

## **A Study Of Satisfaction And Challenges For Marginal And Small Farmers Towards Custom Hiring Centre Services In Jalgaon District.**

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**Abstract:** Custom hiring centres are crucial for marginal and small farmers because they provide access to expensive, modern agricultural machinery without outright purchase. These centres allow farmers to rent equipment on a need basis, which helps reduce the capital burden and enhance productivity. For small and marginal farmers, who often operate on thin margins and may not have the financial capability to invest in high-cost machinery, these centres enable them to adopt modern farming techniques, improve crop yields, and reduce labor costs. This arrangement also facilitates timely operations during critical farming periods, such as sowing and harvesting, potentially increasing farm income and sustainability. Overall, custom hiring centres play a vital role in leveling the playing field for smallholders by improving their access to technology and mechanization. The importance of satisfaction and challenges for marginal and small farmers towards Custom Hiring Centre Services is crucial in understanding their experiences and needs within the agricultural sector. High satisfaction levels, as seen with marginal farmers, can signify the effectiveness of these services in meeting their requirements, potentially leading to their continued usage and positive word-of-mouth referrals. Conversely, challenges that small farmers seem to face more significantly underscore areas where improvements and support are necessary to ensure that Custom Hiring Centres can effectively cater to their needs and alleviate their difficulties. Addressing these issues while maintaining or enhancing satisfaction levels among marginal farmers can contribute to a more equitable and efficient agricultural service ecosystem. The study is based on primary data collected from 120 farmers. A survey method is used for the collection of primary data. SPSS is used for the analysis of data. Descriptive and inferential statistics are used to study the objectives and validate the hypothesis.

**Keywords:** Satisfaction, Challenges, Farmers, Custom Hiring Centre.

### **1. Introduction:**

A Custom Hiring Centre (CHC) is a vital agricultural infrastructure facility established to provide farmers with access to various farm machinery and equipment on a rental basis. These centers are typically set up in rural and farming regions to cater to the needs of small and marginal farmers who may not possess the resources to own expensive machinery. CHCs offer a wide range of farming equipment, including tractors, plows, harvesters, and irrigation tools, allowing farmers to access and use these machines per their specific farming requirements.

Custom Hiring Centres are pivotal in improving agricultural productivity by reducing the dependency on traditional manual labor, increasing efficiency, and promoting mechanized farming practices. They offer cost-effective solutions to

farmers, enabling them to access modern technology without the burden of ownership costs. Additionally, these centers contribute to rural employment opportunities by creating machinery operation, maintenance, and management jobs, thereby supporting the overall development of rural agricultural communities.

**Marginal Farmers:** Marginal farmers are a category of farmers typically with small landholdings, often with limited resources and access to modern agricultural technologies. They operate on a small scale and may have insufficient land to sustain their livelihoods adequately. Marginal farmers often face challenges regarding low farm productivity, income instability, and vulnerability to various factors such as weather fluctuations and market dynamics. In many agricultural contexts, efforts are made to provide support and resources to help improve the

conditions and livelihoods of marginal farmers to enhance their farm productivity and overall well-being.

**Small Farmers:** Small farmers are typically individuals or families who own and operate relatively small parcels of land for agricultural purposes. The definition of "small farmer" can vary from one region or country to another, depending on factors like land size, income, and local agricultural practices. Small farmers have limited land resources and often rely on traditional or subsistence farming methods. They may face various challenges, such as limited access to capital, technology, and markets, impacting their agricultural productivity and economic well-being. Small-scale farming is a common practice in many rural areas, especially in developing countries, and plays a significant role in global food production and rural economies.

**Satisfaction of Farmers:**

The satisfaction of small farmers towards Custom Hiring Centre Services in Jalgaon District is essential for assessing the quality and effectiveness of these services in catering to the specific needs of the local small-scale agricultural community. Understanding their satisfaction levels can provide valuable insights into farm machinery's availability, affordability, and reliability, which are critical for small farmers to optimize their farming operations. Addressing any issues or concerns that may affect their satisfaction can enhance the overall productivity and well-being of small farmers in the region, ultimately supporting the growth and sustainability of agriculture in Jalgaon District.

