

# Foreign Direct Investment Analysis

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DATA SCIENCE: UNIFIED MENTOR

MADE BY ARINDAM

# Introduction

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Investment is a game of understanding historic data of investment objects under different events but it is still a game of chances to minimize the risk we apply analytics to find the equilibrium investment.

Objective of this project is to understand the Foreign direct investment in India for the last 17 financial years from 2000-2001 to 2016-2017.

The given contains sector and financial year-wise data of FDI in India Sector-wise investment analysis Year-wise investment analysis.

By applying a python code for our data analysis, we can find out the trends and have an insight to be informed for future decisions and research.

# The Scope and Data Source

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## **Scope:**

This analysis covers multiple sectors as detailed in the dataset, spanning a period of 17 financial years. It includes data cleaning, exploratory data analysis (EDA), and visualization techniques to interpret and present the findings in a visual manner.

## **Data Source:**

The dataset used in this analysis is the same as provided in the project letter. I have just altered the names of the sectors to better suit the visual manner of the report. The link to the dataset is given here [Dataset Link](#).

# Methodology & Key Attributes

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**Data Cleaning:** Handling missing values, ensuring data consistency, and preparing the dataset for analysis.

**Exploratory Data Analysis:** Calculating summary statistics, identifying key metrics, and exploring relationships between variables.

**Visualization:** Using line plots, bar charts, and heatmaps to represent data trends and insights visually.

## **Key Columns:**

**Sector:** The sector being analyzed.

**Years (2000-01 to 2016-17):** Data values for each year.

# Data Cleaning and Preparation

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## **Handling Missing Values:**

All the missing data values in the columns have been replaced with 0 to preserve total and average counts.

## **Data Type Adjustments:**

To make sure that all the values stay consistent, any data that is not numeric has been changed to fit the columns.

## **Additional Processing:**

All the names of the sectors have been shortened by using acronyms and removing the unnecessary details in the names.

# Exploratory Data Analysis (EDA)

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## **Summary Statistics:**

The statistics for each sector can be summarized using the visuals obtained and we can find the trends within the investments made in the sector by foreign investors. The average and total investment statistics can be obtained by the graphs as well.

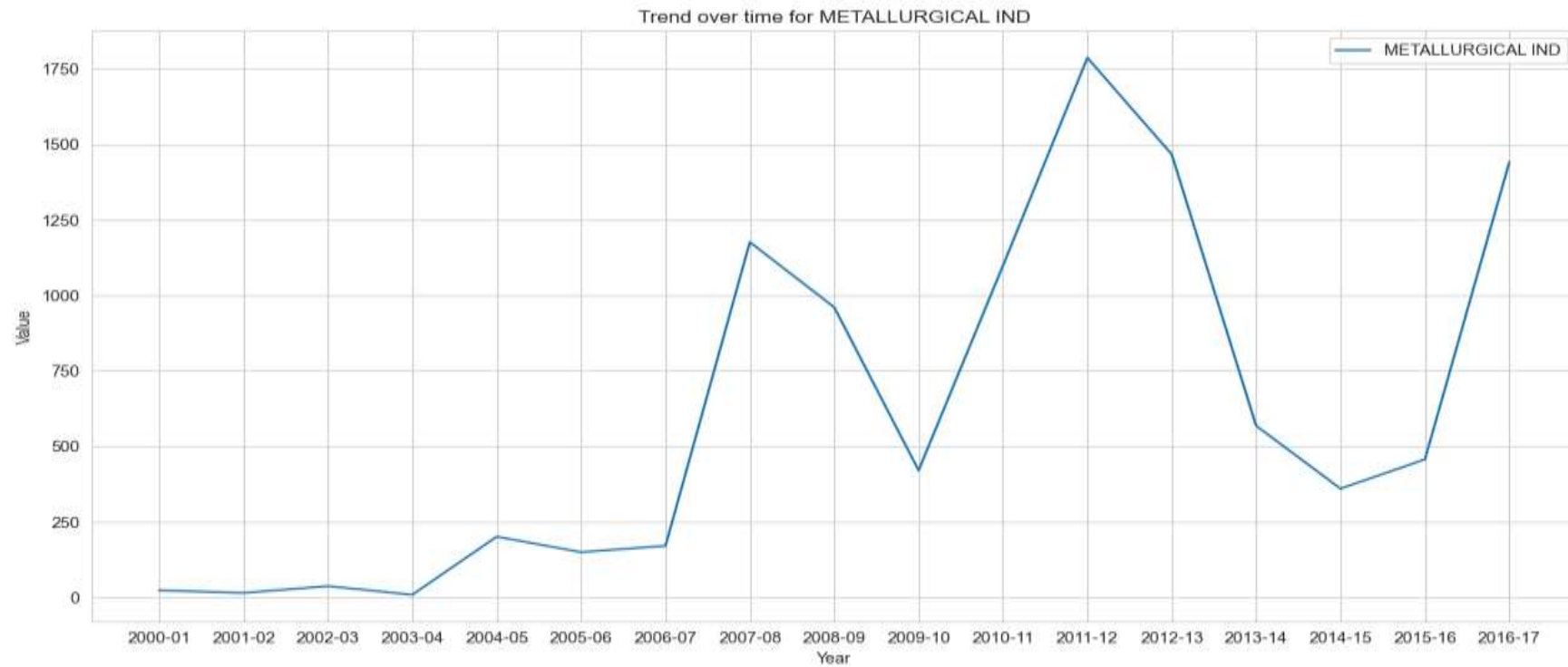
## **Key Metrics:**

The key factors we analyzed here are the Total and Average values of investment in each sector and the investment trends for each sector separately.

Sector-wise Graphs visualising  
the trends in the value

# METALLURGICAL INDUSTRIES

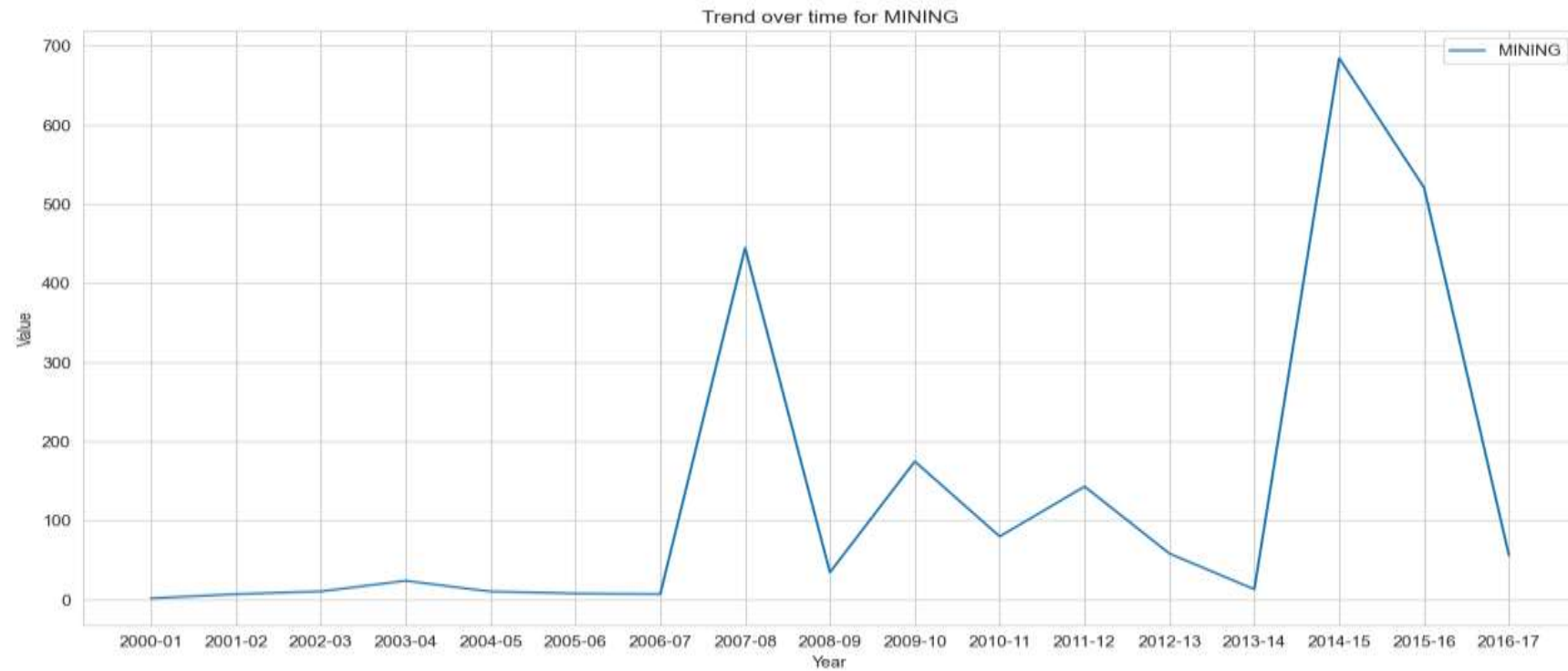
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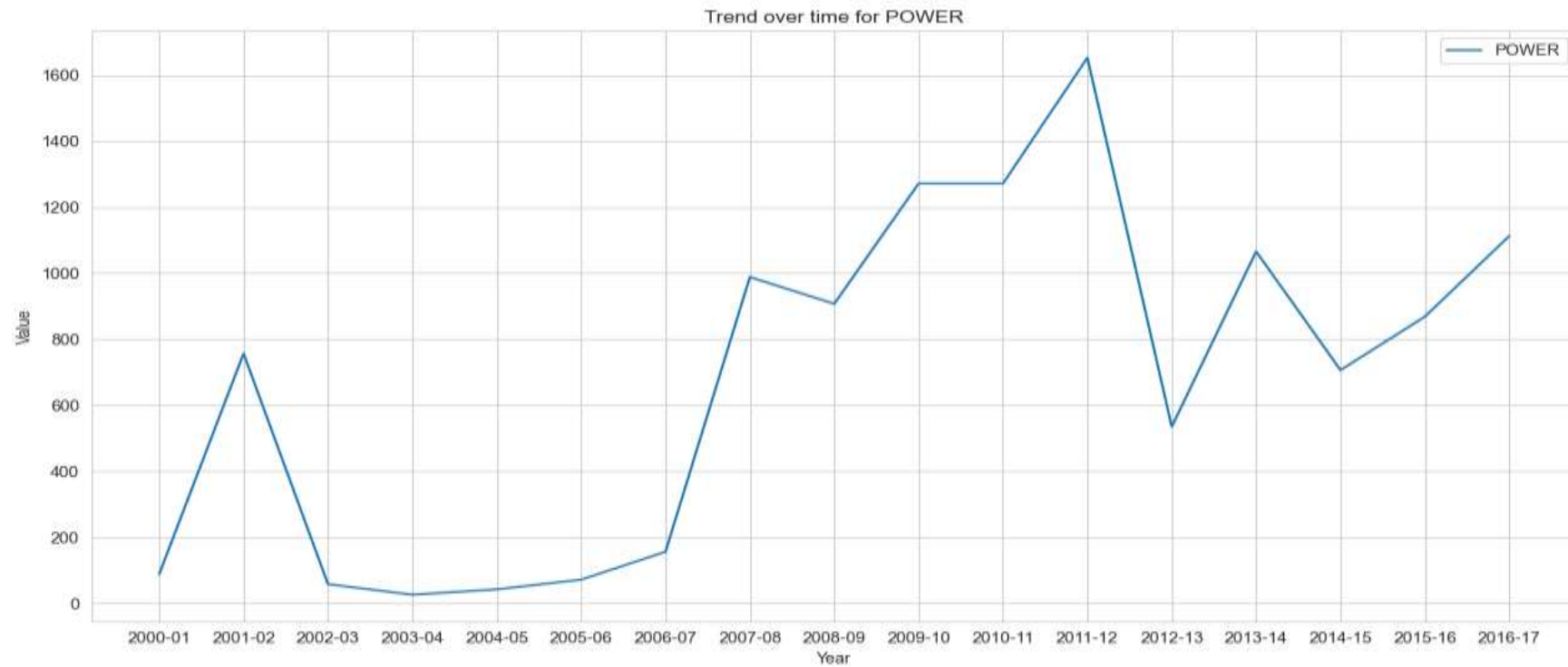
# MINING

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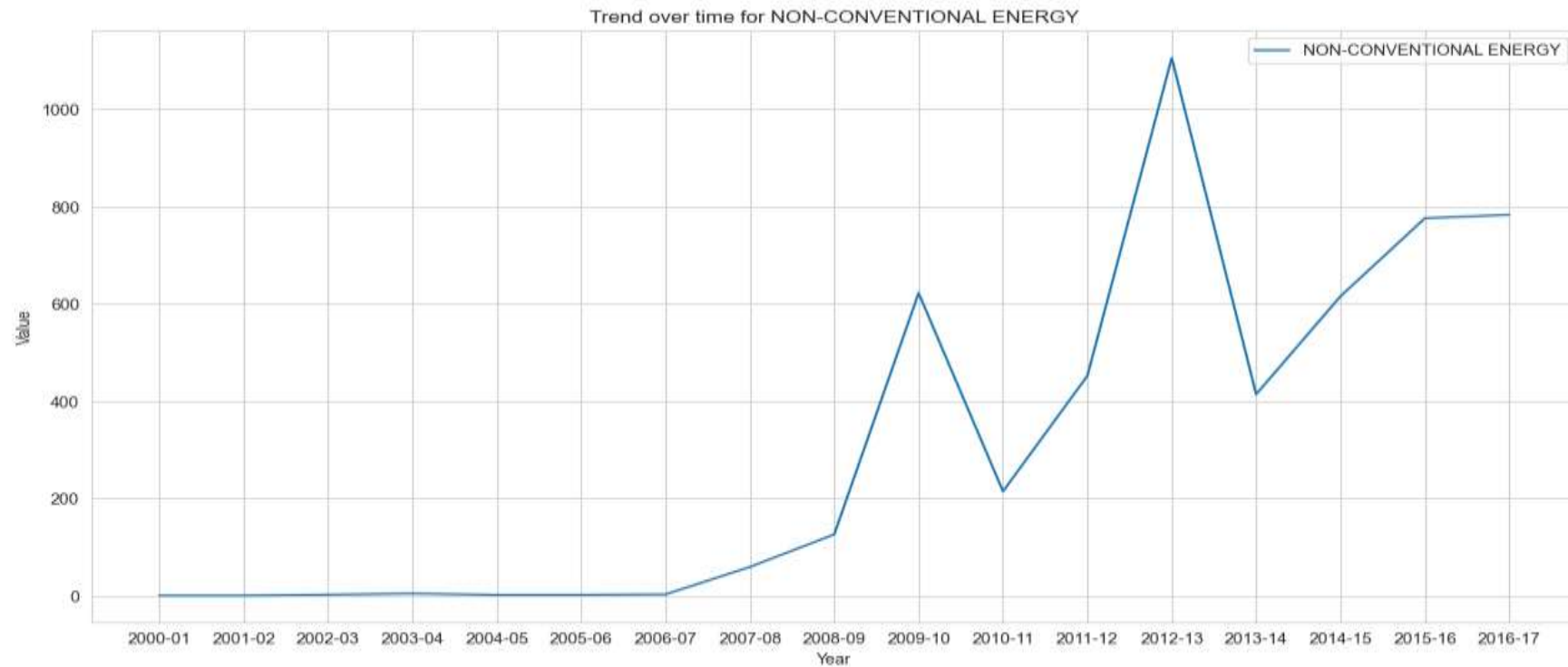
# POWER

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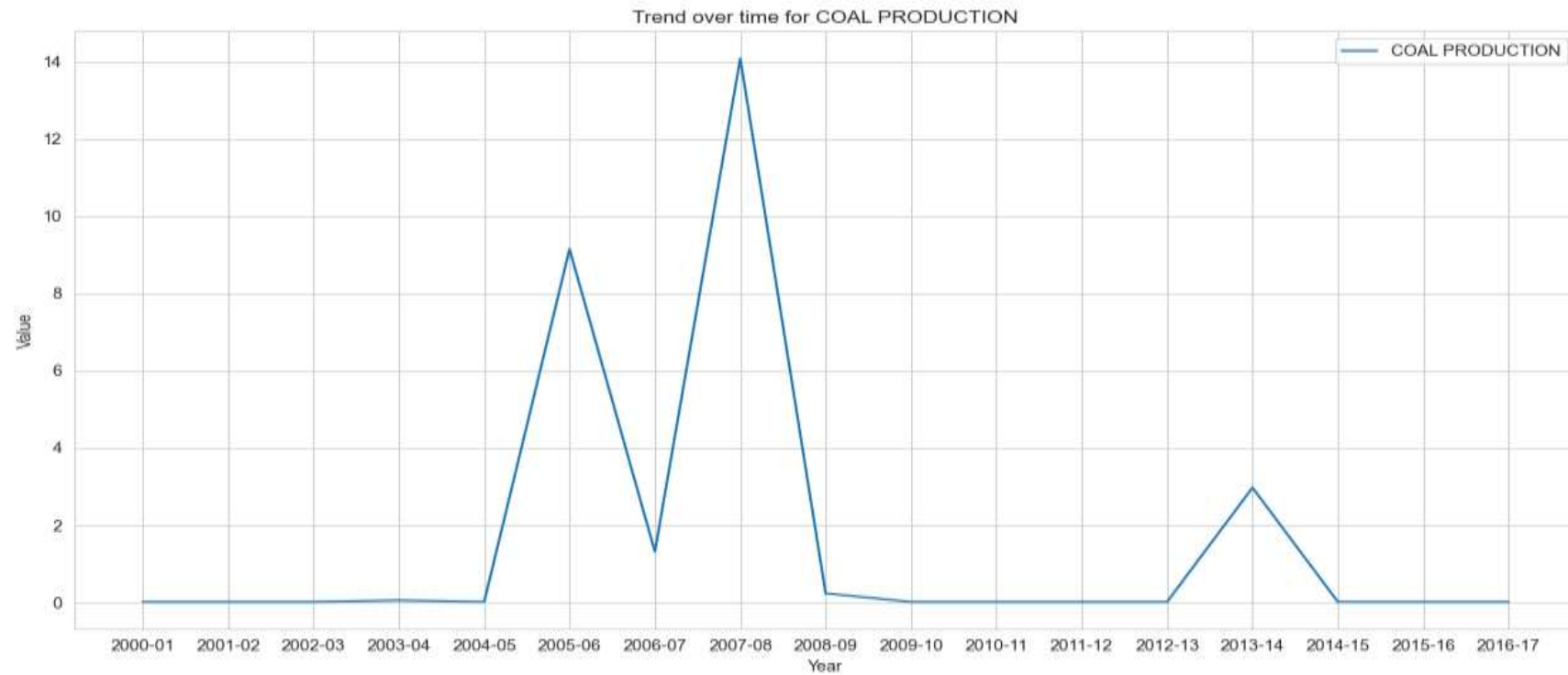
# NON-CONVENTIONAL ENERGY

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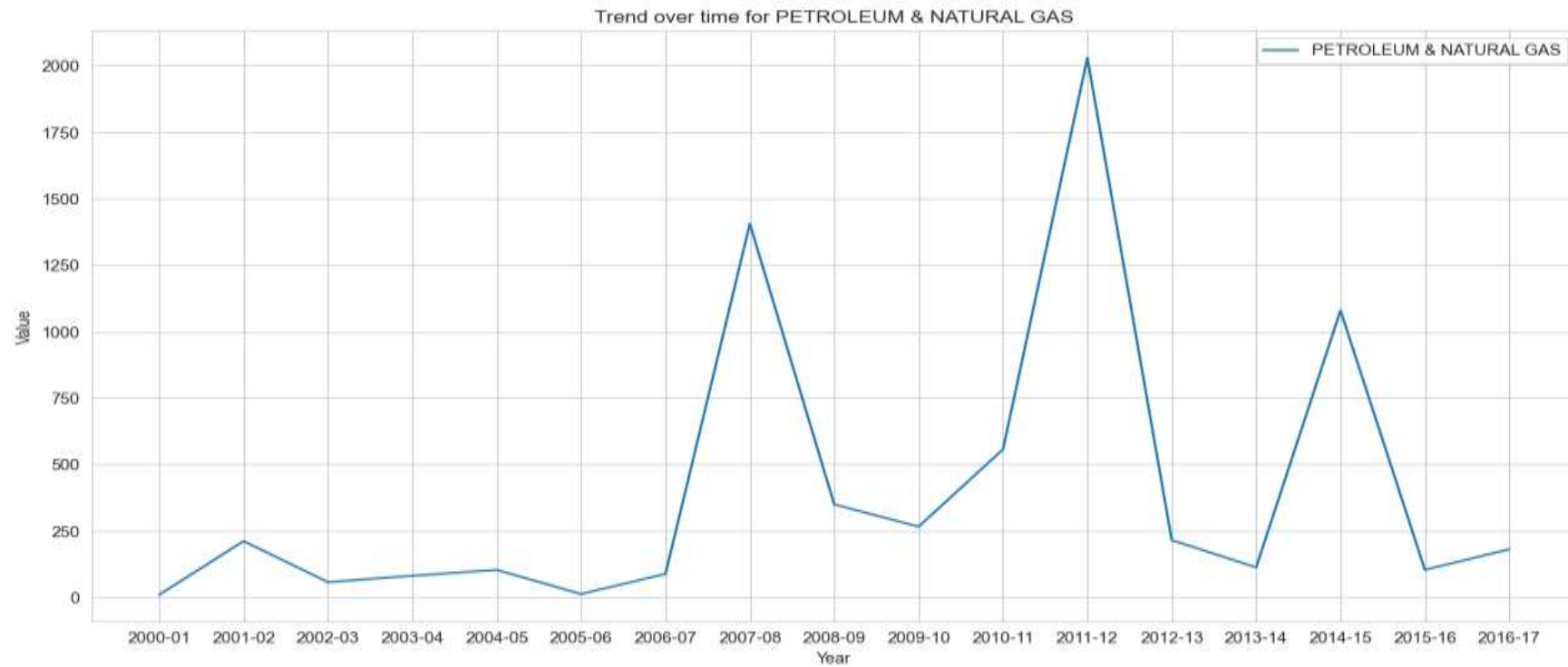
# COAL PRODUCTION

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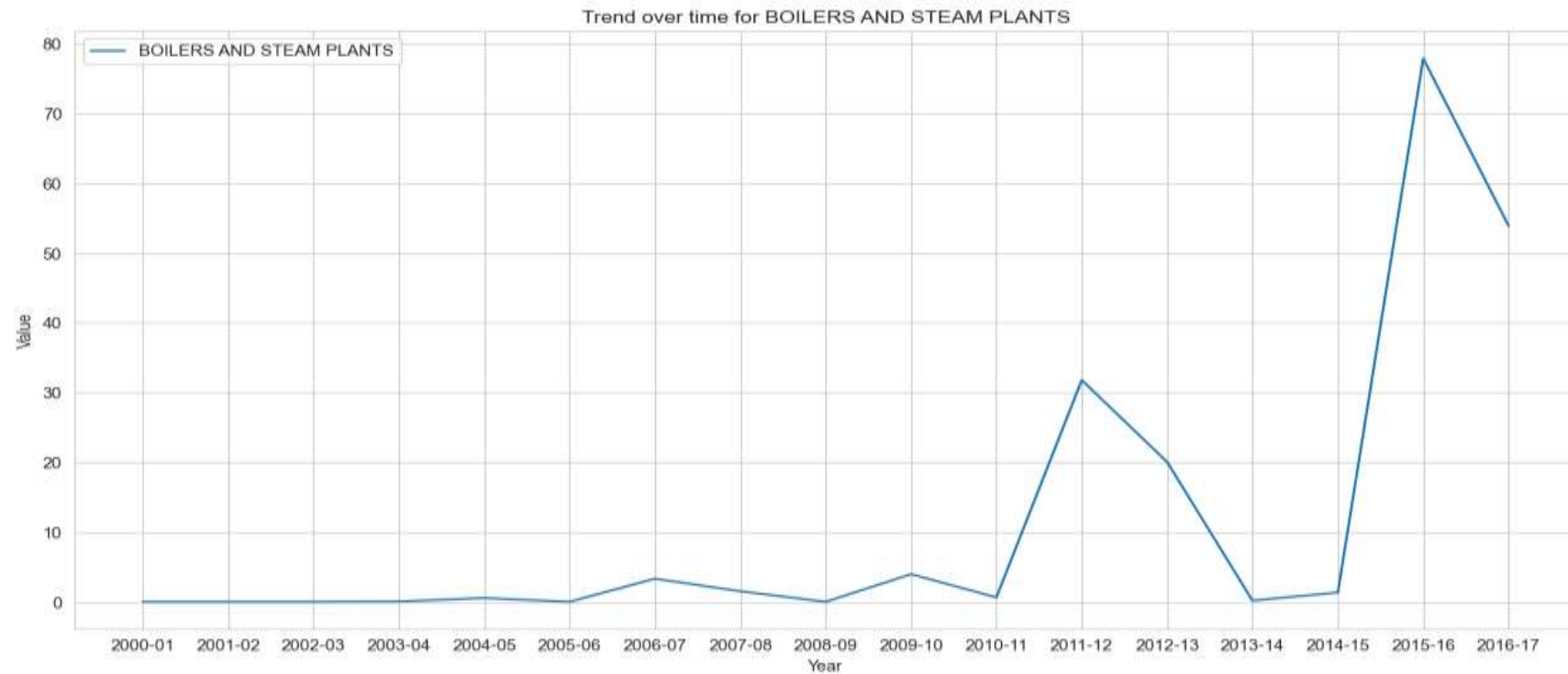
# PETROLEUM & NATURAL GAS

