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It is all about the risk – how to create an enabling environment for agricultural innovation within the CAP?

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Background

- The challenges facing the EU agriculture necessitate introduction of innovations leading to higher efficiency of using natural resources and means of production.
- As other EU policies also the CAP must support the achievement of goals stimulated in the EU Strategy 2020.
- In line with this need the EU introduced new policy instruments to stimulate innovation in agriculture.
- Given the fact that post-2020 policy instruments are currently being designed we can state what factors should be better taken account of in their design.

What kind of innovation within the CAP?

- The creation of truly innovative, new technologies and practices.
- The implementation of both brand new innovative technologies and of already established technologies that have not been implemented so far by a given farmer.
- Although both creation and implementation of innovations are important, a visible impact on competitiveness and environmental footprint of agriculture has the implementation of innovations.
- Therefore, it should be a priority for the CAP, while creating innovations should be a shared responsibility of the EU research policy and the CAP.

Risk

- Decision making process concerning investment and innovation is influenced both by economic and non-economic factors.
- Taking into account the non-economic factors when shaping agricultural policy can lead to higher efficiency and effectiveness [Grolleau et al., 2015].
- Risk is a commonly known factor lowering the pace of adapting new technologies [Marra et al., 2003].
- Family firms commonly try to avoid too much risk in undertaking investment, yet they are able to reconcile their economic and noneconomic goals by making investments in exploitative R&D projects that reliably increase sales rather than exploratory investments that could lead to even higher sales but at a correspondingly higher risk [Panel & Chrisman, 2014].

Loss version, risk aversion and ambiguity aversion

- Loss aversion – prescribing higher value to losses than to gains. As Grolleau et al. [2015] showed an agri-environmental contract highlighting that the payment is a compensation to cover the implementation costs and revenue foregone from a change in practices is potentially less efficient than a contract stating that the payment is rewarding the provision of environmental services.
- Risk aversion – reluctance to accept a project with higher gains but also higher risk and acceptance of a project with lower gains but characterised by lower risk.
- Ambiguity aversion - preference for known risks over unknown risks. This is especially important in the case of innovations. Research conducted by Ross et al. [2012] confirms that lack of information (or lack of confidence in this information) could then explain why some technologies are received less favourably than others.

Status quo bias/default bias and choice overload

- Status quo bias/default bias – preference not to change anything and to select the default option where available.
- Choice overload – availability of too many possible options resulting in difficulty in making a decision.
- In the case of a choice overload there can occur a tendency to choose a status quo option.

Conclusions

- Intrinsic motivation and human responses, especially risk perception and its tolerance, are vital to policy effectiveness and innovation implementation.
- When designing specific policy measures policy makers have to take into account not only economic but also social and personal rewards expected by farmers.
- The aversion to different types of risk is an important factor discouraging farmers from implementing innovations.
- It is recommended that in creating the CAP 2020+ more attention is paid to insights from behavioural economics as it may offer useful advice on the designing of an enabling environment for agricultural innovation.
- Making use of behavioural economics means conducting experiments to verify farmers' attitudes towards different forms of policy design. Such experiments serve not only to answer the question of the farmers' preferences towards different forms of policy measures but they also offer guidance on the ways of helping to alter farmers attitudes towards implementing innovations.
- It must be also borne in mind that some of the technological innovations can reduce farmers' exposure to risk and thus they can influence farmers' attitudes towards future implementation of innovations.

Thank you for your attention!

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