



## **From administered prices to total prices: application to the Indian, US and EU prices of rice and wheat**

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### **Outlook**

#### **I – Questionning radically the various concepts of agricultural prices**

- 1.1 – The AoA rules on stockholding for food security purposes
- 1.2 – There does not exist anywhere in the world pure market prices
- 1.3 – No difference between "current market price" and "current domestic market price"
- 1.4 – Is there a difference between "administered price" and "acquisition price"?
- 1.5 – In India current market prices and current FOB prices are not the same for all rices
- 1.6 – Comparing farm prices with administered prices.
- 1.7 – From the concept of administered price to the concept of total price

#### **II – Assessment of the US total prices of rice and wheat from 1986-88 to 2012**

- 2.1 – The US total domestic price of rice and wheat
  - 2.1.1 – The US total domestic price of rice
  - 2.1.2 – The US total domestic price of wheat
- 2.2 – The US subsidies to its exported wheat from 1986 to 2012

#### **III – Assessment of the EU total prices of wheat and rice from 1986-88 to 2012**

- 3.1 – The EU total domestic price of wheat
- 3.2 – The EU dumping rate of wheat exports
- 3.3 – The EU total domestic price of rice and export subsidies

#### **IV – The combined US+EU dumping rate of wheat and rice**

- 4.1 – The combined US+EU dumping rate of wheat
- 4.1 – The combined US+EU dumping rate of rice

In a previous paper I argued that "DCs have put a foot in the door of the AoA rules in Bali and they have now to open it completely in the post Bali programme to rebuild all the rules"<sup>33</sup>. The present paper begins to disentangle these complex, illogical and unfair rules for developing countries (DCs) by questioning the various concepts of agricultural prices, particularly those of market price and administered price, with the examples of Indian, US and EU prices of rice and wheat.

### **I – Questionning radically the various concepts of agricultural prices**

Eugenio Diaz-Bonilla of IFPRI wrote an interesting paper on December 5, 2013, during the WTO Ministerial conference in Bali, to contribute to the looming impasse on the G-33 proposal to change the footnote 5 of the AoA Annex 2 Article 3. For him, "*The correct approach to the impasse, in my view, is to try to clarify the relationship between the language*

<sup>33</sup> Assessment and outlook of the Agreement on public stockholding adopted at the WTO Ministerial Conference in Bali from 3 to 7 December 2013, December 16, 2013, <http://www.solidarite.asso.fr/Papers-2013>

of Annex 2 on "market prices" and "administered prices" rather than to seek exemptions or "peace clauses"<sup>4</sup>. And he proposed to rewrite the footnote as follows: "Administered prices in the context of this paragraph will be considered rebuttable presumed in compliance with the conditions that they do not offer price support, and therefore, they will not have to be counted against the aggregate measure of support, if they do not exceed the appropriate domestic market price or the import parity equivalent based on the world market price of the product considered".

This interesting statement invites us to focus more on the alleged differences between "administered prices" and "market prices". But let us first copy the articles 3 and 4 of AoA Annex 2, at the centre of the debate.

### **1.1 – The AoA rules on stockholding for food security purposes**

#### **"3. *Public stockholding for food security purposes*"<sup>5</sup>**

*Expenditures (or revenue foregone) in relation to the accumulation and holding of stocks of products which form an integral part of a food security programme identified in national legislation. This may include government aid to private storage of products as part of such a programme. The volume and accumulation of such stocks shall correspond to predetermined targets related solely to food security. The process of stock accumulation and disposal shall be financially transparent. Food purchases by the government shall be made at current market prices and sales from food security stocks shall be made at no less than the current domestic market price for the product and quality in question.*

**4. *Domestic food aid***<sup>6</sup>: *Expenditures (or revenue foregone) in relation to the provision of domestic food aid to sections of the population in need. Eligibility to receive the food aid shall be subject to clearly-defined criteria related to nutritional objectives. Such aid shall be in the form of direct provision of food to those concerned or the provision of means to allow eligible recipients to buy food either at market or at subsidized prices. Food purchases by the government shall be made at current market prices and the financing and administration of the aid shall be transparent."*

The two articles deal with public food purchases which "shall be made at current market prices", a first difference being that, whereas article 3 deals with food security stocks which should be sold "at no less than the current domestic market price", article 4 deals with domestic food aid not passing through previous public stocks and allows sales at below market prices. But the main difference is that of footnote 5 to article 3 saying that, when the "stocks of foodstuffs for food security purposes are acquired and released at administered prices... the difference between the acquisition price and the external reference price is accounted for in the AMS".

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<sup>4</sup> *Some Ideas to Break the Stalemate on Agricultural Issues at Bali*, <http://www.ifpri.org/blog/some-ideas-break-stalemate-agricultural-issues-bali>

<sup>5</sup> For the purposes of paragraph 3 of this Annex, governmental stockholding programmes for food security purposes in developing countries whose operation is transparent and conducted in accordance with officially published objective criteria or guidelines shall be considered to be in conformity with the provisions of this paragraph, including programmes under which stocks of foodstuffs for food security purposes are acquired and released at administered prices, provided that the difference between the acquisition price and the external reference price is accounted for in the AMS.

<sup>6</sup> *For the purposes of paragraphs 3 and 4 of this Annex, the provision of foodstuffs at subsidized prices with the objective of meeting food requirements of urban and rural poor in developing countries on a regular basis at reasonable prices shall be considered to be in conformity with the provisions of this paragraph.*

From these two quotations, let us clarify the meaning of the following expressions on prices: "current market price", "current domestic market price", "administered price" – corresponding to "minimum support price", MSP, in India, "loan rate" in the US and "intervention price" in the EU –, "acquisition price", "current FOB price", "external reference price".

**1.2 – A first observation is that there does not exist anywhere in the world pure market prices** determined without any State's intervention, except in textbooks of extra-terrestre free-traders. Supply and demand are always influenced by some public rules on the domestic market or at the border.

**1.3 – A priori there is no difference between "current market price" and "current domestic market price"** although the Philippines government imported 1.2 million tonnes of rice between December 2007 and April 2008 before "*dumping its stockpiles at a loss in an attempt to stave off unrest over the price of rice*"<sup>7</sup>, although this "dumping" was on its domestic market. On the other hand we assume that by "current market price" we mean current market price at the farm gate as it is the case for administered prices although in India these prices are not really at the farm gate but in specific village markets for public procurement: the "mandis".

**1.4 – Is there a difference between "administered price" and "acquisition price"**, two expressions used only in footnote 5? The difference might be that the "acquisition price" exceeds the "administered price" paid to farmers by the administrative costs of purchase, transport and stockholding before releasing the stocks to the beneficiaries of food aid. This gap between the two prices is important and would increase largely the AMS which is the difference between the acquisition price and the external reference price. However, happily, here the AoA Annex 3 Article 8 provides that: "*Market price support shall be calculated using the gap between a fixed external reference price and the applied administered price multiplied by the quantity of production eligible to receive the applied administered price. Budgetary payments made to maintain this gap, such as buying-in or storage costs, shall not be included in the AMS*". So that the footnote 5 should not have used at all the concept of "acquisition price" but only that of "administered price", otherwise there is a conflict in the AoA rules between Annex 2 and Annex 3. So that we have to concentrate on the difference between "current domestic market price", "administered price" and "current FOB price".

**1.5 – In India current market prices and current FOB prices are not the same for all rices**, given the basic distinction between Basmati rice and non-Basmati rice. Indeed Basmati rice, of a much higher quality and price, is not publicly procured and has no MSP.

Tables 1 and 2 show the evolution of Basmati rice and non-Basmati rice exports and the corresponding FOB prices, respectively in rupees and dollars, from the marketing years (April to March) 2000-01 to 2012-13, the exchange rate of table 2 being calculated on the same months. If the export volume of Basmati rice has dropped to 35% of all rice exports in 2012-13, it represents still 59% of the rice export value. Indeed the FOB price of Basmati rice is 2.5 times that of non-Basmati rice.

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<sup>7</sup> <https://www.wsws.org/en/articles/2008/06/phil-j19.html>

Table 1 – Indian exports of Basmati and non-Basmati rice, tonnes & Rs. million: 2000/01 to 2012/13

Fiscal year	Basmati		Non-Basmati		Total rice		% of Basmati		FOB price in Rs/tonne		
	Tonnes	Rs. M	Tonnes	Rs. M	Tonnes	Rs. M	Tonnes	Rs. M	Basmati	Non-B	Total rice
2000/01	848919	21419.4	683194	7841.6	1532113	29261	55.4%	73.2%	2523.1	1147.8	1909.9
2001/02	665843	18390.8	1532348	13243.6	2198191	31634.4	30.3%	58.1%	2762	864.3	1439.1
2002/03	594867	17295.4	4076347	36340.8	4671214	53636.2	12.7%	32.2%	2907.4	891.5	1148.2
2003/04	770764	19909.2	2601471	21421.6	3372235	41330.8	22.9%	48.2%	2583	823.4	1225.6
2004/05	1126125	27419.4	3645873	38997.3	4771998	66416.7	23.6%	41.3%	2434.8	1069.6	1391.8
2005/06	1186560	30430.9	2901150	31781.8	4088060	62212.7	29.03%	48.9%	2609	1095.5	1521.8
2006/07	1040672	27783.2	3704847	42578.8	4745519	70362	21.9%	39.5%	2669.7	1149.3	1482.7
2007/08	1181655	43347.7	5314183	73962.3	6495838	117310	18.2%	37%	3668.4	1391.8	1805.9
2008/09	1556383	94768.5	949992	16914.3	2506375	111682.8	62.1%	84.9%	6089	1780.5	4456
2009/10	2015912	108388.6	139371	4147.6	2155283	112536.2	93.5%	96.3%	5376.7	2975.9	5221.4
2010/11	2370684	113547.7	100683	2312.9	2471367	115860.6	95.9%	98%	4789.7	2297.2	4688.1
2011/12	3211801	154504.5	4099000	86681.8	7310801	241186.3	43.9%	64.1%	4810.5	2114.7	3299
2012/13	3532183	192030.1	6572139	140278.6	10104323	332308.6	35%	57.8%	5436.6	2134.4	3288.8

Source: <http://www.airea.net/page/57/statistical-data/rice-export-from-india>; \* no data for 2007/08;

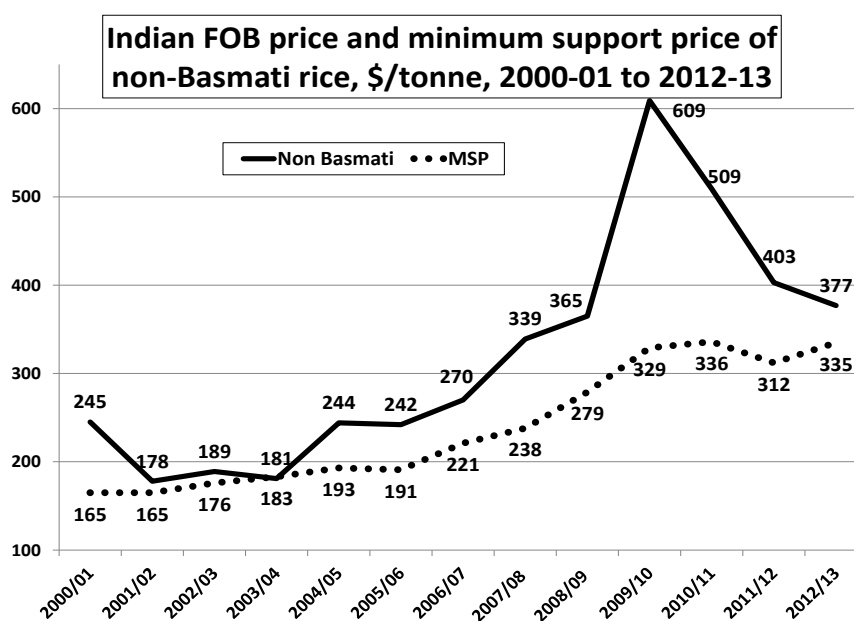
<http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/FHB160913FLS.pdf>

Table 2 – Indian exports of Basmati and non-Basmati rice, tonnes & \$ million: 2000/01 to 2012/13

Market Year	Exchange Rate:Rs/\$	Basmati		Non-Basmati		Total rice		% of Basmati		FOB price in \$/tonne		
		Tonnes	\$ million	Tonnes	\$ million	Tonnes	\$ million	Tonnes	\$ million	Basmati	Non-B	Total
2000/01	46.8945	848919	456.8	683194	167.2	1532113	624	55.4%	73.2%	538	244.8	407.3
2001/02	48.5559	665843	378.8	1532348	272.7	2198191	651.5	30.3%	58.1%	568.8	178	296.4
2002/03	47.2856	594867	365.8	4076347	768.5	4671214	1134.3	12.7%	32.2%	614.9	188.5	242.8
2003/04	45.4360	770764	438.2	2601471	471.5	3372235	909.6	22.9%	48.2%	568.5	181	269.7
2004/05	43.9000	1126125	624.6	3645873	888.3	4771998	1512.9	23.6%	41.3%	554.6	243.7	317
2005/06	45.2879	1186560	671.9	2901150	701.8	4088060	1373.7	29%	48.9%	566.3	241.9	336
2006/07	42.5739	1040672	652.6	3704847	1000.1	4745519	1652.7	21.9%	39.5%	627.1	269.9	348.3
2007/08	41.0854	1181655	1055.1	5314183	1800.2	6495838	2855.3	18.2%	37%	892.9	338.8	439.6
2008/09	48.8420	1556383	1940.3	949992	346.36	2506375	2286.6	62.1%	84.9%	1246.7	364.5	912.3
2009/10	48.8420	2015912	2219.2	139371	849.2	2155283	2304.17	93.5%	96.3%	1100.8	609.3	1069
2010/11	45.1224	2370684	2516.4	100683	512.6	2471367	2567.7	95.9%	98%	1061.5	509.1	1039
2011/12	52.5034	3211801	2942.8	4099000	1651	7310801	4593.7	43.9%	64.1%	916.2	402.8	628.3
2012/13	56.5752	3532183	3394.2	6572139	2479.5	10104323	5873.8	35%	57.8%	960.9	377.3	581.3

Source: <http://www.airea.net/page/57/statistical-data/rice-export-from-india>

The following graph shows that every year from 2000-01 to 2012-13 the FOB price of non-Basmati rice exports has been significantly higher than the MSP, except in 2003-04 when they were about the same, so that the allegation that Indian rice is dumped on the world market is totally unfounded.



