

PPD 631

**Geographic Information Systems for Public Policy, Planning & Development**

**Cigarette & Electronic Cigarette – An Overview**

*Status and Trend*

Xiaoliang Yan

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# 1. Background

The market of electronic cigarette is expanding fast. According to Bloomberg Industries, With revenue from e-cigarettes expected to double this year to over \$1 billion and up to \$1.7 billion by some estimates, the electronic cigarette makers are gradually burning away at the \$80 billion sales of tobacco, with e-cigarette sales predicted to pass traditional cigarette sales by 2047.

E-cigarette poses both potential opportunities and risks to our nation's public health. Proponents claim these products provide smokers a much safer alternative to conventional cigarettes with the taste and feel of cigarettes without the deadly consequences, and thus show promise as an avenue to reduce tobacco-related death and disease. While the critics show concern that these devices could pose unique public health harms: 1. E-cigarettes could promote dual use by serving as an alternative product in places where smoking is prohibited, 2. They could also lure young people into starting to use tobacco and lead to even more dangerous cigarette use. There is a vigorous debate about whether and how to regulate these relatively new tobacco products.

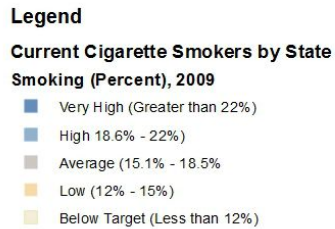
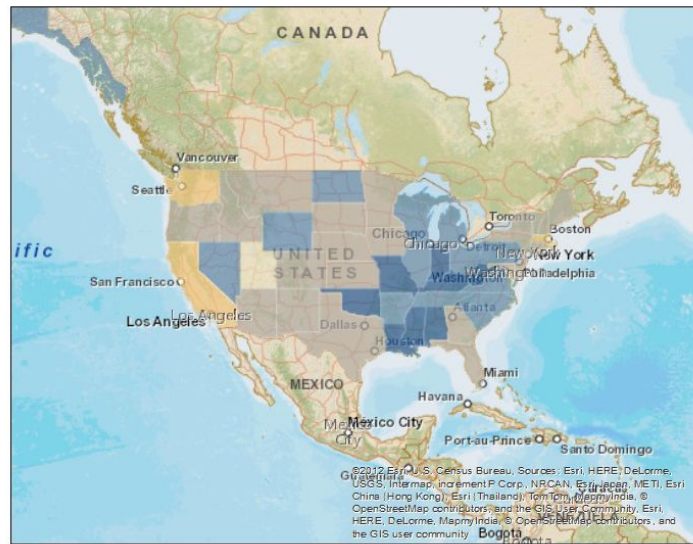
FDA is reportedly preparing to regulate the electronic cigarettes. While the electronic cigarette makers are putting low price tags and launching advertising campaigns. According to Citigroup's prediction, e-cigarette will have a \$3 billion market segment by 2015, which had a \$2 billion market scale in 2013.

