

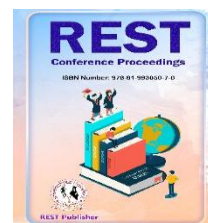


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A Detailed Study of Tractor Loan and Factor Affecting For Buying Agricultural Vehicle and Equipment in Amravati City

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Abstract: Consumers make purchase decisions in each and every aspect of their life. Thus studying consumer behaviour becomes more vital. All marketing decisions & activities are based on assumptions about consumer behaviour. The following objectives were framed for the paper, to study the factors influencing the purchase of agricultural tractors and to evaluate the most important factors like brand name, subsidy, horsepower, maintenance etc considered for the purchase of agricultural tractors loan. The study was carried out in Amravati state. Descriptive research design has been used in this study. The researcher has used both primary and secondary data for this research. The researcher has collected primary data from the tractor owners who had bought their tractor for to the dealer point during the study period in Amravati district. Factor analysis was used to find out the most influencing factors considered by the respondents while making the purchase decision of tractor. It is found as per the ranking given by the respondents' subsidy is ranked first and followed by sources consulted, horse power, after sales service, price and brand name respectively are considered for purchase of tractors.

Keywords: Agricultural Equipment's Tractors, Tractor Loans, Agricultural Mechanization, Farm Equipment Financing, Consumer Behaviour, Government Subsidies, Loan Repayment Patterns, Agricultural Credit Institutions, Small and Marginal Farmers, Amravati District, Factor Analysis, Rural Credit Systems, Mechanization Challenges.

1. INTRODUCTION

Agriculture remains the backbone of India's economy, with a significant portion of the population depending on it for livelihood. Among the vital inputs that influence agricultural productivity, mechanization plays a crucial role by reducing human effort, saving time, and enhancing efficiency. Tractors and other agricultural equipment have become indispensable tools for modern farming practices, particularly in regions like Amravati, a key agricultural district in Maharashtra known for the cultivation of crops such as cotton, soybean, wheat, and pulses. Despite the evident benefits of mechanization, the high cost of tractors and agricultural equipment often makes them inaccessible to small and marginal farmers. To bridge this financial gap, various tractor loan schemes are provided by banks, Non-Banking Financial Companies (NBFCs), and cooperative institutions. These loans enable farmers to acquire essential machinery on credit, thus promoting agricultural development and economic sustainability. This study aims to conduct a comprehensive analysis of the tractor loan landscape in Amravati city. It explores the various loan schemes available, their terms and conditions, interest rates, repayment options, and the level of awareness among farmers. Additionally, the study investigates the socio-economic and psychological factors that influence the decision-making process of farmers when purchasing agricultural vehicles and equipment. Factors such as income level, landholding size, educational background, accessibility to finance, government subsidies, and technological awareness are examined in detail. Understanding these dynamics is crucial for policymakers, financial institutions, and equipment manufacturers to design better loan products, outreach strategies, and support systems tailored to the needs of Amravati's farming community. This research thus provides valuable insights that could help bridge the existing gaps between availability, accessibility, and actual adoption of agricultural mechanization through loans in semi-urban and rural settings. Amravati, a city located in the Vidarbha region of Maharashtra, is a hub for agricultural activity. The region is known for its cotton, soy, pulses, and other crop production. Agriculture plays a pivotal role in the livelihood of the residents, and this directly influences the demand for agricultural vehicles and equipment. Tractors and other farming machinery are crucial for improving productivity and efficiency in the agricultural sector. However, the high costs associated with these vehicles often make them out of reach for many farmers, leading to a rising demand for financing options, especially tractor loans. This study focuses on understanding the role of tractor loans and the various factors influencing the decision to buy agricultural vehicles and equipment in Amravati. The key elements examined in this study include the loan process, types of financing available, socio-economic factors, and the impact of these variables on farmers' purchasing decisions. Amravati, located in the Vidarbha region of Maharashtra, is predominantly an agrarian district with a large portion of its population engaged in farming and related activities. The selection of Amravati city for this study is based on several critical factors that make it a representative and significant location for analysing the

