

# Trends in electricity production vs. Economic growth

Data Engineering 1  
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A dark blue diagonal gradient bar that starts from the bottom left and extends towards the top right, covering the lower half of the slide.

# Outline

- Aim of project
- How to find the answer using limited analytics available in Knime
- Knime pipeline
- Plots 1990 vs. 2010
  - Trends in Nuclear
  - Trends in oil, gas and coal
  - GDP-PPP versus population size
- Conclusions

# Aim of project

To investigate if population growth is the main driver in an increased oil, gas and coal diet worldwide from 1990-2010.

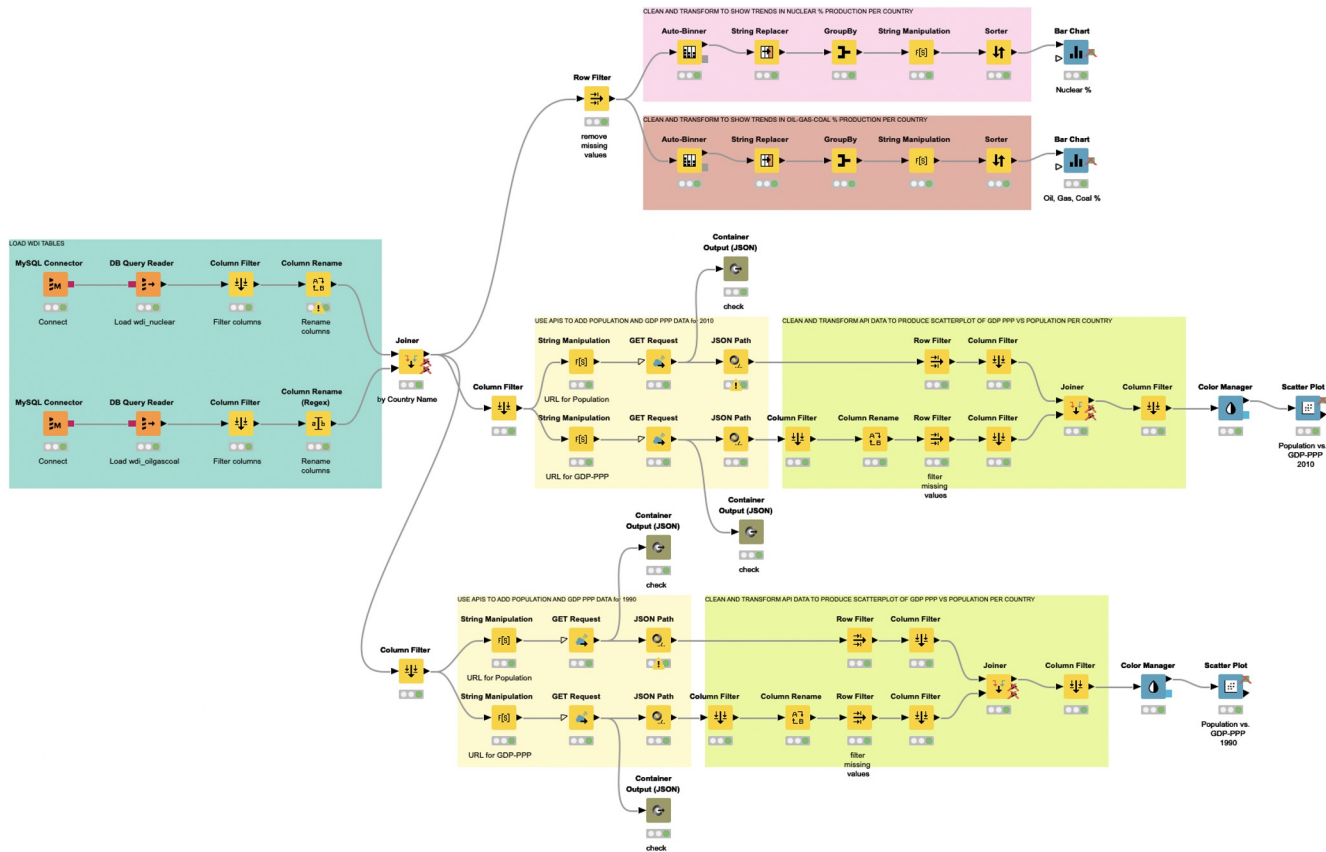
# How?

