

# Summary output for EDA Project2

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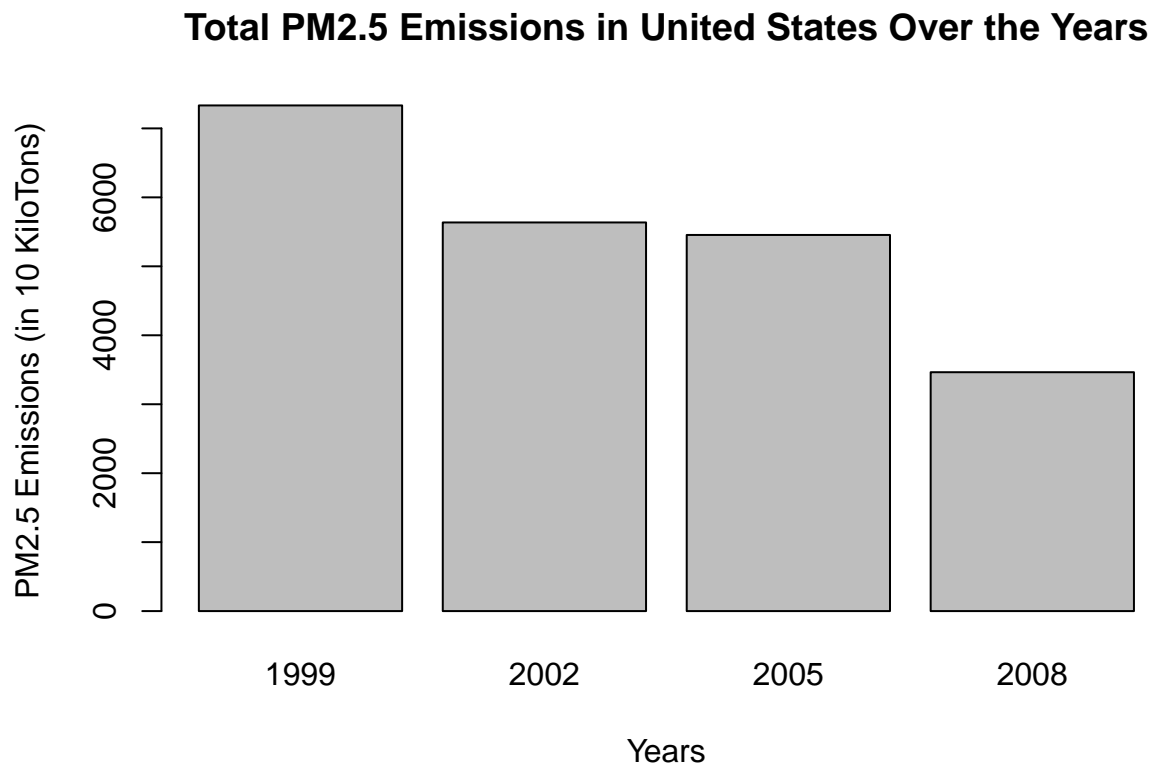
## Output Summary for EDA Project 2

This is summary report about my output and answers to the questions for my EDA Project 2.  
The R code to the construction of the plot for Analysis are as follow:

### Questions 1

Have total emissions from PM2.5 decreased in the United States from 1999 to 2008? Using the base plotting system, make a plot showing the total PM2.5 emission from all sources for each of the years 1999, 2002, 2005, and 2008.