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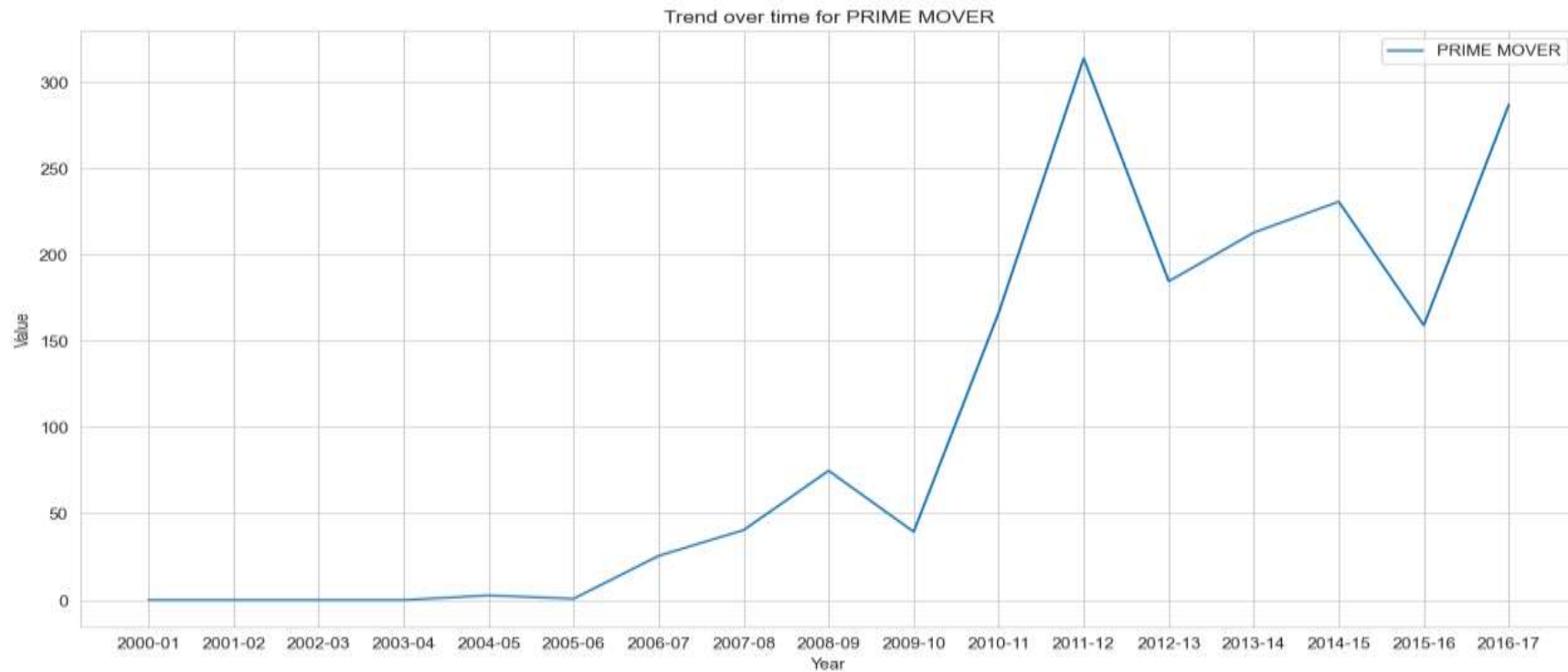
# BOILERS AND STEAM GENERATING PLANTS

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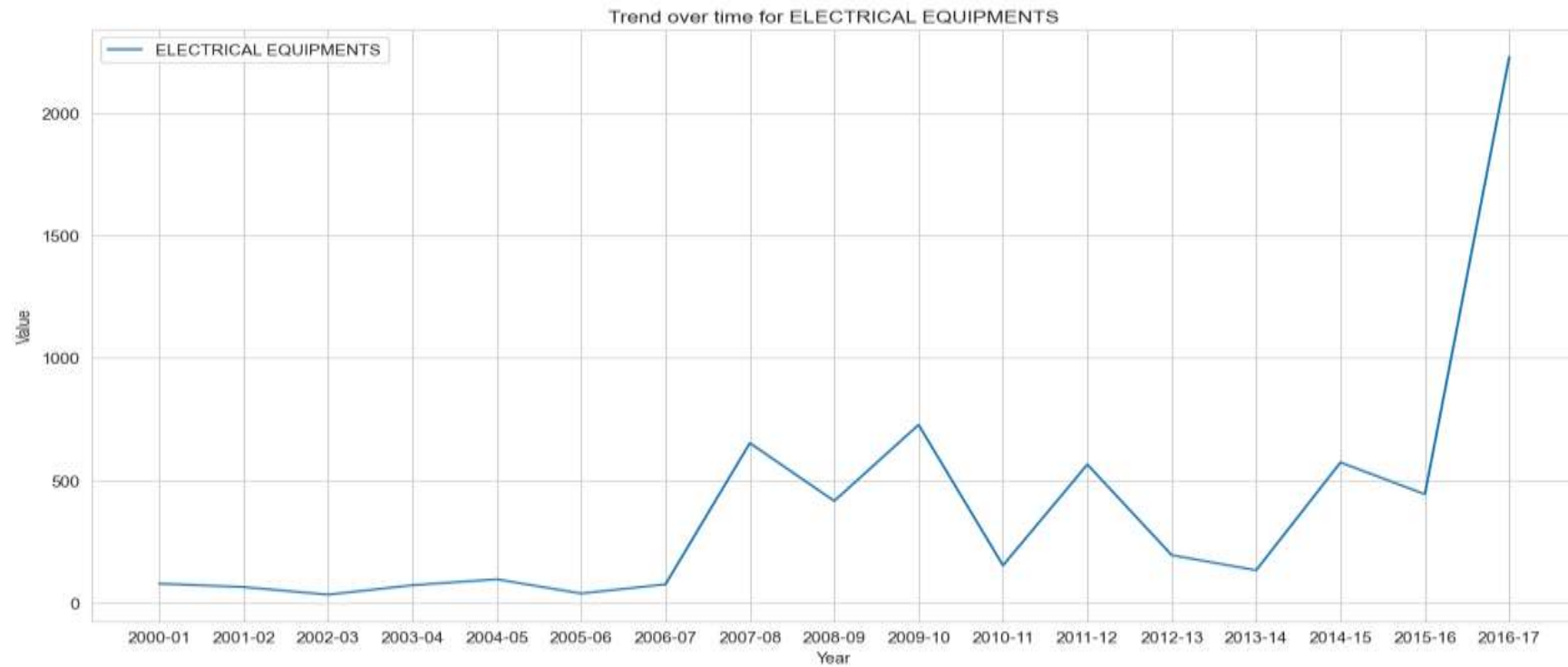
# PRIME MOVER (OTHER THAN ELECTRICAL GENERATORS)

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# ELECTRICAL EQUIPMENTS

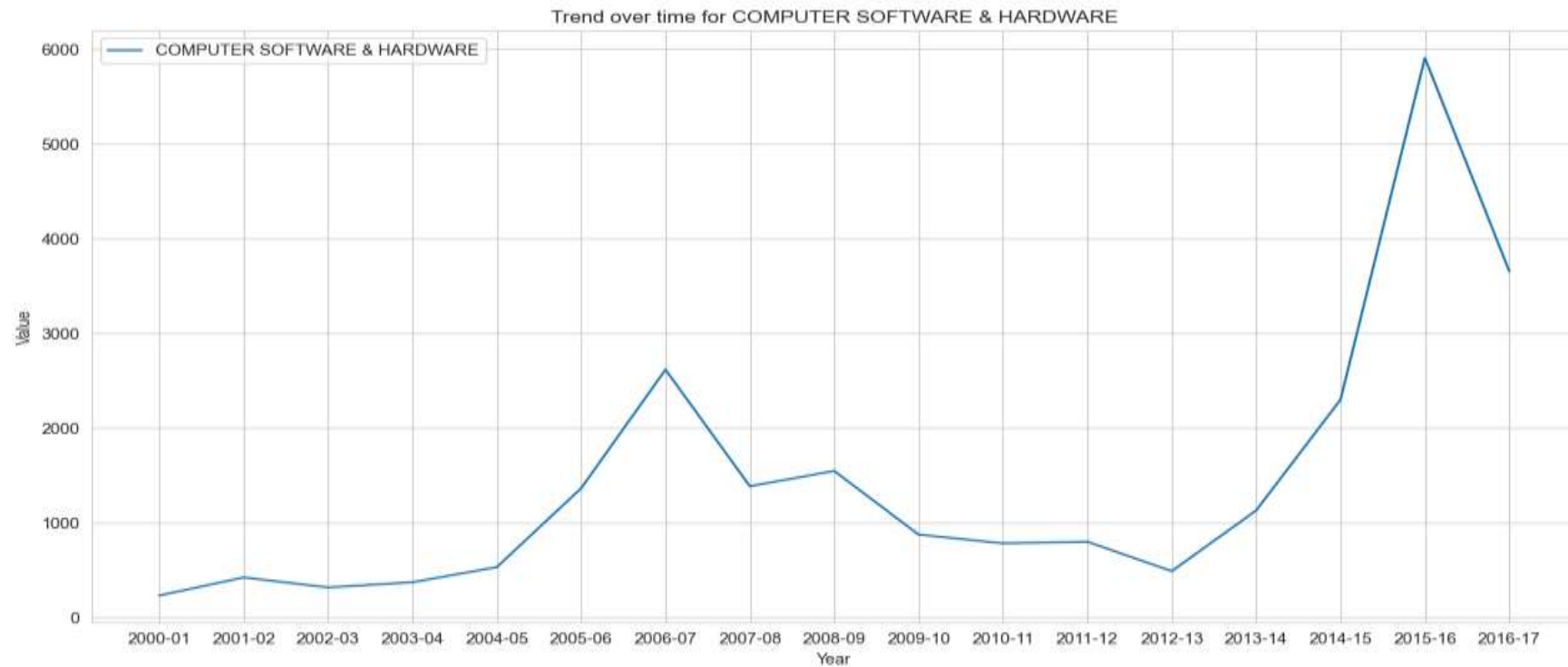
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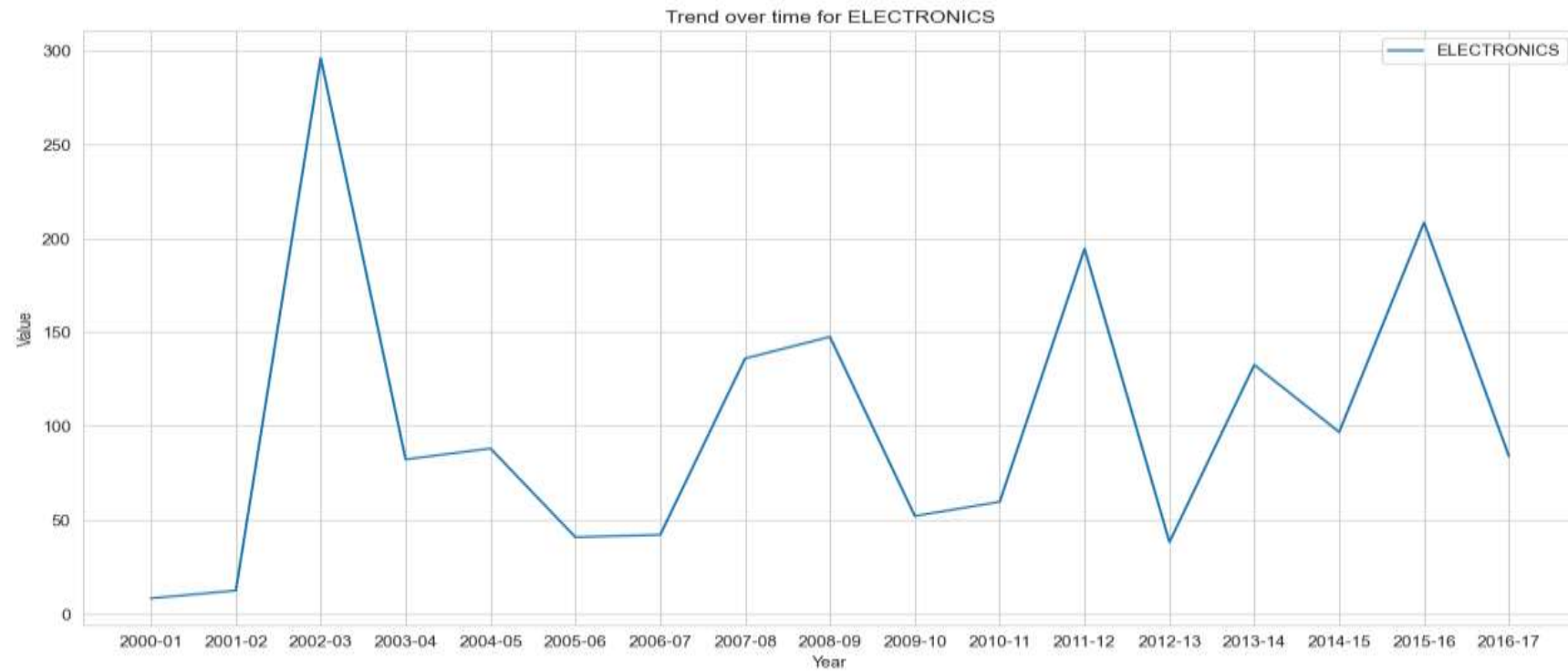
# COMPUTER SOFTWARE & HARDWARE

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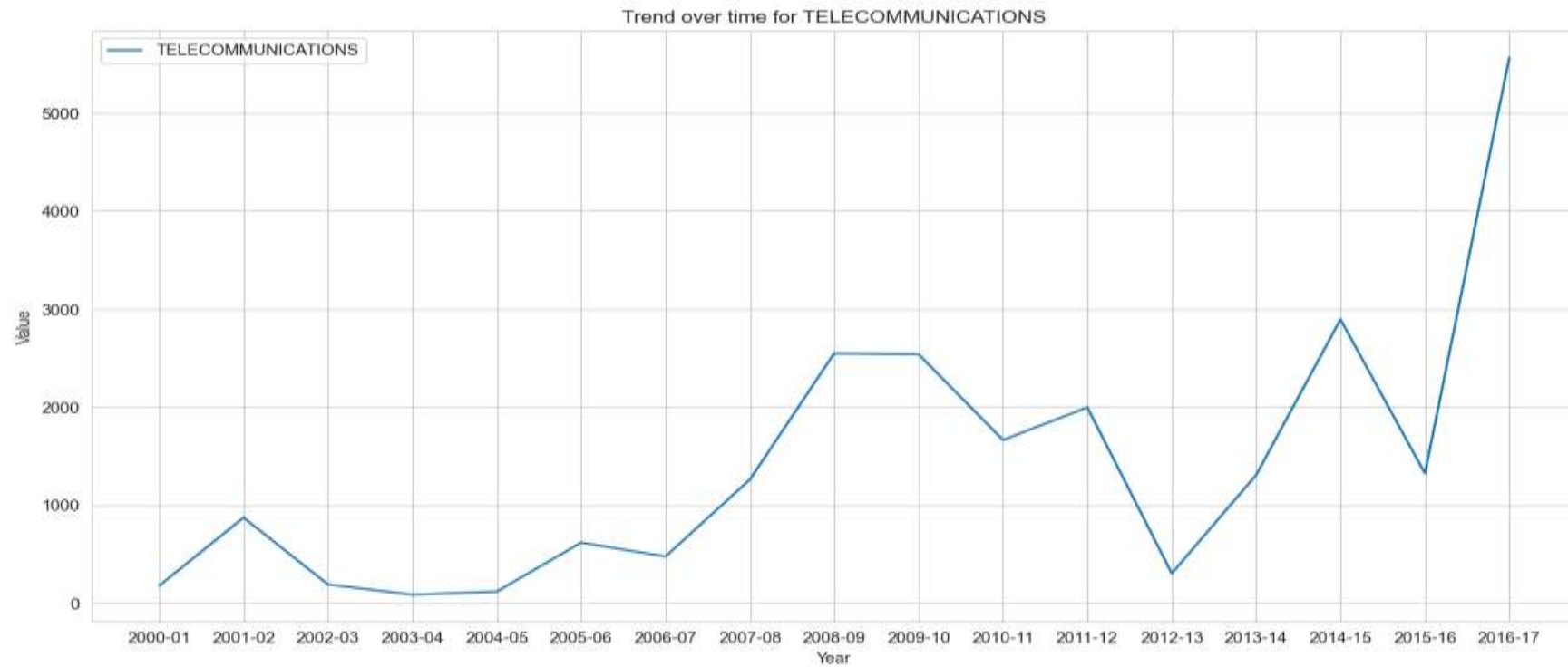
# ELECTRONICS

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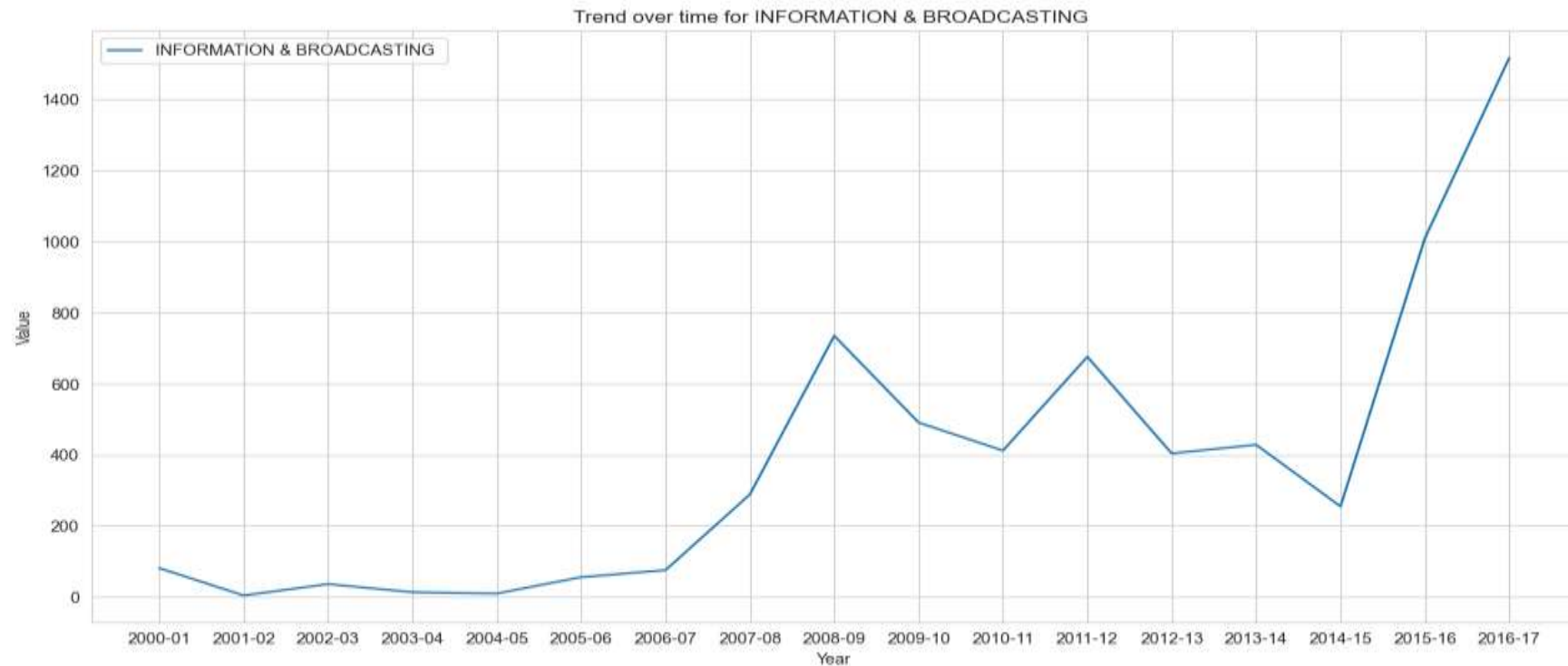
# TELECOMMUNICATIONS

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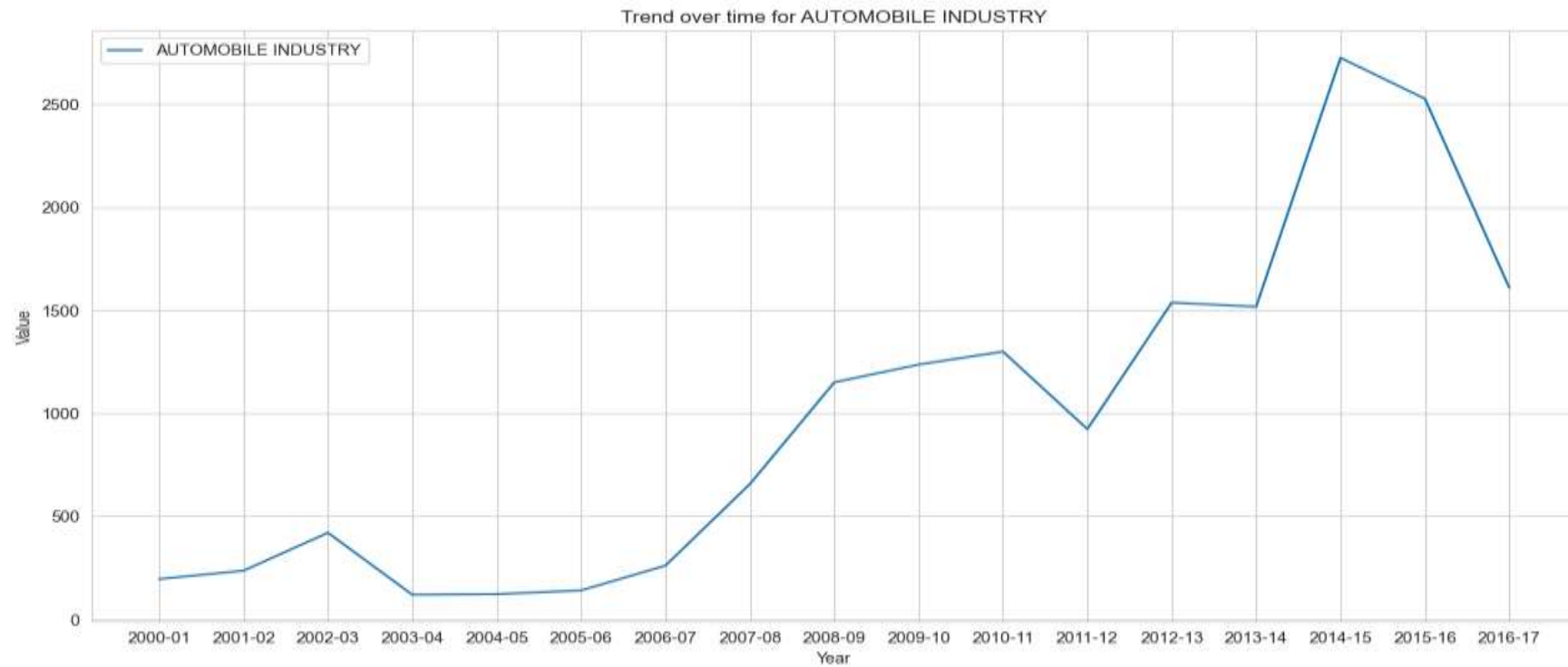
# INFORMATION & BROADCASTING (INCLUDING PRINT MEDIA)

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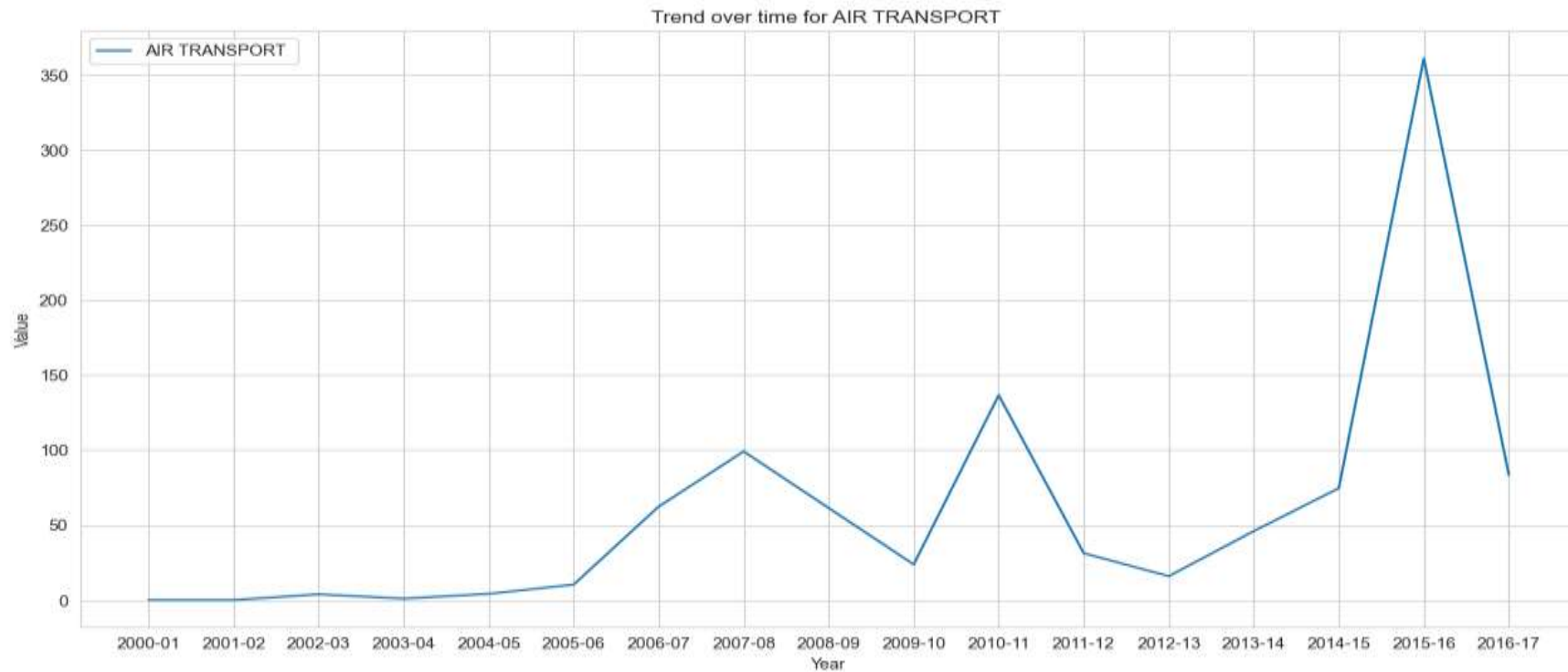
# AUTOMOBILE INDUSTRY

