

Unintended Consequences of Food Subsidies: The Case of the Haiti Rice Subsidy

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I. Executive Summary

RICE PRICES IN HAITI

Haiti is an important rice consumer, and a big rice importer. Around 86 percent of the Haitian population consumes rice. The poor urban families spend relatively more in rice as a percentage of household income than other Haitian households. Haiti imports 70% of the rice it consumes.

Before the food crisis (declared worldwide in March 2008) the price of rice¹ in the local market was directly determined by the import price, with no distortions. Haitian rice importers purchase rice on a FOB Gulf basis. These FOB Gulf prices went from 17.75 to 43 US\$/cwt between mid 2007 and the beginning of the crisis. This increase was immediately reflected in the prices in Haiti's local markets, which nearly doubled during the same period, corroborating the high correlation between the FOB and the domestic prices mentioned above.

THE FOOD CRISIS AND THE RICE PRICE SUBSIDY PROGRAM

As a consequence of the crisis, food price inflation more than tripled in Haiti from 6.4% in July 2007 to 20% in March 2008. This led the government to announce a subsidy to reduce the price of rice to consumers to a fixed level of 43 US\$ per 50kg bag to control social unrest. The rice price subsidy program was set as a temporary subsidy for rice importers planned for 6 months (April – September 2008) and was designed to maintain the selling price from rice importers to distributors at 43 US\$ per 50kg bag. The expectation was that rice distributors would then also maintain low prices to consumers. The expected impact sought by the Government of Haiti, was a drop in the price of imported rice in the local market. No subsidies were given to the price of locally produced rice. While the program was on-going, the subsidy period was revised down to 5 months (ending in August 2008), with US\$ 17 million transferred from the Government to rice importers. According to the Central Bank of Haiti, the subsidy was funded by a Budget Support Grant from the World Bank (US\$10 million) and a Grant from CARICOM/PetroCaribe (US\$7 million).

MAIN FINDINGS AND CONCLUSIONS

The main result from the subsidy has been the attenuation of social unrest and political tensions, however it has also produced a medium term increase (and not a reduction) in rice prices in local markets. By estimating the relationship between international and local prices of imported rice before the rice subsidy program was implemented, this study was able to establish what would have been the domestic price of imported rice without the subsidy program and compare it with the actual observed price. Before the announcement of the rice price subsidy, the international price of rice (FOB Gulf) determined the domestic price with over 99% statistical confidence level. Using the pre-subsidy relationship between international and domestic rice prices, the analysis estimates that 1 year after the subsidy program was concluded (from July 2008 to June 2009) rice prices paid by consumers have been higher than what they would have been without the subsidy program. Although by June 2009 the program had ended, rice prices in Haiti were still 10% higher than the projections without the subsidy. Between April 2008 and June 2009, the overall estimated surcharge to Haitian rice consumers was of approximately US\$23 million. Possible explanations for such unintended price increase after the

¹ Locally produced rice was sold at a premium price given differences in quality with imported rice.

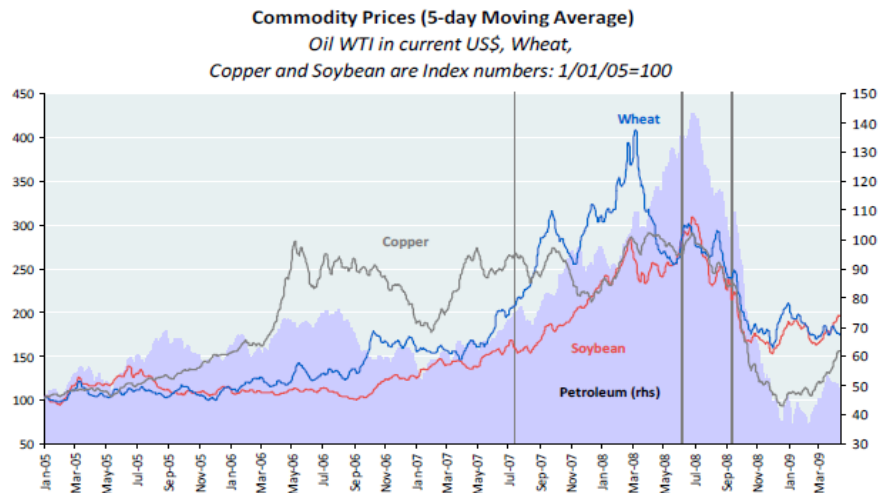
subsidy program could be: (i) the degree to which decisions of pricing among rice importers have become more consultative; and/or (ii) the degree to which Government intervention policies in the rice market has been factored into profit margins of rice importers and/or distributors in Haiti.

In the context of providing food subsidies to poor displaced households after the 2010 earthquake, public policies could be designed to avoid such unintended consequences from happening again in the future. A direct subsidy to the targeted consumers (i.e. food vouchers) could have minimized distortionary effects in the domestic rice market and directly boosted purchasing power of low-income families. Using the US\$17million to directly subsidize rice consumption of low income families through a voucher scheme would have: (i) yielded savings of 40% on rice expenditures over a 5 month period; (ii) had an increased impact on nutrition of low-income households as it would have allowed consumers to choose product and quality; and (iii) would have also allowed local rice farmers to benefit from the price subsidy as market prices would have remained unchanged.

