Extended Abstract

Paper/Poster Title	**Explaining gender differences in adoption and intensity of agri-environmental scheme: A Hungarian-Slovenian comparison**

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Abstract	***200 words max***

The aim of the paper is to investigate the impacts of gender differences in the AES adoption and intensity in Hungary and Slovenia between 2007 and 2015 using FADN data. We employ Blinder-Oaxaca decomposition approach and RIF regression to explain the gender differences. Our calculation show that participation rate in the AES is higher in Slovenia compared to Hungary. We find that there is significant difference in the intensity of AES in both countries, however, there is not significant difference in the adoption of the AES in Slovenia. Our results suggest that the drivers of the AES adoption and the AES intensity differ in Hungary and Slovenia. These results are confirmed at aggregate and detailed decomposition and along the distribution of the AES intensity.

Keywords	Agri-environmental scheme, determinants of farmers participation, gender gap,
JEL Code	Q12, Q18

Introduction	***100 – 250 words***

Recognition of the motives and factors encouraging farmers to participate in Agri-Environmental Scheme (AES), which is particularly important in the context of voluntary adoption of conservation practices in most of these programmes (Batáry et al. 2015, Dessart et al. 2019). The willingness of farmers to participate in such programmes is a necessary condition, although of course, it does not guarantee success in achieving the assumed resilience and sustainability goals, particularly environmental ones. During the recent decade there is a vast literature on the determinants of participation in AECS in different countries (e.g., Uthes and Matzdorf 2013, Raggi et al. 2015, Lastra-Bravo et al. 2015, Zimmermann and Britz 2016, Mozzato et al. 2018, Defrancesco et al. 2018, Uehleke et al. 2019). However, research results from various countries remain ambiguous, which indicates that many conditions are not only country but local specific that require more detailed recognition in different geographical or space contexts (de Krom 2017, Mozzato et al. 2018, Dessart et al. 2019), particularly, if context-specific measures are considered (Brown et al. 2021). More recently, Kreft et al. (2021) emphasize the role of non-cognitive skills, namely self-efficacy, and locus of control, in farmers' uptake of mitigation measures. We focus on the gender driven participation in the AES and farm sustainability. More specifically, we compare gender-based differences in the adoption of AES and in the intensity of AES within and between the countries using Hungarian and Slovenian FADN data.

Methodology

100 – 250 words

We employ counterfactual decomposition technique popularized by Blinder (1973) and Oaxaca (1973) that is widely used to study mean outcome differences between male and female farmers. It divides the outcome differential between two groups into a part that is "explained" by group differences in farm and farmers characteristics, such as farm resources, farm structure, farm outcome, farmers' social-demographic characteristics, and a residual part that cannot be accounted for by such differences in outcome determinants. This "unexplained" part is often used as a measure for discrimination, but it also subsumes the effects of group differences in unobserved predictors. Second, we estimate Recentered Influence Function (RIF) regressions, as proposed by Firpo et al. (2009), and decompose the gender gap at different points of the AES intensity. We use panel dataset for both countries over the period 2007 and 2015.

Results

100 – 250 words

Our results suggest that participation rate in the AES is higher in Slovenia compared to Hungary. The observed gender gap is insignificant for Slovenia, whilst it is strongly significant in Hungary for the adoption of the AES. Decomposition methods distinguish what proportion of the baseline gender AES adoption and intensity difference can be attributed to: (i) differences in average characteristics of AES adoption and intensity generating factors (endowment effect) and (ii) gender differences in their returns (structural effect).

The aggregate decomposition results for adoption of the AES in Slovenia reveal that of the 14% gender gap, 44% is explained by gender differences in the levels of productive inputs. The structural effect accounts for the remaining 56%, which can be related to differences in returns to inputs or to unobservable terms. Similar numbers for Hungary are 26 %, (gender gap), 37% (endowment effect) 73% (structural effect). The observed gender gap are significant for adoption intensity in both countries. The detailed decompostion highlight that farm characteristics play more important role in Hungary compared to Slovenia, whilst farmers' characteristics are less important in both countries.

The overall gender gap at different points of AES intensity distribution and the proportion of the gap explained by the endowment effect in Hungary. The gender intensity differential peaks in the middle of the distribution; the largest gaps are observed for the 30th, 50th and 60th percentiles, while the smallest (not statistically significant) are observed for the bottom two and top two deciles. For Slovenia the largest gaps are observed on top two percentiles.

Discussion and Conclusion

100 – 250 words

We investigate the impacts of gender differences in the AES adoption and intensity in Hungary and Slovenia between 2007 and 2015 using FADN data. We employ Blinder-Oaxaca decomposition approach and RIF regression to explain the gender differences. Our calculation show that participation rate in the AES is higher in Slovenia compared to Hungary We find that there is significant difference in the intensity of AES in both countries, however, there is not significant difference in the adoption of the AES in Slovenia. Our results suggest that the drivers of the AES adoption and the AES intensity differ in Hungary and Slovenia. These results are confirmed at aggregate and detailed decomposition and along the distribution of the AES intensity.