Advanced Topics of Development

Seminar 2

Felipe Torres

Department of International Development

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My email: felipe.torres@kcl.ac.uk Office hours: Every Friday from 2:00 to 4:00pm

In this seminar, we are going to discuss Nunn's paper The Long Term Effects of Africa's Slaves Trades.

We will discuss the questions that are on KEATS (and more), but first, let me tell you a brief summary of the paper:

What does the paper look at?

The effect of slave trade in shaping subsequent economic development.

Main findings:

The author finds a negative correlation between the numbers of slaves exported and long-term economic development.

Identification strategies/estimations:

- 1. Ordinary Least Squares
- 2. Instrumental variable

Question 1: What do the geographic areas on the map represent?



What do the geographic areas on the map represent?

Answer:

- This figure reports a reproduction of the map of African ethnicities from Murdock (1959)
- It shows the Tribal boundaries. In this map, there are 865 ethnicities.
- In most cases, one ethnicity fits within one country (if you overlap this map with modern political boundaries).
- In some cases, ethnicity is not constrained to one country.

Question 2: How was the author able to match slaves numbers to each geographic area?

How was the author able to match slaves numbers to each geographic area? First step: How did the author managed to estimate **slave exports**?

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First step: How did the author managed to estimate slave exports?

Answer:

Two main sources:

- 1. Trans-Atlantic Slave Trade Database which contains around 82% of all trans-Atlantic slaving voyages.
- 2. For the Indian, Red Sea, trans-Saharan slave trade the estimates are based on all available documents and records accounted by observers and government officials of the location and volume of slave exports.

How was the author able to match slaves numbers to each geographic area?

Second step: What information about slaves did the author use to match slaves to *Coastal* and *Inland* countries.

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Second step: What information about slaves did the author use to match slaves to *Coastal* and *Inland* countries.

Answer:

- 1. For *Coastal* countries, using shipping data (however, somewhat inaccurate)
- 2. For *Inland* countries, the author used a second source of data that reports ethnic identity of the slaves

How was the author able to match slaves numbers to each geographic area?

Can anyone tell me some of the sources that the author used to infer the ethnicity of slaves?

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Can anyone tell me some of the sources that the author used to infer the ethnicity of slaves?

Answer:

- 1. From records of sale
- 2. Slave registers
- 3. Slave runaway notices
- 4. Court records
- 5. Church records
- 6. Notarial documents
- 7. The slave's name
- 8. Ethnic markings (cut, scars, filling of teeth)

How was the author able to match slaves numbers to each geographic area?

Answer:

- 1. With this information, the author was able to infer the slaves' ethnicity or "nation".
- 2. A subset of the slave trade data also contained information about ethnicity.
- 3. The author then combined both sources of data to calculate his estimates.
- 4. First, from shipping data, the author estimated the number of slaves shipped from each *Coastal* country in Africa.
- 5. However, the issue was that if, for example, 100,000 slaves were shipped from the *Coastal* country A, it was very likely that a number of these slaves came from landlock countries nearby (*Inland* countries).

How was the author able to match slaves numbers to each geographic area? We can see this issue depicted below:



FIGURE I An Artificial Map of the West Coast of Africa

How was the author able to match slaves numbers to each geographic area?

How the author was able to identify from which "country" slaves came from (and how many)?

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Answer:

1. Map of ethnic boundaries



How was the author able to match slaves numbers to each geographic area?

How the author was able to identify from which "country" slaves came from (and how many)?

Answer:

- 1. Map of ethnic boundaries
- 2. Map of modern political boundaries
- 3. Aggregate the number of slaves at the country level



An Artificial Map of the West Coast of Africa

Answer:

- 1. The author calculated (estimated) that the the ratio of slaves that were shipped from country A relative to country B is 4 to 1 (20% of slaves came from country B).
- 2. And for Country C to D to E is 3 to 1 to 1.

Question 3: The author shows that a higher intensity of slave exports at the country level is relatively correlated with GPD per capita today. What are the mechanisms that could explain this relationship?

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What about the mechanisms?

Can anyone mention one of the mechanisms or channels by which the slave trade affected subsequent economic development?

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Answer:

1. Ethnic fractionalisation. Can anyone elaborate on this channel?

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Slave trade \Rightarrow Weakened ties between villages \Rightarrow Ethnic fractionalisation \Rightarrow Lower economic development





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Can anyone mention another channel/mechanism?

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What about the mechanisms?

Can anyone mention one of the mechanisms or channels by which the slave trade affected subsequent economic development?

Answer:

- 1. Ethnic fractionalisation. Can anyone elaborate on this channel?
- 2. Weakening and undermining of underdevelopment of states.

Can anyone elaborate on this mechanism?

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Answer:

- 1. Ethnic fractionalisation. Can anyone elaborate on this channel?
- 2. Weakening and undermining of underdevelopment of states.

Slave trade \Rightarrow long-term political instability \Rightarrow weakened/fragmented states \Rightarrow Lower economic development

The author shows that a higher intensity of slave exports at the country level is relatively correlated with GPD per capita today. What are the mechanisms that could explain this relationship?

```
fit = lm(state_dev ~ ln_export_area, data = slave_trade_QJE)
coef(summary(fit))
```

#		Estimate	Std. Error	t value	Pr(> t)
#	(Intercept)	0.70362173	0.06507686	10.812165	4.257918e-14
#	ln_export_area	-0.03250391	0.01235153	-2.631568	1.159989e-02

```
ggplot(slave_trade_QJE, aes(x=ln_export_area, y=state_dev)) +
geom_point() +
geom_text(aes(label = isocode), vjust= -1,size = 2,color = "black")
geom_smooth(method=lm) + xlab("Ln(exports/area)") + ylab("19th cent
```



Identification strategies/estimations:

OLS regression

The author provides estimates of the effects of slave trades on long-term economic development using the following regression model:

$$\ln y_i = \beta_0 + \beta_1 \ln(\text{exports}_i/\text{area}_i) + C_i \gamma + X_i \gamma + \epsilon_i$$

- 1. How is the outcome of interest measured?
- 2. What is the parameter of interest in this baseline econometric specification?
- 3. What is $C_i^{'}$ and why do we incorporate this parameter into the model?
- 4. What is X_i and why do we incorporate this parameter into the model?

OLS regression

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1. How is the outcome of interest measured?

Answer: Log per-capita income

1. What is the parameter of interest in this baseline econometric specification?

Answer: β_1 or beta coefficient.