Plot1



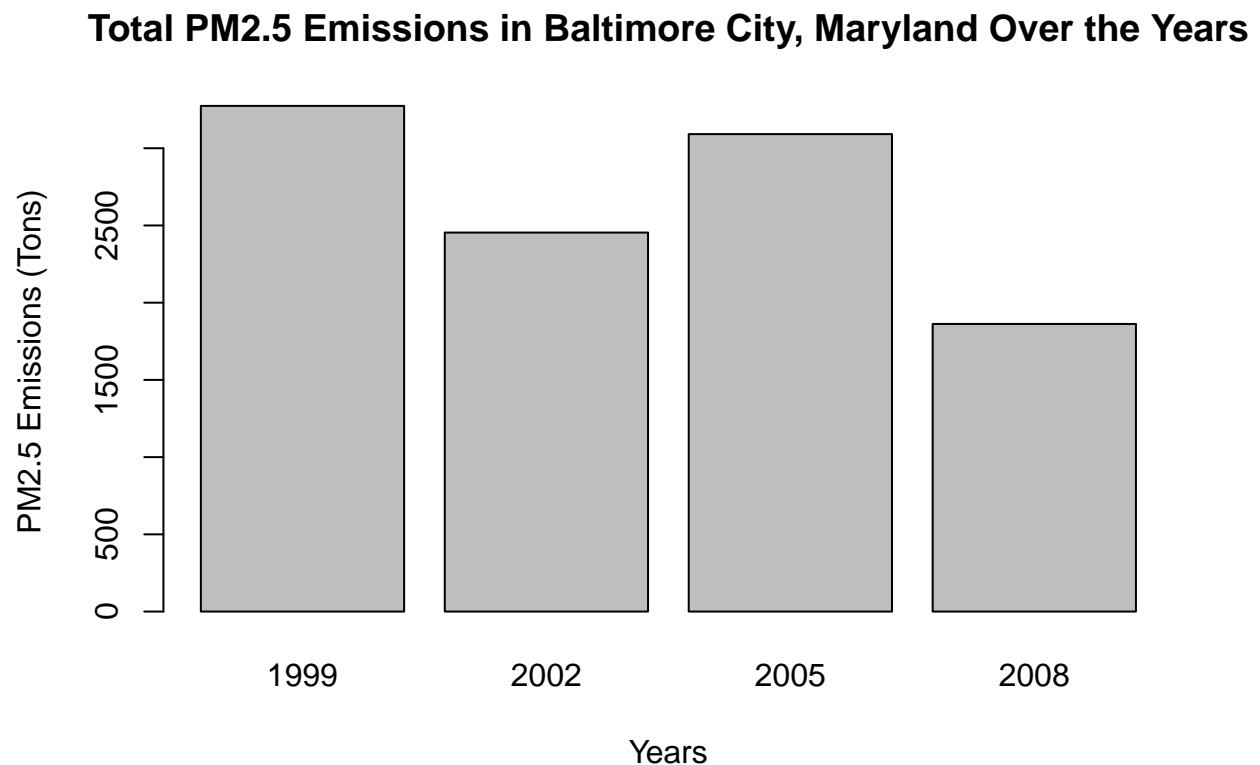
### Analysis Statement for Q1

The barplot reverted that the total PM<sub>2.5</sub> emissions in the US has decreased from 1999 to 2008.

### Questions 2

Have total emissions from PM<sub>2.5</sub> decreased in the Baltimore City, Maryland (fips == "24510") from 1999 to 2008? Use the base plotting system to make a plot answering this question.