II. Introduction

International food and oil prices spiked between the end of 2007 and beginning of 2008 (see Figure 1). Haiti was importing at that time (by November 2008) 53% of its food according to the World Food Program (WFP) and the National Commission on Food Security (CNSA). In 2008 80% of food imports into Haiti were rice imports, and rice represented 7% of the Consumption Price Index (CPI). This meant that the increase in international food prices, the 2007-2008 Global Food Crisis, led to an immediate increase in food inflation, going from 6.4% in July 2007 to 20% in March 2008.

Figure 1. (source: Bloomberg)



As a consequence of the 2007-2008 Global Food Crisis and the increase in the Food CPI, several protests against the Government took place in Haiti. Violent protests began in early April in the city of Les Cayes and then in Port au Prince, the capital. Six (6) people died and several shops were looted. By April 12, 2008, the Senate had given a vote of no confidence to Prime Minister Jacques Edouard Alexis who promptly resigned. Since: (i) 70% of the rice consumed in Haiti is imported; (ii) 86% of Haitians consume rice, and (iii) households living in less than 2 dollars a day (first 4 quintiles) consume 75% of the rice (see Table 1 below); the new President Preval immediately reacted, announcing the (indirect) fixing of the price of rice to Haitian consumers by providing a subsidy to rice importers. This was done through private-public agreements on a fixed price to be sold to local rice distributors. The decision to implement an indirect subsidy was made based on the fact (as is shown in the next section) that import prices had in the past been transmitted fully and immediately to rice consumers. Thus, a subsidy to the price of rice at the level of the importers was expected to be passed on immediately into benefits (savings) to rice consumers.

Table 1. Rice Expenditures by Quintile

Quintile	% of national rice expenditures
1 (poorest)	15%
2	18%
3	21%
4	21%
5 (richest)	25%

Source: Demombynes, G. Calculations of 2001 Household Survey (IHSI.)
Notes: Quintiles shown were calculated using per capita household income and were calculated for individuals, i.e. each quintile includes one-fifth of the population of the individuals.

The Government announced the subsidy after April 12, 2008, fixing (indirectly) a price between rice importers and local distributors at US\$43/50kg bag. This was the average price of imported rice sold to consumers observed in Port au Prince since 2006. The main objective was to reduce social tensions among the low income urban population. The Government also prohibited rice exports to the Dominican Republic in order to avoid re-export of subsidized rice. The subsidy scheme was implemented by forming a public-private sector Presidential Commission between the Central Bank of Haiti (BRH), the President’s Office and rice importers. The subsidy scheme initially sought external financing to keep domestic rice prices from further increasing for 6 months (April to October 2008), and the Ministry of Economy and Finance (MEF) was able to secure budget support from the World Bank and CARICOM of US\$10 and 7 million respectively.

The Presidential Commission met every 3 to 4 weeks to report on the current rice stocks and incoming vessels with rice, and to agree on a subsidy level per vessel in order to ensure a fixed price to be sold to local rice distributors. With the signed minutes of the meetings agreement of the Presidential Commission, each importer had to present documentation to the Central Bank of Haiti (BRH), showing that the rice was in fact imported into the country and sold to local distributors at the agreed price. Box I shows the details on the information collected during the first meeting of the Presidential Commission on April 14, 2008. As Figure 4 shows, the price to consumers never reached the intended target price of US\$43/50kg (equivalent of HTG94/6lbs) bag set by the Government, and there was no way for the Government to enforce the final price being sold to consumers.

Box I – Details on the structure of rice price subsidies

Subsidies to food importers were agreed on individually, importer by importer, according to the price of the rice stored in Haiti as well as the price paid for the rice in transit to Haiti. The procedures and documents necessary for the rice importers to obtain the subsidy were: (i) the customs and shipping documents; and (ii) the signed copy of the minutes of the meeting of the Presidential Commission mentioning that specific shipment to be subsidized. Here below is an example of the minutes of the first meeting with the details of the subsidy of the rice in storage by importers (Table 1) and the rice in transit to Haiti (Table 2).

Table 1. Subsidies for Stored Rice by Importers (April 14, 2008)

Importateur	Volume souscrit (PV 14 et 15 avril 2008)	Volume déclaré (Base pieces soumises)	Pieces soumises		Subvention par sac	Montant de la Subvention dû à l'importateur
			connaissance maritime	bordereau de douane		
MANUTHOR S.A.	2100 TM (42 000 sacs)	2086.9 TM (41 738 sacs)	ok	ok	\$5.00	\$208,690.00
NABATCO	3869.9 TM (77398 sacs)	5125.4 TM (102508 sacs)	ok	ok	\$5.00	\$386,990.00
RICECO PAP	6300 TM (126 000 sacs)	7770.4 TM (155408 sacs)	ok	ok	\$5.00	\$630,000.00
RICECO CAP	2100 TM (42 000 sacs)	Docs incomplets	ok		\$3.00	\$126,000.00
TCHAKO S.A.	14275 TM (285 500 sacs)	11405 TM (228 100 sacs)	ok	ok	\$3.00	\$684,300.00
LAROCHE CAP	850 TM (17000 sacs)	873.95 TM (17479 sacs)	ok	ok	\$4.00	\$68,000.00
LUCKY CAP	6206 TM (124 120 sacs)	Docs manquants	Aucun	Aucun	\$4.00	\$496,480.00
						\$2,600,460.00