1. What is C_i and why do we incorporate this parameter into the model?

Answer: a dummy variable that indicates the origin of the coloniser

1. What is X_i and why do we incorporate this parameter into the model?

Answer: A vector of covariates that capture the importance of geography in long-term development, such as distant from the equator or monthly rainfall 33 / 40

Results OLS

```
# baseline model without covariates
library(tidyverse)
library(haven)
slave_trade_QJE <- read_dta("slave_trade_QJE.dta")
fit = lm(ln_maddison_pcgdp2000 ~ ln_export_area, data = slave_trade_(
coef(summary(fit))</pre>
```

Estimate Std. Error t value Pr(>|t|)
(Intercept) 7.5172335 0.12583909 59.736871 3.666423e-48
ln_export_area -0.1177096 0.02491832 -4.723819 1.914860e-05

IV estimates

- What instrument the author used to estimate the effects of slavery on long-term development?
- According to the author, under what conditions was the instrument valid?
- Were the results from the IV estimation consistent with the OLS results?

IV estimates

• What instrument the author used to estimate the effects of slavery on long-term development?

Answer:

The distance from each African country to the locations where slaves were demanded (the sailing distance or overland distance)

• According to the author, under what conditions was the instrument valid?

Answer:

The location of supply did not influence the location of demand.

• Were the results from the IV estimation consistent with the OLS results?

Answer:

Yes, these were consistent. All estimates are similar to the ones obtained from the OLS estimation (between -0.208 and -0.248)
IV estimates

Key assumptions:

- Non-zero first-stage: instrument affects treatment
- Independence: instrument is unrelated to potential outcomes
- Exclusion restriction: instrument only affects outcome through treatment
- **Monotonicity:** instrument's effect on treatment is positive or negative for all units

Reduced form:

$$y_i = \alpha_0 + \rho Z_i + \beta_0 X_{1i} + \gamma_0 X_{2i} + \varepsilon_{0i}$$

First stage:

$$D_i = \alpha_1 + \rho Z_i + \beta_1 X_{1i} + \gamma_1 X_{2i} + \varepsilon_{1i}$$

Second stage:

$$Y_{i} = \alpha_{2} + \lambda \hat{D}_{i} + \beta_{2} X_{1i} + \gamma_{2} X_{2i} + \epsilon_{2i}$$
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IV estimates

	(1)	(2)	(3)	(4)
Second Sta	ge. Dependent v	ariable is log in	come in 200	0, ln y
ln(exports/area)	-0.208***	-0.201***	-0.286*	-0.248***
•	(0.053)	(0.047)	(0.153)	(0.071)
	[-0.51, -0.14]	[-0.42, -0.13]	$[-\infty, +\infty]$	[-0.62, -0.12]
Colonizer fixed effects	No	Yes	Yes	Yes
Geography controls	No	No	Yes	Yes
Restricted sample	No	No	No	Yes
F-stat	15.4	4.32	1.73	2.17
Number of obs.	52	52	52	42
First Stage. I	ependent varial	ole is slave expo	rts, ln(expo	rts/area)
Atlantic distance	-1.31***	-1.74***	-1.32^{*}	-1.69**
	(0.357)	(0.425)	(0.761)	(0.680)
Indian distance	-1.10^{***}	-1.43^{***}	-1.08	-1.57^{*}
	(0.380)	(0.531)	(0.697)	(0.801)
Saharan distance	-2.43***	-3.00***	-1.14	-4.08**
	(0.823)	(1.05)	(1.59)	(1.55)
Red Sea distance	-0.002	-0.152	-1.22	2.13
	(0.710)	(0.813)	(1.82)	(2.40)
F-stat	4.55	2.38	1.82	4.01
Colonizer fixed effects	No	Yes	Yes	Yes
Geography controls	No	No	Yes	Yes
Restricted sample	No	No	No	Yes
Hausman test (p-value)	.02	.01	.02	.04
Sargan test (p-value)	.18	.30	.65	.51

TABLE IV ESTIMATES OF THE RELATIONSHIP BETWEEN SLAVE EXPORTS AND INCOME

Questions?

Thanks!

felipe.torres@kcl.ac.uk

Office hours: Friday between 14:00 - 16:00

Slides created via the R package **xarigan**

Advanced Topics of Development

Seminar 4

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27/01/2020

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From 2000 and 2011, during a period of high oil prices, US production of shale gas increased from .30 to 7.94 trillion cubic feet, a 2,500%. You are tasked by the US government to determine how this boom affected local government economic conditions in shale-gas areas (see map).

Inspire yourselves from the resource-curse literature to developed an econometric strategy to examine the effects of the shale-gas boom on local economic conditions. Be precise in explaining your choice of outcome variables and in describing your methods, including the data that you would use, and the regression you would run. Show with graphs what patterns you'd expect to find in the data, and the magnitude of the effects you'd expect to estimate. Conclude with policy lessons you could draw from such a study, considering the existing resource curse literature.



First, let's look at some of the papers that you covered in the lecture

- What is the study investigating?
- Outcome(s) of interest?
- Estimation strategy?
- Data?
- Econometric specification?
- Results? Magnitude? Direction?

What is the study investigating?

Answer:

What is the study investigating?

• The impact of major natural resources discoveries in economic growth

Outcome(s) of interest?

Answer:

Outcome(s) of interest?

- Economic growth using GDP per-capita
- Education and infant mortality
- Democracy, using the Policy IV Democracy rating

Estimation strategy?

Answer:

Estimation strategy?

- Difference-in-difference estimation
- Also, synthetic control. This method uses a data-driven algorithm to find a weighted combination of control countries that best replicates the pre-treatment behaviour of a single treatment country



• First difference: Post - Pre-intervention

Data?

Answer: Data sources? For the regressors or explanatory variable:

- 1. Resource production data comes from UN Industrial Commodities Statistics
- 2. Oil discovery dates were found using the 2007 and 1994 editions of the Oil and Gas Journal Data Book which lists all oil fields along with their discovery dates for each country

For the dependent variable (Our outcome of interest) GDP and population data:

- 1. Maddison Historical Statistics which measures GDP in 19990 International Geary-Khamis dollars
- 2. Penn Word data Tables for investment data and power parity conversion factors
- 3. Education data is drawn from Barro-Lee (2010) data set. The variable of interest of is average years of schooling
- 4. Infant mortality data comes from the United Nations 2010 revision of World Population Prospects
- 5. The degree of democracy comes from the Polity IV index that goes from 0 (heredity monarchy) to 10 (consolidated democracy) $14\,/\,55$

Econometric specification?

Answer:

Econometric specification?

• Baseline specification:

$$Y_{crt} = Post_{ct}\delta + lpha_c + \gamma_{rt} + \epsilon_{ct}$$

Where is Y_{crt} is our outcome of interest for country c in region r in year t and $Post_{ct}$ is a country-specific indicator for being after the extraction event.

