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Assessing the Impacts of Equivalency Agreements in International Organic Trade

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Organic food has been widely recognized as healthy products and explosive expansion of global trade on organic food brings about both opportunities and challenges for organic-involved participants of all the countries in the world. The growing concern on organic-involved trade raises questions for researher: How does OEA relationship affect the market share of exporting countries in destination market? If one importing country reduces non-tariff barrier of trade on organic products with one exporting country, how does it influence the trade pattern between the importing country and all the other exporting countries? Ex-post approach, conducting an analysis of the effects of a past trade policy, has been implemented to answer this question (Demko and Jaenicke, 2015), however, ex-ante simulation of a change in trade policy to answer a "what if" question still leaves blank in this field.

We establish a structural model based on Eaton and Kortum (2002), and apply BLP(Berry, Levinsohn, and Pakes, 1995) method to estimate the parameters and finally conduct counterfactual analysis based on simulation. Eaton and Kortum(2002) illustrates that exporting country which offers the lowest price dominates the market for the specific product in importing country, which provides us with theoretical background to specify a random coefficient logit model in trade field. Heerman et al.(2015) firstly applies the BLP method in agricultural trade literature, contributing to identify the elasticity of market share with respect to trade cost by so-called "systematic heterogeneity model". They

believe that land and climate endowments are important non-random drivers of comparative advantage in agricultural trade, so exporting countries are sensitive to the change of trade cost between their competitors and importing country, especially for those competitors who have similar land and climate endowments and thus compete head-to-head for specific products. Based on work developed by Heerman et al.(2015) which relaxes the assumption of IIE (independence of irrelevant exporters) property,[1] we make two further contributions to highlight the role of trade cost and better identify the substitution pattern between exporter's market shares with respect to trade cost. The first contribution, we generate correlation across exporters by interacting with unobserved product characteristics, observed and unobserved product-specific trade cost. Especially the observed product characteristics, we introduce data of arable land for specific organic product which describes observed agro-ecological characteristics for specific product and make the substitution pattern close to the reality. Building correlation across exporters by interacting with unobserved trade cost at product-level also plays a critical role in organic food market. For example, Ostuki et.al. (2001) employs a gravity model to quantify the impact of a new harmonized aflatoxin standard set by the EU on food exports from Africa, they find out that a one percent lower maximum allowable level of contamination will reduce trade flow by 1.1% for cereals, 0.43% for fruits, nuts and vegetables. The second contribution, we find valid instruments for endogenous variable, and implement GMM to solve the endogeneity issue.

I Background: Organic Food and Relevant Global Market

The term "organic" is rooted in "bio" from Greek "bios" meaning life or way of living, organic products and natural products are commonly viewed as encouraging

[1]IIE property is equivalent to IIA(independence of irrelevant alternatives) property in discrete choice literature. Heerman et al.(2015) defines IIE as the following: "changes to a third country's trade costs are 'irrelevant' to the ratio of any other two competitors' market share in a given import market."

a healthier lifestyle described by the acronym Lifestyles of Health and Sustainability (LOHAS). The United Nations Codex Alimentarius Commission defines organic as a "labelling term that denotes products that have been produced in accordance with organic production standards and certified by a duly constituted certification body or authority" (FAO/WHO,2001). Green Earth Organics provides a clear definition of what an organic food product is, "organic foods are minimally processed to maintain the integrity of the food without artificial ingredients, preservatives or irradiation" (Essoussi and Zahaf, 2008). IFOAM established a singular organic definition based on farm management practices involving the use of natural methods of enhancing soil fertility and resisting disease, the rejection of synthetic chemical fertilizers, pesticides, and pharmaceuticals, and the protection of eco-systems. Acceptance of this organic definition has spread with IFOAMs recent expansion to include members from 100 countries (Raynolds, 2004).

Initially promulgated by IFOAM and national private voluntary certification organizations, organic standards, inspections, and certifications are increasingly regulated by government authorities. European governments established laws regulating organic certification and labeling in the 1980s (Michelsen,2001). The European Union (EU) harmonized these regulations, setting organic criteria for crop and livestock production following IFOAM standards (Barrett et.al., 2002). In the United States, states also became involved in organic certification as the market expanded in the 1980s (Klonsky, 2000). Japan, Canada, Australia, New Zealand and many other Northern countries have recently established similar standards, harmonizing rules and procedures across the world's major organic markets (Campbell and Liepins, 2001).

One of the most salient breakthrough in alleviation of trade-involved barriers is the bilateral organic equivalency agreement. Most importing countries, like the United States, the European Union, Canada and China settle down bilateral organic agreements based on political will and negotiations between the governments. The function of the bilateral organic agreements is to confirm that another country's control system and its standards are in line with domestic requirements and that the products certified in those countries can be sold on the national market.

United States

In 2009, the United States and Canada concluded their first bilateral agreement. Under a determination of equivalence, producers and processors, who are certified according to the US National Organic Program (NOP) standards by a certifying agent accredited by the United States Department of Agriculture (USDA), do not have to be certified by the Canada Organic Product Regulation (COPR) standards in order for their products to be represented as organic in Canada. Likewise, Canadian organic products certified to COPR standards may be sold or labelled in the United States as organically produced. Taiwan declared a unilateral recognition of USDA-certified exports in the same year.

In June 2012, the United States and the European Union have recognized each other's national organic standards and control systems, except for animal products from the European Union and apples and pears from the United States, which require extra verification. Additional specifications are agreed upon for wine. In addition, products from aquaculture production are not yet included in this agreement.

In 2014, the organic equivalency arrangement between the United States and Japan was effective in January, and organic equivalency agreement between the United States and South Korea was effective in July.

In 2015, the U.S. National Organic Program entered into a bilateral organic equivalency with Switzerland, its fifth organic equivalency arrangement.

Denmark

Denmark is a member country of the European Union. The European Union currently recognizes thirteen countries as being equivalent to the European Union's system and list them in Annex III to Regulation (EC) No 1235/2008 (known as the Third Country List). Chile is the newly added member of the third country list since the organic agreement was just established between EU and Chile in 2017 (European Commission, Relations with non EU countries). The other twelve countries are as follows: Argentina, Australia, Canada, Costa Rica, India, Israel, Japan, New Zealand, Republic of Korea, Switzerland, Tunisia, United States of America.

TABLE 1: OEA TRADING PARTNERS OF IMPORT MARKETS

import market	OEA partner at the end of last year	OEA parnter newly added in current year	year
U.S.	Canada		2011
	Canada	EU (except Croatia)	2012
	Canada, EU (except Croatia)	Croatia	2013
	Canada, EU	Japan, Republic of Korea	2014
	Canada, EU, Japan, Republic of Korea	Switzerland	2015
	Canada, EU, Japan, Republic of Korea, Switzerland		2016
Denmark	Canada, Argentina, Australia, Costa Rica, India, Israel, Japan, New Zealand, Switzerland, Tunisia, EU (except Croatia)		2011
	Canada, Argentina, Australia, Costa Rica, India, Israel, Japan, New Zealand, Switzerland, Tunisia, EU (except Croatia)	U.S.	2012
	Canada, Argentina, Australia, Costa Rica, India, Israel, Japan, New Zealand, Switzerland, Tunisia, EU (except Croatia), U.S.	Croatia	2013
	Canada, Argentina, Australia, Costa Rica, India, Israel, Japan, New Zealand, Switzerland, Tunisia, EU, U.S.		2014
	Canada, Argentina, Australia, Costa Rica, India, Israel, Japan, New Zealand, Switzerland, Tunisia, EU, U.S.	Republic of Korea	2015
	Canada, Argentina, Australia, Costa Rica, India, Israel, Japan, New Zealand, Switzerland, Tunisia, EU, U.S. , Republic of Korea		2016

Notes: More OEA fact sheet can be retrieved from IFOAM organics international website. https://www.ifoam.bio/en/organic-equivalence-tracker

II Model

Suppose we have I exporters and one *outside exporter* engaging in bilateral trade in this model, *outside exporter* indicates that importers may decide not to purchase specific products from any of the I exporters. Exporters are indexed by $i \in \{0, 1, 2, \ldots\ldots I\}$, where $i = 0$ represents the *outside exporter*. Importers are indexed by n, and products are indexed by j. We utilize the same production function in exporter i as Heerman et al.(2015) which adds a product-specific land productivity to the Eaton and Kortum model.

$$q_{ij} = z_{ij}(N_i^{\beta_i}(a_{ij}L_i)^{1-\beta_i})^{\alpha_i}Q_i^{1-\alpha_i} \tag{1}$$

where q_{ij} is the output of product j in exporter i, z_{ij} represents product j-specific technological productivity, N_i, L_i and Q_i refers to input of labor, land and intermediate inputs respectively. a_{ij}, the newly added product-specific land productivity, reflects the overall suitability of exporter i's environment for product j.

Same as Eaton and Kortum(2002), we assume that exporter i's technological productivity follows Frechet (also called the Type II extreme value distribution):

$$F_i(z) = e^{-T_i z^{-\theta}} \tag{2}$$

where $T_i > 0$ and $\theta > 1$. A bigger T_i implies that a high efficiency draw for any product j is more likely, the parameter θ reflects the amount of variation within the distribution and a bigger θ implies less variability.

With perfect competition, the price offered by exporter i in market n for product j is equivalent to the unit production cost multiplied by the geographic barrier:

$$p_{nij} = \frac{a_{ij}^{-\alpha_i(1-\beta_i)}c_i\tau_{nij}}{z_{ij}} \tag{3}$$

where c_i is the cost of an agriculture input bundle in exporter i, and z_{ij} represents product j-specific technological productivity in exporter i. As for $a_{ij}^{-\alpha_i(1-\beta_i)}$, it represents product

j-specific cost of land input in exporter i, and the power $\alpha_i(1-\beta_i)$ derived from production function measures the responsiveness of output to a change in levels of land used in production. τ_{nij} measures the geographic barrier of delivering product j from exporter i to market n. We take the Samuelson iceberg assumption, which implies that shipping the product j from exporter i to market n requires a per-unit iceberg trade cost of $\tau_{nij} > 1$ for $n \neq i$ since a portion of goods melt during the delivery. If there's no cross-border delivery, then we have $\tau_{nnj} = 1$. We also assume that $\tau_{nij} \leqslant \tau_{nkj}\tau_{kij}$, the cross-border arbitrage forces effective geographic barriers to obey the triangle inequality.

Then we employ method developed by Eaton and Kortum(2002) to obtain the probability that exporter i offers the lowest price for product j in market n.

We denote the exporter's product-specific cost of land input $a_{ij}^{-\alpha_i(1-\beta_i)}$ as $\widetilde{a_{ij}}$, then the probability that price of exporter i's product j in market n is lower than p is:

$$\begin{aligned} G_{ni}(p) = Pr(P_{nij} \leqslant p) = Pr(\frac{\widetilde{a_{ij}}c_i\tau_{nij}}{z_{ij}} \leqslant p) = Pr(z_{ij} \geqslant \frac{\widetilde{a_{ij}}c_i\tau_{nij}}{p}) \\ = 1 - F_i(\frac{\widetilde{a_{ij}}c_i\tau_{nij}}{p}) = 1 - e^{-T_i(\frac{\widetilde{a_{ij}}c_i\tau_{nij}}{p})^{-\theta}} \\ = 1 - e^{-p^\theta T_i(\widetilde{a_{ij}}c_i\tau_{nij})^{-\theta}} \end{aligned}$$

The probability that country n actually buys product j is the probability that at least one exporter i's price of product j in market n is lower than p, so the distribution of price in market n is:

$$\begin{aligned} G_n(p) = 1 - \prod_{i=0}^{I} Pr(P_{nij} > p) = 1 - \prod_{i=0}^{I}[1 - G_{ni}(p)] \\ = 1 - \prod_{i=0}^{I}\{1 - (1 - e^{-T_i(\widetilde{a_{ij}}c_i\tau_{nij})^{-\theta}p^\theta})\} = 1 - \prod_{i=0}^{I} e^{-T_i(\widetilde{a_{ij}}c_i\tau_{nij})^{-\theta}p^\theta} \\ = 1 - e^{-p^\theta \sum_{i=0}^{I} T_i(\widetilde{a_{ij}}c_i\tau_{nij})^{-\theta}} \end{aligned}$$

Therefore, the probability that exporter i offers the lowest price for product j in market n is:

$$\begin{aligned}\pi_{ni} &= Pr[P_{nij} \leqslant min\{P_{nsj}; s \neq i\}] \\ &= \int_0^{\infty} \prod_{s \neq i} [1 - G_{ns}(p)] dG_{ni}(p) \\ &= \int_0^{\infty} \frac{\int_{i=0}^{I} (1 - G_{ni}(p))}{1 - G_{ni}(p)} dG_{ni}(p)\end{aligned}$$

Recall that $\prod_{i=0}^{I}(1 - G_{ni}(p)) = 1 - G_n(p) = e^{-p^{\theta} \sum\limits_{i=0}^{I} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}}$;

and $1 - G_{ni}(p) = e^{-p^{\theta} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}}$; so we have:

$$\begin{aligned}\pi_{ni} &= \int_0^{\infty} \frac{e^{-p^{\theta} \sum\limits_{i=0}^{I} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}}}{e^{-p^{\theta} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}}} d[1 - e^{-p^{\theta} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}}] \\ &= \int_0^{\infty} e^{-p^{\theta} \sum\limits_{k \neq i}^{I} T_k(\widetilde{a_{kj}} c_k \tau_{nkj})^{-\theta}} \cdot -e^{-p^{\theta} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}} \cdot -T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta} \cdot \theta p^{\theta - 1} dp \\ &= \int_0^{\infty} e^{-p^{\theta} \sum\limits_{i=0}^{I} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}} \cdot T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta} \theta p^{\theta - 1} dp \\ &= \frac{T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}}{\sum\limits_{i=0}^{I} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}} \cdot \int_0^{\infty} \sum_{i=0}^{I} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta} \cdot e^{-p^{\theta} \sum\limits_{i=0}^{I} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}} \theta p^{\theta - 1} dp \\ &= \frac{T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}}{\sum\limits_{i=0}^{I} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}} \cdot \int_0^{\infty} dG_n(p) \\ &= \frac{T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}}{\sum\limits_{i=0}^{I} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}}\end{aligned}$$

The probability that exporter i offers the lowest price for product j in market n is:

$$\pi_{nij} = \frac{T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}}{\sum\limits_{i=0}^{I} T_i(\widetilde{a_{ij}} c_i \tau_{nij})^{-\theta}} \tag{4}$$

We make some changes to equation (4) so that the market share is expressed in the form of logit formula:

$$\pi_{nij} = e^{ln(\pi_{nij})} = e^{ln(\frac{T_i(\widetilde{a_{ij}}c_i\tau_{nij})^{-\theta}}{\sum_{i=0}^{I} T_i(\widetilde{a_{ij}}c_i\tau_{nij})^{-\theta}})}$$

$$= e^{ln(T_i(\widetilde{a_{ij}}c_i\tau_{nij})^{-\theta}) - ln(\sum_{i=0}^{I} T_i(\widetilde{a_{ij}}c_i\tau_{nij})^{-\theta})}$$

$$= \frac{e^{ln[T_i(\widetilde{a_{ij}}c_i\tau_{nij})^{-\theta}]}}{e^{ln[\sum_{i=0}^{I} T_i(\widetilde{a_{ij}}c_i\tau_{nij})^{-\theta}]}}$$

$$= \frac{e^{lnT_i - \theta lnc_i + \theta\alpha_i(1-\beta_i)lna_{ij} - \theta ln\tau_{nij}}}{\sum_{k=0}^{I} e^{lnT_k - \theta lnc_k + \theta\alpha_k(1-\beta_k)lna_{kj} - \theta ln\tau_{nkj}}}$$

We denote $F_{V_E(V_E)}$ and $F_{V_t(V_t)}$ as distribution of unobserved product characteristics and unobserved product-specific trade cost, then we could integrate out the product-related variables and get market share specific to exporter i and market n. We also normalize the parameters of *outside exporter* to zero, then the random coefficients logit model can be written as:

$$\pi_{nit} = \int \frac{exp(lnT_{it} - \theta lnc_{it} + \theta\alpha_i(1-\beta_i)lna_{ijt}(V^E_{ijt}) - \theta ln\tau_{nijt}(V^t_{nijt}, \nu_{nijt}))}{1 + \sum_{k=1}^{I} exp(lnT_{kt} - \theta lnc_{kt} + \theta\alpha_k(1-\beta_k)lna_{kjt}(V^E_{kjt}) - \theta ln\tau_{nkjt}(V^t_{nkjt}, \nu_{nkjt}))} dV^E_{ijt} dV^t_{nijt} d\nu_{nijt} \tag{5}$$

III Specification

We focus on global organic food market during the period of 2011-2016, so we regard each importer n combined with each year t within period of 2011-2016 as a new "market", then the random coefficients logit model which describes the organic food market share of exporter i in market n at time t is rewritten as the following:

$$\pi_{nit} = \int \frac{exp(lnT_{it} - \theta lnc_{it} + \theta\alpha_i(1-\beta_i)lna_{ijt}(V^E_{ijt}) - \theta ln\tau_{nijt}(V^t_{nijt}, \nu_{nijt}))}{1 + \sum_{k=1}^{I} exp(lnT_{kt} - \theta lnc_{kt} + \theta\alpha_k(1-\beta_k)lna_{kjt}(V^E_{kjt}) - \theta ln\tau_{nkjt}(V^t_{nkjt}, \nu_{nkjt}))} dV^E_{ijt} dV^t_{nijt} d\nu_{nijt}$$

Following Eaton and Kortum(2002) and Heerman et al.(2015), we define $S_{it} = lnT_{it} - \theta lnc_{it}$, S_{it} represents exporter i's "competitiveness" at time t, its state of technology ad-

justed for its intermediate input costs. Then we simplify the random coefficients logit model as:

$$\pi_{nit} = \int \frac{exp(S_{it} + \theta\alpha_i(1-\beta_i)lna_{ijt}(V_{ijt}^E) - \theta ln\tau_{nijt}(V_{nijt}^t, \nu_{nijt}))}{1 + \sum_{k=1}^{I} exp(S_{kt} + \theta\alpha_k(1-\beta_k)lna_{kjt}(V_{kjt}^E) - \theta ln\tau_{nkjt}(V_{nkjt}^t, \nu_{nkjt}))} dV_{ijt}^E dV_{nijt}^t d\nu_{nijt} \tag{6}$$

where V_{ijt}^E and V_{nijt}^t follows standard multivariate normal distribution, and ν_{nijt} is random variable drawn from standard normal distribution.

