

Economics of Storage of Paddy in Rural Godowns in TBP Area in Karnataka

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Abstract

Background: The present study was undertaken to know the economics of storage of paddy in rural godowns and the benefits accrued and problems faced by the farmers in Tungabhadra Project area. Tungabhadra project area was purposively chosen for the study since 72 per cent of the total numbers of rural godowns sanctioned by NABARD (2406) in Karnataka are lying in this region.

Methods: Purposive sampling technique was adopted for selection of sample farmers based on the nature of ownership, age of the godown and utilization of the godowns. Tabular analysis with simple averages and percentages were worked out.

Results: The rural godown Scheme seems to have encouraged the farmers. It was noticed that the majority of farmers used godowns to store their produce in the harvest season and sell in lean period in order to realise higher returns. The godown users were able to reap about 9 to 13 per cent increase in prices for their produce by holding the same for 4 to 4 ¹/₂ months. About 60 per cent of the owner users constructed godowns to avail subsidy. Further, about 96 per cent of owner users and 93 per cent of non-owner users utilized the rural godowns to avail pledge loan from banks.

Application: Hence, small and marginal farmers of TBP area should be encouraged for the construction of smaller capacity godowns (50MT), by extending the facilities as in hilly areas under the Gramin Bhandaran Yojana Scheme.

Key words: Rural godowns, farmers economy, pledge loan, gain in price.

1. Introduction

Storage is an important marketing function, which involves holding and preserving goods from the time they are produced until they are needed for consumption. Storage is an exercise of human foresight by means of which commodities are protected from deterioration, and surplus supplies in times of plenty are carried over to the season of scarcity. Storage is required for inter-temporal and inter-spatial adjustments. In economics parlance, storing implies value addition in commodity by enhancing its "Time Utility". Godowns are an economic activity and denote a dynamic aspect of commercial storage. It provides for safe storing of goods in an orderly manner at suitable locations for easy retrieval when required for use [1]. The necessity for storage arises fundamentally out of lack of adjustment between the time and place of production of goods and the time and place of their consumption.

Rural godowns in India are agriculture-based and their utilization depends mainly on agricultural production. In India the need for rural godowns was progressively felt in the context of extension of agricultural credit to the rural areas as well as the need to provide adequate scientific storage facilities for the preservation of foodgrains. Accordingly the capital investment subsidy scheme titled 'Gramin Bhandaran Yojana' was launched in 2001[1]. The main objectives of the scheme included creation of scientific storage capacity with allied facilities in rural areas to meet out various requirements of farmers for storing farm produce, processed farm produce, agricultural inputs, etc., and prevention of distress by creating the facility of pledge loan. Under the scheme 19,456 godowns (sanctioned by NABARD) were established in the country upto 2009-10 with a capacity of 2,39,02,099 tonnes [1]. Karnataka was also one of the beneficiary States and the Tungabhadra Project area (TBP) in the State has a large number of rural godowns. Hence, the study is based on the rural godowns sanctioned by NABARD under Gramin Bhandaran Yojana scheme and located in TBP area. The objectives of the study were to analyse the advantages of rural godowns in terms of better price, pledge loan facility and returns generated thereon.

Note. This study is a part of Masters Research carried out by the first author under the chairmanship of second author with the third author as a member of the advisory committee.

2. Methodology

Tungabhadra project area was purposively chosen for the study since 72 per cent of the total numbers of rural godowns sanctioned by NABARD in Karnataka are lying in this region. The Tungabhadra project area consists of three districts namely Raichur, Bellary and Koppal. Two taluks from Raichur district namely Sindhanur and Manvi, and one taluk from Koppal district namely Gangavati were selected based on the highest number of rural godowns. Purposive sampling technique was adopted for selection of sample farmers based on the nature of ownership and the use of rural godowns [2].

Among the selected farmers, 30 farmers were owner-users, 30 farmers were non-owner users and 30 were non-users of rural godowns, i.e., ten farmers each from owner users, non owner users and non users categories were selected from each taluk. Thus, the total sample size constituted 90 sample farmers. Primary data with respect to quantity of paddy stored, price realized, pledge loan availed pertained only to godowns sanctioned by NABARD under Gramin Bhandaran Yojana scheme.

Paddy was the only commodity that almost occupied the bulk of the storage space in the selected godowns as TBP area is the Rice Bowl of Karnataka and hence all information in the study pertains to paddy crop. It is grown during *kharif* and also *rabi/summer* seasons. The data collected pertains to the agriculture year 2009-10 and 2010-11 for *kharif* and *rabi/summer* seasons. Tabular analysis with simple averages and percentages were worked out.