#### Plot 2



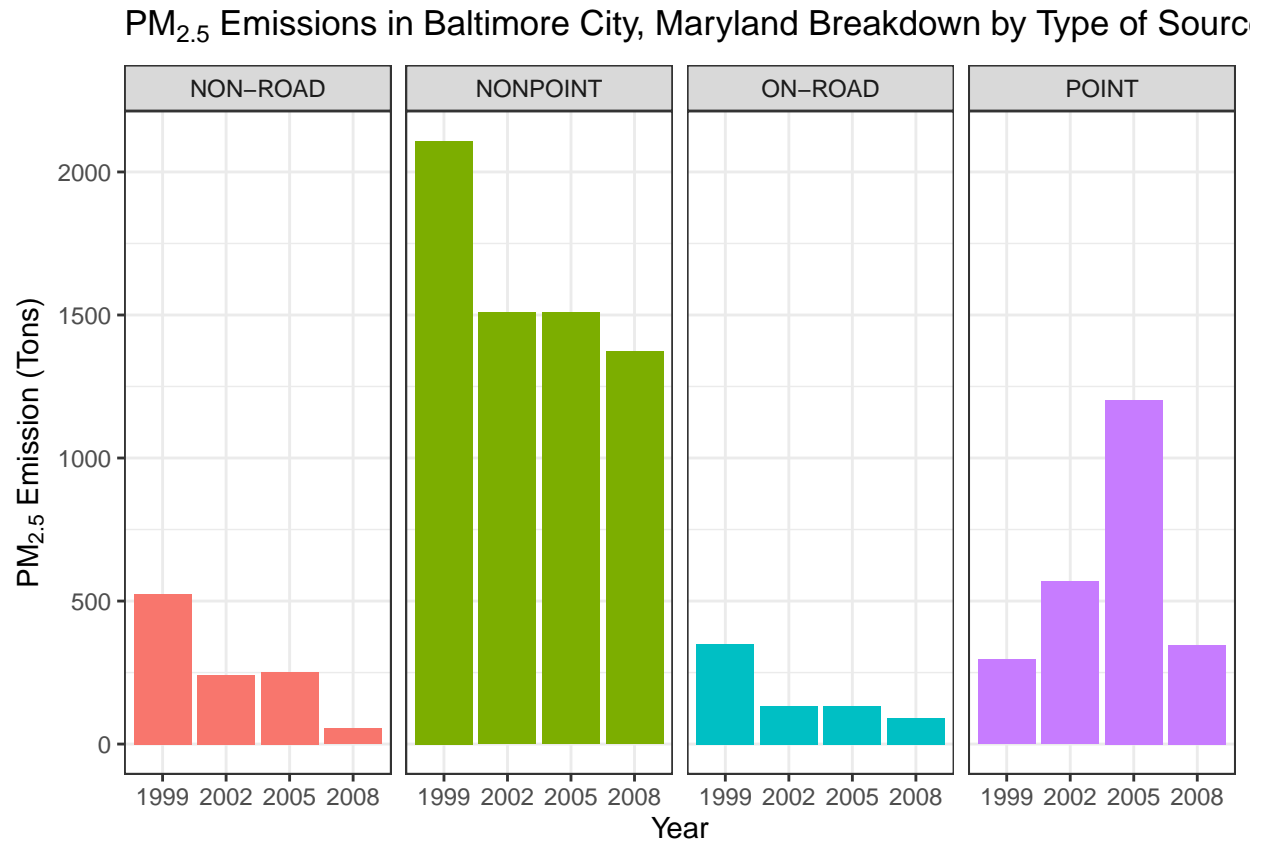
### Analysis Statement for Q2

In overall, the barplot reverted that the total PM<sub>2.5</sub> in Baltimore City, MD has decreased from year 1999 to 2008. It experience a dropped in year 2002, but then going up again in year 2005 and then another huge dropped in year 2008.

### Questions 3

Of the four types of sources indicated by the type (point, nonpoint, onroad, nonroad) variable, which of these four sources have seen decreases in emissions from 1999–2008 for Baltimore City? Which have seen increases in emissions from 1999–2008? Use the ggplot2 plotting system to make a plot answer this question.