Next, we specify $S_{it} + \theta\alpha_i(1-\beta_i)lna_{ijt}$ and $-\theta ln\tau_{nijt}$ as the following:

$$S_{it} + \theta\alpha_i(1-\beta_i)lna_{ijt} = X_{it}\varphi + X_{it}\Sigma_E V_{ijt}^E + \lambda_i + \lambda_t$$

where S_{it} represents exporter i's "competitiveness" at time t, we follow Eaton and Kortum (2002) and define it as exporter fixed effects and time fixed effects denoted by λ_i and λ_t; where a_{ijt} represents organic product j specific land productivity in exporter i at time t, which reflects the overall suitability of exporter i's environment for product j at time t;

where X_{it} is a $1 * g$ vector of variables describing exporter i's agro-ecological characteristics at time t; φ is a $g * 1$ vector of coefficients;

We specify $X_{it} = [ORGLAND_{it} \quad ORGSHARE_{it} \quad TEMP_i]$;

where $ORGLAND_{it}$ is the log of organic arable land in exporter i at time t, $ORGSHARE_{it}$ is the organic arable land share of total farmland in exporter i at time t, $TEMP_i$ represents the share of total arable land area in temperate climate zones in exporter i at time t. We also collect baseline data, such as the share of total arable land area in tropical and boreal climate zones in exporter i at time t, denoted as trp_i and bor_i. We assume that the share of arable land in each climate zones does not vary over sample period.

where V_{ijt}^E is a $g * 1$ vector that captures the effect of unobservable product j-specific agro-ecological characteristics in exporter i at time t with scaling matrix $\Sigma_E(g * g)$.

$$-\theta ln\tau_{nijt} = t_{nit}\eta + t_{nit}\Sigma_t V_{nijt}^t + \gamma OEA_{nit} + \sigma\nu_{nijt}OEA_{nit} + \lambda_n + \xi_{nit}$$

where τ_{nijt} represents the trade cost between exporter i and market n for organic product j at time t;

where t_{nit} is a $1 * h$ vector describing the relationship between exporter i and market n at time t; η is a $h * 1$ vector of parameters;

We define $t_{nit} = [b_{ni} \quad l_{ni} \quad rta_{nit} \quad d_{ni} \quad EXPGDP_{it} \quad IMPGDP_{nt}]$, where b_{ni}, l_{ni} and rta_{nit} equal to one if the two countries share a common border, language or are members of a common regional free trade agreement at time t; where $EXPGDP_{it}$ and $EXPGDP_{nt}$ represents log value of gross domestic product in exporter i at time t and importer n at time t respectively, measured in constant 2010 US dollar. Following work of Eaton and Kortum (2002), we assign each country pair to one of five distance categories. The only difference between our work and Eanton and Kortum's work is that we only have five distance categories instead of six categories since no country pairs in our sample data can be categoried to $[0, 375)$ miles. Instead, we define $d_{ni} = [distance_1 \quad distance_2 \quad distance_3 \quad distance_4 \quad distance_5]$, where $distance_1$ represents the population-weighted average distance between largest cities of country pairs fall in range of $[0, 750)$ miles; $distance_2$, $distance_3$, $distance_4$, $distance_5$ represents range of $[750, 1500)$, $[1500, 3000)$, $[3000, 6000)$ and $[6000, maximum)$ respectively.

where V^t_{nijt} is a $h * 1$ vector that captures the effect of unobservable product j-specific trade costs between exporter i and market n at time t with scaling matrix $\Sigma_t(h * h)$;

OEA_{nit} equals to one if exporter i and market n signed organic equivalency agreement at time t. The coefficient of OEA_{nit} follows a normal distribution with mean γ and standard deviation σ.

where λ_n is a market-specific trade cost captured by a fixed effect;

where ξ_{nit} captures unobservable or unquantifiable bilateral trade costs that are common across products and orthogonal to the regressors at time t;

OEA_{nit} is an endogenous variable in this model because the importing countries observe exporting countries' characteristics which are unobserved or unquantified by researcher and take them into account when deciding whether signing OEA with exporters or not. For example, China signed OEA with New Zealand in 2016 because Chinese con-

sumers lost confidence in dairy products resulted from Melamine milk powder incident in 2008, and Yin et al. (2018) found that consumers were willing to pay 6.679 US dollars higher for infant milk powder originated from New Zealand compared with that from China by conducting a choice experiment survey.

We find one instrument for the endogenous variable. Imagine that if the index in exporters who already signed organic equivalency agreement or enjoyed similar privilege with market n at time t were similar to exporter i, for example, the number of organic-involved producers, then the probability that exporter i and market n would sign the OEA is higher. Because the exporters who signed OEA with importer n were exporter i's competitors in market n, if exporter i shared similar organic-involved participants with these competitors, the more likely that exporter i would sign OEA with market n. Therefore, we define IV as the following: absolute value of the difference between the average number of organic-involved producers in exporting countries who already signed OEA with market n and the number of organic-involved producers in exporter i.

These instruments are unrelated with error term, ξ_{nit}. Because we are comparing the number of organic-involved participants between exporting countries other than exporter i and exporter i at year t, which is determined by the trade cost between exporting countries other than exporter i and their partners, and by the trade cost between exporter i and her global partners, not just specific to trade cost between exporter i and market n.

IV Estimation

We have linear parameters ϕ_1 and nonlinear parameters ϕ_2, where $\phi_1 = (\varphi, \eta, \gamma, \hat{\lambda_i}, \hat{\lambda_t}, \hat{\lambda_n})$; $\phi_2 = (\Sigma_E, \Sigma_t, \sigma)$. In equation (6), we specify that the random coefficients logit model is as the following:

$$\pi_{nit} = \int \frac{exp(S_{it} + \theta\alpha_i(1-\beta_i)lna_{ijt}(V^E_{ijt}) - \theta ln\tau_{nijt}(V^t_{nijt}, \nu_{nijt}))}{1 + \sum_{k=1}^{I} exp(S_{kt} + \theta\alpha_k(1-\beta_k)lna_{kjt}(V^E_{kjt}) - \theta ln\tau_{nkjt}(V^t_{nkjt}, \nu_{nkjt}))} dV^E_{ijt} dV^t_{nijt} d\nu_{nijt}$$

We denote that:

$\delta_{nit} = X_{it}\varphi + \lambda_i + \lambda_t + t_{nit}\eta + \gamma OEA_{nit} + \lambda_n + \xi_{nit}$

$\mu_{nijt} = X_{it}\Sigma_E V_{ijt}^E + t_{nit}\Sigma_t V_{nijt}^t + \sigma\nu_{nijt}OEA_{nit}$

We can rewrite the random coefficients logit model as the following:

$$\pi_{nit} = \int \frac{exp(\delta_{nit} + \mu_{nijt}(V_{ijt}^E, V_{nijt}^t, \nu_{nijt}; \phi_2))}{1 + \sum_{k=1}^{I} exp(\delta_{nkt} + \mu_{nkjt}(V_{kjt}^E, V_{nkjt}^t, \nu_{nkjt}; \phi_2))} dV_{ijt}^E dV_{nijt}^t d\nu_{nijt}$$

where δ_{nit} represents the mean effect of exporter i's characteristics on exporter i's market share in market n at time t;

where μ_{nijt} represents the product-specific deviation from the mean effect.

We illustrate the estimation procedure step by step.

Step 1 We draw V_{ijt}^E and V_{nijt}^t from standard multivariate normal distribution, and draw random variable ν_{nijt} from standard normal distribution.

Step 2 Compute market shares.

We give initial values to $\phi_2 = (\Sigma_E, \Sigma_t, \sigma)$, use V_{ijt}^E, V_{nijt}^t, ν_{nijt} collected from step 1, then we compute the predicted market share $\hat{\pi_{nit}}$ using the following estimator:

$$\pi_{nit} = \frac{1}{ns}\sum_{j=1}^{ns} \frac{exp(\delta_{nit} + \mu_{nijt}(V_{ijt}^E, V_{nijt}^t, \nu_{nijt}; \phi_2))}{1 + \sum_{k=1}^{I} exp(\delta_{nkt} + \mu_{nkjt}(V_{kjt}^E, V_{nkjt}^t, \nu_{nkjt}; \phi_2))}$$

where ns is the number of products in our sample data, set as 79. Because the number of HS code for organic food collected from GATS website in U.S. market is 32, and the number of HS code for organic food collected from Statistics Denmark in Danish market is 47, the total number of organic food in our sample data is 79.

Step 3 Contraction mapping(fixed-point iteration) to get mean effect δ_{nit}.

Given a guess of ϕ_2 and initial value of δ_{nit}^0, iterate on

$$\delta_{nit}^{h+1}(\phi_2) = \delta_{nit}^h(\phi_2) + ln(\pi_{nit}) - ln(\hat{\pi_{nit}})(\delta_{nit}^h, \phi_2)$$

where π_{nit} is the observed market share, $\hat{\pi_{nit}}$ is the predicted market share based on initial value of δ_{nit}^h and guess of ϕ_2. The process stops when $\|\delta_{nit}^{h+1} - \delta_{nit}^h\| \leqslant tolerance$. Then

we obtain estimate of $\delta_{nit}(\phi_2)$.

Step 4

A. Given $\delta_{nit}(\phi_2)$, estimate ϕ_1 and compute ξ_{nit}. Recall that $\delta_{nit} = X_{it}\varphi + \lambda_i + \lambda_t + t_{nit}\eta + \gamma OEA_{nit} + \lambda_n + \xi_{nit}$, we simplify δ_{nit} as the following: $\delta_{nit} = X\phi_1 + \xi$, where X contains variables for $X_{it}, t_{nit}, \lambda_i, \lambda_t, \lambda_n, OEA_{nit}$, and Z are instrument variables. Then, $\hat{\phi_1} = (X'ZWZ'X)^{-1}(X'ZWZ'\delta)$, and $\xi_{nit}(\phi_2) = \delta_{nit} - X\hat{\phi_1}$.

B. Minimize the GMM objective: Min $\xi(\phi)'ZWZ'\xi(\phi)$, where W is the GMM weight matrix, $[E(Z'\xi(\phi)\xi(\phi)'Z)]^{-1}$. Start with $W = I$ to get initial estimates, use them to compute W, and minimize GMM objective function for new estimates. After minimizing GMM objective function, we get new ϕ_2, we use new estimates of ϕ_2 as initial guess and go back to step 1, get new $\delta_{nit}(\phi_2), \xi_{nit}(\phi_2)$ and minimize GMM again, and continue to move on until converge.

V Data

Table 1 reports the fact sheet of Organic Equivalency Agreement between exporters and ten main import markets from 2011 to 2016. In U.S. market, Canada has been OEA partners of U.S. since 2009, then European Union signed OEA with U.S. in June 2012. Croatia joined EU in 2013, so we excluded Croatia from United States' OEA partners in 2012 but included Croatia in 2013. Japan and South Korea became United States' OEA partners in 2014 and Switzerland signed OEA with U.S. in 2015. Although United States Department of Agriculture (USDA) and Mexico's National Service for Animal and Plant Health, Food Safety and Quality (SENASICA) were cooperating to establish an organic equivalency agreement between United States and Mexico, and currently USDA-certified products may be exported to Mexico (USDA, Agriculture Marketing Service)[2], we excluded Mexico as United States' OEA partners since it has not yet been effective and many items were under discussion. Apart from bilateral organic equivalency agreements, United States built several unilateral organic equivalency agreements with

[2]https://www.ams.usda.gov/services/organic-certification/international-trade

some other countries (named recognition agreements). For example, India, Israel, New Zealand and Mexico are allowed to accredit certifying agents in their own countries such that these certifying agents are authorized to certify whether organic products meet all USDA organic standards, satisfied organic products can be imported to United States. On the other side, Taiwan is allowed to import USDA-certified organic products which is labeled as "organic" without further certification by Taiwan government. However, we only included bilateral organic equivalency agreements in our data, unilateral organic equivalency agreements such as recognition agreements were excluded since the year when these agreements went into force were unclear.

Denmark, as member of European Union, had ten OEA partners and other EU countries at the beginning of 2011. European Union signed OEA with United States and South Korea in 2012 and 2015 respectively.

The dependent variable is defined as the market share of exporter i in market n at time t, the import value of organic products from exporter i in market n at time t divided by the total import value of organic products from all exporters in market n at time t. We obtain organic-specific trade value between exporters and two main import markets, United States and Denmark, from GATS(the USDA Foreign Agricultural Service's Global Agricultural Trade System) and Statistics Denmark respectively. We select 82 countries as exporters and then drop the observation if market share equals to zero[3], so the number of exporters involved in each market varies over time. Table 2 shows that market share of all selected 82 exporters in U.S. market is higher than 98 percent during period of 2011-2016, and the market share of outside exporters only accounts for nearly 1 percent during sample period. Similarly, the market share of all selected 82 exporters in Danish market is higher than 96 percent during sample period, and the outside market share only accounts for 3 percent.

The organic arable land and organic arable land share of total farmland in exporter i at time t are obtained from FiBL statistics. The website "Staitiscs.FiBL.org" is main-

[3]The total number of countries involved is 83, including 82 exporters in each market and one corresponding importer, selection of potential exporters is based on whether this country has data for the number of organic producers which is used to construct instrument variables. We drop the observation if market share equals to zero since zero market share cannot be identified in the inner loop.

tained by the Research Institute of Organic Agriculture FiBL, funded under a project of the Swiss State Secretariat of Economic Affairs SECO and the International Trade Centre ITC. The Research Institute of Organic Agriculture FiBL carried out global survey on organic farming and published yearbook "The World Organic Agriculture" with IFOAM - Organics International each year. The log value of organic arable land on average is 11.58 during sample period, which is approximately 106,940 hectares, and the organic arable land accounts for 3 percent of total farmland on average.

