



# **DETERMINANTS OF JAPAN'S ODA ALLOCATION**

**TEMPORAL TREND IN EFFECT OF RECIPIENTS NEEDS AND  
DONORS INTERESTS**

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# BACKGROUND

- Hearing about an activity in Cameroon (Recipient)
  - What would be the ideal aid?
- Looking at ODA from diplomatic perspective (Donor)
  - How responsible is ODA for “national interest”?
- 2014 – 60 year anniversary of Japan’s ODA




# ABOUT JAPAN'S ODA

- 1954: First year – Colombo Plan
- 1957: Technical cooperation started
- 1958: Loans started
- 1969: Grant aid started
- 1992: ODA Charter created
- 2003: ODA Charter revised
- 2014: ODA Charter revised, changed name to Development Cooperation Charter



# LITERATURE – 1 INDEPENDENT VARIABLES

## RECIPIENTS' NEEDS / DONOR'S INTERESTS

- RN: GDP per capita, saving rates, growth rates, inflation rates, foreign debts, average life expectancy, infant mortality, trade balance, Human Development Index (HDI), status of good governance
  - DI: net export, exports, imports, trade amount, FDI, former colony, UN friendship, religion, and area dummy such as East Asian dummy
- 
- |                   |                            |
|-------------------|----------------------------|
| ○ Population      | positive                   |
| ○ GDP per capita  | negative                   |
| ○ Trade (Exports) | positive                   |
| ○ East Asia Dummy | positive / not significant |
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# LITERATURE – 2 DEPENDENT VARIABLES

## 3 TYPES OF JAPANESE ODA


### Grant Aid

- Formerly done by MOFA → affected by diplomatic policy ?
- Shift: Asia to Africa

### Technical Cooperation

- Decided on-site by consulting
- Ratio to Asia is stable → stable trend ?

### Loans

- Recipients must pay back → middle income countries
  - 80% : East / South Asia
- 

## RESEARCH QUESTIONS

1. Which matters more, Recipients Needs (RN) or Donor's Interests (DI) in determining ODA amount?
2. **Has the tendency changed through decades?**

## MODEL

$$\text{Aid Amount} = \alpha + \beta_1 * \text{RN} + \beta_2 * \text{DI}$$

**AA:** Grant Aid or Technical Cooperation

**RN:** GDP per capita, Governance

**DI:** NEX, Duration, EA Dummy

**Other:** Decades Dummy (70s, 80s, 90s, 00s)



# RESULTS 1-1

## LGA STANDARD MODEL

$$\text{LGA} = 2.600 - .642 * \text{LGDP} + .007 * \text{FHI} + .121 * \text{LNEX} + .070 * \text{DURGA}$$

(0.00) (0.00) (0.80) (0.00) (0.00)

$$+ .306 * D_{ea} - 1.052 * D_{70} - .076 * D_{80} + .310 * D_{90} - .209 * D_{00}$$

(0.35) (0.00) (0.71) (0.04) (0.04) (p-value)

Variable	LGDP	FHI	LNEX	DURGA	EA
70s	-0.3153596	0.0820689	0.2640698	0.2070554	1.8518749
80s	-0.9324760	-0.0317251	0.1458969	0.1931814	0.6256713
90s	-0.5828206	-0.0396237	0.1651971	0.0914053	0.2204066
00s	-0.5683507	0.0306253	0.1093608	0.0575091	-0.2920947
10s	-0.9013073	0.1326179	0.0494986	0.0509765	0.0321949





# RESULTS 1-2

## LTC STANDARD MODEL

$$\begin{aligned}
 \text{LTC} = & - .089 - .270 \cdot \text{LGDP} - .139 \cdot \text{FHI} + .075 \cdot \text{LNEX} + .067 \cdot \text{DURTC} + 1.761 \cdot \text{D}_{\text{EA}} \\
 & (0.83) \quad (0.00) \quad (0.00) \quad (0.00) \quad (0.00) \quad (0.00) \\
 & - .475 \cdot \text{D}_{70} + .0580 \cdot \text{D}_{80} + .606 \cdot \text{D}_{90} + .177 \cdot \text{D}_{00} \\
 & (0.02) \quad (0.71) \quad (0.00) \quad (0.01) \quad (p\text{-value})
 \end{aligned}$$