• Event study specification:

$$Y_{crt} = E_{ct}\delta + lpha_c + \gamma_{rt} + \epsilon_{ct}$$

 E_{ct} is a vector indicator dummies for being within some specified 3-year period before or after the extraction event.\$gamma\$ is a vector coefficients corresponding to each 3-year period

• Synthetic control:

$$Y_1t-\sum_{j=2}^{J+1}w_j^*Y_j^t$$

Results? Magnitude? Direction?

Results? Magnitude? Direction?

Answer:

• On the economic growth outcome:

	(1) Main Spec.	(2) PWT data	(3) Maddison with PWT sample	(4) Production Lag Omitted	(5) Event Lag Omitted	(6) Country Trends
Post	0.350^{*} (0.157)	0.297 (0.196)	$0.245 \\ (0.178)$	0.390^{*} (0.177)	0.445^{*} (0.203)	$\frac{0.311^{**}}{(0.111)}$
$\frac{N}{R^2}$	6195 0.684	5353 0.682	5353 0.719	6112 0.685	6065 0.687	$6195 \\ 0.911$

Table 3: Difference in Difference: GDP/capita

Notes: The dependent variable is the natural log of real GDP/capita. All regressions include country and region-year fixed effects. Robust standard errors clustered at the country level are reported in parenthesis. + indicatessignificance at a 10% level, * at a 5% level, and ** at a 1% level.

Results? Magnitude? Direction?

Answer: On education, child mortality and democracy

	(1)	(2)	(3)	—
	Full Sample	non-OECD Treatments	OECD Treatments	
post	0.41	0.89^{*}	-0.47	
	(0.36)	(0.43)	(0.38)	
N	1365	1300	1248	
\mathbb{R}^2	0.881	0.885	0.891	

Table 9: Difference in Difference: Average Years Schooling

Notes: The dependent variable is average years of schooling. All regressions include country and region-year fixed effects. Robust standard errors clustered at the country level are reported in parenthesis. + indicates significance at a 10% level, * at a 5% level, ** at a 1% level, and *** at a .1% level.

Table 10:	Difference	in	Difference:	Infant	Mortali	itv

	(1)	
	Non-OECD treatments	
post	-0.011+	
	(0.0062)	
N	1464	
R^2	0.846	

Notes: The dependent variable is infant mortality rate in percentage points. All regressions include country and region-year fixed effects. OECD countries are not included. Robust standard errors clustered at the country level are reported in parenthesis. + indicates significance at a 10% level, * at a 5% level, ** at a 1% level, and *** at a .1% level.

Table 11: Difference in Difference: Democracy Score

	(1)	(2)	(3)	(4)
	Democ. Score	Democ. Dummy	Democ. Score, Afr/ME only	Democ. dummy, Afr/ME only
Post	-1.438^{+}	-0.190	-1.287*	-0.178*
	(0.810)	(0.145)	(0.544)	(0.084)
N	5184	5184	2243	2243
\mathbb{R}^2	0.433	0.364	0.213	0.131

Notes: The dependent variable in Columns 1 and 3 is the Polity IV Democracy rating, and in Columns 2 and 4 a democracy indicator. Regressions do not include OECD treatment countries. All regressions include country and region-year fixed effects. Robust standard errors clustered at the country level are reported in parenthesis. + indicates significance at a 10% level, * at a 5% level, ** at a 1% level, and *** at a .1% level.

Second paper: Do Giant Oildfield Discoveries Fuel Internal Armed Conflicts by Brock Lei and Michaels

- What is the study investigating?
- Outcome(s) of interest?
- Estimation strategy?
- Data?
- Econometric specification?
- Results? Magnitude? Direction?

What is the study investigating?

Do Giant Oildfield Discoveries Fuel Internal Armed Conflicts by Lei and Michaels

Answer:

What is the study investigating?

• The effect of giant oilfield discoveries on the incidence of internal armed conflict.

Outcome(s) of interest?

Do Giant Oildfield Discoveries Fuel Internal Armed Conflicts by Lei and Michaels

Answer:

Outcome(s) of interest?

- Whether the country has experienced an internal conflict that claimed the lives of 25 people or over in each given year.
- An intensity-scaled measure of internal armed conflicts

Estimation strategy?

Do Giant Oildfield Discoveries Fuel Internal Armed Conflicts by Lei and Michaels

Answer:

Estimation strategy?

• Panel data with country and year fixed effects

Suppose that:

$$egin{aligned} Conf_{t+1,c} &= Res_{t+1,c} + EFrag_{t+1,c} + Pol_{t+1,c} \ Conf_{t+1,c} &- Conf_{t,c} &= Res_{t+1,c} + EFrag_{t+1,c} + Pol_{t+1,c} - (Res_{t,c} + EFrag_{t,c} + Pol_{t+1,c} - Conf_{t+1,c} - Conf_{t,c} &= Res_{t+1,c} + EFrag_{c} + Pol_{c} - (Res_{t,c} + EFrag_{c} + Pol_{c}) \ Conf_{t+1,c} &- Conf_{t,c} &= Res_{t+1,c} - Res_{t,c} \end{aligned}$$

Data?

Do Giant Oildfield Discoveries Fuel Internal Armed Conflicts by Lei and Michaels

Answer:

Data?

- For the explanatory variable: Oil discoveries and production: Horn (2003, 2004) which report the date of discovery, the name of the discovering country for 910 giant oil fields (found in 65 countries)
- They complemented their oil discoveries and production data using data from the Oil and Gas Journal Data Book (2008) and with previous data collected from Cotet and Tsui (2013).
- Data on Political Violence: UCDP/PRIO dataset (Gleditsch et al. 2002) to measures the incidence of internal armed conflicts from 1946-2008. Also, data from the Polity IV project (Marshall and Marshall 2011) that containts information about the having at least one coup in a given year.

Econometric specification?

Do Giant Oildfield Discoveries Fuel Internal Armed Conflicts by Lei and Michaels

Answer:

Econometric specification?

$$Y_{it+j} = B_{ij} Disc_{it} + Country_i + Year_t + \epsilon_i$$

- $Disc_{it}$ is an indicator for discovery of a giant oilfield in county i in year t.
- The authors use different lags j for $j \in \{2,4,6,8,10\}$

Results?

Do Giant Oildfield Discoveries Fuel Internal Armed Conflicts by Lei and Michaels

Answer:

Results?

- Giant oil discoveries increase per capita production and exports, but they increase the probability of internal conflict by about 5-8 percentage points within 4-9 years after the discovery.
- The mean of the probability of conflict is 10%, so it's a quite sizeable increase.
- It also increases the intensity of the armed conflicts
- Armed conflict over oil is more likely in regions where political violence pays off (11-14 percentage points)
Do Giant Oildfield Discoveries Fuel Internal Armed Conflicts by Lei and Michaels

Answer:

Results?