## 2. Conventional Cigarette

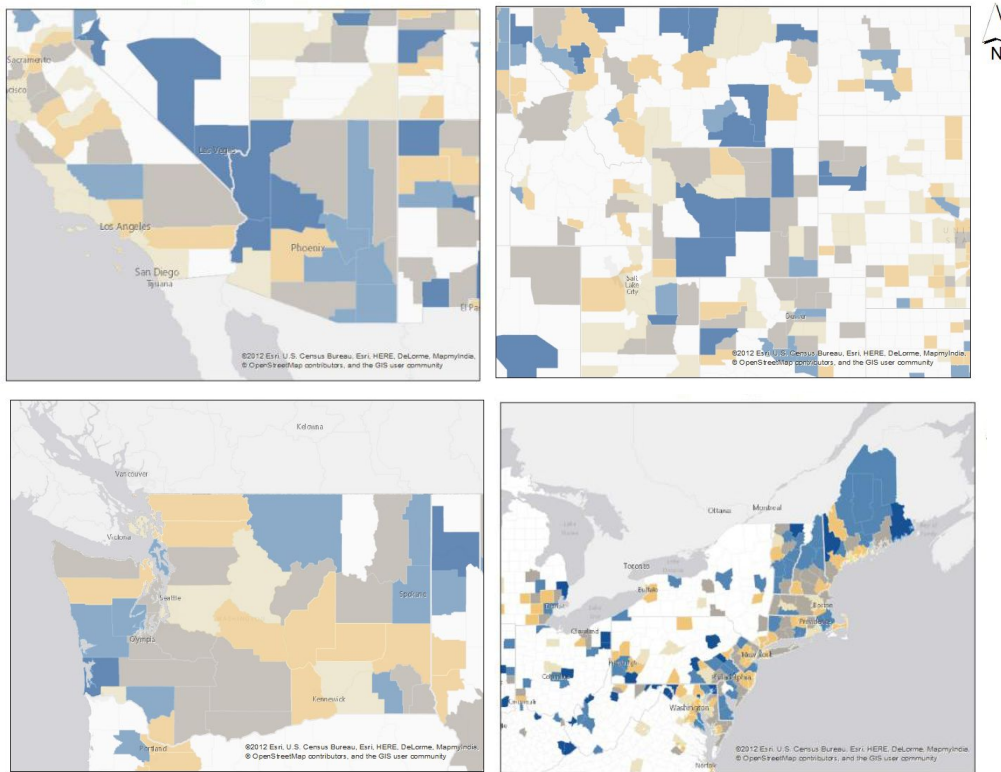
According to Centers for Disease Control and Prevention(CDC), an estimated 42.1 million people, or 18.1% of all adults in the United States, smoke cigarettes. Cigarette smoking is more common among men(20.5%) than women(15.8%).

The overall smoking prevalence declined from 2005(20.9%) to 2012(18.1%). And From 2000 to 2011, as CDC reported, overall consumption of tobacco fell by 27.5%, from 450.7 billion cigarette equivalents to 326.6 billion.

Graph 1.1 shows the smoking prevalence in different states and counties.