**Challenges for Farmers:**

The challenges faced by small and marginal farmers towards Custom Hiring Centre Services in Jalgaon district encompass various factors. Small farmers often encounter difficulties in affordability and access to the required machinery, which can be particularly challenging during peak seasons. Additionally, there is a lack of awareness about the services offered by these centers, which hampers their utilization. Marginal farmers, on the other hand, grapple with issues related to the availability of skilled labor to operate the machinery and the overall condition and quality of the equipment provided by the centers. These challenges underline the need for improved affordability, accessibility,

awareness, and machinery maintenance at Custom Hiring Centres to better serve the specific needs of small and marginal farmers in the Jalgaon district.

**2. Review of Literature:**

**S Nishanthi and A Rohini (2023)**, in their paper titled, "A study on satisfaction level and constraints faced by farmers in availing the services of custom hiring centers in Coimbatore district of Tamil Nadu," conclude that The study reveals the demographics Satisfaction, and constraints of farmers using Custom Hiring Centres (CHCs) in Coimbatore, Tamil Nadu. The findings show that middle-aged male farmers with some formal education, medium-sized or semi-medium farms, moderate agricultural experience, and money use CHCs most. Despite high satisfaction with farm machinery availability and rental costs, issues with machinery types, quality, and support services were observed. Farmer restrictions included a lack of skilled workers and machines during peak season. To optimize CHC satisfaction and efficacy, well-maintained machinery, many machines, and efficient communication routes are crucial. Awareness campaigns, training initiatives to boost trained labor availability, and better customer assistance can help farmers use CHCs more. These strategies can help CHCs boost agricultural output, improve farmers' livelihoods, and sustain the region's agricultural economy.

**Bethi, S. K., & Deshmukh, S. S. (2023)**. in their paper titled "Custom Hiring Centers in Indian Agriculture: Evolution, Impact, and Future Prospects," concludes that In India, Custom Hiring Centers (CHCs) have been instrumental in promoting agricultural mechanization and inclusion, marking a significant change in the sector. The widespread construction of CHCs, funded by government schemes, highlights their relevance in improving access to new agricultural gear and encouraging entrepreneurship. Implementing cutting-edge technology like AI, ML, and IoT has improved CHC operations and promoted sustainable agriculture despite obstacles. The integration of CHCs is a hopeful step towards a more resilient and productive agricultural landscape, highlighting their lasting impact on the future of Indian agriculture.

**Chinnappa, B., et.al (2018).** in their paper titled "The economic impact of custom hiring service centers in Maize cultivation: a case study from Karnataka" conclude that the positive economic impact on cost savings, yield, and net returns was 15.71, 4.90, and 24%, respectively, compared to farms using private individual farmers. Farms can reduce their reliance on human and bullock labor by 16.29% and 683.0%, respectively, using mechanical services from CHSCs compared to private farms. Energy consumption efficiency was higher in CHSCs compared to private. Mechanical energy costs Rs. 2.48 per MJ, a lower cost than private sources at Rs. 3.13. Profit analysis shows that HMF utilizing CHSC services generated an additional Rs—6165 per acre. The efficiency research shows that over 0.8 cost efficiency score is achieved by most HMFs using CHSC services.

