Impact of Japan's ODA Loan on Asian Economic Developments

Ken-ichi KAWASAKI
RIETI/MoFA, Japan

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Summary

The fundamental aid philosophy of Japan is to support the self-help efforts of developing countries. In 1992, Japanese cabinet approved the Official Development Assistance (ODA) Charter, which comprehensively stated Japan's basic aid policies.
Japan has been the world's largest donor country during the last ten years (Chart 1), although Japan's ODA ratio over GDP remains lower than the UN target of 0.7 per cent (Chart 2). Several features of Japan's ODA include a) high percentage of loans and high share of bilateral basis (Table 1), b) higher untied share while lower grant share (Chart 3), c) high percentage of loans to Asia (Chart 4), and d) high weighting for economic infrastructures (Chart 5).
Japan's ODA will be provided in a selective manner improving its effectiveness, efficiency and transparency. Its allocation both by regions and sectors are reviewed.

Impact of Japan's ODA capital flows into seven Asian countries: China, Indonesia, Malaysia, the Philippines, Thailand, Viet Nam and India (Chart 7); were simulated by a modified version of the standard GTAP Model with Version 4 database aggregating to 16 regions and 6 sectors (Table 2).
Real GDP is estimated to expand by around 4 to 28 per cent and prices will decline by around 2 to 12 per cent in recipient countries (Chart 8). This would result in improvements of international competitiveness, therefore external balances, in those countries (Chart 9). In addition, industrial structures would be more or less affected by reallocation of production endowments (Chart 10).
Income gains would also be shared by outside recipient countries through trade and income linkages under the assumption of dynamic capital accumulation (Chart 11). Those benefits could vary among the economies according to the destination of Japan's ODA (Chart 12).
Multipliers of capital increases in seven Asian countries are shown in Annex Tables.

Japan's Aid Philosophy

Support for Self-help Efforts

Economic development is only possible when the government and citizens of a developing country make unremitting efforts to improve their current conditions.

An aid donor should not impose its plans on aid recipients but rather should do its best to search out and discover nascent independent projects in a developing country and then lend a deft and experienced helping hand to ensure that small seeds can grow to fruition.

ODA Charter: Principles

Balancing development with environmental concerns

Avoiding the use of aid for military purposes

Paying attention to the military expenditures of aid recipients, their development and production of missiles and weapons of mass destruction, and their import and export of arms

Paying attention to the promotion of democratization, the introduction of a market economy, and the securing of basic human rights and freedoms

Chart 1: Trends in Major Countries' ODA

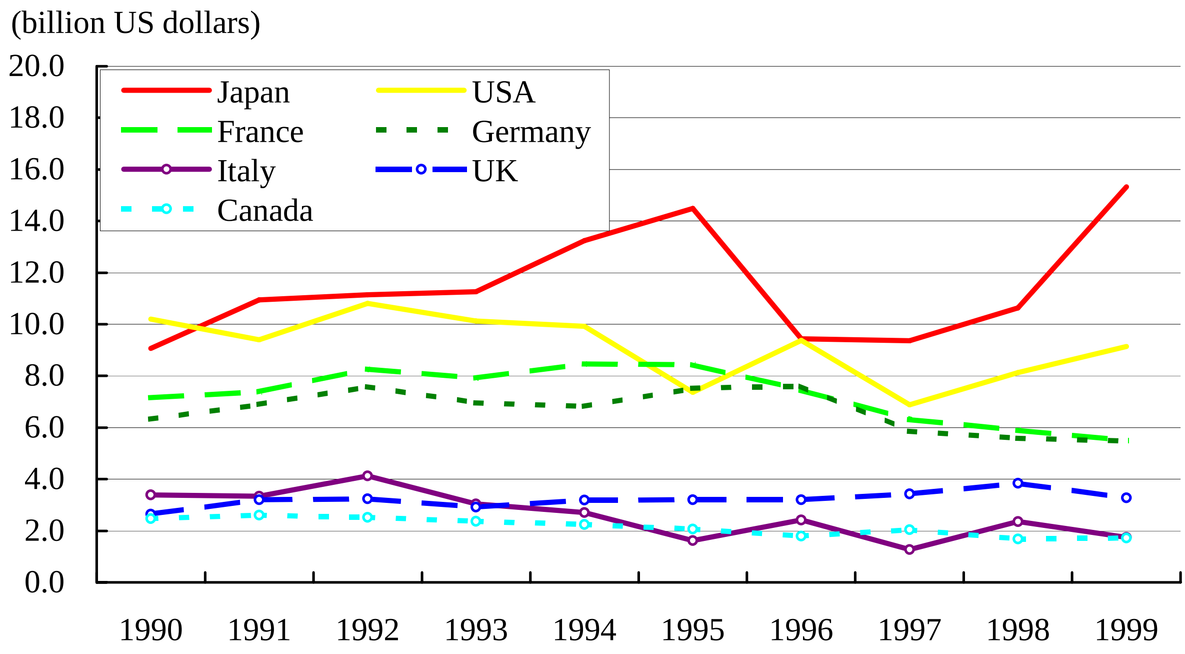


Chart 2: ODA/GNP Ratios in DAC (1998/99)