3. Results and Discussion

The rural godowns Scheme seems to have encouraged farmers in creating storage capacities for their produce, which was otherwise sold at low prices immediately after the harvest. The relative price advantage due to storage has been presented in Table 1. It is observed from the Table that, even after deducting the storage charges of (*kharif*) Rs 15.29 per quintal and (*rabi/summer*) Rs 16.63 per quintal and storage loss of (*kharif*) Rs 65.77 per quintal and (*rabi/summer*) Rs 53.91 per quintal, there was a gain in price to the extent of Rs 151.94 and Rs 96.46 per quintal respectively for *kharif* and *rabi/summer* crops. The average storage period for *kharif* and *rabi* crop was 4.10 and 4.46 months respectively [3]. The average rental charges were Rs 3.73 per quintal per month. Most of the respondents were able to reap about 9 to 13 per cent increase in prices for their produce by holding the same for 4 to 4 $\frac{1}{2}$ months avoid distress sale after harvest and due to the fact that storage resulted in the preservation of quality which helped them fetch both better realization on the saleable volumes and the prices received.

Table 1. Relative price advantage due to storage of paddy

Sl. No.	Particulars		Units	paddy season	
				<i>Kharif</i> crop	<i>Rabi/Summer</i>
1	Average quantity stored in sample godowns		Qtl	2727.50	2748.68
2	Price at the time of storage		Rs per Qtl	1209.00	1025.00
3	Realized price		Rs per Qtl	1460.00	1210.00
4	Duration of storage		months	4.10	4.46
5	Storage charge per month		Rs per Qtl	3.73	3.73
6	Total storage charge		Rs per Qtl	15.29	16.63
7	Storage loss				
	a.	Physical loss	Qtl	148.42 (5.44)	144.76 (5.26)
	b.	Financial loss	Rs per Qtl	65.77	53.91
8	Quantity removed (after accounting for storage loss)		Qtl	2579.08	2603.92
9	Labour charge		Rs per Qtl	18.00	18.00
10	Gain in price		Rs per Qtl	151.94 (12.56)	96.46 (9.41)

Note: Figures in parentheses indicate percentages to average quantity stored

The pledge loan availed by users are presented in Table 2. During the study period, the pledge loan availed by owner user was highest in Sindhanur (Rs 7.26 lakhs) followed by Manvi (Rs 4.72 lakhs) and Gangavati (Rs 1.66 lakhs). Similarly loan availed by non-owner user was highest in Manvi (Rs 1.39 lakhs) followed by Gangavati (Rs 0.87 lakhs) and Sindhanur (Rs 0.45 lakhs). During the same period pledge loan availed by owner users was highest (Rs 5.22 lakhs) compared to non-owner users (Rs 0.90 lakhs). This was because of more banking activity and number and capacity of godowns [4, 5].

Table 2. Pledge loan facility availed by godown users

(Lakh rupees per farmer)

Taluk/season User category	Manvi			Sindhanur			Gangavati			overall
	K	R/S	Total	K	R/S	Total	K	R/S	Total	
Owner user	2.51	2.21	4.72	3.75	3.51	7.26	2.02	1.66	3.68	5.22
Non-owner-user	0.75	0.64	1.39	0.22	0.23	0.45	0.49	0.38	0.87	0.90

Note: K=Kharif, R/S=Rabi/Summer

There has been a non-uniform pattern of rent both in respect to periodicity and weight. Owner users were charging non-owner users for storing their produce based on relationship that existed between them. Income received by owner users in the form of rent by hiring out a part of the godown is presented in Table 3. During the study period, owner users of Sindhanur taluk had earned more income (Rs 77,715) compared to the farmers of Manvi (Rs 52,485) and Gangavati (Rs 39,740) because of highest total capacity utilization by non-owner users in Sindhanur compared with Manvi and Gangavati taluks. The overall average income earned from custom hiring in all the three taluks was Rs 56,646 per godown per year. These obtained results were extrapolated to average storage capacity of TBP area, and thus the income earned was Rs 88,723.67 per godown per year. It was also observed that, income received by godown owner for every tonne of capacity utilized by non-owner user was highest in Manvi (Rs 383.38) when compared with Sindhanur (Rs 363.66) and Gangavati (Rs 296.35). The income per tonne of capacity utilized by non-owner user was highest in Manvi (Rs 383.38) than Sindhanur (Rs 363.66) and Gangavati (Rs 296.35) because of the differences in rental charges on storage (Rs 2.50 to 3.00 per bag per month) and the highest storage charge was in Manvi taluk. The average income received from three taluks was Rs 350.61 and the estimated income per tonne of capacity utilized by non-owner user for entire TBP area was Rs 350.69 per godown.