## Plot

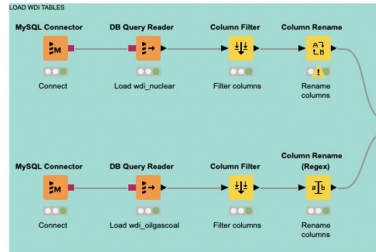
- Electricity production for nuclear, oil, gas and coal in year 2010 (comparison: has nuclear changed as much?)
- GDP-PPP versus population size in the year 2010
- Compare to 1990 to provide context

## Explain

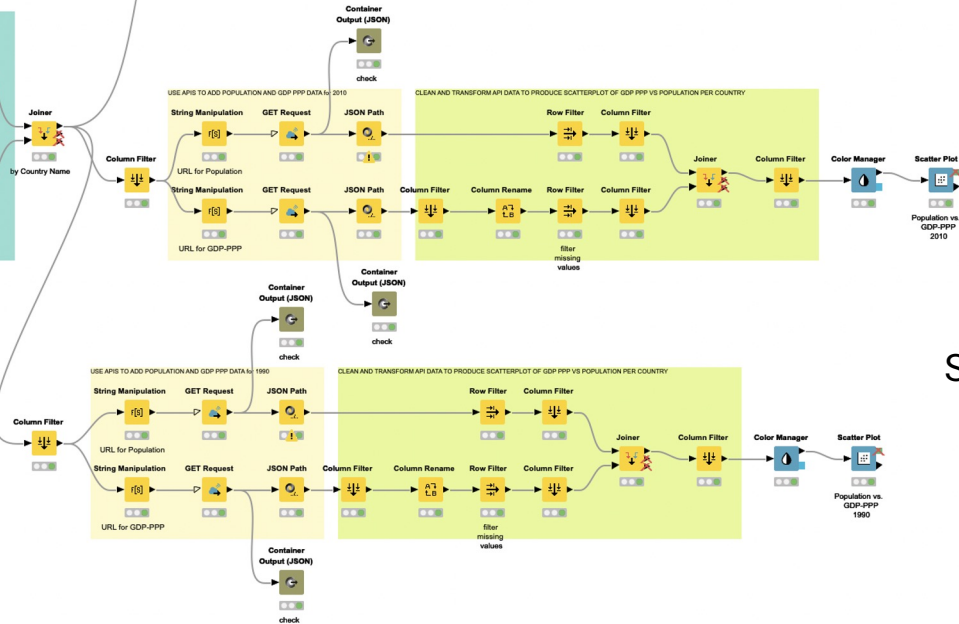
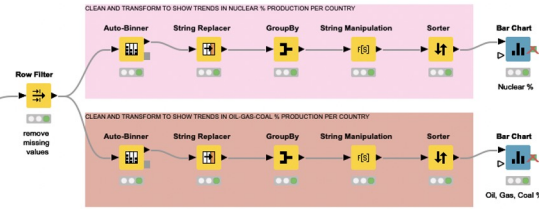
- Are there trends?
- What conclusions can be drawn, if any?