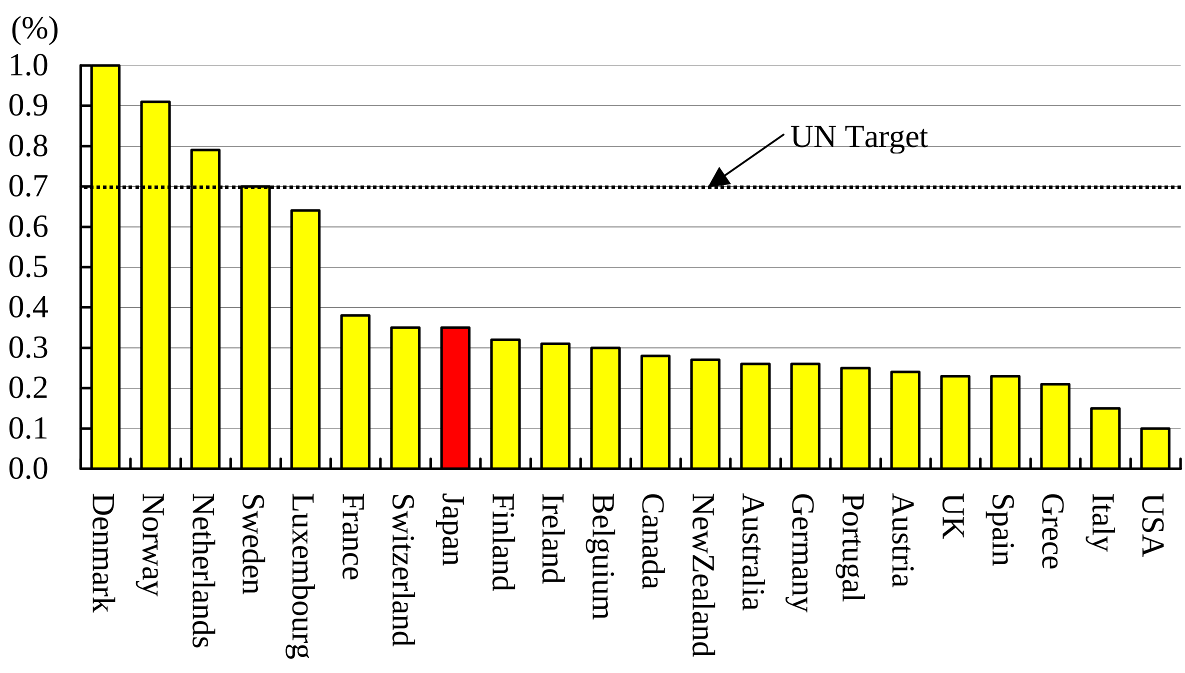


Table 1: Japan's ODA in 1999

(Net disbursement basis)

	Billion US $	Billion Yen	Share (%)
Bilateral ODA	10.498	1,195.7	68.2
Grants	5.539	630.9	36.0
Grant Aid	2.340	266.5	15.2
Technical Cooperation	3.199	364.4	20.8
Government Loans	4.959	564.8	32.2
Disbursement	7.987	909.7	51.9
Repayment	3.029	345.0	19.7
Contribution and Subscriptions to International Organization	4.888	556.7	31.8
Total	15.385	1,752.4	100.0

Chart 3: Quality of ODA (1997/98)

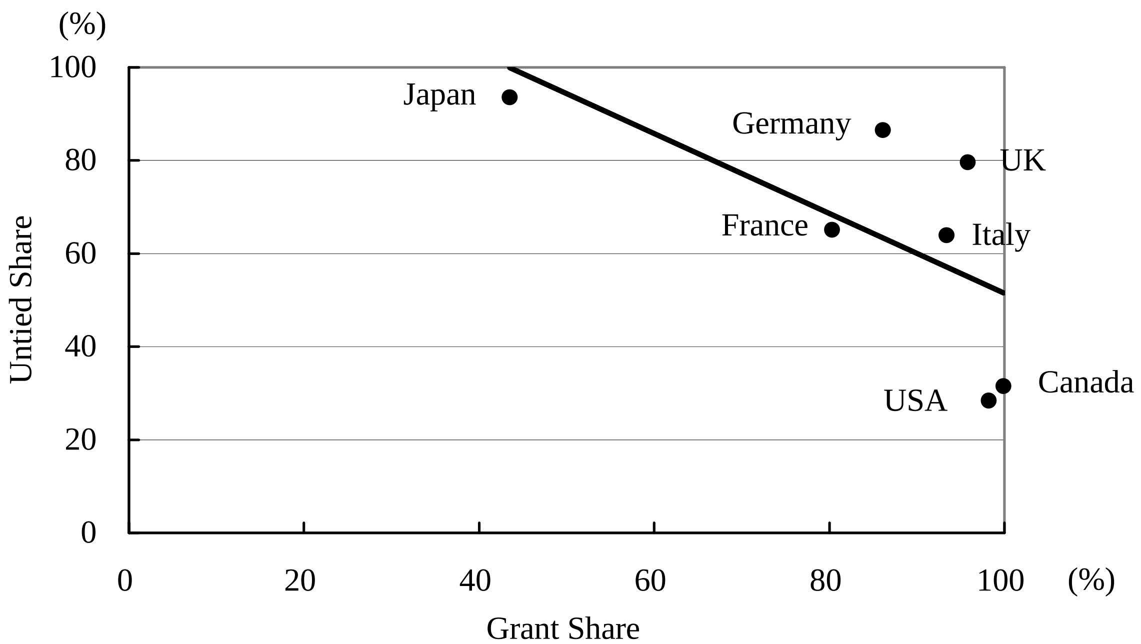


Chart 4: Geographical Distribution (1999)

