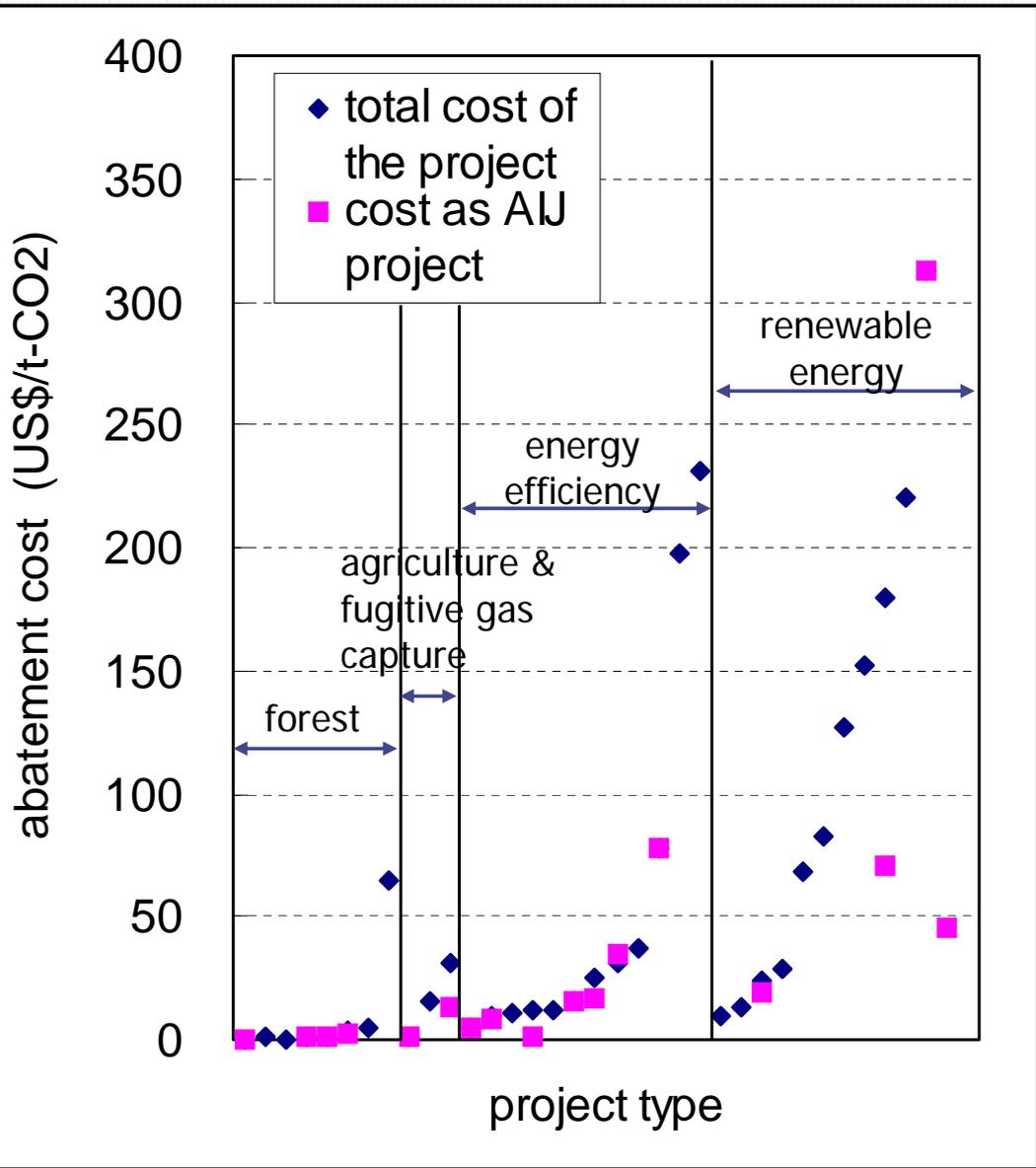


A Study on Avoiding Cream-Skimming Effects in CDM

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Cream-Skimming Effect in CDM

- ◆ Annex I countries implement only low cost CDM projects.
- ◆ Implemented projects do not contribute to the sustainable development of developing countries.



Abatement Costs of AIJ Projects Implemented in Developing Countries

Past Analysis and Problems

◆ Quantitative Analysis on CDM

- Use the same framework as emissions trading.
- Projects of lowest marginal abatement costs are being implemented first.

◆ Participation of Private Companies

- Active participation is expected
- Private companies prefer projects of low abatement cost.

