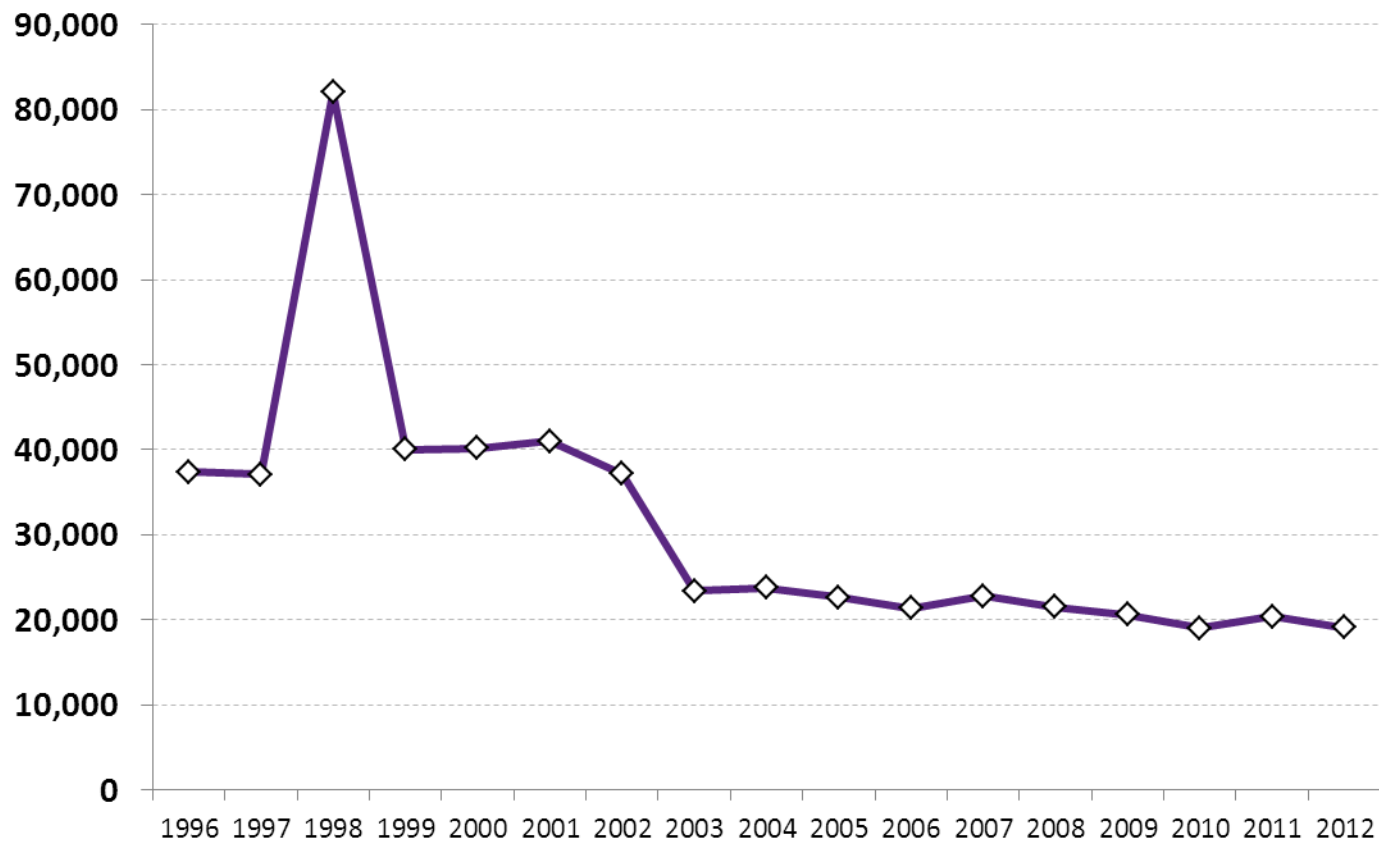
Rhode Island

16-year-old licensees



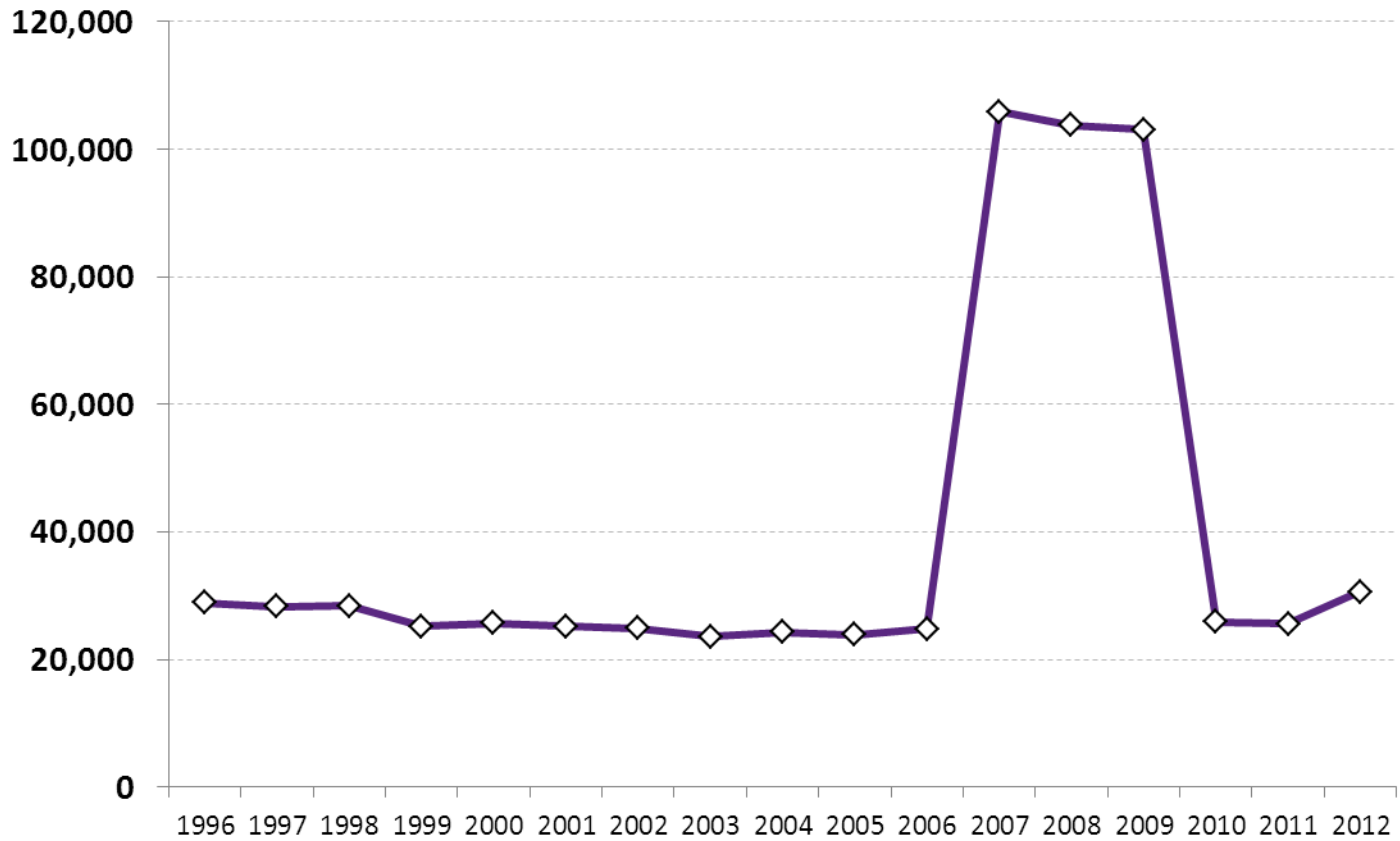