tractor loan market and the factors influencing the purchase of agricultural vehicles and equipment. Amravati is known for cultivating major crops such as cotton, soybean, tur (pigeon pea), and wheat. The widespread practice of farming makes the city and its surrounding rural areas highly dependent on agricultural machinery, including tractors and other equipment, for improved productivity and efficiency. High Demand for Mechanization With the rise in awareness of modern farming techniques and the need to enhance output, there is an increasing trend among farmers in Amravati towards the adoption of mechanized farming solutions. This has led to a noticeable increase in the demand for tractors and other agricultural implements. Availability of Financial Institutions Amravati hosts a wide network of financial institutions, including public and private sector banks, NBFCs, cooperative banks, and rural credit societies. These institutions actively offer agricultural loans, making it an ideal place to study the structure, accessibility, and effectiveness of tractor loans. Diverse Farmer Profile: The city has a mix of small, marginal, and large-scale farmers with varying socio-economic backgrounds. This diversity provides a rich sample for studying how different factors such as income level, landholding size, and education influence buying behaviour and financial decisions related to agricultural equipment. Being a district headquarters, Amravati city offers relatively better infrastructure and connectivity, which facilitates field research, data collection, and interaction with farmers, bankers, dealers, and other stakeholders involved in the agricultural machinery ecosystem. Amravati city provides an ideal blend of agricultural importance, financial activity, policy support, and accessibility, making it a strategic and relevant choice for conducting this detailed study on tractor loans and the influencing factors in the purchase of agricultural vehicles and equipment.

2. RESEARCH OBJECTIVES

To examine the extent of awareness and the degree of adoption of farm mechanization practices among farmers in Amravati district. To analyse the relationship between landholding size, cropping patterns, and the utilization of agricultural machinery in the study area. To assess farmers' perceptions regarding the costs, benefits, and accessibility of mechanization services. To evaluate the role of financial institutions and government subsidies in facilitating and promoting farm mechanization. To identify the key challenges and constraints faced by farmers in adopting modern mechanization and to suggest suitable policy interventions.

Hypothesis:

H1a: Interest rates on tractor loans significantly influence the purchasing decisions of farmers.

H1b: The ease of loan processing and documentation positively affects the willingness to take tractor loans.

H1c: Socioeconomic status (e.g., income, landholding size, education) significantly affects the farmer's decision to purchase agricultural machinery.

Scope of the study: Geographical CoverageThe study is focused exclusively on Amravati city, located in the Vidarbha region of Maharashtra. It aims to understand local dynamics in agricultural financing and equipment purchasing behaviour specific to this area. Time Frame of StudyThe study is conducted over a defined period, typically spanning one agricultural season or financial year, to understand farmer behaviour during a consistent cycle of activity. Policy Relevance The findings aim to assist: Policymakers in designing better agricultural finance schemes financial institutions in customizing loan products for farmers Equipment manufacturers and dealers to tailor marketing strategies for the Amravati market

3. METHODOLOGY

A research design is a broad plan the states objective of research project and provides the guidelines what is to be done to realize those-objective. It is in other words a master plan for executing a research project Deductive approach of reasoning is used to find out the most influencing factors affecting the decision of individual investors. in this study, the researcher exploring the Tractor loan and factor affecting Behaviour factors influencing the decision making of investors. The study starts with the reviewing the behaviour finance theories in general and in stock market in particular to get the theoretical and conceptual context as well as empirical findings of previous researcher from which the research model and hypotheses are proposed. then the question used in interviews and questionnaire are prepared. In market research, sampling means getting opinion from a number of Service person, Businessman, Students chose a specific group, in a order to find out about the whole group Therefore, market researchers make extensive of sampling from which, through careful design and analysis. can draw information about their chosen. The sampling technique will be a non-probability convenience sampling technique. For the research of study sample size were 100 respondents who do online. Sampling area here the survey was made from Amravati City.