## **1.6 – Comparing farm prices with administered prices.**

In India, and likely in other DCs running public stockholding programmes, public purchases occur mainly in the post-harvest period, to avoid the slump in farm prices at that time when most small farmers need to sell as they are facing pressing needs: around 50% of rice is procured from October to December, 30% from January to March, 15% from April to June, and 5% from July to September, the marketing year going from October to September. For wheat, almost the entire procurement occurs from April to June<sup>8</sup>, the marketing year going from April to March. In fact Kharif season lasts from April to September (summer): rice (paddy) is the season's main crop. Rabi season lasts from October to March (winter): wheat is the season's main crop.

Shall we compare the market prices on the same months of procurement or on an yearly average basis? It seems preferable to use the yearly average as some procurement occurs all year long, particularly because, if most of India's rice is produced in the Kharif season (July-November), the winter (rabi) crop (November-April) accounts for around 10% of annual production<sup>9</sup> and paddy might be harvested in three seasons in India. In any case 25% of rice production and 29% of wheat production do not enter the market, because of self-consumption by farmers' households but also for seeds and payment in kind of some agricultural workers<sup>10</sup>.

However, if farmers are entitled to sell their crop at MSPs – the procurement policy is open ended –, in practice the Food Corporation of India (FCI) is not present in all mandis of all States all year long, already because many States are not producing rice or wheat. Even if the FDI were always present in all mandis, the farmers are free to sell to private traders or millers if they can get higher prices. Therefore, given that the share of total production publicly procured is always lower than the production sold at domestic market prices – this share was of 32.7% in 2012-13, for 34.1 Mt over a total production of 104.4 Mt<sup>11</sup> – and that self-consumption was of about 25% (26.1 Mt), the sales to private traders and millers are of 42.3% or 44.2 Mt. In that hypothesis, as farmers would not sell to private traders at a lower price than the MSP, the domestic market price would be higher than the MSP. In these conditions where the MSP is lower than the average market price, the footnote 5 requiring that "*the difference between the acquisition price and the external reference price is accounted for in the AMS*" would be totally illogical.

In fact, the FDI cannot procure wheat and rice in all States, the first obvious reason being that 10 States – over the Indian 28 States plus 7 Union's territories – accounted for 97.9% of all wheat production<sup>12</sup> and 83.7% of all rice production<sup>13</sup> in 2010-11: Uttar Pradesh (33.02% of wheat and 11.91% of rice), Punjab (19.26% of wheat and 10.86% of rice), Haryana (13.27% of wheat and 3.61% of rice), West Bengal (1.06% of wheat and 15.80% of rice), Bihar (5.16% of wheat and 5.34% of rice), Andhra Pradesh (12.71% of rice), Madhya Pradesh (9.67% of wheat), Rajasthan (9.31% of wheat), Orissa (7.31% of rice), Tamil Nadu (7.08% of rice), Chhattisgarh (5.40% of rice), Gujarat (3.96% of wheat), Karnataka (3.70% of rice), Maharashtra (2.15% of wheat), Uttarakhand (1.06% of wheat).

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<sup>8</sup> <http://www.fao.org/docrep/016/an034e/an034e00.pdf>

<sup>9</sup> <http://oryza.com/news/rice-news/india-government-projects-2013-14-main-rice-crop-over-923-million-tons>

<sup>10</sup> <http://www.fao.org/docrep/016/an034e/an034e00.pdf>

<sup>11</sup> [http://smartinvestor.business-standard.com/market/story-202950-storydet-Rice\\_procurement\\_drops\\_by\\_3\\_in\\_2012\\_13.htm#.UrYJtLTuFGY](http://smartinvestor.business-standard.com/market/story-202950-storydet-Rice_procurement_drops_by_3_in_2012_13.htm#.UrYJtLTuFGY)

<sup>12</sup> <http://www.mapsofindia.com/top-ten/india-crops/wheat.html>

<sup>13</sup> <http://www.mapsofindia.com/top-ten/india-crops/rice.html>

To what extent the average farm price was higher of lower than the MSP? We have the figures at State level but only at harvest time and only up to 2010-11, when the MSP was of 11,700 rupees (Rs) per tonne for wheat and of 10,000 Rs per tonne for paddy (corresponding to 15,200 Rs per tonne of rice).

For rice the production and procurement are less concentrated than for wheat. In 2012-13 14 States – which represented in 2011 81.1% of the total population of 1.210 billion – accounted for 96.5% of total production and 97.8% of total procurement, but the percentage of procurement over production was of 68.3% on average in the four States of Punjab, Haryana, Andhra Pradesh and Chhattisgarh – which accounted for 32.3% of total production and 66% of total procurement with only 13.5% of the population – but was of 50.6% on average in the other 10 States which accounted for 64.3% of total production, 32.5% of total procurement and 72.7% of the population.

Table 3 – Statewise production, procurement and farm price of rice in 2010-11 and 2012-13

	Popul <sup>e</sup> 2011 1000 people	Farm price 2010-11 Rs per tonne paddy	2010-11			2012-13		
			Production	Procurement	Procu/prod <sup>e</sup>	Production	Procurement	Procu/prod <sup>e</sup>
Punjab	27,704	10,920	10837	8634	79.7%	11374	8558	75.2%
Madhya Pradesh	72,598	10,810	1772	516	29.1%	2775	898	32.4%
Haryana	25,353	20,760	3472	1687	48.6%	3976	2609	65.6%
Uttar Pradesh	199,581	8,880	12014	2554	21.3%	14413	2286	15.9%
Rajasthan	68,621	15,130	266	0		223	1963	
Bihar	103,805	8,460	4670	883	18.9%	7336	1303	17.8%
Uttarakhand	10,117	10,430	545	422	77.4%	581	497	85.5%
Gujarat	60,384	10,740	1523	0		1503	0	
Jammu&Kashmir	12,549	17,408	508	11	2.2%	546	2	0.4%
Maharashtra	112,373	11,530	2669	308	11.5%	3042	192	6.3%
West Bengal	91,348	10,470	12333	1310	10.6%	14962	1766	11.8%
Andhra Pradesh	84,666	9,980	14385	9609	66.8%	10915	6468	59.3%
Orissa	41,947	9,320	6558	2465	37.6%	7640	3613	47.3%
Karnataka	61,131	10,580	4047	180	4.4%	3283	59	1.8%
Tamil Nadu	72,139	9,910	6139	1543	25.1%	4400	481	10.9%
Kerala	33,388	12,000	543	263	48.4%	531	240	45.2%
Jarkhand	32,966	8,710	1137		0	3027	215	7.1%
Chhattisgarh	25,540	11,440	6159	3746	60.8%	6609	4804	72.7%
Assam	31,169	8,510	4752	16		4562	20	0.4%
ArunachalPradesh	1,383							
Himachal Pradesh	6,857	16,940	131	0		134	1	
Manipur	2,722	10,500						
Tripura	3,671	8,350						
Mizoram	1,091	10,820						
Meghalaya	2,964							
Nagaland	1,981	8,500						
Sikkim	0,608							
Chandigarh	1,055	9,160		10			12	
Delhi	16,753							
Goa	1,458							
Pondicherry	1,244			40				
Others	0,529							
Total	1210,193		95980	34198	35.6%	101832	34024	33.4%

Sources: <http://dfpd.nic.in/fcamin/bulletion/oct-091213.pdf>

About half the production was sold in 2010-11 with farm prices at harvest time higher than the MSP of 10,000 Rs per tonne of paddy whereas half was sold with farm prices lower than the MSP. Seven States accounting for 51.7% of total rice production and 49.9% of total procurement with 46.8% of the population had average farm prices at harvest time lower than the MSP: Uttar Pradesh (8,880), Bihar (8,460), Andhra Pradesh (9,980), Orissa (9,320), Tamil Nadu (9,910), Jarkhand (8,710) and Assam (8,510). On the other hand 12 States accounting for 46.6% of total rice production and also 49.9% of total procurement with 49.7% of the population had average farm prices at harvest time higher than the MSP.

If we take the distribution of production and procurement in 2012-13 the same seven States with lower farm prices at harvest time than the same MSP of 10,000 Rs/tonne in 2010-11 (data are not available beyond 2010-11) accounted for 51.4% of rice production and 42.3% of total procurement. And the same 12 States accounted for 46.5% of total production and 49.9% of total procurement.

So that it seems difficult to draw a conclusion on the impact of the MSP on the average price received by rice farmers at harvest time. However the States with farm prices at harvest time higher than the MSP are also those with ratios of procurement to production of 39.6% in 2010-11 and 45.1% in 2012-13, significantly higher than the ratios of 34.4% and 27.5% respectively for the States with farm prices lower than the MSP. Which allows to conclude that the intensity of procurement at the MSP leads to higher farm prices at harvest time.

For wheat 11 States – which represented in 2011 64.8% of the total population – accounted in 2012-13 for 98.7% of total production and 99.9% of total procurement, but the ratio of procurement to production was of 74.3% on average in the three States of Punjab, Madhya Pradesh and Haryana – which accounted for 43.7% of total production and for 78.6% of total procurement, with only 10.4% of population – but was only of 16% on average in the other 8 States which accounted for 55% of total production, 21.3% of total procurement and 54.4% of the population.

Table 4 – Statewise population and production, procurement and farm price of wheat in 2010-11 and 2012-13

	Popul° 2011	Farm price	2010-11			2012-13		
1000 tonnes	1000 people	Rs/tonne	Production	Procurement	Procu/prod°	Production	Procurement	Procu/prod°
Punjab	27,704	11030	15829	10209	64.5%	16106	12834	79.7%
Madhya Pradesh	72,598	11660	7627	3539	46.4%	13133	8493	64.7%
Haryana	25,353	11800	11041	6347	57.5%	11117	8665	77.9%
Uttar Pradesh	199,581	10630	30001	1645	54.8%	30302	5063	16.7%
Rajasthan	68,621	11550	7215	476	66%	8954	1964	21.9%
Bihar	103,805	10470	4670	183	3.9%	5375	772	14.4%
Uttarakhand	10,117	10970	887	86	9.7%	838	139	16.6%
Gujarat	60,384	13250	3854	1		3135	156	5%
Jammu & Kashmir	12,549	12130	290			416	9	2.2%
Maharashtra	112,373	13840	2292			875	2	0.2%
West Bengal	91,348	12310	842	9	1.1%	907	2	0.2%
Andhra Pradesh	84,666		10			7		
Orissa	41,947	13350	5			2		
Karnataka	61,131	15970	245			172		
Tamil Nadu	72,139		0				481	
Kerala	33,388		0					
Jarkhand	32,966		151			267		
Chhattisgarh	25,540	13670	127			141		
Assam	31,169	11720	64			57		
Arunachal Pradesh	1,383							
Himachal Pradesh	6,857	13380	670			544	1	
Manipur	2,722							
Tripura	3,671							
Mizoram	1,091							
Meghalaya	2,964							
Nagaland	1,981							
Sikkim	0,608							
Chandigarh	1,055	12000		9			17	
Delhi	16,753	13000		10			31	
Goa	1,458							
Pondicherry	1,244							
Others	0,529		109				1129	
Total	1210,193		86874	22514		92348	38148	

Source: <http://dfpd.nic.in/fcamin/bulletion/oct-091213.pdf>; <http://eands.dacnet.nic.in/fhprice/FHPState-2010-11.htm>; farm price in Rs/tonne in 2010-11 when the MSP of wheat was 11,700 Rs (13,500 Rs in 2012-13)

For wheat six States accounting for 76.2% of total production and 71.7% of total procurement with 39.9% of the population had in 2010-11 average farm prices at harvest time lower than the MSP of 11,700 Rs/tonne: Punjab (11,030 Rs), Madhya Pradesh (11,660 Rs), Uttar Pradesh (10,630 Rs), Rajasthan (11,550 Rs), Bihar (8,460) and Uttarakhand (10,970 Rs). On the other hand 5 States accounting for 21.1% of total production and 28.2% of total procurement with 25% of the population had average farm prices at harvest time higher than the MSP.

Considering the production and procurement of 2012-13 confirms that the same six States with average farm price at harvest time in 2010-11 lower than the MSP accounted for 80.9% of total production and 76.7% of total procurement in 2012-13. And the average farm price of wheat at harvest time was higher than the MSP in 12 States accounting for only 18.8% of total production and 23.3% of total procurement with 40.2% of total population. Even if the ratio of procurement to production in these 12 States (51.2%) was higher than in the six States (39.2%) accounting for the bulk of production and procurement. Since the average farm price was higher than the MSP in the States with a lower production share it is very likely that it was the same in the remaining States with a minimal production.

So that we can conclude that the impact of the MSP on the average farm price of rice and more clearly of wheat was positive in the sense that it has led the private traders to pay higher prices to farmers in order to get enough rice and wheat. So that it is an additional powerful argument to dismiss the allegation that the MSPs of rice and wheat were responsible of an Indian dumping of rice and wheat.