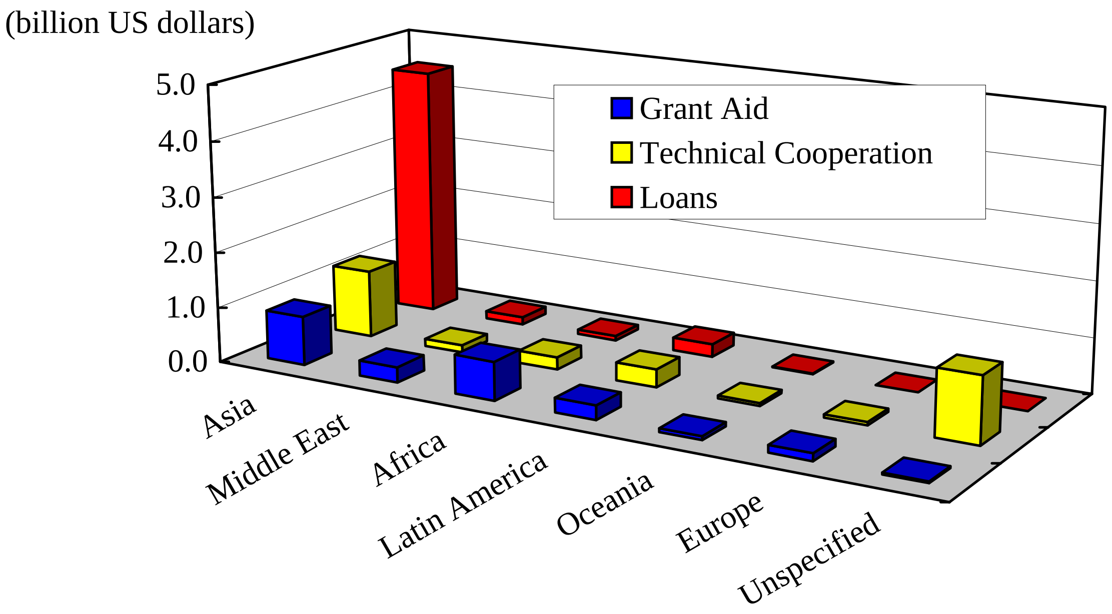


Chart 5: Sectoral Distribution (1999)

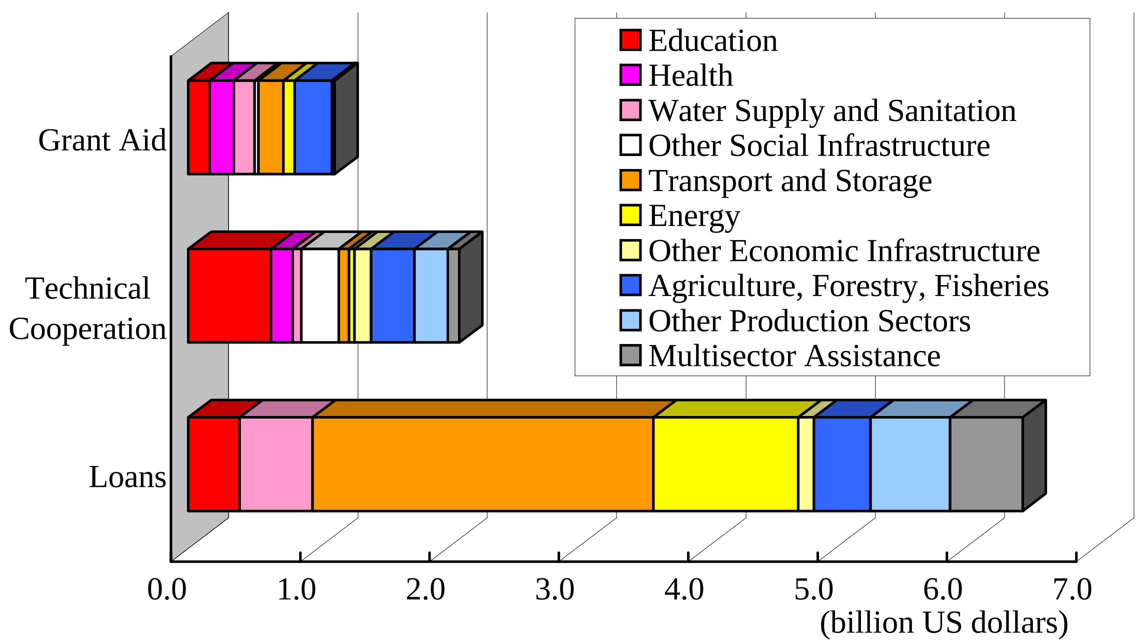
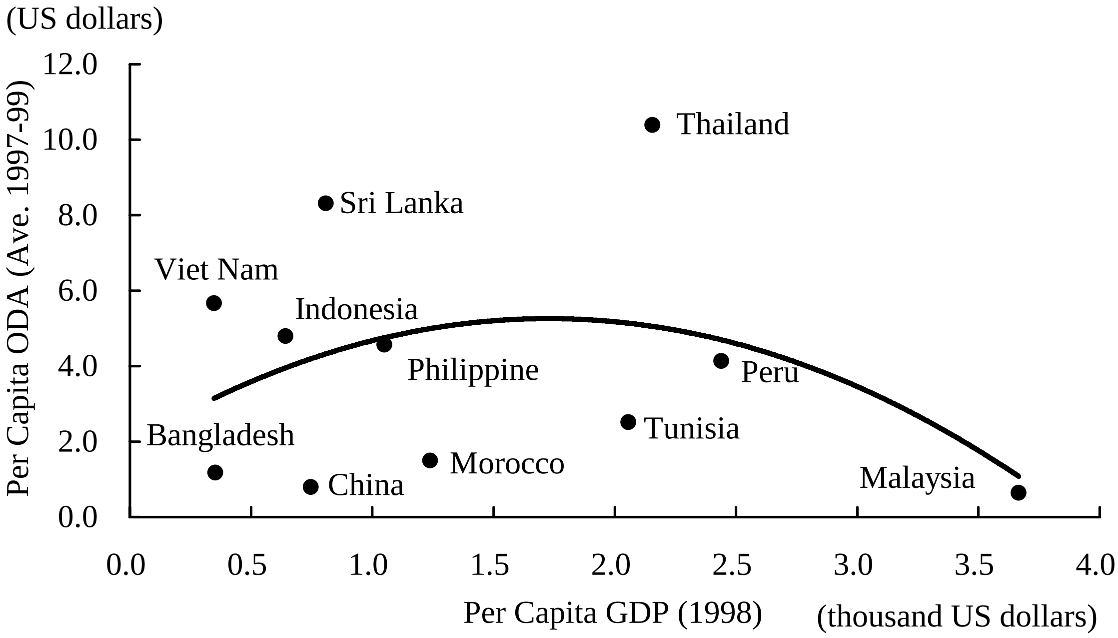


Chart 6: Relative Level of ODA



Review of Japan's ODA Loan

Significance as a Recipient Country
- Political and Economic Relations to Japan
- Conformity with the Principles of the ODA Charter
- Economic Performance
- Appropriate Development Strategy and Plan
- Ability of Implementing Projects

Appropriate Amount of ODA Loan
- Impact on Development Strategy and Plan
- Past Records
- Debt Service Ratio
- Comparison with the Other Recipient Countries
- The Share of Japan's ODA among Donors