Virginia

16-year-old licensees

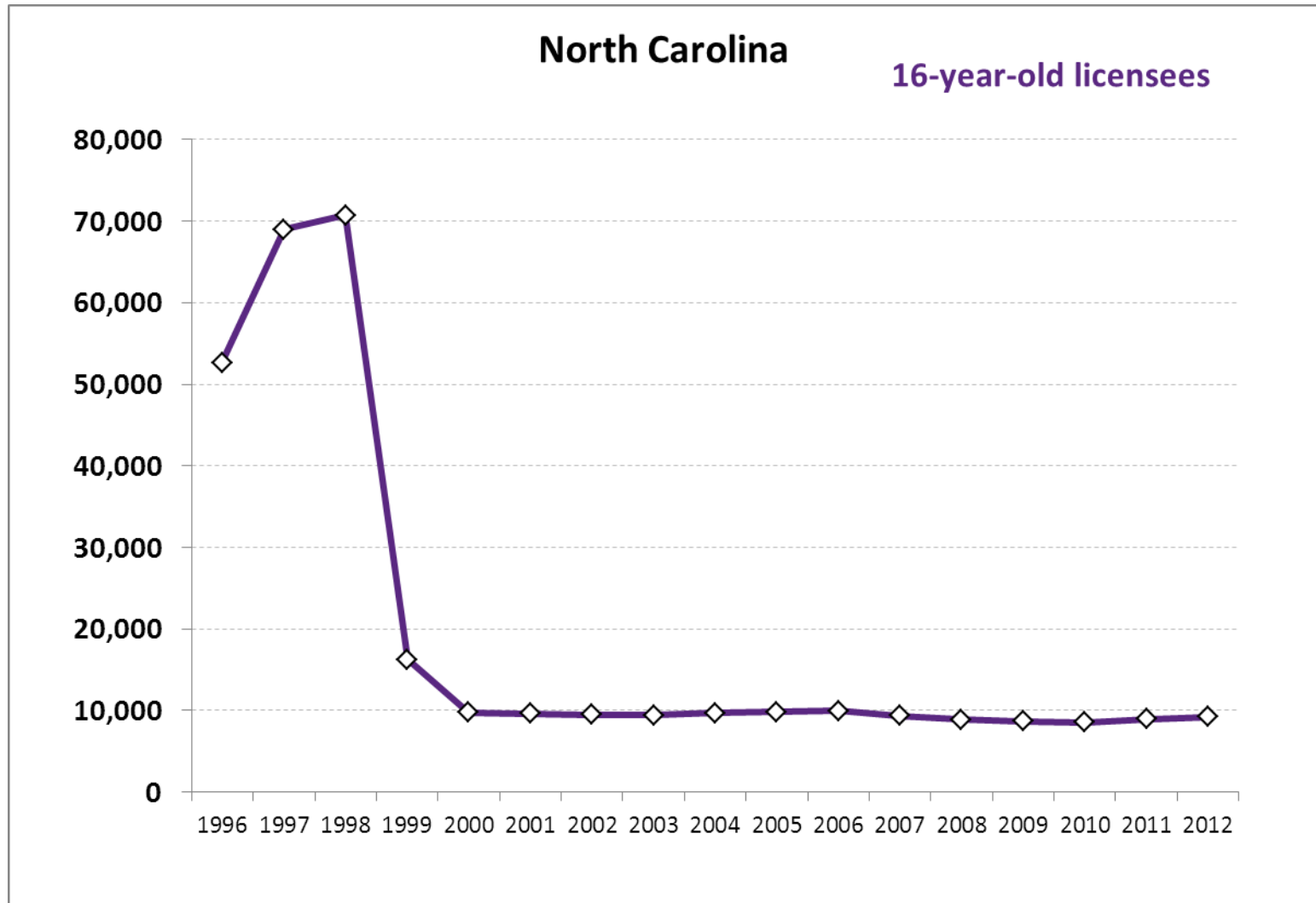


Utah