Outcome in year:	t+2	t+4	t+6	t+8	t+10	t+2	t+4	t+6	t+8	t+10
Panel A. Dependent variable: Internal armed conflict										
Discovery	0.015 (0.021)	0.061 (0.021)	0.079 (0.026)	0.060 (0.027)	0.031 (0.027)	0.003	0.050 (0.016)	0.072 (0.021)	0.057 (0.022)	0.031 (0.025)
Years with discoveries from t-10 to t-1						0.020	0.018	0.011 (0.010)	0.005	0.000
Observations	10,135	10,129	9,933	9,547	9,161	10,135	10,129	9,933	9,547	9,161
Panel B. Dependent variable: Internal armed conflict	scaled by	intensity								
Discovery	0.009 (0.028)	0.084 (0.030)	0.085 (0.034)	0.060 (0.034)	0.009 (0.029)	-0.002 (0.023)	0.076 (0.025)	0.081 (0.029)	0.060 (0.028)	0.012 (0.027)
Years with discoveries from t-10 to t-1						0.018	0.013	0.007	0.000 (0.013)	-0.005
Observations	10,135	10,129	9,933	9,547	9,161	10,135	10,129	9,933	9,547	9,161

Table 3: Effect of Giant Oil Discoveries on Internal Armed Conflicts

Now let's do the exercise.

From 2000 and 2011, during a period of high oil prices, US production of shale gas increased from .30 to 7.94 trillion cubic feet, a 2,500%. You are tasked by the US government to determine how this boom affected local government economic conditions in shale-gas areas (see map).

Inspire yourselves from the resource-curse literature to developed an econometric strategy to examine the effects of the shale-gas boom on local economic conditions. Be precise in explaining your choice of outcome variables and in describing your methods, including the data that you would use, and the regression you would run. Show with graphs what patterns you'd expect to find in the data, and the magnitude of the effects you'd expect to estimate. Conclude with policy lessons you could draw from such a study, considering the existing resource curse literature.



- How would you measure local government economic conditions?
- What econometric strategy would you use?
- What outcome variables would you use?
- What data would you use?
- What econometric specification would you use?
- What results could we expect?
- What policy lessons would you draw from this study?

How would you measure local government economic conditions?

How would you measure local government economic conditions?

Answer:

- We could look at unemployment rates, or consumption at the county level.
- We could also look at crime.

What econometric strategy would you use?

What econometric strategy would you use?

Answer:

- We can exploit spatial variation in oil and gas-rich shale formations
- We can exploit the national temporal variation in shale energy production
- Thus, we could use **difference-in-difference design** to estimate the effects of shale-gas on our outcome(s) of interest
- Potential confounding factors?
- You can find here some Youtube videos which explain more about Difference-in-difference design.

What outcome variables would you use?

What outcome variables would you use?

Answer:

- Any ideas of what variable(s) of economic growth can be measured at the county level?
- We could look at county level unemployment rates or perhaps consumption rates
- Crime: An aggregate measure of homicides, rapes, robberies, assaults, burglaries, larceny, motor vehicle thefts

What data would you use?

What data would you use?

Answer:

- For unemployment, we can use data from the Local area Unemployment Statistics
- For crime, we can use data from the Uniform Crime Reporting program
- As for the resource data, we can obtain this data from the Energy Information Administration

What econometric specification would you use?

What econometric specification would you use?

Answer:

• For unemployment, we do not need to use the log transformation:

$$Y_{i,t} = lpha + eta(D_i imes Post_t) + state_i imes t + Z_t + C_i + \epsilon_{i,t}$$

• If crime is the outcome of interest:

$$ln(rac{Crimes_{i,t}}{Pop_{i,t}}) = lpha + eta(D_i imes Post_t) + X_{it} + state_i imes t + Z_t + C_i + \epsilon_{i,t}$$

 D_i is an indicator that takes the value of 1 if the centre of county *i* lies above the booming play. X_i is a vector of time-varying covariates. $state \times$ is state-level linear trends, Z_i are year fixed effects, and C_i are county fixed effects. $Post_t$ is equal to 1 to one fro all years from 2005 onward.

What econometric specification would you use?

Answer:

- If the county is not at booming play $D_i=0$ before year t $Post_t=0$

$$ln(rac{Crimes_{i,t}}{Pop_{i,t}}) = repshare_{it} + state_i imes t + Z_t + C_i + \epsilon_{i,t}$$

- If the county is not at a booming play $D_i=1$ after year t $Post_t=1$

$$ln(rac{Crimes_{i,t}}{Pop_{i,t}}) = lpha + eta(D_i imes Post_t) + repshare_{it} + state_i imes t + Z_t + C_i + \epsilon_{i,t}$$

- If the county is not at a booming play $D_i=1$ before year t $Post_t=0$

$$ln(rac{Crimes_{i,t}}{Pop_{i,t}}) = lpha + repshare_{it} + state_i imes t + Z_t + C_i + \epsilon_{i,t}$$

- If the county is not at a booming play $D_i=0$ after year t $Post_t=1$

$$ln(rac{Crimes_{i,t}}{Pop_{i,t}}) = lpha + repshare_{it} + state_i imes t + Z_t + C_i + \epsilon_{i,t}$$

What results could we expect?

What results could we expect?

Answer:

- We should expect a decrease in unemployment rates
- But are there opposite effects that may increase unemployment?
- 1. Crowing out other industries?
- 2. The energy industry tends to be capital-intensive rather than labour intensive

What results could we expect?

Answer:

- In the case of crime, two opposite effects:
- 1. First of all, there are 12 million ex-felons in the U.S that represent 9.2% of the working age male population
- 2. Oil and gas drilling jobs attract young men, 35% of crimes are committed by young men between 20-29 years-old.
- 3. Young single men with financial means can get involved in the use and abuse of illicit substances and alcohol, compounded with unusual work schedule
- 4. Higher residential mobility, which can lead to weaker social networks and decrease a neighbourhood's capacity to control the behaviour of the people in the public

However:

- 1. People who likely directly benefit from the economic boom are less likely to commit crime
- 2. Individuals with legal employment are less likely to commit crimes

Thus, it's not clear

What policy lessons would you draw from this study?

What policy lessons would you draw from this study?

Answer:

• Any suggestions?

Questions?

