Performance of Agri - Warehousing in Maharashtra and Market Potential for Negotiable Warehouse Receipts Finance in India

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Abstract

The present study has critically analyzed the economic performance of Maharashtra State Warehousing Corporation by using the tabular analysis method. The study found that net profit before tax had continuously increased from ₹1754.20 lakhs to ₹ 3526.03 lakhs (50.24% increase) during the last six years (2005-2010). The capacity utilization percent ranged between 74 to 79%. The financial analysis ratios, that is, gross profit to turnover was 32.63%, net profit to total turnover (27.99 %) and net profit after tax to total turnover (18.46%) were positive, return on capital employed was 10.32%, and current ratio was 1.42 : 1. All these economic performance indicators and financial ratios highlight the incredible economic performance and positive growth of agri- warehousing in Maharashtra. On the other hand, the warehouses are still facing a lot of constraints in their warehousing operations . The market potential for warehouse receipt financing in India was estimated at ₹ 19000 crore, and also, negotiable warehouse receipt financing is facing quite a few challenges in India. Hence, the present study has suggested that training and awareness programs should be conducted for farmers, warehouse managers, and support staff ; modern warehouses are the need of the hour ; warehouses should complete accreditation, registration, and certification ; high margins and stamp duty on warehouse receipt finance may be reduced for farmers and other depositors. Also, additional 35 million MT storage capacity may be created at the all India level by promoting private sector participation through various public – private partnership measures.

Keywords: **agri-warehouses, constraints, economic performance, negotiable warehouse receipts finance, Maharashtra State Warehousing Corporation**

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Indian agriculture is characterized by the seasonal nature of production and fluctuations in the production cycles. On the other hand, the consumption pattern for agri-products is relatively stable and continuous. This conflicting behaviour of demand and supply makes it essential that a large quantity of farm produce has to be stored for a considerable period of time with the aim to even out seasonal fluctuations. Hence, warehousing is of crucial importance, and it is an essential element for the success of production, manufacturing, and processing activities. The term 'warehousing' used for holding a produce from the time of its production, till it reaches the ultimate consumers forms an important element of marketing function. Through warehousing, agri-commodities are protected from deterioration in both - quantity and quality, and excess supplies in the times of over production are carried over to scarcity periods. The warehousing function, therefore, adds the time utility to products besides place utility. Warehousing facilities are crucial to avoid the loss arising out of faulty storage and also to equip the farmers with a convenient instrument of credit through negotiable warehouse receipts. Thus, the warehousing scheme in India is an integrated scheme of scientific storage, rural credit, and price stabilization.

Economic efficiency and success of a warehouse largely depend on scientific storage, effective utilization of constructed storage space (capacity utilization), lesser amount of storage losses, higher profits for both warehouse operators and depositors, and sound financial performance indicators.

Objectives of the Study

With the abovementioned background, the present study has critically analyzed the issues related to economic performance of warehousing service of Maharashtra State Warehousing Corporation (MSWC), constraints faced by

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agri-warehouses in Maharashtra, and scope for negotiable warehouse receipts credit in India.

Current Status of Warehousing Industry in India

At present, there are three main agencies in the public sector which are engaged in building large scale storage capacity. They are Food Corporation of India (FCI), Central Warehousing Corporation (CWC), and State Warehousing Corporation (SWC). Presently, CWC is operating 469 warehouses across the country with a storage capacity of 10.80 million MT, providing warehousing services for a wide range of products ranging from agricultural produce to sophisticated industrial products. Likewise, state warehousing corporations were also set up in different states of India and are operating 1659 state warehouses, with a storage capacity of 25.09 million MT, providing warehousing services (CWC Annual Report, 2012-2013). In addition, the total capacity available with FCI for storage of food grains is 37.73 million MT (Food Corporation of India, 2013) .

In the co-operative sector, NCDC has assisted in creation of 15.07 million tonnes of storage capacity. Nowadays, private warehouses are providing sizeable storage space (18.97 million MT) and also, the storage capacity provided by state civil supplies is 11.30 million MT (Rai, 2012). Thus, the total warehousing capacity available in India in public, co-operative, and private sector is about 118.96 million MT. As per recent estimates, additional 35 million MT warehousing capacity is required in the next 5 to 10 years. There is a need for sufficient modern warehousing capacity to be created in the country to store and preserve the food grains procured for the central pool (Rai, 2012).

Methodology

Maharashtra State Warehousing Corporation was purposively selected for this study. MSWC was established on August 8, 1957 under the Agriculture Produce (Development & Warehousing) Act, 1956, which was subsequently replaced by the Warehousing Corporations Act, 1962. It is one of the oldest State Warehousing Corporations in the country (MSWC Annual Report, 2010). It was started with 3 warehousing centers and has now grown up to the extent of 176 centers (at present), with a total capacity of 13.58 lakh tonnes (CWC Annual Report, 2013).

