

Estimating the Impact of Non-Tariff Measures (NTMs) on Potential Export for Lao PDR: A Case of Agricultural and Agro-food Products

Vanthana Nolintha and Chansamone Vongphaisit

ARTNeT Capacity Building for Trade Policy Researchers

Supporting Equitable Development in ASEAN: Impact of Regional Integration on CLMV Countries

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Contents covered

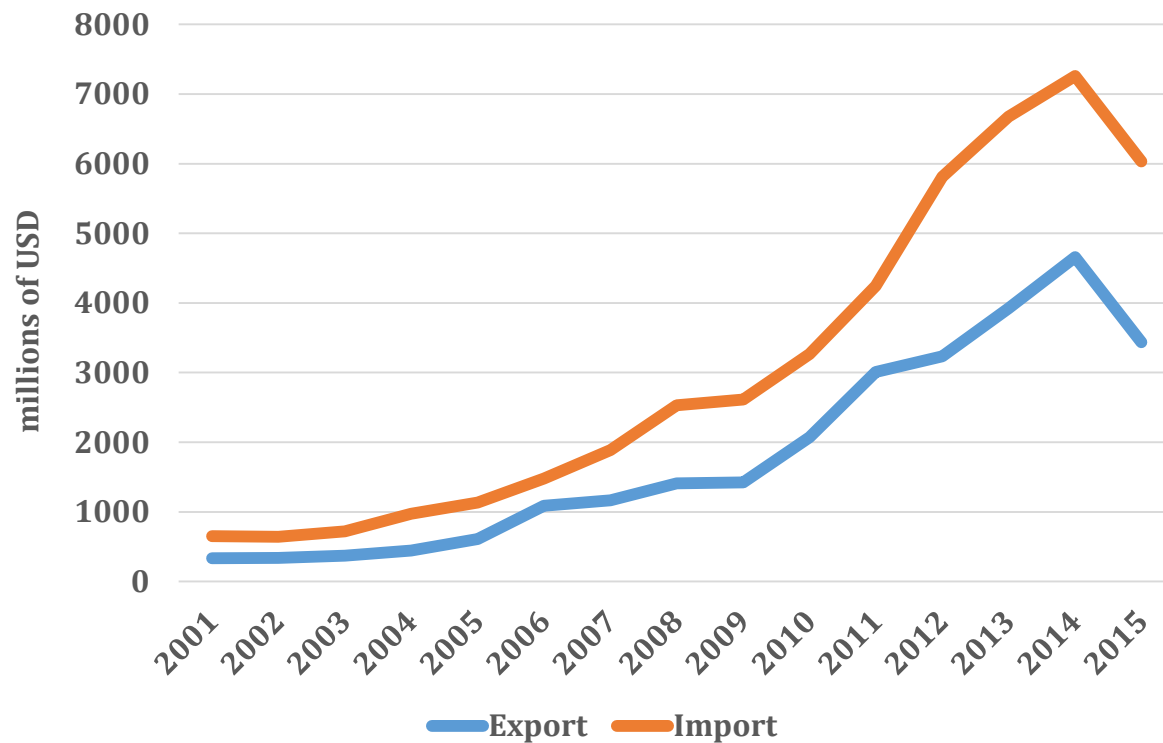
- Background issues
- Existing studies and findings
- Proposed methodology
- Expected implications for policy
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Background Issues

Trade liberalization

- Lao PDR has gradually liberalized trade by participating in multilateral and bilateral trade agreements.
 - Joining the ASEAN in 1997, followed by implementing AFTA in 1998 under the common effective preferential tariff (CEPT) scheme.
 - Being a member of WTO in 2013.
- Lao PDR trades with more than 50 countries and the country has reached the BTAs with 15 countries.
- The country is granted the unilateral tariff preferences in form of generalized system of preferences (GSP) treatment from 47 countries.