16-year-old licensees

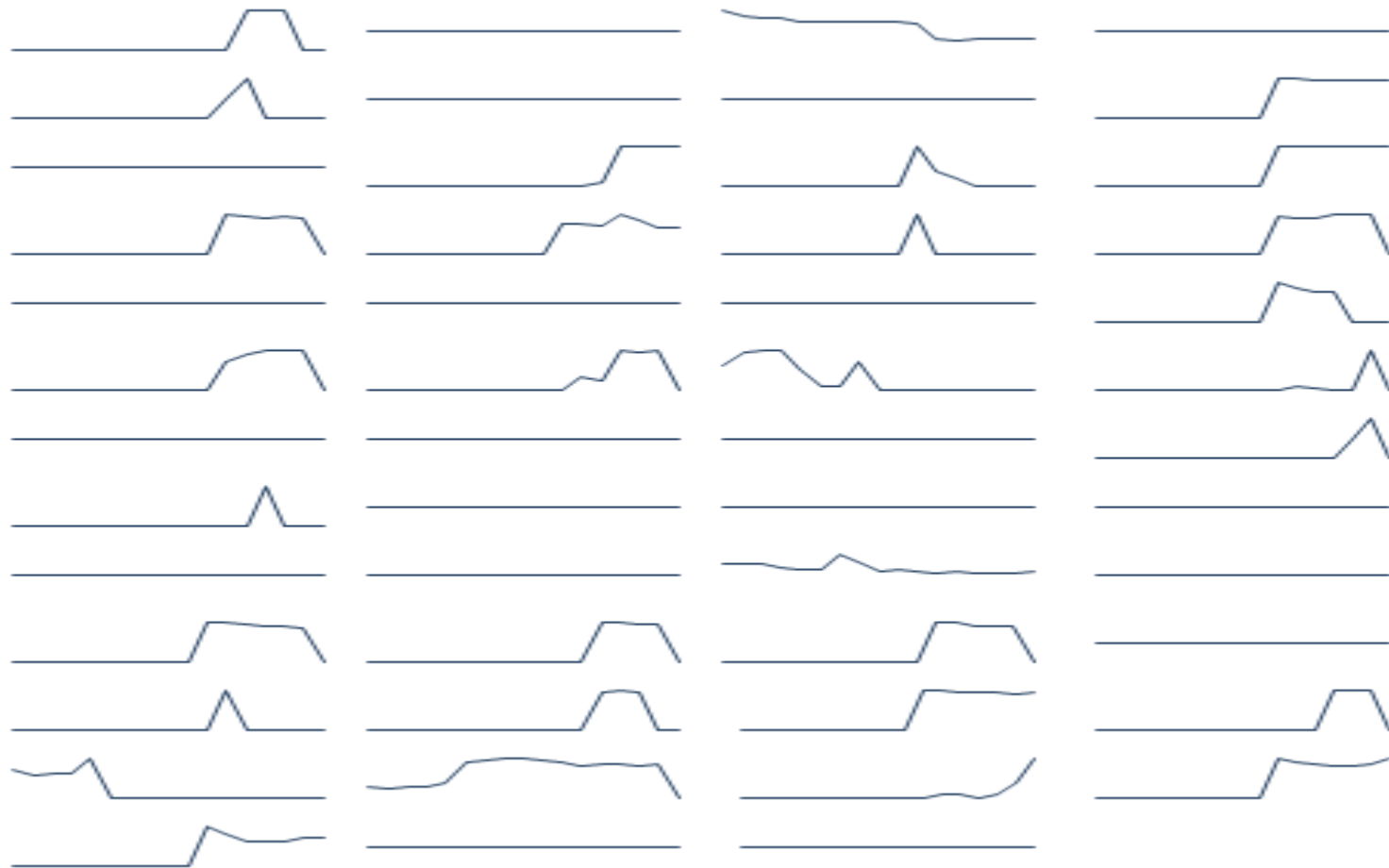


North Carolina – Reliable, but wrong!