Data for total arable land in tropical, temperate and boreal climate zones in exporter i are collected from Development of the GTAP version 7 land use data base (Avetisyan, Baldos and Hertel, 2011). We assume that the total arable land in the above three climate zones does not vary over time, so we only use land data in 2011. In this dataset, arable agriculture land are sorted into 18 AEZ(agro-ecological zones) , AEZ 1-6 represents tropical land area, AEZ 7-12 represents temperate land area, and AEZ 13-18 represents boreal land area. We sum the arable land in each climate zones, and then compute the ratio of arable land in each climate zones to all the three climate zones. Table 2 shows that the average share of arable land in temperate zones is 63 percent, which is higher than average share of arable land in tropical climate zones(around 34 percent) and boreal climate zones(around 3 percent). Similarly, the variation over time comes from the change of number of active exporters involved in each year.

Elements of classical gravity variables, such as dummy variable indicating whether exporter i and market n shares common border, common language, and whether they are members in Regional Trade Agreement, coming from Centre d'$\acute{E}$tudes Prospectives et d'Informations Internationales (CEPII, Mayer, T.& Zignego, S.,2011). Real GDP of exporter and importer during sample period are available from the World Bank. We also obtained population-weighted average distance between largest cities in each country pairs from CEPII, and seperated distance into five categories following Eaton and Kortum (2002). Table 2 shows that 69 percent of organic-trading country pairs have the farest distance which is larger than 6,000 miles, and 9 percent of country pairs have median level of distance between 750 and 1,500 miles. 16 percent of country pairs have

relatively farer distance which is between 1,500 and 6,000 miles, 5 percent of them have relatively nearer distance which is between 0 and 750 miles. The OEA dummy variable indicates that on average 40 percent of country pairs in the sample data during sample period are OEA partners. The instrument variable for OEA endogenous variable, defined as the absolute value of the difference between number of organic producers in exporter i and average number of organic producers in all countries who are OEA partners of market n at time t, is 33,170 on average during sample perod.

TABLE 2: SUMMARY STATISTICS

variable	definition	mean	standard deviation	minimum value	maximum value
π_{nit}	dependent variable, market share of exporter i in market n at time t	0.02	0.04	0.00000065	0.25
$ORGLAND_{it}$	log of organic arable land in exporter i at time t, hectare	11.58	2.05	5.52	17.12
$ORGSHARE_{it}$	organic arable land share of total farmland in exporter i at time t	0.03	0.04	0.01	0.22
$TEMP_i$	share of total arable land area in temperate climate zones in exporter i	0.63	0.43	0	1
trp_i	share of total arable land area in tropical climate zones in exporter i	0.34	0.44	0	1
bor_i	share of total arable land area in boreal climate zones in exporter i	0.03	0.09	0	0.65
b_{ni}	dummy variable, whether exporter i and market n share common border	0.03	0.16	0	1
l_{ni}	dummy variable, whether exporter i and market n share common language	0.14	0.34	0	1
rta_{nit}	dummy variable, whether exporter i and market n are RTA partners at time t	0.37	0.48	0	1
$distance_1$	distance between exporter i and market n falls in range of [0,750) miles	0.05	0.22	0	1
$distance_2$	distance between exporter i and market n falls in range of [750,1500) miles	0.09	0.29	0	1
$distance_3$	distance between exporter i and market n falls in range of [1500,3000) miles	0.08	0.27	0	1
$distance_4$	distance between exporter i and market n falls in range of [3000,6000) miles	0.08	0.28	0	1
$distance_5$	distance between exporter i and market n falls in range of [6000,maximum) miles	0.69	0.46	0	1
OEA_{nit}	dummy variable, whether exporter i and market n are OEA partners at time t	0.40	0.49	0	1
IV_{nit}	instrument varaible, absolute value of the difference between number of organic producers in exporter i and average number of organic producers in all countries who are OEA partners of market n at time t, in 1,000s	33.17	86.75	0	824.98
$EXPGDP_{it}$	log of gross domestic product in exporter i at time t, in constant 2010 US dollars	26.13	1.78	21.47	30.46
$IMPGDP_{nt}$	log of gross domestic product in market n at time t, in constant 2010 US dollars	28.73	1.92	26.51	30.46
I_t^{US}	number of active exporters in U.S. market at time t	67.50	4.85	60	72
I_t^{DNK}	number of active exporters in Denmark market at time t	52	3.90	47	57
π_t^{US}	market share of all active exporters in U.S. market at time t	0.9877	0.0035	0.9818	0.9911
$outshr_t^{US}$	outside market share in U.S. market at time t	0.0123	0.0035	0.0089	0.0182
π_t^{DNK}	market share of all active exporters in U.S. market at time t	0.9647	0.0248	0.9369	0.9896
$outshr_t^{DNK}$	outside market share in U.S. market at time t	0.0353	0.0248	0.0104	0.0631
n_obs	number of observations	717			

Notes: Values are computed within sample data across sample period (2011-2016).

VI Results

Table 3 shows estimates of mean effect and unobserved product-specific deviations in our model. The mean effect of OEA indicator is 2.6545, indicating that exporters who are OEA partners of the importer would occupy higher market share in this market relative to those who are non-OEA partners. The product-specific deviation σ is positive and statisitcally significant, which implies that the advantage of being OEA partners of the importer would be intensified by some products, while the small magnitude of σ compared to other deviations shows that the magnitude of advantage is relatively small. The positive and statistically significant value of $\varphi^{ORGLAND}$ implies that market share is increasing for organic land-intensive exporters. Positive and significant value of product-related deviations, $\Sigma_E^{ORGLAND}$ indicates that market share is further increasing for organic land-intensive products. Another agro-ecological variable of exporters, mean value of organic share, $\varphi^{ORGSHARE}$, is positive but not significant. The negative but significant value of product-specific deviation $\Sigma_E^{ORGSHARE}$ can be interpreted as preference for exporters who maintain smaller organic share of total farmland, it seems reasonable considering some exporters with large organic land but small organic share, for example, China and India. $\varphi^{TEMP} = 14.9590$ suggests that the market share is relatively high for exporters whose farmland are more temperate-climate-intensive, compared with exporters whose farmland are more tropical or boreal-climate-intensive.

The estimates of trade cost related variables, such as the dummy variables for common border and common language between country pairs, $\eta^b = -0.9684, \eta^l = -0.3030$, indicates that the market share is decreasing with exporters who share common border and common language with importer. It seems inconsistent with results of other gravity models, however, considering that we only have 3 percent of country pairs sharing common border and 14 percent sharing common language, the result is within tolerance. Especially considering the positive estimates of product-specific deviations, Σ_t^b, Σ_t^l, which shrink the advantage of exporters who are not contiguous with importer and whose language are different with importer. Positive and significant value of RTA indicator, η^{rta}, implying that the market share is increasing for exporters who are within the same re-

gional trade agreements with importer. As for mean effect of distance indicators, we find that the market share contracts more for exporters who are farther away from importer. For example, $\eta^{distance2}$ indicates that the market share for country pairs whose distance fall in the range of 750 and 1,500 miles is smaller than country pairs whose distance fall in the range of 0 and 750 miles. The magnitude of $\eta^{distance3}, \eta^{distance4}, \eta^{distance5}$ shows that the effect of distance on market share is increasing. Products are even more sensitive to the distance considering the negative and statistically significant value of $\Sigma_t^{distance6}$. The mean effect of real GDP of exporters is negative but not significant, while the mean effect of real GDP of importers is positive and statistically significant, indicating that exporters incline to export more organic products to larger economies. Σ_t^{IMPGDP} suggests that larger economies are also attractive to some organic products. The year fixed effect estimates imply that organic trade are more active in 2015 and 2016, but less active in the first three years.

Table 4 shows results for exporter fixed effects. We find that the largest exporer fixed effect is Indonesia, 15.8946, followed by Thailand, 15.3856 and Brazil, 15.0219. The smallest exporter fixed effect is Albania, -15.5233, followed by Latvia, -14.8474 and Slovenia, -13.4922. Exporter fixed effect represents the ability of exporting organic food to the destination market, we check values of the United States, Italy and China, top three exporters ordered by volumes of exports to the world in 2016, their exporter fixed effects are all positive in our results.

TABLE 3: RANDOM COEFFICIENTS LOGIT MODEL RESULTS

	Linear Model	Homogeneous Logit Model		Ramdom Coefficients Logit Model		
	OLS	2SLS	Mean Effect		Unobserved Deviation	
OEA_{nit}	-0.9111^{***}	2.6908	γ	2.6545^{***}	σ	0.0019^{***}
	(0.2703)	(8.0844)		(0)		(0)
			X_{it}			
$ORGLAND_{it}$	0.0831	0.0708	$\varphi^{ORGLAND}$	0.0528^{***}	$\Sigma_E^{ORGLAND}$	0.0287^{***}
	(0.1945)	(0.2190)		(0)		(0)
$ORGSHARE_{it}$	0.0876	0.0408	$\varphi^{ORGSHARE}$	0.0436	$\Sigma_E^{ORGSHARE}$	-0.0154^{***}
	(0.1183)	(0.1688)		(10.8051)		(0)
$TEMP_i$	30.6867^{***}	14.1681	φ^{TEMP}	14.9590^{***}	Σ_E^{TEMP}	0.0173^{***}
	(5.9322)	(37.6376)		(0)		(0)
			t_{nit}			
b_{ni}	-0.6384	-1.0129	η^b	-0.9684^{***}	Σ_t^b	0.0040
	(0.5914)	(1.0687)		(0)		(1,843.8)
l_{ni}	-1.0358^{***}	-0.3189	η^l	-0.3030^{***}	Σ_t^l	0.0106^{***}
	(0.3362)	(1.6512)		(0)		(0)
rta_{nit}	-0.4429	0.0490	η^{rta}	0.1017^{***}	Σ_t^{rta}	0.0230^{***}
	(0.3207)	(1.1600)		(0)		(0)
$diatance2_{ni}$	-2.2674^{***}	-2.2496^{***}	$\eta^{distance2}$	-2.2526	$\Sigma_t^{distance2}$	-0.0064^{***}
	(0.4850)	(0.5432)		(64.2495)		(0)
$distance3_{ni}$	-4.4657^{***}	-4.8890^{***}	$\eta^{distance3}$	-4.9360^{*}	$\Sigma_t^{distance3}$	0.0373
	(0.4825)	(0.6057)		(2.5495)		(241.5947)
$distance4_{ni}$	-5.1538^{***}	-4.8768^{***}	$\eta^{distance4}$	-4.8505	$\Sigma_t^{distance4}$	-0.0095
	(0.6597)	(0.9640)		(25.3772)		(690.5997)
$distance5_{ni}$	-6.8668^{***}	-6.3666^{***}	$\eta^{distance5}$	-6.3255	$\Sigma_t^{distance5}$	-0.0296^{***}
	(0.5728)	(1.2915)		(6.9282)		(0)
$EXPGDP_{it}$	-6.4024^{***}	-2.0534	η^{EXPGDP}	-2.2400	Σ_t^{EXPGDP}	0.0188
	(1.4818)	(9.8937)		(1.5207)		(5.3852)
$IMPGDP_{nt}$	5.5150^{***}	1.6568	η^{IMPGDP}	1.8906^{***}	Σ_t^{IMPGDP}	0.0729
	(1.2902)	(8.7728)		(0)		(2.4717)
Year Fixed Effect						
λ_t^{2012}	-0.4462^{**}	-1.0203	-1.0909^{***}			
	(0.2065)	(1.3083)	(0)			
λ_t^{2013}	-0.0398	-0.7054	-0.5286			
	(0.2118)	(1.5115)	(182.4281)			
λ_t^{2014}	0.0612	-0.7365	-0.7774^{***}			
	(0.2211)	(1.8063)	(0)			
λ_t^{2015}	0.7450^{***}	-0.1019	0.1495^{***}			
	(0.2337)	(1.9173)	(0)			
λ_t^{2016}	0.9156^{***}	0.0116	0.1283			
	(0.2569)	(2.0478)	(233.7862)			
Importer Fixed Effect						
$\lambda_n^{UnitedStates}$	-18.8886^{***}	-3.3875	-3.4609			
	(5.0117)	(35.2151)	(119.4655)			

Notes: Dependent variable is the market share of each exporter in markets of United States and Denmark from 2011 to 2016. Standard deviations are in parentheses. $*p < 0.1, **p < 0.05 ***p < 0.01$

TABLE 4: EXPORTER FIXED EFFECTS ESTIMATES

Exporter	λ_i	Exporter	λ_i
Albania	-15.5233^{***}	Israel	-0.8209^{***}
United Arab Emirates	9.2740^{***}	Italy	1.5160
Argentina	-0.6309	Jordan	-10.8174
Armenia	-9.2340^{***}	Japan	2.9176
Australia	-1.3126	Kenya	6.5722^{***}
Austria	-6.1061	Cambodia	4.5211^{***}
Burundi	-1.5574^{***}	Republic of Korea	-4.3449
Belgium	-5.1411	Lao People's Democratic Republic	-3.2938
Bangladesh	6.6088	Lebanon	-8.4180
Bulgaria	-11.3911	Sri Lanka	10.0965^{***}
Bosnia and Herzegovina	-10.7515^{***}	Lithuania	-12.7508
Bolivia (Plurinational State of)	1.1619^{***}	Latvia	-14.8474^{***}
Brazil	15.0219^{***}	Madagascar	2.1247^{***}
Canada	6.6506^{***}	Mexico	10.6101
Switzerland	-3.5797^{***}	Namibia	-13.4716
Chile	0.0103	Nigeria	11.1520^{***}
China	9.1455	Nicaragua	5.2602^{***}
Cameroon	3.2924	Netherlands	-2.2384^{***}
Colombia	12.0526^{***}	New Zealand	-3.3252
Costa Rica	6.8822^{***}	Pakistan	-3.0399
Czech Republic	-12.4426	Panama	3.6449
Germany	0.9556	Peru	6.4592^{***}
Denmark	-10.4665^{***}	Philippines	8.9347
Dominican Republic	7.8174	Poland	-7.4689
Ecuador	7.1506	Portugal	-7.7909^{***}
Spain	0.3611	Paraguay	-6.9710^{***}
Ethiopia	4.5954	Romania	-6.7972^{***}
Finland	1.3390	Russian Federation	2.9878^{***}
France	0.5388	Rwanda	3.6231^{***}
United Kingdom	0.4838^{***}	Saudi Arabia	-0.4423^{***}
Georgia	-8.5682	Slovenia	-13.4922^{***}
Ghana	3.4537	Sweden	-5.8518
Greece	-5.5193^{***}	Thailand	15.3856^{***}
Guatemala	7.8401	Tunisia	-8.1174^{***}
Honduras	7.5409	Turkey	1.4077^{***}
Croatia	-11.3310	United Republic of Tanzania	5.7063
Hungary	-10.7497^{***}	Uganda	7.7633^{***}
Indonesia	15.8946^{***}	Ukraine	-6.1942^{***}
India	13.3840^{***}	Uruguay	-9.1686
Ireland	-9.0196	United States	7.2163^{***}
		Viet Nam	10.2271^{***}

Notes:We have 83 exporters in total, but drop λ_i dummy variables for two exporters due to multicollinearity. They are South Africa and Zambia. $*p < 0.1, **p < 0.05 ***p < 0.01$

VII Counterfactual Analysis

We conduct two counterfactual analysis based on estimates and equation (6), one analysis investigates what would happen if importer signed organic equivalency agreement with one of non-OEA exporters in 2016, the other analysis explores what would happen if importer removed OEA relationship with one of existing OEA exporters in 2016, both counterfactual analysis are experimented on markets of United States and Denmark respectively. Table 5 shows the results pertinent to response of the exporter who is under experiment, and table 6 shows the results with respect to the response of the remaining exporter who keep their OEA state unchanged. Notice that we keep the total import value on organic food in each market constant when we conduct counterfactual analysis. For example, the total import value on organic food from all exporters including outside exporters in United States is 1,689,063 thousand dollars in 2016, and the total import value on organic food from all exporters including outside exporters in Denmark is 477,968.2 thousand dollars. We simulated market share for active exporters in our sample data, then multiply with the total import value on organic food of each market in 2016 respectively. Therefore, table 5 which records self response and table 6 which records cross response should be combined together for use of explaning results of simulation.