Aims of This Study

- ◆ Argue on the importance of implementing CDM projects of high cost
- ◆ Find incentives for Japanese private companies to invest in high cost CDM projects

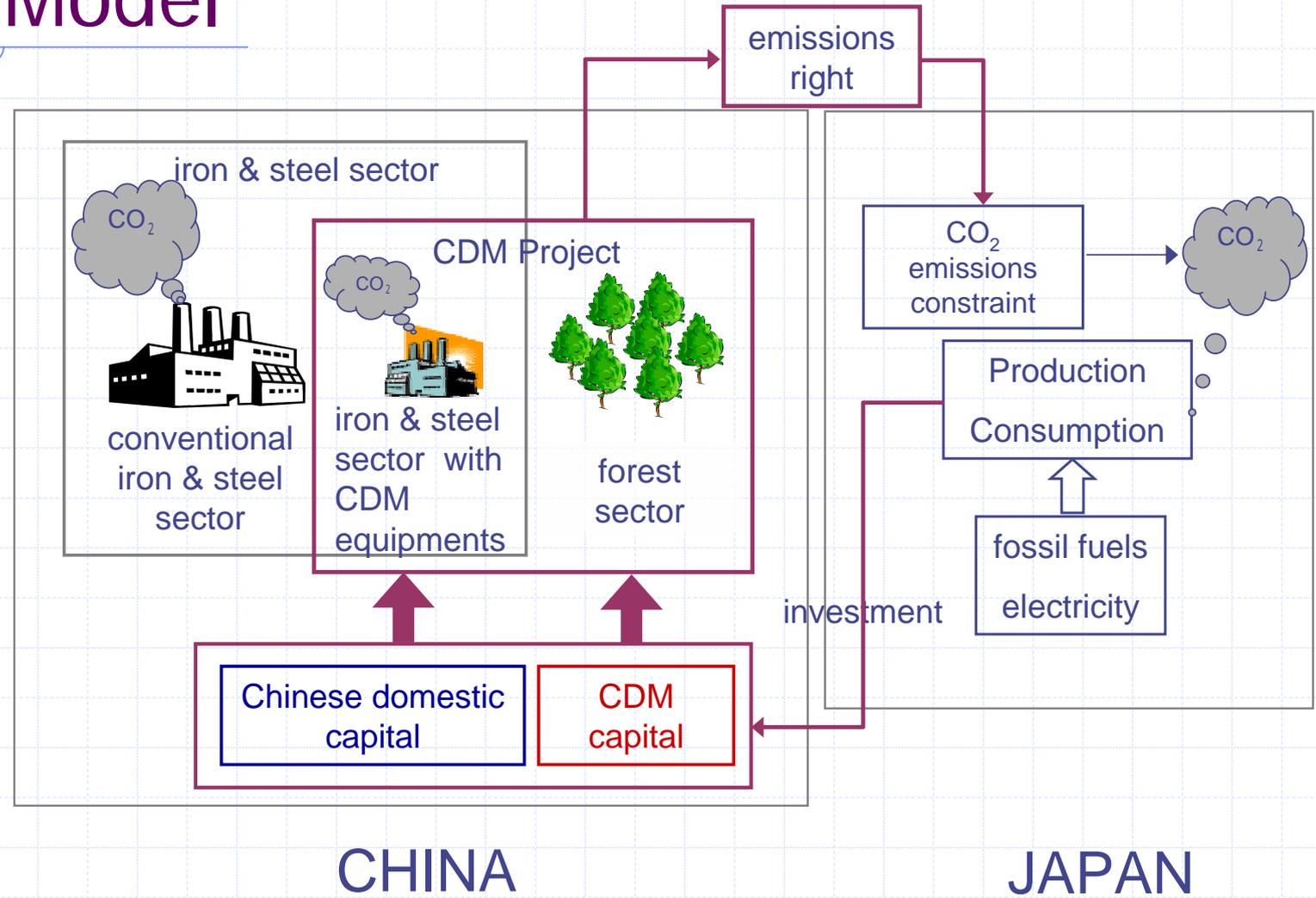
Settings of the Model Analysis

regions	Japan, China, rest of the world
time period of the analysis	1995 - 2020 (recursive)
database	GTAP
investing country	Japan
host country	China
CDM projects considered	afforestation, energy saving projects in the iron and steel sector
investing period	2001 - 2010
starting year of GHG abatement	Japan 2001 China & row 2016
GHG considered	CO2 emitted from fossil fuels

CO₂ Emission Constraints

Period	Japan	China & rest of the world
2001-2010	abatement starts from 2001, emissions are reduced to 94% of the 1990 emission in 2010	none
2011-2020	emissions are gradually reduced to 94% of the 2010 emission in 2020	none until 2015, fixed to the 2015 emission from 2016