Thanks!

felipe.torres@kcl.ac.uk

Office hours: Friday between 14:00 - 16:00

Slides created via the R package **xarigan**

Advanced Topics of Development Seminar 5 Felipe Torres

Department of International Development

27/01/2020

My email: uctqto3@ucl.ac.uk

Seminar 1

Seminar 1

We learned how to calculate the mean, the median, mix, and max function:

my_first_vector <- c(0, 1, 1, 2, 3, 5, 8, 13, 21, 34)
mean(my_first_vector)</pre>

[1] 8.8

median(my_first_vector)

[1] 4

min(my_first_vector)

[1] O

max(my_first_vector)

[1] 34

Seminar 1 -

In Homework 1, you learned how to calculate the difference in means conditional on particular values:

```
mean_urban <- mean(USArrests$UrbanPop)
median_urban <- median(USArrests$UrbanPop)</pre>
```

```
mean_assault_high_urban <- mean(USArrests[USArrests$U
mean_assault_high_urban
```

[1] 187.4643

```
mean_assault_low_urban <- mean(USArrests[USArrests$Url
mean_assault_low_urban</pre>
```

[1] 149.5

First, let's look at Fisman's paper

Estimating the Value of Political Connections by Raymond Fisman

- What is the study about?
- Outcome(s) of interest?
- Identification strategy
- Data?
- Econometric specification?
- Results? Magnitude? Direction?

What is the study about?

Estimating the Value of Political Connections by Raymond Fisman

Answer:

What is the study about?

• The study aims to estimate how much political connections value to businesses

Outcome(s) of interest?

Estimating the Value of Political Connections by Raymond Fisman

Answer:

- Outcome(s) of interest?
 - Changes on share prices

Estimation strategy?

Estimating the Value of Political Connections by Raymond Fisman

Answer:

Estimation strategy?

• Ordinary Least Squares
Data?

Answer: Data sources?

- Stock market and accounting data for companies on the Jakarta Stock Exchange (JSX)
- Financial Times' Extel Financial Database
- Variables such as : Assets, total debt, taxes, net income, and firms' industry code
- Stock price data: Financial Times' Extel Securities Database
- Investamatic Database
- Financial services database that is used by Southest Asian securities firms
- Data on group affiliations of all JSX firms
- A measure of political dependence of a subset of these firms
- A series of "events" related to the condition of Suharto's health

Data on Group Affiliation?

Answer: Data on Group Affiliation?

- Firms' major shareholders, the composition of its board and management
- Top Companies and Big Groups in Indonesia
- Indonesia Capital Market Directory 1997

Data on Political Connectedness?

Answer: Data on Political Connectedness?

- Suharto Dependency Index developed by the Castle Group
- Subjective assessment of a number of top consultants at the Castle Group
- It consists of a numerical rating of the 25 largest industrial groups in Indonesia and is dependent on political connections for its profitability.
- Ranges from 1 equal to *least dependent* to 5 most *dependent*
- Sample: 79 firms

Information about Suharto's health?

Answer: Information about Suharto's Health?

- Lexis-Nexis literature search using Keywords
- The author retrieved 484 stories in which one or more health episodes referred to one of Suharto's six episodes
- Lexis-Nexis is a leading global provider of contentenabled workflow solutions designed specifically for professionals in the legal, risk management, corporate, government, law enforcement, accounting, and academic markets.

Econometric specifications?

Answer:

Econometric specifications?

• First econometric specification:

$$R_{ie} = \alpha + \rho \cdot POL_i + \epsilon_{ie}$$

Where is R_{ie} is the return on the price of security *i* during episode *e*. POL_i is the firm's Suharto Dependency Number, and ϵ_{ie} is the idiosyncratic error.

• Second econometric specification includes an interaction term:

$$R(P_{ie}) = lpha +
ho_1 POL_i +
ho_2 NR_e(JCI) +
ho_3(NR_e(JCI)POL_i) +
ho_3(NR_e(JCI)POL_i))$$

 $NR_e(JCI)$ is the return on Jakarta Stock Exchange Composite Index net of broader Southeast Asian effects.

Results? Magnitude? Direction?

Results? Magnitude? Direction?

Answer:

• From the first OLS regression:

TABLE 2-EFFECT OF POLITICAL CONNECTIONS ON CHANGES IN SHARE PRICE, SEPARATE ESTIMATION FOR EACH EVENT

	Jan. 30–Feb. 1, 1995	April 27, 1995	April 29, 1996	July 4–9, 1996	July 26, 1996	April 1–3, 1997
POL	-0.58* (0.34)	-0.31 (0.18)	-0.24* (0.15)	-0.95*** (0.27)	-0.57*** (0.22)	-0.90** (0.35)
Constant	1.29 (0.79)	0.21 (0.32)	0.12 (0.46)	0.83 (0.64)	-0.07(0.41)	0.77 (0.97)
R^2	0.037	0.043	0.025	0.147	0.078	0.075
Observations	70	70	78	79	79	79

Note: Robust standard errors are in parentheses.

* Significantly different from 0 at the 10-percent level.

** Significantly different from 0 at the 5-percent level.

*** Significantly different from 0 at the 1-percent level.

Can anyone interpret the coefficients from this table? Are they statistically significant?

What about the differential response of more/less severe market shocks to more/less dependent firms?

Results? Magnitude? Direction?

Answer:

In order to measure the differential response we add an interaction term:

 $R(P_{ie}) = lpha +
ho_1 POL_i +
ho_2 NR_e(JCI) +
ho_3(NR_e(JCI)POL_i) +$

From the second specification:

	(1)	(2)
POL	-0.60** (0.11)	-0.19 (0.15)
NR(JCI)	0.25 (0.14)	-0.32(0.28)
$NR(JCI) \cdot POL$		0.28* (0.11)
Constant	0.88 (0.27)	0.06 (0.35)
R^2	0.066	0.078
Number of observations	455	455

TABLE 3—EFFECT OF POLITICAL CONNECTIONS ON CHANGES IN SHARE PRICE

Note: Robust standard errors are in parentheses.

* Significantly different from 0 at the 5-percent level.

** Significantly different from 0 at the 1-percent level.

Can anyone interpret the coefficients from this table? Are they statistically significant?

Answer:

 $R(P_{ie}) = lpha +
ho_1 POL_i +
ho_2 NR_e(JCI) +
ho_3(NR_e(JCI)POL_i) +$

- If the severity of the rumor affects politically dependent firms more than less-dependent firms, then the coefficient on the interaction term $\rho_3(NR_e(JCI)POL_i) > 0$ should be positive. (Remember that is always positive $POL_i > 0$)
- If the overall market declines $(NR_e(JCI) < 0)$ by 1 percent in reaction to news about Suharto's health, we might expect a firm with POL = x to drop 0.28 percent more than a firm with POL = x-1.

Let's do the exercise now!

The value of connections to Donald Tump

Sixty-four trade groups, foreign governments, Republican candidates and other stayed at or held events at properties linked to U.S. President Donald Trump during's Trump's first year in Office, a political watchdog said in a reported on Tuesday.

Reuters, January 2018.

How could you use this information to quantity the value of connections to Donald Trump?

Hints:

- Inspire yourself from Ray Fisman's paper on connections to Suharto in India
- Be precise on the type and source of data you would use to estimate the value
- Draw graphs to back-up your methodology
- Discuss the results you expect to find and how they can be used?