**Nissa et al. (2017).** in their paper titled "Custom hiring center: An emerging benefits, constraints, and way forward concerning Nicra village in Wakharwan, district Pulwama" conclude that integrating agri inputs like fertilizers, equipment, and seeds through ecosystem partners can make custom hiring viable. Effective Custom Hiring can be achieved by adopting policies supporting farm mechanization technology adoption, development, and promotion through training, ICT use, and demonstration. India has 80% small and marginal landholdings. There is significant potential for CHCs

to satisfy the needs of farm machines in such a large area. The Government of India aims to boost farm electricity availability from 0.93kW/ha to 2kW/ha in the 12th Plan period (2012-2017), acknowledging its significant potential. The "Submission on Agricultural Mechanization (SMAM)" program helps achieve this goal. Our objective includes providing custom hiring facilities for agricultural machinery. Andhra Pradesh, Madhya Pradesh, Karnataka, and Punjab have implemented a Public Private Partnership (PPP) to encourage Custom Hiring through training, financial aid, and demonstration.

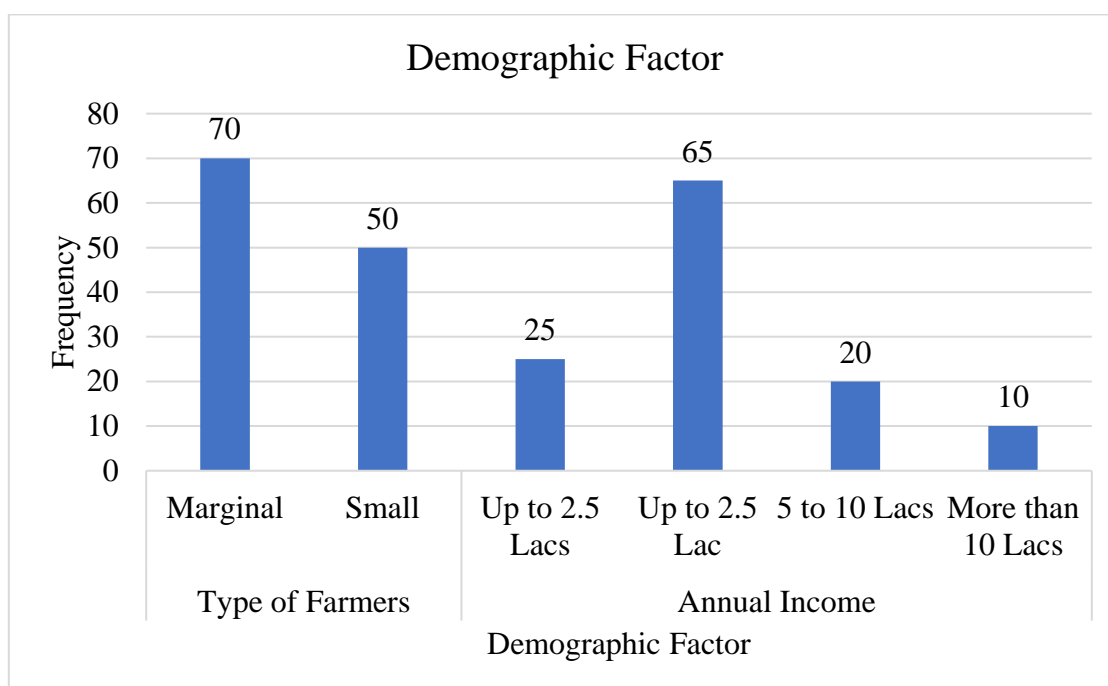
**Kadaraiah and Jirli, (2022).** in their paper titled "Perception of farmers towards custom hiring service centers in Tumakuru district of Karnataka" conclude that Higher education, earnings, and living conditions have prompted rural residents to migrate to metropolitan regions, resulting in labor shortages in agriculture necessitating mechanization. Farmers' high assessment of the CHSC suggests that investing in agricultural machinery and equipment would raise output costs. Hence, strengthening extension efforts is necessary to raise awareness among farmers about CHSC services. Improving public-private partnerships in CHSCs is crucial for promoting socio-economic development among farmers and enabling tailored farm mechanization.