Table 2. Subsidies for Import Rice in Transit (April 14, 2008)

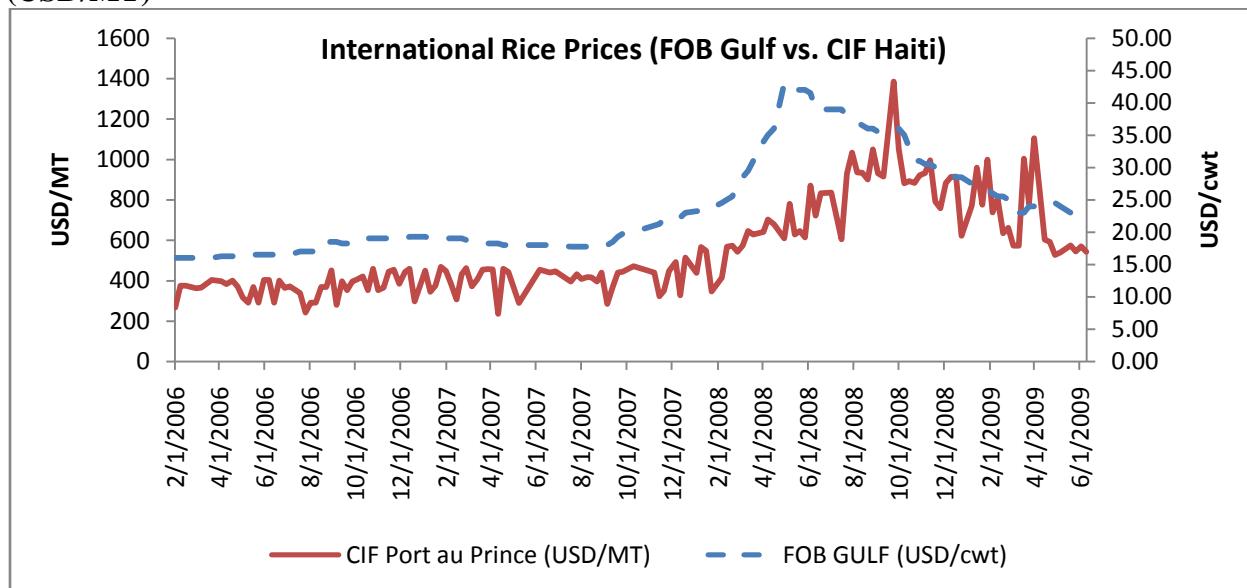
IMPORTER	VOLUME FROM US (Metric Tons)
ACRA	7200 (purchased price USD 56-57, arrival july 08), subsidy USD14-15/bag
Tchako S.A.	11500 (purchased price USD 51) , subsidy USD7/bag
ACRA	11500 (purchased price USD 51, subsidy USD9/bag
Rice co, S.A.	4000 (purchased price USD 51), subsidy USD9/bag
Rice co, S.A.	1500 (purchased price USD 51), subsidy USD9/bag
Manuthor S.A.	6300 (purchased price USD 51), subsidy USD9/bag
Manuthor S.A.	2700 (purchased price USD 56), subsidy USD13/bag
Manuthor S.A.	2000 (purchased price USD 51), subsidy USD9/bag
Tchako S.A.	11500 (purchased price USD 55-56), subsidy USD13-14/bag
Tchako S.A.	11500 (purchased price USD 55-56), subsidy USD13-14/bag
Total	69700

III. The Relationship between International and Domestic Rice Prices

a. International Rice Prices

Haiti mainly imports its rice from the US, and therefore the international reference price for the rice imported into Haiti is FOB Gulf. Figure 2 below shows that the international price increase started at the end of 2007 and reached its maximum point in May 2008. It is important to note that when the Haitian Government implemented the rice price subsidy, this was the time period when international the rice price was at its maximum, meaning that the Government subsidy was in place during a period where international prices were decreasing.

Figure 2. Evolution of International Rice Prices - FOB Gulf (USD/cwt*) and CIF Haiti (USD/MT)



source: Creed Rice Market Report (2009) and SGS (2009).

(* cwt = 112 lbs.

Figure 2 also shows the CIF prices at the Port au Prince port. These are the prices recorded at customs when the rice was imported into the country. One can observe a strong correlation between FOB Gulf and CIF PAP rice prices with a lag of approximately 4 to 5 months. This is the time taken for the purchase to be made, the shipping and handling of the rice from the US to Haiti and the final declaration of the merchandise at the port. This strong relationship between FOB and CIF prices is an initial indication that in Haiti, movements in domestic prices of imported rice can be attributed to movements in the FOB Gulf price. In order to better assess this relationship, a closer look at domestic rice prices in Haiti is needed (see Section c. below).

