# Rainforest Alliance Certified<sup>TM</sup> and its Global Trade Effects in the Cocoa Sector



### GlobalFood

#### Nina Grassnick and Bernhard Brümmer

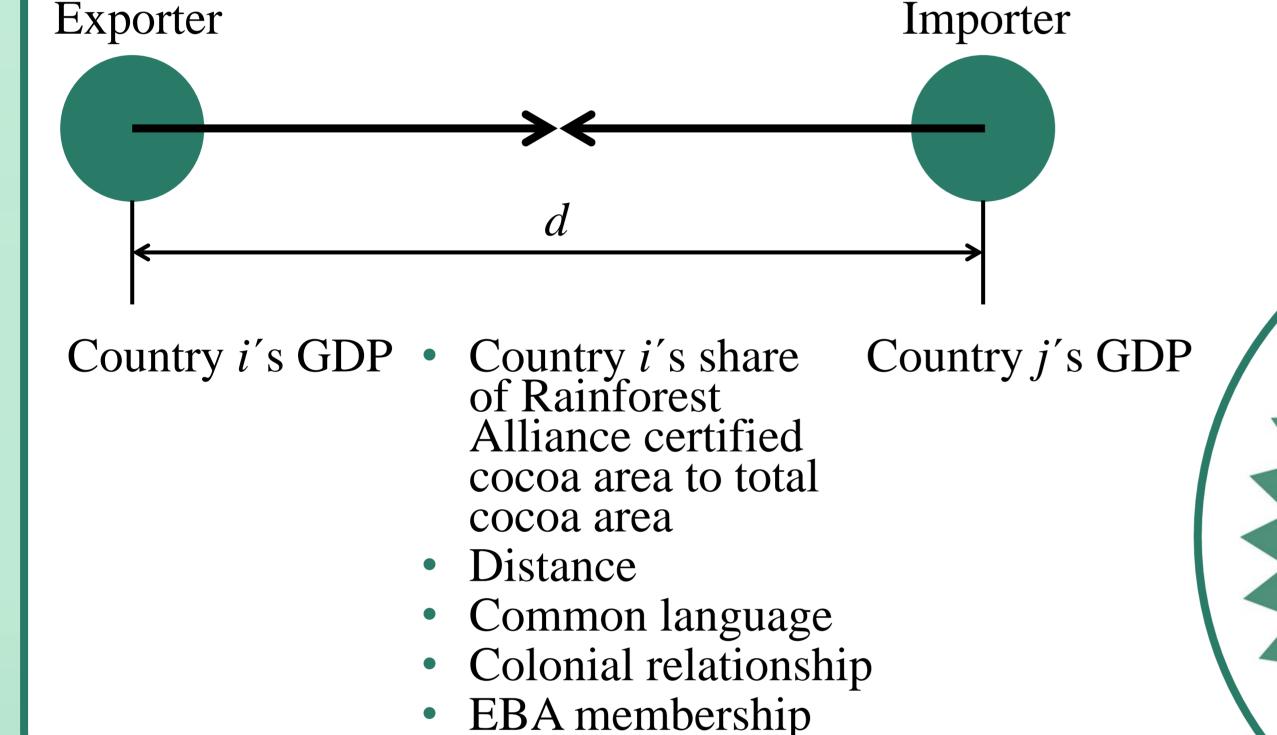
Contact: nina.grassnick@uni-goettingen.de



#### 1. Motivation Recent developments in the global cocoa sector Grinders / manufacturers Cocoa grinding in Certified producers supply cocoa beans ↑ producing countries \ demand certified cocoa ↑ Exports of certified Exports of certified Exports of certified cocoa beans $\uparrow\downarrow$ ? cocoa grindings $\uparrow\downarrow$ ? cocoa beans $\uparrow\downarrow$ ? > Hypothesis 1: The share of Rainforest Alliance certified land area affects cocoa exports positively. > Hypothesis 2: The trade effects differ across cocoa products.

### 2. Background Rainforest Alliance certified producers, 2016 Legend Share of RA certified area (%) **Ouantiles** no certification >0 - 0.14 0.15 - 0.56 0.57 - 1.31 1.32 - 3.7 3.8 - 14 14.1 - 100 iii no cocoa production Source: Rainforest Alliance annual report 2016 and FAOstat → 10.2% of global cocoa production area is Rainforest Alliance certified