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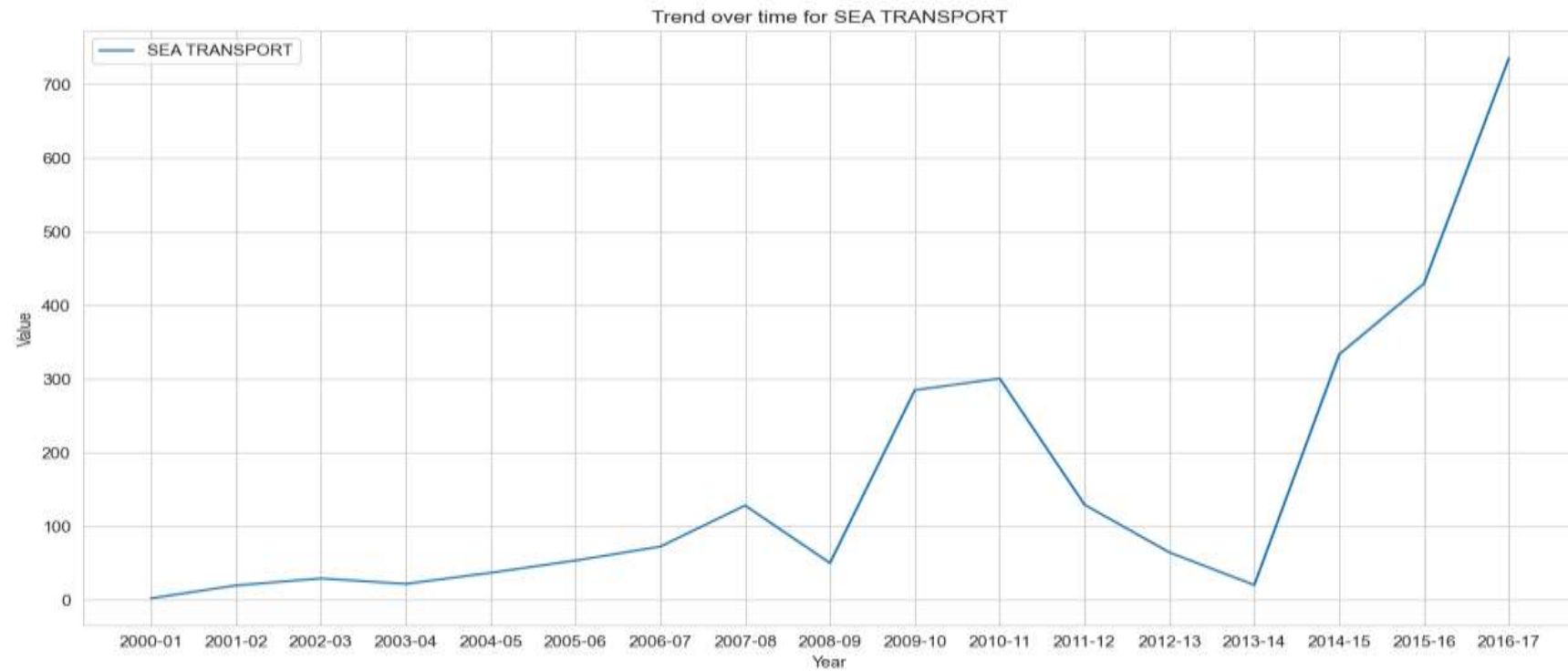
# AIR TRANSPORT (INCLUDING AIR FREIGHT)

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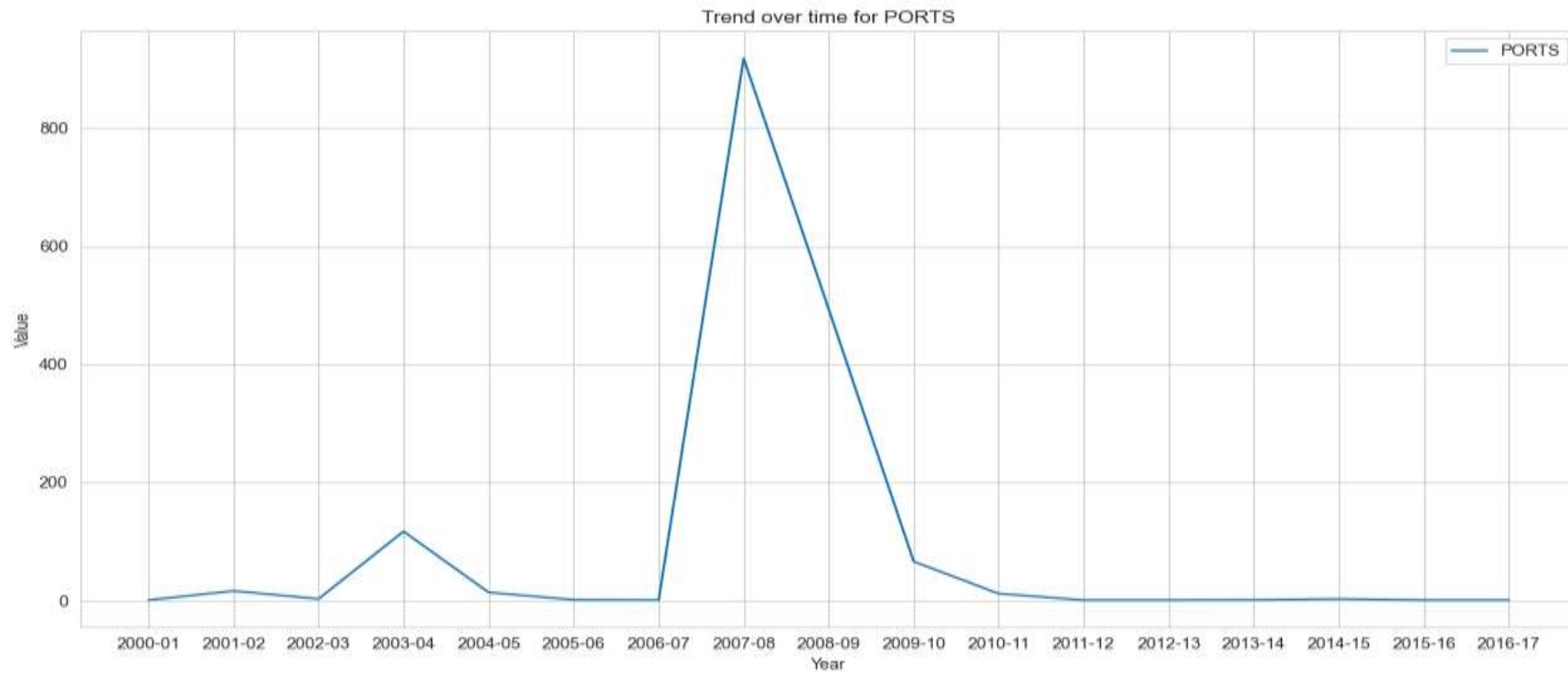
# SEA TRANSPORT

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# PORTS

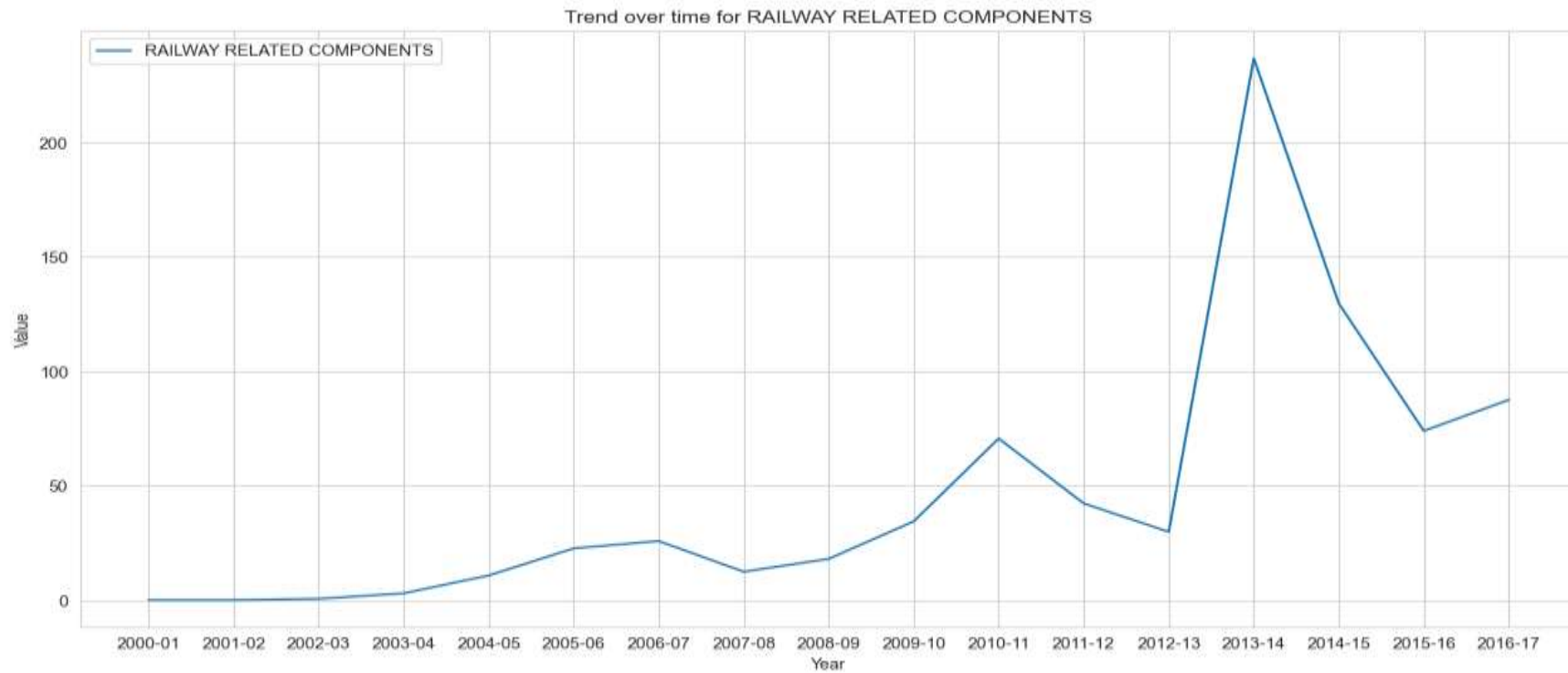
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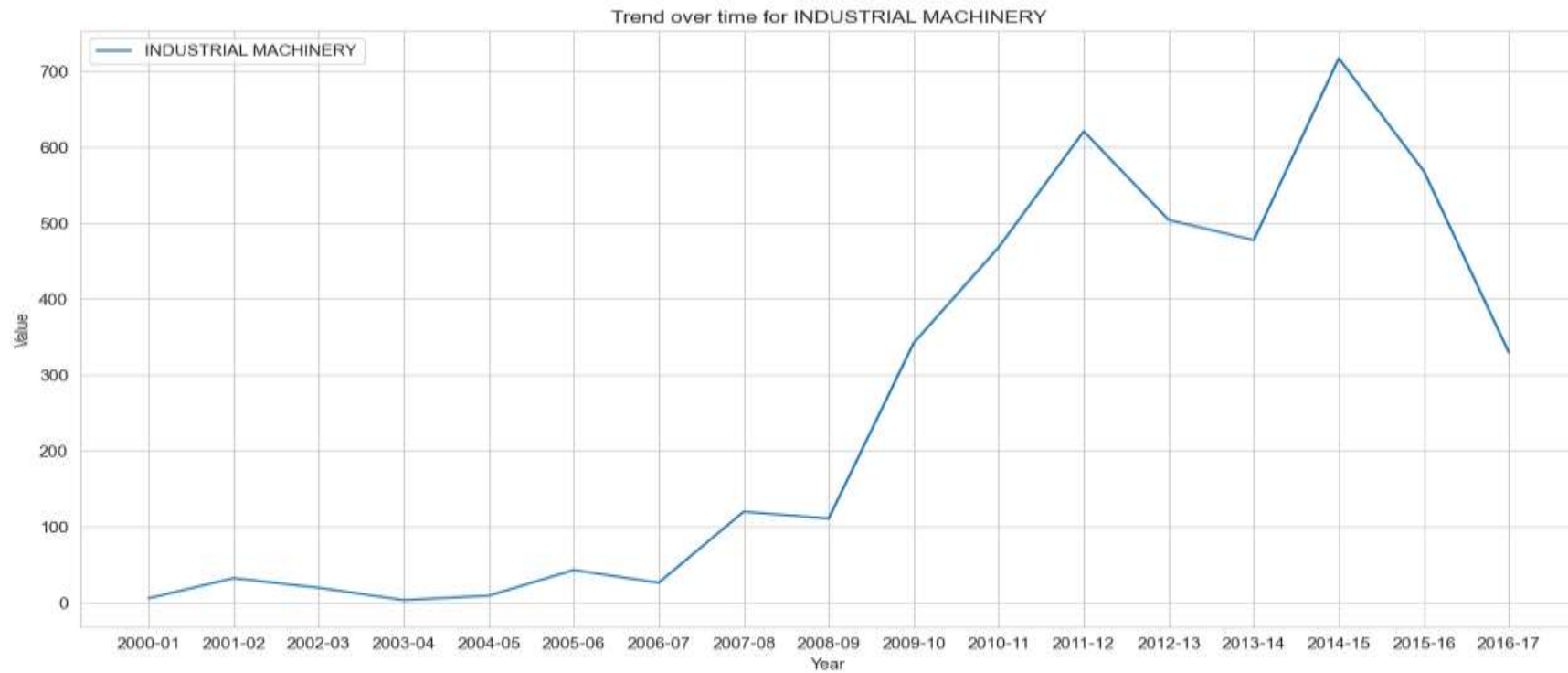
# RAILWAY RELATED COMPONENTS

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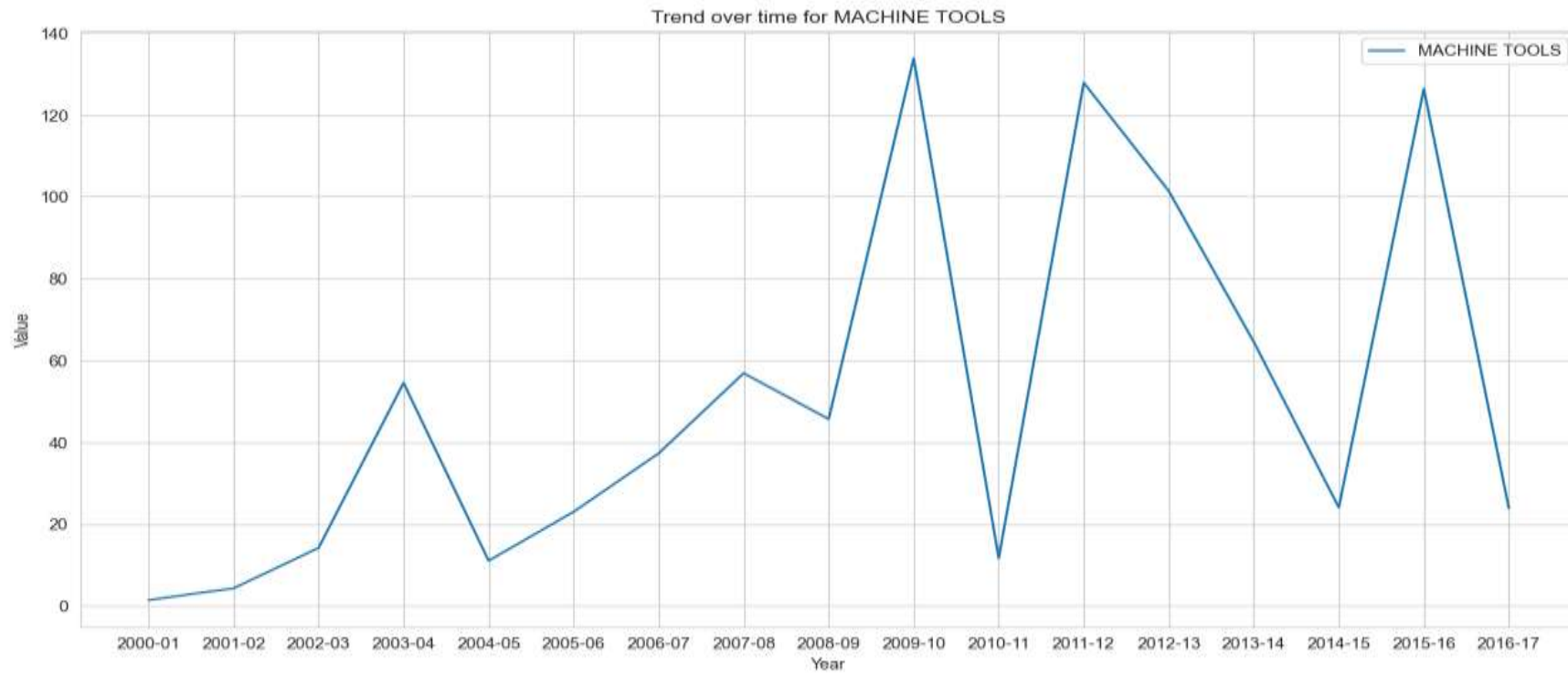
# INDUSTRIAL MACHINERY

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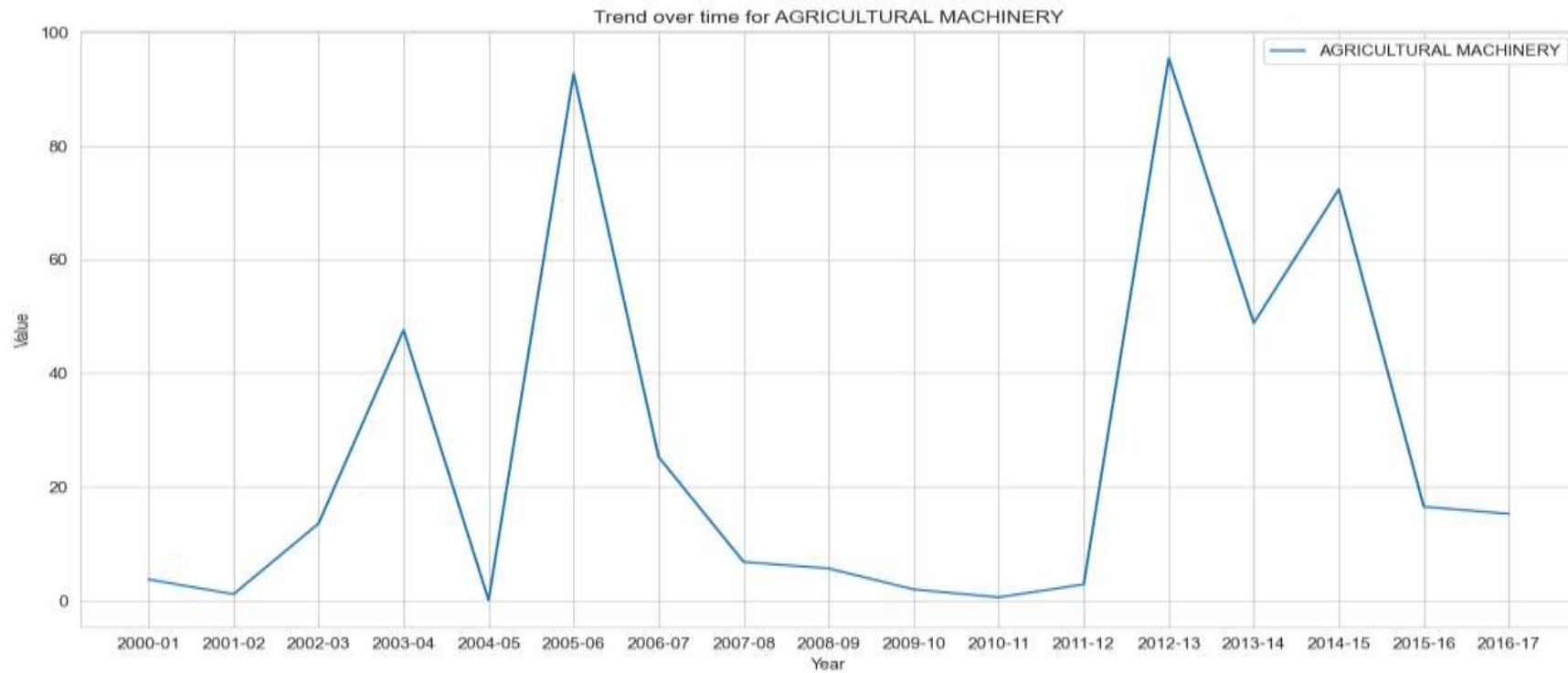
# MACHINE TOOLS

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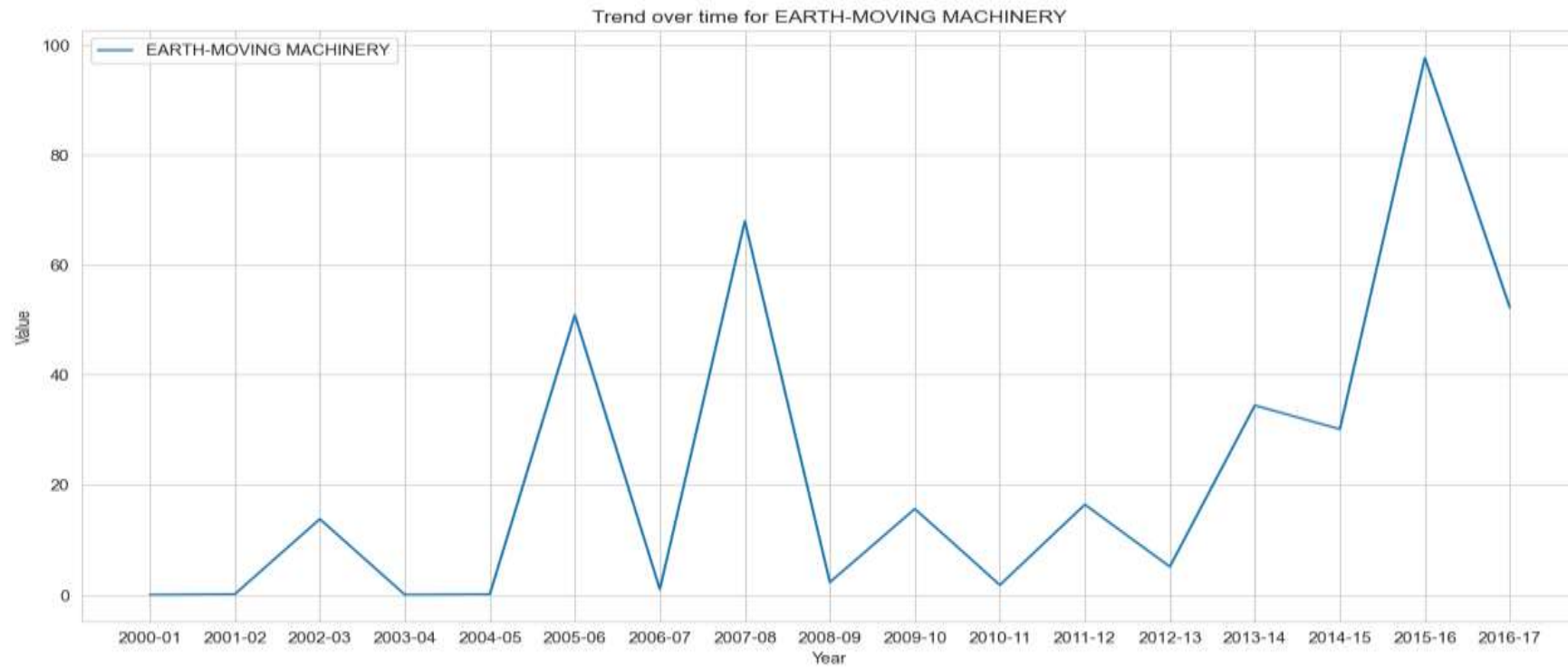
# AGRICULTURAL MACHINERY

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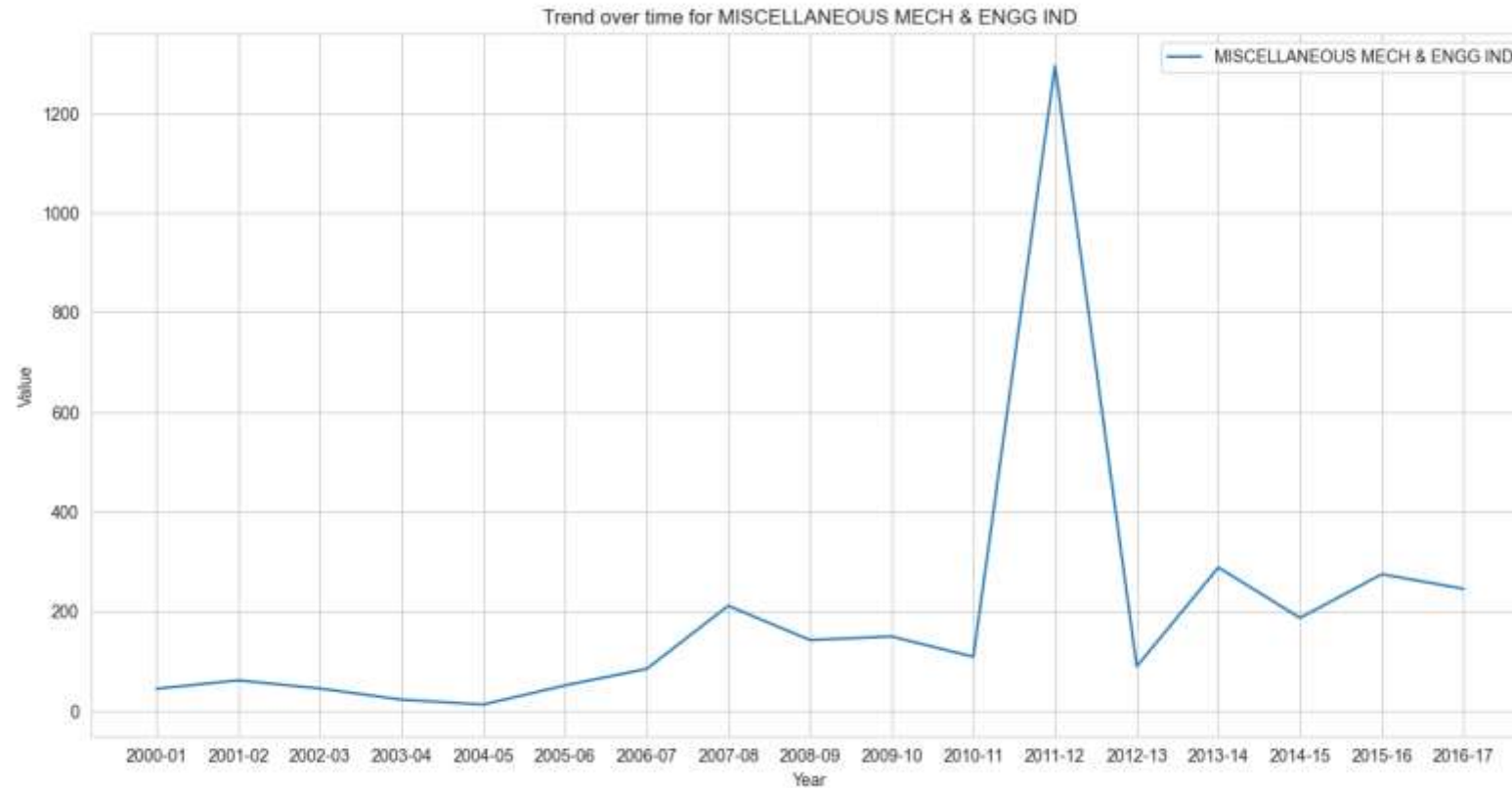


