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## Can cooperative membership foster compliance with European Union regulations? Evidence from cocoa farmers in Côte d’Ivoire

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### Abstract

Cocoa cultivation (*Theobroma cacao* L.) in Africa has long been associated with deforestation in humid tropical regions, as trees are often planted on newly cleared forest land. Côte d’Ivoire plays a significant role in global cocoa production, contributing significantly to the world’s cocoa supply and holding a key position in the global cocoa industry. However, the economic significance of this industry is accompanied by environmental challenges, such as deforestation and child labour practices. In response, the European Union (EU) has implemented strict regulations to promote sustainable cocoa production practices. Despite Côte d’Ivoire’s leadership in cocoa production, there are growing concerns about its ability to implement the necessary sustainability measures to meet these new EU standards. Agricultural cooperatives are places where farmers share information and experiences, allowing them to acquire new skills and best farming practices. While numerous studies have examined the importance of cooperatives in enhancing the adoption of improved farming technologies and land management practices, as well as the economic performance and welfare of smallholder farmers, limited research has explored their role in providing information, raising awareness, and facilitating adjustments in farming systems and practices to ensure compliance with EU new regulations among cocoa farmers. This study investigates the potential role of cooperative membership in facilitating compliance with EU regulations among cocoa farmers in Côte d’Ivoire. We collected data from 218 cocoa farmers in the centre-west and west of Côte d’Ivoire. We used propensity score matching to estimate the average effect. The results reveal that, on average, cocoa farmers in the study area have a propensity score of 0.261, suggesting a 26.1 % probability of being cooperative members based on their observed characteristics. The impact of cooperative membership on EU regulation awareness was positive across different matching methods: 0.193 (t=1.64) in the nearest neighbour matching, 0.363 (t=4.94) in the radius matching, and 0.303 (t=2.52) in the kernel-based matching. These results imply that cooperative membership improves cocoa farmers’ awareness of EU regulations. These results can guide policymakers and stakeholders in promoting cooperative membership among cocoa farmers to enhance their awareness of EU regulations, ultimately leading to better compliance and market access.

**Keywords:** Cocoa farmers, compliance, cooperative, Côte d'Ivoire, deforestation, EU regulations