In table 5, we find that the actual value of export to United States in 2016 is 27,320 thousand dollars on average. If U.S. signed OEA with one of non-OEA exporters in 2016, then the simulated value of export to United States in 2016 would be 205,515 thousand dollars on average, which is 6.5 times the actual value. In Danish market, the actual value of export in 2016 is 2,002 thousand dollars, and the simulated value of export in 2016 would be tripped, approximately 9,184 thousand dollars. On the other side, if U.S. removed OEA relationship with one of existing OEA partners in 2016, the mean value of similated export volumn would shrink to 9 percent of actual export volumn, same as Denmark. For example, actual export volumn in U.S. is 16,247 thousand dollars, and simulated export volumn would be 1,526 thousand dollars; actual value of export in Denmark is 13,246 thousand dollars, and simulated value of export would be 1,250 thousand

dollars.

In Case A of table 5, we find that the top three exporters in order of rate of change is Philippines, Panama and Georgia, whose growth rate would be 841.60, 132.25 and 70.56 respectively. They would occupy higher market share in U.S. if U.S. signed OEA with them in 2016, this change is at the cost of other exporters' market share. Combined with table 6, we find that in the remaining seventy-one active exporters, six of the twenty-four OEA countries and eighteen of the fourty-seven non-OEA countries would shrink their market share in U.S. responding to the change of Philippines' OEA relationship with United States in 2016. Especially Romania in OEA exporters and Tunisia in non-OEA exporters, they would suffer most from Philippines' experiment, Romania would contract to only 23 percent of its actual value of export to U.S. in 2016, and Tunisia would shrink to only 6 percnet of its actual value of export to U.S. in 2016. We also find that several exporters would not benefit from signing OEA with market of United States, for example, the rate of change in Tunisia, Turkey and Ukraine are negative. Combined with table 6, we could explain this negative change by exploring the response of remaining exporters. In Tunisia's case, we find that 75 percent of remaining OEA exporters would increase their market share and 66 percent of remaining non-OEA exporters would vitness higher market share in U.S. relative to their actual market share in 2016. This indicates that OEA relationship can hardly bring benefits to Tunisia, Turkey and Ukraine.

In Case B of table 5, we find that the exporter that benefit most in order of rate of change would be Indonesia, followed by Chile and Ethiopia, if Denmark signed OEA with them in 2016. Similarly, several countries seem hardly benefit from their change of OEA state, such as Cambodia, Pakistan and Philippines.

In the second counterfactual analysis, removing OEA realtionship with existing OEA partners, we find that Romania would suffer most from its change of OEA relationship with United States since the simulated market share of Romania would be only 2 percent of its actual market share in 2016. On the other side, the most invulnerable exporter would be Sweden, it is predicted to continue increasing its market share in United States even if it lost OEA relationship with United States. In market of Denmark, Austria,

Spain, Ireland, Latvia and Slovenia would suffer most in case their OEA relationship with Denmark was removed in 2016, their market shares are predicted to be only 1 percent of their actual value in 2016. On the other side, Argentina and Costa Rica seems likely to maintain their market share with Denmark even if they lost OEA relationship with Denmark in 2016.

TABLE 5: COUNTERFACTUAL ANALYSIS:ADDING NEW OEA PARTNERS

Case A. If U.S. signed OEA with one of the following exporters in 2016				Case B. If Denmark signed OEA with one of the following exporters in 2016			
Exporter	Actual value of export to United States (in thousands of dollars)	Simulated value of export to United States (in thousands of dollars)	Rate of change	Exporter	Actual value of export to Denmark (in thousands of dollars)	Simulated value of export to Denmark (in thousands of dollars)	Rate of change
Albania	7	167	22.93	Bosnia and Herzegovina	286	11,580	39.49
United Arab Emirates	309	1,985	5.43	Bolivia	349	3,306	8.48
Argentina	100,076	271,585	1.71	Brazil	1,093	30,541	26.94
Australia	408	11,700	27.68	Chile	39	14,925	382.21
Bangladesh	54	861	14.94	China	26,787	42,598	0.59
Bosnia and Herzegovina	678	9,351	12.79	Colombia	88	2,109	22.92
Bolivia	2,322	157,603	66.87	Ethiopia	127	11,518	90.04
Brazil	95,065	877,049	8.23	Guatemala	80	2,925	35.44
Chile	47,226	553,090	10.71	Honduras	609	6,363	9.45
China	28,627	1,039,281	35.30	Indonesia	6	3,495	586.81
Colombia	65,027	378,983	4.83	Cambodia	945	358	-0.62
Costa Rica	6,034	93,530	14.50	Sri Lanka	1,458	3,779	1.59
Dominican Republic	2,760	141,848	50.39	Madagascar	63	173	1.72
Ecuador	102,405	460,135	3.49	Mexico	1,535	25,872	15.86
Ethiopia	25,730	97,840	2.80	Nicaragua	368	1,972	4.36
Georgia	65	4,651	70.56	Pakistan	4,324	1,871	-0.57
Guatemala	27,030	455,298	15.84	Peru	1,061	13,633	11.85
Honduras	35,340	806,005	21.81	Philippines	194	66	-0.66
Indonesia	37,019	166,363	3.49	Paraguay	805	1,325	0.65
India	73,667	76,454	0.04	Thailand	3,552	16,624	3.68
Israel	4,311	7,227	0.68	Turkey	2,263	18,681	7.25
Kenya	253	8,762	33.63	Uganda	644	3,910	5.07
Cambodia	422	18,281	42.32	Viet Nam	102	1,176	10.56
Lao People's Democratic Republic	578	10,098	16.47	South Africa	1,282	1,627	0.27
Lebanon	735	15,784	20.47				
Sri Lanka	3,560	178,237	49.07				
Madagascar	201	8,897	43.27				
Mexico	172,218	987,137	4.73				
Namibia	28	922	31.92				
Nigeria	269	7,003	25.03				
Nicaragua	14,437	358,104	23.80				
New Zealand	31,261	79,374	1.54				
Panama	33	4,397	132.25				
Peru	104,109	1,156,420	10.11				
Philippines	3	2,533	841.60				
Paraguay	6,904	66,365	8.61				
Russian Federation	4,057	15,137	2.73				
Rwanda	531	21,544	39.57				
Thailand	8,891	597,958	66.25				
Tunisia	26,247	21,945	-0.16				
Turkey	223,220	203,299	-0.09				
Uganda	5,825	139,491	22.95				
Ukraine	20,391	18,402	-0.10				
Uruguay	3,384	13,594	3.02				
Viet Nam	1,254	59,150	46.17				
South Africa	1,023	54,781	52.55				
Zambia	25	571	21.84				

Notes: In 2016, we only have 71 exporters which had positive market share with the United States and 56 exporters who traded organic food with Denmark. Rate of change equals to the the ratio of the difference between simualated value of export and the actual value of export to the actual value of export.

COUNTERFACTUAL ANALYSIS: REMOVING OEA RELATIONSHIP WITH EXISTING OEA PARTNERS

Case A. If U.S. removed OEA relationship with one of the following exporters in 2016				Case B. If Denmark removed OEA relationship with one of the following exporters in 2016			
Exporter	Actual value of export to United States (in thousands of dollars)	Simulated value of export to United States (in thousands of dollars)	Rate of change	Exporter	Actual value of export to Denmark (in thousands of dollars)	Simulated value of export to Denmark (in thousands of dollars)	Rate of change
Austria	298	90	-0.70	Argentina	201	434	1.16
Belgium	1,515	177	-0.88	Australia	781	19	-0.98
Bulgaria	58	45	-0.23	Austria	7,993	112	-0.99
Canada	82,315	15,872	-0.81	Belgium	14,159	2,232	-0.84
Switzerland	162	133	-0.18	Bulgaria	1,289	4	-1.00
Germany	2,883	1,121	-0.61	Canada	5,564	219	-0.96
Denmark	16	2	-0.86	Switzerland	1,025	166	-0.84
Spain	99,078	5,821	-0.94	Costa Rica	31	31	0.01
France	25,258	1,294	-0.95	Czech Republic	72	12	-0.83
United Kingdom	5,390	493	-0.91	Germany	105,541	5,770	-0.95
Greece	9,354	653	-0.93	Spain	34,267	476	-0.99
Croatia	106	43	-0.59	Finland	2,819	57	-0.98
Hungary	33	10	-0.69	France	15,657	1,661	-0.89
Ireland	10	6	-0.41	United Kingdom	7,530	846	-0.89
Italy	115,776	8,302	-0.93	Greece	2,508	55	-0.98
Japan	9,302	1,300	-0.86	Croatia	238	54	-0.77
Republic of Korea	221	41	-0.81	Hungary	438	13	-0.97
Lithuania	70	23	-0.67	India	322	146	-0.55
Netherlands	22,885	802	-0.96	Ireland	747	10	-0.99
Poland	126	14	-0.89	Italy	77,535	13,228	-0.83
Portugal	1,058	82	-0.92	Japan	33	25	-0.24
Romania	14,005	232	-0.98	Lithuania	1,455	29	-0.98
Slovenia	4	2	-0.55	Latvia	1,122	13	-0.99
Sweden	13	62	3.75	Netherlands	89,271	12,899	-0.86
				New Zealand	2,320	153	-0.93
				Poland	4,333	163	-0.96
				Portugal	100	7	-0.93
				Romania	1,044	20	-0.98
				Slovenia	151	2	-0.99
				Sweden	43,137	744	-0.98
				Tunisia	296	133	-0.55
				United States	1,896	263	-0.86

Notes: In 2016, we only have 71 exporters which had positive market share with the United States and 56 exporters who traded organic food with Denmark. Rate of change equals to the the ratio of the difference between simualated value of export and the actual value of export to the actual value of export.

TABLE 6: RESPONSE OF THE REMAINING EXPORTERS TO ONE MORE OEA PARTNER WITH U.S. IN 2016

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Albania (22.93)	Greece (-0.01), Italy (-0.05), Spain (-0.2), France (-0.28), Netherlands (-0.50), Romania (-0.77)	Portugal (0.11), United Kingdom (0.30), Poland (0.55), Belgium (0.66), Japan (0.97), Denmark (1.06), Canada (1.44), Republic of Korea (1.64), Austria (3.29), Hungary(3.45), Lithuania (3.64), Germany (4.48), Croatia (4.80), Slovenia (5.43), Ireland (7.38), Bulgaria (9.97), Switzerland (10.68)	Sweden (66.46)	Bosnia and Herzegovina (-0.02), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Tunisia (-0.94), Ukraine (-0.94)	Bangladesh (0.12), Costa Rica (0.15), Chile (0.19), Lao People's Democratic Republic (0.24), Brazil (0.26), Lebanon (0.52), Guatemala (0.59), Zambia (0.61), Uganda (0.82), Nigeria (0.84), Australia (1.03), Peru (1.15), Nicaragua (1.18), Namibia (1.32), Kenya (1.45), Rwanda (1.89), Honduras (1.90), Cambodia (2.08), Madagascar (2.13), Viet Nam (2.43), South Africa (2.88), Sri Lanka (2.91), Dominican Republic (2.92), Georgia (4.05), Bolivia (4.23), China (4.99), Thailand (6.06), Panama (8.39)	Philippines (58.34)
United Arab Emirates (5.43)	Greece (-0.01), Italy (-0.05), Spain (-0.2), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.55), Belgium (0.66), Japan (0.97), Denmark (1.06), Canada (1.44), Republic of Korea (1.63), Austria (3.28), Hungary (3.44), Lithuania (3.64), Germany (4.47), Croatia (4.80), Slovenia (5.42)	Ireland (7.37), Bulgaria (9.95), Switzerland (10.67), Sweden (66.39)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Tunisia (-0.94), Ukraine (-0.94)	Bangladesh (0.12), Costa Rica (0.15), Chile (0.19), Lao People's Democratic Republic (0.23), Brazil (0.26), Lebanon (0.52), Guatemala (0.58), Zambia (0.61), Albania (0.68), Uganda (0.82), Nigeria (0.84), Australia (1.03), Peru (1.15), Nicaragua (1.18), Namibia (1.31), Kenya (1.44), Honduras (1.89), Rwanda (1.89), Cambodia (2.07), Madagascar (2.13), Viet Nam (2.43), South Africa (2.88), Sri Lanka (2.90), Dominian Republic (2.92), Georgia (4.04), Bolivia (4.22), China (4.99)	Thailand (6.05), Panama (8.38), Philippines (58.28)

Notes: Values in parentheses are rate of change, the ratio of the difference between simulated value of export to U.S. and the actual value of export to U.S. to the actual value of export to U.S. in 2016.