**Demographic characteristics of respondents:**

Sr.no	Demographic Factor	Category	Frequency	Percent
1	Type of Farmers	Marginal	70	58.3
		Small	50	41.7
2	Annual Income	Up to 2.5 Lacs	25	20.8
		Up to 2.5 Lac	65	54.2
		5 to 10 Lacs	20	16.7
		More than 10 Lacs	10	8.3
3	Total		120	100

The demographic factors analyzed in the dataset include the type of farmers and their annual income. Among the farmers surveyed, 70 are categorized as marginal farmers, while 50 are considered small farmers. Regarding yearly income, 25 farmers have an income of up to 2.5 Lacs, 65 farmers have an income of up to 2.5 Lacs, 20

farmers earn between 5 and 10 Lacs, and 10 farmers have an income exceeding 10 Lacs. These factors provide insights into the distribution of farmers based on their income levels and farming classification, highlighting the diverse economic profiles within the agricultural community.



The following table shows the satisfaction:

Q.no	Particulars	Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied
4.1	The availability of farm machinery at Custom Hiring Centres	4	17	35	37	27
4.2	Rental rates for farm machinery at Custom Hiring Centres	24	28	30	18	20
4.3	Types of machinery available at Custom Hiring Centres adequately meet the demands of different farming practices	25	13	29	41	12
4.4	Performance and reliability of the farm machinery rented from Custom Hiring Centres	7	8	20	41	44
4.5	Condition and quality of the machinery provided by Custom Hiring Centres	3	13	12	47	45

The above responses are rated as follows:

Highly Dissatisfied = 1  
Dissatisfied = 2  
Neutral = 3

Satisfied = 4  
 Highly Satisfied = 5

Using the above responses, the mean score of satisfaction is obtained using the formula below.

The mean score of satisfaction

$$= \frac{\text{Totalscoreof rating of respondent(for 5 statements)} \times 100}{\text{Maximum rating}(25)}$$

Using the above formula, mean scores are obtained for each respondent and all 120 respondents. Descriptive statistics is as follows:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Satisfaction	120	40	92	69.17	10.285
Valid N (listwise)	120				

The above table indicates that the mean score of satisfaction is 69.17 percent with a standard deviation of 10.28, suggesting high variation in the responses.

**The following table shows the challenges:**

Q.no	Particulars	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5.1	The non-availability of skilled labor to operate agricultural pieces of machinery	5	12	33	40	50
5.2	Non-availability of machines during peak season	23	21	11	49	16
5.3	Unavailability of good conditioned machinery	22	27	29	15	27
5.4	Lack of awareness about Custom Hiring Service Centres	12	11	12	43	42
5.5	Timely information on farm machinery is not available	8	19	23	44	26

The above questions are rated as follows:

Strongly Disagree = 1  
 Disagree = 2  
 Neutral = 3  
 Agree = 4  
 Strongly Agree = 5

Using the above responses, the mean score of Challenges is obtained using the formula below.

The mean score of Challenges

$$= \frac{\text{Totalscoreof rating of respondent(for 5 statements)} \times 100}{\text{Maximum rating}(25)}$$

Using the above formula, mean scores are obtained for each respondent and all 120 respondents. Descriptive statistics are as follows:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Challenges	120	20	96	68.10	14.375
Valid N (listwise)	120				

The above table indicates that the mean score of Challenges is 68.10 percent with a standard deviation of 14.37, suggesting high variation in the responses.

**Test of reliability of scale:** This test is used to validate the Likert scale used in the questionnaire. The Cronbach Alpha test is applied to validate the scale in this study. The test is applied to all 120 respondents. The following table represents the results of the test:

Sr.no	Variables	No. of Question	Cronbach Value	Accept
1	Satisfaction	5	.742	Scale is reliable and accepted
2	Challenges	5	.836	Scale is reliable and accepted

The above results indicate that all the Cronbach Alpha values for all the two variables are more than the required value of 0.700. Hence, the test is accepted. The conclusion is that the **scale is reliable and accepted.**

**Objective-1: To study the satisfaction towards services of custom hiring centers according to type of farmers.**

**Null Hypothesis H<sub>01</sub>:** There is no significant difference in satisfaction towards services of custom hiring centers according to type of farmers.