Primary and secondary data were collected to meet out the objectives of the study. The reference period for the primary data collected for this study pertained to the year 2011-12. The primary data were collected to bring forth first hand information about the functioning of agri-warehouses of MSWC, and also to understand the problems faced by the warehouses in their storage operations. Secondary data on a number of warehouses, depositor -wise and commodity-wise utilization of warehouses, fixed assets value, income and expenditure details, average total capacity, average constructed capacity, and average utilization of warehouses were collected from the annual reports of MSWC for the period from 2007-08 to 2009-10.

The data were analyzed with the help of statistical tools like averages and percentages to obtain meaningful results. To study the constraints faced by agri-warehouses of MSWC, twenty warehouses were purposively selected (the warehouses were selected for Warehousing Development and Regulatory Authority's (WDRA) consultancy assignment work of accreditation and for inspection purposes). The warehouses of different capacities - ranging from a minimum of 2000 MT to a maximum of 17000 MT were studied for this purpose in the year 2011-2012. The information regarding the constraints faced by selected agri-warehouses was ascertained by the personal interview method using a well-structured and pre-tested questionnaire. In the preliminary survey, a list of constraints was prepared by collecting first-hand information on agri-warehousing for storage of agri-commodities. It was measured by assessing scores of 2, 1, and 0 for *most serious*, *serious*, and *not so serious* respectively as perceived by the warehouse managers. Constraints were analyzed by using the tabular analysis method based on total score and were finally ranked based on the highest total score value as the *most serious* constraint and the lowest total score as the *least serious* constraint.

Results and Discussion

1) Economic Performance of Maharashtra State Warehousing Corporation (MSWC)

↳ **Depositor - Wise Break Up of Average Utilization for the Year 2009-10 :** The Table 1 shows the depositor-wise

Table 1.Depositor- Wise Break Up of Average Utilization for the Year 2009-10

S.No	Name of the depositor	Utilization per cent
1	Co-operatives	40.11
2	Public undertaking	25.91
3	Traders	14.63
4	Private concern	13.17
5	Farmers	5.50
6	Government	0.68
	Total	**100.00**

Source : Compiled by the Author

Table 2. Commodity- Wise Break Up of Average Utilization for the year 2009-10

S.No	Name of the Commodity	Utilization per cent
1	Cotton Bales	45.27
2	Food grains	40.81
3	Fertilizers	3.91
4	Bonded custom	3.10
5	Others	6.91
	Total	**100.00**

Source : Compiled by the Author

break up of average utilization of warehouses for the year 2009-10. It was observed that the highest utilization percent was 40.11% for co-operatives, followed by public undertakings (25.91 %), traders (14.63 %), private concerns (13.17%) , farmers (5.50%), and the lowest utilization was by the government (0.68%). It can be observed that producers of agricultural crops were utilizing lesser per cent of warehouses in Maharashtra in total capacity constructed, even though farmers get a 50% rebate on storage charges.

↳ **Commodity - Wise Break Up of Average Utilization :** The Table 2 clearly exhibits the commodity-wise break up of average utilization for the year 2009-10. It was observed that the highest percentage of commodities stored in the warehouses was cotton bales (45.27%) , followed by food grains (40.81%) , fertilizers (3.91%) , bonded custom (3.10%), and other commodities (6.91%).

↳ **Comparison of Income and Expenditure, Gross Profit, and Net Profit Before Tax :** It is visualized from the Table 3 that the income continuously increased from ₹ 7857 lakhs to ₹ 12722 lakhs (38.24% increase) during the period from 2005-06 to 2009-10. Similarly, the net profit before tax also increased continuously from ₹ 1754.20 lakhs to ₹ 3526.03 lakhs (50.24% increase) during the last six years. It shows the extraordinary economic performance of MSWC over the years.

Table 3. Income and Expenditure, Gross Profit, and Net Profit Before Tax

S.No.	Year	Income (₹ in Lakhs)	Expenditure (₹ in Lakhs)	Gross profit (₹ in Lakhs)	Net profit before tax (₹ in Lakhs)
1	2005-06	7857	6103	2513.15	1754.20
2	2006-07	8384	6255	2622.15	2128.98
3	2007-08	8764	6603	2678.77	2160.70
4	2008-09	10514	7991	3469.85	2523.02
5	2009-10	12722	9196	4110.67	3526.03

Source : Compiled by the Author

Table 4. Total Capacity, Constructed Capacity, and Average Utilization During the Period from 2005-2010 (in lakh MT)