Variable	LGDP	FHI	LNEX	DURTC	EA
70s	-0.0868281	-0.1152554	0.2112757	0.1759999	2.3976537
80s	-0.0530305	-0.1494192	0.2298245	0.1372607	2.2299787
90s	-0.0031974	-0.2387077	0.1768041	0.0750825	2.0163657
00s	-0.2732198	-0.1031536	0.0013370	0.0453589	1.3457417
10s	-0.6762228	0.0601963	-0.0937670	0.0427200	0.1689507



# RESULTS 2-1

## LGA MODEL WITH WGI

$$\begin{aligned}
 \text{LGA} = & 3.483 - .731 \cdot \text{LGDP} + .029 \cdot \text{WGI} + .120 \cdot \text{LNEX} + .067 \cdot \text{DURGA} + .627 \cdot \text{D}_{90} \\
 & (0.00) \quad (0.00) \qquad \quad (0.85) \qquad \quad (0.00) \qquad \quad (0.00) \qquad \quad (0.14) \\
 & + .219 \cdot \text{D}_{90} - .284 \cdot \text{D}_{00} \\
 & (0.26) \qquad \quad (0.01) \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \quad (\text{p-value})
 \end{aligned}$$

Variable	LGDP	WGI	LNEX	DURGA	EA
90s	-0.7581962	0.1393182	0.0885862	0.0813711	0.6725866
00s	-0.6396963	3.1764173	0.1437021	0.0683832	0.5041165
10s	-0.9869360	-0.3020297	0.0787784	0.0610157	0.9801444



# RESULTS 2-2

## LTC MODEL WITH WGI

$$\begin{aligned}
 \text{LTC} = & 2.95 - .563 \cdot \text{LGDP} + .781 \cdot \text{WGI} + .085 \cdot \text{LNEX} + .034 \cdot \text{DURTC} + 1.234 \cdot \text{D}_{90} \\
 & (0.00) \quad (0.00) \qquad (0.00) \qquad (0.00) \qquad (0.00) \qquad (0.40) \\
 & - .113 \cdot \text{D}_{90} - .213 \cdot \text{D}_{00} \\
 & (0.00) \qquad (0.00) \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \text{(p-value)}
 \end{aligned}$$

Variable	LGDP	WGI	LNEX	DURTC	EA
90s	-0.2663248	1.4142493	0.2382193	0.0506762	1.9618892
00s	-0.5361026	0.9316722	0.0916127	0.0347082	1.2403052
10s	-0.9598859	0.2982663	-0.0113426	0.0308275	0.2213082



# RESULTS 3-1

## LGA MODEL WITHOUT GOVERNANCE INDEX

$$\text{LGA} = 2.57 - .643 \cdot \text{LGDP} + .125 \cdot \text{LNEX} + .069 \cdot \text{DURGA} + .302 \cdot \text{D}_{\text{ea}}$$

(0.00) (0.00) (0.00) (0.00) (0.36)

$$- 1.066 \cdot \text{D}_{70} - .115 \cdot \text{D}_{80} + .305 \cdot \text{D}_{90} - .217 \cdot \text{D}_{00}$$

(0.00) (0.57) (0.04) (0.03) (p-value)

Variable	LGDP	LNEX	DURGA	EA
70s	-0.3145223	0.2640269	0.2081073	1.8351969
80s	-0.9289926	0.1568407	0.1962760	0.6697592
90s	-0.5753982	0.1678159	0.0898900	0.1811125
00s	-0.5647626	0.1130221	0.0566427	-0.3279302
10s	-0.8949403	0.0466640	0.0490650	-0.0151661



# RESULTS 3-2

## LTC MODEL WITHOUT GOVERNANCE INDEX

$$\text{LTC} = - .921 - .231*\text{LGDP} + .074*\text{LNEX} + .067*\text{DURTC} + 1.634*\text{D}_{\text{EA}}$$

(0.00) (0.00) (0.00) (0.00) (0.00)

$$- .505*\text{D}_{70} + .009*\text{D}_{80} + .615*\text{D}_{90} + .194*\text{D}_{00}$$

(0.01) (0.95) (0.00) (0.02) (p-value)