Graph 1.1



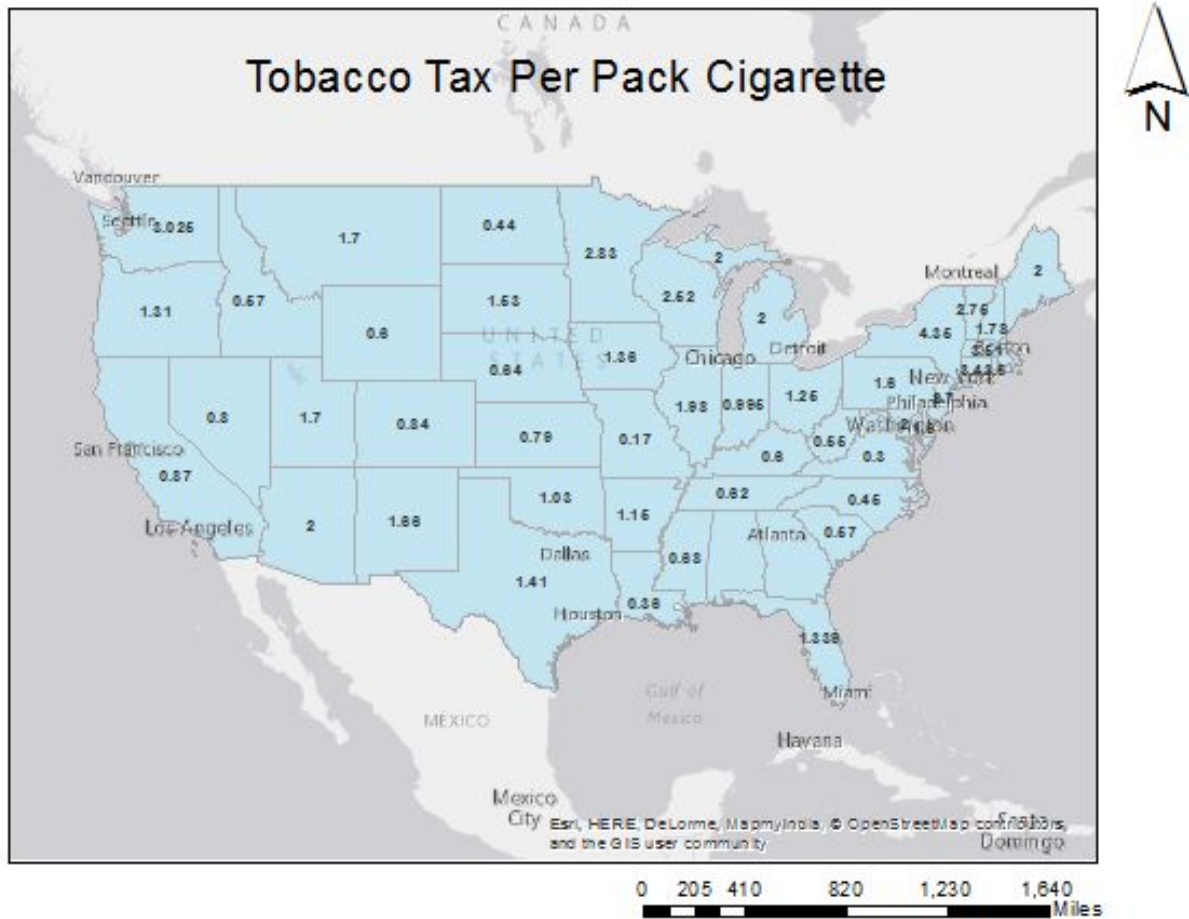
Graph 1.2

And if we look at the prevalence by county(Appendix 1) we can refer that four areas in the U.S. have the highest prevalence, Southern California and Arizona area, Utah area, New York area and Washington area(Graph 1.2).

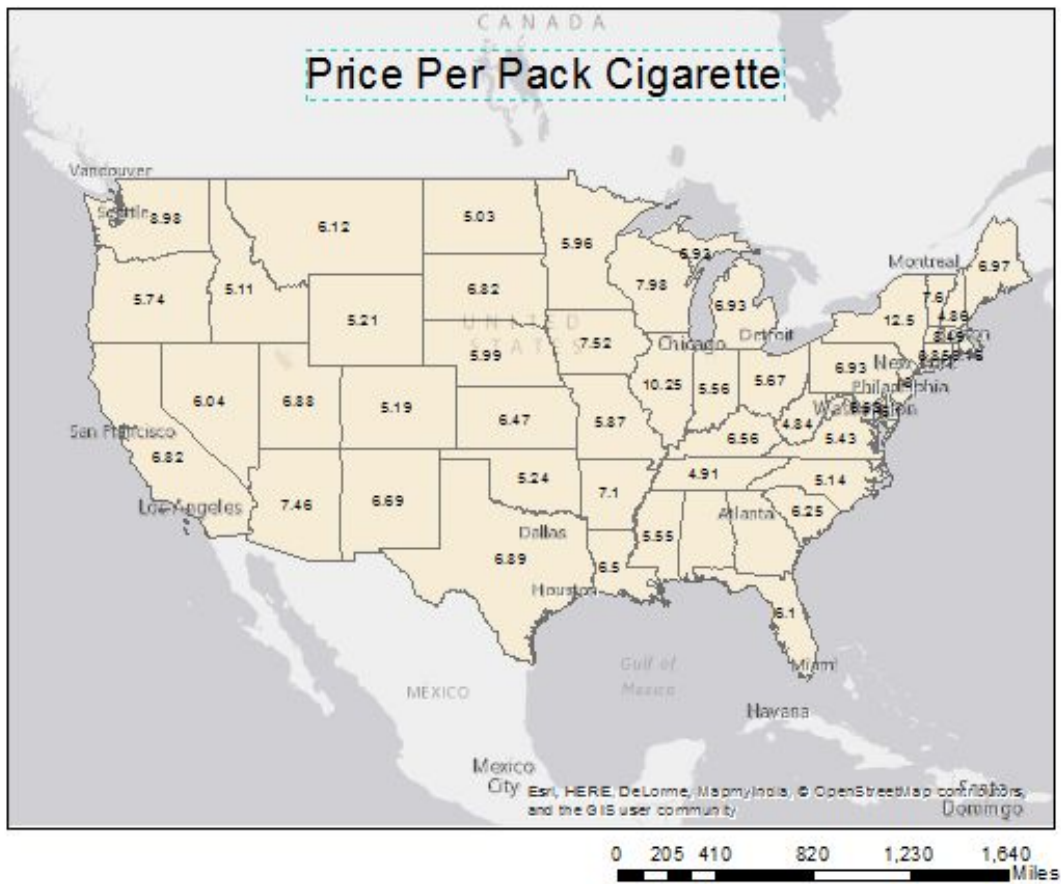
The decline of tobacco use is caused by several reasons, 2 major causes are:

