Extended Abstract
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Paper/Poster Title	**Oil Palm Smallholders Preferences towards Certification Schemes -A Discrete Choice Experiment in Indonesia**

Abstract prepared for presentation at the 96th Annual Conference of the Agricultural Economics Society, K U Leuven, Belgium

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Abstract	***200 words max***
The expansion of oil palm plantations has shown to have various consequences ranging from environmental deconstruction to advancing smallholder's economic welfare (Qaim et al., 2020). The challenge remains to mitigate adverse impacts of palm oil cultivation while strengthening positive impacts, such as the economic benefits for smallholder farmers (ibid). Certification schemes have shown to be an efficient tool to bridge this gap, particularly for tropical agricultural goods (Brandi et al., 2015). Voluntary certification schemes offer a system in which certain standards and best practices are ensured, while increasing the transparency along the value chain and therefore allowing for an improved market access. Although certification schemes are available for oil palm smallholders, their adoption rate remains low among small-scale oil palm farmers. The existing body of research suggests various challenges smallholder face during the process of adopting a certification scheme such as capacity, administrative tasks and farm management (Watts et al., 2021; Brandi et al., 2015; Hutabarat, Slingerland & Dries, 2019). We engaged 250 smallholder farmers in a discrete choice experiment eliciting their preferences towards the setup of certification scheme. Our results suggest ongoing trainings regarding farm management as well as financial support are the biggest factors for smallholders.	

Keywords	Oil Palm, Smallholder
JEL Code	Environment and Development, Q560 see: www.aeaweb.org/jel/guide/jel.php?class=Q)

Introduction	***100 – 250 words***
The extension of oil palm plantations has been at the forefront of debates around climate change and biodiversity loss. Simultaneously oil palm smallholders have experienced economic welfare and has lifted households out of poverty (Qaim et al., 2020). However, the challenge within the industry remains to mitigate adverse impacts while strengthening the positive ones. Certification schemes have been an instrument introduced available to the industry, but mainly used on industrial plantations. The pickup rate among small-scale farmers remains low even though smallholders often lack the efficiency and productivity of large-scale oil palm	

plantations. Through certain best practices, standards and knowledge transfer certification schemes can potentially improve the farm's productivity level, particularly for small-scale farmers.

While such certification schemes are available for large- as well as small-scale palm oil producers, the adoption rate among smallholders, especially independent smallholders, remains low for reasons such as administrative tasks, non-transparent economic benefits and highly demanding administrative requirements (Brandi et al., 2015; Watts et al., 2021 Hutabarat et al., 2019).

Our research therefore aims to identify how certification schemes should be designed to ensure a higher accessibility for smallholder farmers. Employing the method of discrete choice experiments allowed us to derive the attributes small-scale farmers weigh highest when considering the adoption of a certification scheme. Furthermore, we are able to quantify the willingness to pay of smallholders towards certification schemes.

Methodology

100 – 250 words

To elicit smallholder's preferences towards certification schemes, we conducted a Discrete Choice Experiment with 250 smallholder farmers in Jambi, Indonesia. The region of Jambi is one of the hotspots in Oil Palm cultivation, while smallholder farmers contribute more than 50% of the overall output in palm oil (Qaim et al., 2020). Data collection took place from October until December 2021. The respondents were randomly selected within villages throughout the province. All respondents eligible had to cultivate oil palm on no more than 20 hectares.

Our final sample consisted of 20 villages across the 5 biggest oil palm producing regencies in Jambi, Indonesia. Within each village a team of local enumerators approached farmers randomly. Smallholders owning less than 20 hectares of oil palm were eligible to participate in the experiment.

We excluded caretakers from our sample, as the adoption of certification schemes is a decision usually made by the plot owner. Furthermore, farmers who, additionally to their own land, took care of other plots were asked to only answer concerning their own plots. The interviews were conducted in the national language of Bahasa Indonesia, answering a structured questionnaire, which contained the Discrete Choice Experiment.

Respondents were presented with two different certification schemes and an opt-out option on each choice card. Each respondent answered 12 choice cards. The different choice cards were created following an efficient design in the software Ngene.

Further analysis will be conducted using conditional logit and mixed logit models.

Results	***100 – 250 words***

Our preliminary results suggest the following:

Low rates of choosing the opt-out option in our early results hint towards a generally high acceptance rate among respondents towards the presented options in certification schemes.

Our pre-tests and first insights into the data suggest a strong preference of smallholders towards extensive trainings on farm management on a recurring basis. This differs to the options currently available.

Furthermore, the data suggests a high degree of trust for certification schemes issued by the government, such as the newly introduced certificate ISPO (Indonesian Sustainable Palm Oil).

Besides capacity building and a trustworthy issuer of the certificate, direct monetary incentives for certification also played a significant, although less important role than expected.

These early results hint towards relatively low-hanging fruits in the improved design of certification schemes with potentially high impact on the adoption among small-scale farmers.

Discussion and Conclusion	***100 – 250 words***

The results of our research offer a better understanding of oil palm smallholder farmers' preferences towards certification schemes. With this research we can thus derive policy recommendation for an improved design of certification schemes, with an improved accessibility for smallholder farmers without compromising on the environmental and agricultural stringency which certification schemes should impose

The insights drawn from this research offer a better understanding for how certification schemes could be set-up to lower the threshold for smallholder farmers, ensuring a higher adoption rate among smallholder farmers and thus increased efficiency and productivity within for small-scale oil palm farmers.

Against the background of the Sustainable Development Goals and the United Nations Decade of Restauration, the urgency to create systems aiming at strengthening the benefits while mitigating the adverse impacts of oil palm cultivation, becomes stark.

A better understanding of how certification schemes can be made accessible for smallholder farmers without lowering their effectiveness, holds the potential for a more inclusive and environmentally friendly oil palm production, which furthermore strengthens the position of small-scale farmers.

References:

Brandi, C., Cabani, T., Hosang, C., Schirmbeck, S., Westermann, L., & Wiese, H. (2015). Sustainability standards for palm oil: challenges for smallholder certification under the RSPO. The Journal of Environment & Development, 24(3), 292-314.

Hutabarat, S., Slingerland, M., & Dries, L. (2019). Explaining the “certification gap” for different types of oil palm smallholders in Riau Province, Indonesia. The Journal of Environment & Development, 28(3), 253-281.

Qaim, Matin, Kibrom T. Sibhatu, Hermanto Siregar, & Ingo Grass (2020). Environmental, Economic, and Social Consequences of the Oil Palm Boom. Annual Review of Resource Economics 12; 321-344.

Watts, J. D., Pasaribu, K., Irawan, S., Tacconi, L., Martanila, H., Wiratama, C. G. W., & Manvi, U. P. (2021). Challenges faced by smallholders in achieving sustainable palm oil certification in Indonesia. World Development, 146, 105565.