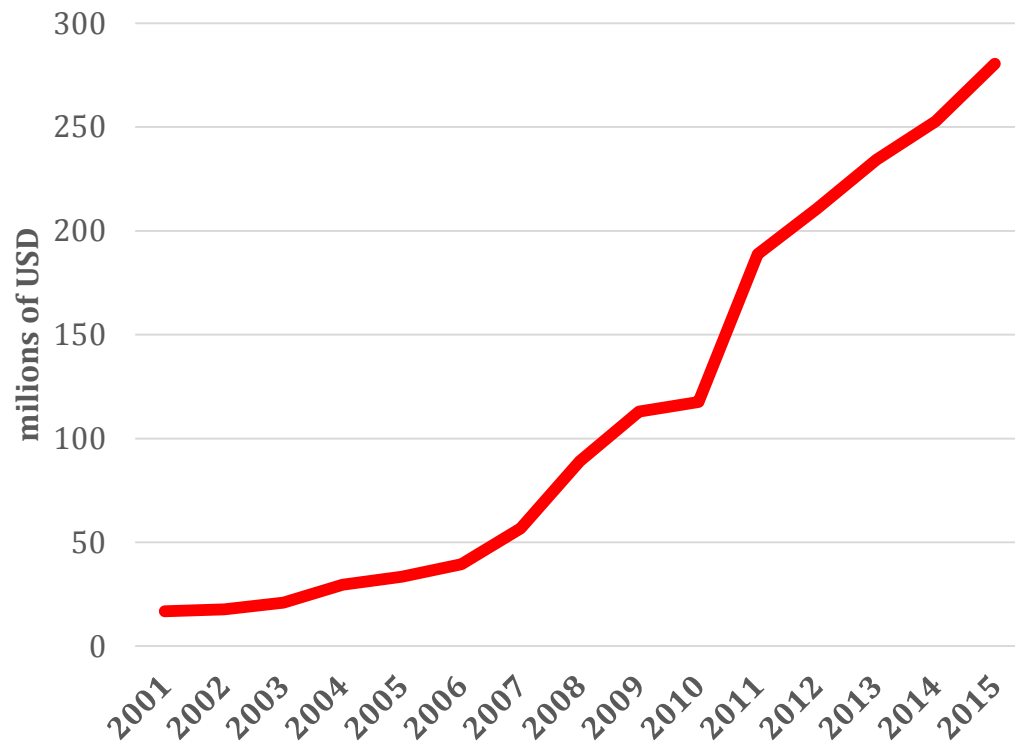
Trade performance of Lao PDR



- Merchandise trade has been more and more expanded even small size.
- Exports are dominated by primary goods such as copper, electricity but manufactures and agricultural exports are growing.
- Imports are dominated by final goods such as petroleum, vehicles, electrical equipment, construction equipment while intermediate goods account for a small proportion of total imports.

Source: International Trade Center

Agricultural commodities exports



Source: International Trade Center

Main agricultural commodities exported are:

- HS07: Vegetables and certain roots
- HS08: Fruits
- HS09: Coffee, ginger, tea
- HS10: Maize, rice
- HS11: Milling products
- HS12: Oil seed

Critical issues on NTMs

- Multilateral negotiations under WTO have successfully liberalized trade.
- However, non-tariff measures (NTMs) have arisen to replace the traditional trade protection, namely tariff.
- Among various forms of NTMs, SPS and TBT has become more and more important in recent years as the WTO allows countries adopt appropriate protection of human, plant and animal health.
- SPS and TBT affect small developing countries like Lao PDR as it participate in international agricultural trade.