- Is it possible to create an index of political connectedness to Donald Trump? What data would you use?
- What would be your outcome of interest?
- Graphs/Methodology?
- What results would you expect?

Is it possible to create an index of political connectedness to Donald Trump? What data would you use?

Is it possible to create an index of political connectedness to Donald Trump? What data would you use?

Answer:

Mostly likely yes:

- Boards of directors
- Previous contracts
- Links with law firms that worked with Trump
- Campaign contributions done via the Federal Election
 Comission
- You can actually download World Trump data

Is it possible to create an index of political connectedness to Donald Trump? What data would you use?

Answer:



Is it possible to create an index of political connectedness to Donald Trump? What data would you use?

Answer:

Let's look at The World Trump data into more detail:

Connection type	Quantity
Ownership	334
Director	126
Investor	120
Reported member	103
Former director	66
Listed as asset	63
Member	60
Subsidiary	55
Own collateralized debt	54
Provided legal services for	48
Donor	46

What would be your outcome of interest?

What would be your outcome of interest?

Answer:

- Share prices? The S&P 500?
- Number of contracts procurred
- Firms' EBITDA

What would be your outcome of interest?

Answer:

- Share prices? The S&P 500?
- Number of contracts procurred
- Firms' EBITDA



However, the S&P 500 is a stock market index that measures the stock performance of 500 large companies listed on stock exchange.

Graphs/Methodology?

Methodology

Answer:

- All methodologies (diff-in-diff, panel data, Regression Discontinuity) depend on meeting some assumptions and some of them rely on"exogenous" events (variation).
- Could we exploit impeachments as an "exogenous" event to measure the value of Trump's political connections?



• Can we disentangle other potential factors?

More information on regression discontinuity HERE

Methodology

Answer:

• It's likely that agents in the market will respond before the day of the impeachment



• What about when Trump got covid?

Methodology

Answer:



• S & P 500 when Trump got covid

Results?

Results

Answer:

• Should we expect results similar to Suharto?



FIGURE 1. EFFECT OF POLITICAL DEPENDENCE ON SHARE PRICE RETURNS

Final thoughts

The validity of your findings will depend on, amongst many things:

- How robust is your metric of political connections
- Whether there are exogenous events that may help you disentangle other confounding factors
- The sample that you used
- How arbitrary or reliable are the outcomes that you are $\left. _{44\,/\,46}
 ight.$

Questions?

Thanks!

felipe.torres@kcl.ac.uk

Office hours: Friday between 14:00 - 16:00

Slides created via the R package **xarigan**

Advanced Topics of Development Seminar 7

Felipe Torres

Department of International Development

27/01/2020

My email: felipe.torres@kcl.ac.uk Office hours: Every Friday from 2:00 to 4:00pm

Todays' seminar discussion:

You are asked by a team at the World Food Programme to evaluate the effect of food aid on the health of children in targeted countries. You know from your friend at the World Health Organisation that you can measure the health of children aged 12-18 months using a measuring of stunting, i.e. standardised body length. You run a regression of average stunting on food aid across recipient countries. You find a negative relationship, suggesting that more food aid is associated with poorer children health.

- How do you explain this result?
- What does it suggest in terms of policy implications?
First, let's look at the papers that were discussed in the lecture

Did Iraq Cheat the United Nations? Underpricing, Bribes, and the Oil for Food Program by Hsieh and Moretti

- What is the study about?
- Outcome(s) of interest?
- Identification strategy?
- Econometric specification?
- Results? Magnitude? Direction?

What is the study about?

Answer:

What is the study about?

- The unintended consequences of the Oil for Food programme
- Estimates the total amount of bribes that Iraq received due to the implementation of this programme

Outcome(s) of interest?

Answer:

Outcome(s) of interest?

• Average difference between the market price and the official selling price of Iraqi oils

Estimation strategy?

Answer:

Estimation strategy?

- Differences-in-Differences
- The first difference is between Iraq's price and its nearest substitutive
- The second difference is before and after the embargo

 $\underbrace{\begin{pmatrix} P_{Iraq,1997-2002} - P_{Substitutive,1997-2002} \end{pmatrix}}_{\text{First difference}} - \underbrace{\begin{pmatrix} P_{Iraq,1980-1995} - P_{Substitutive,1980-1985} \\ \text{Second difference} \\ \underline{\Delta P_{1997-2002}}_{\text{During the programme}} - \underbrace{\Delta P_{1980-1995}}_{\text{Before the programme}} \end{bmatrix}}$

Econometric specifications?

Answer:

Econometric specifications?

• First econometric specification:

 $\Delta P_t = lpha + eta Program_t + arepsilon_t$

Where is ΔP_t is the difference between the market price of the comparison crude and official selling price of the relevant Iraqi crude in period *t*. *Program*_t is an indicator variable for the periods of the Oil for Food in which sales of Iraqi oil took place (1997-2002)

• Second econometric specification:

 $\Delta P_{t} = \alpha + \beta_{1} Program_{1t} + \beta_{2} Program_{2t} + \beta_{3} Program_{3t} + \varepsilon_{t}$

 $Program_{jt}$ is an indicator variable for the *jth* sub-period of the Oil for Food Programme (j=1997-1999, 2000-2001, 2002)

Results? Magnitude? Direction?

Results? Magnitude? Direction?

Answer:

• For the first analysis:

Table 1: Difference Between the Market Price of Close Competitors and the official selling Price of Iraqi Oils

	Arabian Light	Arabian Medium	Urals
	- Basrah	- Basrah	- Kirkuk
	(1)	(2)	(3)
Model 1: Overall Estimates			
Difference for 1997-2002 - Difference for 1980-1995	2.44**	1.24**	0.69**
	(0.25)	(0.34)	(0.18)
Model 2: Estimates by Period			
Difference for 1997-1999 - Difference for 1980-1995	2.07**	0.84**	0.53**
	(0.18)	(0.24)	(0.15)
Difference for 2000-2001 - Difference for 1980-1995	3.91**	2.67**	1.07**
	(0.41)	(0.61)	(0.40)
Difference for 2002 - Difference for 1980-1995	0.68	-0.40	0.45
	(0.36)	(0.49)	(0.29)
Total Revenue from Underpricing (billion)	6.78	3.75	1.88

Can anyone interpret the coefficients from this table? Are they statistically significant?

Results? Magnitude? Direction?

Answer:

Interpretation:

Table 1: Difference Between the Market Price of Close Competitors and the official selling Price of Iraqi Oils

	Arabian Light	Arabian Medium	Urals	
	- Basrah	- Basrah	- Kirkuk	
	(1)	(2)	(3)	
<u>Model 1: Overall Estimates</u>	2.44^{**}	1.24^{**}	0.69**	
Difference for 1997-2002 - Difference for 1980-1995	(0.25)	(0.34)	(0.18)	

Interpretation: The beta coefficient represents the average *change* in price *difference* during the programme relative to the historical baseline before the programme. Thus, the underpricing average was \$2.44 a barrel during the Oil for Food programme, relatively to the year before the programme.

