Group: Garda Ramadhito, Marc Castillo, Kagen Lim, Daryl Kow (Group_B_ChinaWatchers)
Date: 3/3/21
Topic: Tracking Chinese Investments in the Age of Great Power Competition (2010-2019)

In this proposal, we outline some of the key objectives that we would like to achieve through this project. Importantly, we outline the relevant datasets (and embedded variables) that are relevant for the project, and the visualizations that would help to achieve these objectives.

Objectives
1. Tracking Chinese investments around the world using an interactive map
2. Exploring how Chinese investments differ by industries using interactive plots
3. Zooming into Southeast Asia to compare investments between different sources: China, Japan and the US
4. (Optional) Assessing the extent of Chinese investments in Africa by country and year

Overview

Planned Visualization	Dataset	Variables
1. Map Visualization of **Chinese** Investments - World map visualisation displaying Chinese investment by country across time (down to month) - Heat map to be applied across the world map based on level of investment - To include an industry toggle for filtering/scoping in on trends in particular industries.	Chinese Investment Global Tracker https://www.aei.org/china-global-investment-tracker/	- Year-Month - Company Investor - Quantity of Investment (in Millions) - Share Size - Transaction Party - Sector (Industry) - Subsector - Country - Region - BRI - GreenField
2. African-region specific visualization of **Chinese** investment - Stacked charts: - End of year stock breakdown by top 5 sectors	China investment in Africa: http://www.sais-cari.org/chinese-investment-in-afRica	- Year and country panel for both US to Africa and China to Africa FDI for both stocks and flows (in US 100 millions) - Limited breakdown by sector - China data covers

		2003 - 2019

- Facet grids
- Time series:
  - Overlapping series by African country
  - Button to switch between stock versus flow
  - Filter to specific country(ies)		

3. **US China** comparison - Time Series Visualization of Net Outflows of FDI, from US and China, from 1970-2019 - More Granular Time Series Visualizations comparing US and China outflows to given countries or regions (e.g., Southeast Asia or Africa), over time	https://data.worldbank.org/indicator/BM.KLT.DINV.CD.WD?end=2019&start=1970&view=chart https://data.worldbank.org/indicator/BM.KLT.DINV.WD.GD.ZS?locations=CN	- Year - Net Outflows of FDI from US to a Given Country - Name of Country

<u>Variables/Features that are Missing & Misc.</u>

There is some additional information that we would like, which might add value to our existing visualization ideas. We do not have industry-level FDI information for the US, but we have this for Chinese investments. At the moment, we can only do a very high level comparison between US and Chinese FDI outflows. Further, we note that there are some missing variables for given countries, in the World Bank Dataset. We will need to be careful to note which countries have missing data, when we work on our data wrangling and visualization.

One additional note is that, since we are using multiple datasets, the measurements used across the different visualizations are different. Thus, we will not be able to necessarily derive insights from comparing across visualizations. This will need to be communicated through the dashboard that we will build.