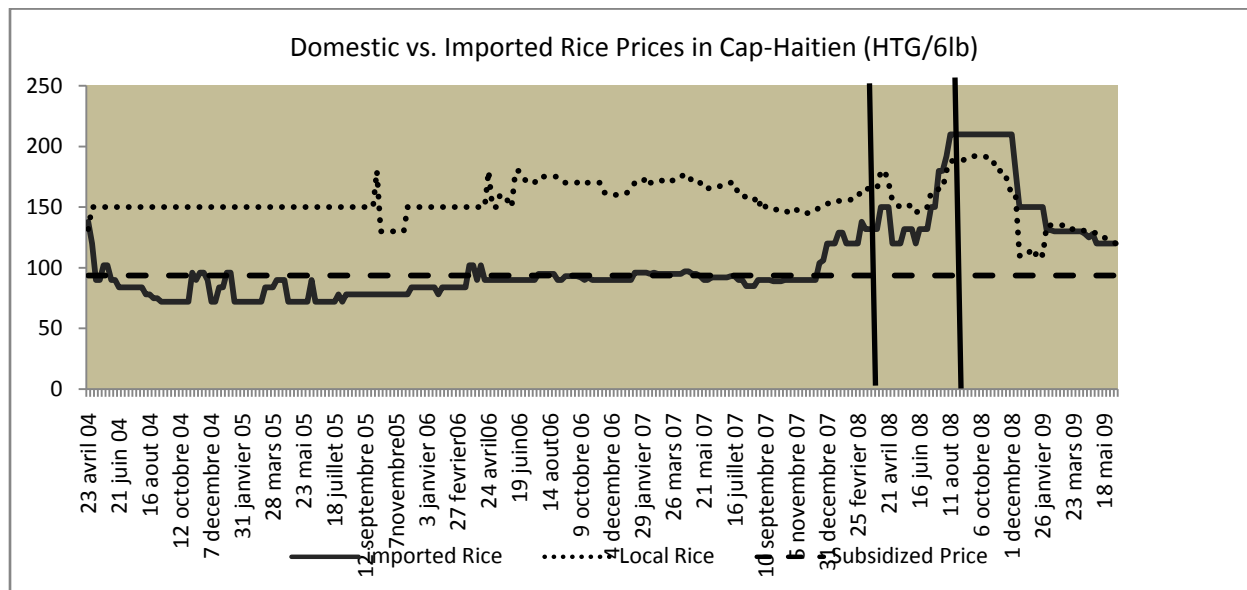
b. Domestic Rice Prices

There are two types of rice sold in Haiti, imported and domestic (locally produced) rice. Imported rice represents 70% of the rice consumed in Haiti, however there are significant quality differences² between the imported and domestic rice. This means Haitian consumers do not substitute easily one type of rice for another, in particular households in urban areas with relatively higher incomes. Imported rice prices more than doubled between December 2007 and August 2008 while domestic rice prices remained fairly stable. Figure 3 shows the evolution of domestic rice prices. The rice price subsidy was implemented from April 12 to mid August 2008 (see vertical lines in Figure 3), and the target price announced by the Government was US\$43/bag, which translates to HTG94/6lb or US\$2.35/6lb (see horizontal dotted line in Figure 4). Figure 4 shows the local and imported price of rice in Cap Haitian, and it is interesting to note the evolution of prices before, during and after the price subsidy (two vertical lines). Before the subsidy, local rice had a substantial premium over imported rice (almost 50%). However

² The main difference between domestic and imported rice is that Haitians prefer the taste of local rice, as well as the % of broken rice is lower than the imported rice.

during the subsidy program was in place, this premium decreased, and after the subsidy program ended, we observe that domestic rice prices decreased and that imported rice became equally or more expensive than domestic rice.

Figure 3.



source: CNSA (2009)

The objective of this study is not to analyze the relationship between locally produced rice and imported rice, but between international and domestic prices of imported rice. However, it is important to note that there are important implications in terms of the impact of the subsidy program on domestic rice production. In fact, it appears that the subsidy has caused a reduction in the premium charged for the locally produced rice. Although it is not the scope of this analysis, it would be important to see how this subsidy program impacted the local rice production.

Prices of imported rice vary within Haiti, but are highly correlated across the country (see Table 2). Correlations are all above 0.68 and many of the majority above 0.80³. For the purpose of this study, we have used the prices from the cities of Cap Haitien, Les Cayes and Port au Prince as representing national domestic prices of imported rice. This given that: (i) they are 3 major cities for which data was mostly complete; (ii) these three cities present high correlation of domestic prices of imported rice with the rest of the cities within Haiti; and (iii) there are a few importers in Cap Haitian and Port au Prince, the two largest cities of the country, who have been anecdotally been identified as the domestic market “price” setters.

Table 2. Correlations of Domestic Prices of Imported Rice in Major Urban Centers in Haiti (2004-2009)

Port-au-	Cap-	Cayes	Jeremie	Gonaives	Jacmel	Hinche	Port de	Ouanaminthe
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³ Data is from the National Food Security Commission (CNSA) of Haiti, which publishes biweekly data on its website: www.cnsahaiti.org.

