

## **Factors Affecting Technology Adoption in the Agricultural Sector: A review**

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Adoption of new technologies in the agricultural sector is low. Studies reveal that the decision to adopt is affected by many factors. The objective of this review was to compile and analyze these factors obtained from numerous sources such as books and journal articles, from many countries, spanning almost 50 years. This compilation will support practitioners in technology dissemination and future research on technology adoption and diffusion. The factors identified through the literature survey can be categorized into three; (1) factors related to farm and farmer such as size of farm, land tenure status, income, prior experience, progressiveness of farmer, availability of capital sources, availability of labor, gender, education level, social capital and age; (2) factors related to the technology, such as affordability, cost of production and marginal returns of introduced technology, number of adopters present in locality, risk, availability, compatibility, complexity, trialability and observability; (3) institutional and market factors, such as access and availability of extension service and inputs, distance and access to markets and access to credit facilities. Many authors have stated that these individual factors affect adoption. Based on this review, it is seen that adoption is a collective and interactive effect of some or all factors. For example, older farmers with more experience may adopt earlier than the young and less experienced. On the contrary the young, who are more educated and tech savvy, may adopt ICT based innovations at a higher level than older farmers. Influence of gender generally depends on social norms. Even when farmers are aware and other factors are favorable, lack of capital, or unfavorable characteristics of the technology as perceived by farmers, hinders adoption. In planning and implementation of extension programs a simplistic approach is not feasible. Rather, an identification of priority factors and a holistic approach need to be considered to ensure greater adoption.

**Key words:** Agricultural extension, Holistic approach, Technology adoption