# EARTH-MOVING MACHINERY

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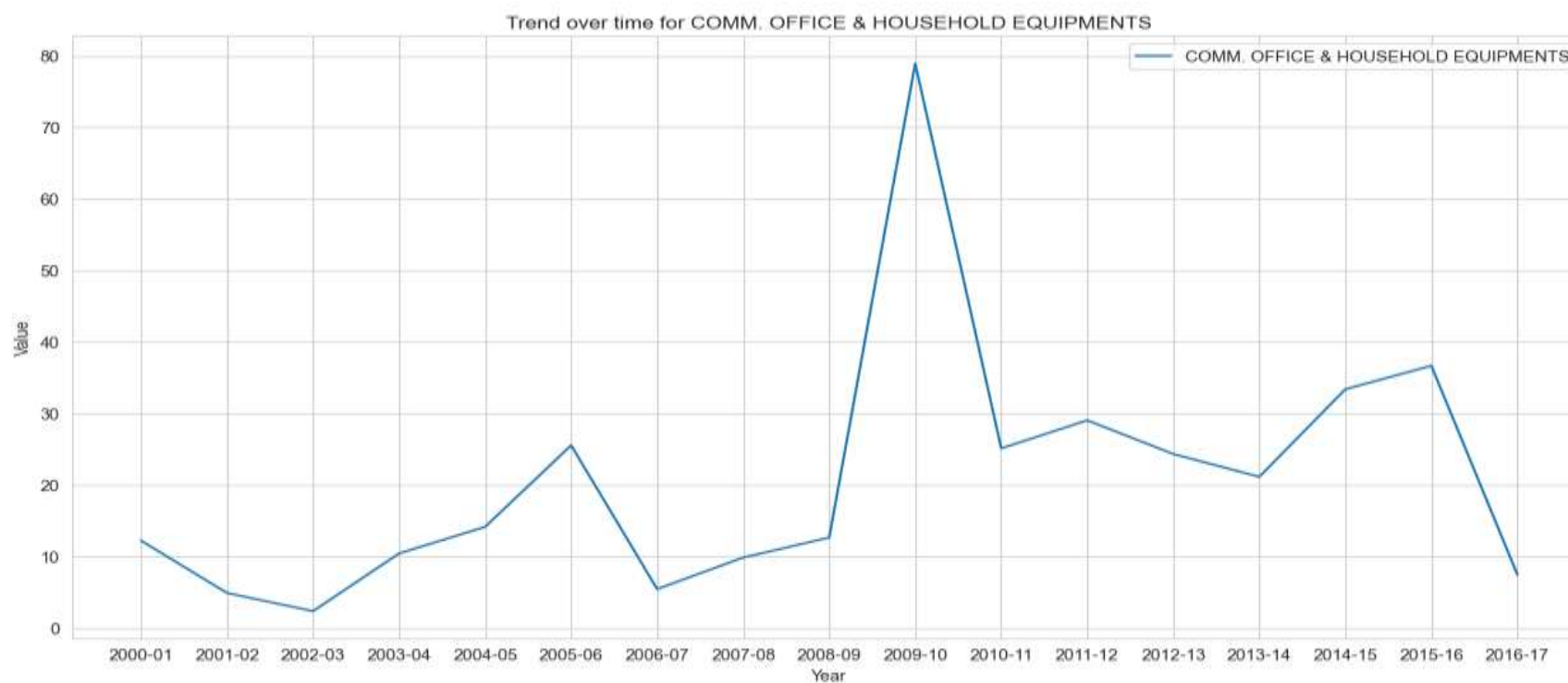


# MISCELLANEOUS MECHANICAL & ENGINEERING INDUSTRIES



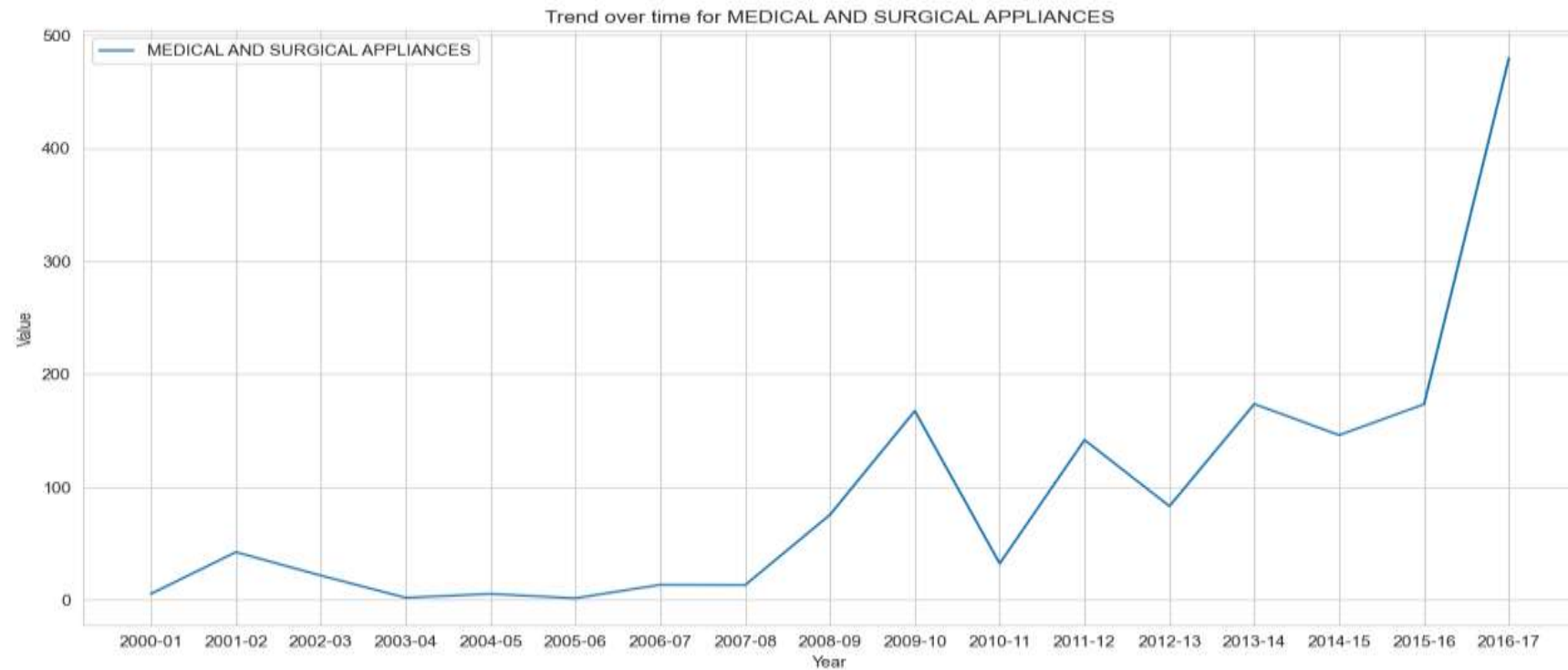
# COMMERCIAL, OFFICE & HOUSEHOLD EQUIPMENTS

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# MEDICAL AND SURGICAL APPLIANCES

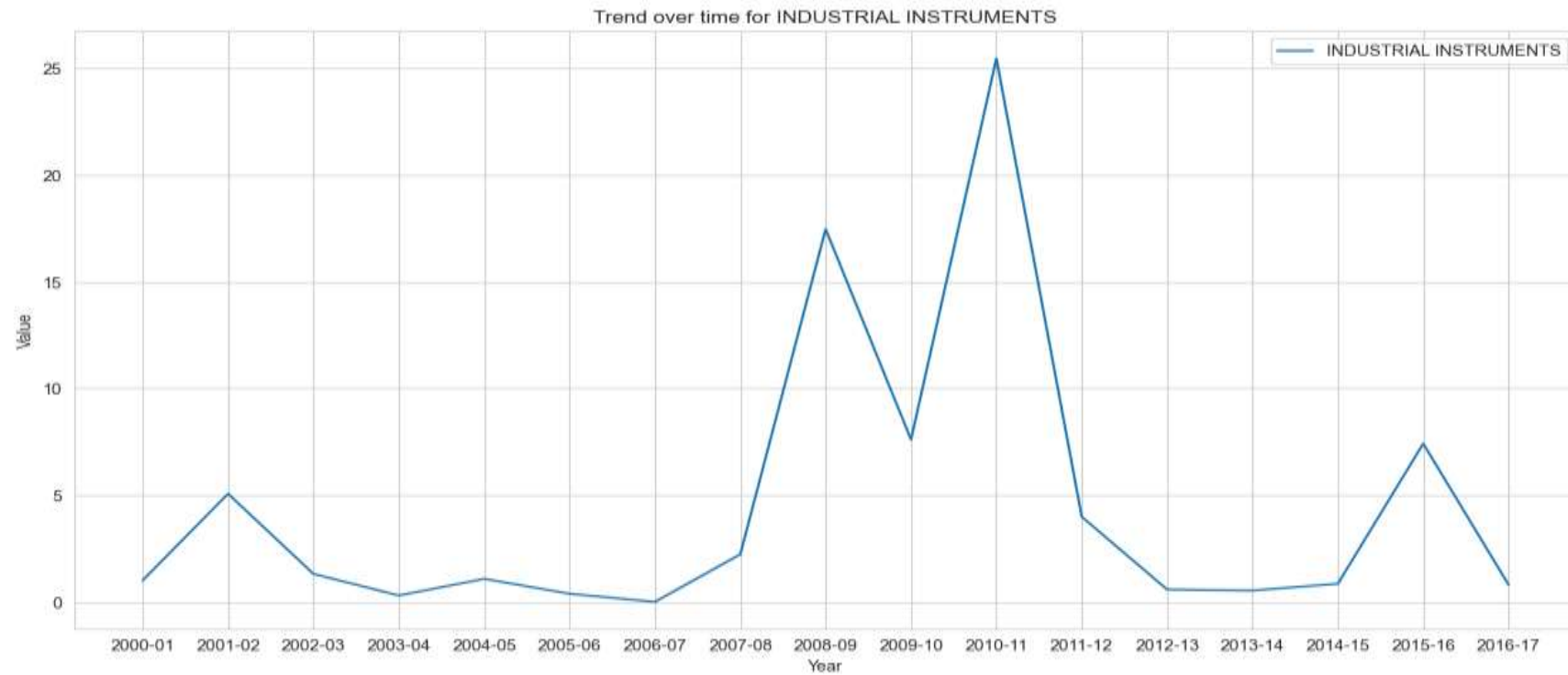
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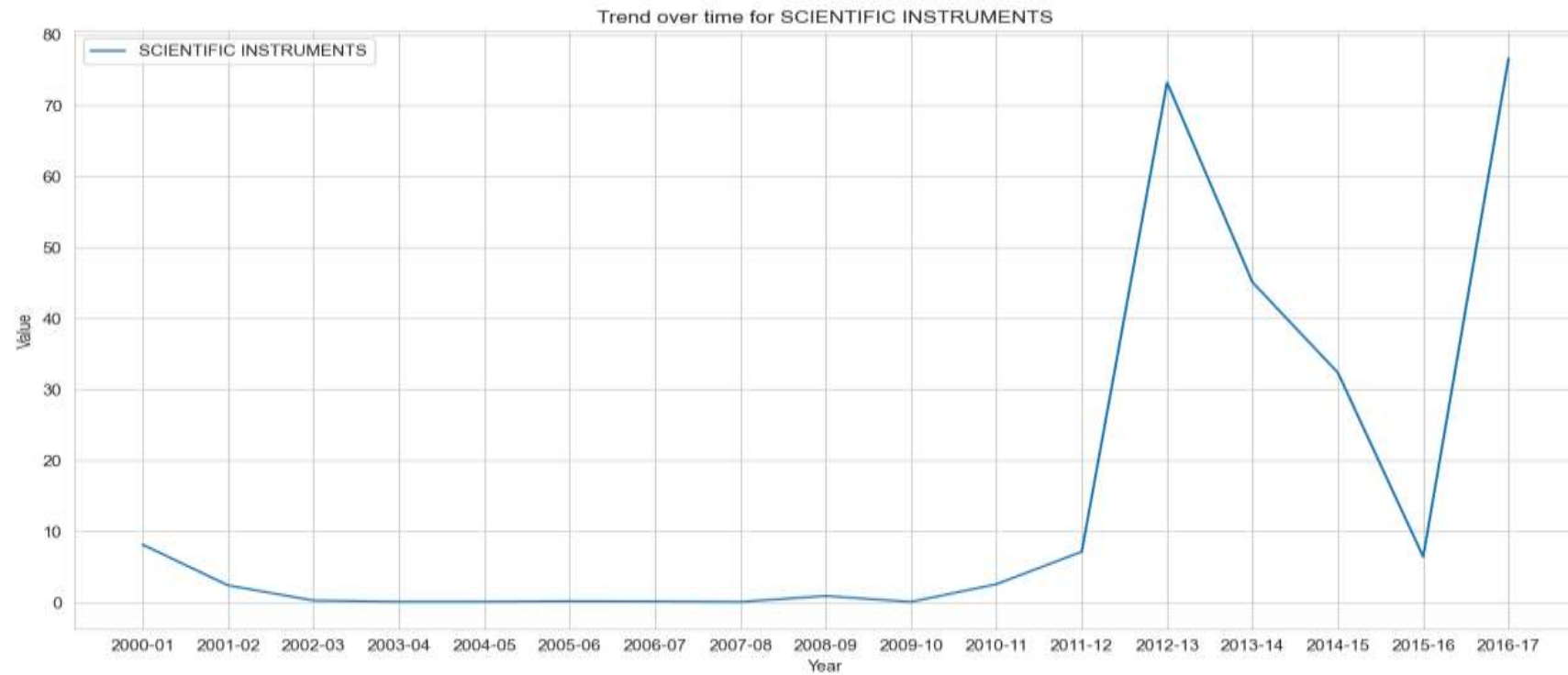
# INDUSTRIAL INSTRUMENTS

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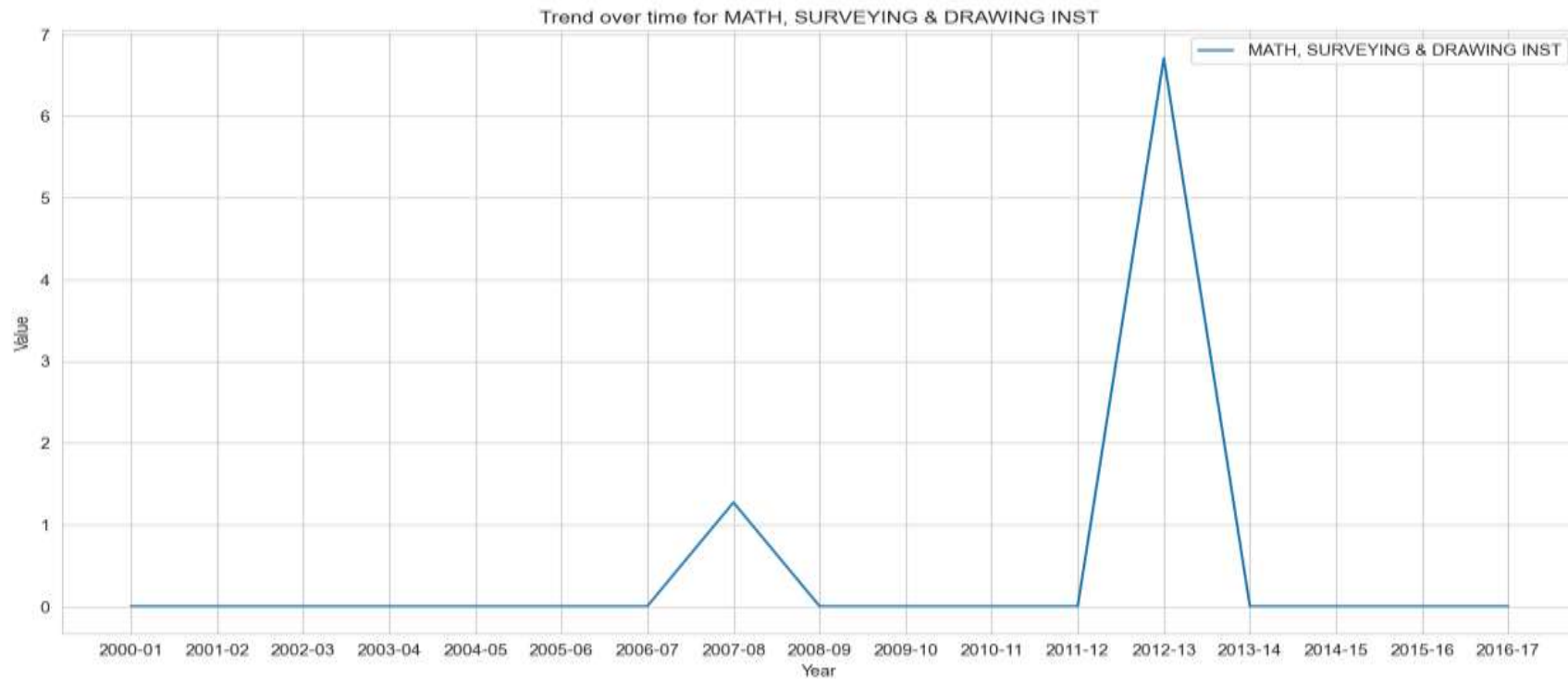
# SCIENTIFIC INSTRUMENTS

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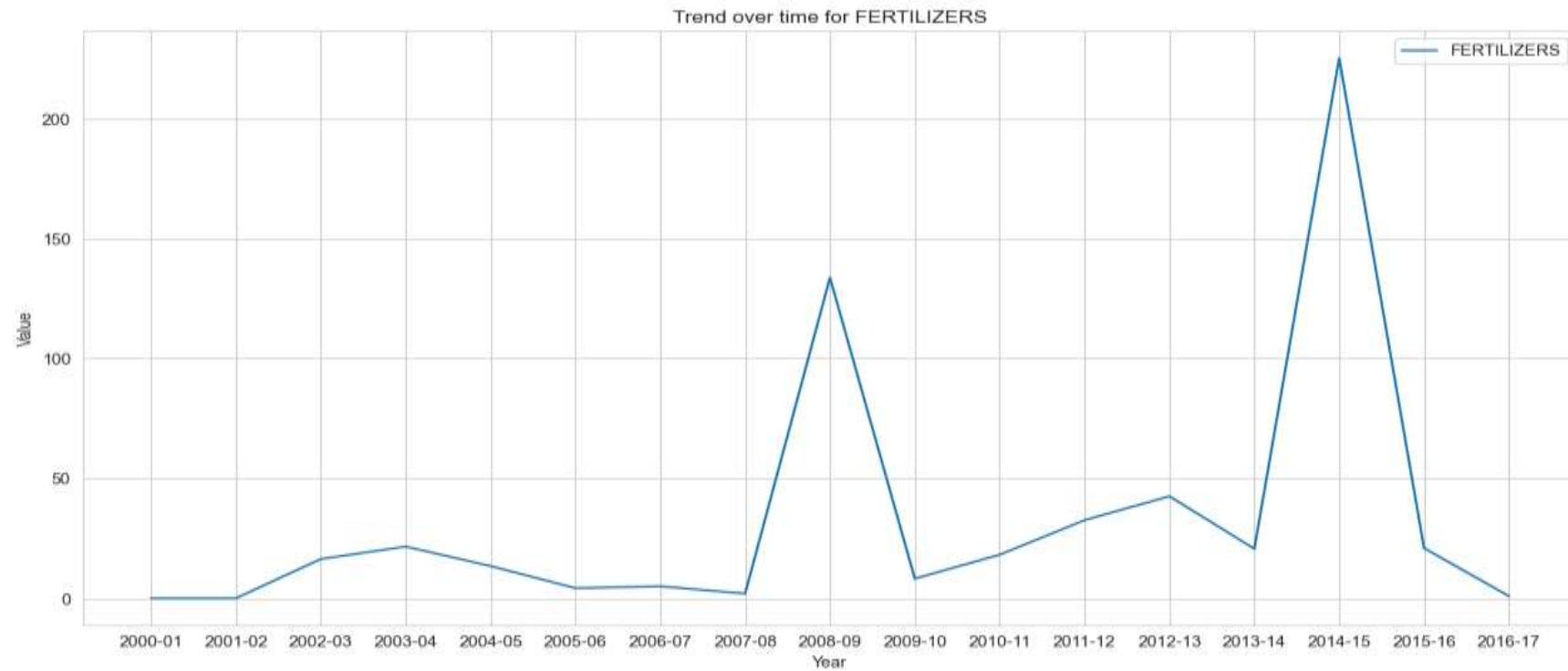
# MATHEMATICAL, SURVEYING AND DRAWING INSTRUMENTS

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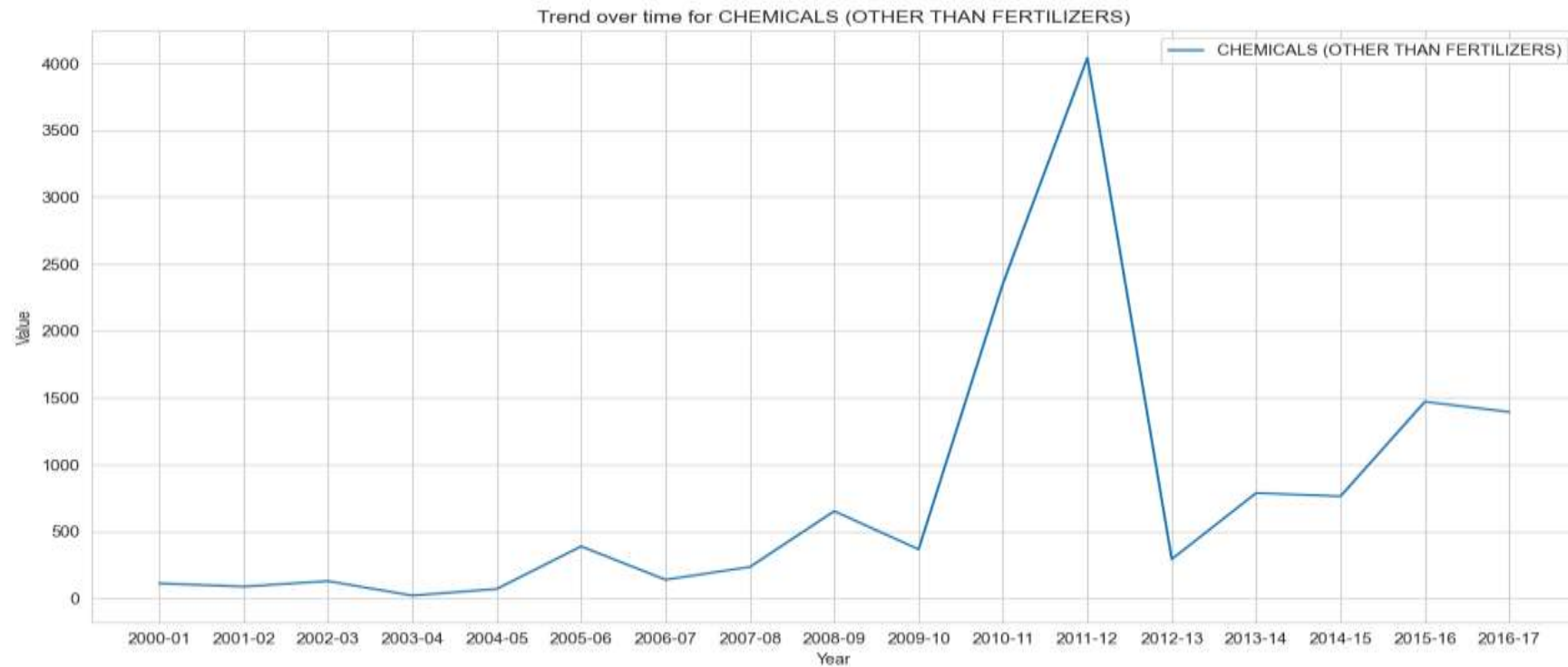
# FERTILIZERS

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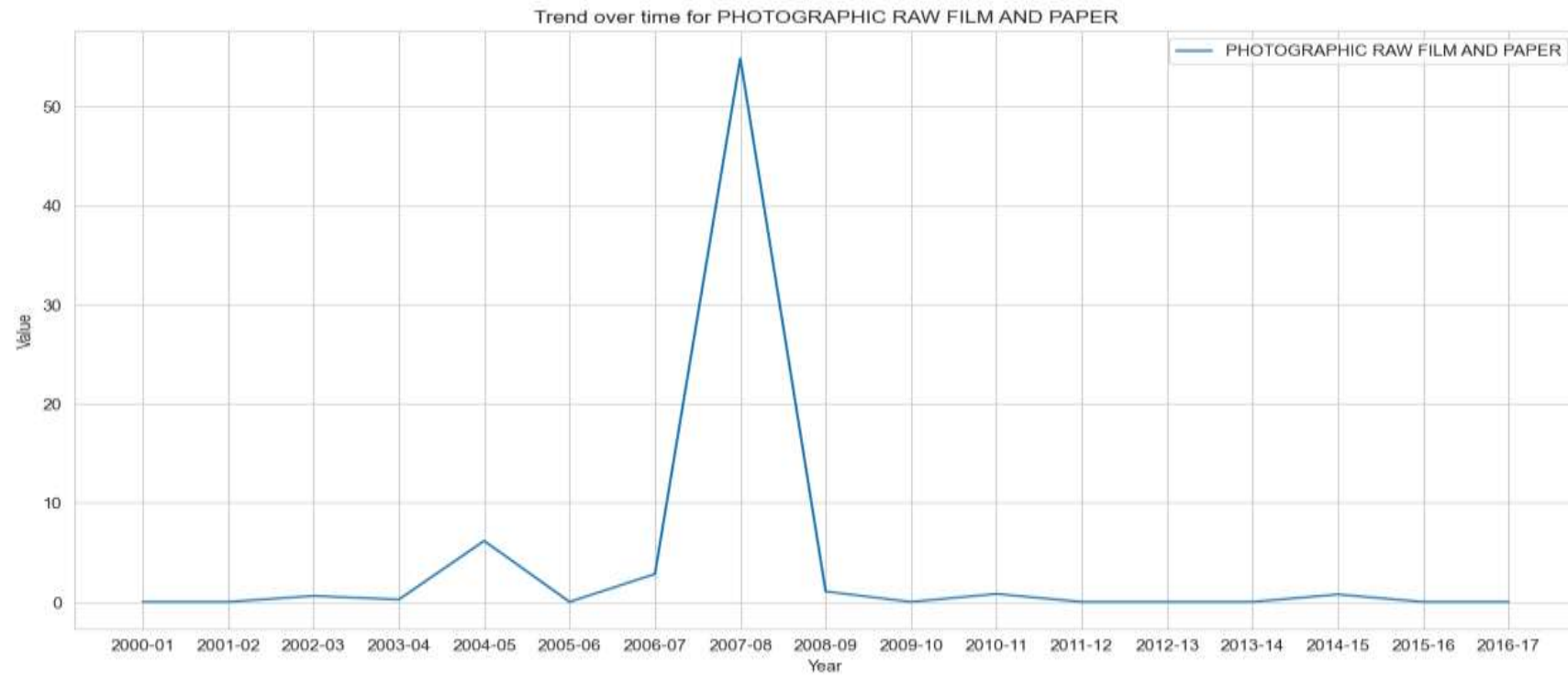
# CHEMICALS (OTHER THAN FERTILIZERS)

