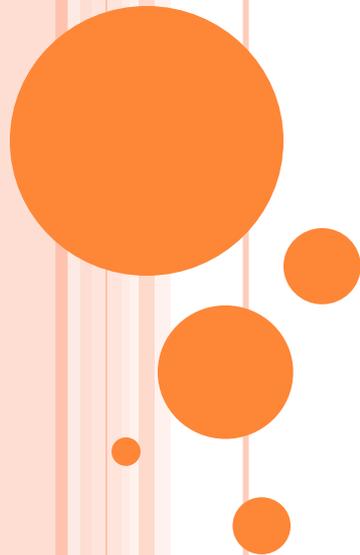


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BURDEN SHARING BEYOND THE KYOTO PROTOCOL

Jason and Yiyong



CONTENTS

- Background
- 3 extended scenarios
- Emission and Carbon Trade Results
- Welfare Results
- Wrap up

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BACKGROUND

○ Global Warming Alarm:

- We must cap global average temperature below 2 Celsius degrees above pre-industrial level.
- We must work it out together.
- Kyoto Protocol points the way ahead (to expire in 2012).

○ Problems Arise:

- How to share mitigation burden while maintaining equitable access to sustainable development?
- How to compensate losers in collective action?



ALTERNATIVE PLANS OF BURDEN SHARING

Country	Kyoto Protocol	More by DC	More by LDC	Equal Sharing
USA	-17	-22	-12	-9
EU27	-17	-22	-12	-9
EEFSU	9	9	9	-9
JPN	-30	-35	-25	-9
RoA1	-40	-45	-35	-9
EEx	0	5	-5	-9
CHN	0	5	-5	-9
IND	0	5	-5	-9
ROW	0	5	-5	-9
World	-8.6	-8.8	-8.5	-9.0