Clearly it would be useful to avail of the average farm prices for the whole marketing years and not only at harvest time to draw definitive conclusions.

### **1.7 – From the concept of administered price to the concept of total price**

The concept of agricultural administered price is not defined in the WTO agreements although it works in opposite ways in developed countries and developing countries (DCs). Whereas in DCs the administered prices – the Indian MSPs for example – are fixed *above* domestic market prices to ensure remunerative prices to small farmers, particularly just after the harvest, and to force the private traders to pay higher market prices, in developed countries they are minimum prices fixed *below* the prevailing market prices in order to reduce their level. But – here lies the fundamental difference – these lower administered prices were accepted by Western farmers only because they were offset by domestic subsidies, including by the alleged *decoupled*<sup>14</sup> fixed direct payments in the EU and US plus *coupled* subsidies, such as the US various types of marketing loan benefits, countercyclical payments and insurance subsidies. In developed countries administered prices are always triggering subsidies, apart from the other means necessary to render them effective: import duties, export subsidies and restrictions, land set aside, production quotas, etc. Indeed the US Farm Bills and EU CAP reforms since the 1990s have consisted in lowering by steps their administered prices to increase their domestic and external competitiveness – importing less and exporting more – through massive compensatory alleged non-trade-distorting subsidies of the *blue* and *green* boxes<sup>15</sup>.

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<sup>14</sup> A subsidy is *coupled* when related to the production or price levels, and *decoupled* in the opposite case.

<sup>15</sup> The *blue box* corresponds to the EU fixed direct payments per hectare (cereals and oilseeds), cattle head (bovines and ovines), or litre of milk decided by the CAP (common agricultural policy) reforms of 1992, 1999 and 2004 to offset the reduction of guaranteed ("intervention") prices but farmers received them only if they produced the corresponding products. The *green box* covers two types of alleged non-trade distorting subsidies: 1) the traditional *green box* of in-kind aid to general agricultural services benefitting to farmers collectively:



It is interesting to underscore that several international reports have underlined the usefulness or even the necessity to internalize in the domestic market prices the subsidies allocated to the corresponding products.

The OECD has done it in a report of 2011 where the concept of domestic prices is defined as "*producer prices plus payments linked to the production of a specific commodity*"<sup>16</sup>. A concept that we propose to define as "comprehensive farm price" or, more simply, "total price". However interesting this OECD approach might be it is too restrictive and biased because it does not incorporate the decoupled subsidies that have substituted more and more coupled subsidies since 1998 in the US and 2005 in the EU.

However a FAPRI<sup>17</sup> Report of October 2013 assessing the two Farm Bills adopted in 2013 by the House of Representatives and the Senate presents tables of the expected "*average crop revenue in dollars per acre*"<sup>18</sup> for several crops for the period 2014-18. In these tables the expected subsidies – only coupled ones in the future as the two Bills have eliminated the fixed direct payments – are added to market sales, which, divided by the yield per acre, gives the comprehensive price per crop, although FAPRI does not use this concept but that of "revenue per acre". And FAPRI expects that they would increase by 9% for rice and 6.6 % for wheat over the period 2014-18, compared to the expected price if the current Farm Bill were not to change.

A World Bank paper of November 2008 written by one of the most prominent free-trade agricultural economist, Kim Anderson, together with Signe Nelgen, incorporates also the decoupled subsidies in their indicator of agricultural prices distortion – the NRA [nominal rate of assistance] – when they write: "*With this dollar value of decoupled payments, the NRA can be calculated by dividing the result by the value of production at undistorted prices. Since the decoupled part of support in agriculture is steadily increasing in high-income countries, it is of particular importance to integrate this part of support, even though it is less market- and resource-distorting than other distortion measures*"<sup>19</sup>.

In fact the USDA has always used implicitly although extensively the concept of total price through the use of the CCC (Commodity Credit Corporation) concept of "Net Budgetary Expenditures per Commodity"<sup>20</sup>. To the contrary the European Commission has always hidden the alleged fully decoupled SPS (Single Payment Scheme) and obliged the OECD to

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agricultural infrastructures, schools, research, agri-environment, calamities, phytosanitary warnings, etc.); 2) the *green box* of decoupled income support in place in the US since 1999 and in the EU since 2005 where farmers continue to receive the average amount of blue box direct payments received in 2000-02 without being obliged to produce anything or being allowed to produce other products than those having benefitted of blue payments.

<sup>16</sup> Jean-Pierre Butault, *Evolution of Agricultural Support in Real Terms in OECD Countries and Emerging Economies*, OECD, 2011, <http://www.oecd-ilibrary.org/docserver/download/5kgkdgf25x20.pdf?expires=1385386110&id=id&accname=guest&checksum=476FE82E1A92E7409C7AAE4E85F48958>

<sup>17</sup> US Research Center dependent from the US government.

<sup>18</sup> [http://www.fapri.missouri.edu/outreach/publications/2013/FAPRI\\_MU\\_Report\\_06\\_13.pdf](http://www.fapri.missouri.edu/outreach/publications/2013/FAPRI_MU_Report_06_13.pdf)

<sup>19</sup> Kim Anderson and Signe Nelgen, "*Estimates of Distortions to Agricultural Incentives, 1955-2011*", updated in June 2013, [http://siteresources.worldbank.org/INTRES/Resources/469232-1107449512766/Note\\_summarizing\\_core\\_updated\\_database\\_0613.pdf](http://siteresources.worldbank.org/INTRES/Resources/469232-1107449512766/Note_summarizing_core_updated_database_0613.pdf); *Distortions to agricultural incentives in Asia*,

<http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:21960058~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html>

<sup>20</sup> [http://www.fsa.usda.gov/Internet/FSA\\_File/pb12\\_tbl35.pdf](http://www.fsa.usda.gov/Internet/FSA_File/pb12_tbl35.pdf);

<http://www.fsa.usda.gov/FSA/webapp?area=about&subject=landing&topic=bap-bu-cc>

change in 2007 the way it presents its indicators of agricultural supports, particularly the PSE (Producer Support Estimate), – differentiating the supports which are commodity specific from those which are not –, the hidden objective being clearly to accredit the idea that the US and EU decoupled supports are rightly notified in the WTO green box as non-trade distorting.

Thus the annual OECD report of 2007 on "Agricultural Policies in OECD, Monitoring and Evaluation " presents the new methodology of agricultural support indicators: *"The total PSE will no longer be broken down into commodities. Instead the total PSE is broken down into four categories reflecting the flexibility given to farmers' production decisions within the various policy measures. These categories are: Single Commodity Transfers (SCT): the annual monetary value of gross transfers from policies linked to the production of a single commodity such that the producer must produce the designated commodity in order to receive the transfer; Group Commodity Transfers (GCT): the annual monetary value of gross transfers from policies whose payments are made on the basis that one or more of a designated list of commodities is produced; All Commodity Transfers (ACT): the annual monetary value of gross transfers from policies that place no restrictions on the commodity produced but require the recipient to produce some commodity of their choice; Other Transfers to Producers (OTP): the annual monetary value of gross transfers made under policies that do not fall in the above three cases (SCT, GCT, ACT). That is, transfers that do not require any commodity production at all"*.

The worst is clearly the change in the CAP (Common Agricultural Policy) indicators of support where the overwhelming weight of the SPS in total subsidies, together with the elimination of the product specific Common Market Organizations (CMOs) replaced by the "single CMO" since 2007, have totally darkened the comprehension of the CAP policy.

However, already in a meeting of 28-29 June 2001 of the WTO Committee on agriculture, the EU Commission admitted, reluctantly, to respond to an Argentina's request on the total level of support to cereals since the CAP reform of 1992: *"For the sake of transparency, the EC gave information on the support for cereals decided in the marketing year 1992... Since marketing year 1995/96, there had been one single intervention price for cereals, 119.19 Euro per tonne, while the compensatory payment for cereals had been 54.34 Euro per tonne. Following the decisions taken as part of Agenda 2000, these aid amounts have been decreased to 101.31 Euro per tonne for the cereal intervention price (CR 1253/99, refers) and 63 Euro per tonne for the compensatory amount (CR 1251/99, refers). These amounts would apply from the marketing year 2002/2003 onwards. Since marketing year 1992, the total level of support, taking into account both the intervention price and the compensatory aid, had clearly decreased"*<sup>21</sup>.

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<sup>21</sup> [http://www.wto.org/english/tratop\\_e/agric\\_e/ag\\_work\\_e.htm](http://www.wto.org/english/tratop_e/agric_e/ag_work_e.htm)

## **II – Assessment of US total prices of rice and wheat from 1986-88 to 2012**

We will assess first the total domestic prices before the total prices of the exported rice and wheat.

### **2.1 – The US total domestic price of rice and wheat**

Let us come back to the US old practice to present the "Net Budgetary Expenditures per Commodity" either in details or in total, namely in the following publications: History of Budgetary Expenditures of the Commodity Credit Corporation (Book 2 for 1980-89, Book 3 for 1990-99, Book 4 for 2001-03) and Commodity Estimates e-book<sup>22</sup>.

The CCC outlays for wheat and rice (and other grains) were essentially based on two types of administered prices, or minimum support prices:

- the first type – the loan rate – might trigger CCC procurement and building up of stocks which are then released either on the domestic market (including for domestic food aid) or on the world market (dumping or foreign food aid);
- the second type – the target price – was also a minimum price not triggering public procurement but a complementary subsidy, at the end of the marketing year, covering the gap between the target price and the higher of the loan rate or the average market price. This second type was called "deficiency payment" before 1996.

According to a USDA report of July 1999, "*Wheat carryover stocks reached levels greater than 1 billion bushels [27.2 million tonnes] between 1981 and 1987, with ending stocks representing an average of 62 percent of annual use. Many of these stocks were in the Farmer-Owned Reserve (FOR) or held by the Commodity Credit Corporation (CCC)... Rather than repaying the loan, the farmer could choose instead to default on the loan at the end of the 9-month loan period, keeping the loan money and forfeiting ownership of the loan collateral (the grain) to the Government... Government-owned stocks of wheat rose to almost 200 million bushels [5.4 million tonnes], representing 8 percent of annual use. Stocks owned by the Government have historically influenced corn and wheat prices because these stocks have generally not been readily accessible to the marketplace*"<sup>23</sup>. And Sumner and Josling add: "*The operation of the loan rate system was based on the notion that a farmer can walk away from a loan, allowing the CCC to take title to the grain. Thus, the loan rate became a floor price in the market. The CCC acquired stocks through this "takeover" process that can then, be stored, disposed of on the domestic market, or exported on commercial or concessional terms. In addition, the CCC can purchase stocks directly in the market to support prices... As with the payments to farmers, the stocks peaked in the 1980s, at the time of depressed world prices. Wheat stocks were valued at \$3.5 billion in 1986*"<sup>24</sup>. Consequently in that period a considerable amount of CCC expenditures were also devoted to storage costs.

However the CCC data on agricultural subsidies do not take into account several important measures, the main one being the subsidies to crop insurance which have become in the last

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<sup>22</sup> [http://www.fsa.usda.gov/Internet/FSA\\_File/pb14\\_commodity\\_estimates.pdf](http://www.fsa.usda.gov/Internet/FSA_File/pb14_commodity_estimates.pdf);

[http://www.fsa.usda.gov/Internet/FSA\\_File/pb12\\_commodity\\_estimates.pdf](http://www.fsa.usda.gov/Internet/FSA_File/pb12_commodity_estimates.pdf);

[http://www.fsa.usda.gov/Internet/FSA\\_File/pb10\\_commodity\\_estimates.pdf](http://www.fsa.usda.gov/Internet/FSA_File/pb10_commodity_estimates.pdf)

<sup>23</sup> *Price Determination for Corn and Wheat: The Role of Market Factors and Government Programs*, <http://usda01.library.cornell.edu/usda/ers/cornwheatprices/tb1878.pdf>

<sup>24</sup> Dan Sumner and Tim Josling, *The Role of the State in Agricultural Trade in North America: The U.S. Commodity Credit Corporation as a Government Actor in the North American Market for Grains*, 2000, <http://aic.ucdavis.edu/oa/steccc.pdf>

years by far the dominant subsidies, but also some significant subsidies largely undernotified in the US non-product-specific AMS, among which those to irrigation and energy. The data on these measures can be found in the last OECD report on the US PSE data base of September 2013<sup>25</sup> which gives the subsidies to insurance premiums per crop per year and the other government costs to insurance for all crops, which allows to multiply the premium subsidies to rice and wheat by the ratio of total government costs on crop insurance to all premium subsidies. However, as US rice is irrigated and yield risks are relatively small compared to input and output price risks, most rice farmers do not use crop insurances.

The OECD report gives also the total energy subsidies, limited to the gasoil used by farmers, that we have allocated to rice and wheat according to the share of their crop production values in the production value of all crops.