**Alternate Hypothesis H<sub>11</sub>:** There is a significant difference in satisfaction towards services of custom hiring centers according to type of farmers.

To study the above null hypothesis, an independent sample T-test is applied, and the results are as follows:

Independent Samples Test				
t-test for Equality of Means				
	t	df	p-value	Mean Difference
Satisfaction	9.997	118	.000	14.069

**Interpretation:** The above results indicate that the calculated p-value is 0.000. It is less than 0.05. Therefore, the T-test is rejected. Hence, the null hypothesis is rejected, and the alternate hypothesis is accepted.

**Conclusion:** There is a significant difference in satisfaction towards services of custom hiring centers according to type of farmers.

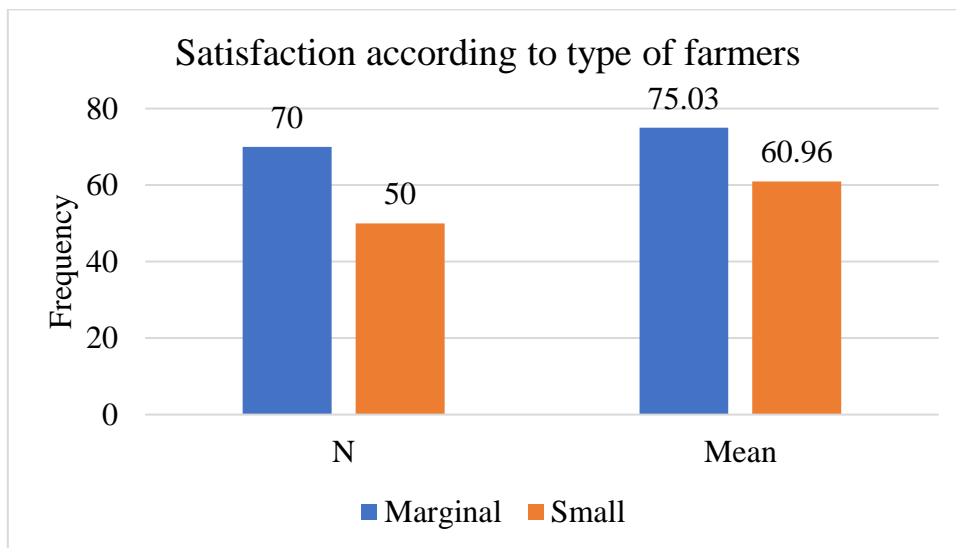
**Finding:** The finding of the mean score for satisfaction for the type of farmer is obtained and presented in the following table:

Group Statistics					
	Type of Farmers	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction	Marginal	70	75.03	7.955	.951
	Small	50	60.96	7.071	1.000

The data reveals variations in farmer satisfaction based on their type, with 70 marginal farmers having a significantly higher mean satisfaction score of 75.03, compared to 50 small farmers with a lower

mean satisfaction score of 60.96. It suggests that marginal farmers tend to report higher levels of satisfaction than small farmers, highlighting a potential difference in their experiences or

preferences related to farming practices or services received. This information is shown below in the bar diagram.



In further study friedman's Chi-sqaure test is applied to understand the satisfaction for each statement:

Test Statistics <sup>a</sup>	
N	120
Chi-Square	56.211
df	4
p-value	.000
a. Friedman Test	

**Interpretation:** The above results indicate that the calculated p-value is 0.000. It is less than 0.05. Therefore, the Friedman test is rejected.