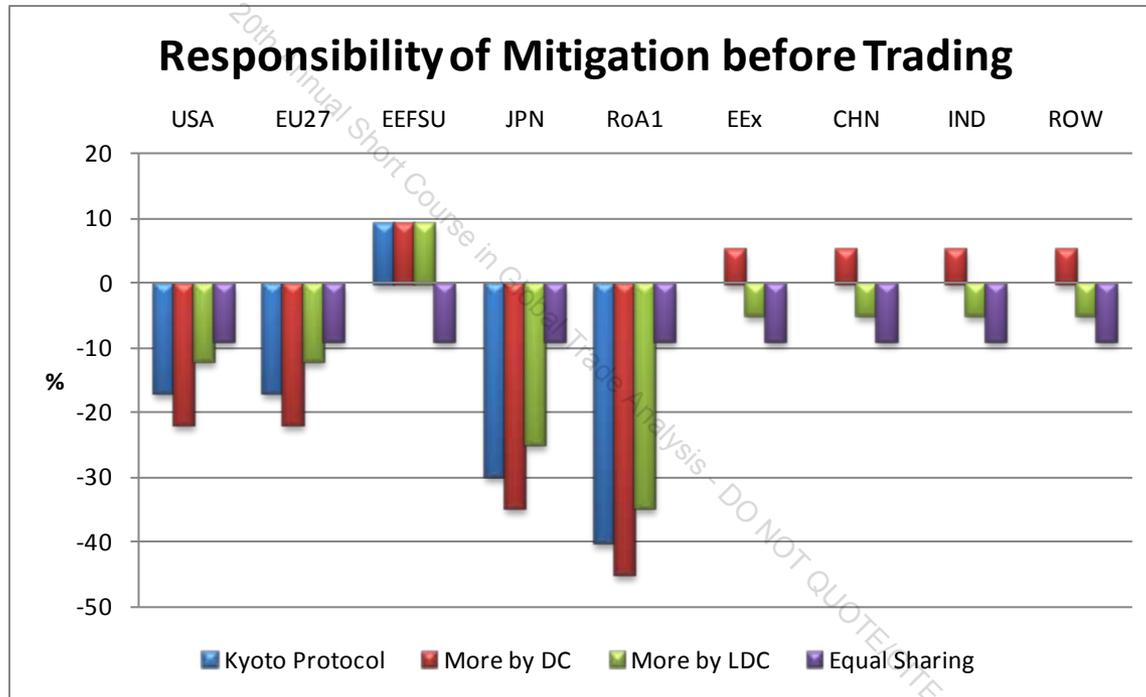


SCENARIO CALCULATIONS

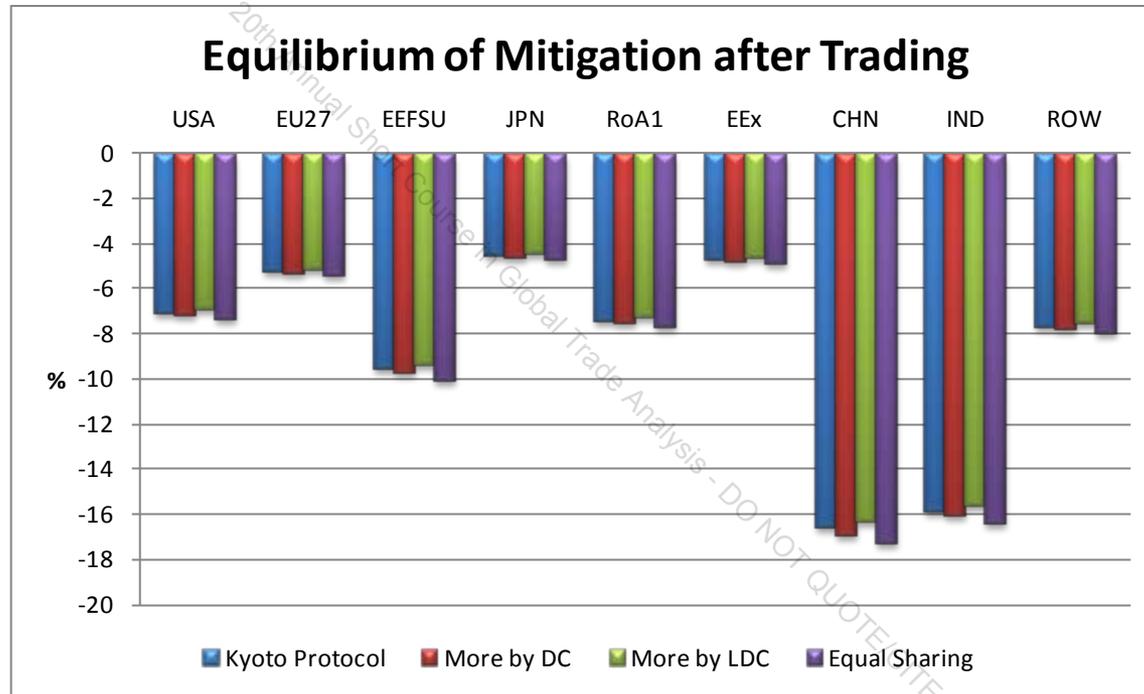
- In all scenarios, global emissions are capped at the initial Kyoto level
 - % Change reduction per region was converted into a global tons of carbon reduction
 - This was reallocated to the LDC in % change form
- Global permit trading in all scenarios