As for the irrigation subsidies – for which the US precise figure of \$203.828 million notified for 2010 cannot hide the massive under-notification –, we endorse the conservative estimates of most assessments, including of many reports by the GAO (General Accounting Office), the US Interior Department<sup>26</sup> and Michael Lind<sup>27</sup> that they are at least of \$2 billion annually, the more so as we do not add the electricity subsidy to transport water. David Blanford and David Orden confirm these hugely under-notified irrigation subsidies: "*The United States does not seem to include the subsidies to agricultural irrigators that arise from lower repayment of capital costs based on assessed "ability to pay," with the reduced capital cost charges to farmers being paid instead by hydroelectric power authorities of the projects... No notification is made for subsidies that might exist related to maintenance and operating costs (which irrigators apparently are required to pay), nor for water charges to agriculture that are below charges to other users. No entry is provided concerning preferential charges for electricity used in agriculture, either to move water from its source to farmland or for on-farm use of electricity*"<sup>28</sup>. Then, given the 91,956,721 total acre-feet<sup>29</sup> of applied irrigation water in the irrigation census of 2008, the \$2 billion of total subsidies imply an average subsidy of \$21.7 per acre-foot. Given that the US rice is totally irrigated with an average 3.34 acre-feet of water per acre of rice, we apply this 3.34 acre-feet to the evolution of rice acres from 1986-88 to 2012 and then multiply the annual acre-feet by \$21.7 to get the annual irrigation subsidies to rice. But 35.8% of the wheat acreage – 4.107 million acres on a total of 11.469 million acres – was also irrigated in 2008, with 1.4 acre-foot of water per acre. But, as we do not have the share of the wheat acreage irrigated each year since 1986-88, we assume that this share remained constant, leading to annual irrigation subsidies of \$126 million.

We can then derive the following tables and graphs on the evolution of the total subsidies to the US rice and wheat from 1986-88 to 2012 and their total farm price composed of the annual market price plus the annual subsidy per tonne.

### **2.1.1 – The US total domestic price of rice**

Tables 7 to 10 show that the US domestic rice subsidies have reached an annual average of 128 \$/t from 1986 to 1999, 171 \$/t from 2000 to 2004 and then have dropped to 80 \$/t on

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<sup>25</sup> <http://www.oecd.org/tad/agricultural-policies/producerandconsumerssupportestimatesdatabase.htm>

<sup>26</sup> <http://wingolog.org/writings/water/html/node89.html>

<sup>27</sup> Michel Lind, *The New Continental Divide*, New America Foundation, The Atlantic Monthly, February 1, 2003 ([http://www.newamerica.net/publications/articles/2003/the\\_new\\_continental\\_divide](http://www.newamerica.net/publications/articles/2003/the_new_continental_divide))

<sup>28</sup> David Blanford and David Orden, *United States: Shadow WTO Agricultural Domestic. Support Notifications*, [www.ifpri.org/PUBS/dp/IFPRIDP00821.pdf](http://www.ifpri.org/PUBS/dp/IFPRIDP00821.pdf)

<sup>29</sup> An acre-foot is the volume of one acre of surface area to a depth of one foot, or 1233.4 cubic meters.

average from 2005 to 2012. This evolution was in line with that of the farm price which fell from an average of 167.7 \$/t from 1986-88 to 1999 to 131.4 \$/t from 2000 to 2004 before jumping to an average of 286 \$/t from 2005 to 2012. Thus the average weight of subsidies in the total price of rice rose from 42.7% from 1986-88 to 1999 to 56.5% from 2000 to 2004 before collapsing to 21.8% from 2005 to 2012. This shows clearly the anti-cyclical nature of the US subsidies, which is totally logical, contrary to the EU practice of maintaining the same level of the alleged decoupled payments independently of the market price level.

Table 7 – The US main domestic subsidies to rice from 1986 to 1999, in \$ million

\$ million	1986	1987	1988	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
CCC payments	947	906	128	660	631	667	867	715	887	836	814	499	459	491	911
Crop insurance	2	3	6	5	8	15	32	15	13	0	3	-1	7	12	43
Energy subsid;	20	32	37	30	34	31	36	29	35	33	37	38	40	43	34
Irrigation subsid	171	169	210	183	195	205	202	227	205	240	224	203	225	236	255
Total subsidies	1140	1112	381	878	868	918	1137	986	1140	1109	1078	739	731	782	1243
Product <sup>c</sup> : 1000t	6049	5879	7253	6394	7008	7080	7229	8149	7081	8971	7887	7784	8301	8366	9345
Subsidy \$/t	188	189	53	137	124	130	157	121	161	124	137	95	88	93	133

Table 8 – The US main domestic subsidies to rice from 2000 to 2012, in \$ million

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
CCC payments	1774	1423	1085	1279	1130	473	605	337	301	411	535	364	396
Crop insurance	3	11	10	17	2	18	21	1	41	61	92	43	59
Energy subsidies	29	25	24	36	38	39	38	36	49	48	39	30	31
Irrigation subsidies	220	240	232	217	241	244	204	199	216	225	262	290	294
Total subsidies	2026	1699	1351	1549	1411	774	868	573	607	745	928	727	780
Production: M tonnes	8658	9765	9569	9067	10540	10108	8826	8999	9241	9972	11027	8289	9048
Subsidies in \$/t	234	174	141	171	134	77	98	64	66	75	84	88	86

US rice subsidies in \$ million: 1986-88 to 2012

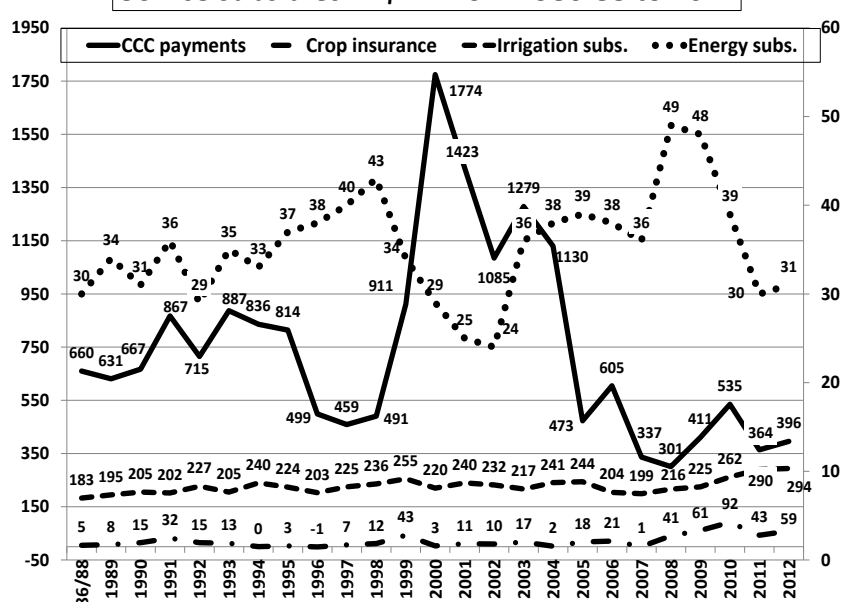
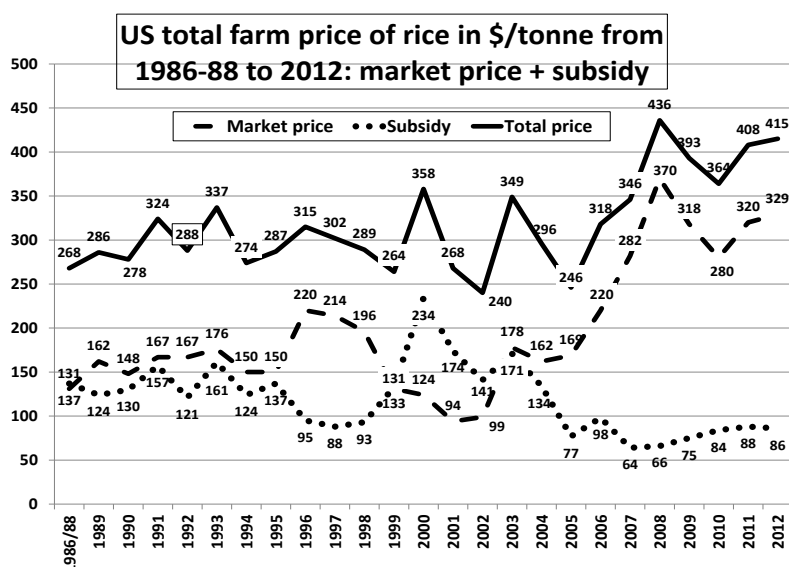


Table 9 – The US total domestic price of rice from 1986-88 to 1999, in \$ million

\$ million	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Farm price	131	162	148	167	167	176	150	150	220	214	196	131
Subsidy	137	124	130	157	121	161	124	137	95	88	93	133
Total price	268	286	278	324	288	337	274	287	315	302	289	264
Subsidy/total price	51.1%	43.4%	46.8%	48.5%	42%	47.8%	45.3%	47.7%	30.2%	29.1%	32.2%	50.4%

Table 10 – The US total domestic price of rice from 2000 to 2012, in \$ million

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Farm price	124	94	99	178	162	169	220	282	370	318	280	320	329
Subsidy	234	174	141	171	134	77	98	64	66	75	84	88	86
Total price	358	268	240	349	296	246	318	346	436	393	364	408	415
Subsidy/total price	65.4%	64.9%	58.8%	49%	45.3%	31.3%	30.8%	18.5%	15.1%	19.1%	23.1%	21.6%	20.7%



The evolution of the US total farm price of rice can be compared with that of the Indian rice MSP from 1986 to 2012, that the above analysis has shown to be close to the average farm price at harvest time. Table 11 shows that, on average from 1986-88 to 1999 the Indian rice MSP has been lower than the US farm price by 4.2% and lower than the US total farm price by 45.1%. And table 12 shows that if, from 2000 to 2012, the Indian MSP has exceeded the US farm price by 5.6% it has been lower than the US total price by 29.9%. More precisely, from 2000 to 2004 the Indian rice MSP has exceeded the US farm price by 33% but has been lower than the US total price by 42.2%. And, from 2004 to 2012, the Indian rice MSP has been lower than the US farm price by 2.2% but lower than the US total price by 23.5%.

Table 11 – US total domestic price of rice and Indian rice MSP from 1986-88 to 1999, in \$/tonne

\$ per tonne	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Farm price	131	162	148	167	167	176	150	150	220	214	196	131
Total price	268	286	278	324	288	337	274	287	315	302	289	264
Indian rice MSP	172	168,3	173,2	142,4	133,5	149,7	164,1	163	162,1	169,2	158,5	171,4

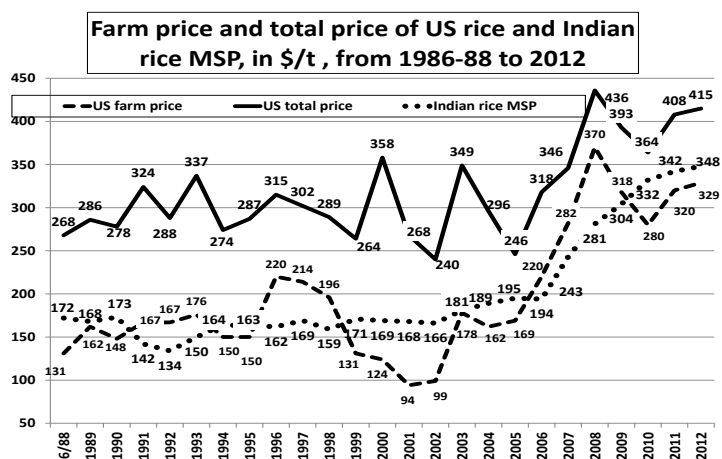


Table 12 – US total domestic price of rice and Indian rice MSP from 2000 to 2012, in \$/tonne

\$ per tonne	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
US Farm price	124	94	99	178	162	169	220	282	370	318	280	320	329
US total price	358	268	240	349	296	246	318	346	436	393	364	408	415
Indian rice MSP	169,1	168,3	165,9	181,4	188,8	195,2	194,1	242,9	280,5	303,6	331,8	341,5	348

### 2.1.2 – The US total domestic price of wheat

Somewhat different observations can be made for the evolution of the US domestic subsidies to wheat (tables 13 to 16). The US domestic wheat subsidies have reached an annual average of 41.8 \$/t from 1986 to 1999, 56.3 \$/t from 2000 to 2004 and then have dropped to 43.3 \$/t on average from 2005 to 2012. On the other hand the farm price rose slightly from an average of 103.9 \$/t from 1986-88 to 1999 to 115.9 \$/t from 2000 to 2004 before jumping to an average of 213.8 \$/t from 2005 to 2012. Thus the average weight of subsidies in the total price of rice rose from 23% from 1986-88 to 1999 to 32.7% from 2000 to 2004 before collapsing to 16.8% from 2005 to 2012. This shows again the globally anti-cyclical nature of the US subsidies, contrary to the illogical EU practice of maintaining the same level of the alleged decoupled payments independently of the market price level.