Treatment of CDM Projects in the Model



Scenarios in the Analysis

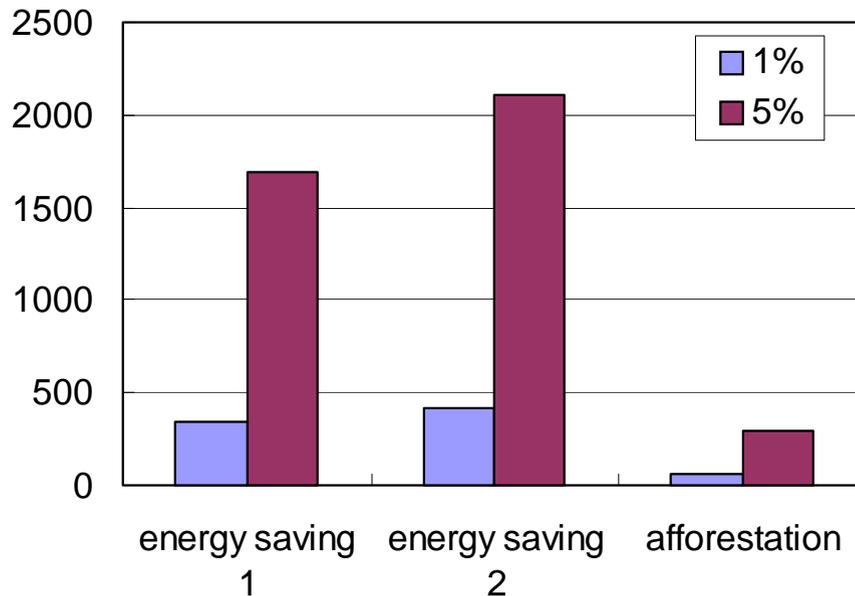
	Scenario	explanation of scenarios	
		CDM Project	investment in afforestation by China (from 2015)
	no constraint	×	×
	domestic	×	
scenarios with CO2 emissions constraints	energy saving 1		
	energy saving 2		
	afforestation		×

Abatement Costs of Projects

Scenario	Abatement Cost (US\$/t-CO ₂)	Reference
Energy saving 1	30	coke dry quenching facility
Energy saving 2	37.5	energy conservation in electric furnace used for ferro-alloy refining
Afforestation	5.2	afforestation

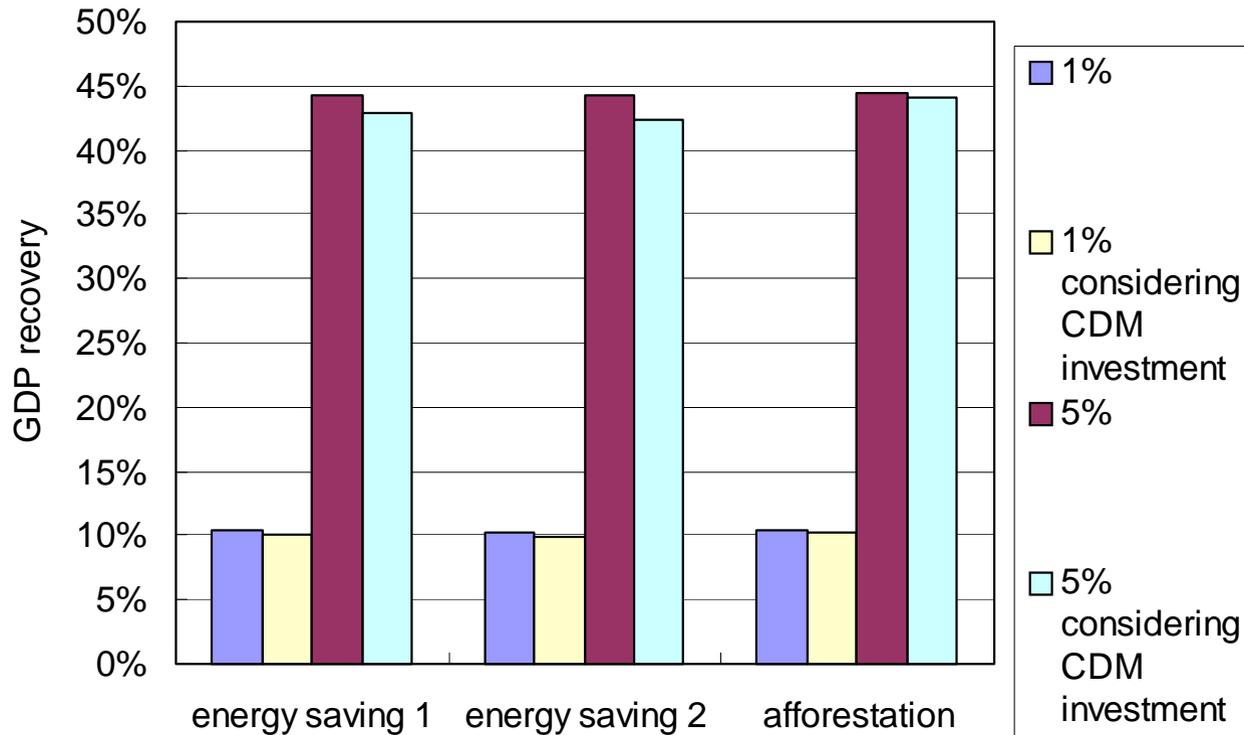
Scale of CDM Projects

- ◆ two cases: Japan receives the emissions right of
 - 1%
 - 5%of the 1990 Japanese CO2 emission in 2010



investment in 2010
(in 1995 million US\$)