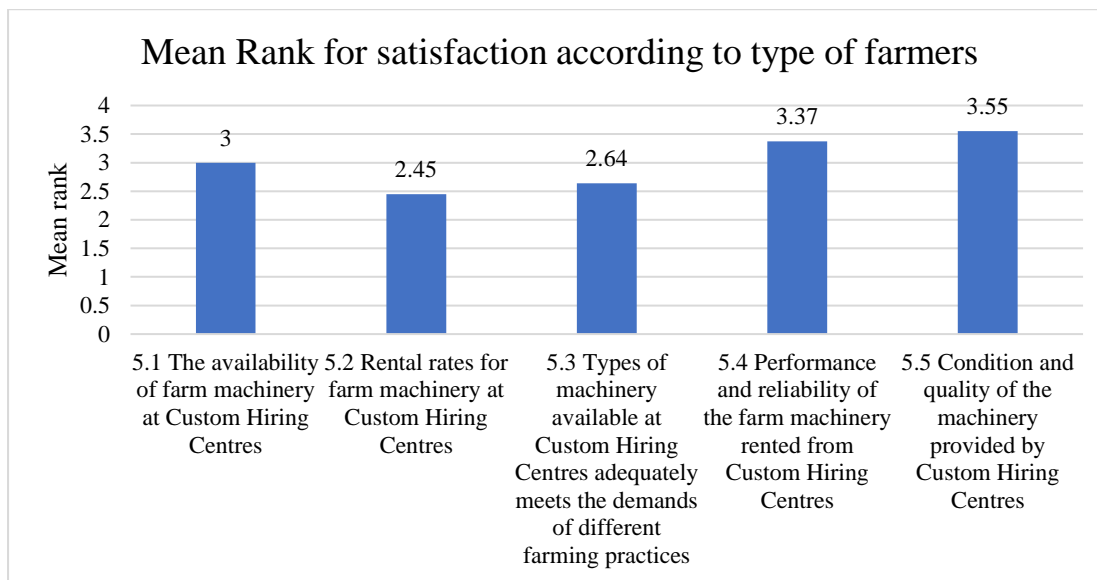
Ranks	
	Mean Rank
5.1 The availability of farm machinery at Custom Hiring Centres	3.00
5.2 Rental rates for farm machinery at Custom Hiring Centres	2.45
5.3 Types of machinery available at Custom Hiring Centres adequately meets the demands of different farming practices	2.64
5.4 Performance and reliability of the farm machinery rented from Custom Hiring Centres	3.37
5.5 Condition and quality of the machinery provided by Custom Hiring Centres	3.55

The mean rank scores indicate the perceived importance of various factors related to Custom Hiring Centres for farm machinery. Among these factors, the highest mean rank score of 3.55 is assigned to the condition and quality of the machinery provided by Custom Hiring Centres,

suggesting that farmers prioritize the overall state of the machinery. Following are factors like the performance and reliability of the rented machinery (mean rank of 3.37) and the types of machinery meeting the demands of different farming practices (mean rank of 2.64). Rental rates for farm

machinery at Custom Hiring Centres hold a moderate mean rank of 2.45. In contrast, the availability of farm machinery at these centers is rated the lowest at 3.00, indicating that farmers

consider the condition and quality of machinery as the most significant factor when choosing Custom Hiring Centres for their farm machinery needs. This information is shown below in the bar diagram.



**Objective-2: To study the Challenges to services of custom hiring centers according to type of farmers.**

**Null Hypothesis H<sub>02</sub>:** There is no significant difference in Challenges towards services of custom hiring centers according to type of farmers.

**Alternate Hypothesis H<sub>12</sub>** There is a significant difference in Challenges towards services of custom hiring centers according to type of farmers.

To study the above null hypothesis, an independent sample T-test is applied, and the results are as follows:

Independent Samples Test				
t-test for Equality of Means				
	t	df	p-value	Mean Difference
Challenges	11.553	118	.000	21.154

**Interpretation:** The above results indicate that the calculated p-value is 0.000. It is less than 0.05. Therefore, the T-test is rejected. Hence, the null hypothesis is rejected, and the alternate hypothesis is accepted.

**Conclusion:** There is a significant difference in Challenges towards services of custom hiring centers according to type of farmers.

