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Net worth statement of mechanised farm and non-mechanised farm in Parbhani District of Maharashtra

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Abstract
Investigation was carried out during the year 2014-15.Cross sectional data were collected from sample growers with the help of pretested schedule by personal interview method. Budgeting technique was applied to achieve the objective. The results revealed that the total asset found to be Rs.2624118.69 while the total liability was Rs. 216928.34 and net worth or equity was found to be Rs.2407190.35 on mechanised farm, where as total asset was Rs.2385168.48 while total liability was Rs.274014.90 and worth or equity was found to be Rs.2111153.58 on non-mechanised farm. Equity value ratio was 0.92 and 0.89 on mechanised farm and non-mechanised farm, respectively. Equity value on mechanised farm was slightly higher than that of non-mechanised farm. This ratio indicated the farm position of business over the period of time. Debt value ratio on mechanised farm and non-mechanised farm was 0.09 and 0.13, respectively. The lower the ratio, it was good sign of the business. Thus, mechanised farm was in a good condition because its owner's equity was higher.

Keywords: Mechanised, Equity, Investigation, agricultural

Introduction
Mechanised farm is the farm where more than fifty percent of the agricultural operations are carried out with the help of machine. Agricultural mechanisation implies the use of various power sources and improved farm tools and equipment with a view to reduce the drudgery of the human beings and drought animals, enhance the cropping intensity, precision and timelines of efficiency of utilization of various crop inputs and reduce losses at different stages of crop production. The end objective of farm mechanisation is to enhance the overall productivity and production with the lowest cost of production. The contribution of agricultural mechanisation has been well recognized in enhancing the production together with irrigation, biological and chemical inputs of high yielding seed varieties, fertilizers, pesticides and mechanical energy.
Farm mechanisation has been helpful to bring about a significant improvement in agricultural productivity. Thus there is strong need for mechanisation of agricultural operations. The factors that justify the strengthening of farm mechanisation in the country can be numerous. The timeliness of operations has assumed greater significant in obtaining optimal yield from different crops, which has been possible by way of mechanisation.
Mechanised farming is where farm machines replace human labour and animal labour. In mechanised farming the different operation like ploughing, threshing, harrowing, sowing, spraying, threshing are done with the help of different machines. The operation like land preparation is done with the help of machines like tractor, rotavator.
Non-mechanised farming is the farming in which the agriculture operations are complete with the help of human labour or animals. In non-mechanised farming the different agricultural operations can be done with the help bullock drawn implement.
Mechanised farming is done with the help of different machines like ploughing is done with the help of tractor drawn plough, leveling is done with the help of rotavator, sowing is done with the help of tractor drawn seed cum fertilizer drill, irrigation is given by lifting the irrigation water with the help of centrifugal pump and deliver it through sprinkler or drip irrigation system, spraying is done with the help of power sprayer. Harvesting, threshing and winnowing is done in crop like wheat only one machine i.e. combine harvester thresher, harvesting of sugarcane is done with the help of sugarcane harvester.
Non-mechanised farming is done with the help of human labour or animals. Ploughing is done

Non-mechanised farming is done with the help of human labour or animals. Ploughing is done with the help of bullock drawn iron plough, Sowing is done with the help of bullock drawn seed cum fertilizer drill. Irrigation is given through channels, spraying is done with the help of manual spray but in present condition use power sprayer, harvesting is done by labour, threshing is done with the help of bullock.

Methodology

Sampling design

Multistage sampling design was adopted for selection of district, tehsils, villages and mechanised farm and non-mechanised farm. In the first stage, the Parbhani district was purposively selected because of mostly existence of mechanised farmings and non-mechanised farmings. In the second stage, Parbhani and Jintur tehsils were selected on the basis of higher area under mechanised farms and non-mechanised farms. In the third stage, eight villages were selected from the each of tehsils on the basis of higher area under mechanised farms and non-mechanised farms. From Parbhani tehsil villages were selected namely Takli, Jamb, Parwa, Digras, Mandwa, Lohgaon, Sayala and Wangi while from Jintur tehsil villages were selected namely Bhogaon, Pachegaon, Ridaj, Nandgaon, Dudhgaon, Nagapur, Chandaj and Jawla. In the fourth stage, from each village, the list of mechanised farmers and non-mechanised farmers along with their holding sizes was obtained. From each of the list three mechanised as well as three non-mechanised farmers were randomly selected from each of the villages. Thus from one village, six farmers were selected. In this way, from sixteen villages, 96 farmers were selected with equal distribution of mechanised farms (48) and non-mechanised farms (48) for the present study. The data were collected during the year 2014-15. The budgeting technique and ratio analysis were used to analyze the data.