Load data



Barcharts



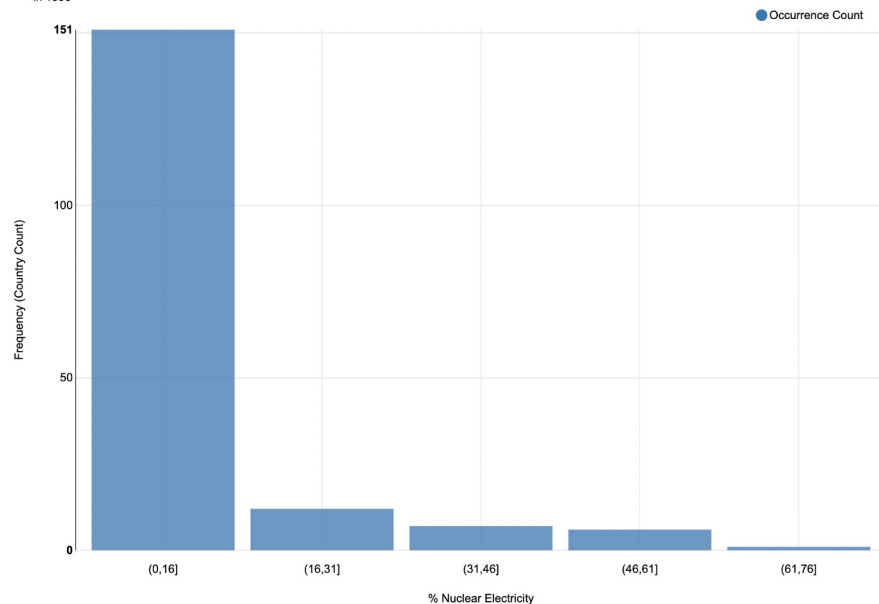
Scatterplots

Knime pipeline

# Trends in nuclear 1990–2010

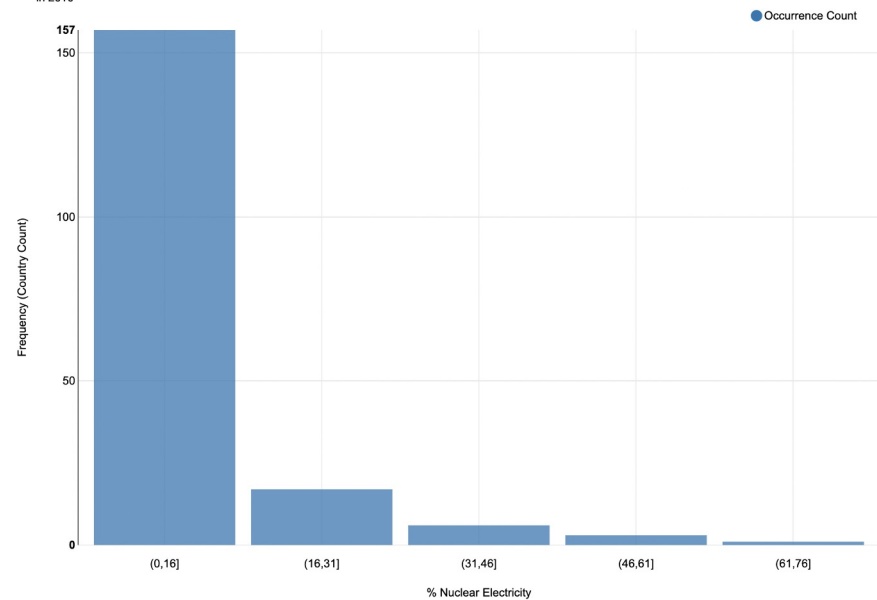