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Argentina (1.71)	Portugal (-0.06), Greece (-0.16), Italy (-0.19), Spain (-0.32), France (-0.39), Netherlands (-0.58), Romania (-0.80)	United Kingdom (0.10), Poland (0.32), Belgium (0.41), Japan (0.67), Denmark (0.75), Canada (1.07), Republic of Korea (1.24)	Austria (2.65), Hungary (2.78), Lithuania (2.95), Germany (3.66), Croatia (3.93), Slovenia (4.47), Ireland (6.13), Bulgaria (8.33), Switzerland (8.93), Sweden (56.36)	Costa Rica (-0.02), Bangladesh (-0.05), Bosnia and Herzegovina (-0.17), Mexico (-0.25), Paraguay (-0.40), Colombia (-0.56), United Arab Emirates (-0.61), Ecuador (-0.64), Indonesia (-0.70), Ethiopia (-0.76), Uruguay (-0.76), Russian Federation (-0.77), New Zealand (-0.84), Israel (-0.90), India (-0.94), Turkey (-0.94), Tunisia (-0.95), Ukraine (-0.95)	Chile (0.01), Lao People's Democratic Republic (0.05), Brazil (0.07), Lebanon (0.30), Guatemala (0.35), Zambia (0.37), Albania (0.43), Uganda (0.55), Nigeria (0.56), Australia (0.72), Peru (0.83), Nicaragua (0.85), Namibia (0.97), Kenya (1.08), Rwanda (1.46), Honduras (1.47), Cambodia (1.62), Madagascar (1.66)	Viet Nam (1.92), South Africa (2.31), Sri Lanka (2.32), Dominican Republic (2.34), Georgia (3.30), Bolivia (3.45), China (4.09), Thailand (5.01), Panama (7.00), Philippines (49.47)
Australia (27.68)	Greece (-0.02), Italy (-0.05), Spain (-0.21), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.54), Belgium (0.65), Japan (0.95), Denmark (1.05), Canada (1.42), Republic of Korea (1.62), Austria (3.26), Hungary (3.42), Lithuania (3.62), Germany (4.44), Croatia (4.76), Slovenia (5.39), Ireland (7.33), Bulgaria (9.90), Switizerland (10.60)	Sweden (66.02)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Tunisia (-0.94), Ukraine (-0.94)	Dominican Republic (2.90), Georgia (4.01), Bolivia (4.20), China (4.96), Thailand (6.02), Panama (8.34)	Philippines (57.96)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Bangladesh (14.94)	Greece (-0.02), Italy (-0.05), Spain (-0.20), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.11), United Kingdom (0.29), Poland (0.55), Belgium (0.66), Japan (0.97), Denmark (1.06), Canada (1.44), Republic of Korea (1.64), Austria (3.29), Hungary (3.45), Lithuania (3.64), Germany (4.48), Croatia (4.80), Slovenia (5.43), Ireland (7.38), Bulgaria (9.96), Switzerland (10.67)	Sweden (66.43)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Tunisia (-0.94), Ukraine (-0.94)	Costa Rica (0.15), Chile (0.19), Lao People's Democratic Republic (0.24), Brazil (0.26), Lebanon (0.52), Guatemala (0.59), Zambia (0.61), Albania (0.68), Uganda (0.82), Nigeria (0.84), Australia (1.03), Peru (1.15), Nicaragua (1.18), Namibia (1.32), Kenya (1.45), Rwanda (1.89), Honduras (1.90), Cambodia (2.08), Madagascar (2.13), Viet Nam (2.43), South Africa (2.88), Sri Lanka (2.90), Dominican Republic (2.92), Georgia (4.04), Bolivia (4.23), China (4.99), Thailand (6.06), Panama (8.39)	Philippines (58.32)
Bosnia and Herzegovina (12.79)	Greece (-0.02), Italy (-0.05), Spain (-0.21), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.54), Belgium (0.65), Japan (0.96), Denmark (1.05), Canada (1.43), Republic of Korea (1.62), Austria (3.27), Hungary (3.43), Lithuania (3.62), Germany (4.45), Croatia (4.77), Slovenia (5.40), Ireland (7.34), Bulgaria (9.91), Switzerland (10.62)	Sweden (66.12)	Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Tunisia (-0.94), Ukraine (-0.94)	Bangladesh (0.12), Costa Rica (0.14), Chile (0.18), Lao People's Democratic Republic (0.23), Brazil (0.25), Lebanon (0.52), Guatemala (0.58), Zambia (0.60), Albania (0.67), Uganda (0.82), Nigeria (0.83), Australia (1.02), Peru (1.14), Nicaragua (1.17), Namibia (1.30), Kenya (1.43), Rwanda (1.87), Honduras (1.88), Cambodia (2.06), Madagascar (2.11), Viet Nam (2.41), South Africa (2.86), Sri Lanka (2.89), Dominican Republic (2.90), Georgia (4.02), Bolivia (4.20), China (4.96), Thailand (6.03), Panama (8.35)	Philippines (58.04)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Bolivia (66.87)	Greece (-0.10), Italy (-0.13), Spain (-0.27), France (-0.34), Netherlands (-0.55), Romania (-0.79)	Portugal (0.01), United Kingdom (0.18), Poland (0.41), Belgium (0.52), Japan (0.80), Denmark (0.88), Canada (1.23), Republic of Korea (1.41), Austria (2.92), Hungary (3.06), Lithuania (3.24), Germany (4.01), Croatia (4.30), Slovenia (4.87), Ireland (6.65), Bulgaria (9.01), Switzerland (9.67), Sweden (60.65)	None	Bosnia and Herzegovina (-0.11), Mexico (-0.19), Paraguay (-0.36), Colombia (-0.53), United Arab Emirates (-0.59), Ecuador (-0.61), Indonesia (-0.68), Ethiopia (-0.74), Uruguay (-0.74), Russian Federation (-0.76), Argentina (-0.79), New Zealand (-0.83), Israel (-0.89), India (-0.93), Turkey (-0.93), Tunisia (-0.94), Ukraine (-0.95)	Bangladesh (0.02), Costa Rica (0.05), Chile (0.08), Lao People's Democratic Republic (0.13), Brazil (0.15), Lebanon (0.39), Guatemala (0.45), Zambia (0.47), Albania (0.54), Uganda (0.67), Nigeria (0.68), Australia (0.86), Peru (0.96), Nicaragua (0.99), Namibia (1.11), Kenya (1.23), Honduras (1.64), Rwanda (1.64), Cambodia (1.81), Madagascar (1.86), Viet Nam (2.13), South Africa (2.55), Sri Lanka (2.57), Dominican Republic (2.58), Georgia (3.60), China (4.48), Thailand (5.45), Panama (7.58), Philippines (53.18)	None
Brazil (8.23)	Belgium (-0.14), Poland (-0.20), United Kingdom (-0.33), Portugal (-0.43), Greece (-0.49), Italy (-0.51), Spain (-0.59), France (-0.63), Netherlands (-0.74), Romania (-0.88)	Japan (0.02), Denmark (0.07), Canada (0.26), Republic of Korea (0.36), Austria (1.23), Hungary (1.30), Lithuania (1.41), Germany (1.83), Croatia (2.00), Slovenia (2.33), Ireland (3.33), Bulgaria (4.67), Switzerland (5.05)	Sweden (34.01)	Nigeria (-0.05), Uganda (-0.06), Albania (-0.13), Zambia (-0.17), Guatemala (-0.18), Lebanon (-0.21), Lao People's Democratic Republic (-0.36), Chile (-0.39), Costa Rica (-0.40), Bangladesh (-0.42), Bosnia and Herzegovina (-0.49), Mexico (-0.54), Paraguay (-0.64), Colombia (-0.73), United Arab Emirates (-0.77), Ecuador (-0.78), Indonesia (-0.82), Ethiopia (-0.85), Uruguay (-0.85), Russian Federation (-0.86), Argentina (-0.88), New Zealand (-0.90), Israel (-0.94), India (-0.96), Turkey (-0.96), Tunisia (-0.97), Ukraine (-0.97)	Australia (0.05), Peru (0.11), Nicaragua (0.13), Namibia (0.20), Kenya (0.27), Honduras (0.50), Rwanda (0.50), Cambodia (0.59), Madagascar (0.62), Viet Nam (0.77), South Africa (1.01), Sri Lanka (1.02), Dominican Republic (1.03), Georgia (1.61), Bolivia (1.70), China (2.09), Thailand (2.65), Panama (3.86)	Philippines (29.68)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Chile (10.71)	United Kingdom (-0.10), Portugal (-0.23), Greece (-0.31), Italy (-0.33), Spain (-0.44), France (-0.50), Netherlands (-0.66), Romania (-0.84)	Poland (0.08), Belgium (0.16), Japan (0.36), Denmark (0.43), Canada (0.70), Republic of Korea (0.83), Austria (2.00), Hungary (2.09), Lithuania (2.23), Germany (2.82), Croatia (3.03), Slovenia (3.47), Ireland (4.82), Bulgaria (6.62), Switzerland (7.13)	Sweden (46.08)	Brazil (-0.13), Lao People's Democratic Republic (-0.14), Costa Rica (-0.20), Bangladesh (-0.22), Bosnia and Herzegovina (-0.33), Mexico (-0.39), Paraguay (-0.51), Colombia (-0.64), United Arab Emirates (-0.69), Ecuador (-0.71), Indonesia (-0.76), Ethiopia (-0.80), Uruguay (-0.80), Russian Federation (-0.82), Argentina (-0.84), New Zealand (-0.87), Israel (-0.92), India (-0.95), Turkey (-0.95), Tunisia (-0.96), Ukraine (-0.96)	Lebanon (0.05), Guatemala (0.10), Zambia (0.11), Albania (0.16), Uganda (0.27), Nigeria (0.28), Australia (0.42), Peru (0.50), Nicaragua (0.51), Namibia (0.61), Kenya (0.70), Rwanda (1.00), Honduras (1.01), Cambodia (1.13), Madagascar (1.17), Viet Nam (1.38), South Africa (1.69), Sri Lanka (1.71), Dominican Republic (1.73), Georgia (2.49), Bolivia (2.63), China (3.17), Thailand (3.90), Panama (5.51)	Philippines (40.24)
China (35.30)	Denmark (-0.12), Japan (-0.16), Belgium (-0.29), Poland (-0.34), United Kingdom (-0.45), Portugal (-0.53), Greece (-0.58), Italy (-0.59), Spain (-0.66), France (-0.69), Netherlands (-0.79), Romania (-0.9)	Canada (0.04), Republic of Korea (0.13), Austria (0.84), Hungary (0.91), Lithuania (0.99), Germany (1.34), Croatia (1.49), Slovenia (1.76), Ireland (2.59), Bulgaria (3.70), Switzerland (4.01), Sweden (27.95)	None	Namibia (-0.01), Nicaragua (-0.06), Peru (-0.08), Australia (-0.13), Nigeria (-0.21), Uganda (-0.22), Albania (-0.28), Zambia (-0.31), Guatemala (-0.32), Lebanon (-0.34), Brazil (-0.46), Lao People's Democratic Republic (-0.47), Chile (-0.49), Costa Rica (-0.51), Bangladesh (-0.52), Bosnia and Herzegovina (-0.58), Mexico (-0.62), Paraguay (-0.70), Colombia (-0.78), United Arab Emirates (-0.81), Ecuador (-0.82), Indonesia (-0.85), Ethiopia (-0.88), Uruguay (-0.88), Russian Federation (-0.89), Argentina (-0.90), New Zealand (-0.92), Israel (-0.95), India (-0.97), Turkey (-0.97), Tunisia (-0.97), Ukraine (-0.97)	Kenya (0.05), Rwanda (0.24), Honduras (0.24), Cambodia (0.32), Madagascar (0.34), Viet Nam (0.47), South Africa (0.66), Sri Lanka (0.67), Dominican Republic (0.68), Georgia (1.17), Bolivia (1.24), Thailand (2.02), Panama (3.03), Philippines (24.39)	None

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Colombia (4.83)	Portugal (-0.12), Greece (-0.22), Italy (-0.24), Spain (-0.37), France (-0.43), Netherlands (-0.61), Romania (-0.81)	United Kingdom (0.03), Poland (0.23), Belgium (0.32), Japan (0.55), Denmark (0.63), Canada (0.93), Republic of Korea (1.08), Austria (2.40), Hungary (2.52), Lithuania (2.68), Germany (3.34), Croatia (3.59), Slovenia (4.09)	Ireland (5.63), Bulgaria (7.68), Switzerland (8.25), Sweden (52.5)	Brazil (-0.01), Lao People's Democratic Republic (-0.02), Chile (-0.06), Costa Rica (-0.09), Bangladesh (-0.11), Bosnia and Herzegovina (-0.23), Mexico (-0.30), Paraguay (-0.45), United Arab Emirates (-0.64), Ecuador (-0.66), Indonesia (-0.72), Uruguay (-0.77), Ethiopia (-0.78), Russian Federation (-0.79), Argentina (-0.82), New Zealand (-0.85), Israel (-0.91), India (-0.94), Turkey (-0.94), Tunisia (-0.95), Ukraine (-0.95)	Lebanon (0.20), Guatemala (0.25), Zambia (0.27), Albania (0.33), Uganda (0.44), Nigeria (0.45), Australia (0.61), Peru (0.70), Nicaragua (0.72), Namibia (0.83), Kenya (0.94), Rwanda (1.28), Honduras (1.29), Cambodia (1.43), Madagascar (1.47), Viet Nam (1.71), South Africa (2.07), Sri Lanka (2.09), Dominican Republic (2.11), Georgia (2.98), Bolivia (3.14), China (3.75), Thailand (4.58)	Panama (6.42), Philippines (45.94)
Costa Rica (14.50)	Greece (-0.06), Italy (-0.09), Spain (-0.24), France (-0.32), Netherlands (-0.53), Romania (-0.78)	Portugal (0.05), United Kingdom (0.23), Poland (0.47), Belgium (0.58), Japan (0.87), Denmark (0.95), Canada (1.31), Republic of Korea (1.50), Austria (3.07), Hungary (3.22), Lithuania (3.41), Germany (4.20), Croatia (4.50), Slovenia (5.10), Ireland (6.95), Bulgaria (9.40), Switzerland (10.08)	Sweden (63.02)	Bosnia and Herzegovina (-0.08), Mexico (-0.16), Paraguay (-0.33), Colombia (-0.51), United Arab Emirates (-0.57), Ecuador (-0.60), Indonesia (-0.67), Uruguay (-0.73), Ethiopia (-0.73), Russian Federation (-0.75), Argentina (-0.79), New Zealand (-0.82), Israel (-0.89), India (-0.93), Turkey (-0.93), Tunisia (-0.94), Ukraine (-0.94)	Bangladesh (0.06), Chile (0.13), Lao People's Democratic Republic (0.17), Brazil (0.19), Lebanon (0.44), Guatemala (0.50), Zambia (0.52), Albania (0.59), Uganda (0.73), Nigeria (0.74), Australia (0.93), Peru (1.04), Nicaragua (1.06), Namibia (1.20), Kenya (1.32), Rwanda (1.74), Honduras (1.75), Cambodia (1.92), Madagascar (1.97), Viet Nam (2.25), South Africa (2.68), Sri Lanka (2.70), Dominican Republic (2.72), Georgia (3.78), Bolivia (3.96), China (4.69), Thailand (5.70), Panama (7.90)	Philippines (55.28)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Dominican Republic (50.39)	Greece (-0.09), Italy (-0.12), Spain (-0.26), France (-0.34), Netherlands (-0.54), Romania (-0.78)	Portugal (0.02), United Kingdom (0.19), Poland (0.43), Belgium (0.53), Japan (0.81), Denmark (0.90), Canada (1.25), Republic of Korea (1.43), Austria (2.94), Hungary (3.10), Lithuania (3.28), Germany (4.05), Croatia (4.35), Slovenia (4.92), Ireland (6.73), Bulgaria (9.11), Switzerland (9.75)	Sweden (61.07)	Bosnia and Herzegovina (-0.10), Mexico (-0.19), Paraguay (-0.35), Colombia (-0.52), United Arab Emirates (-0.58), Ecuador (-0.61), Indonesia (-0.68), Uruguay (-0.74), Ethiopia (-0.74), Russian Federation (-0.76), Argentina (-0.79), New Zealand (-0.83), Israel (-0.89), India (-0.93), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.95)	Bangladesh (0.03), Costa Rica (0.06), Chile (0.10), Lao People's Democratic Republic (0.14), Brazil (0.16), Lebanon (0.41), Guatemala (0.46), Zambia (0.48), Albania (0.55), Uganda (0.68), Nigeria (0.69), Australia (0.87), Peru (0.98), Nicaragua (1.01), Namibia (1.14), Kenya (1.26), Rwanda (1.66), Honduras (1.67), Cambodia (1.84), Madagascar (1.88), Viet Nam (2.16), South Africa (2.58), Sri Lanka (2.60), Georgia (3.65), Bolivia (3.82), China (4.53), Thailand (5.51), Panama (7.66)	Philippines (53.71)
Ecuador (3.49)	United Kingdom (-0.03), Portugal (-0.17), Greece (-0.26), Italy (-0.29), Spain (-0.40), France (-0.46), Netherlands (-0.63), Romania (-0.82)	Poland (0.16), Belgium (0.24), Japan (0.47), Denmark (0.54), Canada (0.82), Republic of Korea (0.97), Austria (2.21), Hungary (2.32), Lithuania (2.47), Germany (3.10), Croatia (3.33)	Slovenia (3.80), Ireland (5.25), Bulgaria (7.18), Switzerland (7.73), Sweden (49.47)	Bosnia and Herzegovina (-0.27), Mexico (-0.34), Paraguay (-0.48), Colombia (-0.61), United Arab Emirates (-0.66), Indonesia (-0.74), Ethiopia (-0.79), Uruguay (-0.79), Russian Federation (-0.80), Argentina (-0.83), New Zealand (-0.86), Israel (-0.91), India (-0.94), Turkey (-0.95), Ukraine (-0.95), Tunisia (-0.96)	Lebanon (0.13), Guatemala (0.18), Zambia (0.20), Albania (0.25), Uganda (0.36), Nigeria (0.37), Australia (0.52), Peru (0.61), Nicaragua (0.62), Namibia (0.73), Kenya (0.83), Rwanda (1.15), Honduras (1.16), Cambodia (1.29), Madagascar (1.33), Viet Nam (1.56), South Africa (1.90), Sri Lanka (1.91), Dominican Republic (1.93), Georgia (2.76), Bolivia (2.90), China (3.48)	Thailand (4.27), Panama (6.00), Philippines (43.29)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Ethiopia (2.80)	Greece (-0.07), Italy (-0.10), Spain (-0.24), France (-0.32), Netherlands (-0.53), Romania (-0.78)	Portugal (0.05), United Kingdom (0.23), Poland (0.46), Belgium (0.57), Japan (0.86), Denmark (0.95), Canada (1.31), Republic of Korea (1.50)	Austria (3.06), Hungary (3.21), Lithuania (3.39), Germany (4.19), Croatia (4.49), Slovenia (5.08), Ireland (6.93), Bulgaria (9.37), Switzerland (10.05), Sweden (62.85)	Bosnia and Herzegovina (-0.08), Mexico (-0.16), Paraguay (-0.34), Colombia (-0.51), United Arab Emirates (-0.57), Ecuador (-0.60), Indonesia (-0.67), Uruguay (-0.73), Russian Federation (-0.75), Argentina (-0.79), New Zealand (-0.82), Israel (-0.89), India (-0.93), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.06), Costa Rica (0.09), Chile (0.12), Lao People's Democratic Republic (0.17), Brazil (0.19), Lebanon (0.44), Guatemala (0.50), Zambia (0.52), Albania (0.59), Uganda (0.73), Nigeria (0.74), Australia (0.92), Peru (1.04), Nicaragua (1.06), Namibia (1.19), Kenya (1.32), Rwanda (1.73), Honduras (1.74), Cambodia (1.91), Madagascar (1.96), Viet Nam (2.24), South Africa (2.67), Sri Lanka (2.69), Dominican Republic (2.71)	Georgia (3.77), Bolivia (3.95), China (4.67), Thailand (5.68), Panama (7.89), Philippines (55.14)
Georgia (70.56)	Greece (-0.02), Italy (-0.05), Spain (-0.20), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.54), Belgium (0.66), Japan (0.96), Denmark (1.05), Canada (1.43), Republic of Korea (1.63), Austria (3.28), Hungary (3.44), Lithuania (3.63), Germany (4.47), Croatia (4.79), Slovenia (5.41), Ireland (7.36), Bulgaria (9.94), Switzerland (10.65), Sweden (66.29)	None	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.12), Costa Rica (0.15), Chile (0.18), Lao People's Democratic Republic (0.23), Brazil (0.25), Lebanon (0.52), Guatemala (0.58), Zambia (0.60), Albania (0.68), Uganda (0.82), Nigeria (0.83), Australia (1.03), Peru (1.15), Nicaragua (1.17), Namibia (1.31), Kenya (1.44), Rwanda (1.88), Honduras (1.89), Cambodia (2.07), Madagascar (2.12), Viet Nam (2.42), South Africa (2.87), Sri Lanka (2.90), Dominican Republic (2.91), Bolivia (4.22), China (4.98), Thailand (6.04), Panama (8.37), Philippines (58.19)	None