4. REVIEW OF LITERATURE

Agricultural mechanization has been widely recognized as a crucial driver of farm productivity, income enhancement, and rural development. However, the adoption of tractors and other mechanized equipment often depends on farmers' financial capacity and accessibility to credit. Several studies have explored these aspects, focusing on both institutional credit and behavioral factors influencing farm mechanization. Shrestha and Yadav (2020) examined financial accessibility for agricultural mechanization in Maharashtra and found that institutional credit, particularly from cooperative banks, played a decisive role in enabling small farmers to acquire tractors and implements. Similarly, Singh and Kaur (2021) emphasized that government subsidies under NABARD and PM-Kisan schemes significantly reduce financial burdens and positively influence farmers' purchasing decisions. According to Kumar et al. (2019), socio-economic variables such as landholding size, annual income, and education level strongly determine the willingness of farmers to invest in tractors. They observed that marginal and small farmers often rely on group ownership or custom hiring centers rather than individual ownership. In a study conducted in Andhra Pradesh, Reddy and Naidu (2022) highlighted that ease of loan processing and flexible repayment terms were more critical than interest rates in shaping farmers' loan adoption behavior. Their findings suggest that procedural hurdles discourage many eligible farmers from availing institutional loans. More recently, NABARD (2023) reported that awareness about subsidy schemes remains uneven, with nearly 40% of farmers in rural India still unaware of available financial support for agricultural machinery. This aligns with Patel and Deshmukh (2023), who, in their study on Vidarbha region, observed that information asymmetry and inadequate outreach remain key barriers to mechanization adoption. Overall, the literature suggests that while institutional credit and government subsidies are vital enablers, factors such as income level, farm size, awareness of schemes, and loan processing efficiency critically influence tractor purchase decisions. Yet, localized studies remain necessary to capture the unique socio-economic and cultural dynamics of regions like Amravati.

5. DATA ANALYSIS AND INTERPRETATION

The present study is based on primary data collected from 100 respondents in Amravati city, who have either purchased tractors/agricultural equipment through loans or expressed intent to do so. The analysis highlights the socio-economic profile of farmers, their financing patterns, and the key factors influencing tractor purchase decisions. The distribution of landholding size among respondents reveals that the majority of farmers belong to the small and marginal category. About 31 percent of the farmers own less than one acre of land, while 28 percent fall in the 1–5 acre category. Together, these groups constitute nearly 59 percent of the sample, indicating that small-scale farming dominates the region. Medium-sized farmers owning 6–10 acres represent 24 percent, whereas only 17 percent are large farmers with more than 10 acres. This shows that despite small landholdings, there is a growing inclination towards mechanization, often supported through loans and subsidies. Ownership of tractors and other farm machinery remains relatively low in Amravati. Only 38 percent of respondents reported owning agricultural equipment, while a significant majority of 62 percent continue to rely on manual labor, bullock carts, or rented/shared machinery. This suggests that there is considerable potential for expansion in the mechanization market, particularly if credit facilities and subsidy programs are made more accessible to small and marginal farmers. The study also examined the role of financial institutions in providing tractor loans. The results indicate that HDFC Bank is the leading player, accounting for 24 percent of the loans, followed closely by government schemes at 20 percent and Punjab National Bank at 16 percent. Non-Banking Financial Companies (NBFCs) contribute 14 percent, while State Bank of India accounts for 12 percent. ICICI Bank and Bank of India provide 8 percent and 6 percent respectively. Interestingly, private banks collectively provide 32 percent of loans, public sector banks account for 34 percent, and NBFCs together with government schemes also contribute 34 percent. This balanced distribution indicates that farmers are exploring a wide range of credit sources, with private banks being slightly more aggressive in their lending approaches. When asked about the primary reason for taking tractor loans, the majority of respondents (42 percent) stated that they sought financing to replace old equipment. This highlights the challenge of outdated machinery, which requires regular replacement for efficient farming. Another 33 percent indicated that their main motivation was to improve production efficiency, demonstrating a strong awareness of the role of technology in increasing productivity. Meanwhile, 16 percent of farmers took loans for farm expansion, and 9 percent used the funds to diversify their agricultural activities. Awareness of government subsidy schemes such as PM-Kisan and NABARD was found to be fairly strong but still incomplete. About 57 percent of farmers reported awareness of such schemes, while 43 percent were not aware. This lack of awareness reduces the overall effectiveness of financial assistance programs, pointing towards a need for stronger outreach and communication efforts by government agencies, cooperatives, and local institutions. The repayment preferences of farmers further reveal their financial behavior. Most respondents (33 percent) preferred a repayment period of 4–5 years, which strikes a balance between affordability and timely repayment. About 28 percent chose shorter repayment durations of 1–3 years, usually reflecting higher-income or large farmers with stable earnings. Another 22 percent opted for a repayment period exceeding 7 years, indicating financial stress or preference for lower EMIs, while 17 percent preferred a 6–7 year repayment cycle.

