

IMPACT OF THE MAXIMUM RETAIL PRICE OF RICE ON RICE MARKET IN SRI LANKA

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ABSTRACT

Paddy is one of the main agricultural crops in Sri Lanka and paddy cultivation is the main livelihood activity of the rural people in Sri Lanka. The government has introduced different policy strategies to address the prevailing drawbacks of the rice sector. The maximum retail price scheme for rice was introduced in 2008 is one of them. The rationale of this study is to probe the impact of the maximum retail price scheme on rice market. Secondary data (2002- 2014) on monthly farm gate, wholesale, and retail prices of rice were analyzed during the study. All nominal prices were converted to real prices using the Colombo Consumer Price Index. Price behaviors over time, price stability, Total gross margin and producer's share of the retail prices were computed as they measure the marketing efficiency. The price policy has marginally improved the producer's share of the price paid by the consumer indicating it is less effective. The average rates at which the total gross margin of Nadu rice and Samba rice have changed are 6.6 and 7.4 respectively. That is, the gross margins of Nadu rice and Samba rice have been increasing at rates of 6.6 and 7.4 percent per annum. This indicates that, the price policy has failed to control the retail price effectively and efficiently. The average total gross margins of Nadu rice and Samba rice prior to the introduction of the price policy were 57.81 and 63.68 percent respectively, while the corresponding values after the introduction of the price policy were 50.12 for Nadu rice and 55.13 for Samba rice. Therefore, it is possible to state that, the price policy has failed to control the retail price as expected. Results indicate that, retail prices of white raw rice and red raw rice have marginally stabilized, stability of retail prices of Nadu rice has not changed and

retail price instability has marginally increased after the introduction of the price policy. Therefore, it is possible to state that, the new price policy has failed to stabilize retail prices.

Keywords: Market margin, Maximum retail price, Price stability, Rice

INTRODUCTION

Paddy and rice marketing in Sri Lanka

Because rice is the staple food in Sri Lanka, the Government has been investing a considerable amount of resources and efforts to raise paddy production. Subsidies, guaranteed prices, maximum retail price, irrigation and land development, colonization schemes, free agricultural extension services and research and development are leading interventions of the government. Though paddy extent and paddy production in Sri Lanka have increased over time, at the national level, individual paddy plots have become financially less attractive due as a result of land fragmentation (Suraweera, 2008). Due to the insufficient government participation in paddy purchasing farmers are facing marketing problems as the production increases. Further, financial constraints, difficulty in accessing to modern production technologies, lack of effective government policy on food imports also have frustrated the paddy farmer (Silva and Yamao, 2009).

Local paddy collectors purchase paddy from farmers and some of them are residing in paddy producing villages running small grocery shops, purchasing agricultural products and supplying agricultural production inputs. They provide household items as well as agricultural inputs on credit and purchase farm products at a low price. Some farmers are compelled to sell their produce to such traders primarily due to credit bound relationships. The other category of paddy collectors do visit villages during the paddy harvesting season. They could be either suppliers of the millers or the agents of the millers. They always try to purchase the maximum amount of paddy at the lowest possible price. Due to the financial constraints

majority of the farmers do not store paddy and sell their produce soon after harvesting to either at the village outlets or to the visiting traders. Having purchased the paddy from the farmer, traders sell them to paddy millers.

Both paddy milling and rice marketing are handled mainly by the private sector. As a result, the millers and the traders over exploit the farmer and the consumer, frustrating both parties. Large scale millers control paddy and rice markets and purchase the lion's share of paddy produced in each season. The small scale and medium scale millers purchase a small fraction of the total harvest. In order to maintain higher prices, large scale millers do not release all their stocks to satisfy the market demand in order to create a rice shortage in the market in order to justify the high price they are charging in the rice market. The miller releases their rice stocks mainly to the wholesalers and a small portion of it to large scale regular buyers such as hotels and in certain cases to the consumers who purchase comparatively larger quantities.

Wholesalers who are based in urban markets have direct linkages with millers of all categories (Silva and Yamao, 2009). Wholesalers do maintain rice stocks and renew their stocks frequently. They sell their rice mainly to retailers, consumers who buy larger quantities, and regular buyers, who purchase larger quantities, such as hotel, restaurants etc.