Plot 3



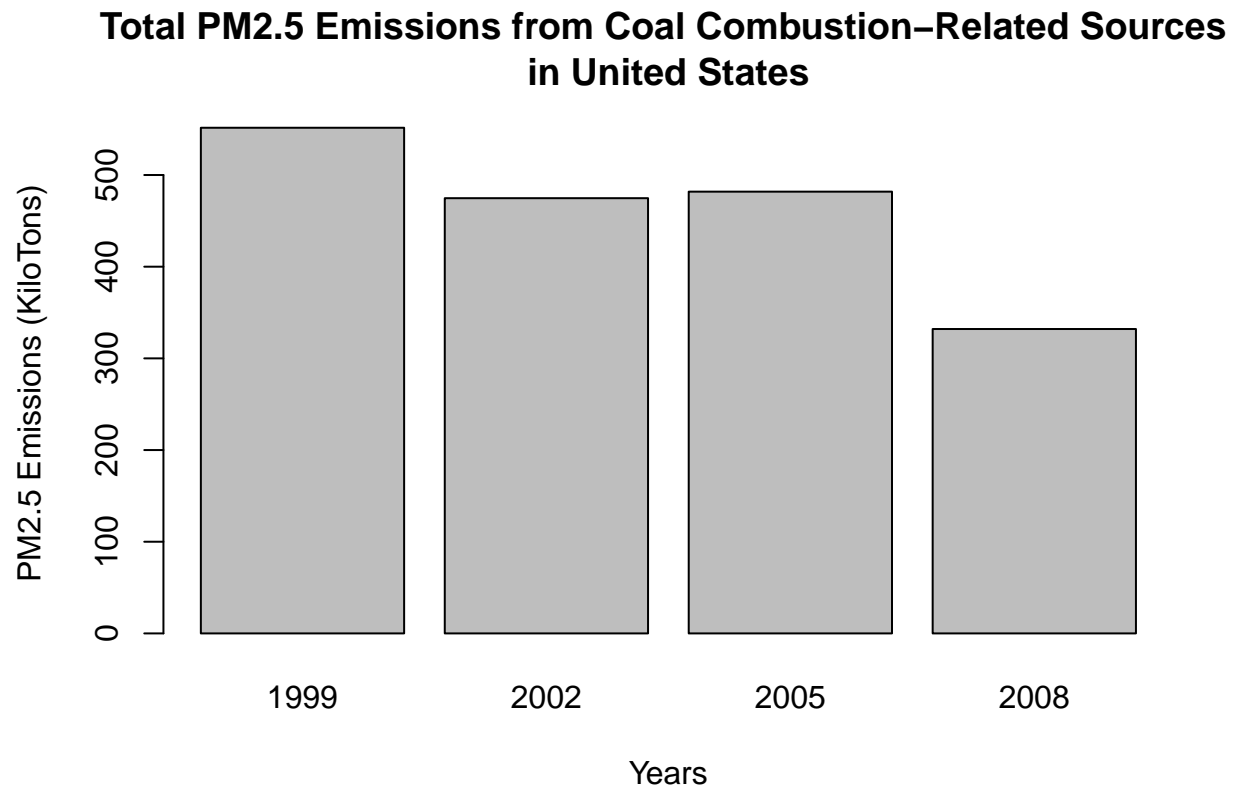
### Analysis Statement for Q3

The source types NON-ROAD, NONPOINT, ON-ROAD have all show a significant decreases in emissions from 1999–2008 for Baltimore City, Maryland. However, the source type POINT show a very significant difference trend compared to other type of sources. It keep on increasing the in first 3 cycles, from year 1999 to 2005, it then experience a huge dropped in 2008.

### Questions 4

Across the United States, how have emissions from coal combustion-related sources changed from 1999–2008?

Plot 4



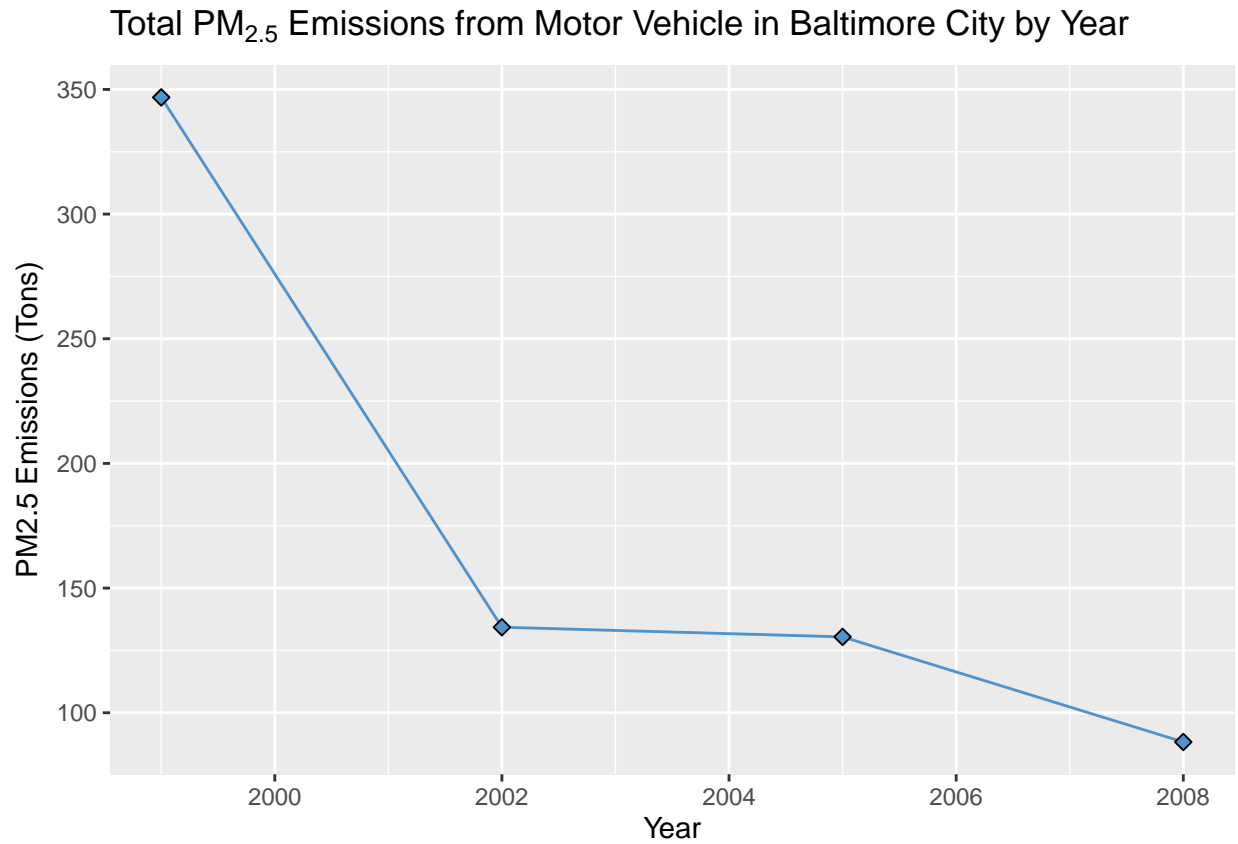
#### Analysis Statement for Q4

The barplot above revert that, the total of PM<sub>2.5</sub> Emissions from Coal Combustion-Related Sources in United State has dropped in year from year 1999 to 2002. and maintained at approximately 480 KiloTans in year 2002 to 2005. It then decrease to approximately 330 KiloTons in year 2008.