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Guatemala (15.84)	United Kingdom (-0.03), Portugal (-0.17), Greece (-0.26), Italy (-0.28), Spain (-0.40), France (-0.46), Netherlands (-0.63), Romania (-0.82)	Poland (0.16), Belgium (0.25), Japan (0.47), Denmark (0.54), Canada (0.83), Republic of Korea (0.97), Austria (2.22), Hungary (2.33), Lithuania (2.48), Germany (3.12), Croatia (3.34), Slovenia (3.82), Ireland (5.27), Bulgaria (7.21), Switzerland (7.76)	Sweden (49.68)	Brazil (-0.06), Lao People's Democratic Republic (-0.08), Chile (-0.11), Costa Rica (-0.14), Bangladesh (-0.16), Bosnia and Herzegovina (-0.27), Mexico (-0.34), Paraguay (-0.48), Colombia (-0.61), United Arab Emirates (-0.66), Ecuador (-0.68), Indonesia (-0.74), Ethiopia (-0.79), Uruguay (-0.79), Russian Federation (-0.80), Argentina (-0.83), New Zealand (-0.86), Israel (-0.91), India (-0.94), Turkey (-0.95), Ukraine (-0.95), Tunisia (-0.96)	Lebanon (0.14), Zambia (0.20), Albania (0.25), Uganda (0.37), Nigeria (0.38), Australia (0.53), Peru (0.61), Nicaragua (0.63), Namibia (0.73), Kenya (0.83), Rwanda (1.15), Honduras (1.16), Cambodia (1.30), Madagascar (1.34), Viet Nam (1.57), South Africa (1.90), Sri Lanka (1.92), Dominican Republic (1.94), Georgia (2.76), Bolivia (2.91), China (3.50), Thailand (4.28), Panama (6.02)	Philippines (43.45)
Honduras (21.81)	Belgium (-0.08), Poland (-0.14), United Kingdom (-0.28), Portugal (-0.38), Greece (-0.45), Italy (-0.47), Spain (-0.55), France (-0.60), Netherlands (-0.72), Romania (-0.87)	Japan (0.09), Denmark (0.15), Canada (0.36), Republic of Korea (0.46), Austria (1.39), Hungary (1.47), Lithuania (1.58), Germany (2.06), Croatia (2.22), Slovenia (2.57), Ireland (3.65), Bulgaria (5.09), Switzerland (5.50)	Sweden (36.62)	Albania (-0.07), Zambia (-0.11), Guatemala (-0.12), Lebanon (-0.16), Brazil (-0.30), Lao People's Democratic Republic (-0.32), Chile (-0.34), Costa Rica (-0.36), Bangladesh (-0.38), Bosnia and Herzegovina (-0.46), Mexico (-0.51), Paraguay (-0.61), Colombia (-0.71), United Arab Emirates (-0.75), Ecuador (-0.76), Indonesia (-0.81), Ethiopia (-0.84), Uruguay (-0.84), Russian Federation (-0.85), Argentina (-0.87), New Zealand (-0.90), Israel (-0.93), India (-0.96), Turkey (-0.96), Ukraine (-0.96), Tunisia (-0.97)	Uganda (0.01), Nigeria (0.02), Australia (0.13), Peru (0.20), Nicaragua (0.21), Namibia (0.28), Kenya (0.36), Rwanda (0.60), Cambodia (0.70), Madagascar (0.73), Viet Nam (0.90), South Africa (1.15), Sri Lanka (1.17), Dominican Republic (1.18), Georgia (1.79), Bolivia (1.90), China (2.34), Thailand (2.92), Panama (4.20)	Philippines (31.98)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Indonesia (3.49)	Greece (-0.10), Italy (-0.13), Spain (-0.27), France (-0.34), Netherlands (-0.55), Romania (-0.79)	Portugal (0.00), United Kingdom (0.18), Poland (0.41), Belgium (0.51), Japan (0.79), Denmark (0.87), Canada (1.21), Republic of Korea (1.40), Austria (2.90), Hungary (3.04), Lithuania (3.22)	Germany (3.98), Croatia (4.27), Slovenia (4.84), Ireland (6.61), Bulgaria (8.96), Switzerland (9.61), Sweden (60.34)	Bosnia and Herzegovina (-0.11), Mexico (-0.20), Paraguay (-0.36), Colombia (-0.53), United Arab Emirates (-0.59), Ecuador (-0.61), Ethiopia (-0.74), Uruguay (-0.74), Russian Federation (-0.76), Argentina (-0.80), New Zealand (-0.83), Israel (-0.89), India (-0.93), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.95)	Bangladesh (0.02), Costa Rica (0.04), Chile (0.08), Lao People's Democratic Republic (0.12), Brazil (0.14), Lebanon (0.38), Guatemala (0.44), Zambia (0.46), Albania (0.53), Uganda (0.66), Nigeria (0.67), Australia (0.85), Peru (0.95), Nicaragua (0.98), Namibia (1.10), Kenya (1.22), Rwanda (0.62), Honduras (1.63), Cambodia (1.80), Madagascar (1.84), Viet Nam (2.11), South Africa (2.53), Sri Lanka (2.55), Dominican Republic (2.57)	Georgia (3.58), Bolivia (3.75), China (4.44), Thailand (5.41), Panama (7.53), Philippines (52.90)
India (0.04)	Greece (-0.05), Italy (-0.09), Spain (-0.24), France (-0.31), Netherlands (-0.53), Romania (-0.77)	None	Portugal (0.06), United Kingdom (0.24), Poland (0.48), Belgium (0.59), Japan (0.88), Denmark (0.97), Canada (1.34), Republic of Korea (1.53), Austria (3.11), Hungary (3.26), Lithuania (3.45), Germany (4.25), Croatia (4.56), Slovenia (5.16), Ireland (7.03), Bulgaria (9.51), Switzerland (10.19), Sweden (63.63)	Bosnia and Herzegovina (-0.07), Mexico (-0.15), Paraguay (-0.33), Colombia (-0.50), United Arab Emirates (-0.57), Ecuador (-0.59), Ethiopia (-0.73), Uruguay (-0.73), Russian Federation (-0.75), Argentina (-0.78), New Zealand (-0.82), Israel (-0.89), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	None	Bangladesh (0.07), Costa Rica (0.10), Chile (0.14), Lao People's Democratic Republic (0.18), Brazil (0.20), Lebanon (0.46), Guatemala (0.52), Zambia (0.54), Albania (0.61), Uganda (0.75), Nigeria (0.76), Australia (0.94), Peru (1.06), Nicaragua (1.09), Namibia (1.22), Kenya (1.34), Rwanda (1.77), Honduras (1.78), Cambodia (1.95), Madagascar (2.00), Viet Nam (2.29), South Africa (2.72), Sri Lanka (2.74), Dominican Republic (2.76), Georgia (3.83), Bolivia (4.01), China (4.74), Thailand (5.77), Panama (8.00), Philippines (55.85)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Israel (0.68)	Greece (-0.02), Italy (-0.05), Spain (-0.20), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.54), Belgium (0.66)	Japan (0.96), Denmark (1.05), Canada (1.43), Republic of Korea (1.63), Austria (3.27), Hungary (3.43), Lithuania (3.63), Germany (4.46), Croatia (4.78), Slovenia (5.41), Ireland (7.35), Bulgaria (9.92), Switzerland (10.63), Sweden (63.20)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.12), Costa Rica (0.15), Chile (0.18), Lao People's Democratic Republic (0.23), Brazil (0.25), Lebanon (0.52), Guatemala (0.58), Zambia (0.60), Albania (0.68)	Uganda (0.82), Nigeria (0.83), Australia (1.02), Peru (1.14), Nicaragua (1.17), Namibia (1.31), Kenya (1.44), Rwanda (1.88), Honduras (1.89), Cambodia (2.07), Madagascar (2.12), Viet Nam (2.42), South Africa (2.87), Sri Lanka (2.89), Dominican Republic (2.91), Georgia (4.03), Bolivia (4.21), China (4.97), Thailand (6.03), Panama (8.36), Philippines (58.11)
Kenya (33.63)	Greece (-0.02), Italy (-0.05), Spain (-0.21), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.54), Belgium (0.65), Japan (0.96), Denmark (1.05), Canada (1.43), Republic of Korea (1.62), Austria (3.27), Hungary (3.43), Lithuania (3.62), Germany (4.45), Croatia (4.77), Slovenia (5.40), Ireland (7.34), Bulgaria (9.91), Switzerland (10.62)	Sweden (66.14)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.12), Costa Rica (0.14), Chile (0.18), Lao People's Democratic Republic (0.23), Brazil (0.25), Lebanon (0.52), Guatemala (0.58), Zambia (0.60), Albania (0.67), Uganda (0.82), Nigeria (0.83), Australia (1.02), Peru (1.14), Nicaragua (1.17), Namibia (1.31), Rwanda (1.87), Honduras (1.88), Cambodia (2.06), Madagascar (2.11), Viet Nam (2.41), South Africa (2.87), Sri Lanka (2.89), Dominican Republic (2.91), Georgia (4.02), Bolivia (4.20), China (4.97), Thailand (6.03), Panama (8.35)	Philippines (58.06)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Cambodia (42.32)	Greece (-0.02), Italy (-0.05), Spain (-0.21), France (-0.29), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.28), Poland (0.53), Belgium (0.65), Japan (0.95), Denmark (1.04), Canada (1.41), Republic of Korea (1.61), Austria (3.25), Hungary (3.40), Lithuania (3.60), Germany (4.43), Croatia (4.74), Slovenia (5.37), Ireland (7.30), Bulgaria (9.86), Switzerland (10.56)	Sweden (65.79)	Bosnia and Herzegovina (-0.03), Mexico (-0.13), Paraguay (-0.31), Colombia (-0.49), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.66), Ethiopia (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.82), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.11), Costa Rica (0.14), Chile (0.18), Lao People's Democratic Republic (0.22), Brazil (0.24), Lebanon (0.51), Guatemala (0.57), Zambia (0.59), Albania (0.67), Uganda (0.81), Nigeria (0.82), Australia (1.01), Peru (1.13), Nicaragua (1.16), Namibia (1.29), Rwanda (1.86), Honduras (1.87), Madagascar (2.10), Viet Nam (2.39), South Africa (2.85), Sri Lanka (2.87), Dominican Republic (2.89), Georgia (3.99), Bolivia (4.18), China (4.93), Thailand (5.99), Panama (8.30)	Philippines (57.75)
Lao People's Democratic Republic (16.47)	Greece (-0.02), Italy (-0.05), Spain (-0.21), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.54), Belgium (0.65), Japan (0.96), Denmark (1.05), Canada (1.42), Republic of Korea (1.62), Austria (3.27), Hungary (3.42), Lithuania (3.62), Germany (4.45), Croatia (4.77), Slovenia (5.40), Ireland (7.34), Bulgaria (9.90), Switzerland (10.61)	Sweden (66.09)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.12), Costa Rica (0.14), Chile (0.18), Brazil (0.25), Lebanon (0.52), Guatemala (0.58), Zambia (0.60), Albania (0.67), Uganda (0.81), Nigeria (0.83), Australia (1.02), Peru (1.14), Nicaragua (1.17), Namibia (1.30), Rwanda (1.87), Honduras (1.88), Cambodia (2.06), Madagascar (2.11), Viet Nam (2.41), South Africa (2.86), Sri Lanka (2.88), Dominican Republic (2.90), Georgia (4.02), Bolivia (4.20), China (4.96), Thailand (6.02), Panama (8.34)	Philippines (58.01)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Lebanon (20.47)	Greece (-0.02), Italy (-0.05), Spain (-0.21), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.28), Poland (0.53), Belgium (0.65), Japan (0.95), Denmark (1.04), Canada (1.42), Republic of Korea (1.61), Austria (3.25), Hungary (3.41), Lithuania (3.60), Germany (4.43), Croatia (4.75), Slovenia (5.38), Ireland (7.31), Bulgaria (9.87), Switzerland (10.58)	Sweden (65.89)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.49), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.11), Costa Rica (0.14), Chile (0.18), Lao People's Democratic Republic (0.22), Brazil (0.25), Guatemala (0.57), Zambia (0.59), Albania (0.67), Uganda (0.81), Nigeria (0.82), Australia (1.01), Peru (1.13), Nicaragua (1.16), Namibia (1.30), Kenya (1.43), Rwanda (1.86), Honduras (1.87), Cambodia (2.05), Madagascar (2.10), Viet Nam (2.40), South Africa (2.85), Sri Lanka (2.87), Dominican Republic (2.89), Georgia (4.00), Bolivia (4.18), China (4.94), Thailand (6.00), Panama (8.31)	Philippines (57.83)
Sri Lanka (49.07)	Greece (-0.11), Italy (-0.14), Spain (-0.28), France (-0.35), Netherlands (-0.55), Romania (-0.79)	Portugal (0.00), United Kingdom (0.17), Poland (0.40), Belgium (0.50), Japan (0.77), Denmark (0.86), Canada (1.20), Republic of Korea (1.38), Austria (2.87), Hungary (3.01), Lithuania (3.19), Germany (3.94), Croatia (4.23), Slovenia (4.80), Ireland (6.56), Bulgaria (8.89), Switzerland (9.53)	Sweden (59.82)	Bosnia and Herzegovina (-0.12), Mexico (-0.20), Paraguay (-0.37), Colombia (-0.53), United Arab Emirates (-0.59), Ecuador (-0.62), Indonesia (-0.69), Uruguay (-0.74), Russian Federation (-0.76), Argentina (-0.80), New Zealand (-0.83), Israel (-0.89), India (-0.93), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.95)	Bangladesh (0.01), Costa Rica (0.04), Chile (0.07), Lao People's Democratic Republic (0.11), Brazil (0.13), Lebanon (0.37), Guatemala (0.43), Zambia (0.45), Albania (0.52), Uganda (0.65), Nigeria (0.66), Australia (0.83), Peru (0.94), Nicaragua (0.96), Namibia (1.09), Kenya (1.21), Rwanda (1.60), Honduras (1.61), Cambodia (1.77), Madagascar (1.82), Viet Nam (2.09), South Africa (2.50), Dominican Republic (2.54), Georgia (3.55), Bolivia (3.72), China (4.41), Thailand (5.37), Panama (7.47)	Philippines (52.51)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Madagascar (43.27)	Greece (-0.02), Italy (-0.05), Spain (-0.21), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.54), Belgium (0.65), Japan (0.96), Denmark (1.05), Canada (1.43), Republic of Korea (1.62), Austria (3.27), Hungary (3.43), Lithuania (3.62), Germany (4.45), Croatia (4.77), Slovenia (5.40), Ireland (7.34), Bulgaria (9.91), Switzerland (10.62)	Sweden (66.14)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.12), Costa Rica (0.14), Chile (0.18), Lao People's Democratic Republic (0.23), Brazil (0.25), Lebanon (0.52), Guatemala (0.58), Zambia (0.60), Albania (0.67), Uganda (0.82), Nigeria (0.83), Australia (1.02), Peru (1.14), Nicaragua (1.17), Namibia (1.31), Kenya (1.44), Rwanda (1.87), Honduras (1.88), Cambodia (2.06), Viet Nam (2.41), South Africa (2.87), Dominican Republic (2.91), Georgia (4.02), Bolivia (4.20), China (4.97), Thailand (6.03), Panama (8.35)	Philippines (58.05)
Mexico (4.73)	Denmark (-0.06), Japan (-0.10), Belgium (-0.24), Poland (-0.29), United Kingdom (-0.41), Portugal (-0.49), Greece (-0.55), Italy (-0.56), Spain (-0.64), France (-0.67), Netherlands (-0.77), Romania (-0.89)	Canada (0.11), Republic of Korea (0.20), Austria (0.97), Hungary (1.03), Lithuania (1.12), Germany (1.50), Croatia (1.65), Slovenia (1.94), Ireland (2.83), Bulgaria (4.01), Switzerland (4.34)	Sweden (29.89)	Nicaragua (-0.01), Peru (-0.02), Australia (-0.07), Nigeria (-0.16), Uganda (-0.17), Albania (-0.23), Zambia (-0.27), Guatemala (-0.28), Lebanon (-0.30), Brazil (-0.43), Lao People's Democratic Republic (-0.44), Chile (-0.46), Costa Rica (-0.47), Bangladesh (-0.49), Bosnia and Herzegovina (-0.55), Paraguay (-0.68), Colombia (-0.76), United Arab Emirates (-0.79), Ecuador (-0.81), Indonesia (-0.84), Ethiopia (-0.87), Uruguay (-0.87), Russian Federation (-0.88), Argentina (-0.90), New Zealand (-0.91), Israel (-0.95), India (-0.97), Turkey (-0.97), Ukraine (-0.97), Tunisia (-0.97)	Namibia (0.06), Kenya (0.12), Honduras (0.32), Rwanda (0.32), Cambodia (0.41), Madagascar (0.43), Viet Nam (0.57), South Africa (0.77), Sri Lanka (0.78), Dominican Republic (0.79), Georgia (1.31), Bolivia (1.39), China (1.73), Thailand (2.23), Panama (3.29)	Philippines (26.10)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Namibia (31.92)	Greece (-0.01), Italy (-0.05), Spain (-0.20), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.11), United Kingdom (0.29), Poland (0.55), Belgium (0.66), Japan (0.97), Denmark (1.06), Canada (1.44), Republic of Korea (1.64), Austria (3.29), Hungary (3.45), Lithuania (3.64), Germany (4.48), Croatia (4.80), Slovenia (5.43), Ireland (7.38), Bulgaria (9.96), Switzerland (10.67)	Sweden (66.43)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.12), Costa Rica (0.15), Chile (0.19), Lao People's Democratic Republic (0.24), Brazil (0.26), Lebanon (0.52), Guatemala (0.59), Zambia (0.61), Albania (0.68), Uganda (0.82), Nigeria (0.84), Australia (1.03), Peru (1.15), Nicaragua (1.18), Kenya (1.45), Rwanda (1.89), Honduras (1.90), Cambodia (2.08), Madagascar (2.13), Viet Nam (2.43), South Africa (2.88), Sri Lanka (2.90), Dominican Republic (2.92), Georgia (4.04), Bolivia (4.23), China (4.99), Thailand (6.06), Panama (8.39)	Philippines (58.31)
Nigeria (25.03)	Greece (-0.02), Italy (-0.05), Spain (-0.20), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.54), Belgium (0.66), Japan (0.96), Denmark (1.05), Canada (1.43), Republic of Korea (1.63), Austria (3.27), Hungary (3.43), Lithuania (3.63), Germany (4.46), Croatia (4.78), Slovenia (5.41), Ireland (7.35), Bulgaria (9.92), Switzerland (10.63)	Sweden (66.21)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.12), Costa Rica (0.15), Chile (0.18), Lao People's Democratic Republic (0.23), Brazil (0.25), Lebanon (0.52), Guatemala (0.58), Zambia (0.60), Albania (0.68), Uganda (0.82), Australia (1.02), Peru (1.14), Nicaragua (1.17), Namibia (1.31), Kenya (1.44), Rwanda (1.88), Honduras (1.89), Cambodia (2.07), Madagascar (2.12), Viet Nam (2.42), South Africa (2.87), Sri Lanka (2.89), Dominican Republic (2.91), Georgia (4.03), Bolivia (4.21), China (4.97), Thailand (6.04), Panama (8.36)	Philippines (58.12)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Nicaragua (23.80)	Portugal (-0.11), Greece (-0.21), Italy (-0.23), Spain (-0.36), France (-0.42), Netherlands (-0.60), Romania (-0.81)	United Kingdom (0.04), Poland (0.24), Belgium (0.33), Japan (0.58), Denmark (0.65), Canada (0.96), Republic of Korea (1.12), Austria (2.45), Hungary (2.57), Lithuania (2.73), Germany (3.41), Croatia (3.65), Slovenia (4.16), Ireland (5.72), Bulgaria (7.80), Switzerland (8.38)	Sweden (53.23)	Lao People's Democratic Republic (-0.01), Chile (-0.05), Costa Rica (-0.08), Bangladesh (-0.10), Bosnia and Herzegovina (-0.22), Mexico (-0.29), Paraguay (-0.44), Colombia (-0.58), United Arab Emirates (-0.64), Ecuador (-0.66), Indonesia (-0.72), Ethiopia (-0.77), Uruguay (-0.77), Russian Federation (-0.79), Argentina (-0.82), New Zealand (-0.85), Israel (-0.91), India (-0.94), Turkey (-0.94), Ukraine (-0.95), Tunisia (-0.95)	Brazil (0.01), Lebanon (0.22), Guatemala (0.27), Zambia (0.29), Albania (0.35), Uganda (0.46), Nigeria (0.47), Australia (0.63), Peru (0.73), Namibia (0.86), Kenya (0.96), Rwanda (1.31), Honduras (1.32), Cambodia (1.47), Madagascar (1.51), Viet Nam (1.75), South Africa (2.11), Sri Lanka (2.13), Dominican Republic (2.15), Georgia (3.04), Bolivia (3.19), China (3.82), Thailand (4.67), Panama (6.53)	Philippines (46.62)
New Zealand (1.54)	Greece (-0.06), Italy (-0.09), Spain (-0.24), France (-0.31), Netherlands (-0.53), Romania (-0.78)	Portugal (0.06), United Kingdom (0.24), Poland (0.48), Belgium (0.59), Japan (0.88), Denmark (0.97), Canada (1.33), Republic of Korea (1.52)	Austria (3.10), Hungary (3.25), Lithuania (3.44), Germany (4.24), Croatia (4.55), Slovenia (5.15), Ireland (7.01), Bulgaria (9.49), Switzerland (10.17), Sweden (63.54)	Bosnia and Herzegovina (-0.07), Mexico (-0.15), Paraguay (-0.33), Colombia (-0.50), United Arab Emirates (-0.57), Ecuador (-0.59), Indonesia (-0.67), Ethiopia (-0.73), Uruguay (-0.73), Russian Federation (-0.75), Argentina (-0.79), Israel (-0.89), India (-0.93), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.07), Costa Rica (0.10), Chile (0.14), Lao People's Democratic Republic (0.18), Brazil (0.20), Lebanon (0.46), Guatemala (0.52), Zambia (0.54), Albania (0.61), Uganda (0.75), Nigeria (0.76), Australia (0.94), Peru (1.06), Nicaragua (1.08), Namibia (1.21), Kenya (1.34)	Rwanda (1.76), Honduras (1.77), Cambodia (1.94), Madagascar (1.99), Viet Nam (2.28), South Africa (2.71), Sri Lanka (2.73), Dominican Republic (2.75), Georgia (3.82), Bolivia (4.00), China (4.73), Thailand (5.75), Panama (7.98), Philippines (55.75)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Panama (132.25)	Greece (-0.01), Italy (-0.05), Spain (-0.20), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.54), Belgium (0.66), Japan (0.96), Denmark (1.05), Canada (1.43), Republic of Korea (1.63), Austria (3.28), Hungary (3.44), Lithuania (3.63), Germany (4.47), Croatia (4.79), Slovenia (5.42), Ireland (7.36), Bulgaria (9.94), Switzerland (10.65), Sweden (66.30)	None	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.12), Costa Rica (0.15), Chile (0.19), Lao People's Democratic Republic (0.23), Brazil (0.25), Lebanon (0.52), Guatemala (0.58), Zambia (0.60), Albania (0.68), Uganda (0.82), Nigeria (0.83), Australia (1.03), Peru (1.15), Nicaragua (1.17), Namibia (1.31), Kenya (1.44), Rwanda (1.88), Honduras (1.89), Cambodia (2.07), Madagascar (2.12), Viet Nam (2.42), South Africa (2.88), Sri Lanka (2.90), Dominican Republic (2.92), Georgia (4.03), Bolivia (4.22), China (4.98), Thailand (6.05), Philippines (58.20)	None
Peru (10.11)	Republic of Korea (-0.04), Canada (-0.11), Denmark (-0.25), Japan (-0.29), Belgium (-0.40), Poland (-0.44), United Kingdom (-0.53), Portugal (-0.60), Greece (-0.64), Italy (-0.65), Spain (-0.71), France (-0.74), Netherlands (-0.82), Romania (-0.91)	Austria (0.56), Hungary (0.62), Lithuania (0.69), Germany (0.99), Croatia (1.11), Slovenia (1.34), Ireland (2.04), Bulgaria (2.98), Switzerland (3.25)	Sweden (23.54)	Kenya (-0.11), Namibia (-0.16), Nicaragua (-0.21), Australia (-0.26), Nigeria (-0.33), Uganda (-0.34), Albania (-0.39), Guatemala (-0.42), Zambia (-0.42), Lebanon (-0.45), Brazil (-0.54), Lao People's Democratic Republic (-0.55), Chile (-0.57), Costa Rica (-0.58), Bangladesh (-0.59), Bosnia and Herzegovina (-0.65), Mexico (-0.68), Paraguay (-0.75), Colombia (-0.81), United Arab Emirates (-0.84), Ecuador (-0.85), Indonesia (-0.87), Ethiopia (-0.90), Russian Federation (-0.90), Uruguay (-0.90), Argentina (-0.92), New Zealand (-0.93), Israel (-0.96), India (-0.97), Turkey (-0.97), Ukraine (-0.98), Tunisia (-0.98)	Honduras (0.05), Rwanda (0.05), Cambodia (0.12), Madagascar (0.14), Viet Nam (0.25), South Africa (0.41), Sri Lanka (0.42), Dominican Republic (0.43), Georgia (0.83), Bolivia (0.90), China (1.18), Thailand (1.57), Panama (2.41)	Philippines (20.56)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Philippines (841.60)	Greece (-0.01), Italy (-0.05), Spain (-0.20), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.55), Belgium (0.66), Japan (0.96), Denmark (1.06), Canada (1.43), Republic of Korea (1.63), Austria (3.28), Hungary (3.44), Lithuania (3.64), Germany (4.47), Croatia (4.79), Slovenia (5.42), Ireland (7.37), Bulgaria (9.95), Switzerland (10.66), Sweden (66.37)	None	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.12), Costa Rica (0.15), Chile (0.19), Lao People's Democratic Republic (0.23), Brazil (0.26), Lebanon (0.52), Guatemala (0.58), Zambia (0.60), Albania (0.68), Uganda (0.82), Nigeria (0.84), Australia (1.03), Peru (1.15), Nicaragua (1.17), Namibia (1.31), Kenya (1.44), Rwanda (1.88), Honduras (1.89), Cambodia (2.07), Madagascar (2.12), Viet Nam (2.42), South Africa (2.88), Sri Lanka (2.90), Dominican Republic (2.92), Georgia (4.04), Bolivia (4.22), China (4.99), Thailand (6.05), Panama (8.38)	None
Paraguay (8.61)	Greece (-0.05), Italy (-0.08), Spain (-0.23), France (-0.30), Netherlands (-0.52), Romania (-0.77)	Portugal (0.07), United Kingdom (0.25), Poland (0.49), Belgium (0.60), Japan (0.90), Denmark (0.98), Canada (1.35), Republic of Korea (1.54), Austria (3.13), Hungary (3.29), Lithuania (3.48), Germany (4.28), Croatia (4.59), Slovenia (5.20), Ireland (7.07)	Bulgaria (9.56), Switzerland (10.25), Sweden (64.02)	Bosnia and Herzegovina (-0.06), Mexico (-0.15), Colombia (-0.50), United Arab Emirates (-0.56), Ecuador (-0.59), Indonesia (-0.66), Ethiopia (-0.73), Uruguay (-0.73), Russian Federation (-0.75), Argentina (-0.78), New Zealand (-0.82), Israel (-0.89), India (-0.93), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.08), Costa Rica (0.11), Chile (0.14), Lao People's Democratic Republic (0.19), Brazil (0.21), Lebanon (0.47), Guatemala (0.53), Zambia (0.55), Albania (0.62), Uganda (0.76), Nigeria (0.77), Australia (0.96), Peru (1.07), Nicaragua (1.10), Namibia (1.23), Kenya (1.36), Rwanda (1.78), Honduras (1.79), Cambodia (1.96), Madagascar (2.01), Viet Nam (2.30), South Africa (2.74), Sri Lanka (2.76), Dominican Republic (2.78), Georgia (3.86), Bolivia (4.04), China (4.78), Thailand (5.80), Panama (8.05)	Philippines (56.17)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Russian Federation (2.73)	Greece (-0.02), Italy (-0.05), Spain (-0.21), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.28), Poland (0.54), Belgium (0.65), Japan (0.95), Denmark (1.04), Canada (1.42), Republic of Korea (1.62)	Austria (3.25), Hungary (3.41), Lithuania (3.61), Germany (4.43), Croatia (4.75), Slovenia (5.38), Ireland (7.31), Bulgaria (9.87), Switzerland (10.58), Sweden (65.91)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.49), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.11), Costa Rica (0.14), Chile (0.18), Lao People's Democratic Republic (0.23), Brazil (0.25), Lebanon (0.51), Guatemala (0.57), Zambia (0.59), Albania (0.67), Uganda (0.81), Nigeria (0.82), Australia (1.01), Peru (1.13), Nicaragua (1.16), Namibia (1.30), Kenya (1.43), Rwanda (1.86), Honduras (1.87), Cambodia (2.05), Madagascar (2.10), Viet Nam (2.40)	South Africa (2.85), Sri Lanka (2.87), Dominican Republic (2.89), Georgia (4.00), Bolivia (4.19), China (4.94), Thailand (6.00), Panama (8.32), Philippines (57.85)
Rwanda (39.57)	Greece (-0.02), Italy (-0.06), Spain (-0.21), France (-0.29), Netherlands (-0.51), Romania (-0.77)	Portugal (0.09), United Kingdom (0.28), Poland (0.53), Belgium (0.64), Japan (0.94), Denmark (1.04), Canada (1.41), Republic of Korea (1.61), Austria (3.24), Hungary (3.40), Lithuania (3.59), Germany (4.42), Croatia (4.73), Slovenia (5.35), Ireland (7.28), Bulgaria (9.84), Switzerland (10.54)	Sweden (65.67)	Bosnia and Herzegovina (-0.04), Mexico (-0.13), Paraguay (-0.31), Colombia (-0.49), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.66), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.82), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.11), Costa Rica (0.14), Chile (0.17), Lao People's Democratic Republic (0.22), Brazil (0.24), Lebanon (0.51), Guatemala (0.57), Zambia (0.59), Albania (0.66), Uganda (0.80), Nigeria (0.82), Australia (1.01), Peru (1.13), Nicaragua (1.15), Namibia (1.29), Kenya (1.42), Honduras (1.86), Cambodia (2.05), Madagascar (2.10), Viet Nam (2.40), Cambodia (2.04), Madagascar (2.09), Viet Nam (2.39), South Africa (2.84), Sri Lanka (2.86), Dominican Republic (2.88), Georgia (3.98), Bolivia (4.17), China (4.92), Thailand (5.98), Panama (8.28)	Philippines (57.64)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Thailand (66.25)	United Kingdom (-0.13), Portugal (-0.26), Greece (-0.34), Italy (-0.36), Spain (-0.46), France (-0.52), Netherlands (-0.67), Romania (-0.84)	Poland (0.04), Belgium (0.11), Japan (0.32), Denmark (0.38), Canada (0.64), Republic of Korea (0.77), Austria (1.89), Hungary (1.98), Lithuania (2.12), Germany (2.68), Croatia (2.89), Slovenia (3.31), Ireland (4.62), Bulgaria (6.35), Switzerland (6.85), Sweden (44.40)	None	Brazil (-0.16), Lao People's Democratic Republic (-0.17), Chile (-0.20), Costa Rica (-0.23), Bangladesh (-0.25), Bosnia and Herzegovina (-0.35), Mexico (-0.41), Paraguay (-0.53), Colombia (-0.65), United Arab Emirates (-0.70), Ecuador (-0.72), Indonesia (-0.77), Ethiopia (-0.81), Uruguay (-0.81), Russian Federation (-0.82), Argentina (-0.85), New Zealand (-0.87), Israel (-0.92), India (-0.95), Turkey (-0.95), Ukraine (-0.96), Tunisia (-0.96)	Lebanon (0.02), Guatemala (0.06), Zambia (0.08), Albania (0.12), Uganda (0.22), Nigeria (0.23), Australia (0.37), Peru (0.44), Nicaragua (0.46), Namibia (0.55), Kenya (0.64), Rwanda (0.93), Honduras (0.94), Cambodia (1.06), Madagascar (1.10), Viet Nam (1.30), South Africa (1.60), Sri Lanka (1.62), Dominican Republic (1.64), Georgia (2.37), Bolivia (2.50), China (3.02), Panama (5.29), Panama (38.78)	None
Tunisia (-0.16)	Greece (-0.02), Italy (-0.06), Spain (-0.21), France (-0.29), Netherlands (-0.51), Romania (-0.77)	Portugal (0.09), United Kingdom (0.28), Poland (0.53), Belgium (0.64), Japan (0.94), Denmark (1.03), Canada (1.41), Republic of Korea (1.61), Austria (3.24), Hungary (3.40), Lithuania (3.59), Germany (4.41), Croatia (4.73), Slovenia (5.35), Ireland (7.28), Bulgaria (9.83), Switzerland (10.54), Sweden (65.65)		Bosnia and Herzegovina (-0.04), Mexico (-0.13), Paraguay (-0.31), Colombia (-0.49), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.66), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.82), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94)	Bangladesh (0.11), Costa Rica (0.14), Chile (0.17), Lao People's Democratic Republic (0.22), Brazil (0.24), Lebanon (0.51), Guatemala (0.57), Zambia (0.59), Albania (0.66), Uganda (0.80), Nigeria (0.82), Australia (1.01), Peru (1.13), Nicaragua (1.15), Namibia (1.29), Kenya (1.42), Rwanda (1.85), Honduras (1.86), Cambodia (2.04), Madagascar (2.09), Viet Nam (2.39), South Africa (2.84), Sri Lanka (2.86), Dominican Republic (2.88), Georgia (3.98), Bolivia (4.17), China (4.92), Thailand (5.98), Panama (8.28), Philippines (57.63)	