Table 13 – The US main domestic subsidies to wheat from 1986 to 1999, in \$ million

\$ million	1986	1987	1988	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
CCC payments	3440	2836	678	2318	53	796	2804	1719	2185	1729	803	1491	1332	2187	3435
Crop insurance	104	44	303	150	297	52	154	188	189	72	162	293	121	17	412
Energy subsidies	199	188	221	203	225	210	178	218	221	197	232	216	189	177	160
Irrigation subsid	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126
Total	3869	3194	1328	2797	701	1184	3262	2251	2721	2124	1323	2126	1768	2507	4133
Prod*1000t	56,864	57,329	49,292	54,495	55,396	74,150	53,860	67,097	65,183	63,131	59,37	61,945	67,496	69,287	62,439
Subsidy \$/t	68	55,7	26,9	51,3	12,7	16	60,6	33,5	41,7	33,6	22,3	34,3	26,2	36,2	66,2

Table 14 – The US main domestic subsidies to wheat from 2000 to 2012, in \$ million

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
CCC payments	5321	2922	1190	1118	1173	1232	1080	729	869	1224	1280	1445	921
Crop insurance	291	603	858	246	492	231	893	610	1705	1594	1255	1064	1663
Energy subsidies	158	146	144	179	165	162	151	191	240	163	160	163	189
Irrigation subsidies	126	126	126	126	126	126	126	126	126	126	126	126	126
Total	5896	3797	2318	1669	1956	1751	2250	1656	2940	3107	2821	2798	2899
Production: M tonnes	60,606	52,971	43,680	63,768	58,665	57,210	49,189	55,790	67,977	60,331	60,028	54,382	61,636
Subsidies in \$/t	97,3	71,7	53,1	26,2	33,3	30,6	45,7	29,7	43,2	51,5	47	51,5	47

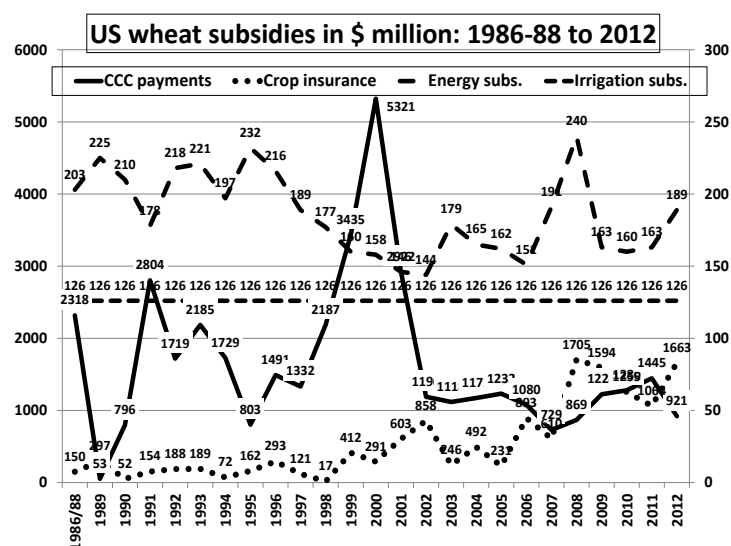
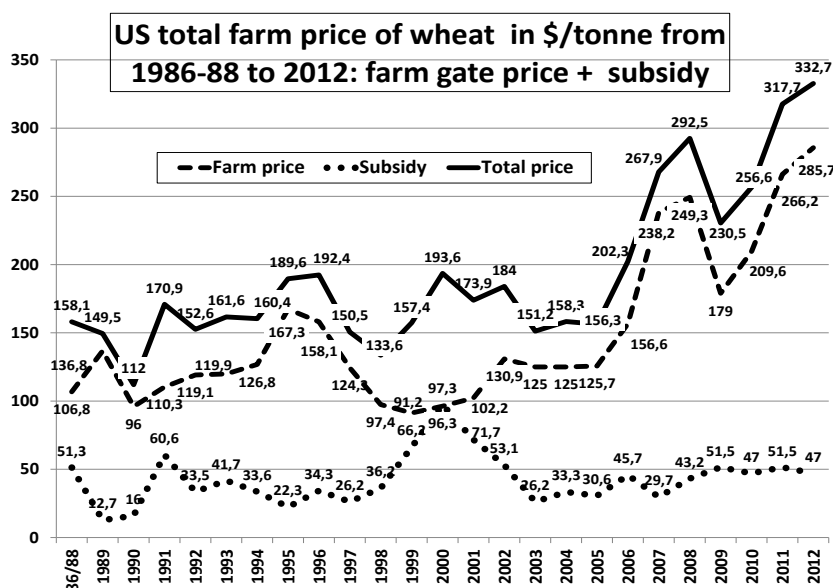


Table 15 – The US total domestic price of wheat from 1986-88 to 1999, in \$ per tonne

	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Farm price	106,8	136,8	96	110,3	119,1	119,9	126,8	167,3	158,1	124,3	97,4	91,2
Subsidy	51,3	12,7	16	60,6	33,5	41,7	33,6	22,3	34,3	26,2	36,2	66,2
Total price	158,1	149,5	112	170,9	152,6	161,6	160,4	189,6	192,4	150,5	133,6	157,4
Subsidy/total price	32,4%	8,5%	14,3%	35,5%	22%	25,8%	20,9%	11,8%	17,8%	17,4%	27,1%	42,1%

Table 16 – The US total domestic price of wheat from 2000 to 2012, in \$ per tonne

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Farm price	96,3	102,2	130,9	125	125	125,7	156,6	238,2	249,3	179	209,6	266,2	285,7
Subsidy	97,3	71,7	53,1	26,2	33,3	30,6	45,7	29,7	43,2	51,5	47	51,5	47
Total price	193,6	173,9	184	151,2	158,3	156,3	202,3	267,9	292,5	230,5	256,6	317,7	332,7
Subsidy/total price	50.3%	41.2%	28.9%	17.3%	21%	19.6%	22.6%	11.1%	14.8%	22.3%	18.3%	16.2%	14.1%



Again this evolution of the US total farm price of wheat can be compared with that of the Indian MSP for wheat from 1986 to 2012, a MSP that the above analysis has shown to be globally lower than the average farm price, at least at harvest time. Table 17 shows that, on average from 1986-88 to 1999 the Indian rice MSP has exceeded by a modest 1.9% the US farm price but has been lower by 21.5% than the US total farm price. And table 18 shows that if, from 2000 to 2012, the Indian wheat MSP has exceeded the US farm price by 7.5% but has been lower than the US total price by 15.6%. More precisely, from 2000 to 2004 the Indian wheat MSP has exceeded the US farm price by 15.8% but has been lower than the US total price by 22.1%. And, from 2004 to 2012, the Indian rice MSP has exceeded the US farm price by 4.7% but has been lower than the US total price by 12.9%.

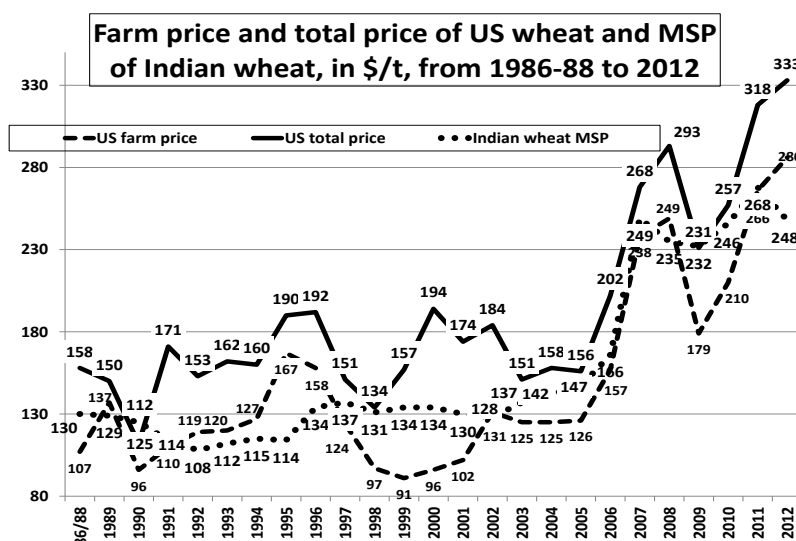




Table 17 – US total domestic price of wheat and Indian wheat MSP from 1986-88 to 1999, in \$/tonne

\$ million	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Farm price	106,8	136,8	96	110,3	119,1	119,9	126,8	167,3	158,1	124,3	97,4	91,2
Total price	158,1	149,5	112	170,9	152,6	161,6	160,4	189,6	192,4	150,5	133,6	157,4
Indian wheat MSP	129,9	129,1	125,4	114,4	107,7	111,6	114,7	113,6	133,8	137,2	130,7	133,9

Table 18 – US total domestic price of wheat and Indian wheat MSP from 2000 to 2012, in \$/tonne

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
US Farm price	96,3	102,2	130,9	125	125	125,7	156,6	238,2	249,3	179	209,6	266,2	285,7
US total price	193,6	173,9	184	151,2	158,3	156,3	202,3	267,9	292,5	230,5	256,6	317,7	332,7
Indian wheat MSP	133,5	130	128,1	137,1	142,4	146,8	165,6	249	235,2	232	245,7	268,1	248,1

A general conclusion is that, for rice and wheat, the Indian MSPs – and most likely the average farm prices – have always been significantly lower, and some years much lower, than the US total price incorporating the product-specific subsidies.

## **2.2 – The US subsidies to its exported wheat and rice from 1986 to 2012**

The data on US subsidies to wheat exports products are much less easy to identify than for domestic subsidies. Let us stress however that these subsidies are only additional to the domestic subsidies which benefit clearly also to the US wheat exports. The US export subsidies can be found in four programmes: EEP (export enhancement program), export credit guarantees, market-access program and non-emergency food aid, all of which has concerned much more wheat than rice.

The data on US subsidies to rice are too limited and those available are insignificant to be useful.

The EEP was only available from 1985 to 1995 but had a huge impact on US wheat competitiveness. According to a FAPRI paper of May 1997, "*EEP has played a major role in exports of many agricultural commodities, particularly wheat, which has accounted for 80 percent of the value of all EEP-assisted sales. Over the period 1985/86 to 1995/96 more than \$5.5 billion were spent on wheat EEP sales... During the last decade, EEP has been applied to an average of 50 to 70 percent of U.S. wheat exports*"<sup>30</sup>. On average from 1986-87 to 1994-95 51.9% of US wheat exports benefitted of an average EEP subsidy of 30.1 \$/tonne, to be compared to the average FOB price of 128.2 \$/tonne, hence an average dumping rate of 22.9% for the EEP subsidies alone (table 19).

Table 19 – The large impact of the EEP the US wheat exports from 1986-87 to 1994-95

\$ million	86/88	1989	1990	1991	1992	1993	1994	1995	Average 1986/94
EEP wheat	497	289	242	768	813	1281	453		620
EEP in 1000 tonnes	15166	16000	14300	17700	19700	21600	18073	570	17506
EEP/tonne	32,8	18,1	16,8	43,2	41,1	33,8	25,1		30,1
Total export 1000 t	36285	33510	29077	34870	36817	33395	32321	33759	33754
EEP % of exports	41,8%	47,8%	49,2%	50,8%	53,5%	64,7%	55,9%	1,7%	46,6%
Wheat FOB price	114,3	161,7	141,1	107,8	132,8	130,9	132,8	168,3	131,6
Dumping rate EEP only	28,7%	11,2%	11,9%	40%	30,9%	25,8%	18,9%		22,9%
Domestic subsidy/tonne	51,3	12,7	16	60,6	33,5	41,7	33,6		35,6
Total subsidy/export ton	84,1	30,8	32,8	103,8	74,6	75,5	58,7		65,7
Total dumping rate	73,6%	19%	23,2%	96,3%	56,2%	57,7%	44,2%		49,9%

But we must add the average domestic subsidy of \$35.6 per exported tonne from 1986-87 to 1994-95 to get the total average subsidy of 65.7 \$/t and the actual dumping rate of 50%. We can also state that the actual total FOB price should incorporate the domestic subsidy so that it

<sup>30</sup> *The Impact of EEP Removal on U.S. Wheat*,  
<http://www.card.iastate.edu/publications/dbs/pdf/files/97bp15.pdf>

would have been on average in that period of \$167.2, and more particularly of \$165.6 in the base period 1986-88.

It has also been estimated that the EEP program alone explained 35% to 40% of the increase in the EU wheat export refunds.

The credit guarantees to agricultural exports of developed countries are an instrument all the more efficient and dangerous for DCs farmers that their national agri-food industries and agricultural traders are very much induced to import rather than to procure the agricultural products from domestic producers as the interest rates they can get from developed countries guaranteed loans are infinitely much lower than those from local banks. The Chairman of the US Soybean producers Association confirmed on 18 July 2000 in a US Senate hearing that : *"Since the suspension of the EEP program of export promotion after 1994, GSM credit is the only governmental program available to help the US agricultural exports to be competitive"*<sup>31</sup>. According to a study of 1999 on fiscal year 1994 by Bruce L. Dahl, William W. Wilson and Cole R. Gustafson, about the subsidy component of the GSM credit guarantees to US wheat exports: *"The value of GSM credit guarantees extended to the base country was \$23.15 per metric ton (mt), or 14.8% of the export value. Adding freight and insurance coverage increases the value of GSM credit guarantees by \$4.12 per mt"*<sup>32</sup>. Yet the US was not the leading subsidizer on wheat export credits: *"The credit guarantee provided by the Canadian Wheat Board had the lowest value (\$12.55/mt), followed by the United States (\$22.61/mt), Australia (\$26.95/mt), and France-COFACE (\$38.55/mt)"*.

We did not find the value of the subsidy component of the GSM on wheat but we can guess it from the quantity of exported wheat having benefitted from the GSM (tables 20 and 21), assuming that the subsidy per tonne remained at the same level of \$23.15. We see a parallel evolution of the amount of export credit subsidies and of the other domestic subsidies: a huge decline in the 2005-10 period, in line with the rise in the wheat price, even if we assumed that the subsidy per tonne remained the same.

