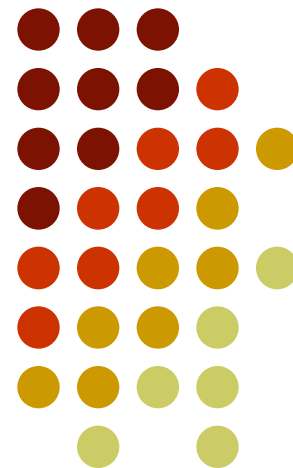


USING ADJUSTED EXCHANGE RATES TO UPDATE THE 2005 PPPS FOR MACHINERY AND EQUIPMENT

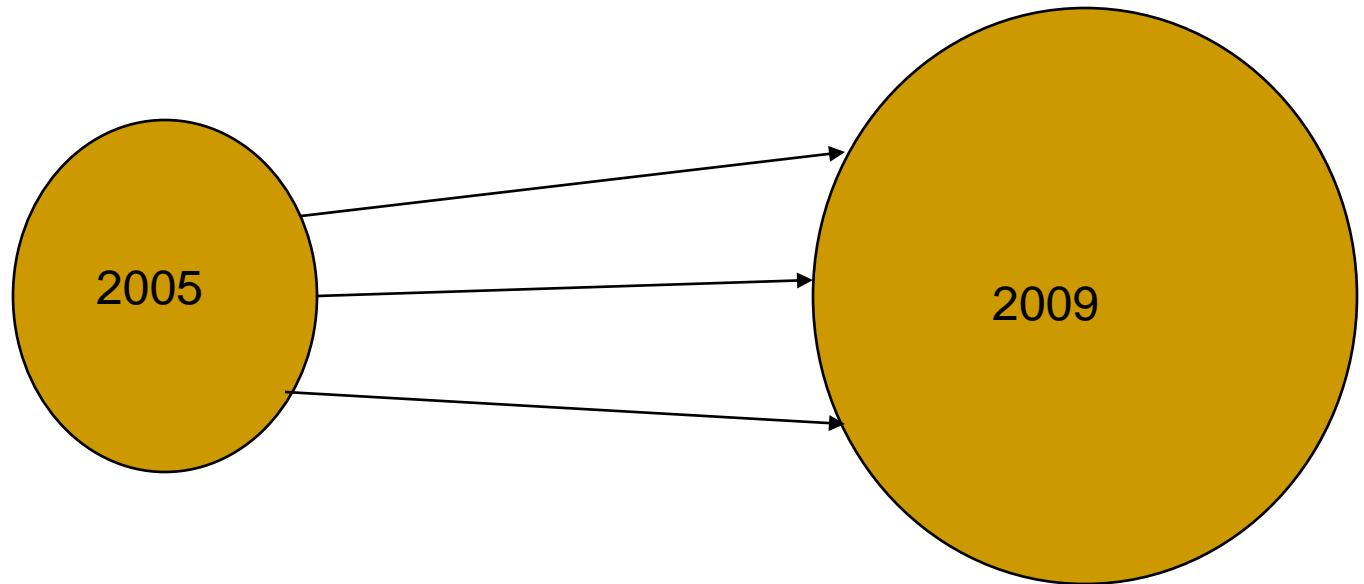
Asia 2009 ICP Update: Regional Meeting, Manila, May 2009





Goal of the exercise

Given the 2005 results for equipment,
estimate **changes** between 2005 and 2009 in order to
arrive at the 2009 PPPs.



The relationship between the PPP for an imported item of machinery and equipment and the Exchange Rate



$$PPP_{A/B} = XR_{A/B} \left(\frac{1 + \sum_{i=1}^n \alpha_i}{1 + \sum_{i=1}^n \beta_i} \right)$$

$PPP_{A/B}$ is the bilateral PPP using B as the base country;

$XR_{A/B}$ is the exchange rate between countries A and B, specifically the number of units of currency A that can be purchased by one unit of currency B; and

α_i and β_i , are the n costs that intervene between the ex-factory price of the good in the countries of production, and the final cost of the good when it is installed and ready for use in the importing countries A and B. Both α_i and β_i are expressed as ratios of the ex-factory price.



