

The Role of Contractors in Uptake of Precision Farming – A Spatial Economic Analysis

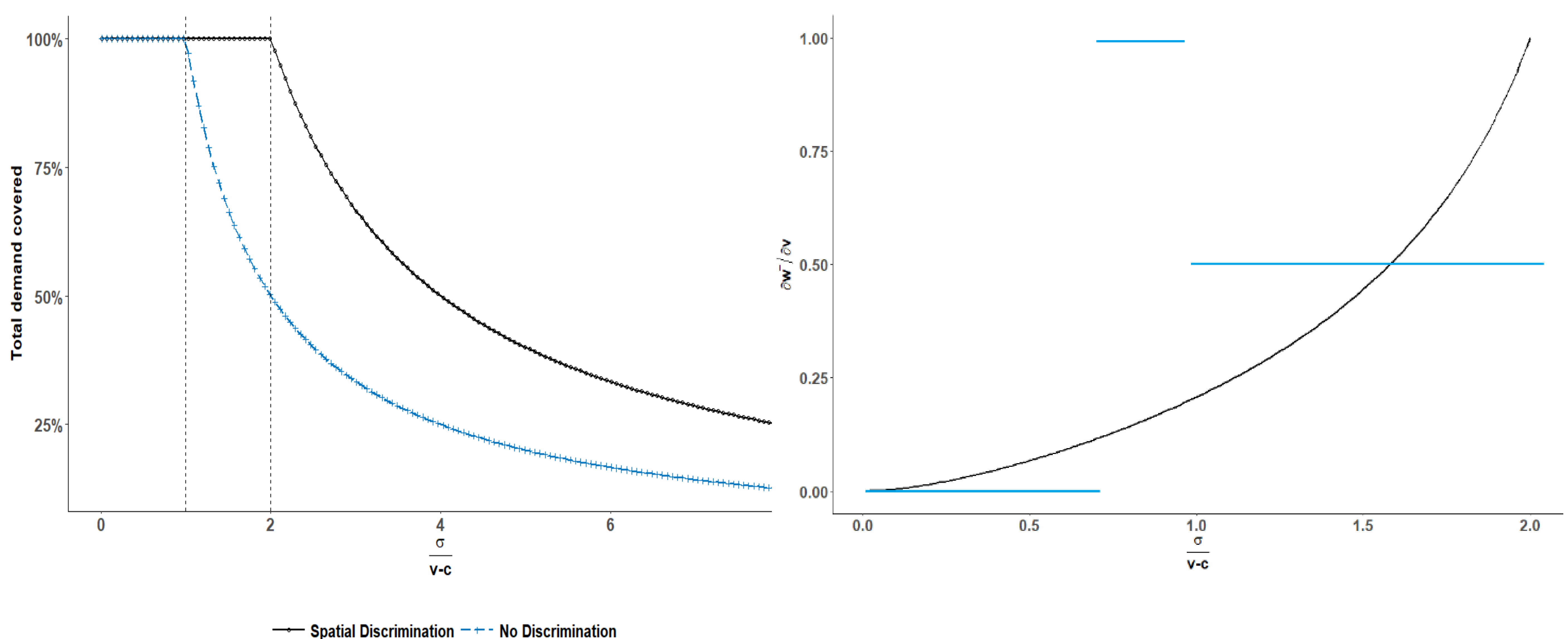
Yanbing Wang, Robert Huber, Robert Finger

Goals

Precision farming offers the potential towards more sustainable agriculture, and the adoption and diffusion of precision farming techniques is of large political interest. However, precision farming techniques requiring high investments are rarely used at small farms and/or in small scale agricultural systems. Yet, these technologies have the largest potential for sustainable intensification. In these systems, contractor will play a vital role in providing farms access to new technologies and enabling wide-spread adoption. In this project, we investigate how spatial competition between contractors providing precision farming services affects i) the uptake of precision farming, ii) the distribution of rents arising from precision farming technologies, and iii) effects of policies such as subsidization of precision farming practices.

Research

- Spatial competition between contractors is associated with:
 - Higher uptake of precision farming technologies
 - Higher pass-through of a subsidy to farmers
- Spatially discriminatory pricing supports higher uptake



Publications

Walter A, Finger R, Huber R, Buchmann N. 2017. *Smart farming is key to developing sustainable agriculture*. Proceedings of the National Academy of Sciences USA 114 (24) 6148-6150.

Finger, R., Swinton, S. M., Benni, N. E., Walter, A. (2019). *Precision Farming at the Nexus of Agricultural Production and the Environment*. Annual Review of Resource Economics 11: 313-335.