Table 20 – The subsidy component of the GSM credits to the US wheat exports: 1989 to 1999

\$ million	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Average
Wheat exports 1000t	33510	29077	34870	36817	33395	32321	33759	27241	28299	28444	29553	31571
" with export credit	7759	8339	13334	8538	5874	4202	5662	4844	5460	3621	3691	6484
% of "	23.2%	28.7%	38.2%	23.2%	17.6%	13%	16.8%	17.8%	19.3%	12.7%	12.5%	20.5%
Subsidy value	179,6	193	308,7	197,7	136	97,3	131,1	112,1	126,4	83,8	85,4	150,1

Source: USDA; <http://ageconsearch.umn.edu/bitstream/30791/1/24020506.pdf>

Table 21 – The subsidy component of the GSM credits to the US wheat exports: 2000 to 2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Av. 2000/10
Wheat export1000t	28888	26175	23126	31505	28993	27276	24711	34343	27619	23917	35127	28335
" with export credit	4026	4614	3633	3791	2554	1052	1008	1360	2691	2078	2797	2691
% of "	13.9%	17.6%	15.7%	12%	8.8%	3.9%	4.1%	4%	9.7%	8.7%	8%	9.5%
Subsidy value	93,2	106,8	84,1	87,8	59,1	24,4	23,3	31,5	62,3	48,1	64,8	62,3

Source: USDA; <http://ageconsearch.umn.edu/bitstream/30791/1/24020506.pdf>

The average annual subsidy declined from \$150.1 million from 1989 to 1999 to \$62.3 million from 2000 to 2010, of which \$42.4 million from 2005 to 2010. We can also assume that the export credit subsidy for 1986-88 was the same as in 1989, of \$179.6 million.

<sup>31</sup> *Testimony before the Subcommittee on Production and price competitiveness*, United States Senate, 18-04-2000, <http://www.gpo.gov/fdsys/pkg/CHRG-106shrg70092/html/CHRG-106shrg70092.htm>

<sup>32</sup> <http://ageconsearch.umn.edu/bitstream/30791/1/24020506.pdf>

Assessing the export subsidy component of the US foreign food aid in wheat is more difficult, particularly because the share of emergency food aid has increased over time, exceeding the non emergency food aid since 2003. Tables 22 and 23 show only partial data on the volume and value of US wheat exports under the various foreign aid programmes, mainly the PL 480. The main criticism to be made to the US foreign food aid is that Congress, under the pressures of agri-business corporations<sup>33</sup>, has refused to promote, or only on an insignificant scale, food aid in cash so as to buy the food in the DCs themselves, which is generally possible even in emergency situations when food could be purchased in neighbouring countries once that logistics (transportation) is also provided. It is what the EU has done largely since 1996.

Table 22 – US wheat export as foreign food aid under Public Law 480: 1986-88 to 1999

\$ million	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
PL 480 for wheat	624	696	553	460	518	371	476	351	357	294	247	195
Wheat aid in 1000 t		3065	3159	2416	4000	3527	1948	1530	1155	1727	5334	3435

Table 23 – Foreign food aid under Public Law 480 for wheat and rice from 2000 to 2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Wheat PL 480: \$ million	190	207	181	325				235	297	266	187		
Wheat aid: 1000 tonnes	3109	2035	2081	1628	2139	1191	961	841	965	901	521		

US wheat exports are also promoted through four small programmes: MAP: Market Access Program; FMDP: Foreign Market Development Program; EMP: Emerging Markets Program; QDSP: Quality Samples Program. These programmes granted \$11.6 million to wheat exports, mainly to finance participation in foreign trade shows. Finally, deleting the subsidy component of the foreign food aid and the small four export promotion programmes, tables 24 and 25 show the dumping rates of wheat exports from 1986-88 to 2012. They were on average of 35.9% from 1986-88 to 1999 and of 22.8% from 2000 to 2012, of which 16.7% from 2005 to 2012. In fact from 2000 to 2012 export subsidies were essentially restricted to domestic subsidies to exports.

Table 24 – Total subsidies to US wheat exports and dumping rate from 1986-88 to 1999

\$ million	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
EEP wheat subsidies	497	289	242	768	813	1281	453					
Wheat export credit	180	180	193	309	198	136	97	131	112	126	84	85
Total export subsidies	677	469	435	1077	1011	1417	550	131	112	126	84	85
Wheat exports: 1000 t	36285	33510	29077	34870	36817	33395	32321	33759	27241	28299	28444	29553
Export subsidy/tonne	18,7	14	15	30,9	27,5	42,4	17	3,9	4,1	4,5	3	2,9
Domestic subsidy/tonne	51,3	12,7	16	60,6	33,5	41,7	33,6	22,3	34,3	26,2	36,2	66,2
Total subsidy/t exported	70	26,7	31	91,5	61	84,1	50,6	26,2	38,4	30,7	39,2	69,1
FOB price	114,3	161,7	141,1	107,8	132,8	130,9	132,8	168,3	231,5	147,8	130,6	121,2
Dumping rate	61.2%	16.5%	22%	84.9%	45.9%	64.2%	38.1%	15.6%	16.6%	20.8%	30%	57%
% of concessional exports		70%	78%	76%	79%	75%	68%	23%	24%	28%	31%	26%

Table 25 – Total subsidies to US wheat exports and dumping rate from 2000 to 2012

\$ million	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Export credit subsidies	93,2	106,8	84,1	87,8	59,1	24,4	23,3	31,5	62,3	48,1	64,8	52,9	50,7
Wheat exports: 1000 t	28888	26175	23126	31505	28993	27276	24711	34343	27619	23917	35127	28589	27400
Export subsidy/tonne	3,2	4,1	3,6	2,8	2	0,9	0,9	0,9	2,2	2	1,8	1,9	1,9
Domestic subsidy/tonne	97,3	71,7	53,1	26,2	33,3	30,6	45,7	29,7	43,2	51,5	47	51,5	47
Total subsidy/t exported	100,5	75,8	56,7	29	35,3	31,5	46,6	30,6	45,4	53,5	48,8	53,4	47
FOB price	123,9	133,8	152,3	157,8	167	163,9	182,3	254,9	377,6	248,3	247,1	341,4	319,4
Dumping rate	81.1%	56.7%	37.2%	18.4%	21.1%	19.2%	25.6%	12%	12%	21.5%	19.7%	15.6%	14.7%
% concessional exports	28%	26%	24%	17%	18%	9%	7%	7%	16%	12%	10%		

However these total subsidies and dumping rates of the US wheat exports are clearly a minimum as we could have taken into account the large volume of wheat and flour processed into other exported products than raw wheat and wheat flour: feed wheat in compound feed,

<sup>33</sup> <http://www.theguardian.com/global-development/2012/jul/18/us-multinationals-control-food-aid>

wheat flour in baked products (bread, biscuits, pastry), pasta, starch, groats and semolinas, wheat malt, wheat gluten, wheat in blended whiskies and vodkas.

We have added a line on the ratio of concessional exports of wheat – encompassing EEP, foreign food aid and export credit – to all wheat exports up to 2010. The figure for 1986-88 is likely at least the same (70%) that in 1989.

As we mentioned above, the subsidies to rice exports are too limited to be taken into account. Thus EEP subsidies to rice were of \$5 million on average in the 1986-88 years, the PL 480 on rice reached an average of \$93 million from 1986-88 to 1999 and of \$64 million from 2000 to 2003 (no figures since 2004) but we have decided not to consider here foreign food aid as actual subsidies for conservative reasons. And the four program of market promotion granted \$4.4 million to rice exports in 2012.

Therefore tables 26 and 27 take only into account the domestic subsidies to assess the US dumping on rice. The US exports have been converted in milled rice equivalent given that the US exports of unmilled (husked or brown) rice are large, particularly to Latin America.

The dumping rate has been of 29.3% on average from 1986-88 to 2012, of which of 35.9% from 1986-88 to 1999, of which of 48.2% in 1986-88, and of 24.7% from 2000 to 2012, of which of 57.2% from 2000 to 2004 and of 14.1% from 2005 to 2012.

Table 26 – The US dumping rate of rice exports from 1986-88 to 1999

\$ per tonne	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Domestic subsidy \$/t	137	124	130	157	121	161	124	137	95	88	93	133
Exports in 1000 t	2352	3013	2429	2199	2138	2635	2781	3045	2596	2259	3065	2609
" in \$ million	667	983	804	756	735	770	1015	997	1031	932	1208	945
FOB price in \$/t	284	326	331	344	344	292	365	327	397	413	394	362
Dumping rate	48,2%	38%	39%	46%	35%	55%	34%	42%	24%	21%	24%	37%

Table 27 – The US dumping rate of rice exports from 2000 to 2012

\$ per tonne	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Domestic subsidy \$/t	234	174	141	171	134	77	98	64	66	75	84	88	86
Exports in 1000 t	2688	2581	3218	3735	3023	3789	3273	2958	3282	2925	3747	3166	3326
" in \$ million	836	717	775	1031	1169	1291	1285	1396	2214	2186	2354	2087	2075
FOB price in \$/t	311	278	241	276	387	341	393	472	675	747	628	659	624
Dumping rate	75%	63%	59%	62%	35%	23%	25%	14%	10%	10%	13%	13%	14%

### **III – The EU total prices and dumping of wheat and rice: 1986-88 to 2012**

The data are for the evolutive EU: EU12 from 1986 to 1994, EU15 from 1995 to 2003, EU25 from 2004 to 2006 and EU27 from 2007 to 2012.

To not overload the paper we have added the EU data on common wheat and durum wheat, the more so as the US and Indian data do not make that distinction. The main domestic subsidies concern, besides the direct aid and that specific to durum wheat, the storage costs and the fuel subsidies. The large value of storage costs is due to the large quantity of public stocks, itself due to the remunerative level of the administered ("intervention") price.

Most data are taken from the EAGGF (European Agricultural Guarantee and Guidance Fund) financial reports, the notifications to WTO, the OECD data of September 2013 on the EU agricultural policy and Eurostat. The fuel subsidies have been allocated to wheat according to the share of wheat in the production value of all crops, which underestimates largely the share of wheat in the total crop area which would have been a better indicator of fuel use.

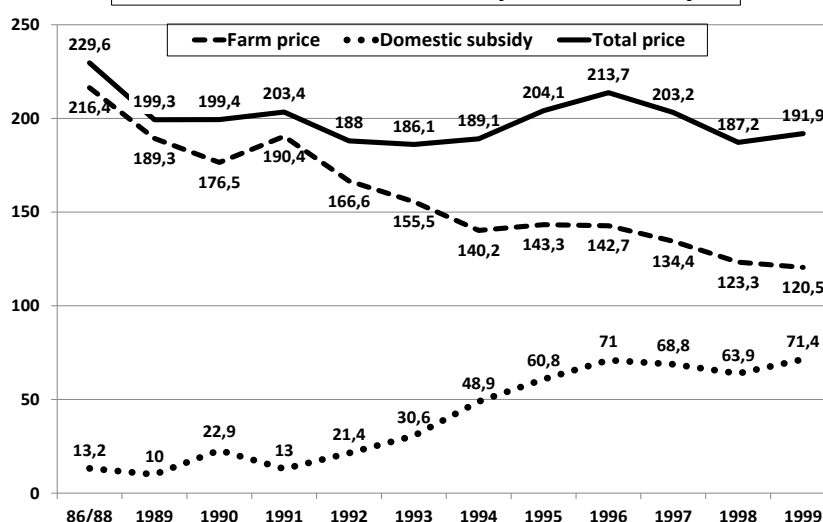
### 3.1 – The EU total domestic price of wheat

Table 28 and the following graph show clearly a continuous decline in the EU domestic farm price from 1986-88 to 1999, decline compensated by the progressive rise in the farm subsidies linked to the CAP reform of 1992 so that the total farm price has remained almost constant.

Table 28 – The total domestic farm prices of EU wheat from 1986-88 to 1999

	1986/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Wheat prod <sup>o</sup> :1000 t	66283	79362	84679	90710	84859	80815	82759	87686	99592	94896	103888	97656
" € million	14345	15020	14944	17273	14138	12565	11606	12571	14209	12753	12811	11770
Farm price	216,4	189,3	176,5	190,4	166,6	155,5	140,2	143,3	142,7	134,4	123,3	120,5
Wheat stocks 1000 t	8136	3883	6564	8818	13076	15259	6292	2312	398	451	2094	5031
Storage costs €M	498	251	1251	515	1200	1473	127	33	-12	5	118	242
Direct aid €M	0	0	0	0	0	0	2815	4174	5812	5324	5316	5416
Aid to durum €M	299	419	516	456	426	817	944	948	1080	1016	993	1006
Fuel subsi/wheat	81	122	175	210	190	182	165	172	196	186	214	311
Total subsidies €M	878	792	1942	1181	1816	2472	4051	5327	7076	6531	6641	6975
" per tonne	13,2	10	22,9	13	21,4	30,6	48,9	60,8	71	68,8	63,9	71,4
Total price	229,6	199,3	199,4	203,4	188	186,1	189,1	204,1	213,7	203,2	187,2	191,9

Total farm price of EU wheat from 1986-88 to 1999 in €/t: domestic farm price + subsidy/t

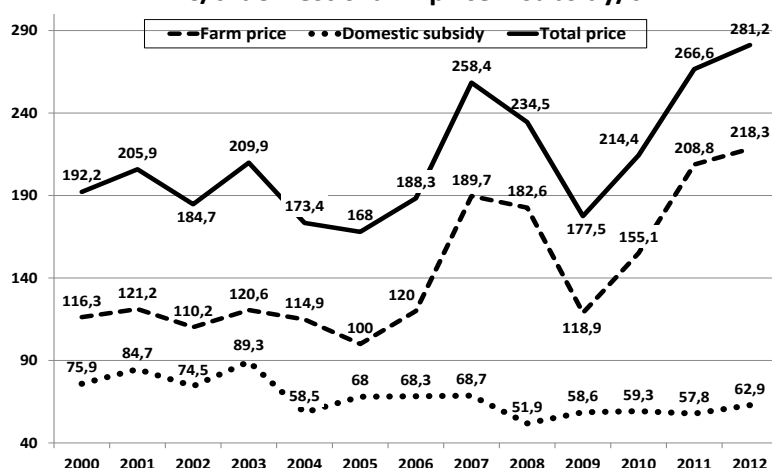


The picture changes in table 29 from 2000 to 2012 when the subsidy per tonne remains almost flat despite the larger rise in the wheat price from 2006, the total farm price following the same path. Converted in euros, the Indian wheat MSP is always much below the EU total price.