Table 3. Income generated by hiring out the godown

(per godown)

Sl.No.	Units/Taluk Particulars	Units	Manvi	Sindhanur	Gangavati	overall	Estimated income for TBP area
1	Average capacity of godown	tonnes	209.25	337.50	210.00	252.25	395.09
2	Income per godown	Rs. per year	52,485.00	77,715.00	39,740.00	56,646.67	88,723.67
3	Average storage capacity utilized by Non-owner user	tonnes	136.90	213.70	134.10	161.57	253.00
4	Income per tonne of capacity utilized by Non-owner user	Rs. per tonne per year	383.38	363.66	296.35	350.61	350.69

The opinion of the owner users of rural godowns on the infrastructure development and asset creation (Table 4) revealed that about 47 per cent of them could purchase a motorbike out of enhanced income. The owner users and non-owner users to the extent of 26.67 and 23.33 per cent respectively had undertaken construction or renovation of their homes. Further, no major changes in farm assets were noticed except 33.33 per cent of owner users had purchased a puddler. The enhanced income had not only helped in marginally raising the standard of living of the farmers but also seemed to have enabled the farmers to augment their household asset base, farm implements and machineries, farm building, pay off debts, other consumer goods and/or build their savings base.

Table 4. Infrastructure/assets created on farm and home by godown users

Sl. No.	Particular	Owner-users (N=30)		Non-owner users (N=30)	
		No.	(%)	No.	(%)
Facilities created at home					
1	Construction or renovation of home	8	26.67	7	23.33
2	Construction of toilets	7	23.33	5	16.67
3	Purchase of motorbikes	14	46.67	4	13.33
Farm implements and machineries					
1	M.B. plough	4	13.33	1	3.33
2	Disc plough	3	10.00	3	10.00
3	Puddler	10	33.33	2	6.67
4	Tractor	1	3.33	0	0.00
5	Power tiller	2	6.67	0	0.00
6	Sprayer	7	23.33	5	16.67
Farm building					
1	Cattle shed	5	16.67	4	13.33
2	Implements shed	1	3.33	1	3.33
3	Pump house	4	13.33	2	6.67
4	Farm road	8	26.67	5	16.67

A perusal of Table 5 indicated that owner users to the extent of 40 per cent had faced delay in availing subsidy on godown construction. It was observed that all the godown user farmers from both the categories agreed that they had used rural godown to avoid distress sale and increase their income. About 20 per cent of them felt the need for additional storage space. It was noticed that the majority of farmers used godowns to store their produce in the harvest season and sell in lean period in order to realise higher returns. About 56 per cent of non-owner users felt that the rent on storage was higher and demanded a decrease of the same. The opinion of the owner user for construction of rural godown was elicited. It was recorded that 60 per cent of the owner users constructed godowns to avail subsidy from Gramin Bhandaran Yojana scheme and to make an additional investment. This was a good sign for the physical growth of godowns. Further, about 96 per cent of owner users and 93 per cent of non-owner users expressed the utilization of rural godowns to avail pledge loan from bank to meet their financial commitments immediately after harvest. However, 13.33 per cent of both the categories of users expressed difficulties with respect to obtaining pledge loan from banks. Thus it follows that facile bank credit is an essential prerequisite to the harmonious and healthy development of rural godowns.

The note-worthy feature of the study is that only about 13.33 per cent of the non-beneficiary farmers (non user) were not aware of godown scheme and pledge loan facilities that existed in the study area. This was because of less social participation, friendship and networks. It also indicated that, most of the time price varied from hourly, daily and weekly basis. As a result, farmers could not expect higher price in the future as they did not have any anticipation on price variation and storage of produce was not felt to be advantageous.

It may be concluded from the study that rural godowns in India are agriculture-based. The rural godowns Scheme seems to have encouraged farmers in creating storage capacities for their produce, and marginally increase their standard of living. Hence it is advised to encourage small and marginal farmers of TBP area for the construction of smaller capacity godowns (50MT), by extending the facilities already existing in hilly areas under the Gramin Bhandaran Yojana Scheme.

Table 5. Reasons for construction/use of rural godowns and constraints faced by users

1	Reasons for using/constructing godowns		Owner user N=30		Non-owner user N=30	
			No.	(%)	No.	(%)
	i	To avoid distress sale and increase income	30	100.00	30	100.00
	ii	To avail pledge loan facility	29	96.66	28	93.33
	iii	For scientific storage	4	13.33	4	13.33
	iv	To avail subsidy	18	60.00	-	-
	v	For additional investment	18	60.00	-	-
2	Constraints					
	i	Encountered difficulties in availing pledge loan from banks	4	13.33	4	13.33
	ii	Delay in getting subsidy	12	40.00	-	-
	iii	High storage charge	-	-	17	56.67
	iv	Inadequate storage space	-	-	6	20.00

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