## 3. Methodology: Gravity model of trade



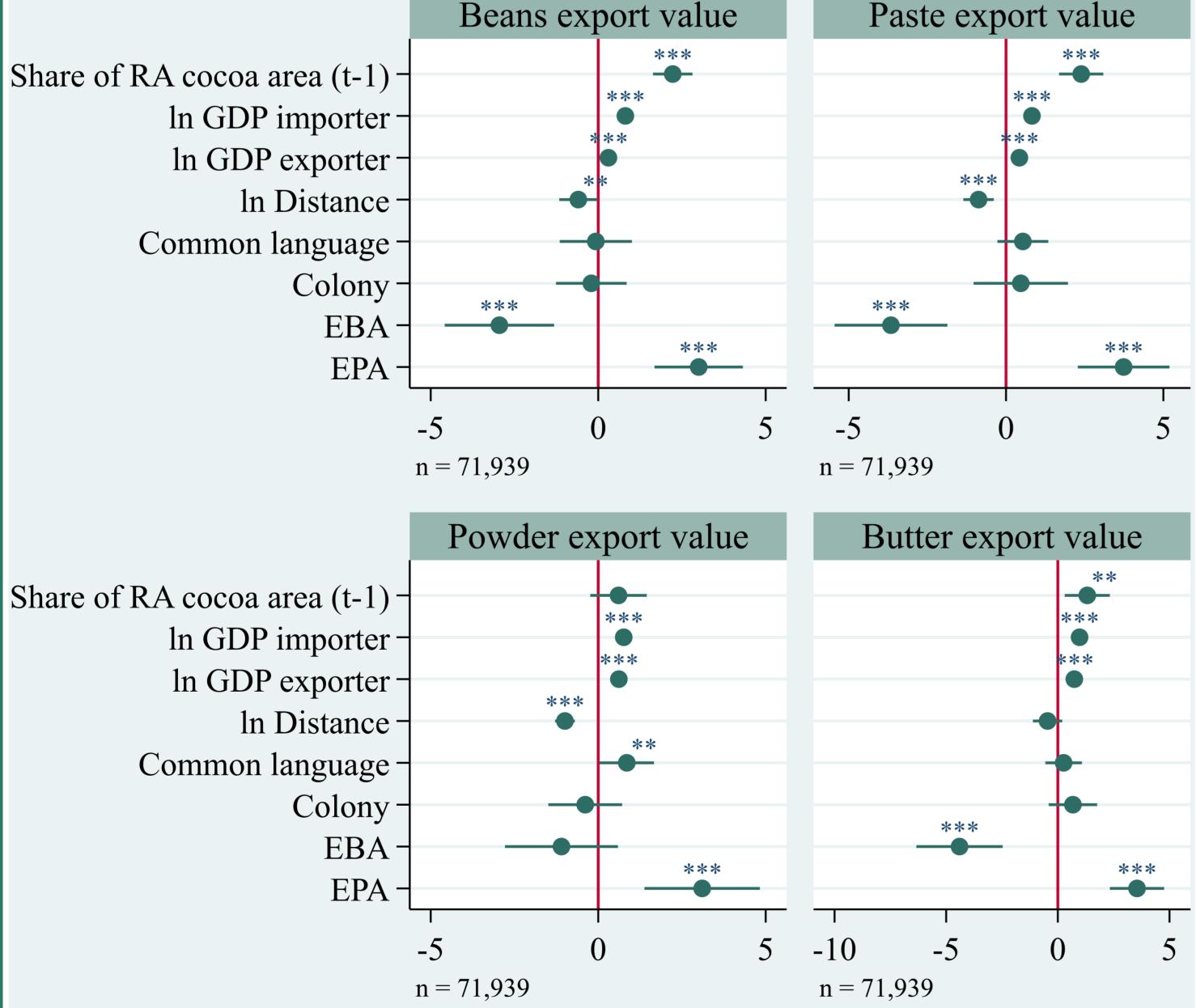
EPA membership

### 4. Limitations

- No disaggregation of certified and uncertified bilateral cocoa trade flows
- No country-level data on share of Rainforest Alliance certified cocoa grindings
- No data on double certification

### 5. Results

The effect of Rainforest Alliance certified on cocoa export values



Notes: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; Robust standard errors clustered at country-pair-

level; Coefficient estimates were obtained using a Poisson pseudo-maximum likelihood

(PPML) estimator; Bonus-Vetus method used to account for multilateral resistance

### 6. Findings

- Countries with higher share of Rainforest Alliance certified cocoa area are more likely to export cocoa products
- The trade effects differ across cocoa products: Strongest effect for cocoa paste, followed by cocoa butter and cocoa powder
- Most common *gravity* variables do have expected sign and magnitude:
- Higher demand by importer (GDP), higher supply by exporter (GDP), common language, colonial relationship and EPA enhance trade of cocoa products
- Higher bilateral distance decreases trade of cocoa products

### 7. Discussion

- Strongest trade effect for cocoa paste:
- Cocoa paste is the first processing step and therefore less sophisticated to produce
- Insignificant trade effect for cocoa powder:
  - Non-certified countries are more likely to specialize on export of cocoa powder
  - Cocoa powder is used to produce drinking chocolates or bakery products
- Those industries have lower demand for certification

This research was financially supported by the German Research Foundation (DFG) through the GlobalFood Program (grant number RTG 1666). We thank the Rainforest Alliance Traceability department for providing us data on certification. The content of the study does not reflect the official opinion of Rainforest Alliance. Responsibility for the information and views expressed in the study lies entirely with the authors.

CERTIFIED