Macroeconomic Assumptions in Simulation

Constant Return to Scale, Perfect Competition

Exogenous Labour Supply by the Economies

Endogenous Capital Accumulation (in the rest of seven Asian economies)
under the fixed saving ratio
without international capital flows which equalize rate of return on capitals

Endogenous Trade Balance

Table 2: Regional and Sectoral Aggregation

Countries and Regions		Industries/Commodities	
Japan	South Asia	AGR:	Agriculture, Forestry & Fishery
China	Asian NIEs	MFG:	Mining & Manufacturing
Indonesia	Oceania	CNS:	Construction
Malaysia	USA	T_T:	Trade & Transport
the Philippines	Canada	OSP:	Other Private Services
Thailand	Latin America	PUB:	Energy & Public Services
Viet Nam	Western Europe		
India	Rest of World		

Chart 7: Cumulated ODA Loan by Sectors

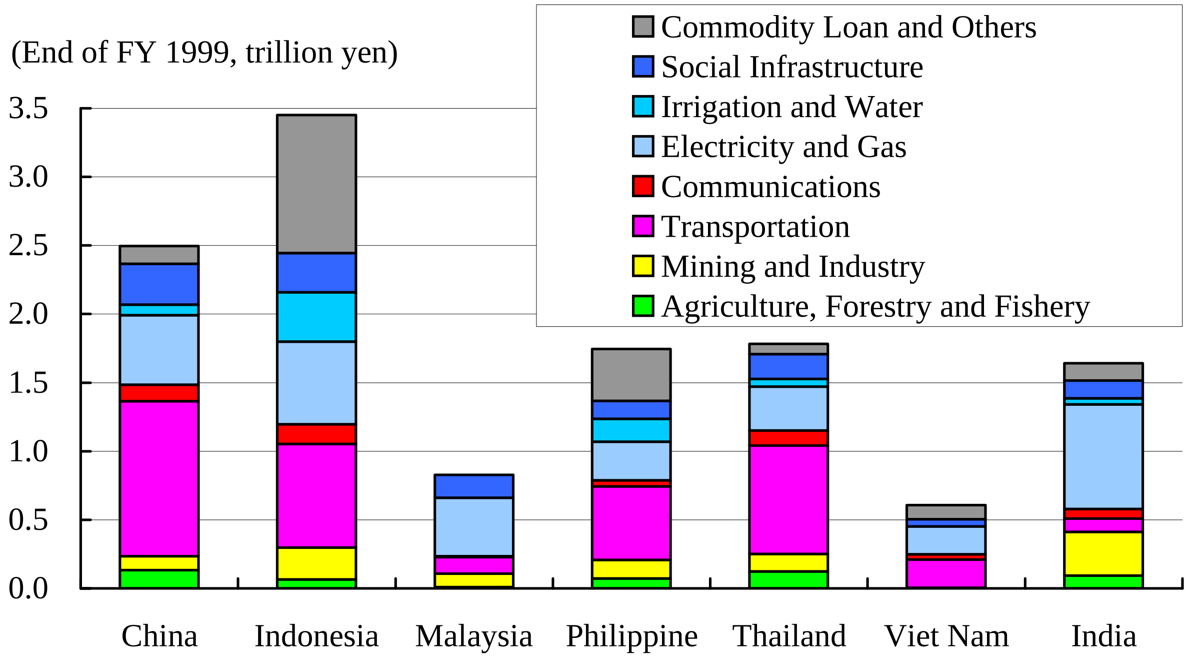


Table 3: ODA Capital Flows to Asian Countries

(percentage of sectoral capitals)

	AGR	MFG	T_T	PUB	Total
China	6.9	0.8	20.1	36.9	8.9
Indonesia	7.8	6.3	44.4	153.6	25.9
Malaysia	2.8	5.2	13.6	286.7	20.6
the Philippines	22.4	19.4	68.0	307.8	48.5
Thailand	26.9	2.5	37.8	150.2	17.6
Viet Nam	0.0	4.2	263.9	471.6	143.9
India	4.8	10.5	13.0	44.9	15.3