Bar Chart of % Nuclear of Total Electricity Production per Country

in 1990

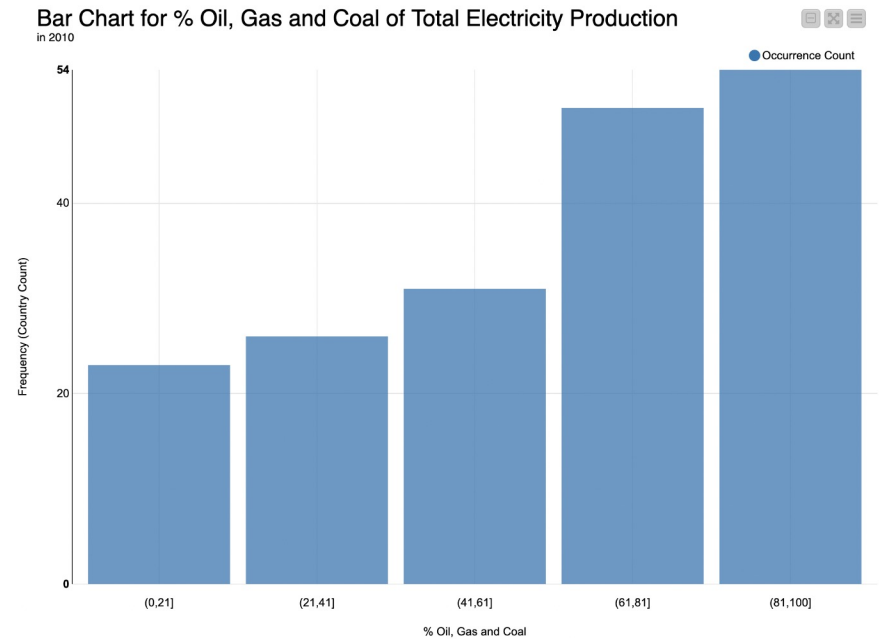
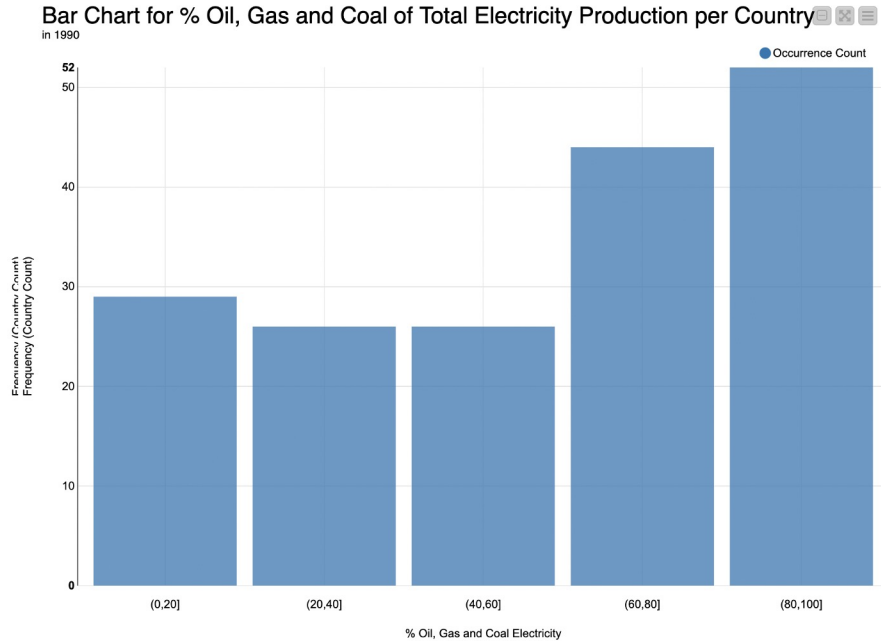


