



## RESEARCH PAPER

# Penetration of farm mechanization services through FPOs: rural dynamics-based business modelling

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**Abstract :** Farm mechanisation although one among the essential input to raise the agriculture productivity, but individual owning of agricultural machinery by resource constrained small and marginal farmers who constitute around 85% of operated land holdings in India is uneconomical. Hence, innovative arrangements such as custom hiring centres' (CHCs) are being encouraged through farm aggregation models like cooperative farming, Joint Liability Groups (JLG), Farmer Producer Organizations (FPOs) to get access to farm machinery services at affordable prices and promote mechanization of operations on small farms. With this background, the present study is taken upto assess the feasibility for the establishment of FPO owned and operated model custom hiring centre (CHC) in Nimmanapalle mandal of chittoor district of Andhra Pradesh state and formulate suitable business strategies for ensuring viability of the unit. The sample size of the study was 120 farmers. The major crops grown in the study area are tomato, paddy and groundnut and the market potential for farm machinery is estimated at Rs. 269.73 lakhs. The SWOT analysis conducted indicated the opportunity for establishment of CHC due to inadequate farm machinery services, labour shortages and farmers habituated to hiring services. The financial assessment for the proposed unit over a five year period showed that the unit is worth investing as reflected by positive NPV of 6.56 lakhs at 12% discount rate, BCR of 1.05 and IRR of 17.27%. The debt service coverage ratios of greater than two from second year onwards and annual increase of positive cash accruals signifies the unit strength in meeting the debt obligations. The unit if established shall have long term social benefits that includes increase in input use efficiency of farm resources due to timeliness of operations, productivity, yields, income levels in addition to creation of employment in non-farm sector.

**Key Words :** Farmer producer organizations, Market potential, Custom hiring centre, Financial assessment, Social benefits

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