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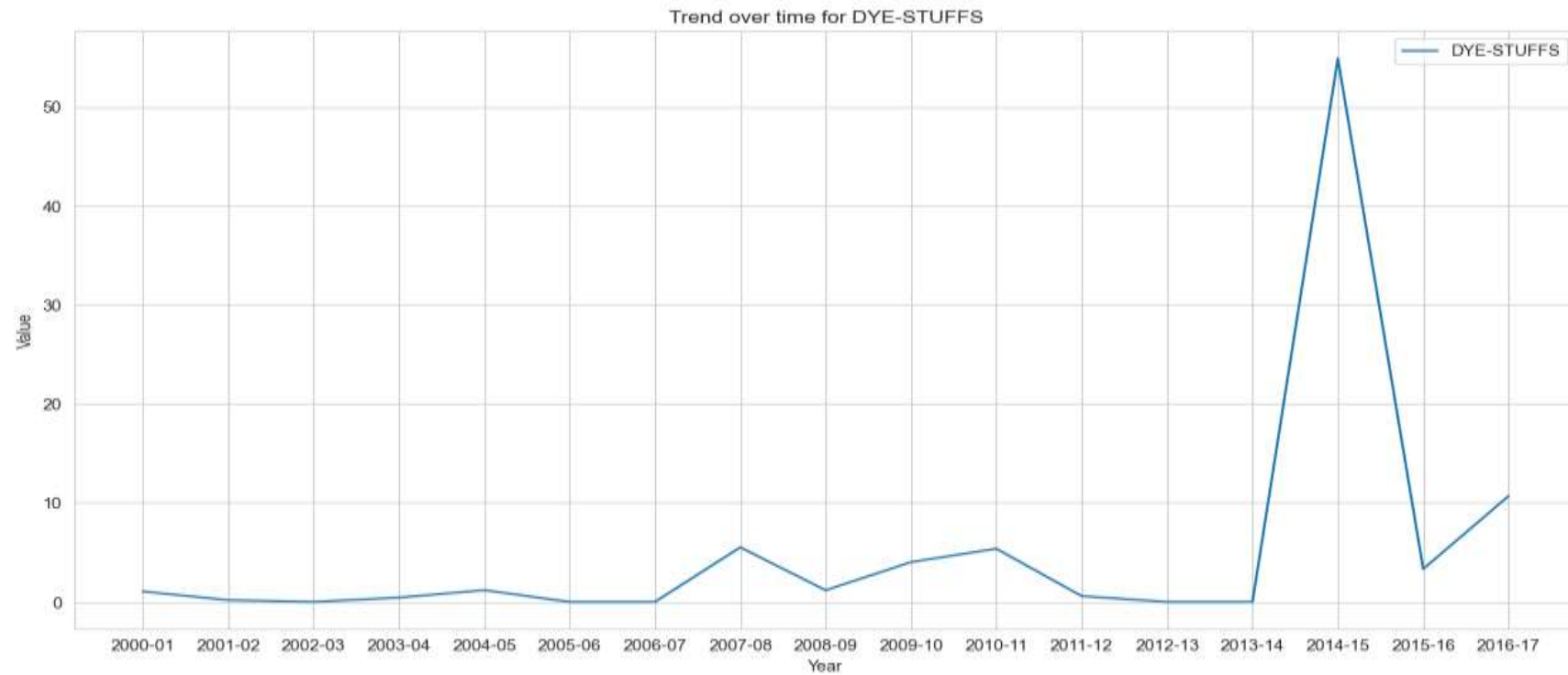
# PHOTOGRAPHIC RAW FILM AND PAPER

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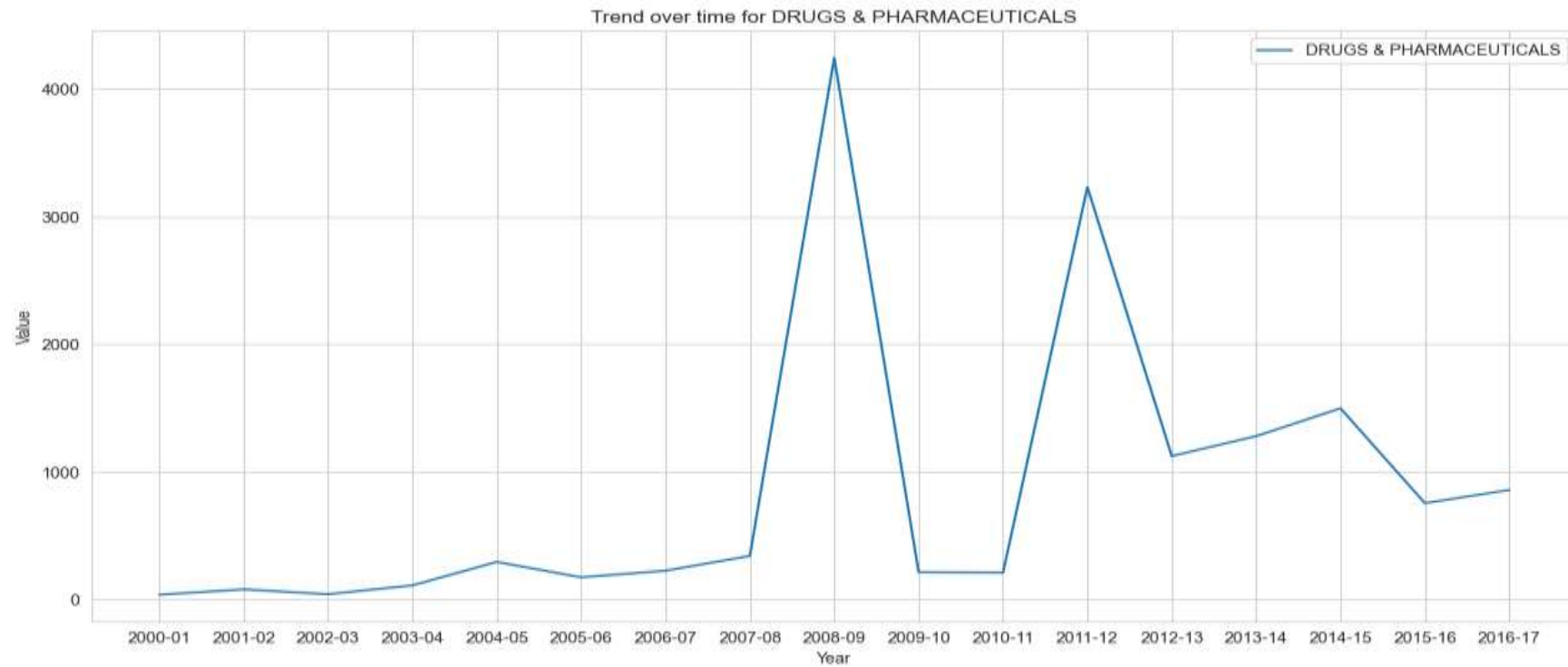
# DYE-STUFFS

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# DRUGS & PHARMACEUTICALS

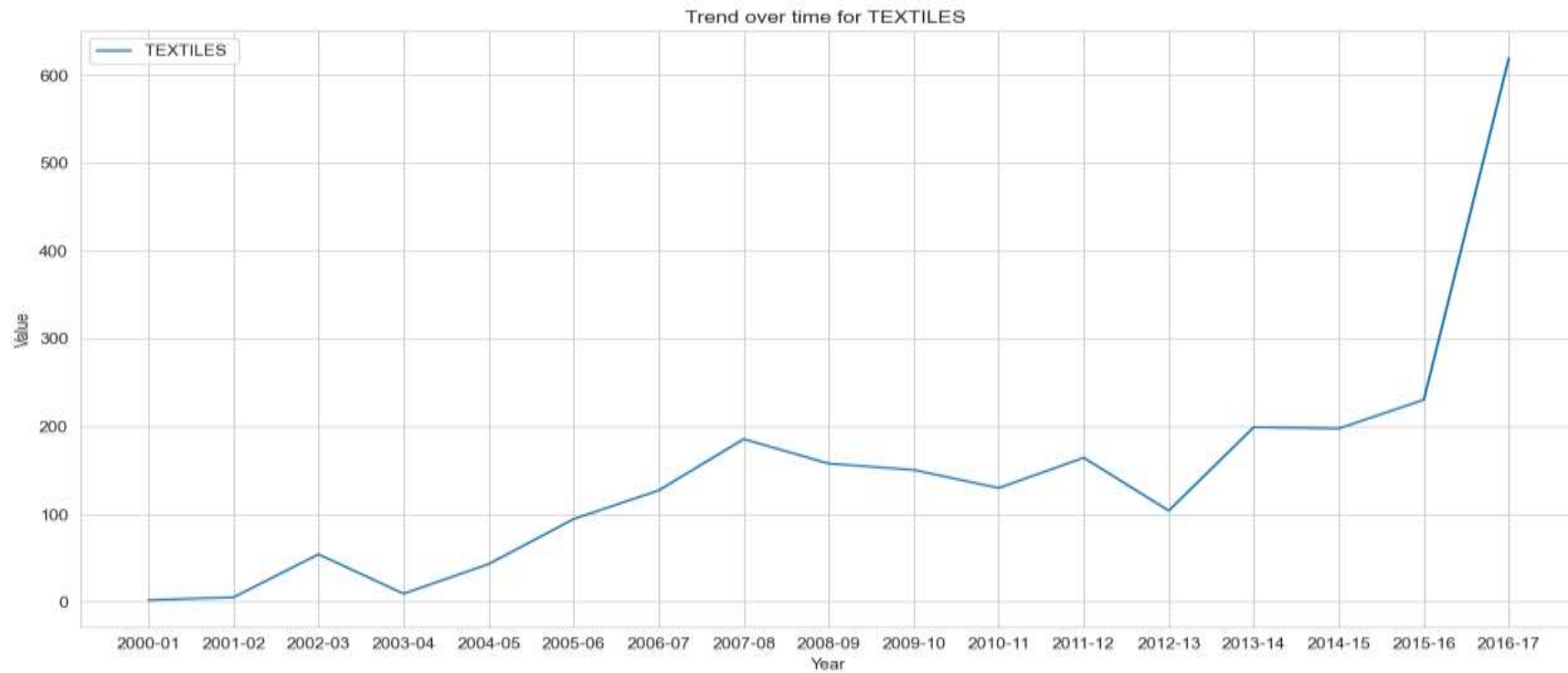
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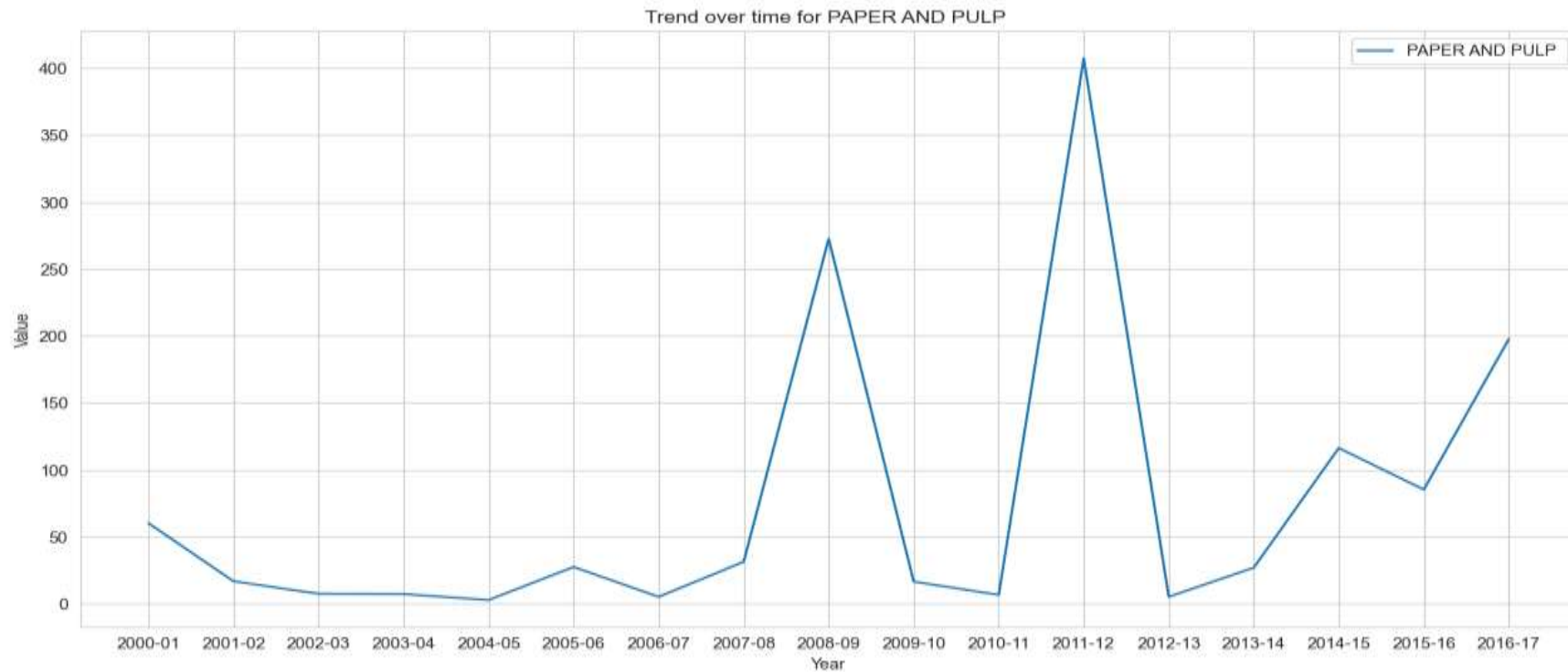
# TEXTILES (INCLUDING DYED,PRINTED)

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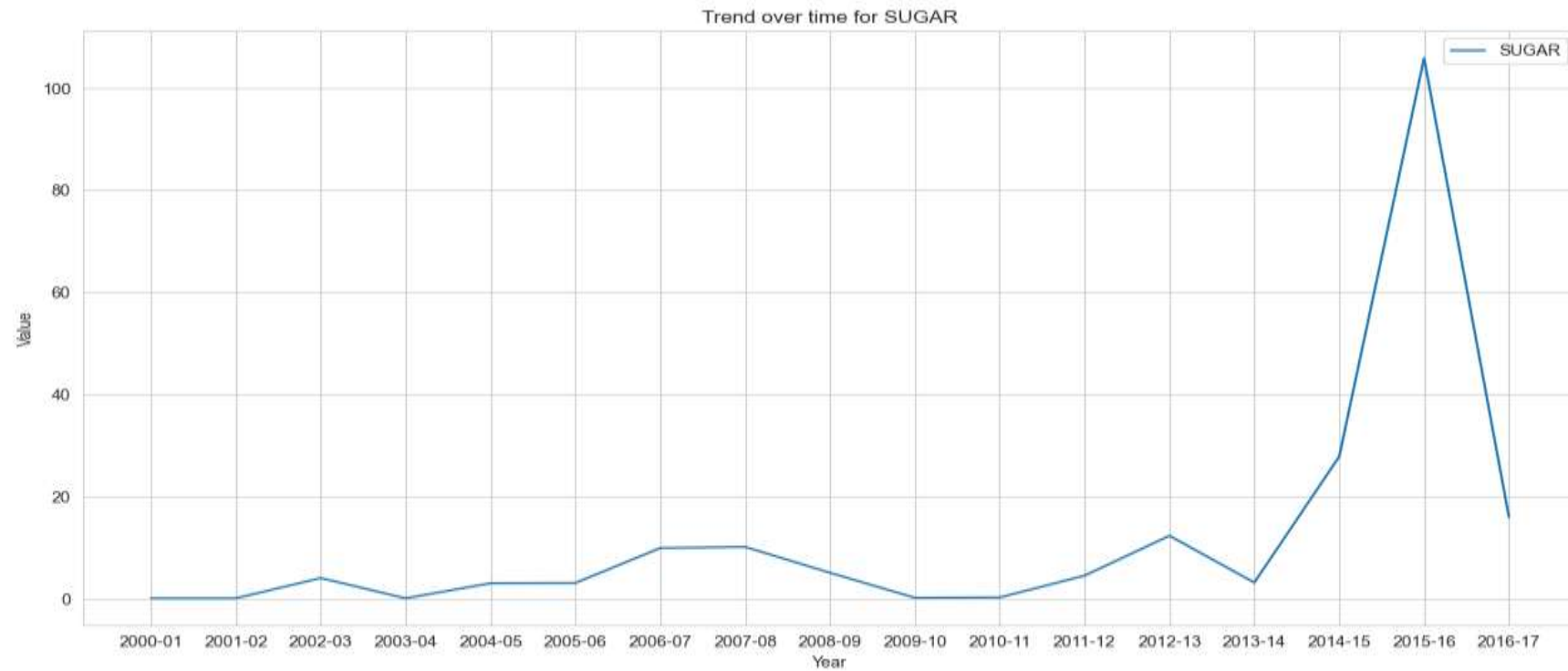
# PAPER AND PULP (INCLUDING PAPER PRODUCTS)

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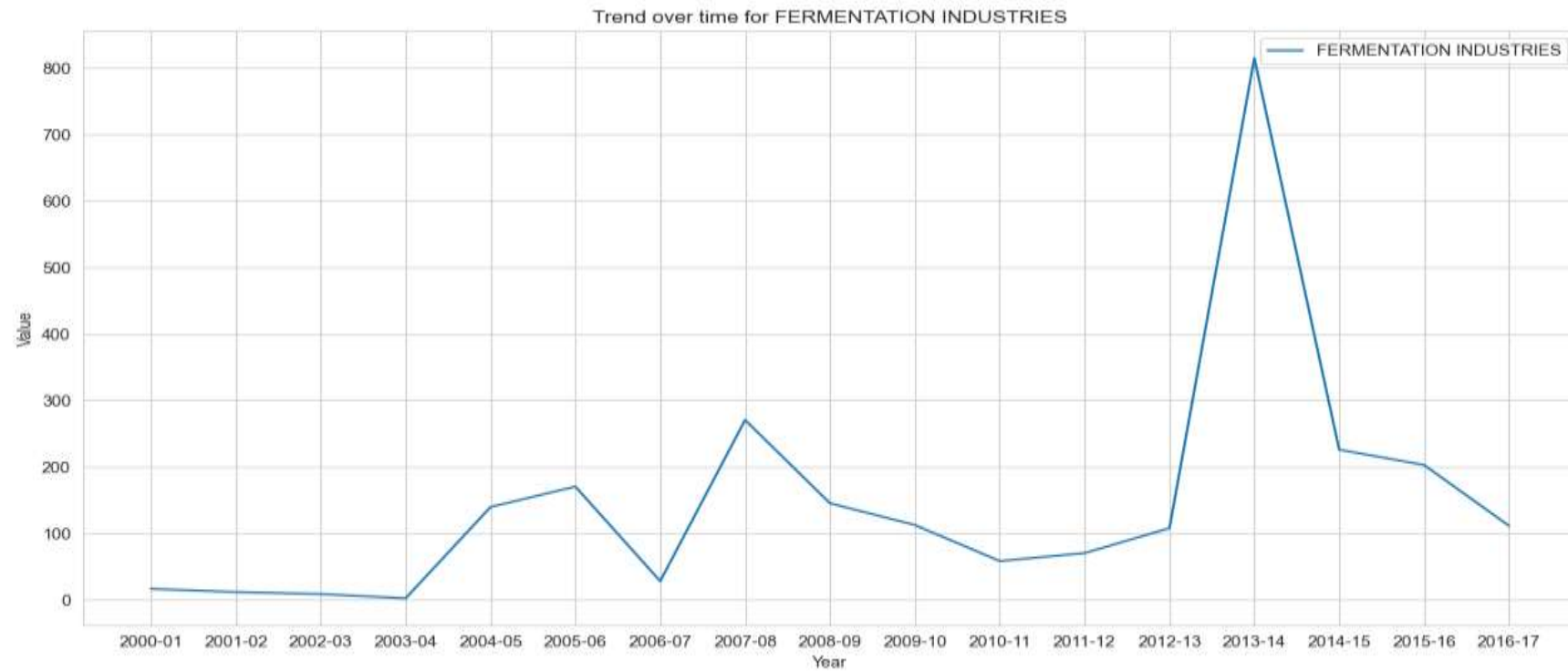
# SUGAR

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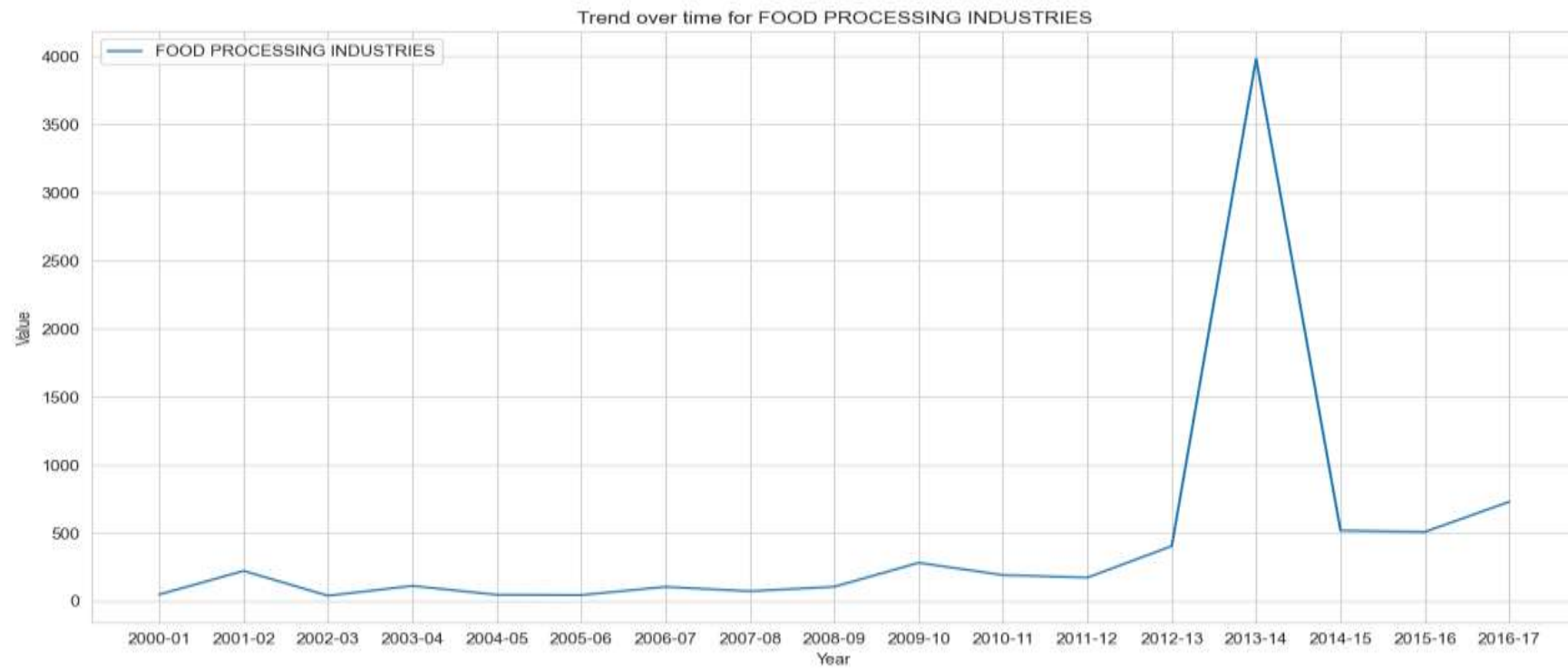
# FERMENTATION INDUSTRIES

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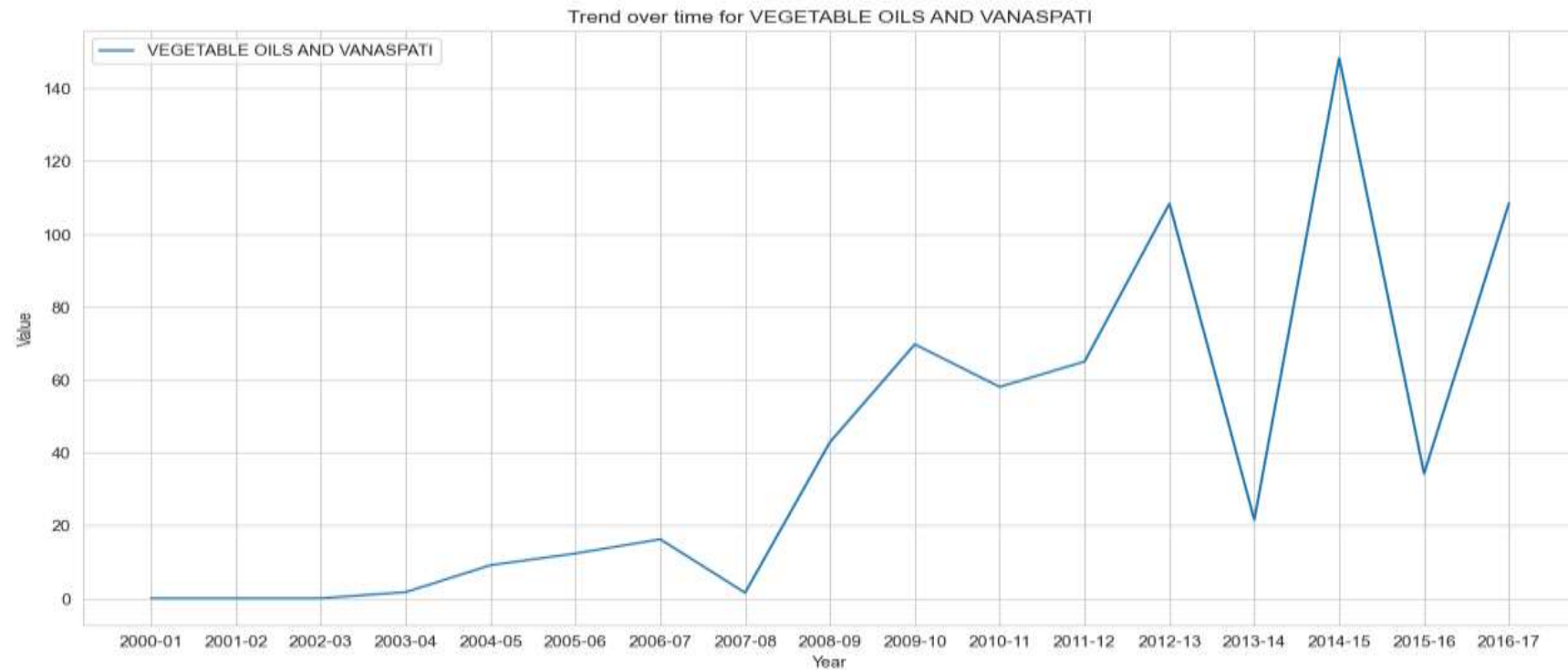
# FOOD PROCESSING INDUSTRIES