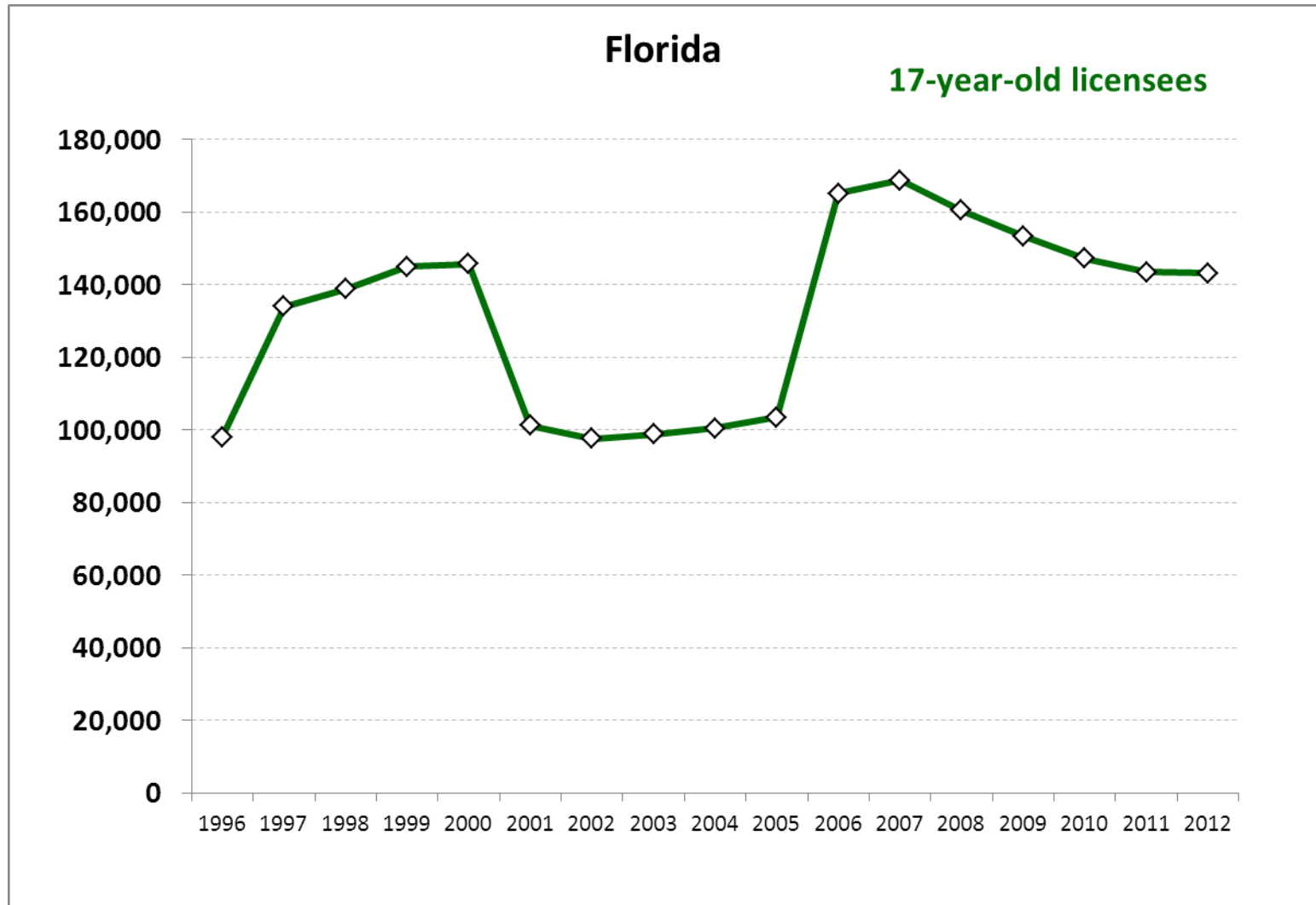




15 yr-old drivers, 1996-2012: 50 states & DC

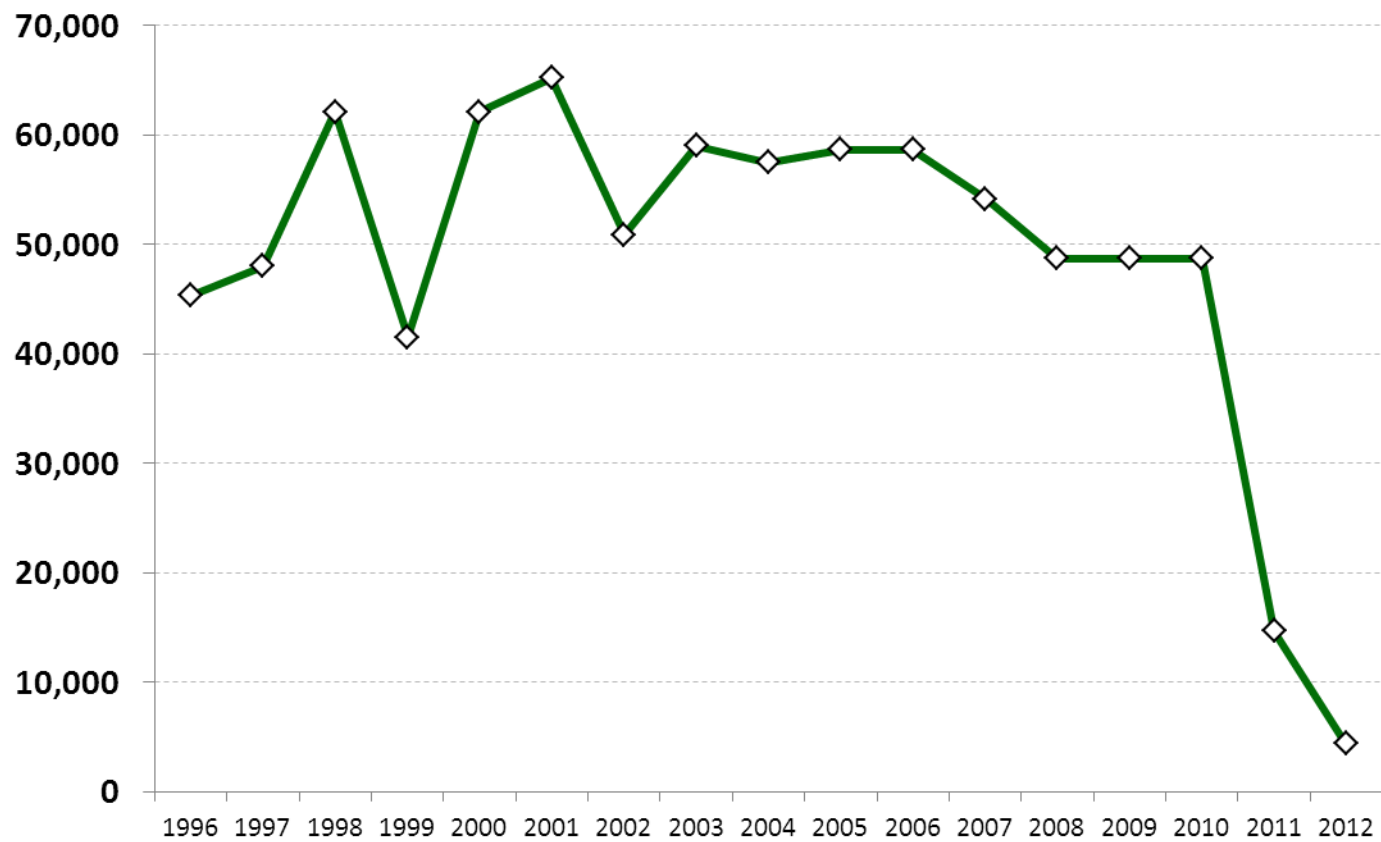


17 yr-olds ...



