Goal:

Use Chinese urbanization data to create a model to predict impact of urbanization of other countries, notably India.

Relevance / Why we care :

By 2050, more than two-thirds global population will live in urban areas (Our World in Data). We need to understand how urbanization impacts demand for corn, wheat, oilseeds and subsequent protein demand.

Chart, line chart

Description automatically generated

Questions answered:

1. Primary

* Quantify impact of Chinese urbanization on demand for corn, oilseeds, wheat, and proteins.
* Use the Chinese model that we develop to then project impact of India urbanization on demand for corn, oilseeds, wheat, and proteins.

1. Secondary :

* Quantify threat that Chinese urbanization has to available agricultural land in China, US and LATAM (if there is time?)

Potential datasets :

1. China GDP : 1960 – present

<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=CN>

1. China population : 1960 – present

<https://data.worldbank.org/indicator/SP.POP.TOTL?locations=CN>

1. China CO2 emissions : 1960 – present

<https://data.worldbank.org/indicator/EN.ATM.CO2E.PC?locations=CN>

1. China urbanization data : 1960 – present

<https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=CN>

1. China agricultural land : 1960 – 2018

<https://data.worldbank.org/indicator/AG.LND.AGRI.K2?locations=CN>

1. India GDP : 1960 – present

<https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=IN>

1. India population : 1960 – present

<https://data.worldbank.org/indicator/SP.POP.TOTL?locations=IN>

1. India CO2 emissions : 1960 - present

<https://data.worldbank.org/indicator/EN.ATM.CO2E.KT?locations=IN>

1. India urbanization data : 1960 – present

<https://data.worldbank.org/indicator/SP.URB.TOTL?locations=IN>

1. India agricultural land : 1960 – 2018

<https://data.worldbank.org/indicator/AG.LND.AGRI.K2?locations=IN>

1. Daily per capita protein supply : 1961 – 2017

<https://ourworldindata.org/grapher/daily-per-capita-protein-supply?tab=chart&country=USA~IND~CHN>

1. Foods databases :

<https://ourworldindata.org/food-supply>

<https://www.fao.org/faostat/en/#data/FBS>

**POTENTIAL DATA TO EXPOUND UPON**

* [**https://woo.opec.org/chapter.php?chapterNr=205&chartID=898**](https://woo.opec.org/chapter.php?chapterNr=205&chartID=898)
  + **URBANIZATION RATE FOR SELECTED REGIONS**
* [**https://woo.opec.org/chapter.php?chapterNr=211**](https://woo.opec.org/chapter.php?chapterNr=211)
  + **Energy policies, climate change and sustainable development**

POTENTIALS TO SKEW DATA/CONCERNS

**-CHINESE ECONOMY VS INDIAN ECONOMY**

**-INDIA IS CAPITILISTIC VS CHINESE GOVERNMENT ESSENTIALLY CONTROLS ECONOMY**

**-SEASONALITY**

**-PRODUCTIVITY OF LAND**

**-SMALL SCALE FARMING VS LARGE SCALE FARMING**

**-GRAIN DIRECTLY RELATED TO URBANIZATION?**

**-NORTHERN CHINA MOSTLY A WHEAT BASED DIET VS SOUTHERN CHINA IS MOSTLY A RICE BASED DIET**

**-ABLE TO OPEN IT UP TO GRAIN + ENERGY CONSUMPTION AS THEY RELATE TO URBANIZATION**

**-SPECIFICTY – DON’T BITE OFF MORE THEN CAN CHEW… DIAL IT DOWN AS BEST AS POSS**

-**FOR ENERGY – USES AND DRIVERS DIFFER BUT ONLY SLIGHTLY, NOT AS EFFECTED BY SEASONALITY**