Results and Discussion

Net worth statement on mechanised farm

Net worth statements on mechanised farm are discussed (Table 1). Total asset was Rs.2624118.69 in which current asset was Rs.495456.22 and medium term asset was Rs.53951.87 while long term asset was Rs.2074710.60. It was clear that long term asset was dominant followed by current asset and medium term asset. In liability side total liability was Rs.216928.3. In total liability, long term liability was Rs.122475.2 and current liability was Rs.86100.00 while medium term liability was Rs.8353.1. Thus long term liability was dominant followed by current liability and medium term liability. When total liability was subtracted farm total asset, net worth or equity found to be Rs.2407190. Net worth of mechanised farm is higher than non-mechanised farm. By considering the results the given hypothesis has been proved because net worth on mechanised farm was higher than that on non-mechanised farm.

Net worth statement on non-mechanised farm

Net worth statement on non-mechanised farm are discussed (Table 2) as follows. Total asset was Rs.2385168.48 in which long term asset was dominant as Rs.1918606.30 followed by current asset (Rs.368417.76) and medium term asset (Rs.98144.42). Total liability was Rs.274014.90 in which long term liability was Rs.130640.00. Then, current liability was Rs.113240 and medium term liability was Rs.30134.90 way in worth or equity was Rs.211153.58.

Estimates of ratio analysis

Estimates of ratios with respect to net worth statement on mechansied farm and non-mechanised farm are discussed (Table 3) as follows. Current ratio was 5.75 and 3.25 on mechanised farm and non-mechanised farm respectively. It inferred that current asset was higher and current liability was lower on mechanised farm as compared to non-mechanised farm. In other words, there was high current liability on non-mechanised farm. Acid test ratio or quick ratio was higher as 2.60 on mechanised farm while it was lower 1.31 on non-mechanised farm. In other words, liquid asset was high on mechanised farm. Intermediately ratio was high 5.82 on mechanised farm while it was 3.25 on non-mechanised farm. It was observed that current liability plus intermediary liability was higher on non-mechanised farm. It inferred that economic condition of farmer was sound on mechanised farm. Net capital ratio was 12.10 on mechanised farm while it was 8.70 n non-mechanised farm. It was clear that total liability was high on non-mechanised farm. On the contrary, total asset was high on mechanised farm as compared to non-mechanised farm. Equity value ratio was 0.92 on mechanised farm while it was 0.89 on non-mechanised farm. In other words, owner's equity in proportionate to total asset was high on mechanised farm as compared to non-mechanised farm. Thus, economic condition was always superior on mechanised farm than that on non-mechanised farm. On the contrary debt value ratio was low on mechanised farm as 0.09 as compared to non-mechanised farm (0.13). In other words, total debt was low on mechanised farm and owner's equity was high on the farm. Current liability was extremely low as 0.04 on mechanised farm while it was 0.05 on non-mechanised farm. It was due to low current liability on mechanised farm and high owner's equity on that farm. Inventory ratio was 0.66 which was lower mechanised farm as compared to non-mechanised farm (0.86). In other words, proportionate inventory was high on non-mechanised farm. It can be concluded that there was high liability on non-mechanised farm.

Table 1: Per farm net worth statement on mechanised farm

Asset	Physical quantity	Amout (Rs/farm)	Liability	Physical quantity (unit/farm)	Amout (Rs/farm)
1. Cash in bank	---	15235.00	1. Institutional crop loan	---	54050.00
2. Cash in hand	---	2210.00	2.Non institutional loan	---	18500.00
3. A/C receivable	---	9300.00	3.A/C payable	---	13550.00
4.Reserved fund	---	34700.00			
5.Bonds	---	4700.00			
6. Salecrop	---	64542.00			
7.Inventory of crop	---	271822.32			
8.Livestock receipt	---	92946.90			
9. Current asset		**495456.22**	**4. Current liability**		**86100.00**
10. Local cow herd	0.91	22076.82	5. Cow loan	0.10	2426.02

11. Crossbreed cow herd	0.15	6033.78	6. Buffalo loan	0.14	5467.01
12. Local buffalo herd	0.47	18353.54	7. Goat	0.01	249.62
13. Improved buffalo herd	0.11	6545.00	8. Poultry	0.01	210.48
14. Goat trip	0.015	374.43			
15. Poultry flock	0.027	568.30			
16. Medium term asset		**53951.87**	**9. Medium term liability**		**8353.13**
17. Commonly used asset	---	36120.50	10. Implement loan	---	8225.21
18. Animal shed (no.)	1.00	9050.10	11. Small machinery loan	---	2250.00
19. Irrigation structure	---	89000.00	12. Irrigation structure	---	25000.00
20. Storage structure	---	48000.00	13. Animal shed loan	---	2500.00
			14. Storage structure loan	---	7500.00
21. Land holding (ha)	3.77	1892540.00	15. Land purchasing	---	77000.00
22. Long term asset		**2074710.60**	**16. Long term liability**	---	**122475.21**
23. Total asset		**2624118.69**	**17. Total liability**	---	**216928.34**
			18. Net worth or equity	---	**2407190.35**