- A. Increasing use of tobacco alternatives.
- B. Policies like smoke-free air laws and cigarette taxes.

According to CDC, the use of cigarette is declining solidly, while the use of other tobacco products like cigar, smokeless tobacco and electronic cigarette is increasing. And regarding to the cigarette tax, we can look at Graph 1.3 and Graph 1.4 to see the current tobacco tax per pack cigarette and the average price per pack in different states.



Graph 1.3



Graph 1.4

A new Gallup poll shows the percentage of smokers who reported smoking more than a pack has declined in recent decades, which peaked at 30 percent in 1978, and below 10 percent in late 1990s. And the number of pack-a-day now is 31 percent and stayed relatively constant. According to the poll, the vast majority said they regret ever starting to smoke(88%), and 78% said that they would like to quit.

The current status and trend of the conventional tobacco shows a sign of declining cigarette use in the United States. And next we will take a look at the electronic cigarette(or vape) market, which grows significantly recently.

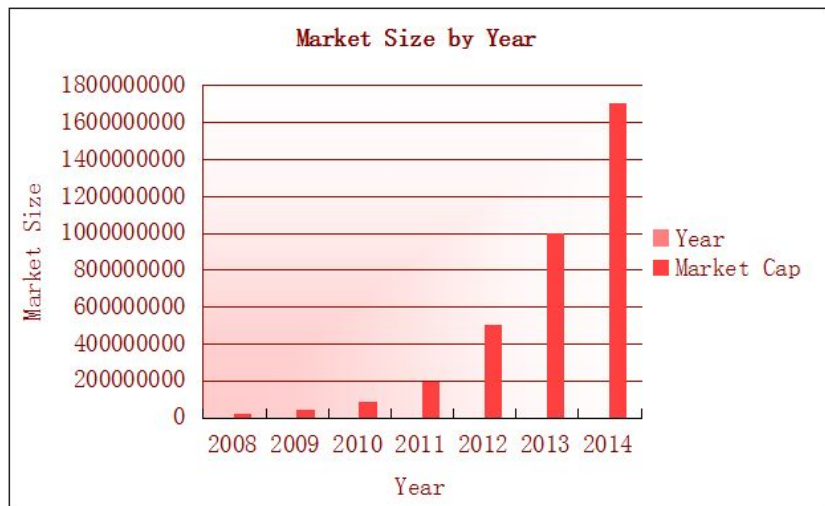
### 3. Electronic Cigarette

*What are electronic cigarettes?*

“Electronic cigarettes”—or e-cigarettes—are devices that allow users to mimic the ritual of smoking a cigarette while inhaling nicotine. Instead of smoke from burning tobacco, users inhale vapor containing nicotine (with the exception of versions which claim to be free of nicotine), flavor additives, and other chemicals. When users inhale from the end of an e-cigarette, a battery-operated vaporizer heats a liquid solution into a vapor. The fast growth in market share of the e-cigarette draws the public’s attention.

And Table 3.1 shows that the market size nearly doubled every year since 2008.