#### Questions 5

How have emissions from motor vehicle sources changed from 1999-2008 in Baltimore City? ##### Note: The type of source ON-ROAD is refer to motor vehicle sources

Plot 5



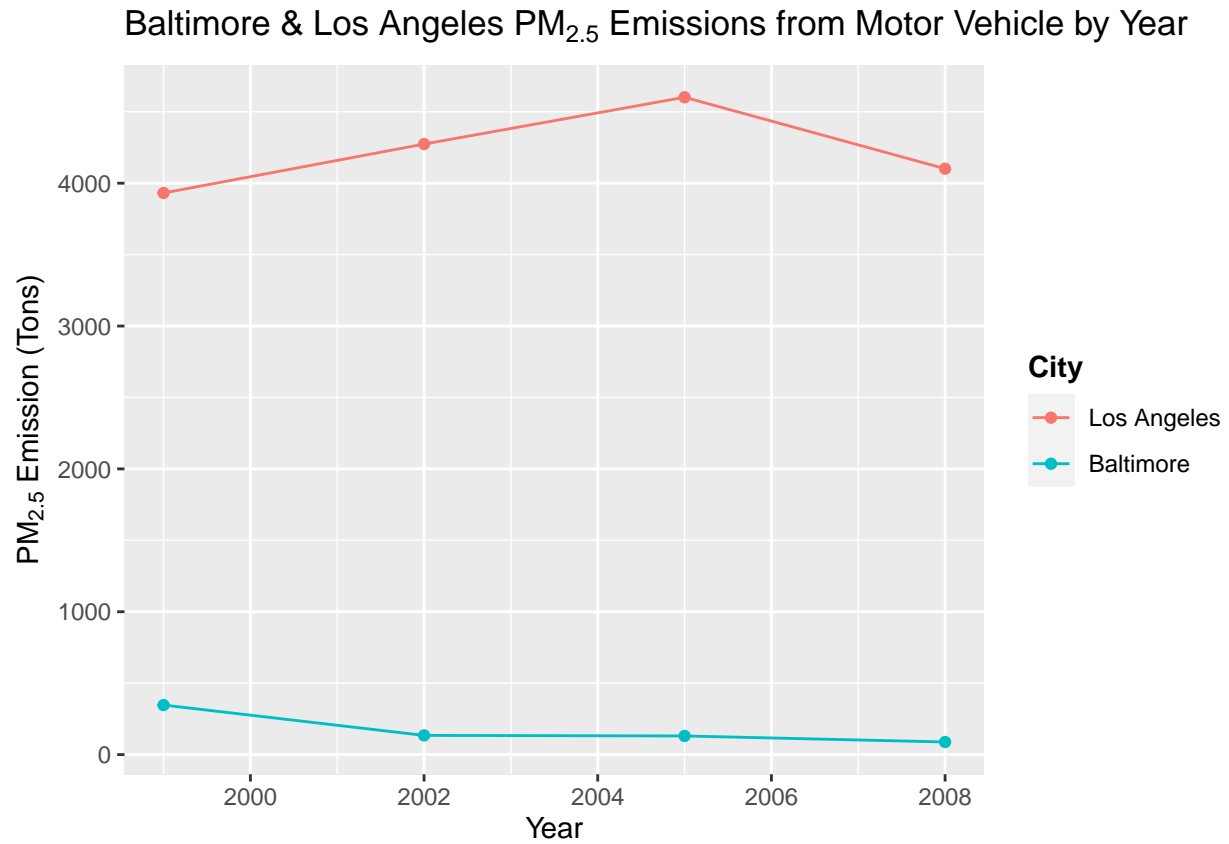
#### Analysis Statement for Q5

The lineplot shown that the PM<sub>2.5</sub> Emissions in Baltimore City from motor vehicle sources has dropped from 1999 to 2008.

#### Questions 6

Compare emissions from motor vehicle sources in Baltimore City with emissions from motor vehicle sources in Los Angeles County, California (fips == "06037"). Which city has seen greater changes over time in motor vehicle emissions?

Plot 6



#### Analysis Statement for Q6

The PM<sub>2.5</sub> Emissions from motor vehicle sources in Los Angeles County has seen the greatest changes over time.