**Finding:** The finding of the mean score for Challenges for the type of farmer is obtained and presented in the following table:

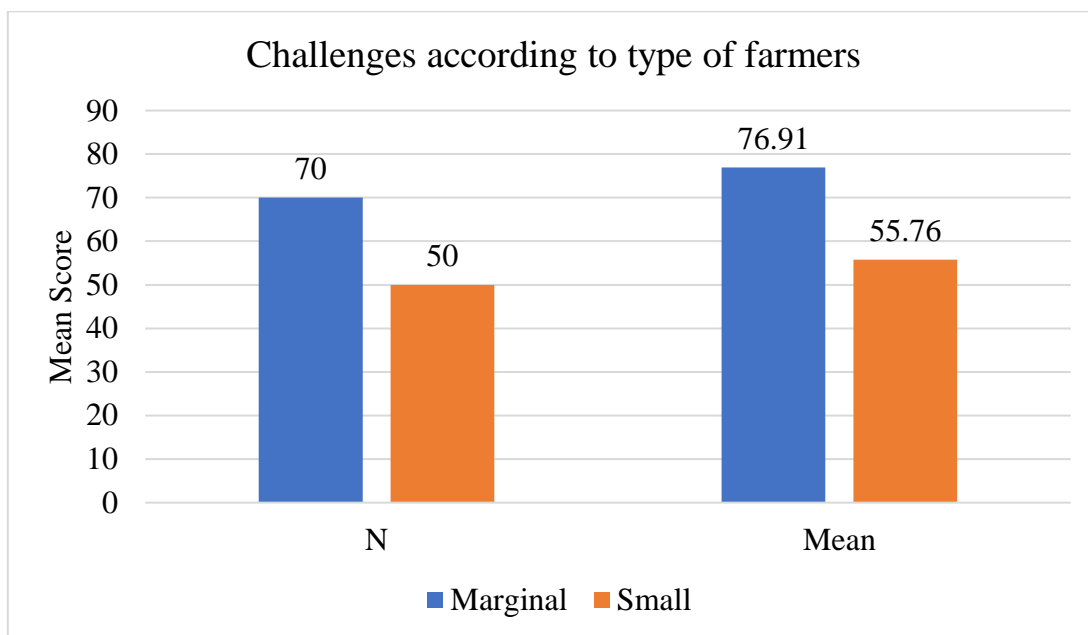
Group Statistics					
	Type of Farmers	N	Mean	Std. Deviation	Std. Error Mean
Challenges	Marginal	70	76.91	7.245	.866
	Small	50	55.76	12.711	1.798

The data highlights differences in the challenges faced by marginal and small farmers, with marginal farmers reporting a notably higher mean score of

76.91 than small farmers, with a lower mean score of 55.76. It indicates that marginal farmers encounter more significant challenges, suggesting

potential disparities in their farming conditions or resources compared to small farmers who face

relatively fewer challenges on average. This information is shown below in the bar diagram.



In further study, Friedman's Chi-square test is applied to understand the satisfaction for each statement:

N	120
Chi-Square	29.875
df	4
p-value	.000
a. Friedman Test	

**Interpretation:** The above results indicate that the calculated p-value is 0.000. It is less than 0.05. Therefore, the Friedman test is rejected.