S.No	Year	Average total capacity (including hired godown)	Average constructed capacity	Average Utilization	Utilization (Percent)
1	2005-06	12.34	11.07	9.77	79
2	2006-07	11.98	11.15	8.29	69
3	2007-08	11.68	11.15	8.15	70
4	2008-09	12.31	11.21	9.25	75
5	2009-10	14.95	11.27	10.99	74

Source : Compiled by the Author

Table 5. Analysis of Financial Ratios

S.No	Particulars	2009-10
1	Gross Profit to Turnover	32.63%
2	Net Profit to Total Turnover	27.99%
3	Net Profit after Tax to Total Turnover	18.46%
4	Wages to Total Turnover	22.34%
5	Current Ratio (Current Assets: Current Liabilities)	1.42 : 1
6	Return on Capital Employed	10.32%

Source : Compiled by the Author

Total Capacity, Constructed Capacity, and Average Utilization of Warehouses (in lakh MT During the Period from 2005-2010) : The details of capacity utilization of warehouses are presented in the Table 4. The Table clearly shows that the average total installed capacity (including hired godown) ranged between 12.34 to 14.95 lakh MT during the period from 2005-2010. Similarly, the average capacity utilization fluctuated between 8.15 to 10.99 lakh MT. The capacity utilization was 74% in the year 2009-10 and the capacity utilization was maximum (79%) in the year 2005-06. This capacity utilization was three-fourth of the actual installed capacity. It shows positive indication of agri-warehousing in Maharashtra and still, there is a lot of potential to increase the capacity utilization to 100%.

Analysis of Financial Ratios : The financial analysis ratios, that is, gross profit to turnover, net profit to total turnover, net profit after tax to total turnover, return on capital employed, wages to total turnover, and current ratio were computed for the year 2009-10 and are presented in the Table 5 to understand the operational efficiency of these warehouses . Gross profit to turnover was 32.63% , net profit to total turnover (27.99 %) and net profit after tax to total turnover (18.46 %) were positive and more than 18% , and also, the wages to total turnover was 22.34%.

Return on capital employed is a ratio that indicates the efficiency and profitability of a company's capital investments. It should always be higher than the rate at which the company borrows. It was 10.32%, and higher than the borrowing rate. Similarly, current ratio is mainly used to give an idea of the company's ability to pay back its short-term liabilities with its short-term assets. It was found that the current ratio was 1.42: 1 (higher than one). All these financial ratios show that MSWC is in good financial health, and has been displaying an incredible economic performance.

2) Constraints Faced by Agri-warehouses (MSWC) in Warehousing Operations in Maharashtra : The constraints faced by agri-warehouses in warehousing operations are presented in the Table 6 in order of seriousness. The Table clearly exhibits that lack of computerization for all warehouse operations , shortage of qualified (technical) warehouse managers, shortage of support staff, and absence of mechanical handling appliances in the warehouse were ranked as the most serious constraints, with the highest total score of 40 , followed by lack of trained warehouse managers and other staff, which was ranked as the second most serious constraint (with a total score of 36). Warehouse godowns showing cracks in its building structure was considered as the least serious constraint, with the least total score of 6. The other constraints like labour problem and labour asking for more labour charges, less number of fire buckets, lack of fully equipped lab facilities , lack of weigh bridge, lack of proper sampling for commodities and sampling register,

Table 6. Constraints Faced by Agri-Warehouses (MSWC) in Warehousing Operations in Maharashtra

S.No.	Particulars	Total Score	Rank
1.	Lack of computerization of all warehousing operations (from commodities entry into the warehouse to final withdrawal of goods from the warehouse).	40	I
2.	Shortage of qualified (technical) warehouse managers and shortage of supporting staff.	40	I
3.	Absence of mechanical handling appliances in the warehouses like stacking machine etc.	40	I
4.	Lack of trained warehouse managers and other staff.	36	II
5.	Labour problem and labour charges are more (sometimes more than storage charges).	34	III
6.	Warehouses are keeping less fire buckets.	29	IV
7.	Lack of fully equipped lab facilities.	22	V
8.	There is no weigh bridge.	21	VI
9.	Lack of proper sampling for commodities and sampling register is not maintained in the warehouse.	20	VII
10.	There is no storage loss register.	20	VII
11.	The warehouses maintain the godown number, stack plan with the lot number in the register only. The stack plan and number is not written on the walls.	20	VII
12.	There is no proper register for calibration of weighing equipments.	18	VIII
13.	The warehouses lack a proper boundary wall and fencing.	17	IX
14.	Warehouse godowns are very old.	13	X
15.	There are no proper security cabins.	9	XI
16.	Internal roads are poor and concrete floor of warehouses are not in good condition.	8	XII
17.	Warehouse godowns have cracks in the building structure.	6	XIII

Source : Compiled by the Author

lack of storage loss register , the stack plan and godown number not being written on the walls , lack of proper register for calibration of weighing equipments , lack of proper boundary wall and fencing in the warehouse, old warehouse godowns , lack of proper security cabins, internal roads being poor and concrete floor of warehouses not being in good condition were influencing the agri-warehouse operations to a considerable extent .

