

Paper Notebook

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1 Introduction

This document includes a table exported from Stata. Below is the table included from '09iv.tex'. This document includes a table exported from Stata. Below is the table included from '09iv.tex'.

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2 Data

2.1 Source

The data comes from lots of source including World Bank which I get the GDP data, IMF and OECD whcih I get the FDI data and exchange rate data. Over them, I get the data of tea production from National Bureau of Statistics of China. The import and export data whose HS code is matched as "09xxxx" which is also necessary is caught from EPS data platform.

2.2 Summarize

I keep the code matches "0901xx" and "0902xx", which is referred coffee and tea. And here is the summarize statistics as follow table:

2.3 Elasticity

As the response is expected to identified about the Covid-19, the elasticity is necessary for it. Thus the calculation for elasticity is a problem for it, vast majority the elasticity is caused by "log-log" model' s parameters of β_1 .

$$P = \beta_0 + \beta_1 \cdot Q + \epsilon$$

However, I find found that I could use a instrumental variable(IV) to get the elasticity more effective.

Differently with traditional formula, the iv function is more effective for it to solve endonal problem(Angrist and Krueger, 2001). The function as follow:

$$E = \frac{Cov(P, IV)}{Cov(Q, IV)}$$

In order to find out a great IV for calculating the elasticity, there are two necessary conditions that the F-value is over 10 at OLS and the p-value is less than 0.05. Therefore the regression result is follow:

	(1) limp	(2) limp	(3) limq	(4) limq
tea	0.019*** (6.50)	0.014*** (8.19)		
limp			-4.552*** (-5.71)	-2.062*** (-8.30)
_cons	-2.717** (-3.13)	-1.083* (-2.18)	16.647*** (7.25)	12.312*** (15.93)
F	42.196	67.035		
p	0.000	0.000	0.000	0.000

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Based on the result, the production of tea is a really great IV for us to identify the elasticity about the import price with import quantity which means the value is possible to be calculated by that. What I want to explore is whether the Covid-19 influents the elasticity in the international trade.

3 Conclusion

The table above was directly imported from a separate file exported by Stata.