

Econ 101 — Summer 2022

International Trade

Empirical Exercise 2: Land Endowment and Comparative Advantage

August 11, 2022

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Due date and time: August 15, 4:50pm

Inputs and products

Please use Stata (any version) for your work. Please base your analysis on the following two data files

IITPD-E by USITC	<code>itpd.dta</code>
WDI 2016	<code>wdi-select.dta</code>

in the respective online data folders <https://econweb.ucsd.edu/muendler/teach/22x/101/gen> and <https://econweb.ucsd.edu/muendler/teach/22x/101/lec07>.

You may find the code from Lecture 7 a useful reference: *lec07.do* in the online lecture folder <https://econweb.ucsd.edu/muendler/teach/22x/101/lec07>.

Please submit three products to canvas.ucsd.edu by the due time (**no late submission accepted**): (i) a file with results and your verbal summary titled *ee02.pdf*, (ii) a log file titled *ee02.log*, and (iii) a Stata code file titled *ee02.do*. **Your log file must exhaustively document the steps from the above input files to the output of results.**

Tasks

1. Preliminaries.

(a) Follow the data preparation steps for comparative advantage and endowment variables as in Lecture 7 (*lec07.do*), with two exceptions:

- Do not prepare the WDI (or Penn World Table) data again; use the ready data `wdi-select.dta` from <https://econweb.ucsd.edu/muendler/teach/22x/101/lec07> instead (as does the lower part of the code in *lec07.do*).
- When selecting the endowment variable to which you relate comparative advantage, do not use human capital (from the Penn World Tables) but instead choose *Agricultural land area* (the series AG.LND.AGRI.K2 in WDI).

Note: When you subsequently scatter plot the data, the x -axis will be on a different scale. One useful base might be the log of 100 square km for land area (0 "1" 4.6051702 "100" 9.2103404 "10k" 13.815511 "1m" 18.420681 "100m").

2. Graphs for the year 2016 and each of four broad sectors.

- Scatter plot log Revealed Comparative Advantage (by Balassa 1965) on the y -axis against agricultural land area on the x -axis—one scatter plot for agriculture, one for mining/energy, one for manufacturing, and one for services.

Hint: If you are unhappy with the placement of the regression results around the regression line, alter the coordinate in the text option of the scatter command, for example using:

```
...text(-.7 10 "\lfittext", color(navy)) for agriculture (where -.7 and 10 are the  $y$ -axis value first and  $x$ -axis value second).
```

- Do your findings lend support to a factor proportions explanation of trade flows as in the Heckscher-Ohlin and Ricardo-Viner models? Interpret your findings in one to three sentences. Refer to the plausible land use intensity of each of the four broad sectors (agriculture, mining/energy, manufacturing, services), and relate the plausible land use intensity to the observed relationship between comparative advantage by country-industry and land endowment by country in the scatter plots.