Rice retailers are scattered all over the country. In general, retail prices do vary from place to place and shop to shop (Silva and Yamao, 2009). Though the retailer does not maintain large stocks they renew their stocks in short intervals. They sell rice in small quantities directly to the consumers.

Marketing channel is a mean of directing a produce from producer to consumer. A marketing channel may include several intermediate steps handled by the market intermediaries. As the number of intermediaries increases the marketing cost and the length of the channel will increase. A marketing channel performs several activities that are necessary to transfer a commodity between the producer and the consumer (Amstrong, 2009). Rice distribution channels in Sri Lanka are

unorganized and the government intervention in rice marketing is at a minimum level. As a result, price fluctuations are common.

Government policies

According to the Food and Agriculture Organization, global food prices rose by 40% in 2007 recording the highest food cost. Some people believed that price rise was due to high oil prices, climate change, market speculations and economic booms (FAO, 2007). Production credit, minimum and maximum price policies, infrastructure development, land development, dissemination of production technologies, research and development, marketing infrastructure development, agriculture insurance etc. are some of the state interventions in agriculture sector.

In April 2008, the Consumer Affairs Authority (CAA) banned the selling of rice above the maximum wholesale and/or retail prices announced by the government (Consumer Affairs Authority, 2015). After several price revisions, the government announced the maximum retail prices for white *Nadu*, red *Nadu*, raw white and raw red rice as Rs.77, Rs. 68, Rs. 66, and Rs. 60 respectively per kg.

Marketing efficiency

Both the producer and the consumer are benefitted when the market is efficient because the marketing structure performs its designed function effectively and competently maximizing the consumer satisfaction at a least cost (Jasdanwala, 1966). Marketing efficiency also viewed as a state of maximizing input (resources used) output (consumer satisfaction) ratio (Kohls, 1967). The marketing efficiency consists of two components, namely; the operational (technical) efficiency and the pricing (economic) efficiency.

The operational efficiency could be measured on the basis of the size of marketing margin. Pricing efficiency is a result of natural competition and balanced economic power that exists within the marketing process (Ravichandran, 2002). The correlation coefficient was used by Lele (1967), Jasdanwala (1966) to study the

efficiency of market structure. Jasdanwala (1966) studied the marketing efficiency using correlation coefficients and multiple regressions. Subbarao (1978) used the market structure and marketing margin approaches in studying pricing efficiency while, Thakur (1974) studied pricing efficiency using marketing margins and the price spread. Using a regression analysis, Thakur (1974) analyzed the operational and pricing efficiency of food grain markets. Ranathilaka and Andiri (2014) concluded that, in developing countries, marketing cost depends mainly on the post-harvest losses. When the market price and the producer price are high, the marketing margin is low and vice versa (Sandika, 2011) because the middleman tries to control the market prices when the retail price (RP) and the producer price (PP) are high. A reduction in marketing cost is beneficial and Pushpakumara (2011) stated that, marketing efficiency in vegetable marketing in Dambulla has increased considerably due to the decreased marketing cost.

Price stability

The price stability gives an idea about price fluctuations. If the fluctuations are higher as well as frequent it is not a favorable condition. Price stability is measured using the coefficient of variance as explained below. Price stability refers to the minimization of price fluctuations. When the price risk is minimum both the producer and the trader are benefitted (Rupasena, et.al 2008).

This coefficient provides a useful standardized statistic for comparing the variation across time. The lower the value of the CV, the higher the price stability is.

Market margin

The commodity price links various levels of a market. The degree and the dynamics of price adjustment determines the marketing margin and the speed at which price changes are transmitted through the marketing channel. The price spread is the difference between the producer price and the retail price of a commodity. If this gap is wider, the marketing cost is higher and producer receives only a smaller fraction of the price paid by the consumer.

The concept of marketing margin was developed to measure the gap between the producer price and the price paid by the consumer and it represents the cost of assembling, processing, transporting, marketing and retailing that is added to the farm products, (Elitzak, 1997) as well valuations for risk and expectations on how markets will evolve. These margins have been examined on many occasions, often in response to sharp movements in farm-gate or retail prices (Li and Sexton, 2009). Changing costs in providing services, introduction of new technologies and changes in quantity of the produce marketed could influence the marketing margin.