This variation suggests that repayment flexibility is a crucial factor in loan adoption. Finally, factor analysis was conducted to determine the most significant influences on purchase decisions. The results clearly show that government subsidies ranked as the most critical factor, followed by consultations with peers and dealers, horsepower of the tractor, after-sales service, price, and brand name, in that order. This indicates that while technical performance and service are important, financial feasibility through subsidies outweighs brand loyalty in shaping farmers' decisions. In summary, the analysis highlights that small and marginal farmers form the bulk of tractor loan seekers in Amravati. Loan accessibility is spread across private banks, public sector banks, and NBFCs, with subsidies playing a decisive role in making tractors affordable. Farmers primarily take loans to replace outdated machinery and improve efficiency, though a significant lack of awareness about government schemes persists. Most importantly, financial support in the form of subsidies, flexible repayment terms, and efficient loan processing are the key enablers for promoting agricultural mechanization in the region.

Findings: 48% of respondents plan to purchase a vehicle, indicating a significant interest in vehicle ownership within the given time frame. 52% of respondents do not plan to purchase a vehicle, suggesting that either financial constraints, lack of necessity, or other priorities are influencing their decision. HDFC Bank is the largest loan provider at 24%, followed by Government Schemes at 20%. Punjab National Bank contributes 16% of the loans, while Non-Banking Financial Companies account for 14%. State Bank of India provides 12% of loans, with ICICI Bank at 8%, and Bank of India at 6%. With private banks (HDFC and ICICI) collectively accounting for 32%, public sector banks (SBI, Bank of India, and Punjab National Bank) making up 34%, while NBFCs and Government Schemes together represent 34% of the loan provision. The majority of borrowers 33% repay their loans within 4-5 years, suggesting that this period is the most preferred or feasible repayment plan for many. 28% of borrowers opt for a shorter repayment period of 1-3 years, indicating a significant number of borrowers who prefer. 17% of borrowers choose a repayment period of 6-7 years, showing a smaller portion of borrowers requiring extended repayment time. 22% of borrowers take more than 7 years to repay their loans, implying that a notable share of borrowers either face financial constraints or prefer lower EMIs over a longer period.

Suggestion: A significant barrier for farmers in acquiring loans is the complexity of the loan application process, including extensive paperwork and long processing times. Financial institutions should consider streamlining the loan process and reducing documentation requirements. The use of digital platforms for loan applications could help make the process more transparent and quicker. The government plays a vital role in promoting mechanization in agriculture. It is essential to increase the budget allocation for subsidies on tractors and agricultural machinery. The government should also ensure that subsidies reach small and marginal farmers effectively, especially those in remote areas, to make these loans more accessible. Farmers in Amravati often face challenges in repaying loans due to fluctuating income and crop prices. To alleviate this, financial institutions should offer lower interest rates and more flexible repayment terms. Creating loan products that take into account the seasonality of agricultural income (e.g., seasonal repayment schedules) can significantly ease financial pressure on farmers.

6. CONCLUSION

Critical Role of Tractor Loans in Amravati's Agricultural Development Tractor loans play a crucial role in the mechanization of agriculture in Amravati, helping farmers increase productivity and reduce labor costs. The availability of such loans has made it easier for farmers to acquire high-quality equipment, which has positively impacted their farming practices. Challenges in Accessing Tractor Loans While tractor loans are available, farmers often face challenges like high interest rates, limited access to financial institutions, lack of collateral, and complex documentation processes. These barriers make it difficult for smaller and marginal farmers to access loans for purchasing equipment, thereby limiting their productivity.

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