Variable	LGDP	LNEX	DURTC	EA
70s	-0.0202770	0.2089912	0.1819900	2.2154457
80s	0.0025292	0.2226161	0.1398535	2.1312367
90s	0.0327116	0.1682090	0.0735583	1.8804117
00s	-0.2475473	-0.0065499	0.0438503	1.1918627
10s	-0.6504754	-0.1034912	0.0411986	-0.0090833



# RESULTS 4-1

## LGA MODEL WITHOUT EA DUMMY

$$\text{LGA} = 2.516 - .642 \cdot \text{LGDP} + .008 \cdot \text{FHI} + .126 \cdot \text{LNEX} + .070 \cdot \text{DURGA}$$

(0.00) (0.00) (0.78) (0.00) (0.00)

$$- 1.029 \cdot \text{D}_{70} - .057 \cdot \text{D}_{80} + .321 \cdot \text{D}_{90} - .203 \cdot \text{D}_{00}$$

(0.00) (0.78) (0.03) (0.04) (p-value)

Variable	LGDP	FHI	LNEX	DURGA
70s	-0.3064727	0.0821717	0.2706219	0.2084550
80s	-0.9234823	-0.0306052	0.1516120	0.1937260
90s	-0.5800742	-0.0382882	0.1692109	0.0917430
00s	-0.5702587	0.0320279	0.1119987	0.0577860
10s	-0.9002735	0.1338739	0.0524509	0.0513116



# RESULTS 4-2

## LTC MODEL WITHOUT EA DUMMY

$$\text{LTC} = - .134 - .271 \cdot \text{LGDP} - .136 \cdot \text{FHI} + .083 \cdot \text{LNEX} + .067 \cdot \text{DURTC}$$

(0.00) (0.00) (0.00) (0.00) (0.00)

$$- .437 \cdot \text{D}_{70} + .091 \cdot \text{D}_{80} + .628 \cdot \text{D}_{90} + .189 \cdot \text{D}_{00}$$

(0.03) (0.56) (0.00) (0.01) (p-value)

Variable	LGDP	FHI	LNEX	DURTC
70s	-0.0850118	-0.1138204	0.2207999	0.1765310
80s	-0.0512352	-0.1464531	0.2393368	0.1380380
90s	-0.0012980	-0.2353136	0.1855005	0.0759732
00s	-0.2744576	-0.0990597	0.0083120	0.0460277
10s	-0.6752987	0.0634514	-0.0862463	0.0437269



# RESULTS 5-1

## LGA MODEL W/O GOVERNANCE INDEX, EA DUMMY

$$LGA = 2.500 - .644*LGDP + .130*LNEX + .070*DURGA$$

(0.00) (0.00) (0.00) (0.00)

$$- 1.044*D_{70} - .096*D_{80} + .316*D_{90} - .211*D_{00}$$

(0.00) (0.63) (0.03) (0.03) (p-value)

Variable	LGDP	LNEX	DURGA
70s	-0.3068929	0.2702467	0.2095273
80s	-0.9220271	0.1618304	0.1967838
90s	-0.5734360	0.1716525	0.0902229
00s	-0.5671283	0.1192865	0.0569148
10s	-0.8943935	0.0495715	0.0493917





# RESULTS 5-2

## LGA MODEL W/O GOVERNANCE INDEX, EA DUMMY

$$LTC = -.944 - .234*LGDP + .082*LNEX + .068*DURTC$$

(0.02) (0.00) (0.00) (0.00)

$$- .465*D_{70} + .044*D_{80} + .637*D_{90} + .205*D_{00}$$

(0.18) (0.78) (0.00) (0.03) (p-value)

Variable	LGDP	LNEX	DTC
70s	-0.0215523	0.2174068	0.1824845
80s	0.0012130	0.2308557	0.1406375
90s	0.0327778	0.1763465	0.0745255
00s	-0.2506181	-0.0000498	0.0446670
10s	-0.6513416	-0.0963566	0.0423207



# CONCLUSION

- DI diminishes
  - LNEX (Economic): sometimes with sign change
  - Duration (Political): clear trend
  - EA dummy (Security): sometimes not significant
- RN matters more...?
  - Does not show much trend
  - Maybe “relatively” more effect
- Keep focusing on RN!



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THANK YOU!