Even with the policy measures introduced by the government of Sri Lanka, both farmers and consumers are not satisfied about the farm gate price of paddy and the retail price of rice. Though there is a policy to control the maximum retail price of rice the public opinion is it is not effective. The purpose of this study is to examine the nature of the impact of the maximum retail price policy on retail price of rice.

MATERIALS AND METHODS

Monthly producer, wholesale and retail prices of four varieties collected by the Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI) of rice over a period of 13 years (2002-2014) were used in this study. All nominal prices were converted to real prices taking the Colombo Consumer Price Index of the year 2010 as the base year. Marketing or operational efficiency could be measured using the farmer's share (Lawrance, 1992) and percentage of total mark up. Price stability, a measure of operational efficiency, gives an idea about price fluctuations. In order to assess the price stability, the coefficient of price variations was used. As agricultural production units are scattered all over the country efficient marketing is practically difficult (Galor, 1990).

Price stability analysis

As explained before, the coefficient of variation in prices was used for this purpose. The higher the value of the CV, the lower the price stability is. The CVs were calculated for all four rice varieties for the entire period covered by the study and

separately for the period without (2000 ñ 2007) the maximum retail price policy and the period with the price policy (2008- 2014) and compared.

Marketing margin analysis

This is a measure of marketing efficiency. The different measures used for this purpose include price spread, total gross margin and producer's share. This study used total gross margin and producer's share measures. The total gross margin measures the gap between the producer price and the price paid by the consumer as a percentage of the retail price.

According to the above equation, a higher marketing margin implies that, a large portion of the price paid by the consumer is being retained by the different market participants. Therefore, the lower values of marketing margins are preferable. The producer's share is the ratio between the ratio between the farm gate price and the retail price and is calculated as given below.

$$\text{Producer's share} = \frac{\text{Farm gate price}}{\text{Retail price}} \times 100$$

If this ratio is high, farmer gets a large portion of the price paid by the consumer and it is a favorable condition.

RESULTS AND DISCUSSIONS

Price behavior

Retail prices

The retail price of white raw rice has ranged between Rs. 48.76 and Rs. 69.72 per kg (price range Rs. 20.96 per Kg.) with a mean price of Rs. 58.41 per kg, while the retail price of red raw rice has ranged from Rs. 43.35 to Rs.74.05 per kg (price range Rs. 30. 70 per Kg.) with a mean price of Rs. 59.30 per kg (Table 1). It is clear that, both the ranges and means of retail prices of white raw rice is smaller than those of red raw rice. The average of white and red raw rice with price policy

and without price policy were compared to examine whether there is a positive impact of the price policy. Results revealed that, the average retail price of white raw rice without and with the price policy were Rs. 60.15 and Rs. 56.38 per kg respectively. Therefore, the retail price of white raw rice has declined by Rs.3.77 per Kg after the introduction of the price policy. The average retail price of red raw rice without price policy was Rs. 62.69 while that with price policy was Rs.55.34 per kg (Table 2) and the retail price of red raw rice has declined by Rs. 7.35 per Kg after the introduction of the price policy.

Table 1. Retail prices of rice

Year	White raw rice (Rs/Kg)	Red raw rice (Rs/Kg)	<i>Nadu</i> rice (Rs/Kg)	<i>Samba</i> rice (Rs/Kg)
2002	64.51	74.05	65.32	78.96
2003	55.19	58.10	58.19	69.48
2004	63.87	71.44	66.72	77.27
2005	51.89	56.48	54.89	72.18
2006	64.32	48.54	49.29	60.51
2007	51.53	58.39	55.10	61.84
2008	69.72	71.81	72.57	83.76
2009	69.19	66.56	68.75	80.55
2010	57.06	59.08	60.99	74.92
2011	54.08	54.22	57.50	67.92
2012	49.73	50.10	52.32	62.81
2013	48.76	43.35	51.77	58.84
2014	59.46	58.74	61.73	66.68

Source: Author developed (2016)

Table 2: Mean retail prices of rice

Period	White raw rice(Rs/Kg)	Red raw rice (Rs/kg)	<i>Nadu</i> rice (Rs/Kg)	<i>Samba</i> rice (Rs/Kg)
Entire period (2002-2014)	58.41	59.30	59.63	70.44
Without price policy (2002- 2007)	60.15	62.69	60.30	72.00
With price policy (2008- 2014)	56.38	55.34	58.84	68.62

Source: Author developed (2016)

The maximum retail price policy has reduced the average retail prices of both white and red raw rice but, the reduction in retail price is large in red raw rice. One reason for the difference in price reductions of the rice varieties could be the difference in demand. Usually, demand for white raw rice is higher than that of red raw rice because red rice consumption is limited to few areas of the country while the white rice consumption is taking place throughout the country.