Chart 8: Impact on Output and Prices

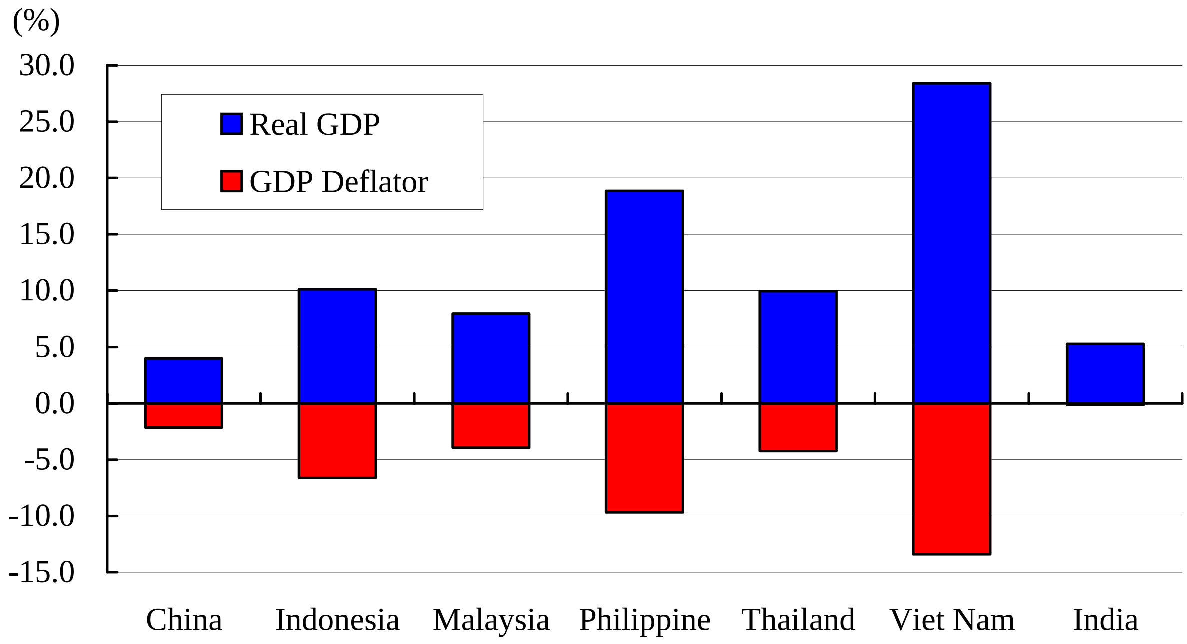


Chart 9: Impact on Trade

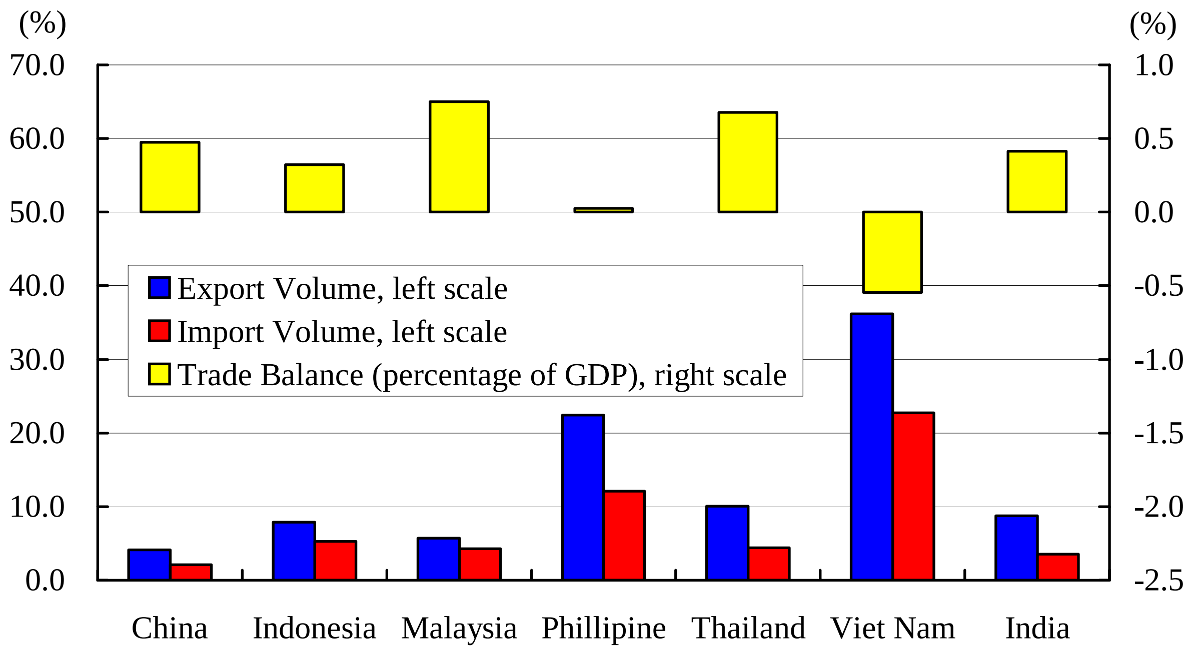


Chart 10: Impact on Industrial Structures

(percentage shares in nominal GDP, inside: without ODA; outside: with ODA)