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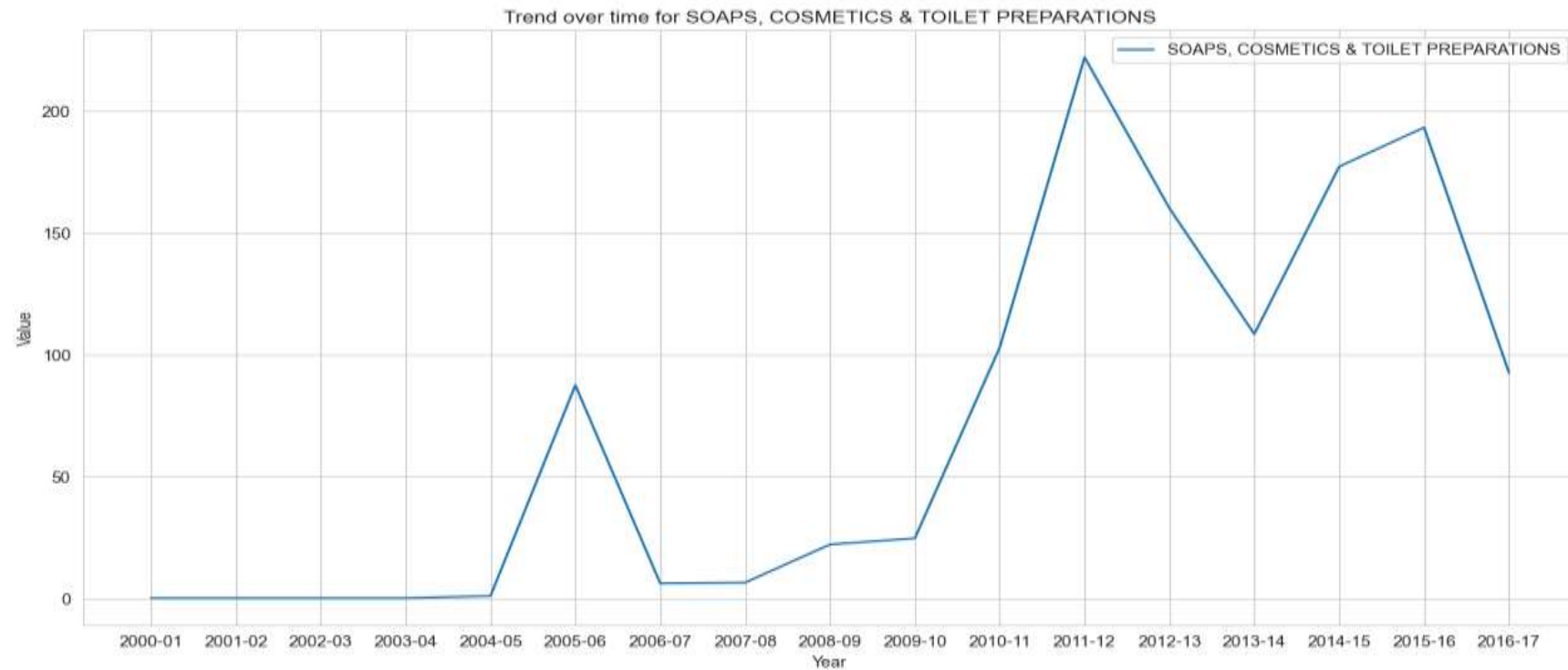
# VEGETABLE OILS AND VANASPATI

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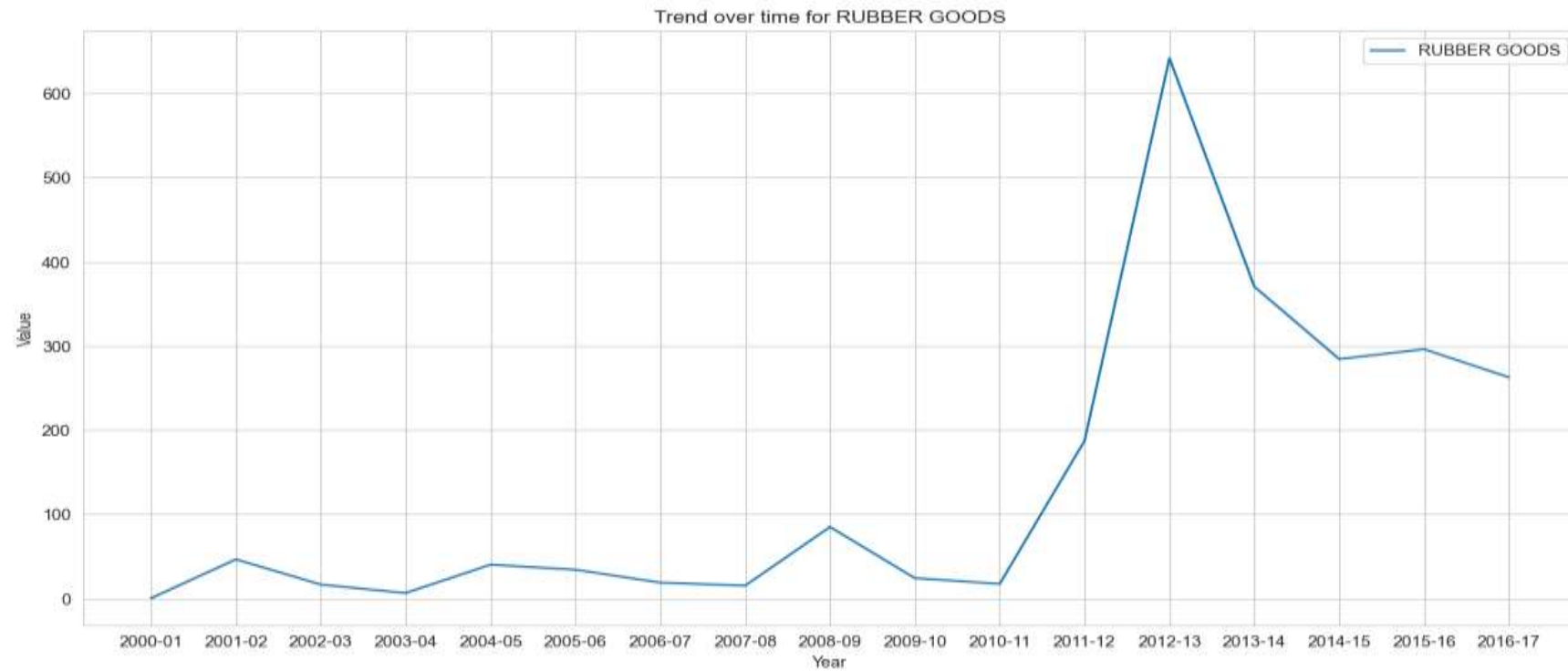
# SOAPS, COSMETICS & TOILET PREPARATIONS

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# RUBBER GOODS

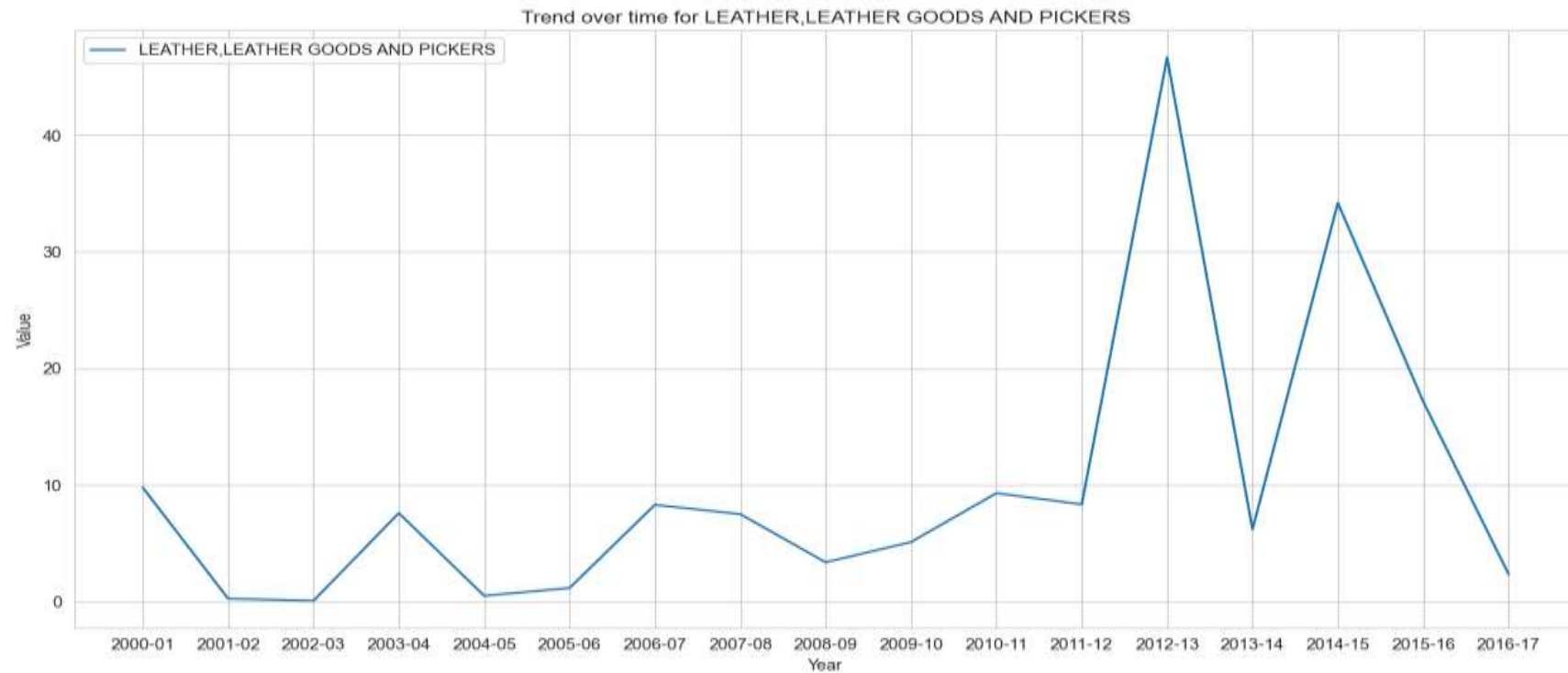
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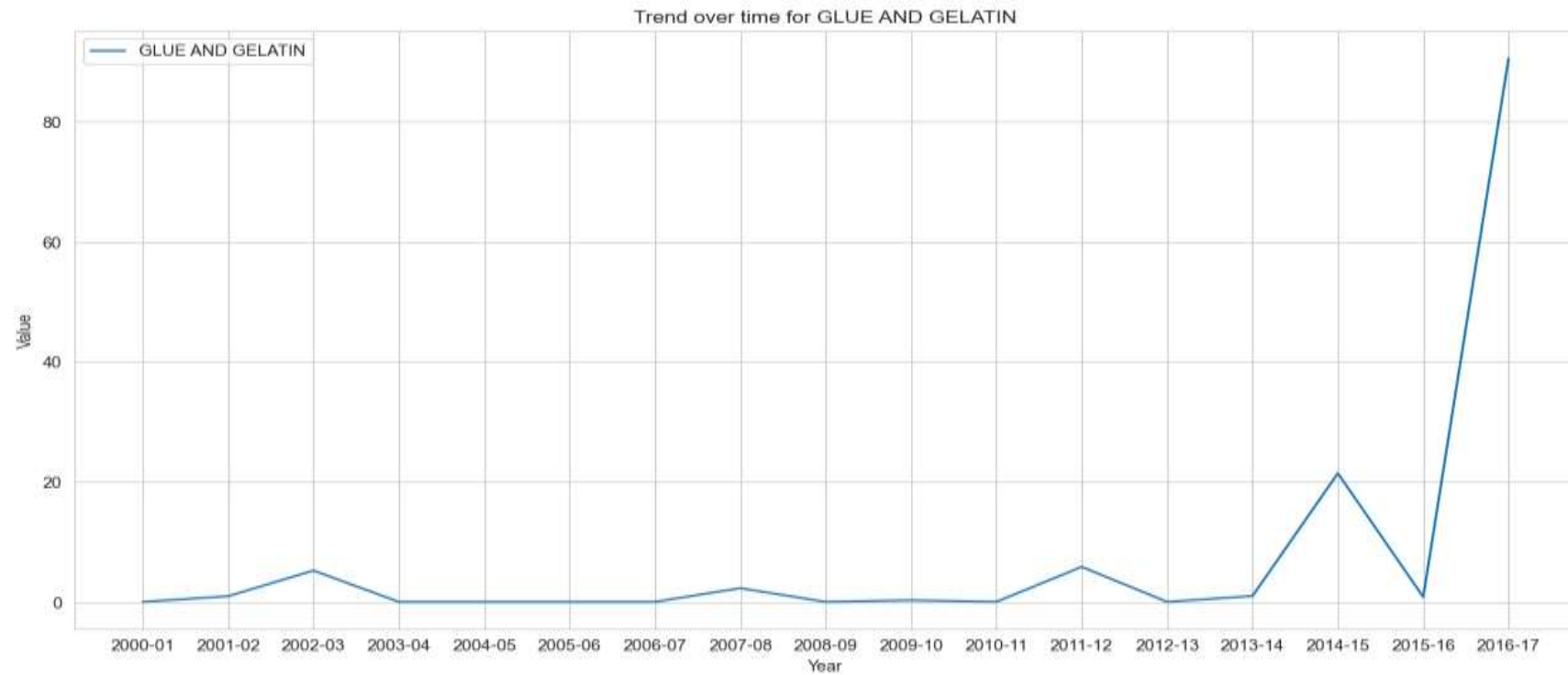
# LEATHER,LEATHER GOODS AND PICKERS

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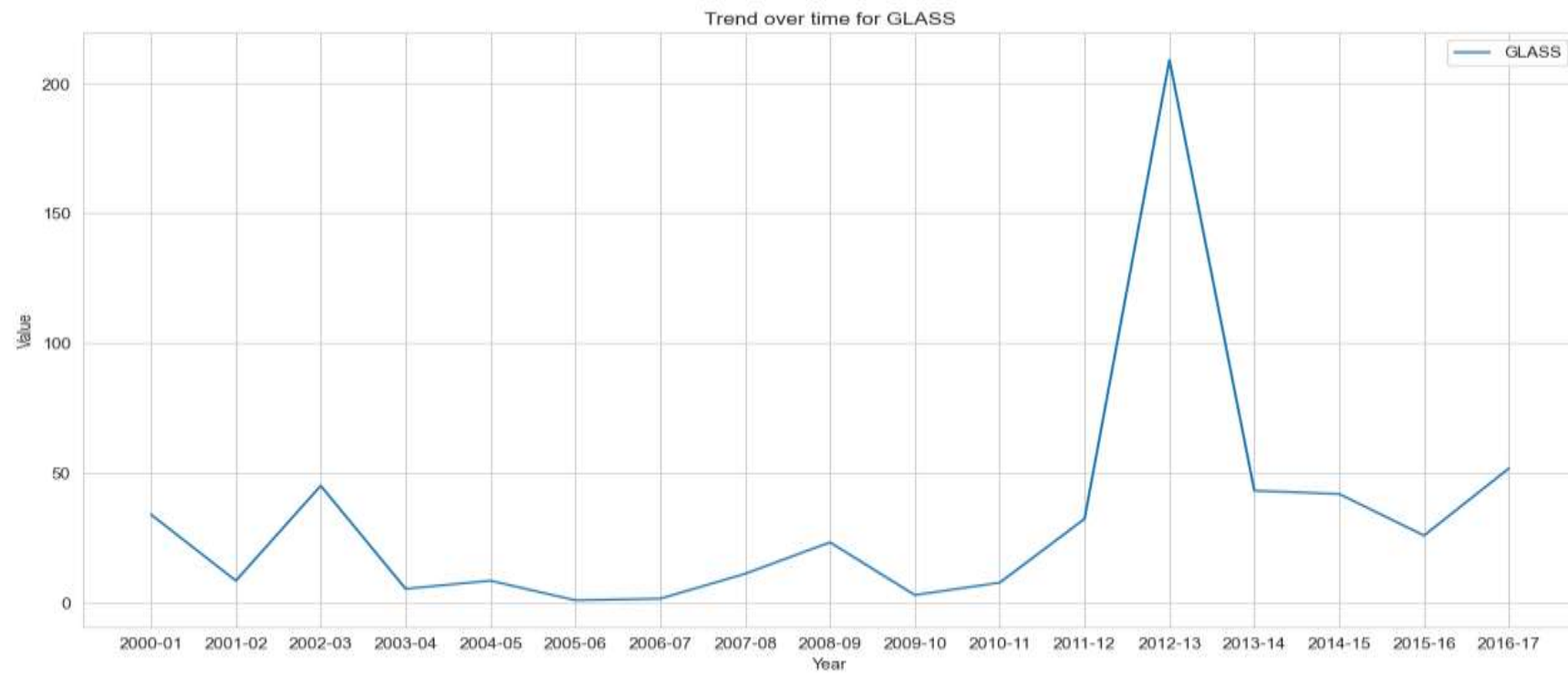
# GLUE AND GELATIN

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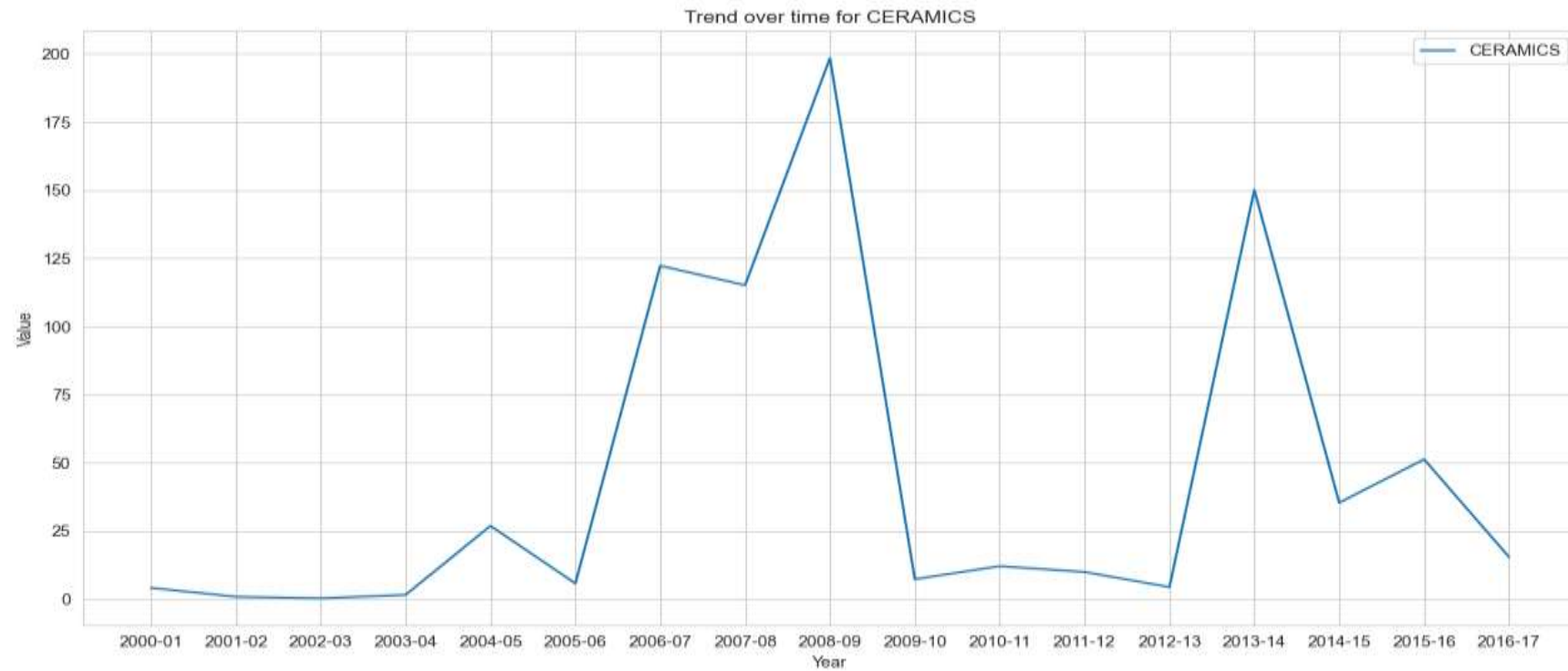
# GLASS

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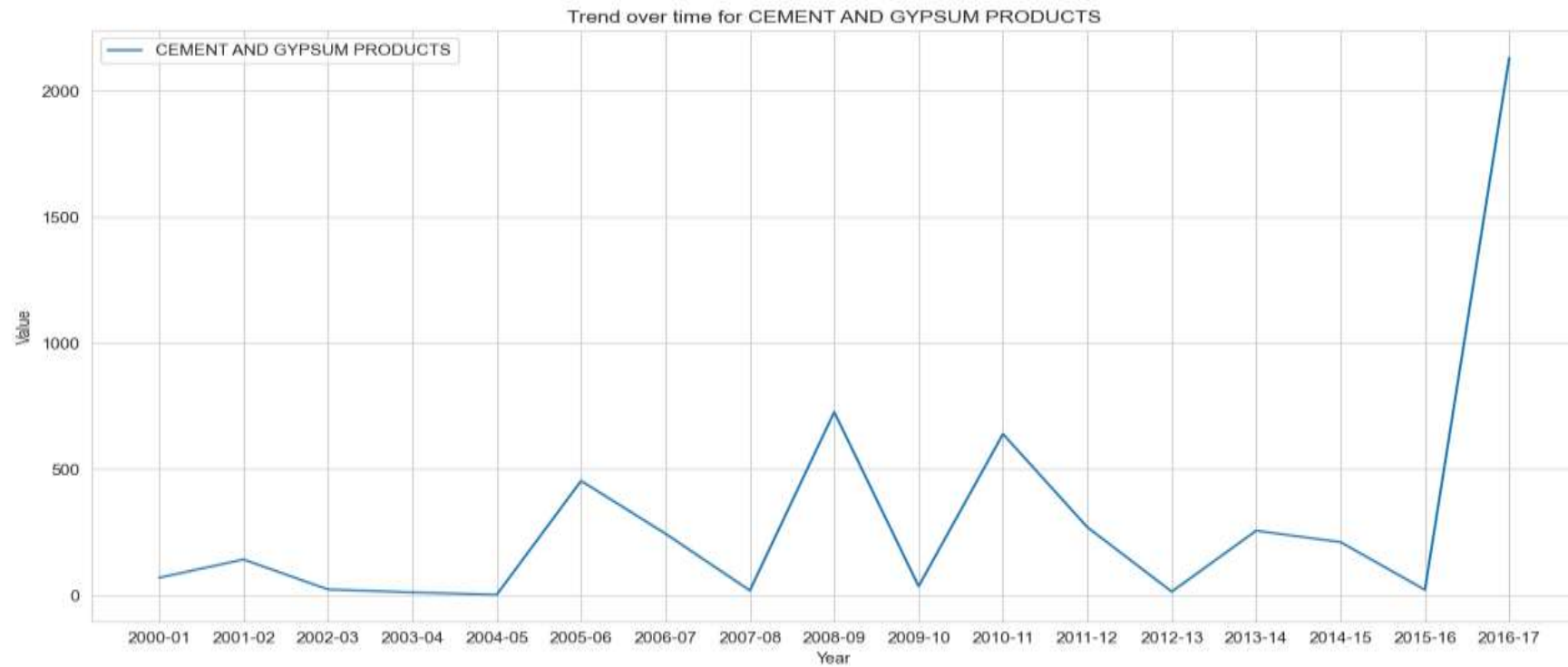
# CERAMICS

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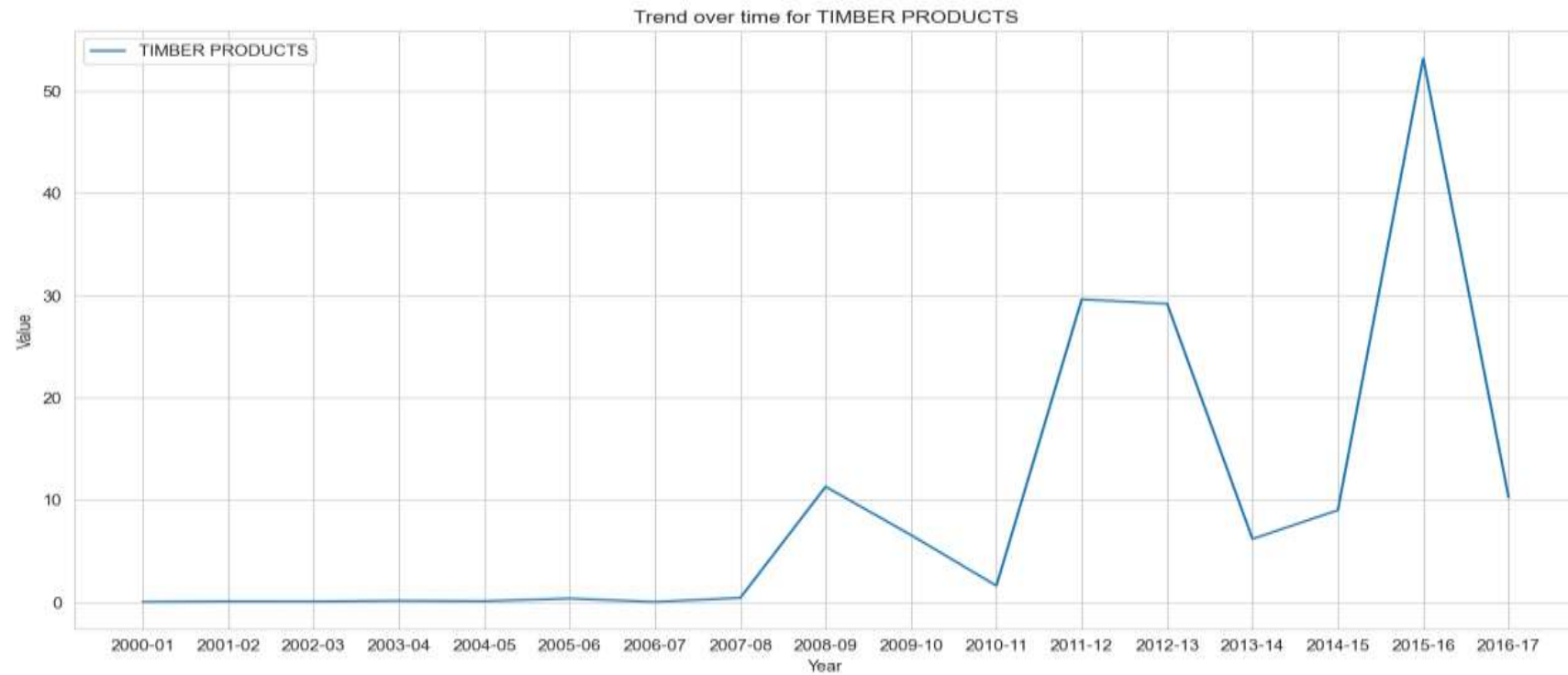
# CEMENT AND GYPSUM PRODUCTS