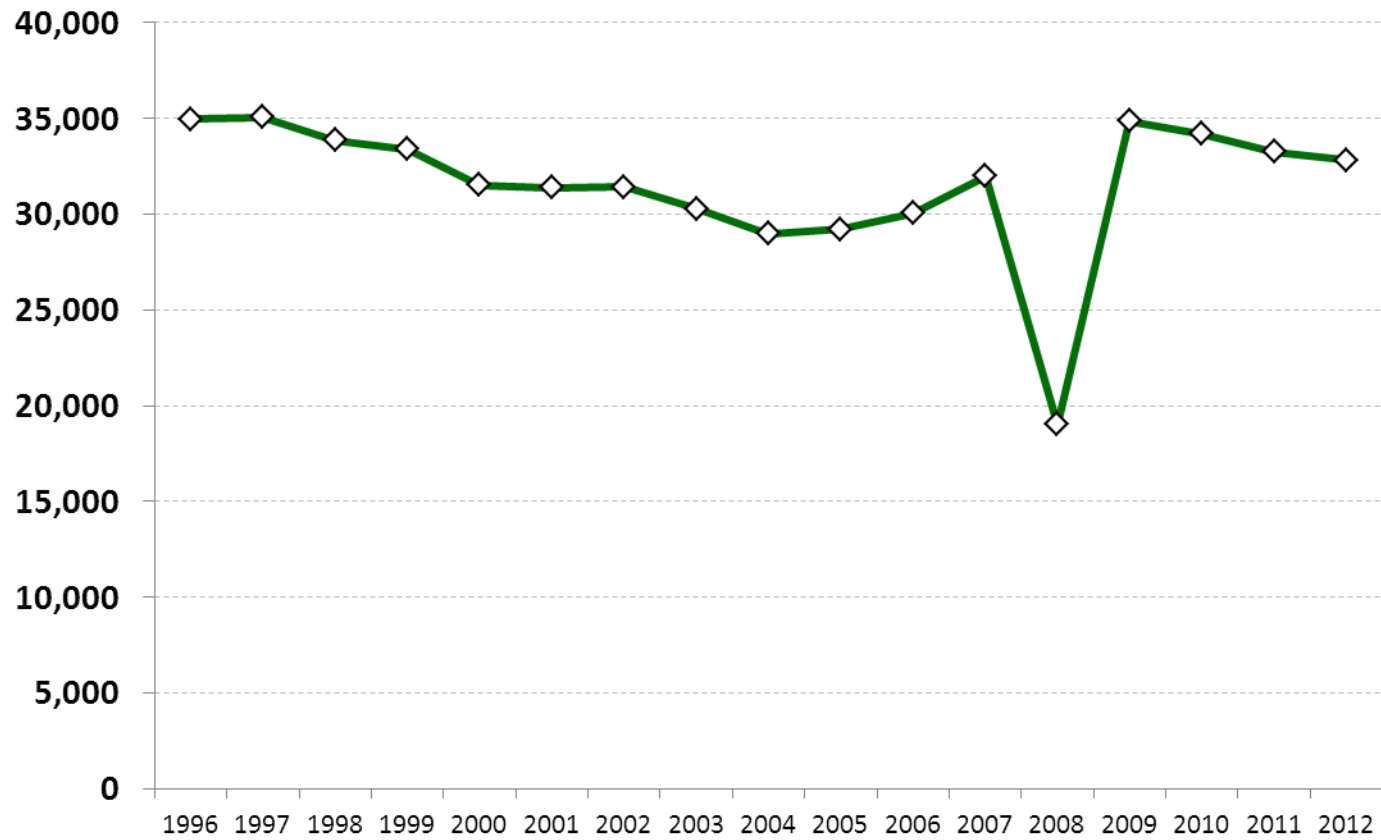
Indiana

17-year-old licensees



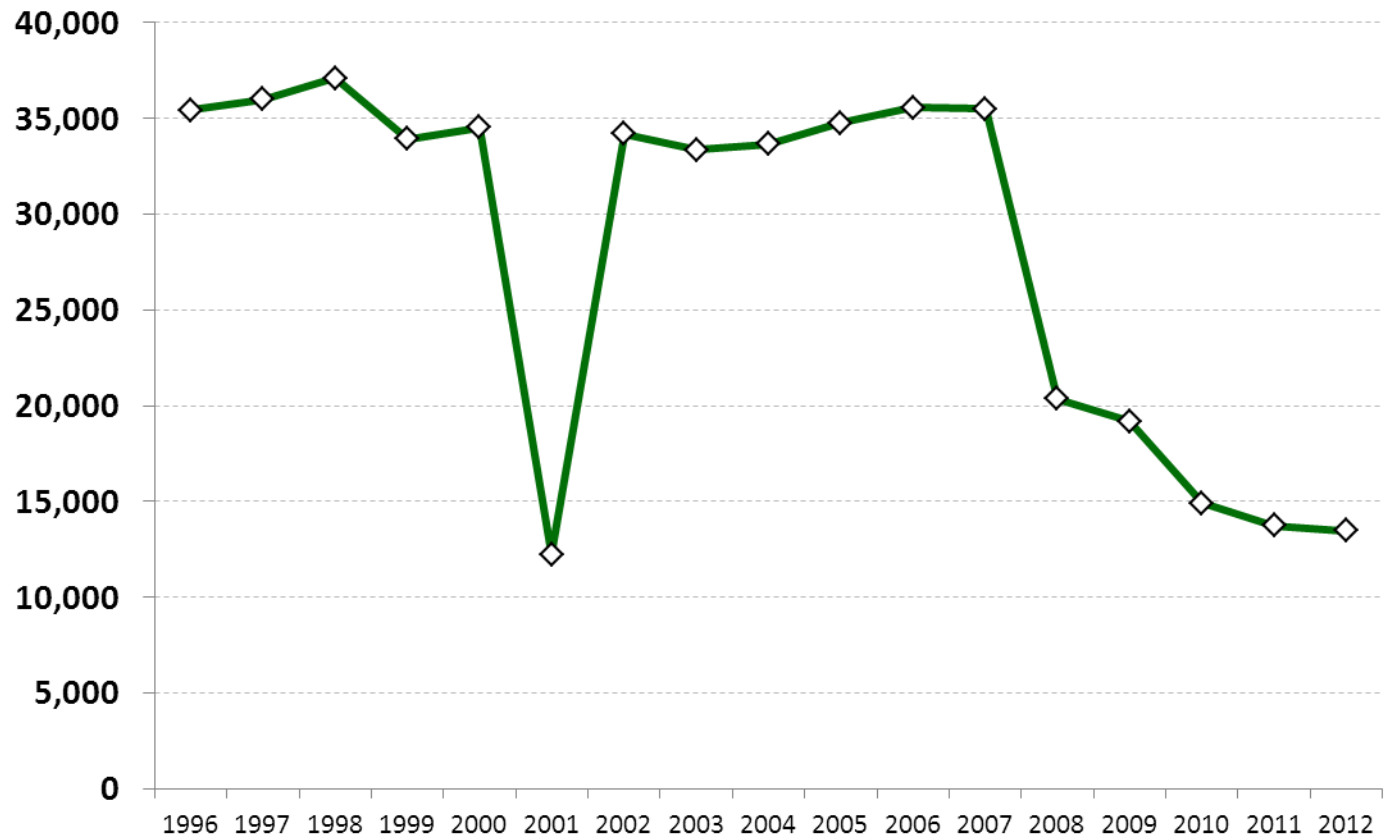
Iowa

17-year-old licensees



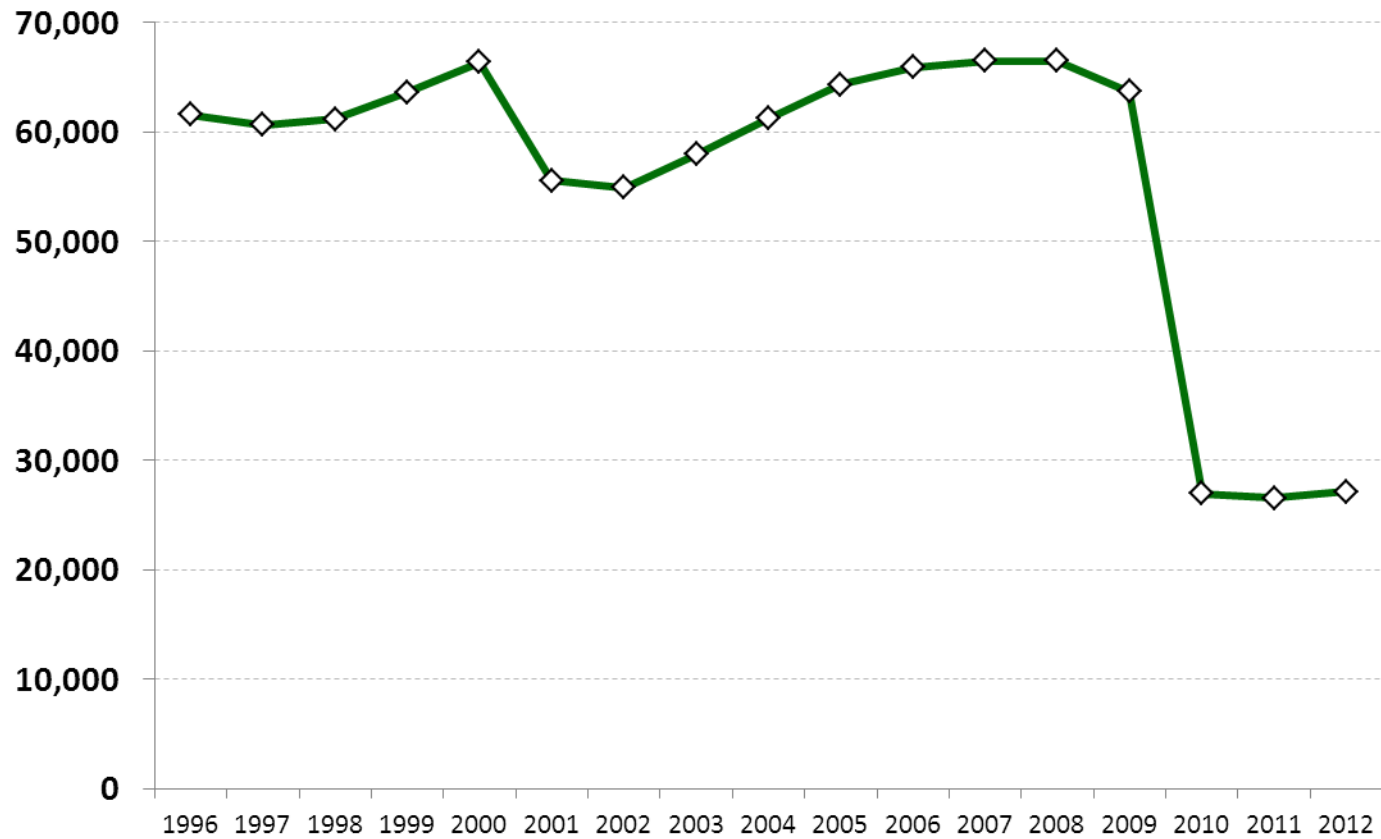
Kentucky

17-year-old licensees



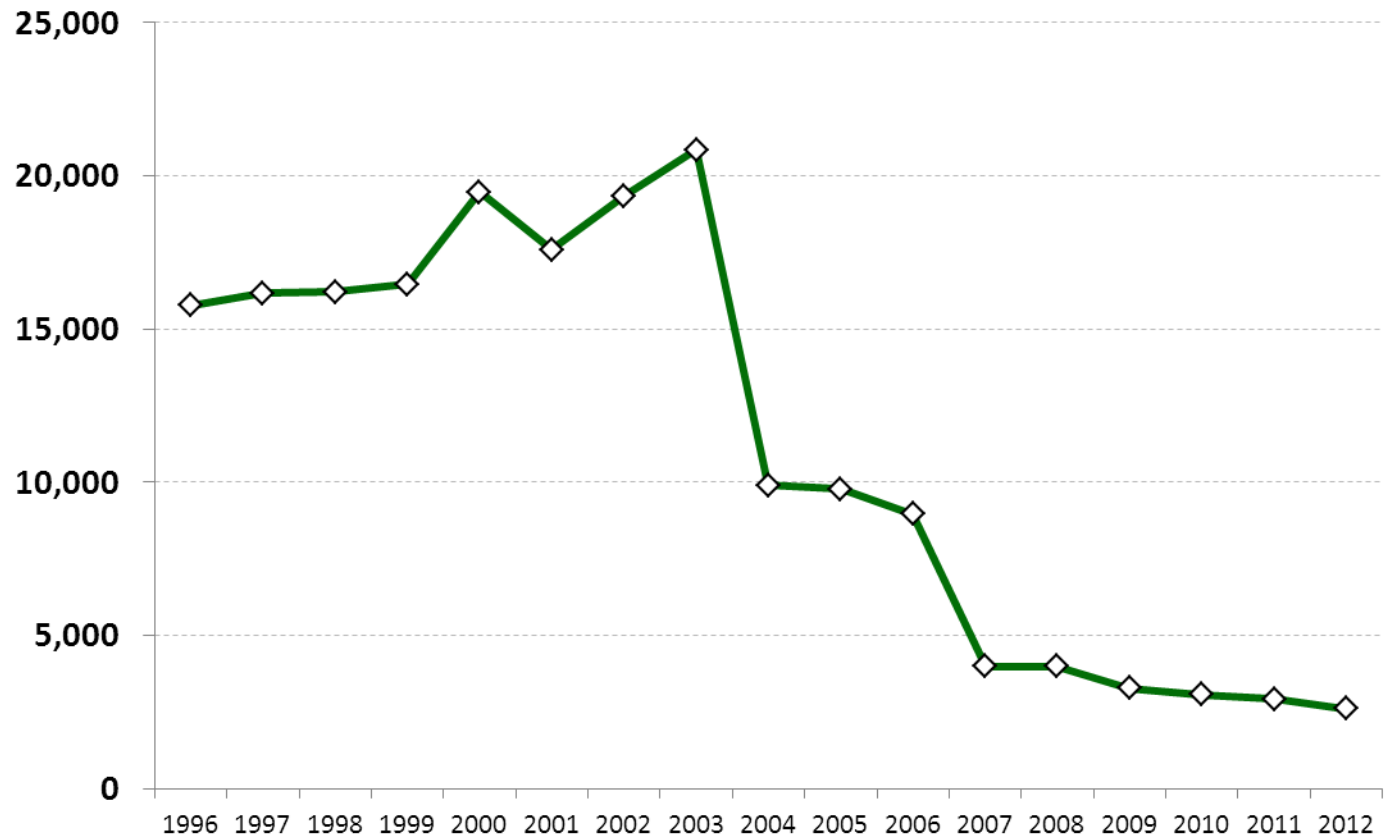
New Jersey

17-year-old licensees



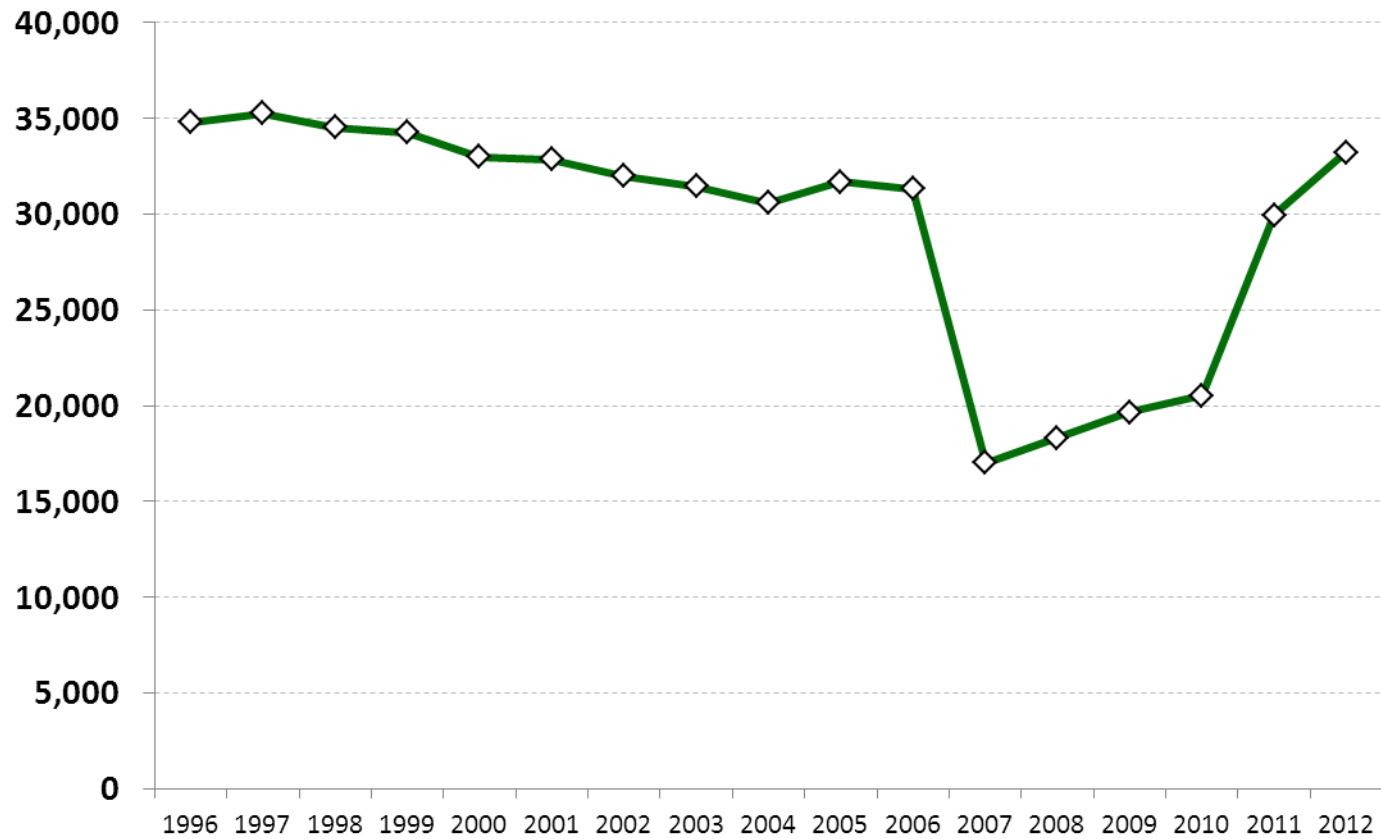
New Mexico

17-year-old licensees



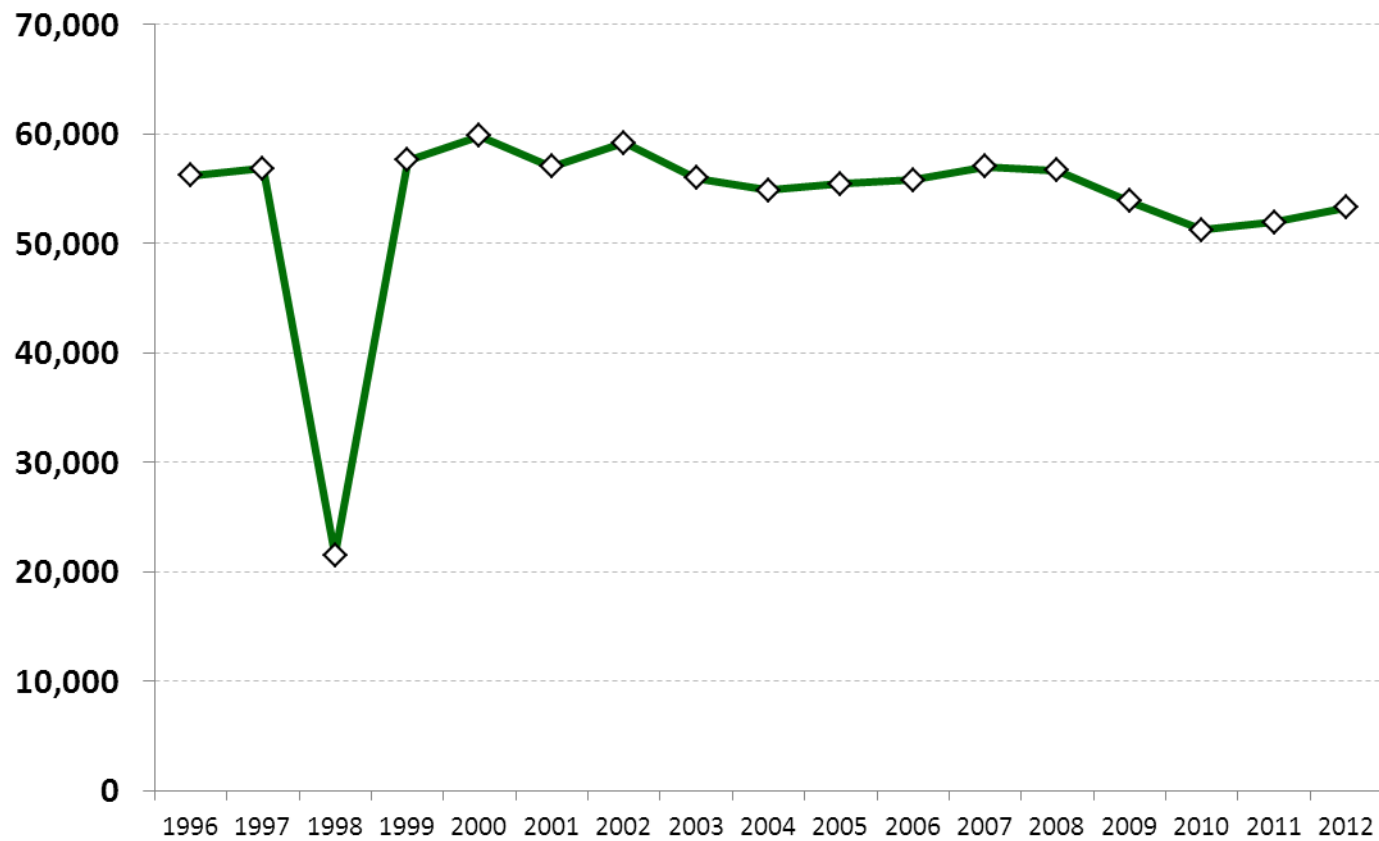
Utah

17-year-old licensees



Virginia

17-year-old licensees





Consequences

1. Ability of researchers to evaluate policies compromised (or prevented)