Retail prices of *Nadu* rice have ranged from Rs.49.29 to Rs.72.57 per kg, while that of *Samba* rice has ranged between Rs.58.84 and Rs.83.76 per kg (Table 1). The average retail price of *Nadu* rice is Rs.59.63 while that of *Samba* is Rs.70.44 per kg (Table 2). Average retail prices of *Nadu* rice without and with the pricing policy were Rs.60.30 and Rs.58.84 per kg respectively. Without and with the pricing policy, the average retail prices of *Samba* rice were Rs.72.00 and Rs.68.12 per kg respectively (Table 2). Thus, it is possible to state that the price policy has reduced the average retail prices of all four rice varieties included in the study.

Wholesale prices

The wholesale prices of white raw rice have ranged between Rs.39.82 and Rs.64.53 per kg with a mean value of Rs.50.82 per kg, while that of red raw rice has changed from Rs.42.10 to Rs.66.43 per kg, with a mean value of Rs.53.50 per kg. Mean wholesale prices of whiteraw rice without and with the price policy are Rs.51.02 and Rs.50.59 per kg respectively (Tables 3 and 4).

Wholesale price of red raw rice has changed between Rs.42.25 and Rs.66.43 per Kg with a mean value of Rs. 53.50. Average wholesale prices of red raw rice with and without the price policy are Rs. 56.07 and Rs.50.51 per Kg respectively (Tables 3 and 4). Thus, the new price policy has contributed to reduce the wholesale price of red raw rice.

Wholesale price of *Nadu* rice has ranged from Rs.42.40 to Rs.67.10 per kg while that of *Samba* has ranged between Rs.51.76 to Rs.77.44 per kg (Table 3).The average wholesale prices of *Nadu* rice without and with the price policy were Rs.53.74 and Rs.53.33 per kg respectively.

Table 3. Wholesale prices of rice

Year	White raw rice (Rs/Kg)	Red raw rice (Rs/Kg)	Nadu rice (Rs/Kg)	Samba rice (Rs/Kg)
2002	56.26	65.37	57.81	73.80
2003	48.10	50.74	51.18	62.73
2004	57.37	65.96	61.10	73.63
2005	44.82	49.00	47.86	64.68
2006	39.82	42.10	42.40	51.76
2007	46.21	52.83	48.73	55.69
2008	64.53	66.43	67.10	77.44
2009	61.47	61.86	63.74	74.17
2010	50.89	52.88	54.51	68.28
2011	48.21	47.95	52.21	62.13

2012	43.51	43.81	47.54	57.54
2013	43.68	42.25	46.69	55.91
2014	59.46	54.19	55.26	62.85

Source: Author developed (2016)

Average wholesale price of *Samba* without and with price policy were Rs.65.53 and Rs.63.48 per kg respectively (Table 4). Thus, it is possible to state that, the price policy has reduced the average wholesale prices of *Nadu* and *Samba* rice in small magnitudes.

Table 4. Average wholesale prices of rice

Description	Mean wholesale price (Rs/Kg)			
	White raw	Red raw	<i>Nadu</i> rice	<i>Samba</i> rice
Entire period (2002-2014)	50.82	53.50	53.55	64.59
Without price policy (2002-2008)	51.02	56.07	53.74	65.53
With price policy (2009-2014)	50.59	50.51	53.33	63.48

Source: Author developed (2016)

Producer prices

The producer price of *Nadu* rice has ranged from Rs.19.71 to Rs.33.56 per Kg with a mean value of Rs.26.90 per Kg. The mean producer price of *Nadu* without and with the price scheme were Rs.26.42 and Rs.27.46 per Kg respectively. The producer price of *Samba* rice has ranged from Rs.22.31 to Rs.38.49 per Kg with an

average price of Rs.30.51 per Kg. The average producer price of *Samba* rice without the price policy is Rs. 30.13 per Kg while it is with the policy is Rs.30.95 per Kg (Tables 5 and 6). This information reveals that the maximum retail price policy has increased the producer prices of *Nadu* and *samba* rice and is a favorable impact