	Prince	Haitien						Paix	
Port-au-Prince	1.00	0.95	0.97	0.93	0.85	0.95	0.94	0.81	0.94
Cap- Haitien		1.00	0.95	0.93	0.74	0.92	0.95	0.82	0.93
Cayes			1.00	0.93	0.79	0.94	0.93	0.78	0.94
Jeremie				1.00	0.68	0.94	0.93	0.78	0.93
Gonaives					1.00	0.77	0.70	0.74	0.81
Jacmel						1.00	0.94	0.83	0.94
Hinche							1.00	0.76	0.93
Port de Paix								1.00	0.86
Ouanaminthe									1.00

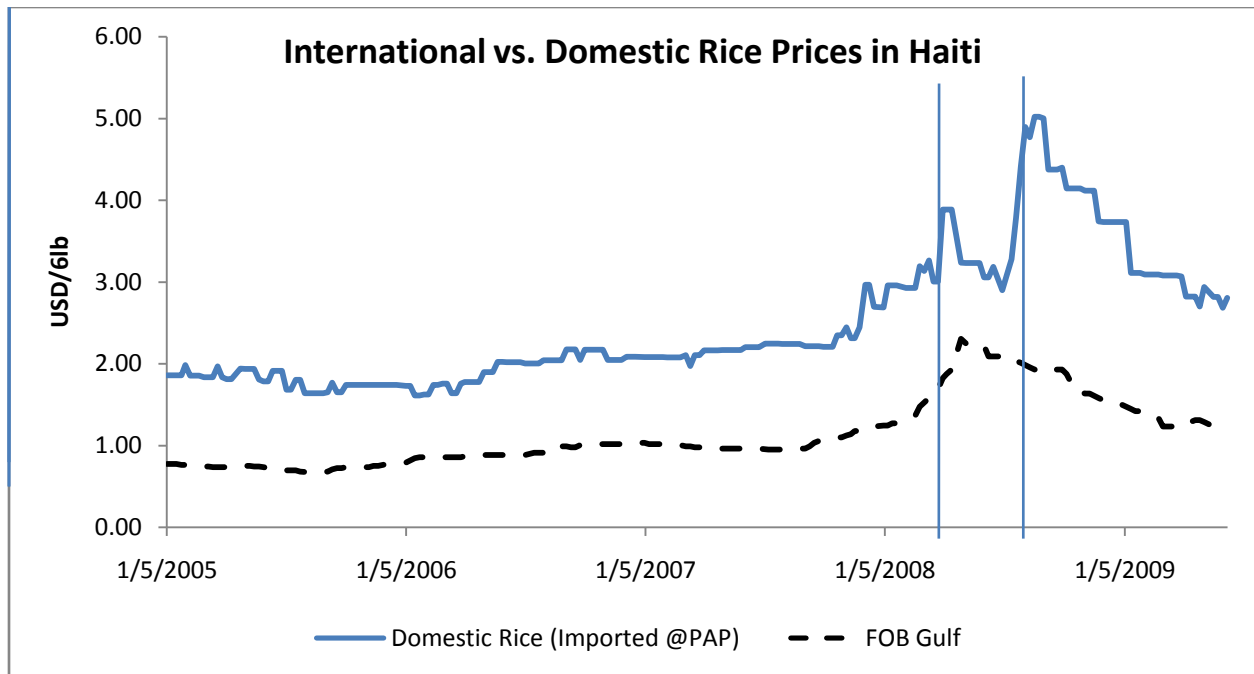
source: CNSA (2009)

Unfortunately, rice consumption volumes are not available by city, so a weighted average at the national level is not possible. Nevertheless, we have estimated volumes of imported rice consumed within Haiti according to the volumes imported. During the period of the subsidy program, a total of 107,000 MT of rice were imported, which represents an average of 27,000MT/month. Some importers have reported that approximately 5% of the imported (subsidized) rice did cross the border into the Dominican Republic, even with the re-export prohibitions. But since there is no verifiable way of documenting the flows to the Dominican Republic during the period (or even after), and given the estimated relative low volumes, these adjustments were not considered in the analysis.

c. Estimating the relationship between international and domestic rice prices

Figure 5 shows the international (FOB Gulf) and domestic (at Port au Prince) import rice prices. The Figure points out by vertical lines the beginning and end of the period of the subsidy program. Figure 4 shows that the relationship between international and domestic rice prices changed during the subsidy period.

Figure 4.



source: CNSA (2009) and Creed Rice Market Report (2009)

In order to determine the relationship between international prices and domestic prices of imported rice in Haiti before the subsidy program, we establish the following function following the law of one price⁴:

$$P_d = a + bP_i \quad (1)$$

Where P_d is the domestic price of imported rice (as reported by CNSA), P_i is the international price of rice purchased by Haitian importers (FOB Gulf), a is the constant measuring average logistic and import costs between the US market (FOB Gulf) and the different cities within Haiti, and b is the coefficient that explains the degree of integration between markets. If b is close to 1, this represents a very strong relationship between markets (perfect price transmission), while if b is close to 0, there's little relationship. Since rice importers sell the rice locally at the cost of replacement of their stock, there is no time lag between international and domestic prices. Even though Figure 2 shows a lag between FOB Gulf and CIF Haiti prices, domestic prices of imported rice follow the level of FOB Gulf prices as importers charge the price needed to secure new imports (replacement cost).