By January 2014, there were 466 brands already in the US e-cigarette



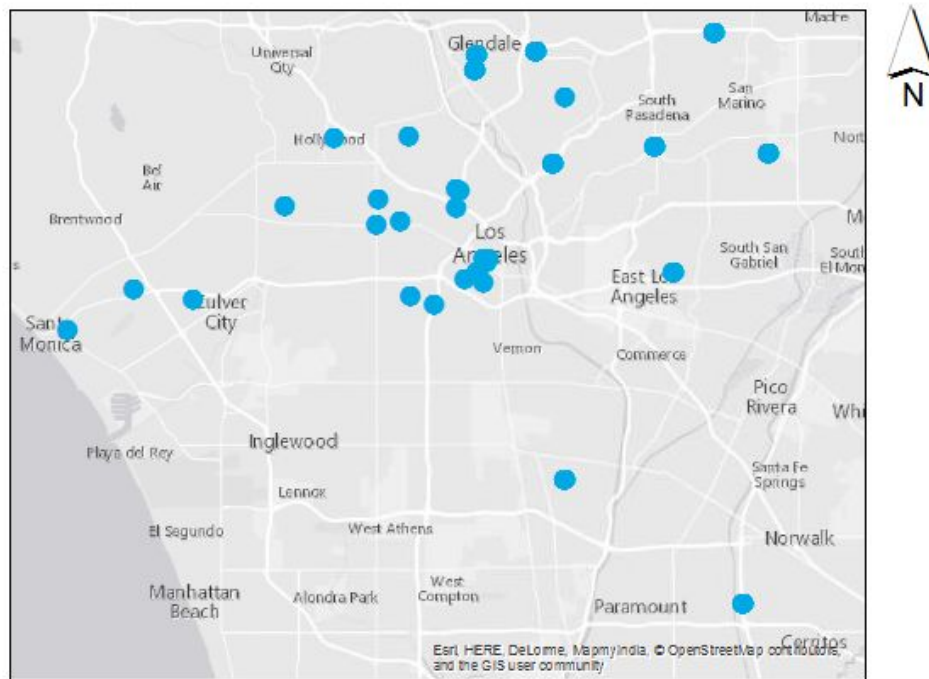
market, and in the last 17 months, there was an increase of 10 brands per month. The market is becoming bigger and bigger, and from 2012, the traditional tobacco giants started to muscle into the market, too(Please refer to Appendix 2). Lorillard bought Blu in 2012, Reynolds launched Vuse in 2013 and Altria started MarkTen in Indiana at the same time(Also bought Green Smoke-the largest online brand of e-cigarette).

The sales channels are similar to traditional tobacco products: smoke shop, C-stores, gas station, dollar stores, etc. However, there are two game-changing channels. One is the online sales of e-cigarette, and another is the vape shops.

Currently, there are over 15,000 vape stores operating in the United States and over 630 in Los Angeles area. Graph 3.1 shows the general distribution of the vape stores in United States, and Graph 3.2 shows the top vape stores in Los Angeles area.



Graph 3.1



Graph 3.2



From the two graphs, we can see that similar to the traditional cigarette market, the top regions of the e-cigarette market are also Southern California and Arizona area, New York area, Washington area. The difference is that the southeast and Texas area are hot in c-cigarettes. And in Los Angeles, we can infer that, most famous vape stores are near downtown area, which to some extent indicates the demographic of the e-cigarette users in Los Angeles.