Table 5: Producer prices of *Nadu* and *Samba* rice

Year	Nadu rice (Rs/Kg)	Samba rice (Rs/Kg)
2002	29.02	34.63
2003	25.05	28.06
2004	31.06	34.71
2005	22.92	27.72
2006	19.71	22.31
2007	23.77	25.86
2008	33.24	37.65
2009	33.56	37.71
2010	26.63	31.29
2011	25.83	38.49
2012	23.82	28.27
2013	23.89	26.59
2014	30.99	33.36

Source: Author Developed (2016)

Table 6. Average producer prices of *Nadu* rice and *Samba* rice

Period	Average producer price (Rs/Kg)	
	<i>Nadu</i> rice	<i>Samba</i> rice
Entire period (2002-2014)	26.90	30.51
Without price policy (2002-	26.42	30.13

2008)		
With price policy (2009-2014)	27.46	30.95

Source: Author developed (2016)

In summary, maximum retail price policy has reduced the average retail prices of all four rice varieties and the average wholesale prices of *Nadu* and *Samba* rice, and increased the producer prices of *Nadu* and *samba* rice marginally.

Marketing efficiency

Producers' share of the consumer price

This ratio indicates the portion of consumer's rupee goes to the producer. The higher this ratio, the greater the benefits channeled to the producers is. Unavailability of data restricted the calculation of the ratio to *Nadu* and *Samba* rice.

When the entire period is considered producers of *Nadu* rice have received 45.11 percent of price paid by the consumer. It reveals that more than one half of the consumer price is being retained by the participants of the marketing channel. This percentage was 43.82 prior to the introduction of the price policy and it reduced to 46.66 after the introduction of the price policy (Table 7).

Table 7: Producer as a percentage of retail price

Description	(Producer price x Retail price)100	
	<i>Nadu</i>	<i>Samba</i>
Entire period (2002-2014)	45.11	43.31
Without price policy(2002-2008)	43.82	41.85
With price policy(2009-2014)	46.66	45.10

Source: Author developed (2016)

Portion of the consumer rupee channeled to the producers of *Samba* rice are 43.31, 41.85 and 45.10 percent respectively the entire period was considered, without the

price policy and with the price policy respectively (Table 7). Price policy has marginally improved the producer's share of the price paid by the consumer. In general, the new price policy has marginally improved the producer's share of the price paid by the consumer.

Total gross margin

The total gross margin was computed dividing the difference between retail and producer price by retail price and multiplying by one hundred. It indicates the proportion of the retail price that is being retained at different point of the marketing channel. Raw rice varieties were excluded from this analysis because producer prices of those rice varieties were not available. Thus, total gross margins of *Nadu* and *Samba* varieties for the entire period, the period from 2000 to 2008 (without price policy) and period from 2009 to 2014 (with price policy) were calculated.

Table 8 : Temporal distribution of total gross margin

Year	<i>Nadu</i>	<i>Samba</i>
2002	55.57	56.14
2003	56.95	59.61
2004	53.17	55.09
2005	58.25	61.59
2006	60.02	63.13
2007	56.86	58.18
2008	54.19	55.05
2009	51.20	53.18
2010	56.34	58.24
2011	55.04	58.08
2012	54.47	54.99
2013	53.86	54.82
2014	49.80	51.47

Source: Author developed (2016)

If the gross margin is large a larger portion of the price difference is retained by the intermediaries and thus, smaller ratios are preferred. The gross margin of *Nadu* rice has ranged between 49.80 and 60.02 percent while that of *Samba* rice has ranged from 51.47 to 63.13 percent (Table 8). This indicates that, a greater part of the price difference is being retained by the market intermediaries.

The average rates at which the gross margin of *Nadu* rice and *Samba* rice have changed are 6.6 and 7.4 respectively. That is, the gross margins of *Nadu* rice and *Samba* rice have been increasing at rates of 6.6 and 7.4 percent per annum. This indicates that, the price policy has failed to control the retail price effectively and efficiently.

The average total gross margins of *Nadu* rice and *Samba* rice prior to the introduction of the price policy were 57.81 and 63.68 percent respectively, while the corresponding values after the introduction of the price policy were 50.12 for *Nadu* rice and 55.13 for *Samba* rice. Therefore, it is possible to state that the price policy has failed to control the retail price as expected.