Table 29 – The total domestic farm prices of EU wheat from 2000 to 2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Wheat prod <sup>o</sup> : 1000 t	105182	91640	104133	90638	137311	124359	117752	120003	150607	138375	139074	140685	136117
" € million	12230	11106	11479	10934	15782	12442	14136	22765	27503	16452	21566	29379	29712
Farm price	116,3	121,2	110,2	120,6	114,9	100	120	189,7	182,6	118,9	155,1	208,8	218,3
Wheat stocks 1000 t	7814	6684	7874	6722	3479	14638	12184	1370	50	1559	5564	165	9
Storage costs €M	464	185	219	267	45	442	338	-226	-101	24	96	-189	2
Aid durum €M	1074	1242	912	1113	1109	501	138	125	137	128	35	31	35
Wheat direct aid €M	6132	6044	6332	6409	6300	6951	6995	7138	7104	7406	7505	7651	7894
Fuel subsidies €M	311	290	298	305	584	563	570	1213	671	555	611	635	635
Total subsidies €M	7981	7761	7761	8094	8038	8457	8041	8250	7811	8113	8247	8128	8566
" in € per tonne	75,9	84,7	74,5	89,3	58,5	68	68,3	68,7	51,9	58,6	59,3	57,8	62,9
Total price in €/t	192,2	205,9	184,7	209,9	173,4	168	188,3	258,4	234,5	177,5	214,4	266,6	281,2
Indian MSP in euro	144,5	145,2	135,5	121,2	114,5	118	131,9	181,7	159,9	166,3	185,3	192,6	193,1

**Total farm price of EU wheat from 2000 to 2012,  
in €/t: domestic farm price + subsidy/t**



### 3.2 – The EU dumping rate of wheat exports

There are conflicting data on the levels of wheat exports and export subsidies between the EAGGF figures and those notified to the WTO, including in the EU Schedule of commitments of 1994. The main reason is that the notifications to the WTO include the sales at a loss on the world market of a good share of the huge wheat public stocks. Thus the total export subsidies of the 1986-88 period were of \$902 million in the EAGGF reports against €1.908 billion in the Schedule of commitments. Export data in quantity and value come from FAOSTAT up to 2011. The end result has been a huge average dumping rate of 86.8% from 1986-88 to 1999, of which 114.2% in 1986-88.

Table 30 – Total subsidies to EU wheat exports and dumping rate from 1986-88 to 1999

Millions d'€	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Exports : 1000 t	15918	20004	21761	19929	22260	21525	16555	16149	13640	14747	13362	16089
" in €M	1892	2979	2650	1879	2361	2467	1745	2032	2179	2181	1697	1749
FOB price €/t	118,9	148,9	121,8	94,3	106,1	114,6	105,4	125,8	159,7	147,9	127	108,7
Export subsidies €M	1908	1681	1562	2351	2159	2255	773	119	318	178	500	509
" in €/tonne	119,8	84	71,8	118	97	104,8	46,7	7,4	23,3	12,1	37,4	31,6
Dom. subs. in €/t	13,3	10	22,9	13	21,4	30,6	48,9	60,8	71	68,8	63,9	71,4
Total subs./export M€	2120	1881	2060	2610	2635	2914	1583	1101	1286	1193	1354	1658
Total subv./export in €/t	133,1	94	94,7	131	118,4	135,4	95,6	68,2	94,3	80,9	101,3	103
Dumping rate	114,2%	63,1%	77,8%	138,9%	111,6%	118,2%	90,7%	54,2%	59%	54,7%	79,8%	94,8%

Source: FAOSTAT: data in \$ converted in euros ; EAGGF; EU notifications to WTO.

However the export subsidies to wheat have progressively disappeared since 2001 whereas the FOB price has exploded since 2007 so that the average dumping rate was reduced to 42.9% from 2000 to 2012, which is still significant but is essentially due to the domestic subsidies.

Table 31 – Total subsidies to EU wheat exports and dumping rate from 2000 to 2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Exports : 1000 t	15387	12663	12997	13829	11384	12606	15673	10222	19902	22184	23685	18907	15990
" in €M	1938	1831	1840	1822	1687	1558	2045	1958	4651	3630	4114	4631	3975
FOB price €/t	126	144,6	141,6	131,8	148,2	123,6	130,5	191,5	233,7	163,6	173,7	245	248,6
Export subsidies €M	826	260	100	176	72	124	128	42	10	1	0	0	0
" in €/tonne	53,7	20,5	7,7	12,7	6,3	9,8	8,2	4,1	0,5	0	0	0	0
Dom. subv. in €/t	75,9	84,7	74,5	89,3	58,5	68	68,3	68,7	51,9	58,6	59,3	57,8	62,9
Total dom sub/export M€	1168	1073	968	1235	666	857	1070	702	1033	1300	1405	1093	1006
Total subs./export M€	1994	1333	1068	1411	738	981	1198	744	1043	1301	1405	1093	1006
Total subv./export in €/t	129,6	105,2	82,2	102	64,8	77,8	76,5	72,8	52,4	58,6	59,3	57,8	62,9
Dumping rate	102,9%	72,8%	58,1%	77,4%	43,7%	62,9%	58,6%	38%	22,4%	35,8%	34,1%	23,6%	25,3%

However this calculation minimizes the actual larger exports of wheat than just in raw wheat and flour exports, as we have shown for the EU27 cereals exports in 2006, study which took also into account the non-product-specific (NPS) subsidies of the amber box attributable to wheat exports: to agricultural insurance, agricultural loans, rebates on agricultural fuel, to investments on wheat farms<sup>34</sup>. Indeed in 2006 beyond exports of 19.553 Mt of cereals and wheat flour (in wheat equivalent), 7.792 Mt of cereals were exported in processed products, among which from wheat: feed wheat in compound feed, wheat flour in baked products (bread, biscuits, pastry), pasta, starch, groats and semolinas, wheat malt, wheat gluten, wheat in blended whiskies and vodkas.

#### **4.3 – The EU total domestic price of rice and dumping rate**

Rice was produced in 8 EU Member States on 477 000 ha in 2011 where Italy accounted for 51.8%, Spain for 25.6%, Greece+Portugal+France for 17.4%, and Bulgaria, Hungary and Romania for the rest.

Up to 1996-97 the rice regime rested essentially on high farm prices due to high import duties and high intervention prices, which led to huge stocks. The intervention price dropped from €350/t in 1996-97 to €298/t in 1999-00, being compensated by a direct payment of €52.7/t. Then the intervention price was cut in 2005 to €150 by the 2004 reform, the direct payment being raised to €177/t, of which €102/t as a decoupled payment of the SPS for the EU15 Member States (in the SAPS for Bulgaria, Hungary and Romania) and €75 as a coupled payment on a total base area of 400 679 ha, this decoupled payment being eventually put in the SPS and SAPS in 2012. For an eligible area of 397 333 ha in the 2000-02 period with the 2002 yield of 6.6 t/ha, the direct aid transferred to the SPS from 2005 on was €267.5 million. The aid transferred to the SAPS was insignificant for Hungary (3,222 ha) from 2005 to 2006 and was limited to around €2.3 million for Bulgaria, Hungary and Romania from 2007 on.

The EU has always been a net importer of rice, but its exports have represented on average 16% of production from 1986-88 to 1999 but 8.3% only from 2000 to 2012.

From 1986-88 to 1999, export refunds per exported tonne were much higher than domestic subsidies, leading to an average dumping rate of 36.6%, of which 54.7% in 1986-88. This because, for conservative and logical reasons, we have calculated the dumping for 1986-88 based on the export volume of Faostat (423,000 t) and not on that notified at the WTO in the EU Schedule of commitments (202,600 t) as the volume having benefitted from refunds, in which case the dumping rate would have been of 113.4% in those years.

To the contrary export refunds shrunk from 2000 to 2005 and disappeared since 2006 whereas rice direct payments increased dramatically. But the spike in FOB prices could not prevent a sharp fall in the dumping rate since 2006.

Given the small level of domestic subsidies from 1986-88 to 1999, it is not useful to present a graph of the total farm price, but it becomes relevant from 2000 to 2012. We did not try to add such subsidies as on irrigation or insurance although they are significant in Spain and Italy.

Tables 32 and 33 show also that the EU total rice price has always largely exceeded the Indian rice MSP converted in euros.

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<sup>34</sup> <http://www.solidarite.asso.fr/IMG/pdf/The-dumping-rate-of-the-UE-27-exported-cereals-in-2006.pdf>

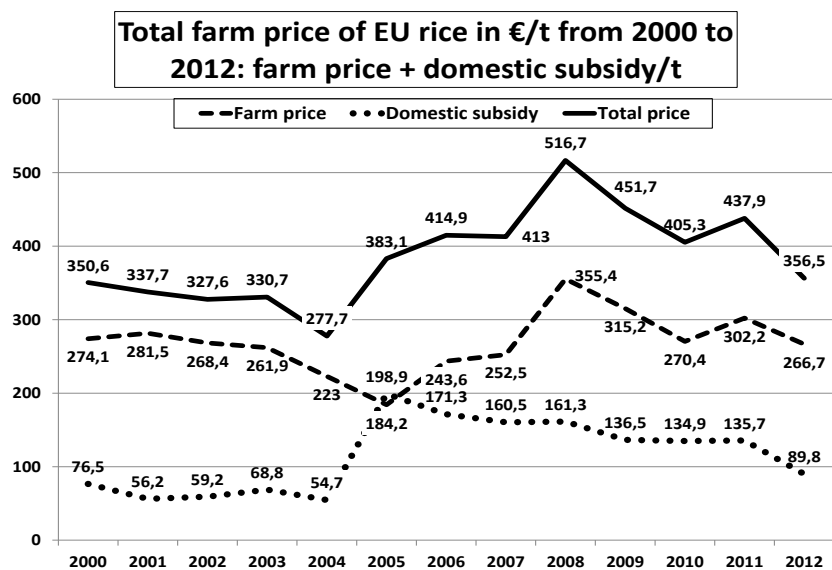
Table 32 – The total domestic farm prices of EU rice from 1986-88 to 1999

	1986/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Rice prod*:1000 t	1932	1944	2238	2193	2174	1946	2155	2110	2616	2800	2670	2675
* € million	766	743	767	759	747	618	773	757	957	889	781	753
Farm price €/t	344,7	382,4	342,8	346	343,6	317,8	358,7	358,8	365,8	317,3	292,7	281,5
Rice payments €M										41	41	82
Storage costs €M	0	0	35,7	21,5	-22,7	0	0	0	0	18	62	45
Other interventions	5,3	45,2	56	34	18	13	4	0				8
Total domestic subs.	5,3	45,2	91,7	55,5	-4,7	13	4	0	0	59	103	135
* €/t	2,7	23,3	41	25,3	0	6,7	1,9	0	0	21,1	38,6	50,5
Dom. Subs/export €M	1,1	9,2	15,3	12,5	0	1,7	0,6	0	0	7,9	13,5	18,2
Total rice price	347,4	405,7	383,8	371,3	343,6	324,5	360,6	358,8	365,8	338,4	331,3	332
Indian MSP in €/t			302	300,3	264	273,9	300	269,3	283,5	299,1	297,2	311,5
Rice exports €M	121,8	161,2	141,6	193,2	184,6	103,7	139,4	124,7	143,1	149,8	154	169,6
* 1000 t	423	394	372	495	493	249	340	325	317	373	351	361
FOB price €/t	361,8	408,8	380,8	390,8	374,2	417,3	409,7	383,8	451,7	401,9	439,3	469,2
Export refunds €M	82,6	45,3	29,1	77,8	66	29	19	49	33	64	50	30
* € per exported tonne	195,3	115	78,2	157,2	133,9	116,5	55,9	150,8	104,1	171,6	142,5	83,1
Total sub/exports €M	83,7	54,5	44,4	90,3	66	30,7	19,6	49	33	71,9	63,5	48,2
Total sub/exported t	197,8	138,3	119,2	182,5	133,9	123,2	57,8	150,8	104,1	192,7	181,1	133,6
Dumping rate	54,7%	33,8%	31,3%	49,7%	35,8%	29,5%	14,1%	39,3%	23%	47,9%	41,2%	28,5%

\* The export quantity is taken from Faostat for 1986 and 1987, those of Eurostat begin only in 1988

Table 33 – Total domestic farm price of EU rice from 2000 to 2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Rice prod*: 1000 t	2485	2545	2620	2702	2888	2670	2574	2729	2690	3217	3143	3117	3062
* € million	681	716	703	708	644	492	627	689	956	1014	850	942	817
Farm price	274,1	281,5	268,4	261,9	223	184,2	243,6	252,5	355,4	315,2	270,4	302,2	266,7
Coupled aid €M	124	113	117	110	110	261	173	168	164	169	154	153	5
Decoupled aid €M	0	0	0	0	0	268	268	270	270	270	270	270	270
Storage 1000 t	703	620	582	700	605	297	62	0					
Storage €M	66	30	38	76	48	2							
Total dom subs. €M	190	143	155	186	158	531	441	438	434	439	424	423	275
* in €/t	76,5	56,2	59,2	68,8	54,7	198,9	171,3	160,5	161,3	136,5	134,9	135,7	89,8
Total rice price	350,6	337,7	327,6	330,7	277,7	383,1	414,9	413	516,7	451,7	405,3	437,9	356,5
Indian MSP in €/t	183,1	187,9	175,4	160,4	151,8	156,9	154,6	177,2	190,7	217,7	250,3	245,3	270,9
Rice exports €M	145,8	110,3	151,9	124,9	89,7	96,8	85	88,5	130,6	123,2	174,2	169,5	149,1
* 1000 t	313,6	245,2	360,9	320,9	195,3	204,6	146,2	141,3	159,5	158,2	310,9	256,3	209,7
FOB price €/t	464,8	449,9	421	389,3	459,3	473,1	581,7	626,2	818,9	778,6	560,3	661,2	710,7
Export refunds €M	38	39	41	38	22	7							
* € per exported t	121,2	159,1	113,6	118,4	112,6	34,2							
Total exp. sub/t	197,7	215,3	172,8	187,2	167,3	233,1	171,3	160,5	161,3	136,5	134,9	135,7	89,8
Dumping rate	42,5%	47,9%	41%	48,1%	36,4%	49,3%	29,4%	25,6%	19,7%	17,5%	24,1%	20,5%	12,6%





## IV – The combined US+EU dumping rate of wheat and rice: 1986-88/2012

### 4.1 – The combined US+EU dumping rate of wheat

Tables 34 and 35 show that the combined dumping rate of the US+EU wheat exports – ratio of the combined total subsidies, domestic and to exports, per exported tonne to the combined FOB price – has fallen from 63.9% from 1986-88 to 1999, of which 82% in 1986-88, to 29.7% from 2000 to 2012, of which 23% from 2005 to 2012, due to the spike in wheat prices and the disappearance of export subsidies.