Based on equation (1) we ran a regression for the period of January 2005 to April 2008 (before the subsidy program began) for three cities within Haiti: Port au Prince, Les Cayes and Cape Haitian. The results of the regression are in Table 3 below. We observe that the coefficients are

⁴ We used a simple OLS because 70 to 80% of the rice consumed in Haiti is imported rice coming from the US and bought at FOB Gulf quoted prices. After discussing with Importers, they also mentioned that the price they charged distributors (and thus final consumers) of rice was the replacement cost. This led us to test for a simple regression on absolute changes in prices, where the constant (alpha) in the OLS regression was seen as the transport/logistics/import costs and the dependent variable coefficient (beta) the import tariff and % margin charged by importers and price distributors. After testing for different lags, it was clear that the strongest relationship existed with no lag (proving the replacement cost description). The OLS presented high R^2 and statistically significant (over 99%) coefficients, so we did not go further into looking for further methods for testing time series. In other words, the simple OLS immediately showed the strong and direct relationship of international and domestic prices of rice before the subsidy.

statistically significant and the R^2 are quite large, signaling that the estimates produced by the equation and coefficients results are very accurate in determining the actual domestic price of imported rice in Haiti.

Table 3. Regression coefficient estimates of equation (1)

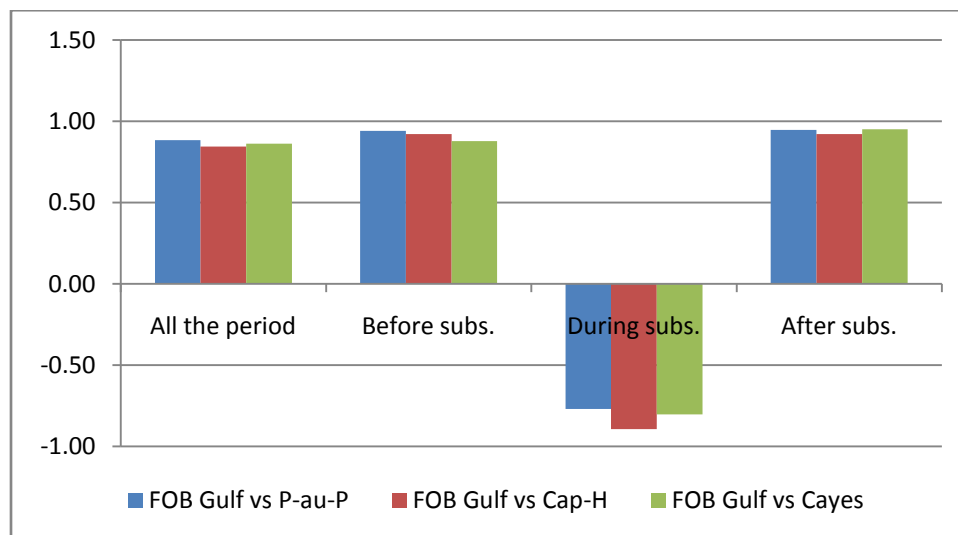
	<i>a</i>	<i>b</i>	t stat	R2
Port au Prince	0.44	1.75	35.07	0.88
Les Cayes	0.48	1.80	24.39	0.79
Cap Haitien	0.60	1.83	31.20	0.86

Authors' calculations

IV. Estimating the impact of the rice price subsidy

Looking at simple correlations between international and domestic prices before, after, and during the subsidy program, it is interesting to note (see Figure 5) that the correlation becomes negative during the subsidy program. In theory, if the subsidy program fixed the domestic price of rice, the correlation should be close to 0. The fact that the correlation is negative and highly negative, points out to the fact that not only domestic prices were decreasing when international prices were increasing, but the contrary as well: domestic prices were increasing when international ones were decreasing. This is reflected in Figure 5 where we observe towards the end of the subsidy period that international prices were decreasing while local ones were increasing.

Figure 5. Correlation between international and domestic rice prices in Haiti before, during and after the subsidy program (2005-2009)