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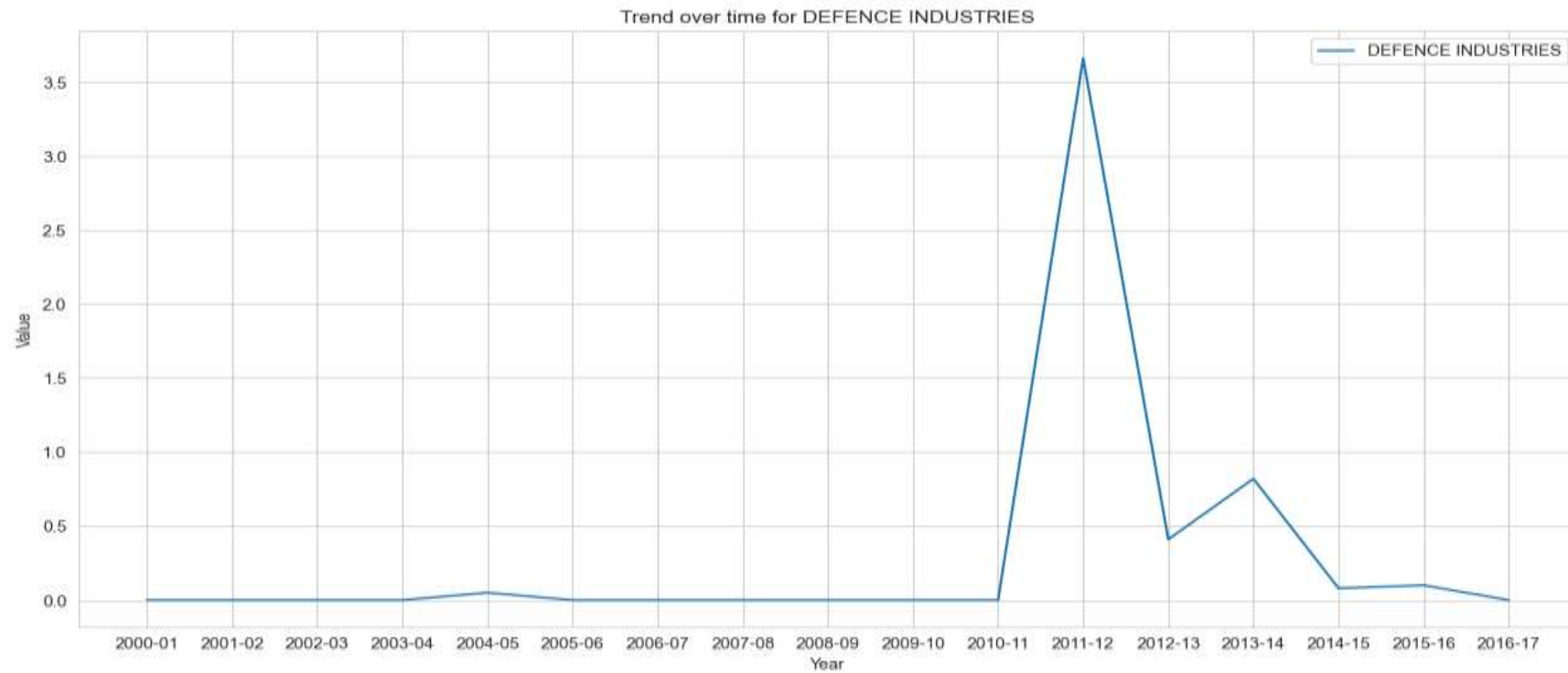
# TIMBER PRODUCTS

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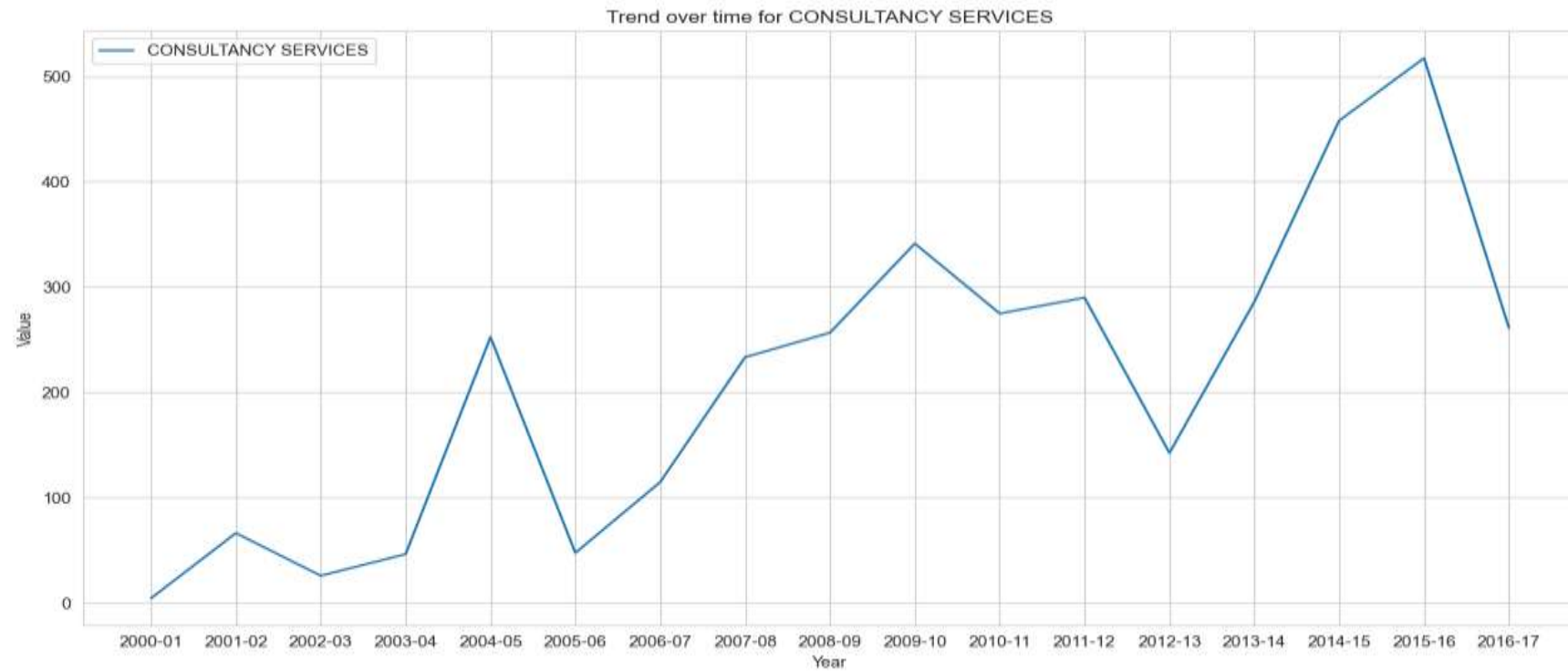
# DEFENCE INDUSTRIES

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# CONSULTANCY SERVICES

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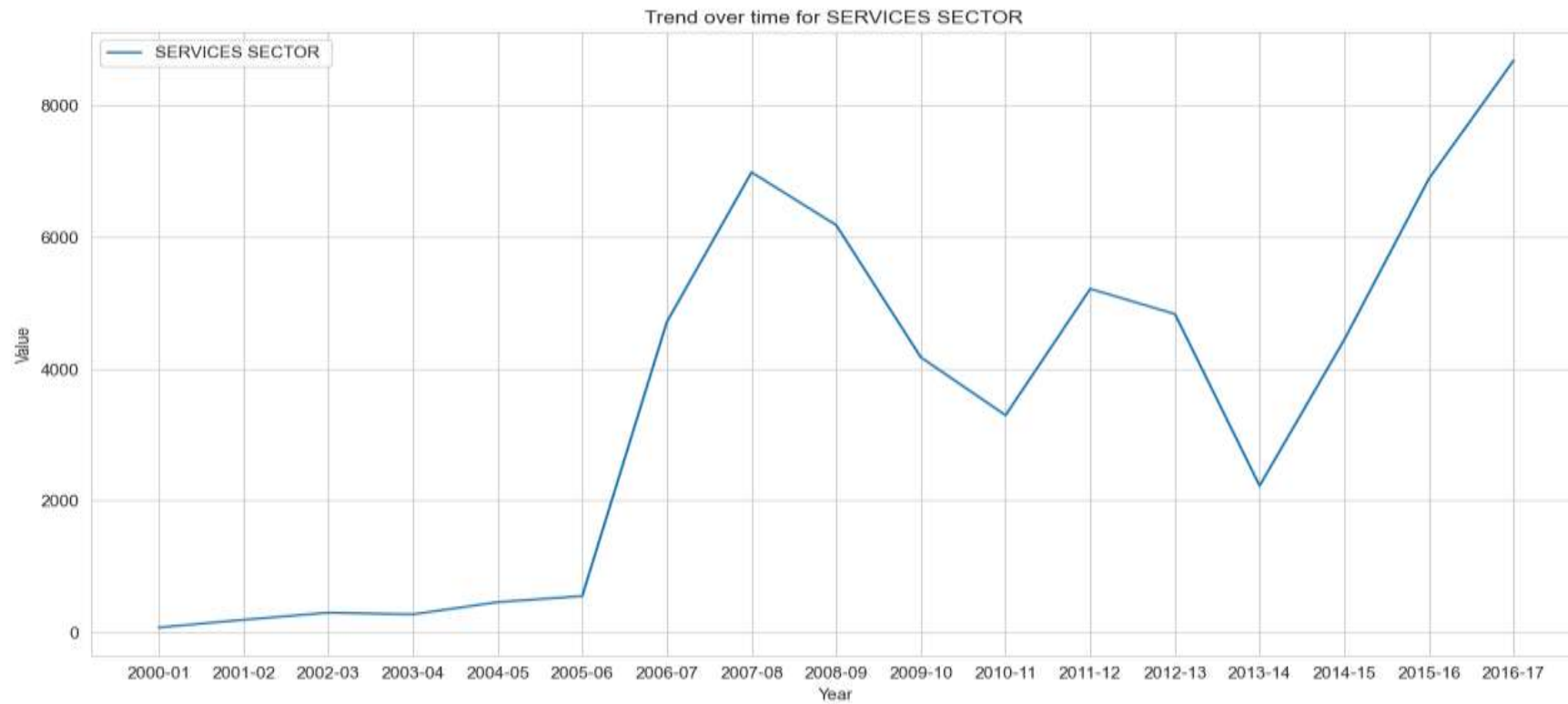




# SERVICES SECTOR

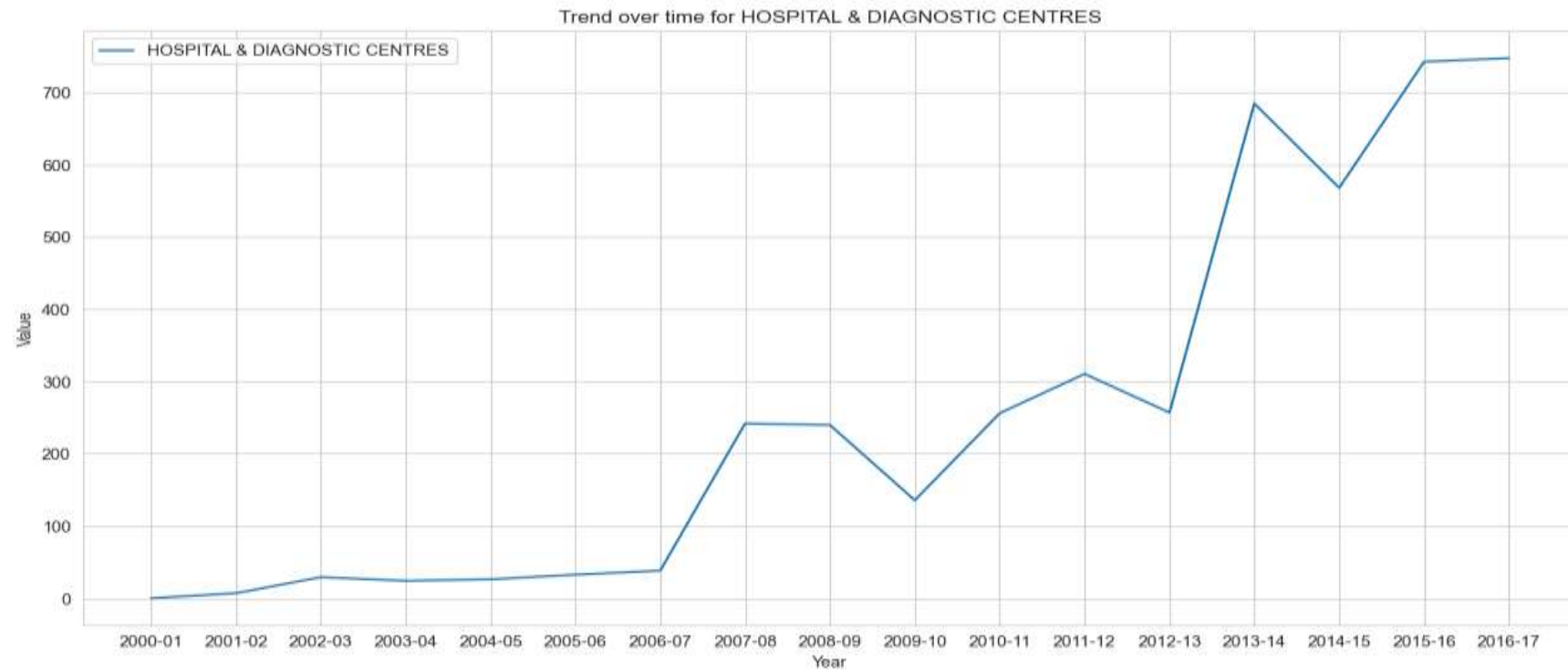
(Fin., Banking, Insurance, Non Fin/Business, Outsourcing, R&D, Courier, Tech. Testing and Analysis, Others)

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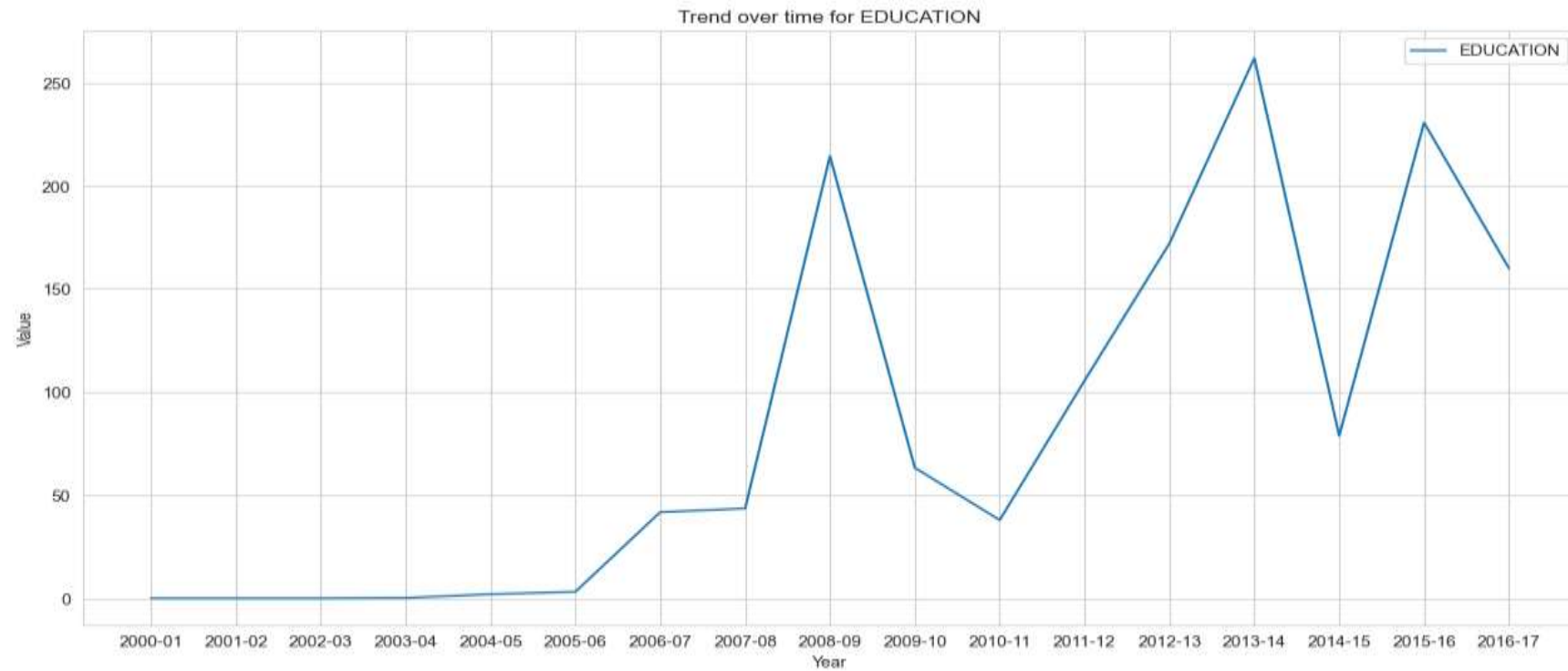
# HOSPITAL & DIAGNOSTIC CENTRES

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# EDUCATION

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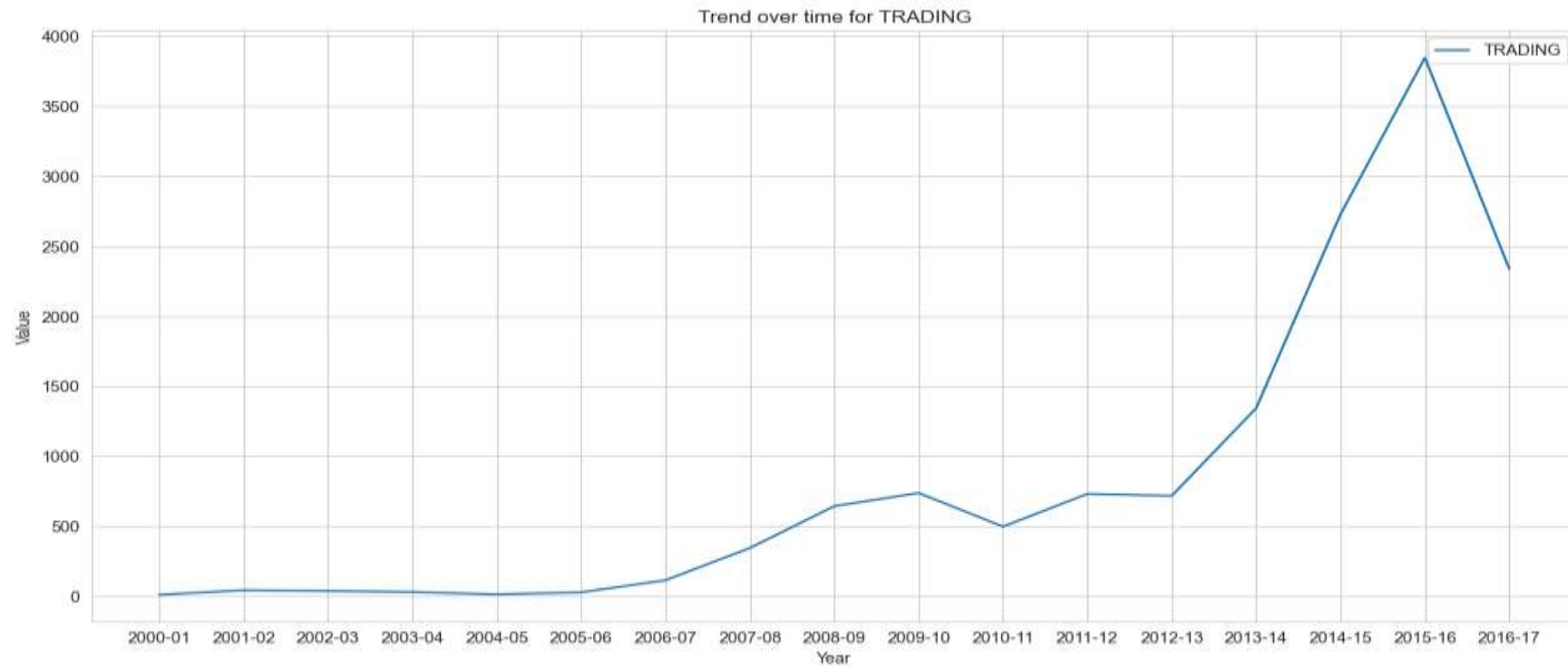
# HOTEL & TOURISM

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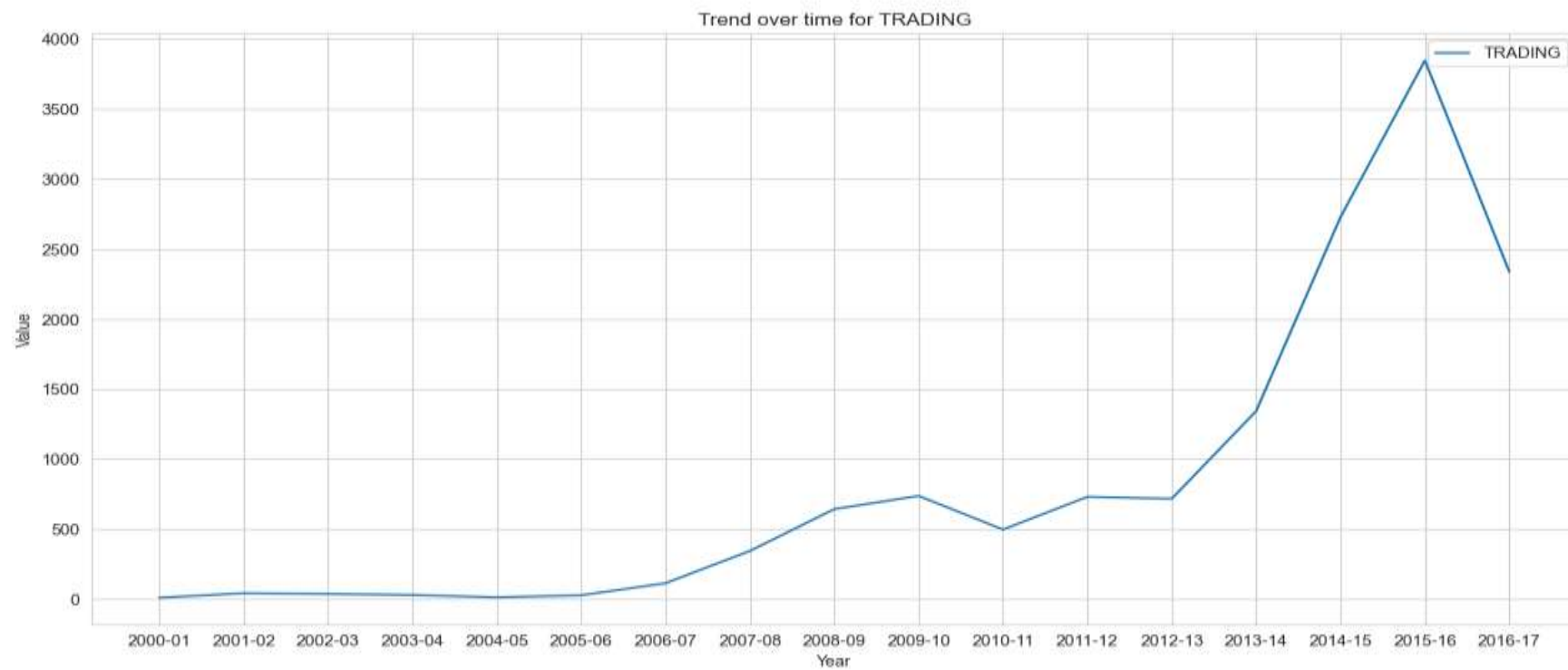
# TRADING