Result for Japan



Recovery of GDP in 2010 comparing to the “domestic” scenario

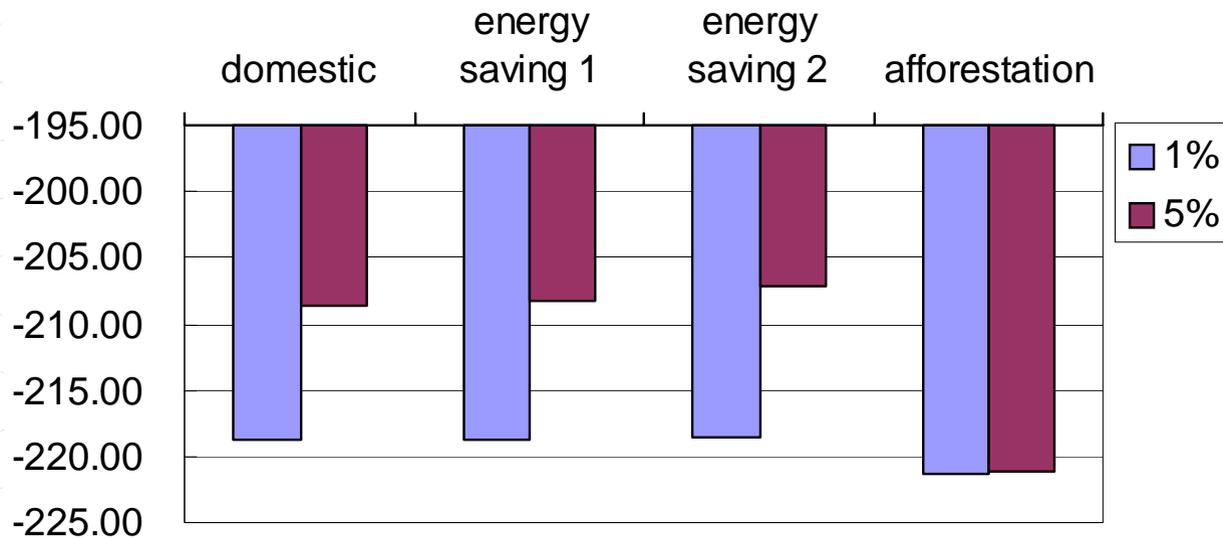
Result for China - 1

◆ index:

average increase of CO2 emission / average GDP growth
between 1995 and 2010

scenario CDM investment	no constraint	domestic	energy saving 1	energy saving 2	afforestation
none	0.648	0.651	-	-	-
1%	-	-	0.651	0.650	0.651
5%	-	-	0.649	0.649	0.650

Result for China - 2



Difference of GDP between scenarios with CO2 abatement and "no constraint" scenario in 2020

(1995 trillion US\$)

Aim of the Questionnaire – What are the incentives for the companies to invest in high cost CDM projects?

◆ What are the incentives that mainly relate to costs?

- ex.) the cost of the project itself becomes cheaper
- the cost of the project is cheaper than other ways of reducing GHGs
- the cost of the project is cheap in the long run

◆ What are the incentives that do not mainly relate to costs?

- ex.) able to save time of procedures
- rules of CDM force companies to invest in high cost projects
- conventional investment activities are admitted as CDM projects
- obtain more business opportunities in developing countries

Companies visited

Sector	Number of companies visited
Electric power distributing	2
Iron and steel manufacturing	2
Paper manufacturing	1
Trading	2

Results of the Questionnaire

- ◆ “To find advantages other than reducing GHGs in high cost CDM projects so that other bodies bear a part of the cost” was supported by all the companies that have answered the questionnaire.
- ◆ Companies regard costs as very important.
- ◆ Incentives that do not mainly relate to costs:
Could not find strong incentives.

Conclusion - 1

- ◆ For Japan, it is better to invest in low cost CDM projects such as afforestation.
- ◆ However, Japan still obtains benefits by investing in relatively high cost CDM projects such as energy efficiency projects.
- ◆ China benefits more from high cost CDM projects not only economically but also in terms of environment and future actions taken by itself against global warming.

Conclusion - 2

- ◆ Companies regard costs of CDM projects as very important.
- ◆ In order for Japanese private companies to invest in high cost CDM projects, it is effective to find advantages other than reducing greenhouse gases so that other bodies bear a part of the cost.