Table 2: Per farm income statement on mechanised farm

Receipt	Physical quantity (unit/farm)	Amout (Rs/farm)	Expense	Physical quantity (unit/farm)	Amout (Rs/farm)
1. Soybean (ha)	1.75	94025.75	1. Hired H.L. (manday)	104.96	20992.00
2. Cotton (ha)	0.95	88453.08	2. Bullock labour (pairday)	6.52	4320.41
3. Pigeonpea (ha)	0.29	21491.32	3. Machine labour (hour)	65.18	32590.00
4. Greengram (ha)	0.18	9838.80	4. Seed (kg)	131.20	11290.00
5. Turmeric (ha)	0.07	10472.00	5. Set /rhizome (q)	12.06	4502.50
6. Wheat (ha)	0.17	7405.20	6. Manure (q)	21.61	3241.50
7. Sugarcane (ha)	0.28	46624.37	7. Fertilizer (kg) N	227.86	2962.18
8. *rabi* Jowar (ha)	1.04	53658.80	P	145.50	6693.00
9. Chickpea (ha)	0.03	1762.50	K	54.64	1457.28
			8. Plant protection (L)	4.58	2290.00
			9. Irrigation (m^3)	4841.71	12201.11
			10. Land revenue	----	303.63
10. Fodder maize (ha)	0.05	2632.50	11. Inidental exp.	----	956.99
			12. Interest on W.C.	----	7965.61
11. Milk in dairy (L)	1639.37	72148.70	13. Family H.L.(Manday)	169.20	33840.00
12. FYM (q)	51.30	7695.00	14. Green fodder (q)	13.04	2608.00
13. Calf (no.)	1.58	12770.00	15. Dry fodder (q)	8.25	5775.00
14. Young goat (no.)	0.20	960.00	16. Conc.& feed (q)	1.98	4455.00
15. Poultry chick (no)	65.00	13000.00	17. Vacination (no.)	2.29	183.20
16. Eggs (no)	216.00	2160.00	18.Water for livestocks (m^3	65.50	165.06
			19. Light (unit)	83.05	498.30
17. Gross cash income		445098.02	**20. Gross cash expense**		125619.97
18. Appreciation of young calf (no)	1.58	5436.61	21. Dep. commenly used asset and shed	---	4510.59
19. Appreciation of young goat (no)	0.20	702.10	22. Dep. on livestock	---	6636.21
20. Appreciation of land holding (ha)	3.77	149000.00	23. Interest on F.C.	---	5450.42
			24. Interset on livestock	---	5839.87
			25. Rental value of land	---	56055.37
21. Increase in asset	---	155138.71	**26. Fixed expense**	---	78492.46
22. Total Receipt	---	600236.73	**27. Total expense**	---	204112.43

			28. Net farm income	----	396124.30

Table 3: Estimates of ratios with respect to net worth statement on mechanised farm and non-mechanised farm

Particular		**Formula**	**Mechanised farm**		**Non-mechanised farm**	
			Calculation	**Ratio**	**Calculation**	**Ratio**
1.	Current ratio	$\frac{\text{Current asset}}{\text{Current liability}}$	$\frac{495456.22}{86100.00}$	5.75	$\frac{368417.76}{113240.00}$	3.25
2.	Acid test ratio or quick ratio	$\frac{\text{Currentasset } \mathbf{mimus} \text{ inventory}}{\text{Currentliability}}$	$\frac{223633.90}{86100.00}$	2.60	$\frac{148383.09}{113240.00}$	1.31
3.	Intermediate ratio or working ratio	$\frac{\text{Currentasset } \mathbf{plus} \text{ intermediate asset}}{\text{Currentliability } \mathbf{plus} \text{ intermediate laibility}}$	$\frac{549408.09}{94453.13}$	5.82	$\frac{466562.18}{143374.90}$	3.25
4.	Net capital ratio	$\frac{\text{Total asset}}{\text{Total liability}}$	$\frac{2624118.69}{216928.34}$	12.10	$\frac{2385168.48}{274014.90}$	8.70
5.	Equity value ratio	$\frac{\text{Owner's equity}}{\text{Total asset}}$	$\frac{2407190.35}{2624118.69}$	0.92	$\frac{2111153.58}{2385168.48}$	0.89
6.	Debt value ratio	$\frac{\text{Total debt}}{\text{Owner's equity}}$	$\frac{216928.34}{2407190.35}$	0.09	$\frac{274014.90}{2111153.58}$	0.13
7.	Current laibility ratio	$\frac{\text{Currentliability}}{\text{Owner's equity}}$	$\frac{86100.00}{2407190.35}$	0.04	$\frac{113240.00}{2111153.58}$	0.05
8.	Inventory ratio	$\frac{\text{Value of inventory}}{\text{Net working capital}}$	$\frac{271822.32}{409356.22}$	0.66	$\frac{220034.67}{255177.76}$	0.86

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