Components of the price of a machine, installed and ready for use in an importing country [most components are small or vary little across countries]

	Ex-factory price in exporting country
<i>plus</i>	<i>Product taxes less subsidies in exporting country</i>
<i>plus</i>	<i>Trade margin in exporting country</i>
<i>plus</i>	<i>Drayage (transport from the factory to the wharf) in exporting country</i>
<i>plus</i>	<i>Wharfage (fee for using the wharf) in exporting country</i>
<i>equals</i>	F.o.b. price in exporting country
<i>plus</i>	<i>International freight</i>
<i>plus</i>	<i>Insurance costs</i>
<i>equals</i>	C.i.f. price in importing country
<i>plus</i>	<i>Customs duty in importing country</i>
<i>plus</i>	<i>Wharfage (fee for using the wharf) in importing country</i>
<i>plus</i>	<i>Product taxes less subsidies in importing country</i>
<i>plus</i>	<i>Trade margins in importing country</i>
<i>plus</i>	<i>Drayage (transport from the wharf to the place of use) in importing country</i>
<i>plus</i>	<i>Installation costs at the producer's establishment</i>
<i>equals</i>	Installed, ready-to-use price in importing country



Main components of the price of a machine, installed and ready for use in an importing country	
	Ex-factory price in exporting country
<i>Equals (approximately)</i>	F.o.b. price in exporting country
<i>plus</i>	<i>International freight</i>
<i>plus</i>	<i>Insurance costs</i>
<i>Equals (approximately)</i>	C.i.f. price in importing country
<i>plus</i>	<i>Customs duty in importing country</i>
<i>plus</i>	<i>Product taxes in importing countries (e.g. VAT)</i>
<i>plus</i>	<i>Installation costs at the producer's establishment</i>
<i>Equals (approximately)</i>	Installed, ready-to-use price in importing country



2005 Questionnaire on Machinery and Equipment [includes unnecessary components]

	Percent imported						Three most important source countries			Margins				
	0	25	50	70 to 79	80 to 89	90				Customs	VAT etc	Trade	Transport & installation	Total
	to 24	to 49	to 69			to 100								
Bangladesh			x				USA	UK	China	8,5	7,5	29.2		45,2
Bhutan			x				India	Japan	UK	5		27	18	50
Cambodia		x					..	..	..	..	..	..	..	..
China,PR		x					EU	Japan	USA	10	17	6,5	3	36,5
Fiji							Australia	N.Z	Japan	..	..	..	..	..
Hong Kong						x	China	Japan	Taiwan	0	0	23		23
India		x					USA	Germany	Japan	25	0	10	3	38
Indonesia	x						..	..	..	..	..	..	..	..
Iran		x					Germany	Austria	Spain	22	24			48
Macao						x	China	Japan	Korea	0	0	10	..	..
Malaysia		x					USA	Japan	China	5		17	5	27
Maldives						x	Singapore	Sri Lanka	India	20				20
Mongolia						x	Russia	Japan	China	5	15	10		30
Nepal	x						India	China	..	..	..	..	..	..
Pakistan	x						China	USA	Italy	..	..	..	..	..
Philippines		x					Japan	USA	Singapore	7	0	9	9	25
Singapore			x				Malaysia	USA	Japan	..	..	..	..	..
Taiwan			x				Japan	USA	Germany	..	..	..	..	..
Thailand		x					Japan	..	..	3	7	10	..	..

QUESTIONNAIRE ON IMPORTED MACHINERY AND EQUIPMENT



Item No.	Description	2005		2008/9	
		Metal products and equipment	Transport equipment	Metal products and equipment	Transport equipment
1	C.i.f. value of imports in national currency				
2	International freight costs in national currency				
3	International insurance in national currency				
4	Customs duties in national currency				
5	Non-deductible VAT or other product taxes in national currency				
6	Installation costs: <i>either</i> amounts in national currency <i>or</i> estimated margin (%)	_____ _____ %	_____ _____ %	_____ _____ %	_____ _____ %