# The Role Played by Awareness and Complexity through the Use of a Logistic Regression Analysis

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**Abstract :** Adoption of Precision Agriculture (PA) is involved in a multidimensional and complex scenario. The process of adopting innovations is complex and social inherently, influenced by other producers, change agents, social norms and organizational pressure. Complexity depends on factors that interact and influence the decision to adopt. Farm and operator characteristics, as well as organizational, informational and agro-ecological context directly affect adoption. This influence has been studied to measure drivers and to clarify 'bottlenecks' of the adoption of agricultural innovation. Making decision process involves a multistage procedure, in which individual passes from first hearing about the technology to final adoption. Awareness is the initial stage and represents the moment in which an individual learns about the existence of the technology. 'Static' concept of adoption has been overcome. Awareness is a precondition to adoption. This condition leads to not encountering some erroneous evaluations, arose from having carried out analysis on a population that is only in part aware of technologies. In support of this, the present study puts forward an empirical analysis among Italian farmers, considering awareness as a prerequisite for adoption. The purpose of the present work is to analyze both factors that affect the probability to adopt and determinants that drive an aware individual to not adopt. Data were collected through a questionnaire submitted in November 2017. A preliminary descriptive analysis has shown that high levels of adoption have been found among younger farmers, better educated, with high intensity of information, with large farm size and high labor-intensive, and whose perception of the complexity of adoption process is lower. The use of a logit model permits to appreciate the weight played by the intensity of labor and complexity perceived by the potential adopter in PA adoption process. All these findings suggest important policy implications: measures dedicated to promoting innovation will need to be more specific for each phase of this adoption process. Specifically, they should increase awareness of PA tools and foster dissemination of information to reduce the degree of perceived complexity of the adoption process. These implications are particularly important in Europe where is pre-announced the reform of Common Agricultural Policy, oriented to innovation. In this context, these implications suggest to the measures supporting innovation to consider the relationship between various organizational and structural dimensions of European agriculture and innovation approaches.

**Keywords :** adoption, awareness, complexity, precision agriculture