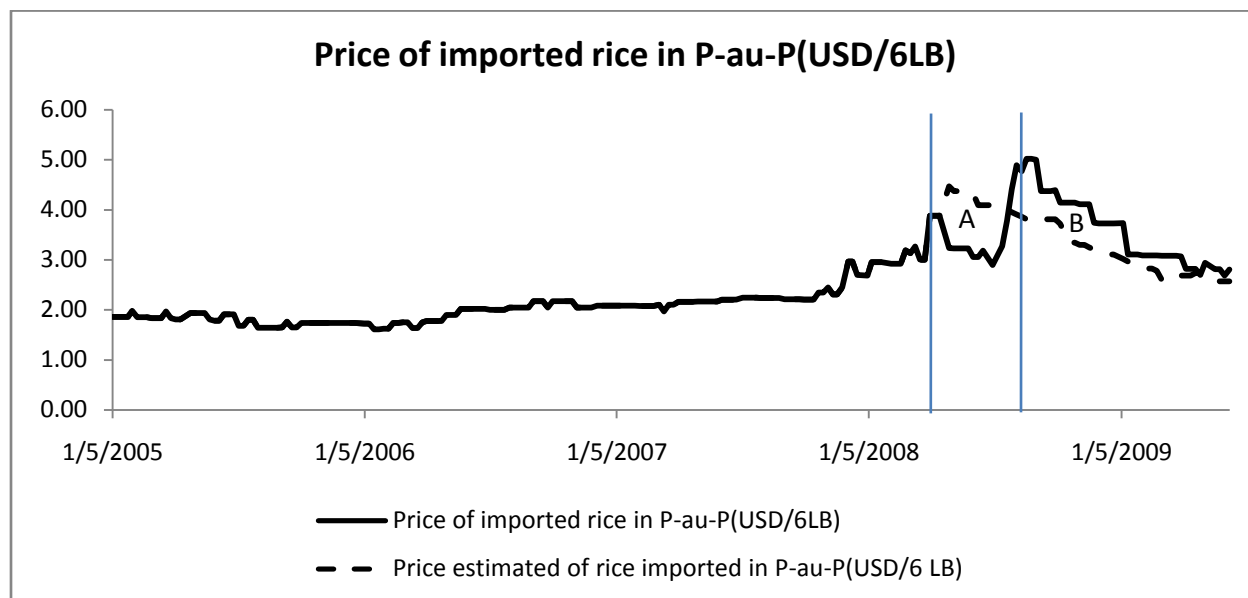


source: Author's calculations based on CNSA (2009) and Creed Rice Market Report (2009)

In order to measure the impact of the subsidy program, we estimate the savings to Haitian consumers by comparing the actual price of imported rice observed in the three selected cities during the subsidy program with the estimated domestic price calculated based on the international price at the time following equation (1) and the coefficients in Table 3. This enable

us to estimate what would have been the domestic price of imported rice without the subsidy program and compare it with the actual observed price. Figure 6 shows both estimated and actual domestic prices of imported rice before, during and after the subsidy program.

Figure 6.



source: Author's calculations based on CNSA (2009) and Creed Rice Market Report (2009)

By measuring the difference between the actual and estimated price of imported rice, we are able to obtain the benefits (or costs) of the subsidy program to Haitian rice consumers. Figure 6 shows that during the first part of the subsidy program, actual domestic prices were below estimated prices, meaning that the subsidy program enabled Haitian consumers to buy rice at prices that were lower than would have otherwise been without any subsidy. However, towards the end of the subsidy period, actual prices rise above the estimated price. This situation continued up to June 2009. This means that Haitian consumers, since the end of the subsidy period, and up to the middle of 2009, have been purchasing imported rice at prices that are above what they would have paid without the subsidy program. Also, Figure 6 shows that actual observed prices of imported rice after the subsidy program was implemented, presents a larger volatility, pointing out to an increase in price uncertainty by rice consumers. The standard deviation of prices of imported rice before the subsidy program was 0.42 US\$/6lbs, however after the subsidy program, the standard deviation increased to 0.68 US\$/6lbs. The estimated price of imported rice (without the subsidy program) presented a lower standard deviation of 0.62 US\$/6lbs.

In order to estimate the total value of savings or additional costs of the subsidy to Haitian consumers, we multiply the difference between actual observed domestic prices and estimated prices (prices estimated using the pre-subsidy relationship between international and domestic prices) by the volume of rice imported during that period. Although there is no way to verify actual rice volumes sold to Haitian consumers each week, we assume that consumers purchased the same total amount of rice every week (during 2008 the average national weekly consumption of imported rice was 6100MT). In other words, we assume a low price elasticity of imported

rice demand. However, this is likely not the case. Low income consumers tend to have relatively higher price elasticity of demand of those products that compose a large portion of their consumption basket as they are very sensitive to such prices changes. Therefore, the estimates on the benefits of the rice price subsidy are likely to be over-estimated if in fact the volumes of imported rice sold were reduced given the drop in demand.

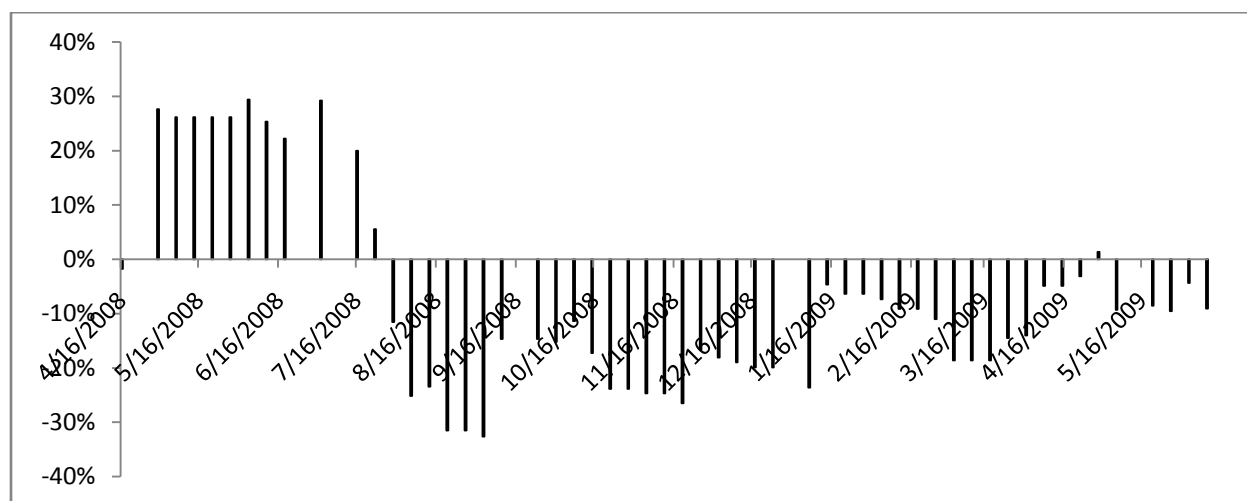
Table 4 below shows the estimated price difference (benefits/costs) in the different cities and the estimated national value of consumer savings (costs) of purchased rice. We observe that during the period of the subsidy, consumers saved a total of approximately US\$17million (area A in Figure 6), while after the subsidy program ended, the cost to consumers has been US\$40million (area B in Figure 6).