Bar Chart of % Nuclear of Total Electricity Production

in 2010



# Trends in oil, gas and coal 1990–2010

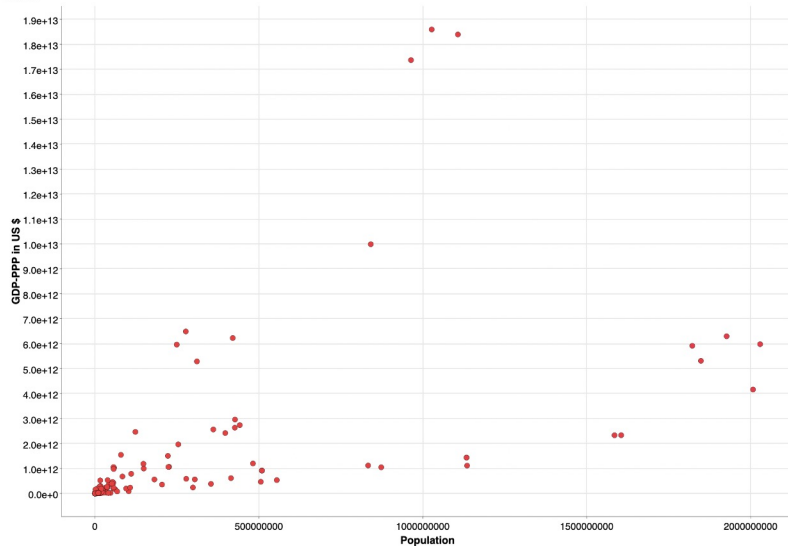




# GDP-PPP vs. population growth

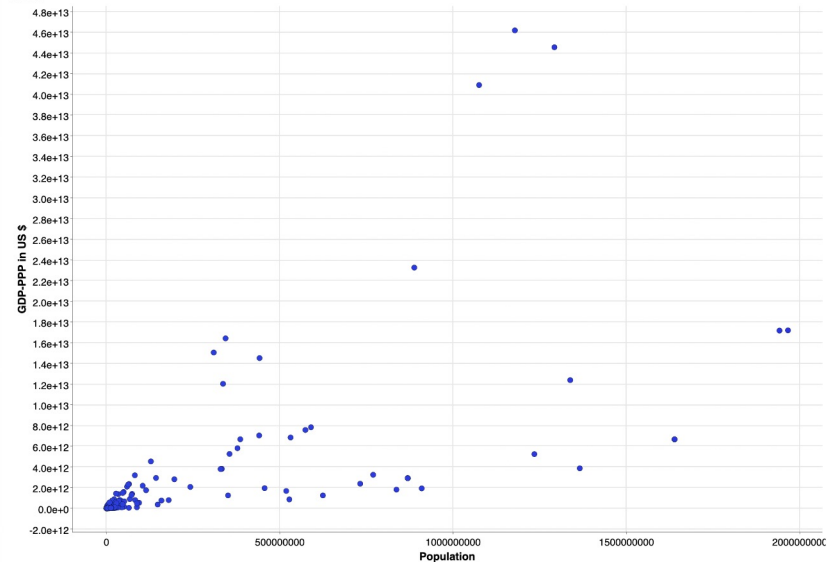
GDP-PPP versus population per country

in 1990



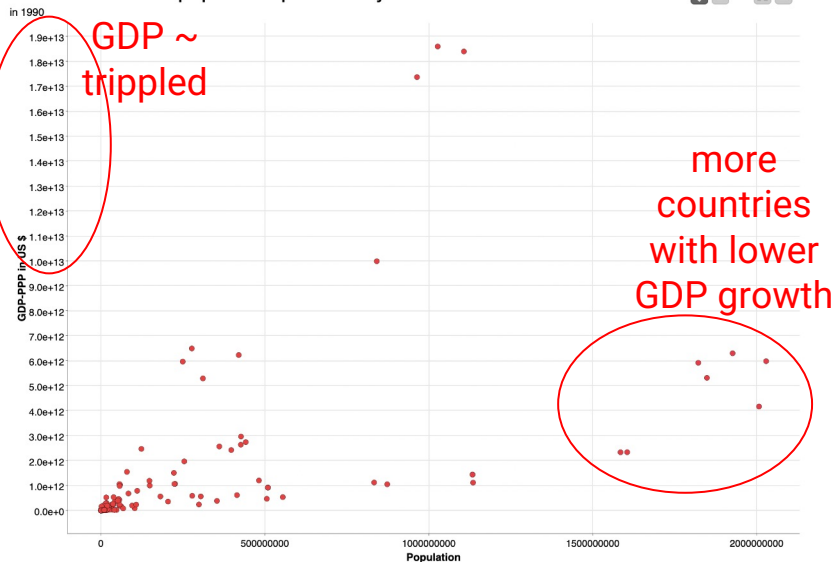
GDP-PPP versus population per country

in 2010

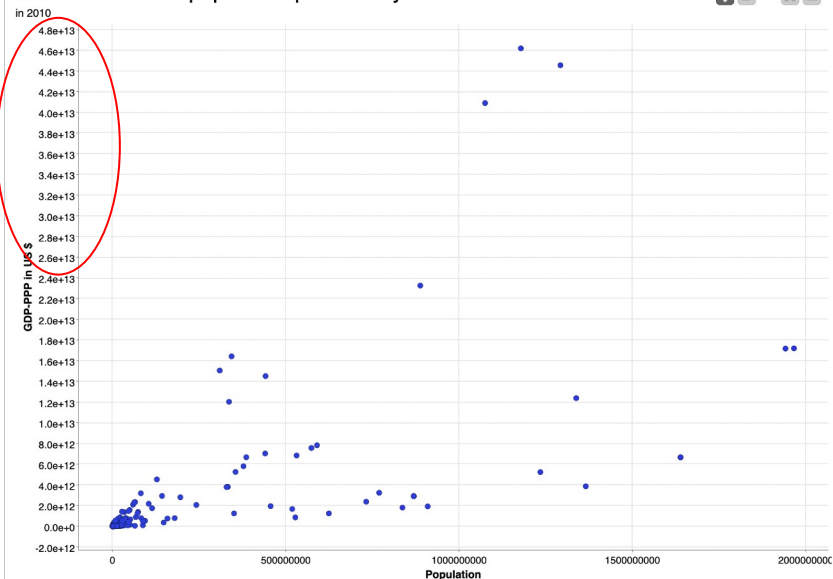


# GDP-PPP vs. population growth

GDP-PPP versus population per country



GDP-PPP versus population per country



# Conclusions

- Investigation inconclusive: not enough variables (limitation of knime software)
- Nuclear electricity production stable in years 1990-2010
- Slight increase in oil, gas and coal electricity production in years 1990-2010
- GDP-PPP roughly **tripled** between 1990-2010
  - Need more investigations into why/how this happened
  - Population growth not proportional to GDP-PPP growth
  - Likely not the driving factor for more fossil fuel consumption