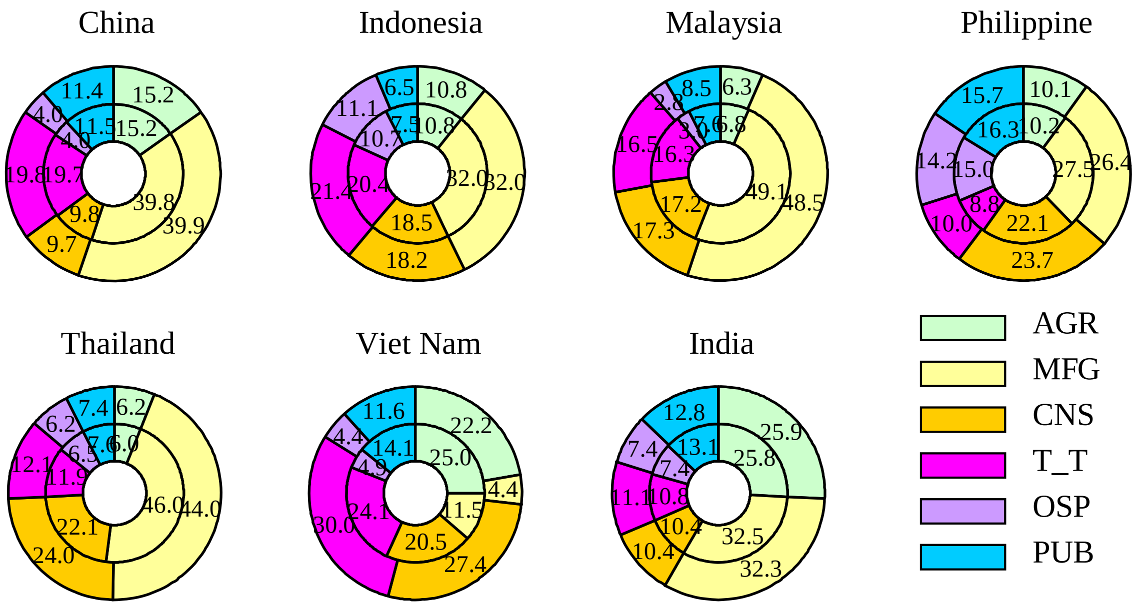


Chart 11: Economic Gains by Regions

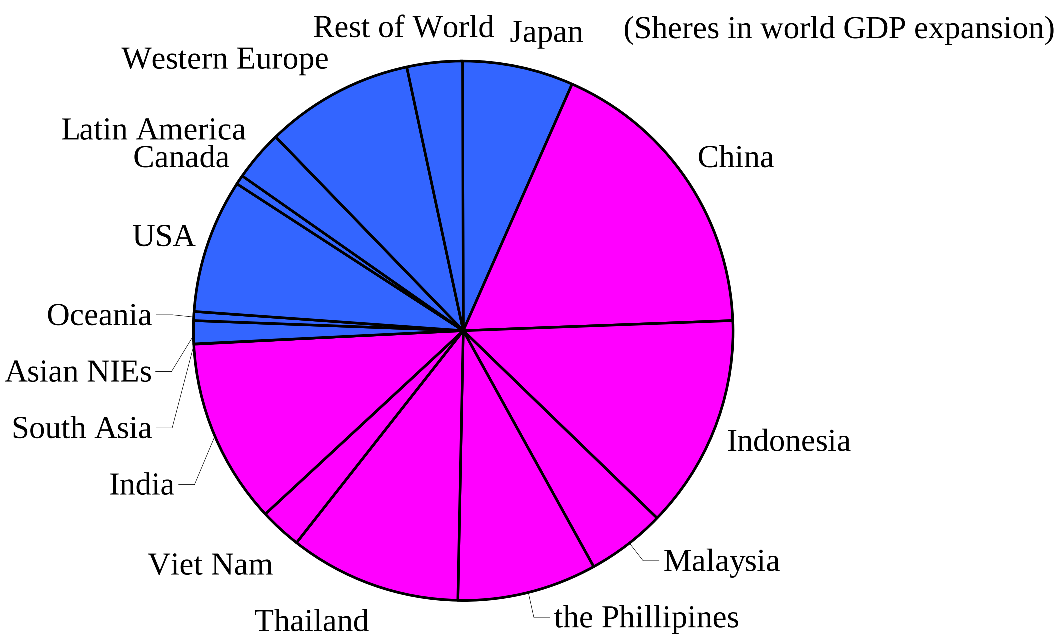
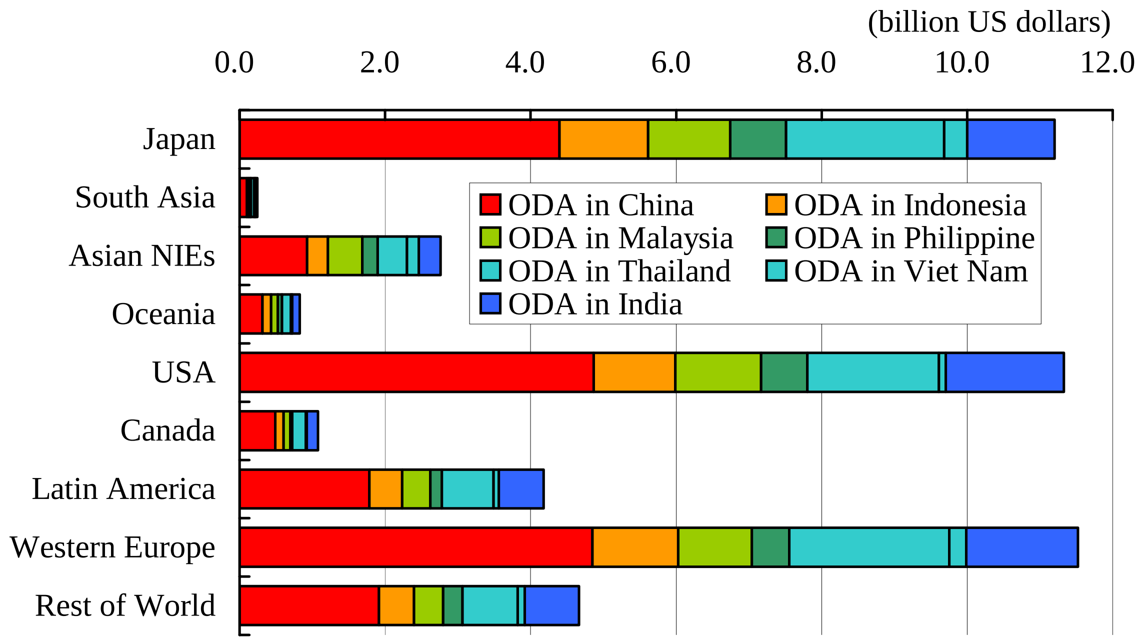


Chart 12: Welfare Gains outside Recipients



Annex: Impact of Capital Increases by 1 bil. US Dollars

Impact of capital increases in seven Asian countries (China, Indonesia, the Philippines, Thailand, Malaysia, Viet Nam and India) on regional real GDPs is shown in Annex Tables.

Simulations were carried out shocking a variable qo (“capital”, REG) by a certain percentage, which corresponds to 1 billion US dollars in the each economies, in an exogenous manner.

Those increases in capitals were fully allocated to specific sectors (“AGR”, “MFG”, “CNS”, “T_T”, “OSP”, “PUB”) shocking a variable qfe (“capital”, PROD_COMM, REG) respectively swapping with a variable tf. While, those capital allocation were endogenously solved in cases titled “Unspecified”.

Annex Table 1: Impact of Capital Increases in China

(percentage changes of real GDP)

	AGR	MFG	CNS	T_T	OSP	PUB	Unspecified
Japan	-0.0056	0.0103	0.0068	0.0177	0.0048	0.0018	0.0078
China	0.1478	0.1774	0.1734	0.1670	0.1700	0.1709	0.1753
Indonesia	-0.0064	0.0126	0.0082	0.0217	0.0058	0.0022	0.0096
Malaysia	-0.0073	0.0145	0.0100	0.0258	0.0073	0.0026	0.0112
the Phillipines	-0.0060	0.0125	0.0085	0.0221	0.0064	0.0022	0.0097
Thailand	-0.0106	0.0175	0.0110	0.0294	0.0075	0.0029	0.0130
Viet Nam	-0.0039	0.0105	0.0062	0.0168	0.0038	0.0020	0.0077
India	-0.0049	0.0101	0.0067	0.0174	0.0046	0.0018	0.0077
South Asia	-0.0040	0.0113	0.0073	0.0191	0.0046	0.0021	0.0085
Asian NIEs	-0.0068	0.0108	0.0080	0.0189	0.0053	0.0020	0.0085
Oceania	-0.0055	0.0104	0.0066	0.0175	0.0046	0.0019	0.0078
USA	-0.0049	0.0090	0.0058	0.0153	0.0041	0.0016	0.0068
Canada	-0.0047	0.0105	0.0068	0.0182	0.0046	0.0019	0.0079
Latin America	-0.0076	0.0140	0.0090	0.0238	0.0064	0.0025	0.0106
Western Europe	-0.0041	0.0082	0.0053	0.0140	0.0036	0.0015	0.0062
Rest of World	-0.0065	0.0124	0.0079	0.0209	0.0056	0.0022	0.0093
World	-0.0013	0.0140	0.0106	0.0205	0.0086	0.0060	0.0116