Table 4. Estimated Consumer Savings (costs) from the Rice Subsidy Program

	Average Consumer Savings (USD/6lbs)	Total consumer savings (USD)
During the Subsidy Period (April-August 2008)	0.48	17,135,276
After the Subsidy Period (September,2008-June 2009)	-0.46	(40,359,616)
Total	-0.19	(23,224,339)

The analysis shows that as of June 2009, domestic prices of imported rice were still 10% higher than would have otherwise been without the subsidy program. Since the implementation of the subsidy program, Haitian consumers paid US\$23million more for imported rice than they would have paid if the program had not been implemented (area A-B in Figure 6). The subsidy to the price of rice produced consumers' savings of up to 30% and consumer over-costs of up to 33% after the end of the subsidy period (see Figure 7). In addition to the cost to consumers, one must incorporate the cost to Haitian taxpayers of US\$17million which were transferred to rice importers by the Government during that same period.

Figure 7. Consumer Savings (over costs) on Rice Purchases in Haiti (April, 2008 to June 2009)



source: Author's calculations based on CNSA (2009) and Creed Rice Market Report (2009)

A potential cause for the higher than estimated domestic prices of imported rice is that, during and after the subsidy program, the rice importers were able to compare prices of incoming shipments and reach agreements among them (collusion) on the prices to be sold to distributors, which could have very well continued after the subsidy program ended. Another potential cause is that rice importers and/or distributors have been charging a premium to consumers in order to make-up for past and/or potential future Government interventions in the domestic rice market. Many rice importers complained that although they did receive the subsidy payment, these were not easy to obtain, and payments were received late and after much bureaucratic processes that cost importers' resources and time. Nevertheless, the main welfare benefits from the program were the subsidence of social unrest (although this is questionable given that international rice prices did decline after the April 2008 violent protests); and the apparent benefits to price importers from the subsidies.

V. Main Conclusions and Policy Implications

The findings of this study show that although the rice price subsidy program did produce the intended savings to Haitian consumers during the 4-month period of the subsidy program (April-August 2008), this intervention caused medium term distortions in the domestic market of imported rice such that domestic prices of imported rice have risen beyond the price that consumers would have faced without a subsidy program. Furthermore, the actual prices consumers faced after the subsidy program was implemented were much more volatile than the estimated price without a subsidy program, pointing to also an increased consumer uncertainty about local market prices for rice. The estimated domestic prices of imported rice in a "without subsidy" scenario are based on statistically robust parameters calculated based on the relationship of international and domestic rice prices before the subsidy program was put in place.

There are several potential explanations for this price behavior post-subsidy, but some of the most likely according to interviews undertaken in August 2009 to the main rice importers: (i) that price importers and/or distributors have (across the board) increase margins in order to either recuperate past losses during the subsidy scheme and/or build additional margins in case the Government intervened in the market again; and/or (ii) given the creation of the presidential commission where rice importers were encouraged to share market price and volume information, that this has led to practices of collusion and price fixing among actors of the rice import supply chain, potentially beyond the end of the subsidy program.

Therefore, these findings point to the need of reviewing public policies and programs that intend to lower food costs to low-income consumers. Although at the time of the 2007-2008 Global Food Crisis, providing a subsidy to Haitian Rice Importers seemed to be an efficient and quick mechanism to lower domestic rice prices, it proved to distort local rice markets and produced an over-cost of imported rice purchases, hurting low income households relatively more. A direct transfer from taxpayers to rice consumers would have yielded better results. The US\$17million of public resources spent in the subsidy program would have translated in a food voucher of over

US\$4/month⁵ per household for 5 months for the families living under the 2 dollars/person/day poverty line. This US\$4/month represents 40% of monthly rice expenditures of a low-income household in Haiti.

Although a food voucher would have needed an institutional delivery mechanism to be in place before the 2007-2008 Global Food Crisis, this analysis points out to: (i) the importance of having such delivery mechanism in place now given the expected medium to long term food and nutritional needs of the Haitian population in the aftermath of the recent earthquake; and (ii) in order to tackle the food and nutritional needs of the low-income Haitian population, using a targeted food voucher as a subsidy mechanism is not only more efficient, but can have higher impact on nutrition as it can be used for a wide variety of food products.

⁵ This estimate includes the overhead cost of running the program, estimated at below 10% as per international experience.

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