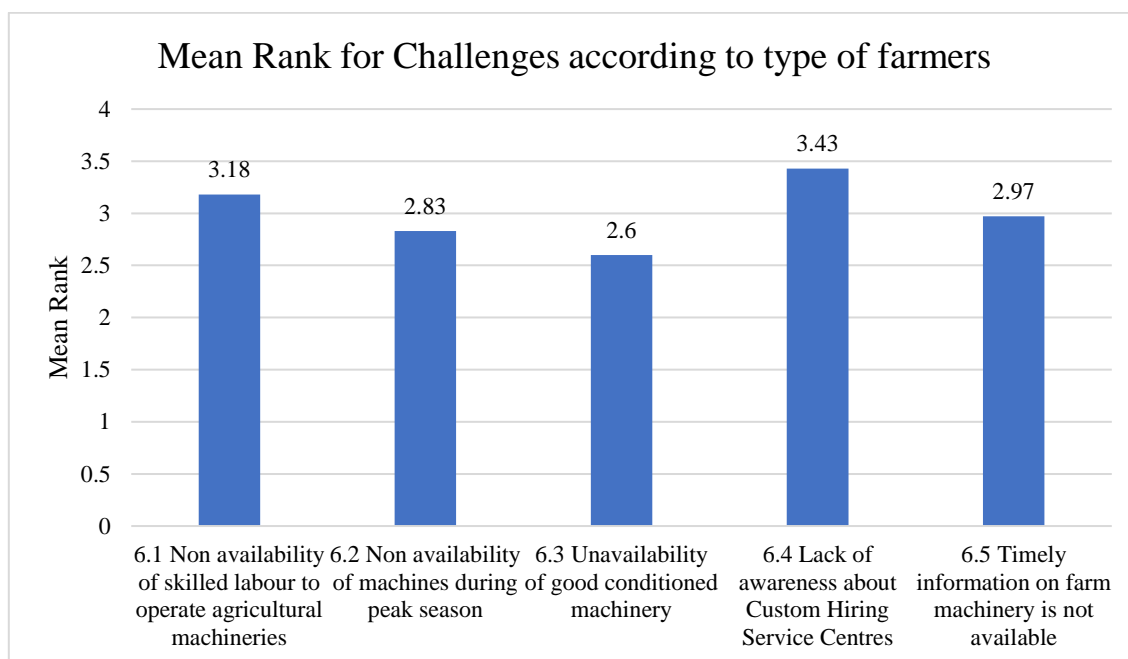
Ranks	
	Mean Rank
6.1 Non-availability of skilled labour to operate agricultural machinery	3.18
6.2 Non-availability of machines during peak season	2.83
6.3 Unavailability of good conditioned machinery	2.60
6.4 Lack of awareness about Custom Hiring Service Centres	3.43
6.5 Timely information on farm machinery is not available	2.97

The mean rank scores illustrate the perceived factors affecting the utilization of Custom Hiring Service Centres for agricultural machinery. Among these factors, the highest mean rank of 3.43 is associated with the lack of awareness about these centers, indicating that a significant portion of respondents consider insufficient awareness a

substantial barrier. Other notable factors include non-availability of skilled labor to operate machinery (mean rank of 3.18), unavailability of good-conditioned machinery (mean rank of 2.60), and non-availability of machines during peak seasons (mean rank of 2.83). Timely information on farm machinery is also essential, with a mean rank

of 2.97. These mean ranks provide insights into farmers' challenges and obstacles in accessing and utilizing Custom Hiring Service Centres for their

agricultural machinery needs. This information is shown below in the bar diagram.



**Findings and Conclusion:**

The survey found that marginal and small farmers were much less satisfied with bespoke employment centers. Marginal farmers were more satisfied than small farmers in the independent sample T-test. It suggests that marginal farmers choose custom hiring centers due to reasons including machinery quality and reliability, kind, and rental pricing. The Friedman test corroborated these findings by emphasizing the relevance of machinery condition and quality, performance, dependability, and type suitability in satisfying farming demands as key determinants in farmer satisfaction. The survey indicated again that marginal farmers had more trouble acquiring custom hiring center services than small farmers. An independent sample T-test showed marginal farmers had higher mean challenge scores. The Friedman test's key obstacles were the lack of awareness of bespoke recruiting centers, lack of competent workers, and lack of machines during peak seasons. These findings highlight the differences in experiences and issues marginal and small farmers have while using custom hiring centers, highlighting the need for targeted interventions to increase access and satisfaction with these critical services.

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