Warehouse Receipts Financing by Banks and Scope for Negotiable Warehouse Receipts Credit in India

The Warehousing (Development and Regulation) Act, 2007 came into force w.e.f. October 25, 2010. The act established Warehousing Development and Regulatory Authority (WDRA) w.e.f. October 26, 2010. The act confers the negotiability of warehouse receipts and prescribed the issue of negotiable warehouse receipts. The receipts issued by the warehouses registered with the WDRA would become a fully negotiable instrument as per the act (WDRA Manual, 2007). During the year 2011, the Honorable Minister of Consumer Affairs, Food and Public Distribution, Prof. K.V.Thomas formally launched the negotiable warehouse receipt system (NWRs). Hereafter, farmers can seek the loan from banks against the warehouse receipts issued to them against their storage. As per the recent study by Union Bank of India, the market potential for warehouse receipt financing in India was estimated at ₹19000 crore. Among all the commodities , wheat market potential was the highest at ₹ 5109 crore, followed by paddy (₹ 4698 crore), potato (₹1394 crore) , soybean (₹1284 crore), ground nut (₹1121 crore), and mustard (₹ 947 crore). The market potential was the lowest for gram at ₹ 932 crore (Rai , 2012) .

Some of the results obtained in the present study are in conformity with the suggestions of Rai (2012), who also recommended the full negotiability of warehouse receipts, warehouses accreditation, registration and certification, high margins up to 40% stipulated by banks, and stamp duty on pledge for warehouse receipts to be the major challenges in negotiable warehouse receipt system in India.

Conclusion and Policy Implications

The study concludes that net profit before tax of MSWC showed a remarkable increase of 50.24% from 2005 to 2010. The capacity utilization of MSWC warehouses was three - fourth of the actual installed capacity. The financial analysis ratios, that is, gross profit to turnover, net profit to total turnover, and net profit after tax to total turnover were positive. Return on capital employed and current ratio was encouraging .All these economic performance indicators and financial ratios highlight the incredible economic performance of MSWC. On the other hand, the MSWC warehouses are still facing lot of constraints in their warehousing operations .The market potential for warehouse receipt financing in India was estimated at ₹19000 crore. Also, negotiable warehouse receipt financing is facing a lot of challenges in India.

Based on the insights provided by the study, the following policy implications have been suggested to make the agri-warehousing operations and warehouse receipt financing more efficient in Maharashtra and India :

1) Warehouse receipt financing is still used in India only by traders and affluent farmers. Hence, there is a need to conduct training and awareness programs for farmers about agri-warehousing and warehouse receipt financing by government organizations, financial institutions, and NGOs to ensure more participation from small and marginal farmers.

2) The study suggested that modern warehouses are the need of the hour, equipped with the following well-designed and efficient warehousing infrastructure :

a) All warehouse operations should be computerized (from commodities' entry into the warehouse to final withdrawal of goods from the warehouse).This may reduce documentation and paper work.

b) Mechanical handling devices may be provided to the warehouses for loading, unloading, and stacking the goods . This would reduce wastage in handling and would also minimize handling and labour costs.

c) Electronic weigh bridge may be provided to the warehouses.

d) Fully equipped scientific labs need to be set up by warehouses to improve the quality and quantity maintenance of agro commodities and may improve the commodity value appraising skills.

3) Qualified warehouse managers and support staff like quality control inspectors, warehouse assistants, dusting operators need to be recruited to improve the performance of agri-warehouses.

4) Training should be given to warehouse managers and support staff in the area of agri- warehousing and warehouse receipt financing.

5) Warehouses should complete accreditation of warehouses, warehouses registration, and certification to speed up the process to implement the negotiable warehouse receipt system.

6) High margins for warehouse receipt finance should be reduced to 10-20% by banks and stamp duty on warehouse receipt finance may be reduced for farmers and other depositors.

7) The recent projections of additional 35 million MT storage capacity may be created by promoting private sector participation through various public - private partnership measures, that is, build - own - operate -transfer (BOOT), build - own -lease-transfer (BOLT), build-own-operate (BOO),lease-develop-operate (LDO), and joint ventures, and so forth. In addition to these initiatives, the Central and State warehousing corporations may be involved for creation of modern warehousing infrastructure .

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