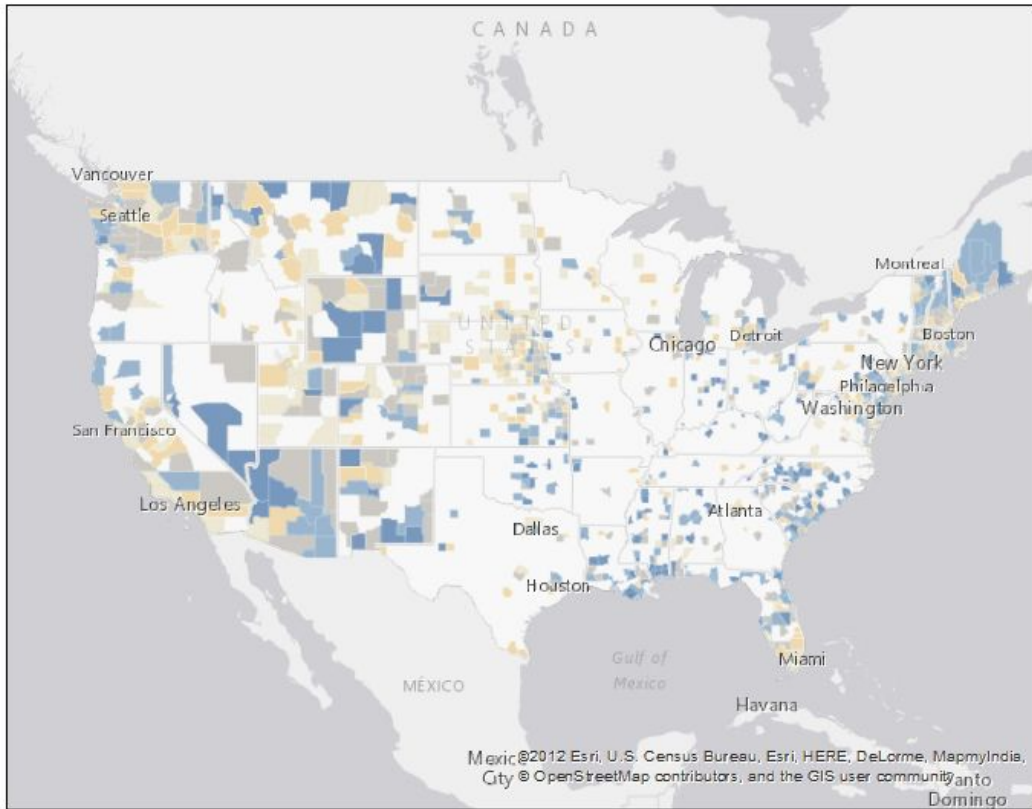
Bloomberg industries have predicted that the e-cigarette sales to surpass the traditional cigarette sales by 2047, and Goldman Sachs declared electronic cigarette as one of the top 10 disruptive technologies to watch.

## 4. Summary

This project just shows the current status and trend of two related markets: conventional cigarette and electronic cigarette. As we can see, the conventional cigarette market is declining constantly and the e-cigarette market is booming, the top 3 tobacco giants already started marketing their own e-cigarette brands and pushing FDA to put regulation to this industry(in order to squeeze small brands out).

*For the demographics and other related market information, please refer to the Appendix.*

