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## Rainforest Alliance Certification and its Global Trade Effects in the Cocoa Sector

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### Abstract

The amount of non-tariff measures, applied to guarantee high levels of food quality, such as sanitary and phytosanitary or technical measures, has increased over the last decades. In addition to mandatory quality standards, voluntary food safety as well as social and environmental standards have evolved to meet an increasing demand for safe, high-quality, sustainably and ethically produced food by discerning consumers worldwide.

Since these voluntary standards affect import and exports decisions, the analysis of trade effects of such non-tariff measures has become an important topic during. The standards-as-barriers versus the standards-as-catalysts argument especially, has been controversially discussed. However, scientific evidence remains ambiguous.

This study analyses the trade effects of the private social and environmental standard Rainforest Alliance (RA) in the cocoa sector. This sector makes a suitable example to study social and environmental standards, because it faces three major challenges in production. First, the cocoa sector is characterised by increasing chocolate demand. Second, cocoa farming is expanding, especially into rain forest and protected areas, which can lead to reduction of native vegetation and biodiversity. Third, most cocoa producers are smallholders who rely on family and informal labour.

This study makes four major contributions to the current debate. First, we use a previously unexploited data set provided by RA. Second, we study the trade effects of a social and environmental standard, while most other studies focus on food safety standards. Third, we are the first who use the share of certified land area to total area as a proxy for certification. This allows us to calculate a less biased effect of certification on export flows. Fourth, our analysis is at a global level including 56 exporters and 172 importers over a 9-year period. Previous studies rather focus on one specific import or export region.

We find that RA certification enhances bilateral exports of cocoa. However, the effect remains robust only for raw cocoa beans and cocoa paste and disappears for other processed cocoa products. Finally, we conclude that voluntary food standards are not a suitable instrument to promote sustainably and ethically produced cocoa exports per se.

**Keywords:** Agricultural trade, cocoa, Rainforest Alliance, voluntary food standards