Annex Table 2: Impact of Capital Increases in Indonesia

(percentage changes of real GDP)

	AGR	MFG	CNS	T_T	OSP	PUB	Unspecified
Japan	-0.0002	0.0051	0.0037	0.0207	0.0007	-0.0014	0.0048
China	0.0021	0.0057	0.0045	0.0265	0.0007	-0.0020	0.0058
Indonesia	0.4286	0.4937	0.4965	0.4652	0.4882	0.4778	0.5011
Malaysia	0.0011	0.0076	0.0055	0.0312	0.0012	-0.0021	0.0073
the Phillipines	0.0025	0.0045	0.0044	0.0246	0.0009	-0.0018	0.0052
Thailand	-0.0012	0.0089	0.0055	0.0352	0.0004	-0.0028	0.0079
Viet Nam	0.0005	0.0033	0.0027	0.0158	0.0009	-0.0011	0.0034
India	0.0001	0.0052	0.0037	0.0206	0.0007	-0.0013	0.0049
South Asia	0.0057	0.0042	0.0036	0.0213	0.0004	-0.0016	0.0046
Asian NIEs	-0.0012	0.0056	0.0042	0.0224	0.0009	-0.0015	0.0053
Oceania	0.0000	0.0051	0.0035	0.0203	0.0007	-0.0014	0.0047
USA	-0.0003	0.0046	0.0031	0.0179	0.0005	-0.0012	0.0042
Canada	0.0009	0.0051	0.0036	0.0212	0.0005	-0.0015	0.0048
Latin America	-0.0003	0.0070	0.0048	0.0279	0.0009	-0.0019	0.0065
Western Europe	0.0002	0.0041	0.0028	0.0164	0.0005	-0.0011	0.0038
Rest of World	-0.0002	0.0063	0.0042	0.0246	0.0008	-0.0017	0.0058
World	0.0030	0.0084	0.0069	0.0229	0.0040	0.0020	0.0081

Annex Table 3: Impact of Capital Increases in Malaysia

(percentage changes of real GDP)

	AGR	MFG	CNS	T_T	OSP	PUB	Unspecified
Japan	0.0027	0.0108	0.0066	0.0131	0.0034	0.0018	0.0084
China	0.0066	0.0129	0.0083	0.0167	0.0039	0.0020	0.0104
Indonesia	0.0042	0.0134	0.0078	0.0161	0.0039	0.0022	0.0104
Malaysia	0.7755	1.5107	1.3180	1.0042	1.1530	1.0382	1.4044
the Phillipines	0.0058	0.0138	0.0087	0.0168	0.0050	0.0024	0.0111
Thailand	0.0058	0.0168	0.0102	0.0212	0.0049	0.0026	0.0132
Viet Nam	0.0026	0.0080	0.0046	0.0104	0.0033	0.0012	0.0063
India	0.0052	0.0115	0.0066	0.0133	0.0031	0.0018	0.0089
South Asia	0.0101	0.0112	0.0070	0.0138	0.0029	0.0015	0.0091
Asian NIEs	0.0012	0.0116	0.0081	0.0143	0.0043	0.0024	0.0093
Oceania	0.0042	0.0106	0.0061	0.0128	0.0031	0.0017	0.0082
USA	0.0032	0.0093	0.0054	0.0112	0.0027	0.0015	0.0072
Canada	0.0049	0.0109	0.0064	0.0133	0.0030	0.0017	0.0085
Latin America	0.0054	0.0145	0.0084	0.0176	0.0043	0.0024	0.0113
Western Europe	0.0035	0.0086	0.0050	0.0103	0.0024	0.0013	0.0067
Rest of World	0.0043	0.0131	0.0075	0.0154	0.0037	0.0019	0.0101
World	0.0062	0.0154	0.0105	0.0158	0.0069	0.0052	0.0127

Annex Table 4: Impact of Capital Increases in the Philippines

(percentage changes of real GDP)

	AGR	MFG	CNS	T_T	OSP	PUB	Unspecified
Japan	0.0002	-0.0011	0.0009	0.0113	-0.0004	0.0009	0.0006
China	0.0009	-0.0021	0.0011	0.0144	-0.0005	0.0010	0.0006
Indonesia	0.0006	-0.0009	0.0010	0.0138	-0.0006	0.0010	0.0008
Malaysia	-0.0010	-0.0028	0.0019	0.0168	0.0007	0.0017	0.0012
the Phillipines	1.1235	1.8489	1.5726	1.2461	1.5089	1.3877	1.6735
Thailand	0.0007	-0.0014	0.0009	0.0184	-0.0014	0.0011	0.0007
Viet Nam	-0.0031	-0.0069	0.0004	0.0078	0.0022	0.0000	-0.0005
India	0.0005	-0.0010	0.0009	0.0110	-0.0004	0.0009	0.0006
South Asia	0.0005	-0.0018	0.0013	0.0112	-0.0004	0.0008	0.0006
Asian NIEs	-0.0001	-0.0013	0.0015	0.0122	-0.0003	0.0011	0.0009
Oceania	0.0006	-0.0008	0.0006	0.0108	-0.0006	0.0007	0.0005
USA	0.0010	-0.0005	0.0005	0.0097	-0.0006	0.0007	0.0005
Canada	0.0014	-0.0009	0.0007	0.0114	-0.0009	0.0008	0.0005
Latin America	0.0007	-0.0012	0.0009	0.0150	-0.0006	0.0011	0.0008
Western Europe	0.0008	-0.0007	0.0005	0.0088	-0.0006	0.0006	0.0004
Rest of World	0.0007	-0.0010	0.0009	0.0130	-0.0005	0.0010	0.0007
World	0.0035	0.0038	0.0046	0.0137	0.0032	0.0042	0.0047