Appendix 1

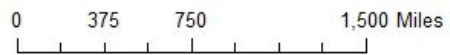


**Legend**

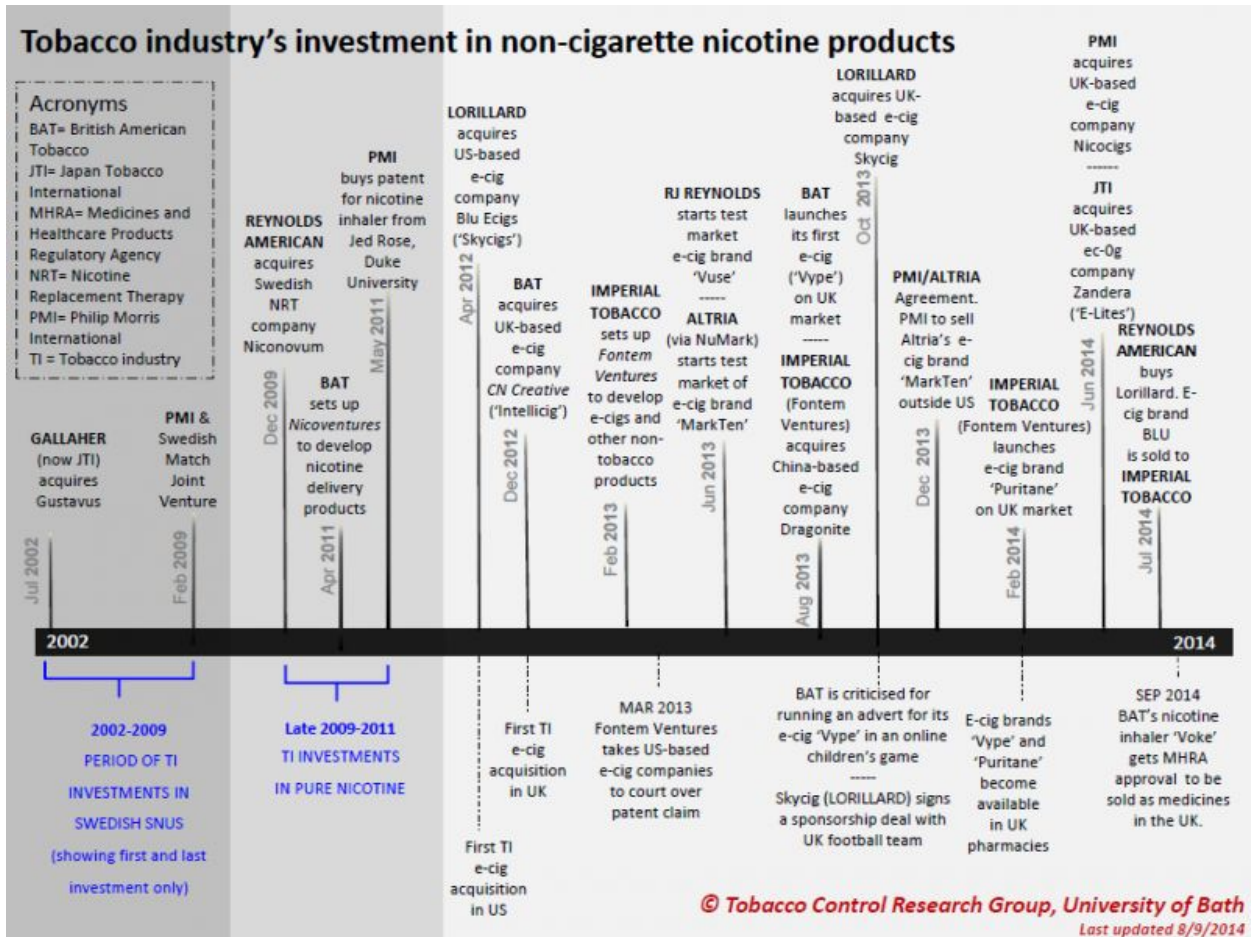
**Current Cigarette Smokers by County**

**Smoking (Percent), 2009**

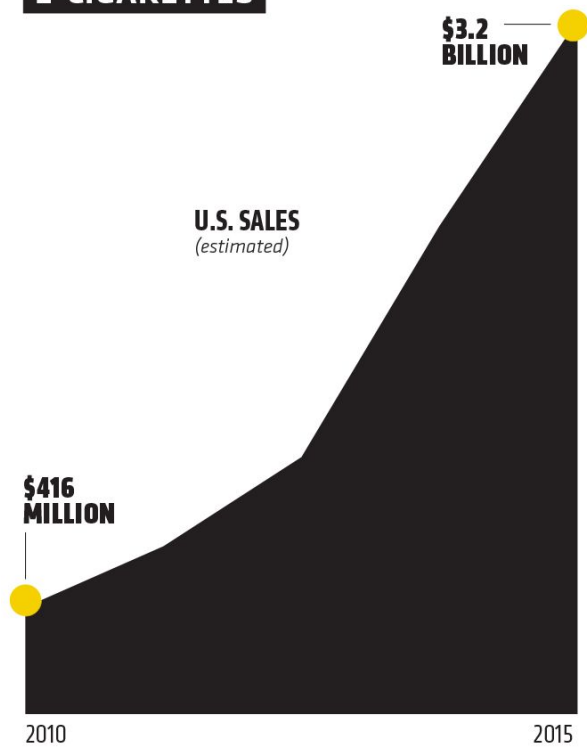
- Very High (Greater than 22%)
- High 18.6% - 22%
- Average (15.1% - 18.5%)
- Low (12% - 15%)
- Below Target (Less than 12%)
- No Data



Appendix 2



## E-CIGARETTES



**\$10 BILLION** Estimated size of the global e-cigarette industry by 2017

**\$80 BILLION** Current size of the U.S. tobacco industry

# 2047

**The year** sales of e-cigarettes are projected to pass those of paper cigarettes

### Current Smoking Among Adults by Demographic Characteristics