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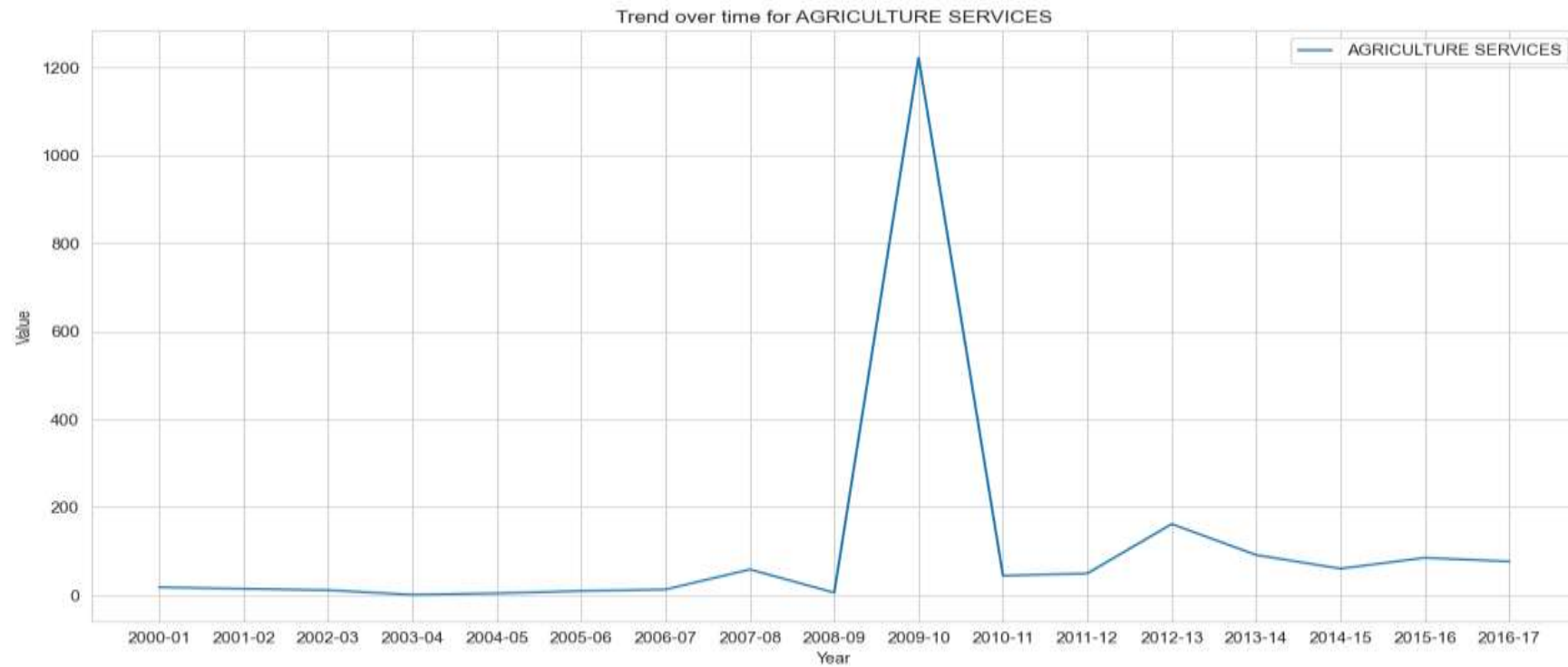
# RETAIL TRADING

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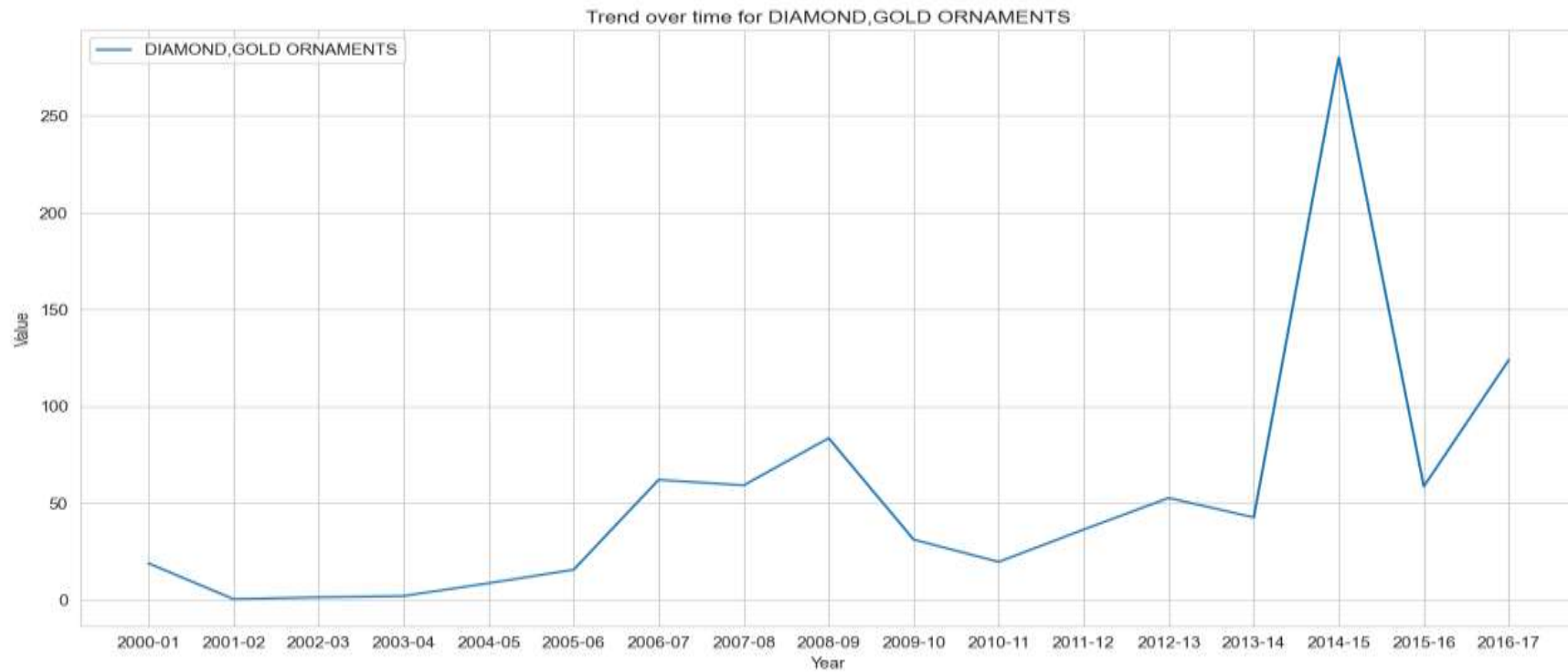
# AGRICULTURE SERVICES

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# DIAMOND,GOLD ORNAMENTS

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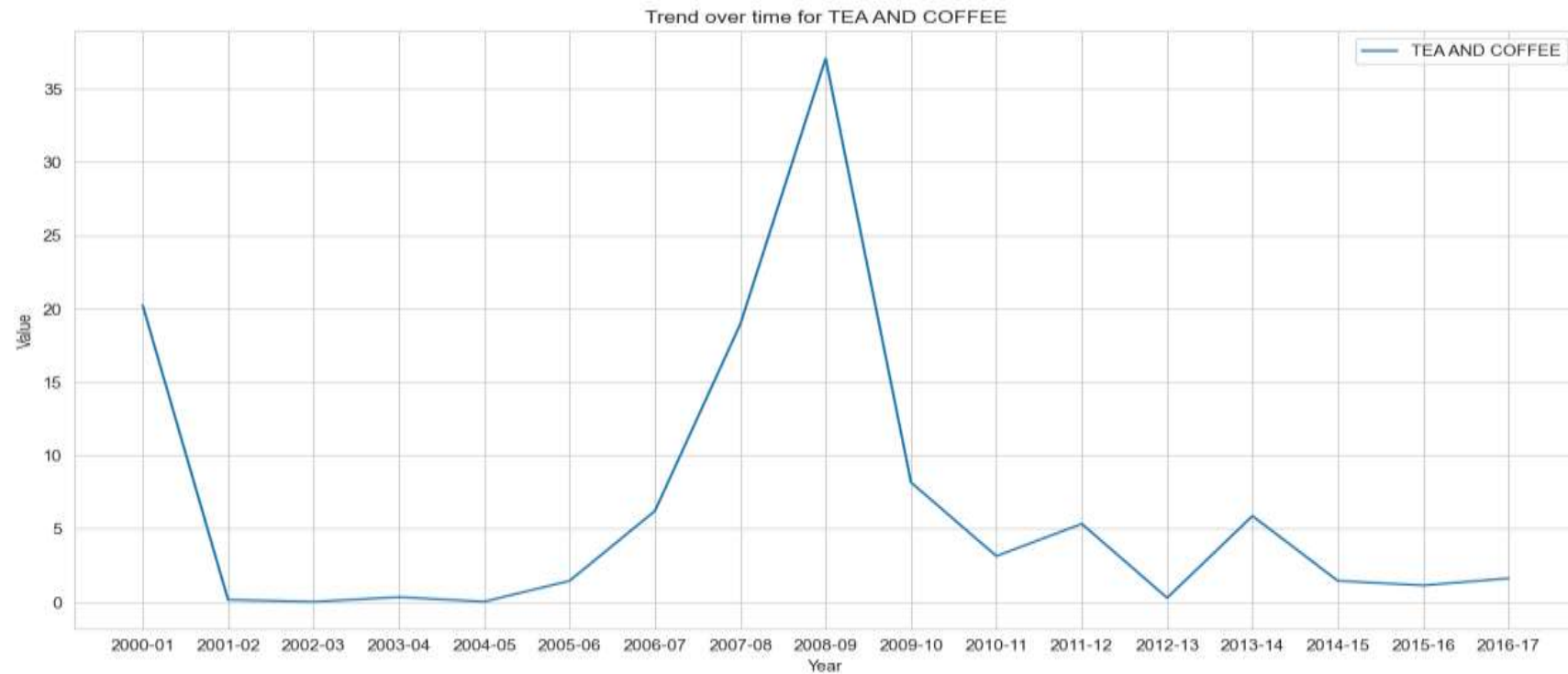




# TEA AND COFFEE

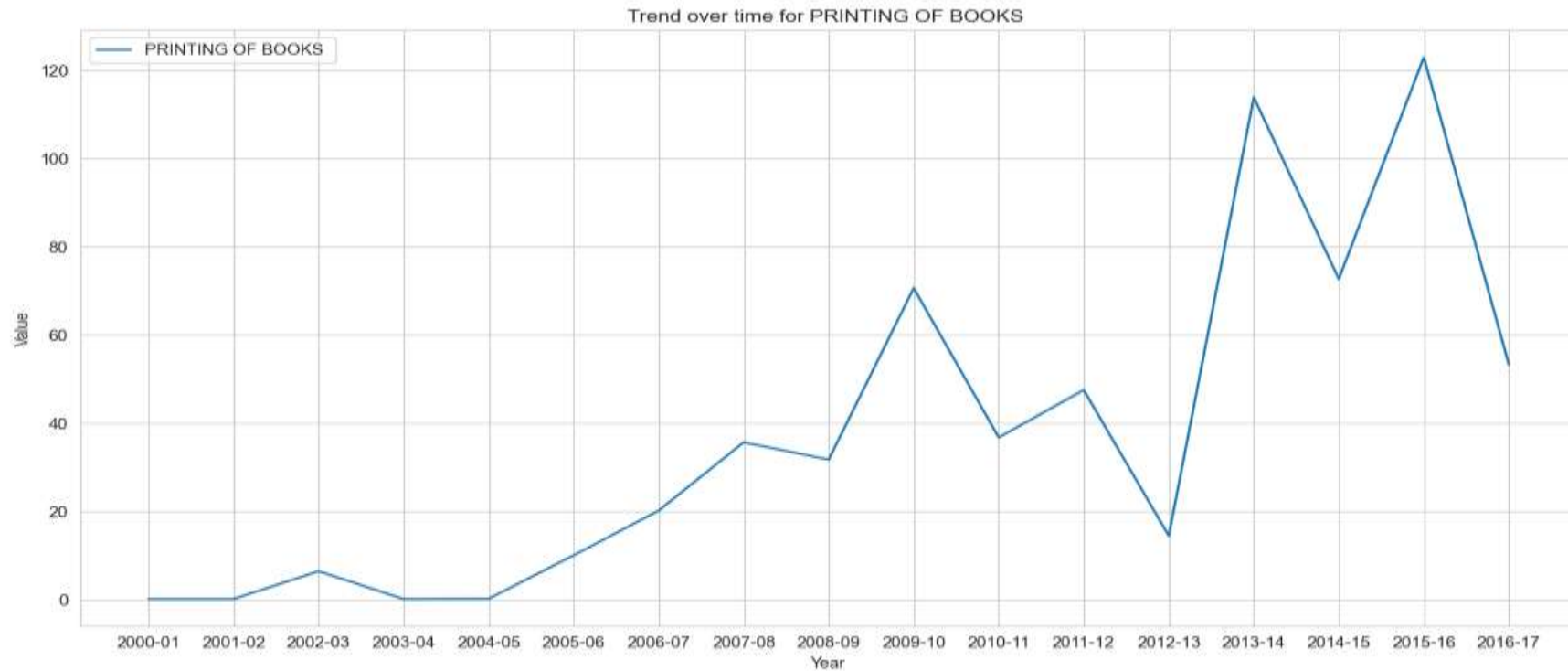
## (PROCESSING & WAREHOUSING COFFEE & RUBBER)

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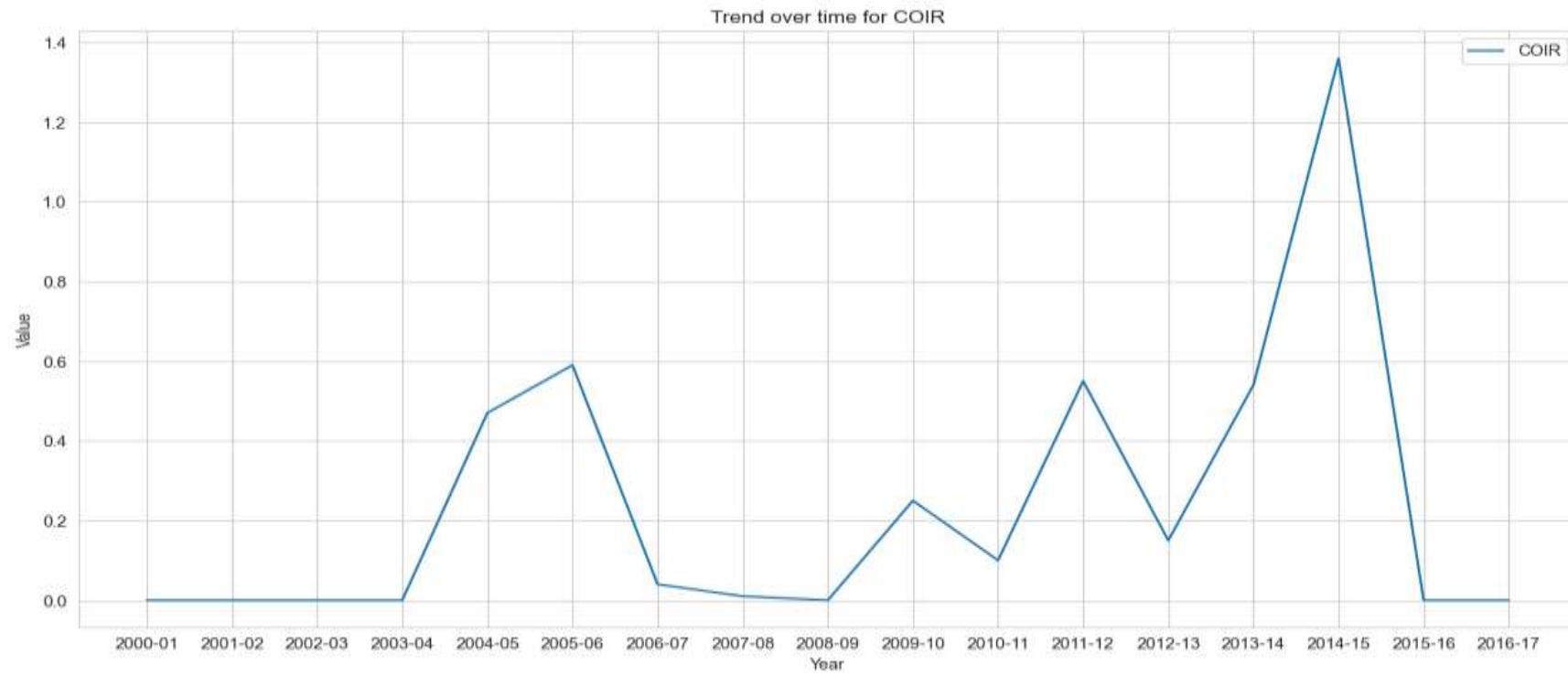
# PRINTING OF BOOKS (INCLUDING LITHO PRINTING INDUSTRY)

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# COIR

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# CONSTRUCTION (INFRASTRUCTURE) ACTIVITIES

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# CONSTRUCTION DEVELOPMENT

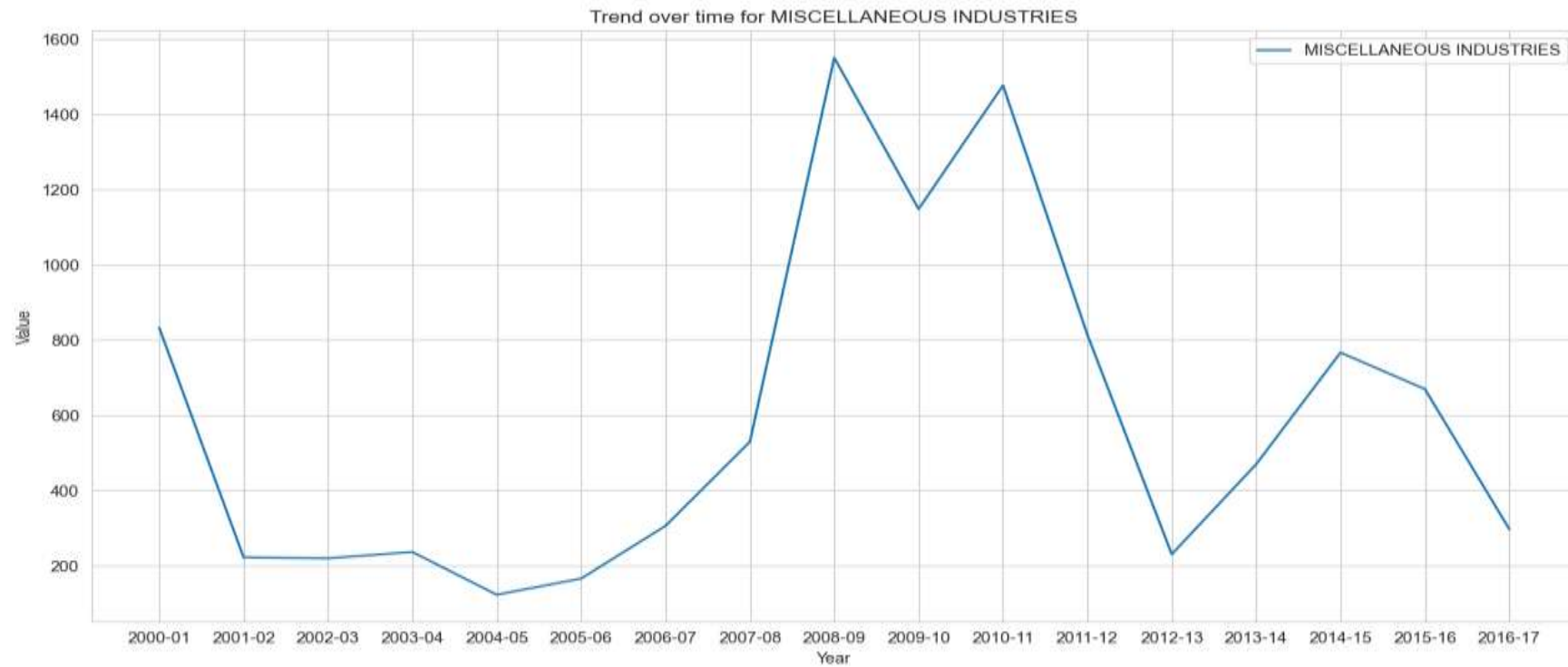
(Townships, housing, built-up infrastructure and construction-development projects)

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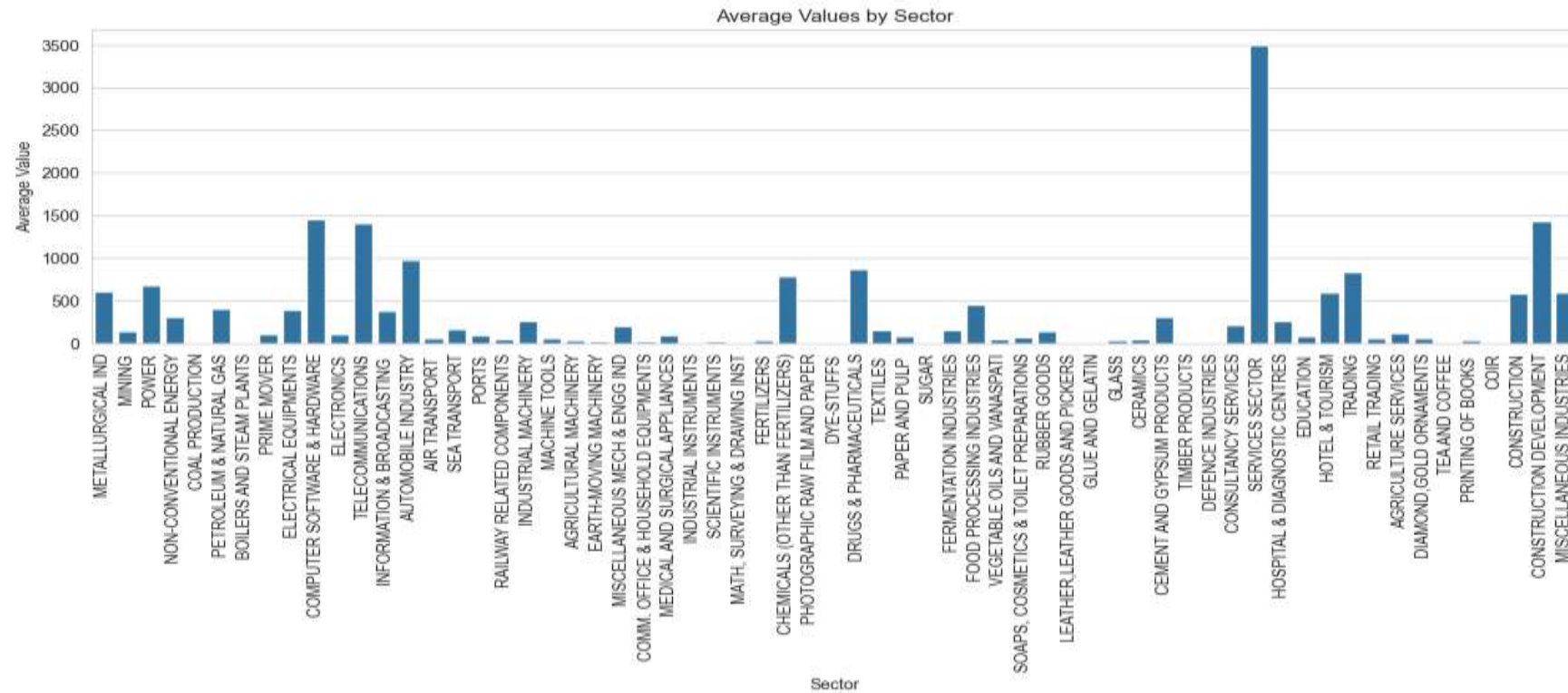


# MISCELLANEOUS INDUSTRIES

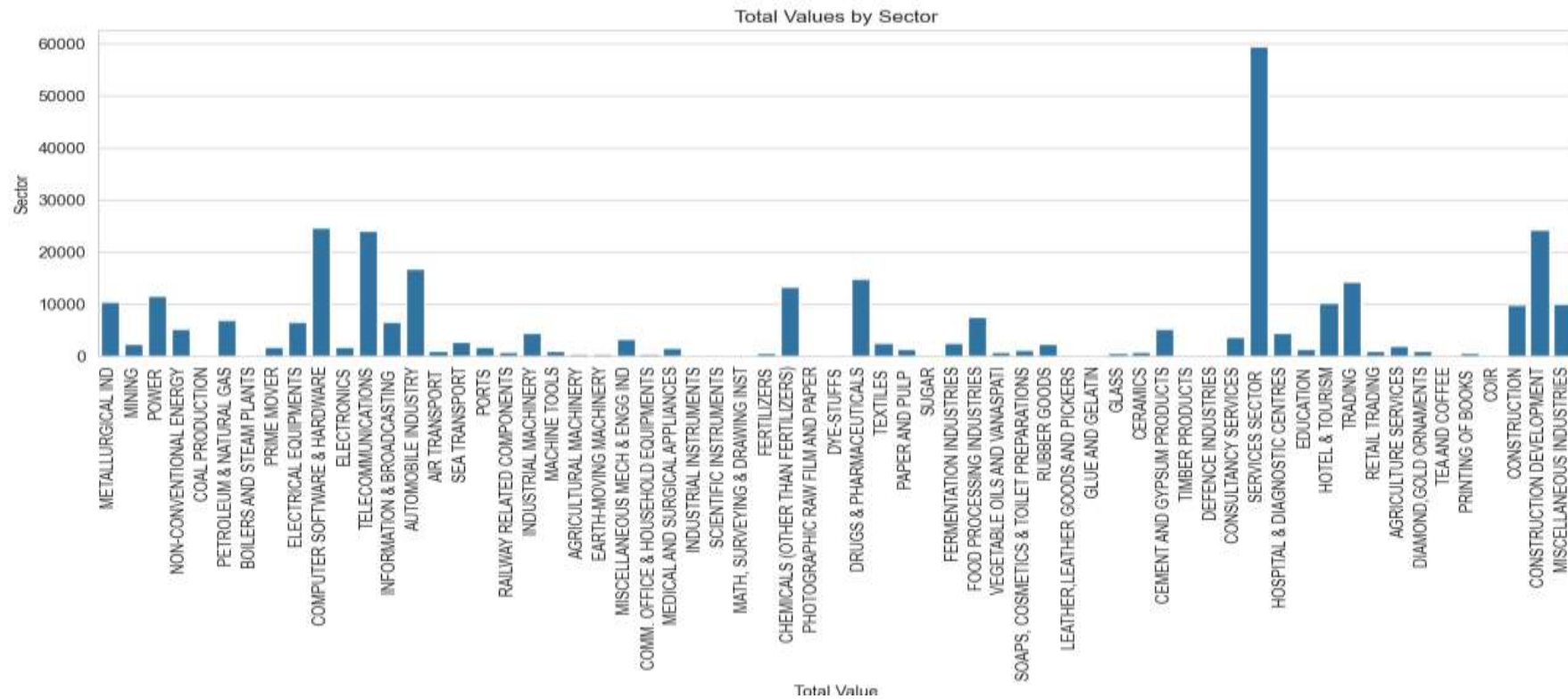
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# Average values by Sector



# Total Value by Sector





# Conclusion

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By looking at these visuals that we have obtained using the analysis, we can conclude the following:

1. Services sector has shown most growth in the given time frame.
2. Least growth has been shown by COIR.
3. Highest total investment has been made in Services Sector.
4. Highest average investments is also made in the Services Sector.

Thus, we can conclude that investing in the Services Sector is bound to be profitable.

# Thank You

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MADE BY: ARINDAM

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