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Turkey (-0.09)	Portugal (-0.02), Greece (-0.12), Italy (-0.15), Spain (-0.29), France (-0.36), Netherlands (-0.56), Romania (-0.79)	United Kingdom (0.15), Poland (0.37), Belgium (0.48), Japan (0.75), Denmark (0.83), Canada (1.16), Republic of Korea (1.34), Austria (2.81), Hungary (2.95), Lithuania (3.13), Germany (3.87), Croatia (4.15), Slovenia (4.71), Ireland (6.44), Bulgaria (8.74), Switzerland (9.37), Sweden (58.93)		Bosnia and Herzegovina (-0.13), Mexico (-0.22), Paraguay (-0.38), Colombia (-0.54), United Arab Emirates (-0.60), Ecuador (-0.62), Indonesia (-0.69), Ethiopia (-0.75), Uruguay (-0.75), Russian Federation (-0.77), Argentina (-0.80), New Zealand (-0.83), Israel (-0.89), India (-0.93), Ukraine (-0.94), Tunisia (-0.95)	Bangladesh (0.00), Costa Rica (0.02), Chile (0.06), Lao People's Democratic Republic (0.10), Brazil (0.12), Lebanon (0.35), Guatemala (0.41), Zambia (0.43), Albania (0.50), Uganda (0.62), Nigeria (0.63), Australia (0.80), Peru (0.91), Nicaragua (0.93), Namibia (1.06), Kenya (1.17), Honduras (1.57), Rwanda (1.57), Cambodia (1.73), Madagascar (1.78), Viet Nam (2.05), South Africa (2.45), Sri Lanka (2.47), Dominican Republic (2.49), Georgia (3.48), Bolivia (3.64), China (4.32), Thailand (5.27), Panama (7.34), Philippines (51.70)	
Uganda (22.95)	Greece (-0.09), Italy (-0.12), Spain (-0.26), France (-0.33), Netherlands (-0.54), Romania (-0.78)	Portugal (0.02), United Kingdom (0.20), Poland (0.43), Belgium (0.53), Japan (0.82), Denmark (0.90), Canada (1.25), Republic of Korea (1.44), Austria (2.96), Hungary (3.11), Lithuania (3.29), Germany (4.06), Croatia (4.35), Slovenia (4.94), Ireland (6.74), Bulgaria (9.12), Switzerland (9.78)	Sweden (61.29)	Bosnia and Herzegovina (-0.10), Mexico (-0.18), Paraguay (-0.35), Colombia (-0.52), United Arab Emirates (-0.58), Ecuador (-0.61), Indonesia (-0.68), Ethiopia (-0.74), Uruguay (-0.74), Russian Federation (-0.76), Argentina (-0.79), New Zealand (-0.83), Israel (-0.89), India (-0.93), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.95)	Bangladesh (0.04), Costa Rica (0.06), Chile (0.10), Lao People's Democratic Republic (0.14), Brazil (0.16), Lebanon (0.41), Guatemala (0.46), Zambia (0.48), Albania (0.55), Nigeria (0.70), Australia (0.87), Peru (0.99), Nicaragua (1.01), Namibia (1.14), Kenya (1.26), Honduras (1.67), Rwanda (1.67), Cambodia (1.84), Madagascar (1.89), Viet Nam (2.17), South Africa (2.59), Sri Lanka (2.60), Dominican Republic (2.62), Georgia (3.66), Bolivia (3.83), China (4.54), Thailand (5.52), Panama (7.67)	Philippines (53.78)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Ukraine (-0.10)	Greece (-0.02), Italy (-0.05), Spain (-0.21), France (-0.29), Netherlands (-0.51), Romania (-0.77)	Portugal (0.09), United Kingdom (0.28), Poland (0.53), Belgium (0.65), Japan (0.95), Denmark (1.04), Canada (1.41), Republic of Korea (1.61), Austria (3.25), Hungary (3.40), Lithuania (3.60), Germany (4.42), Croatia (4.74), Slovenia (5.37), Ireland (7.30), Bulgaria (9.85), Switzerland (10.56), Sweden (65.78)		Bosnia and Herzegovina (-0.03), Mexico (-0.13), Paraguay (-0.31), Colombia (-0.49), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.66), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.82), Israel (-0.88), India (-0.92), Turkey (-0.93), Tunisia (-0.94)	Bangladesh (0.11), Costa Rica (0.14), Chile (0.18), Lao People's Democratic Republic (0.22), Brazil (0.24), Lebanon (0.51), Guatemala (0.57), Zambia (0.59), Albania (0.67), Uganda (0.81), Nigeria (0.82), Australia (1.01), Peru (1.13), Nicaragua (1.16), Namibia (1.29), Kenya (1.42), Rwanda (1.86), Honduras (1.87), Cambodia (2.05), Madagascar (2.10), Viet Nam (2.39), South Africa (2.85), Sri Lanka (2.87), Dominican Republic (2.89), Georgia (3.99), Bolivia (4.18), China (4.93), Thailand (5.99), Panama (8.30), Philippines (57.74)	
Uruguay (3.02)	Greece (-0.02), Italy (-0.05), Spain (-0.21), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.10), United Kingdom (0.29), Poland (0.54), Belgium (0.65), Japan (0.95), Denmark (1.04), Canada (1.42), Republic of Korea (1.62)	Austria (3.26), Hungary (3.42), Lithuania (3.61), Germany (4.44), Croatia (4.76), Slovenia (5.38), Ireland (7.32), Bulgaria (9.88), Switzerland (10.59), Sweden (65.94)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.49), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.11), Costa Rica (0.14), Chile (0.18), Lao People's Democratic Republic (0.23), Brazil (0.25), Lebanon (0.51), Guatemala (0.57), Zambia (0.60), Albania (0.67), Uganda (0.81), Nigeria (0.82), Australia (1.01), Peru (1.14), Nicaragua (1.16), Namibia (1.30), Kenya (1.43), Rwanda (1.87), Honduras (1.88), Cambodia (2.06), Madagascar (2.11), Viet Nam (2.40), South Africa (2.86), Sri Lanka (2.88), Dominican Republic (2.90)	Georgia (4.01), Bolivia (4.19), China (4.95), Thailand (6.01), Panama (8.32), Philippines (57.90)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Viet Nam (46.17)	Greece (-0.04), Italy (-0.08), Spain (-0.23), France (-0.30), Netherlands (-0.52), Romania (-0.77)	Portugal (0.07), United Kingdom (0.25), Poland (0.50), Belgium (0.61), Japan (0.90), Denmark (0.99), Canada (1.36), Republic of Korea (1.55), Austria (3.15), Hungary (3.30), Lithuania (3.49), Germany (4.30), Croatia (4.61), Slovenia (5.22), Ireland (7.11), Bulgaria (9.61), Switzerland (10.30)	Sweden (64.28)	Bosnia and Herzegovina (-0.06), Mexico (-0.14), Paraguay (-0.32), Colombia (-0.50), United Arab Emirates (-0.56), Ecuador (-0.59), Indonesia (-0.66), Uruguay (-0.72), Ethiopia (-0.73), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.82), Israel (-0.89), India (-0.93), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Namibia (1.24), Kenya (1.37),Rwanda (1.79), Honduras (1.80), Cambodia (1.98), Madagascar (2.03), South Africa (2.76), Sri Lanka (2.78), Dominican Republic (2.80), Georgia (3.88), Bolivia (4.06), China (4.80), Thailand (5.83), Panama (8.09)	Philippines (56.41)
South Africa (52.55)	Greece (-0.04), Italy (-0.07), Spain (-0.23), France (-0.30), Netherlands (-0.52), Romania (-0.77)	Portugal (0.07), United Kingdom (0.26), Poland (0.50), Belgium (0.61), Japan (0.91), Denmark (1.00), Canada (1.36), Republic of Korea (1.56), Austria (3.16), Hungary (3.31), Lithuania (3.51), Germany (4.32), Croatia (4.63), Slovenia (5.24), Ireland (7.13), Bulgaria (9.63), Switzerland (10.33)	Sweden (64.45)	Bosnia and Herzegovina (-0.05), Mexico (-0.14), Paraguay (-0.32), Colombia (-0.50), United Arab Emirates (-0.56), Ecuador (-0.59), Indonesia (-0.66), Uruguay (-0.72), Ethiopia (-0.73), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.82), Israel (-0.89), India (-0.93), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.09), Costa Rica (0.12), Chile (0.15), Lao People's Democratic Republic (0.20), Brazil (0.22), Lebanon (0.48), Guatemala (0.54), Zambia (0.56), Albania (0.63), Uganda (0.77), Nigeria (0.78), Australia (0.97), Peru (1.09), Nicaragua (1.11), Namibia (1.25), Kenya (1.37), Rwanda (1.80), Honduras (1.81), Cambodia (1.98), Madagascar (2.03), Viet Nam (2.33), Sri Lanka (2.79), Dominican Republic (2.81), Georgia (3.89), Bolivia (4.07), China (4.81), Thailand (5.85), Panama (8.11)	Philippines (56.55)