2. Careless use can produce profoundly incorrect conclusions
3. States misled
4. Myths about teen drivers develop

Washington Post creates a new phenomenon, January 24, 2010

The Washington Post

More teens are choosing to wait to get driver's licenses

By Donna St. George
Washington Post Staff Writer
Sunday, January 24, 2010

The quest to get a driver's license at 16 -- long an American rite of passage -- is on the wane among the digital generation, which no longer sees the family car as the end-all of social life.

THIS STORY

- » **Teens not the driving force they used to be**
- **User Poll: Is it a good thing more teens are waiting to get their driver's**



Patricia gives Kat a smile after the drive. Kat Velkoff, 20, Chantilly, just got her driver's license last summer. She spent years driving around with her mother, Patricia, on a learner's permit, but now has her own car and is enrolled at UMBC. (Dayna Smith/For the Post)



Recommendations for State DOTs

These data matter ... a lot!

Reporting not merely a bureaucratic nuisance

Get house in order at state level

Quality control checks ...

- Compare across time

- Compare to population

- Check veracity given licensing system (& changes)



Recommendations for FHWA

These data matter ... a lot!

People trust them, use for important work

Clarify “licensed driver”

Communicate clearly to states

Quality control checks ...

Compare across time

Compare to population

Check veracity



Recommendations for researchers

Do not use these data!!!

Completely useless for national studies,
or longitudinal analyses

Obtain state licensing data if possible

Be wary, check thoroughly & carefully

Develop and implement better exposure measures for
all drivers, but especially teens