Annex Table 5: Impact of Capital Increases in Thailand

(percentage changes of real GDP)

	AGR	MFG	CNS	T_T	OSP	PUB	Unspecified
Japan	0.0018	0.0063	0.0040	0.0309	0.0024	0.0002	0.0057
China	0.0048	0.0073	0.0052	0.0396	0.0031	0.0001	0.0069
Indonesia	0.0025	0.0075	0.0047	0.0375	0.0029	0.0001	0.0068
Malaysia	0.0027	0.0113	0.0062	0.0467	0.0040	0.0008	0.0098
the Phillipines	0.0029	0.0083	0.0052	0.0392	0.0036	0.0004	0.0075
Thailand	0.4595	0.6302	0.6538	0.4765	0.6840	0.5779	0.6444
Viet Nam	0.0045	0.0069	0.0019	0.0270	0.0015	0.0002	0.0054
India	0.0038	0.0059	0.0039	0.0302	0.0023	0.0002	0.0055
South Asia	0.0045	0.0074	0.0039	0.0324	0.0018	0.0002	0.0064
Asian NIEs	0.0011	0.0065	0.0050	0.0333	0.0030	0.0002	0.0062
Oceania	0.0023	0.0061	0.0036	0.0300	0.0022	0.0001	0.0055
USA	0.0019	0.0054	0.0031	0.0263	0.0019	0.0001	0.0048
Canada	0.0033	0.0062	0.0038	0.0312	0.0021	0.0001	0.0056
Latin America	0.0029	0.0083	0.0050	0.0411	0.0031	0.0002	0.0075
Western Europe	0.0024	0.0049	0.0029	0.0242	0.0016	0.0001	0.0044
Rest of World	0.0023	0.0079	0.0043	0.0364	0.0025	0.0002	0.0069
World	0.0049	0.0096	0.0074	0.0317	0.0061	0.0035	0.0091

Annex Table 6: Impact of Capital Increses in Viet Nam

(percentage changes of real GDP)

	AGR	MFG	CNS	T_T	OSP	PUB	Unspecified
Japan	-0.0019	0.0056	0.0038	0.0122	-0.0007	0.0002	0.0041
China	0.0010	0.0029	0.0047	0.0143	-0.0022	-0.0011	0.0036
Indonesia	0.0043	0.0044	0.0042	0.0147	-0.0016	-0.0001	0.0043
Malaysia	-0.0031	0.0262	0.0039	0.0264	0.0024	0.0058	0.0128
the Phillipines	-0.0038	0.0161	0.0052	0.0194	0.0019	0.0034	0.0092
Thailand	-0.0019	0.0116	0.0067	0.0214	-0.0003	0.0016	0.0081
Viet Nam	6.5969	7.9635	8.8659	7.2424	7.7952	7.5062	8.5307
India	0.0002	0.0047	0.0038	0.0119	-0.0008	0.0001	0.0039
South Asia	-0.0022	0.0045	0.0050	0.0121	-0.0007	0.0000	0.0041
Asian NIEs	-0.0041	0.0065	0.0055	0.0134	0.0001	0.0006	0.0052
Oceania	-0.0003	0.0046	0.0034	0.0115	-0.0010	0.0000	0.0036
USA	-0.0015	0.0048	0.0029	0.0104	-0.0007	0.0001	0.0034
Canada	-0.0004	0.0058	0.0034	0.0125	-0.0009	0.0003	0.0041
Latin America	-0.0025	0.0074	0.0047	0.0161	-0.0011	0.0002	0.0053
Western Europe	-0.0006	0.0046	0.0026	0.0097	-0.0006	0.0002	0.0032
Rest of World	-0.0009	0.0062	0.0040	0.0141	-0.0011	0.0001	0.0046
World	0.0022	0.0095	0.0080	0.0153	0.0033	0.0041	0.0083

Annex Table 7: Impact of Capital Increses in India

(percentage changes of real GDP)

	AGR	MFG	CNS	T_T	OSP	PUB	Unspecified
Japan	-0.0053	0.0064	0.0032	0.0138	0.0004	0.0016	0.0037
China	-0.0056	0.0077	0.0040	0.0176	0.0004	0.0019	0.0046
Indonesia	-0.0062	0.0076	0.0038	0.0166	0.0005	0.0019	0.0045
Malaysia	-0.0091	0.0100	0.0050	0.0211	0.0008	0.0031	0.0059
the Phillipines	-0.0058	0.0083	0.0042	0.0178	0.0006	0.0019	0.0049
Thailand	-0.0089	0.0109	0.0053	0.0229	0.0007	0.0027	0.0063
Viet Nam	-0.0043	0.0050	0.0024	0.0110	0.0003	0.0014	0.0029
India	0.3061	0.3622	0.3491	0.3245	0.3383	0.3494	0.3561
South Asia	0.0007	0.0043	0.0027	0.0134	0.0000	0.0010	0.0031
Asian NIEs	-0.0058	0.0067	0.0036	0.0148	0.0005	0.0019	0.0040
Oceania	-0.0050	0.0063	0.0031	0.0134	0.0004	0.0015	0.0037
USA	-0.0045	0.0056	0.0027	0.0118	0.0004	0.0014	0.0032
Canada	-0.0050	0.0066	0.0032	0.0141	0.0004	0.0016	0.0038
Latin America	-0.0072	0.0086	0.0043	0.0184	0.0006	0.0022	0.0050
Western Europe	-0.0037	0.0050	0.0025	0.0109	0.0003	0.0012	0.0030
Rest of World	-0.0063	0.0078	0.0038	0.0162	0.0006	0.0019	0.0045
World	-0.0012	0.0102	0.0071	0.0167	0.0043	0.0056	0.0077