	OEA partners of United States			Non-OEA partners of United States		
Exporter under experiment	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country	countries that shrink value of export	countries whose growth rate of export are lower than this country	countries whose growth rate of export are higher than this country
Zambia (21.84)	Greece (-0.01), Italy (-0.05), Spain (-0.20), France (-0.28), Netherlands (-0.51), Romania (-0.77)	Portugal (0.11), United Kingdom (0.30), Poland (0.55), Belgium (0.66), Japan (0.97), Denmark (1.06), Canada (1.44), Republic of Korea (1.64), Austria (3.29), Hungary (3.45), Lithuania (3.64), Germany (4.48), Croatia (4.80), Slovenia (5.43), Ireland (7.38), Bulgaria (9.96), Switzerland (10.68)	Sweden (66.44)	Bosnia and Herzegovina (-0.03), Mexico (-0.12), Paraguay (-0.30), Colombia (-0.48), United Arab Emirates (-0.55), Ecuador (-0.58), Indonesia (-0.65), Ethiopia (-0.72), Uruguay (-0.72), Russian Federation (-0.74), Argentina (-0.78), New Zealand (-0.81), Israel (-0.88), India (-0.92), Turkey (-0.93), Ukraine (-0.94), Tunisia (-0.94)	Bangladesh (0.12), Costa Rica (0.15), Chile (0.19), Lao People's Democratic Republic (0.24), Brazil (0.26), Lebanon (0.52), Guatemala (0.59), Albania (0.68), Uganda (0.82), Nigeria (0.84), Australia (1.03), Peru (1.15), Nicaragua (1.18), Namibia (1.32), Kenya (1.45), Rwanda (1.89), Honduras (1.90), Cambodia (2.08), Madagascar (2.13), Viet Nam (2.43), Sri Lanka (2.90), Dominican Republic (2.92), Georgia (4.04), Bolivia (4.23), China (4.99), Thailand (6.06), Panama (8.39)	Philippines (58.33)

Reference

Berry, S., Levinsohn, J., and Pakes, A. 1995. Automobile prices in market equilibrium. Econometrica: Journal of the Econometric Society, 841-890.

Campbell, H., and Liepins, R. 2001. Naming organics: understanding organic standards in New Zealand as a discursive field. Sociologia Ruralis, 41(1), 22-39.

Canada Organic Trade Association. Released in July 2017. The state of organics: federal-provincial-territorial performance report 2017. PDF version could be retrieved from https://www.ota.com/sites/default/files/StateofOrganics_2017-FINAL2.pdf.

Eaton, J., and Kortum, S. 2002. Technology, geography, and trade. Econometrica, 70(5), 1741-1779.

FiBL and IFOAM. Organics international. 2018. The world of organic agriculture, statistics and emerging trends 2018. PDF version can be retrieved from https://shop.fibl.org/CHen/mwdownloads/download/link/id/1093/?ref=1

FiBL and IFOAM. IFOAM EU Groupe. 2016. Organic in Europe, prospects and developments 2016. PDF version can be retrieved from https://www.ifoam-eu.org/sites/default/files/ifoameu_organic_in_europe_2016.pdf

Heerman, K. E., Arita, S., and Gopinath, M. 2015. Asia-Pacific integration with China versus the United States: examining trade patterns under heterogeneous agricultural sectors. American Journal of Agricultural Economics, 97(5), 1324-1344.

Hamzaoui Essoussi, L., and Zahaf, M. 2008. Decision making process of community organic food consumers: an exploratory study. Journal of Consumer Marketing, 25(2), 95-104.

Jaenicke, E. C., and Demko, I. 2015. Impacts from Organic Equivalency Policies: A Gravity Trade Model Analysis. Penn State University and Organic Trade Association.

Klonsky, K. 2000. Forces impacting the production of organic foods. Agriculture and human values, 17(3), 233-243.

Michelsen, J. 2001. Recent development and political acceptance of organic farming in Europe. Sociologia ruralis, 41(1), 3-20.

Nevo, A. 2000. A practitioner's guide to estimation of random coefficients logit models

of demand. Journal of economics & management strategy, 9(4), 513-548.

Nevo, A. 2001. Measuring market power in the ready–to–eat cereal industry. Econometrica, 69(2), 307-342.

Otsuki, T., Wilson, J. S., and Sewadeh, M. 2001. Saving two in a billion: quantifying the trade effect of European food safety standards on African exports. Food policy, 26(5), 495-514.

Wu, L., Yin, S., Xu, Y., and Zhu, D. (2014). Effectiveness of China's organic food certification policy: consumer preferences for infant milk formula with different organic certification labels. Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie, 62(4), 545-568.