Table 34 – The combined dumping rate of US+EU wheat exports from 1986-88 to 1999

\$ million	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
US exports: 1000 t	36285	33510	29077	34870	36817	33395	32321	33759	27241	28299	28444	29553
EU exports: 1000 t	15918	20004	21761	19929	22260	21525	16555	16149	13640	14747	13362	16089
US+EU exp 1000 t	52203	53514	50838	54799	59077	54920	48876	49908	40881	43046	41806	45642
EU exports: €M	1892	2979	2650	1879	2361	2467	1745	2032	2179	2181	1697	1749
\$/€ exchange rate	1,10	1,10	1,27	1,24	1,30	1,17	1,19	1,31	1,27	1,13	1,12	1,07
EU wheat exp \$M	2081	3277	3366	2330	3069	2886	2077	2662	2767	2465	1901	1871
US wheat exp \$M	3849	6187	4074	3540	4690	4879	4277	5699	6457	4322	3843	3747
EU+US exports \$M	5930	9464	7440	5870	7759	7765	6354	8361	9224	6787	5744	5618
US+EU FOB price	113,6	176,9	146,3	107,1	131,3	141,4	130	167,5	225,6	157,7	137,4	123,1
US total export subsidies	677	469	435	1077	1011	1417	550	131	112	126	84	85
EU " in €M	1908	1681	1562	2351	2159	2255	773	119	318	178	500	509
EU " in \$M	2099	1849	1984	2915	2807	2638	9207	156	404	201	560	545
US+EU exp subs \$M	2776	2318	2419	3992	3818	4055	9757	287	516	327	644	630
" \$ per tonne	53,2	43,3	47,6	72,8	64,6	73,8	20	5,8	12,6	7,6	15,4	13,8
US Domestic subsidy/t	51,3	12,7	16	60,6	33,5	41,7	33,6	22,3	34,3	26,2	36,2	66,2
Total " to US exports \$M	1861	426	465	2113	1233	1393	1086	753	934	741	1030	1956
EU dom sub./t	13,3	10	22,9	13	21,4	30,6	48,9	60,8	71	68,8	63,9	71,4
EU dom sub/export €M	212	200	498	259	476	659	810	982	968	1015	854	1149
" \$M	233	220	633	321	619	771	963	1286	1230	1146	956	1229
US+EU total dom sub/exp	2094	646	1098	2434	1852	2164	2049	2039	2164	1887	1986	3185
" per exported tonne	40	12,1	21,6	44,4	31,3	39,4	41,9	40,9	52,9	43,8	47,5	69,8
Total subsidy/exported t	93,2	55,4	69,2	117,2	95,9	113,2	61,9	46,7	65,5	51,4	62,9	83,6
Dumping rate	82%	31,3%	47,3%	109,4%	73%	80,1%	47,6%	27,9%	29%	32,6%	45,8%	67,9%

Table 35 – The combined dumping rate of US+EU wheat exports from 2000 to 2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
US exports: 1000 t	28888	26175	23126	31505	28993	27276	24711	34343	27619	23917	35127	28589	27400
EU exports: 1000 t	15387	12663	12997	13829	11384	12606	15673	10222	19902	22184	23685	18907	15990
US+EU exp 1000 t	44275	38838	36123	45334	40377	39882	40384	44565	47521	46101	58812	47496	43390
US wheat exp \$M	3525	3503	3780	4043	5255	4438	4285	8480	11455	5519	6898	11298	8317
EU exports €M	1938	1831	1840	1822	1687	1558	2045	1958	4651	3630	4114	4631	3975
Exchange rate \$/€	0,9236	0,8956	0,9456	1,1312	1,2439	1,2441	1,2556	1,3705	1,4708	1,3948	1,3257	1,392	1,2848
EU export in \$M	1790	1640	1740	2061	2098	1938	2568	2683	6841	5063	5454	6446	5107
EU+UE exports \$M	5315	5143	5520	6104	7353	6376	6853	11163	18296	10582	12352	17744	13424
FOB price US+EU	120	116,2	124,7	137,9	166,1	144	154,8	252,1	413,2	239	278,9	400,7	303,1
US export subs \$M	93,2	106,8	84,1	87,8	59,1	24,4	23,3	31,5	62,3	48,1	64,8	52,9	50,7
EU " €M	826	260	100	176	72	124	128	42	10	1	0	0	0
" \$M	762,9	232,9	94,6	199,1	89,6	154,3	160,7	57,6	14,7	1,4	0	0	0
US+EU exp subs \$M	856,1	339,7	178,7	286,9	148,7	178,7	184	89,1	77	49,5	64,8	52,9	50,7
" per tonne	19,3	8,7	4,9	6,3	3,7	4,5	4,6	2	1,6	1,1	1,1	1,1	1,2
US exp subs/t	3,2	4,1	3,6	2,8	2	0,9	0,9	0,9	2,2	2	1,8	1,9	1,9
US dom subs \$/t	97,3	71,7	53,1	26,2	33,3	30,6	45,7	29,7	43,2	51,5	47	51,5	47
" total dom/exports \$M	2903	1984	1311	914	1023	859	1152	1051	1254	1280	1714	1527	1340
EU dom sub €/t	75,9	84,7	74,5	89,3	58,5	68	68,3	68,7	51,9	58,6	59,3	57,8	62,9
" total EU/exports €M	1168	771	723	968	496	686	894	580	943	1210	1322	1013	1006
" total EU/exports \$M	1079	961	916	1397	828	1066	1344	962	1519	1813	1862	1521	1292
Sub inter EU+UE/exp	3982	2945	2227	2311	1851	1925	2496	2013	2773	3093	3576	3048	2632
" per exported tonne \$/t	89,9	75,8	61,7	51	45,8	48,3	61,8	45,2	58,4	67,1	60,8	64,2	60,7
Tot sub/exported t \$/t	109,2	84,5	66,6	57,3	49,5	52,8	66,4	47,2	60	68,2	61,9	65,3	61,9
Dumping rate	91%	72,7%	53,4%	41,6%	29,8%	36,7%	42,9%	18,7%	14,5%	28,5%	22,2%	16,3%	20,4%

## 4.2 – The combined US+EU dumping rate of rice

Tables 36 and 37 show that the combined dumping rate of the US+EU rice has fallen from 35.9% from 1986-88 to 1999, of which 51.7% from 1986 to 1988, to 24.1% from 2000 to 2012, of which 13.5% from 2005 to 2012, due to the spike in rice prices and the disappearance of export subsidies.

Table 36 – The US+EU combined dumping rate of rice exports from 1986-88 to 1999

\$ per tonne	86/88	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
US exports in 1000 t	2352	3013	2429	2199	2138	2635	2781	3045	2596	2259	3065	2609
EU "	337	394	372	495	493	249	340	325	317	373	351	361
US+EU "	2689	3407	2801	2694	2631	2884	3121	3370	2913	2632	3416	2970
US exports in \$M	667	983	804	756	735	770	1015	997	1031	932	1208	945
EU " in €M	121,8	161,2	141,6	193,2	184,6	103,7	139,4	124,7	143,1	149,8	154	169,6
" in \$M	134	177,3	179,8	239,6	240	121,3	165,9	163,4	181,7	169,3	172,5	181,5
US+EU "	801	1160,3	983,8	995,6	975	891,3	1180,9	1160,4	1212,7	1101,3	1380,5	1126,5
US+EU FOB price	297,9	340,6	351,2	369,6	370,6	309	378,4	344,3	416,3	418,4	404,1	379,3
EU export sub. in €M	82,6	45,3	29,1	77,8	66	29	19	49	33	64	50	30
\$/€ exchange rate	1,10	1,10	1,27	1,24	1,30	1,17	1,19	1,31	1,27	1,13	1,12	1,07
EU export sub. in \$M	90,9	49,8	37	96,5	85,8	33,9	22,6	64,2	41,9	72,3	56	32,1
EU+US exp sub/t	33,8	14,6	13,2	35,8	32,6	11,8	7,2	19	14,4	27,4	16,4	10,8
US dom subsidy \$/t	137	124	130	157	121	161	124	137	95	88	93	133
" to exports \$M	322	374	316	345	259	424	345	417	247	199	285	347
EU dom subsi €M	5,3	45,2	91,7	55,5	-4,7	13	4	0	0	59	103	135
EU dom subsi \$M	5,8	49,7	116,5	68,8	-6,1	15,2	4,8	0	0	66,7	115,4	144,5
EU production 1000 t	1932	1944	2238	2193	2174	1946	2155	2110	2616	2800	2670	2675
EU dom sub \$/t	3	25,6	52	31,4	0	7,8	2,2	0	0	23,8	43,2	54
EU dom sub/export \$M	1	10,1	19,3	15,5	0	1,9	0,7	0	0	8,9	15,2	19,5
US+EU "	323	384	335	361	259	426	346	417	247	208	300	367
" per exported tonne	413,9	433,9	372,3	457	344,8	459,8	368,3	481,2	288,9	280,2	356,2	398,6
US+EU total sub/exp/t	153,9	127,4	132,9	169,6	131	159,4	118	142,8	99,2	106,4	104,3	134,2
Dumping rate	51,7%	37,4%	37,8%	45,9%	35,3%	51,6%	31,2%	41,5%	23,8%	25,4%	25,8%	35,4%

Table 37 – The US+EU combined dumping rate of rice exports from 2000 to 2012

\$ per tonne	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
US exports in 1000 t	2688	2581	3218	3735	3023	3789	3273	2958	3282	2925	3747	3166	3326
EU "	313,6	245,2	360,9	320,9	195,3	204,6	146,2	141,3	159,5	158,2	310,9	256,3	209,7
US+EU "	3002	2826	3579	4056	3218	3994	3419	3099	3442	3083	4058	3422	3536
US exports in \$M	836	717	775	1031	1169	1291	1285	1396	2214	2186	2354	2087	2075
EU exports in €M	145,8	110,3	151,9	124,9	89,7	96,8	85	88,5	130,6	123,2	174,2	169,5	149,1
\$/€ exchange rate	0,9236	0,8956	0,9456	1,1312	1,2439	1,2441	1,2556	1,3705	1,4708	1,3948	1,3257	1,392	1,2848
EU exports in \$M	134,7	98,8	143,6	141,3	111,6	120,4	106,7	121,3	192,1	171,8	230,9	235,9	191,6
US+EU "	971	816	919	1172	1281	1411	1392	1517	2406	2358	2585	2323	2267
US+EU FOB price	323,4	288,7	256,7	289	397,9	353,4	407	489,6	699	764,8	637	678,8	641
EU export sub. €M	38	39	41	38	22	7	0	0	0	0	0	0	0
EU export sub. \$M	35,1	34,9	38,8	43	27,4	8,7	0	0	0	0	0	0	0
EU+US exp sub/t	11,7	12,3	10,8	10,6	8,5	2,2	0	0	0	0	0	0	0
US dom subsidy \$/t	234	174	141	171	134	77	98	64	66	75	84	88	86
" to exports \$M	629	449	454	639	405	292	321	189	217	219	315	279	286
EU dom subsi €M	190	143	155	186	158	531	441	438	434	439	424	423	275
EU dom subsi \$M	175,5	128,1	146,6	210,4	196,5	660,6	553,7	600,3	638,3	612,3	562,1	588,9	353,3
EU prod° 1000 t	2485	2545	2620	2702	2888	2670	2574	2729	2690	3217	3143	3117	3062
EU dom sub \$/t	70,6	50,3	55,9	77,9	68,1	24,7	21,5	22	23,7	19	17,9	18,9	11,5
EU dom sub/exp \$M	22,5	20,5	15,5	24,3	34,9	12,1	14,7	15,6	14,9	12	5,8	7,4	5,5
US+EU "	651,5	469,5	469,5	663,3	439,9	304,1	335,7	204,6	231,9	231	320,8	286,4	291,5
" per exported tonne	217	166,1	131,2	163,5	136,7	76,1	98,2	66	67,4	74,9	79,1	83,7	82,4
US+EU tot sub/exp/t	228,7	178,4	142	174,1	145,2	78,3	98,2	66	67,4	74,9	79,1	83,7	82,4
Dumping rate	70,7%	61,8%	55,3%	60,2%	36,5%	22,2%	24,1%	13,5%	9,6%	9,8%	12,4%	12,3%	12,9%