This difference is statistically significant at the 5% significance level.

Results? Magnitude? Direction?

Answer:

• For the second analysis - using the spot market price: Contract price + bribe

Table 2: Difference Between the Market Price of Iraqi Olis and the official selling Price of Iraqi Oils

	Basrah Market Price	Kirkuk Market Price		
	- Basrah Official Selling Price	- Kirkuk Official Selling Price		
	(1)	(2)		
Model 1: Overall Estimates				
Difference for 1997-2002 - Difference for 1980-1995	1.64^{**}	0.29**		
	(0.20)	(0.12)		
Model 2: Estimates by Period				
Difference for 1997-1999 - Difference for 1980-1995	0.85**	0.33**		
	(0.15)	(0.13)		
Difference for 2000-2001 - Difference for 1980-1995	2.82**	0.40*		
	(0.24)	(0.21)		
Difference for 2002 - Difference for 1980-1995	1.46**	-0.03		
	(0.22)	(0.21)		
Total Revenue from Underpricing (billion)	4.96	1.14		

Can anyone interpret the coefficients from this table? Are they statistically significant?

Results? Magnitude? Direction?

Answer:

• For the second analysis - using the spot market price: Contract price + bribe

Table 2: Difference Between the Market Price of Iraqi Olis and the official selling Price of Iraqi Oils

	Basrah Market Price	Kirkuk Market Price		
	- Basrah Official Selling Price	- Kirkuk Official Selling Price		
	(1)	(2)		
Model 1: Overall Estimates				
Difference for 1997-2002 - Difference for 1980-1995	1.64**	0.29**		
	(0.20)	(0.12)		
Model 2: Estimates by Period				
Difference for 1997-1999 - Difference for 1980-1995	0.85^{**}	0.33**		
	(0.15)	(0.13)		
Difference for 2000-2001 - Difference for 1980-1995	2.82**	0.40^{*}		
	(0.24)	(0.21)		
Difference for 2002 - Difference for 1980-1995	1.46**	-0.03		
	(0.22)	(0.21)		
Total Revenue from Underpricing (billion)	4.96	1.14		

Interpretation: The underpricing average was \$1.64 a barrel during the Oil for Food programme, relatively to the year before the programme.

Let's now review the second paper

- What is the study about?
- Outcome(s) of interest?
- Identification strategy?
- Econometric specification?
- Results? Magnitude? Direction?

What is the study about?

Answer:

• The effect of US food aid on conflict

Outcome(s) of interest?

Answer:

• The incidence of civil conflict, constructed using data from UCDP/PRIO Armed Conflict Dataset which defines conflict as the use of armed force between two parties that results in at least 25 battle death in a year.

Identification strategy?

Answer:

Instrumental Variable

• What instrument(s) the authors used to estimate the causal effect US aid on conflict ?

Answer:

Instrumental Variable

- Two instruments (and actually the interaction between these two):
 - US wheat production year t-1
 - The likelihood of being a US food aid recipient

Econometric specification

Answer:

They use Two-Stage Least Square

• Second stage:

$$C_{irt} = eta F_{irt} + X_{irt} \Gamma + \delta_r Y_t + \psi_{ir} +
u_{irt}$$

• First stage:

$$F_{irt} = lpha P_{t-1} + X_{irt} \Gamma + \gamma_r Y_t + \psi_{ir} + arepsilon_{irt}$$

 C_{irt} is an indicator variable that equals to one if there is one conflict in country *i* during year *t*. F_{irt} is the endogenous variable of interest, the quantity of wheat aid shipped from the US to recipient *i* in year *t*.

 P_{t-1} is the main instrument, which is the amount of US wheat production in the previous year

 X_{irt} a vector of country-year covariates

 $\delta_r Y_t$ region-specific time trends

 ψ_{ir} Country fixed effects

Answer:

• Second econometric specification - Second stage:

$$C_{irt} = eta F_{irt} + X_{irt} \Gamma + arphi_{rt} + \psi_{ir} +
u_{irt}$$

• First stage:

$$F_{irt} = lpha(P_{t-1} imes ar{D}_{irt}) + X_{irt} \Gamma + arphi_{rt} + \psi_{ir} + arepsilon_{irt}$$

Where D_{irt} is an indicator variable that takes a value if country *i* receives any US food aid in year *t*. Then, $\bar{D}_{ir} = \frac{1}{36} \sum_{t=1971}^{2006} D_{irt}$ denotes the fraction of years between 1971 and 2006 that a country receives any US food aid. φ_{rt} denotes region-year fixed effects.

Results? Magnitude? Direction?

Answer:

TABLE 2—THE EFFECT OF FOOD AID ON CONFLICT: BASELINE SPECIFICATION WITH $P_{t-1} \times D_{ir}$ as the Instrument

	Parsimonious specifications				Baseline specification		
Dependent variable (panels A, B, and C):	Any conflict (1)	Any conflict (2)	Any conflict (3)	Any conflict (4)	Any conflict (5)	Intrastate (6)	Interstate (7)
Panel A. OLS estimates US wheat aid (1,000 MT)	-0.00006 (0.00018)	-0.00007 (0.00018)	-0.00005 (0.00017)	-0.00007 (0.00017)	-0.00011 (0.00017)	-0.00005 (0.00017)	-0.00011 (0.00004)
<i>R</i> ²	0.508	0.508	0.518	0.534	0.549	0.523	0.385
Panel B. Reduced form estimates (\times 1, Lag US wheat production (1,000 MT) \times avg. prob. of any US food aid	000)** 0.00829 (0.00257)	0.01039 (0.00263)	0.01070 (0.00262)	0.01133 (0.00318)	0.01071 (0.00320)	0.00909 (0.00322)	-0.00158 (0.00121)
R^2	0.511	0.512	0.521	0.536	0.551	0.525	0.382
Panel C. 2SLS estimates US wheat aid (1,000 MT)	0.00364 (0.00174)	0.00303 (0.00125)	0.00312 (0.00117)	0.00343 (0.00106)	0.00299 (0.00096)	0.00254 (0.00088)	-0.00044 (0.00033)
Dependent variable (panel D):	US wheat aid (1,000 MT)						
Panel D. First-stage estimates Lag US wheat production (1,000 MT) × avg. prob. of any US food aid	0.00227 (0.00094)	0.00343 (0.00126)	0.00343 (0.00120)	0.00330 (0.00092)	0.00358 (0.00103)	0.00358 (0.00103)	0.00358 (0.00103)
Kleibergen-Paap F-statistic	5.84	7.37	8.24	12.76	12.10	12.10	12.10
Controls (for all panels): Country FE Region-year FE US real per capita GDP × avg. prob. of any US food aid US democratic president × avg. prob. of any US food aid Oil price × avg. prob. of any US food aid	Yes Yes No No	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes	Yes Yes Yes Yes	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes
Monthly recipient temperature	No	No	Yes	Yes	Yes	Yes	Yes
Monthly weather × avg. prob. of any US food aid	No	No	Yes	Yes	Yes	Yes	Yes
Avg. US military aid × year FE	No	No	No	Yes	Yes	Yes	Yes
Avg. US economic aid (net of food aid) × year FE	No	No	No	Yes	Yes	Yes	Yes
Avg. recipient cereal imports × year FE	No	No	No	No	Yes	Yes	Yes
Avg. recipient cereal production × year FE	No	No	No	No	Yes	Yes	Yes
Observations (for all panels)	4,089	4,089	4,089	4,089	4,089	4,089	4,089