Price Stability

Price stability gives an idea about the degree of price fluctuations. The coefficient of variation (CV) of prices could be used as a measure of price stability. The higher the CV value, the greater price fluctuation (low price stability) is. The CV values of retail prices of white raw rice, and *Nadu* rice have increased during 2003 to 2005. The CVs of the retail prices all rice varieties have declined in 2006 and has increased in 2007. With the introduction of the new price policy the CVs of retail prices of all rice varieties have declined in 2008 and have increased again in 2009 and 2010. Price instability has declined thereafter (Table 1). The instability of the retail price has increased in 2014 (Table 8).

Table 9 : CV values of retail prices of rice

Years	CV (%)			
	White- raw rice	Red -raw rice	<i>Nadu</i>	<i>Samba</i>
2002	7.36	10.21	7.42	10.78
2003	6.31	8.00	5.90	14.58
2004	8.73	14.21	6.81	15.45
2005	10.39	13.96	9.33	10.55
2006	5.99	6.80	6.59	5.96
2007	19.31	13.18	16.95	19.86
2008	3.23	3.74	3.28	6.54
2009	14.28	4.41	5.61	5.73
2010	13.59	12.67	12.75	11.13
2011	3.94	3.81	2.47	3.89
2012	5.04	3.54	3.55	2.32
2013	1.62	1.26	1.65	1.80
2014	11.01	14.49	9.62	6.46

Source: Author developed (2016)

The mean CV values of retail prices of white raw rice, red raw rice, *Nadu* rice and *Samba* rice are 7.8, 7.8, 9.1 and 8.9 percent respectively. Thus, the lowest and the highest CV values of retail prices are associated with raw (white and red) rice and *Nadu* rice varieties respectively. The overall trend in CV values of retail prices of white raw rice, red raw rice, *Nadu* rice and *Samba* rice were 7.09, 6.52, 6.93 and 6.09 respectively. That is, retail prices of all rice varieties considered are not stable during the period considered.

This study also compared the mean CV values of the period prior to the introduction and the period after the introduction of the price policy with the intension to examine whether the price policy has reduced the instability of retail prices. The

mean CV values of retail prices prior to the introduction of the maximum retail price policy were 13% (white-raw rice), 16% (red- raw rice), 11% (*Nadu* rice) and 11% (*Samba* rice) while the corresponding values after the implementation of the price policy were 12%, 12%, 11% and 12% respectively (Table 9).

Results indicate that, retail prices of white raw rice and red raw rice have marginally stabilized, stability of retail prices of *Nadu* rice has not changed and retail price instability has marginally increased after the introduction of the price policy (Table 9). Therefore, it is possible to state that, the new price policy has failed to stabilize retail prices, as expected.

Table 10: Average CV values of retail prices of rice before and after the introduction of maximum retail price

Rice Variety	CV before 2008 (%)	CV after 2008 (%)
Raw white	13	12
Raw red	16	12
<i>Nadu</i>	11	11
<i>Samba</i>	11	12

Source; Author developed (2016)

CONCLUSIONS AND RECOMMENDATIONS

The maximum retail price policy has reduced the average retail prices of all four rice varieties average wholesale prices of *Nadu* and *Samba* rice and increased the producer prices of *Nadu* and *samba* rice marginally. This information reveal that, the new price policy is less effective in controlling market prices.

Producer's share, total gross margin and price stability are the measures used to assess the marketing efficiency. The price policy has marginally improved the producer's share of the price paid by the consumer indicating it is less effective.

The average rates at which the total gross margin of *Nadu* rice and *Samba* rice have changed are 6.6 and 7.4 respectively. That is, the gross margins of *Nadu* rice and *Samba* rice have been increasing at rates of 6.6 and 7.4 percent per annum. This indicates that, the price policy has failed to control the retail price effectively and efficiently. The average total gross margins of *Nadu* rice and *Samba* rice prior to the introduction of the price policy were 57.81 and 63.68 percent respectively, while the corresponding values after the introduction of the price policy were 50.12 for *Nadu* rice and 55.13 for *Samba* rice. Therefore, it is possible to state that, the price policy has failed to control the retail price as expected.

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