EMISSION AND CARBON TRADE RESULTS



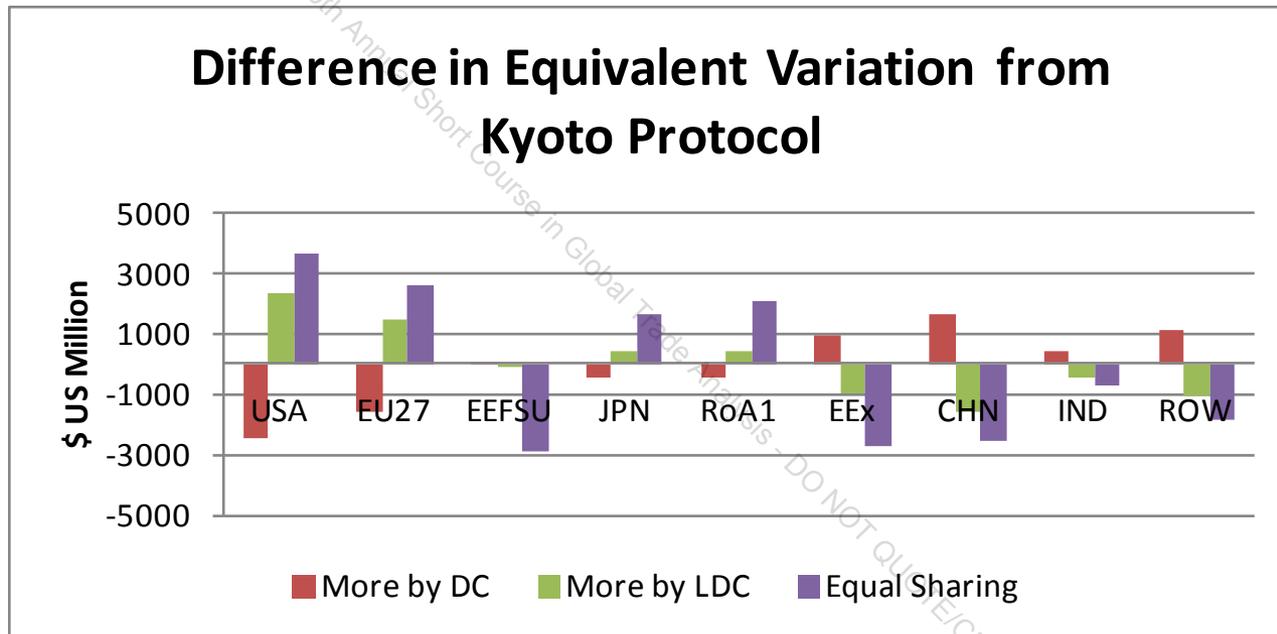
EMISSION AND CARBON TRADE RESULTS



	Kyoto Protocol	More by DC	More by LDC	Equal Sharing
\$ per ton of carbon	22.3	22.9	21.8	23.5



WELFARE RESULTS



HOW MUCH OF EV CAN BE ACCOUNTED FOR BY WEALTH TRANSFER

EV - WT (WT/EV)	More by DC	More by LDC	Equal Sharing
USA	-556 (77%)	536 (77%)	616 (83%)
EU27	-314 (80%)	301 (80%)	574 (78%)
EEFSU	45 (0%)	-43 (0%)	-122 (96%)
JPN	-73 (82%)	71 (82%)	182 (89%)
RoA1	-126 (72%)	124 (71%)	62 (97%)
EEx	-4 (100%)	12 (101%)	-873 (68%)
CHN	277 (83%)	-269 (83%)	35 (101%)
IND	119 (74%)	-114 (73%)	-57 (92%)
ROW	280 (74%)	-269 (74%)	-298 (83%)

WT =
Carbon balance
X Carbon Tax

In Millions of
US dollars



SUMMARY

- Initial allocation of emission quotas have little effect on equilibrium location of emissions mitigation
- Initial allocation of emission quotas have significant impact on welfare.



Thank you for your attention

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WELFARE DEC.: MORE BY DC

WELFARE	1 co2trd	2 alloc_A1	6 tot_E1	7 IS_F1	Total
1 USA	-5566	-4445	2267	185	-7559
2 EU27	-4096	-1279	2966	0	-2409
3 EEFSU	2763	-940	-1120	69	772
4 JPN	-2066	-868	1505	-138	-1567
5 RoA1	-2428	-1146	-1657	18	-5212
6 EEx	1958	-2209	-8034	53	-8232
7 CHN	5968	-2037	1131	-100	4962
8 IND	1383	-699	671	50	1404
9 ROW	2071	-1462	2267	-137	2738
Total	-14	-15086	-4	0	-15103



WELFARE DEC.: MORE BY LDC

WELFARE	1 co2trd	2 alloc_A1	6 tot_E1	7 IS_F1	Total
1 USA	-1837	-4004	2719	336	-2787
2 EU27	-1617	-842	3129	-55	616
3 EEFSU	2583	-870	-1085	56	685
4 JPN	-1335	-788	1543	-176	-756
5 RoA1	-1716	-1034	-1566	-12	-4328
6 EEx	-83	-2234	-7926	55	-10188
7 CHN	2949	-1896	777	-91	1739
8 IND	663	-708	549	22	526
9 ROW	387	-1507	1855	-135	600
Total	-7	-13883	-4	0	-13893



WELFARE DEC.: EQUAL SHARING

WELFARE	1 co2trd	2 alloc_A1	6 tot_E1	7 IS_F1	Total
1 USA	-654	-4296	3099	445	-1406
2 EU27	-902	-779	3506	-86	1740
3 EEFSU	154	-958	-1440	105	-2140
4 JPN	-301	-797	1835	-233	503
5 RoA1	-88	-991	-1508	-43	-2630
6 EEx	-850	-2492	-8693	59	-11976
7 CHN	2312	-2146	757	-108	814
8 IND	501	-792	564	16	288
9 ROW	-176	-1706	1877	-155	-159
Total	-3	-14957	-5	0	-14965

