

## **A Synthesis on Impact Assessment Models from the Perspective of Evolution of the EU Common Agricultural Policy**

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### **Abstract:**

The agricultural sector and rural areas have been intertwined with both socio-economic and environmental problems over decades, and for this reason, policies related to the sector and related living areas has frequently been changing. This change has been also triggered by the societal demands that differ with the changing economic and institutional structures of the member countries. The factors behind the evolution of the European Union's "Common Agricultural Policy" since the beginning are not different from the ones already mentioned above. Nevertheless, implementation of the policies in the Union as a whole, without considering the heterogeneity among countries, becomes a challenge particularly on policy impact analyses. So far, quantitative impact analysis regarding agricultural sector and rural areas has been carried out by various methodologies which include partial and general equilibrium type models, sector models, econometric and simulation models. The fact that the agricultural sector and the rural areas cannot be considered separately from environmental and climate changes, the increasing heterogeneity of farms and the policies taking these facts into account have led to the emergence of different approaches in impact analysis. For instance, the use of agent-based approaches which consider spatial, social and economic heterogeneity and risk behaviour of farms have been increasing lately. In addition, these can be integrated with other modeling platforms with an interdisciplinary view which certainly becomes the strength of the analysis instrument. From the above perspective, this paper reviews the existing empirical impact assessment approaches and tools with a critical eye to derive the strengths and

weaknesses in terms of data requirement, created indicators, social, economic and environmental specifics and policy content. In summary, the review aims to achieve why new generation- agricultural impact assessment models are need taking into account the progress in information technology and communication tools and big data analytics in addition to changes in the EU CAP objectives and instruments of policy measures.

**Keywords:** Agricultural Policy, Impact Assesment, Policy Modeling, CAP

**JEL Codes:** Q1, Q18