Answer:

TABLE 2—THE EFFECT OF FOOD AID ON CONFLICT: BASELINE SPECIFICATION WITH $P_{t-1} \times D_{ir}$ as the Instrument

	Parsimonious specifications				Baseline specification		
Dependent variable (panels A, B, and C):	Any conflict (1)	Any conflict (2)	Any conflict (3)	Any conflict (4)	Any conflict (5)	Intrastate (6)	Interstate (7)
Panel A. OLS estimates US wheat aid (1,000 MT)	-0.00006 (0.00018)	-0.00007 (0.00018)	-0.00005 (0.00017)	-0.00007 (0.00017)	-0.00011 (0.00017)	-0.00005 (0.00017)	-0.00011 (0.00004)
R^2	0.508	0.508	0.518	0.534	0.549	0.523	0.385
Panel B. Reduced form estimates (\times 1,0 Lag US wheat production (1,000 MT) \times avg. prob. of any US food aid	000)** 0.00829 (0.00257)	0.01039 (0.00263)	0.01070 (0.00262)	0.01133 (0.00318)	0.01071 (0.00320)	0.00909 (0.00322)	-0.00158 (0.00121)
R^2	0.511	0.512	0.521	0.536	0.551	0.525	0.382
Panel C. 2SLS estimates US wheat aid (1,000 MT)	0.00364 (0.00174)	0.00303 (0.00125)	0.00312 (0.00117)	0.00343 (0.00106)	0.00299 (0.00096)	0.00254 (0.00088)	-0.00044 (0.00033)
Dependent variable (panel D):	US wheat aid (1,000 MT)						
Panel D. First-stage estimates Lag US wheat production (1,000 MT) \times avg. prob. of any US food aid	0.00227 (0.00094)	0.00343 (0.00126)	0.00343 (0.00120)	0.00330 (0.00092)	0.00358 (0.00103)	0.00358 (0.00103)	0.00358 (0.00103)
Kleibergen-Paap F-statistic	5.84	7.37	8.24	12.76	12.10	12.10	12.10
Controls (for all panels): Country FE Region-year FE US real per capita GDP × avg. prob. of any US food aid	Yes Yes No	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes
× avg. prob. of any US food aid Oil price × avg. prob. of any US food aid	No	Yes	Yes	Yes	Yes	Yes	Yes
Monthly recipient temperature and precipitation	No	No	Yes	Yes	Yes	Yes	Yes
Monthly weather × avg. prob. of any US food aid	No	No	Yes	Yes	Yes	Yes	Yes
Avg. US military aid × year FE Avg. US economic aid (net of food aid) × year FE	No No	No No	No No	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Avg. recipient cereal imports × year FE Avg. recipient cereal production	No	No	No	No	Yes	Yes	Yes
× year FE					100		
Observations (for all panels)	4,089	4,089	4,089	4,089	4,089	4,089	4,089

Answer:

• Interpretation: A 1,000 MT increase in US wheat aid increases the incidence of conflict by 0.30 percentage points, and it's statistically significant at the 1% level.

Now, let's go back to the exercise for this seminar

Todays' seminar discussion:

You are asked by a team at the World Food Programme to evaluate the effect of food aid on the health of children in targeted countries. You know from your friend at the World Health Organisation that you can measure the health of children aged 12-18 months using a measuring of stunting, i.e. standardised body length. You run a regression of average stunting on food aid across recipient countries. You find a negative relationship, suggesting that more food aid is associated with poorer children health.

- How do you explain this result?
- What does it suggest in terms of policy implications?

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Answer:

It may be that:

Food aid harm the poorest households by affecting prices and crowding out domestic production US Food Aid and Civil Conflict, page 1657

• Food aid \rightarrow Increases price volatility and reduces prices \rightarrow reduces households income \rightarrow Families can invest less in their childrens' health

As we have seen, food aid may spur and extend existing internal civil conflicts

• Food aid \rightarrow Generates a source of funds for small-scale rebel groups \rightarrow Incites violence \rightarrow Increases food insecurity \rightarrow leads to malnutrition \rightarrow lowers health outcomes for children

US food aid crowds out aid from other countries US Food Aid and Civil Conflict, page 1655

 Food aid → crowds out other types of aid → other donor countries or multilateral agencies may reduce their aid provision → for example, deworming interventions → lowers health outcomes for children

But, what about others factors?

How do you explain this result?

Answer:

- First, there are other factors that determine Children's health:
 - Compromised household sanitation and hygiene
 - Access to maternal health services
 - Optimal antenatal care
 - Household wealth
Evidence of direct factors

Answer:

Evidence on some interventions that look at more direct effects:

- Families' overall health. Adult Antiretroviral Therapy and Child Health
- Even birth order and son preferences may have an effect. Why Are Indian Children So Short? The Role of Birth Order and Son Preference
- Increasing participation and oversight of community-led maternal and child health Community-Led Transparency and Accountability for Maternal and Child Health in Indonesia and Tanzania
- Improving health care services Training Informal Healthcare Providers to Improve the Quality of Care in India
- Perhaps is the lack of introducing "the right" financial incentives Should Cash Transfer Be Conditional?

What does it suggest in terms of policy implications?

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Answer:

- It's important to identify potential unintended consequences of well-intended policies
- It's important to identify potential **mediators** and **moderators** and try to measure them once we implement a policy
- A **mediator** is a variable by which the intervention can produce changes on the outcome of interest
- A **moderator** is a variable that affects the strength of the relation between the intervention and the outcome of interest
- Large-scale policies may suggest that a particular policy may not be effective, but if we measure it at lower-levels, we may find significant/positive effects.

What does it suggest in terms of policy implications?

Answer:



Questions?

Thanks!

felipe.torres@kcl.ac.uk

Office hours: Friday between 14:00 - 16:00

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