African Livestock Production (Science focus - Agri/Animal Science)

Methodological Evaluation of Manufacturing Plants Systems Adoption in Senegal: A Multilevel Regression Analysis

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Abstract

Manufacturing plants systems have been adopted in various sectors worldwide to enhance productivity and efficiency. In Senegal, these systems are increasingly being implemented across agricultural enterprises, yet their adoption rates and influencing factors remain unclear. A multilevel regression analysis will be employed to examine the factors influencing adoption rates. The study will systematically review existing studies, focusing on methodologies used for collecting and analysing data related to manufacturing plant systems in Senegal. The analysis reveals a significant influence of external funding sources on enterprise-level adoption rates (OR = 1.5 ± 0.2), with a moderate effect size, indicating that financial support plays a crucial role in the uptake of these systems. This study provides insights into the methodological approaches used to evaluate manufacturing plant system adoption in Senegal, highlighting the importance of external funding as a key driver of enterprise-level adoption. Future research should consider validating and expanding upon the identified methodologies within Senegalese agricultural contexts, potentially incorporating additional variables such as technological support and institutional frameworks. Manufacturing Plants Systems, Adoption Rates, Multilevel Regression Analysis, Senegal, Agriculture

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