Research objectives

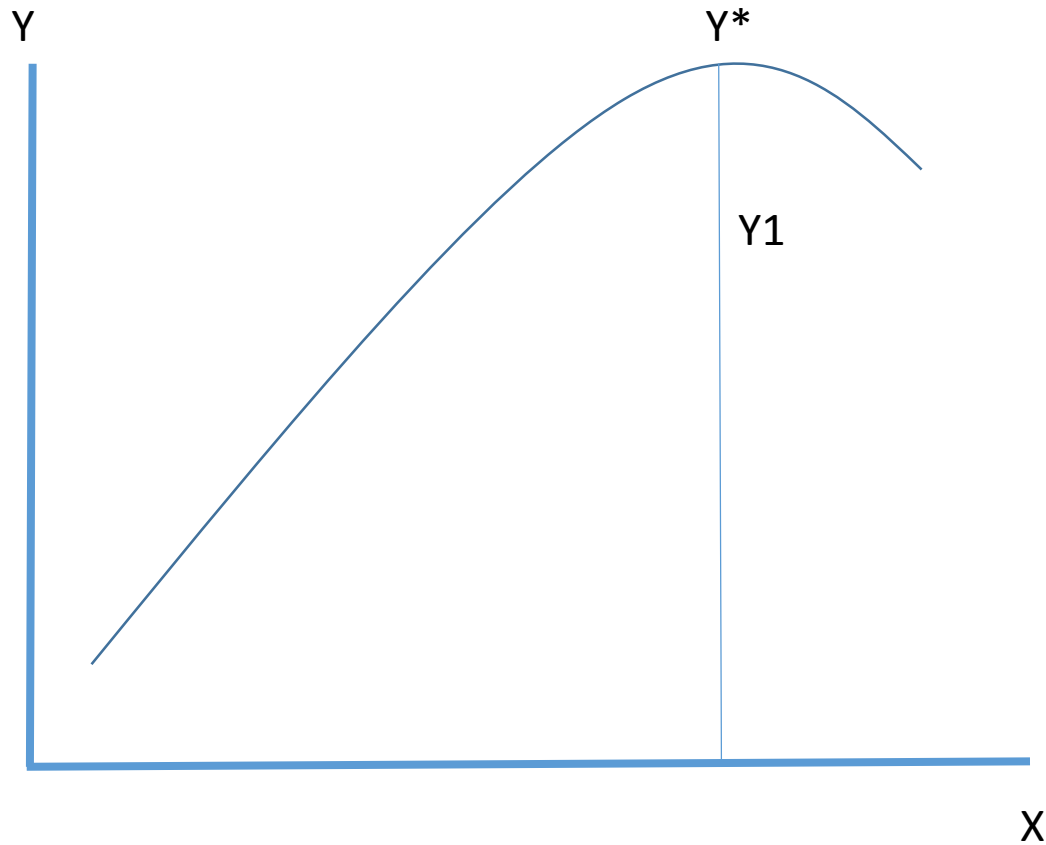
- To estimate the potential export of agricultural and agro-food products between Lao PDR and its trading partners;
- To examine the impact of NTMs imposed by importing countries on export efficiency of those products; and
- To provide policy recommendation for the formulation of effective strategies that can increase quality, productivity and accordingly enhance competitiveness of the Lao exporters.

Existing Studies and Findings

Impacts of non-tariff measures on trade/export

Author (s)	Topic	Methodology	Findings
Ardakani <i>et.al</i> (2009)	Effects of NTBs on agricultural export of Iran	Gravity estimation	NTBs had a negative effect on pistachios, raisins, and shrimp.
Disdier <i>et. Al</i> (2007)	Impact of SPS and TBT Agreements on agricultural trade	Gravity estimation	Exports of DCs and LDCs to OECD are negatively affected.
Bassiony (2012)	Impact of NTBs on Egyptian agricultural trade	Gravity estimation	NTMs had a positive effect on Egyptian agricultural commodities.
World Bank (2009)	A survey on NTMs affecting Lao exporters	Qualitative data analysis	Coffee is affected by SPS imposed by EU.

Concept of potential export and export inefficiency



- Y^* : potential export
- $Y1$: actual export
- $Y^* - Y1$: export inefficiency

Stochastic Frontier Gravity Estimation

- The stochastic frontier gravity model is the integration of Gravity model and stochastic frontier production function that introduced by Drisdale and Kalirajan (2000) to address the bias of the conventional gravity model and to estimate potential trade flows.
- The gravity equation with a stochastic frontier approach can be written as:
- $\ln X_{ijt} = \ln f(Y_{ijt}; \beta) \exp(v_{ijt} - u_{ijt})$

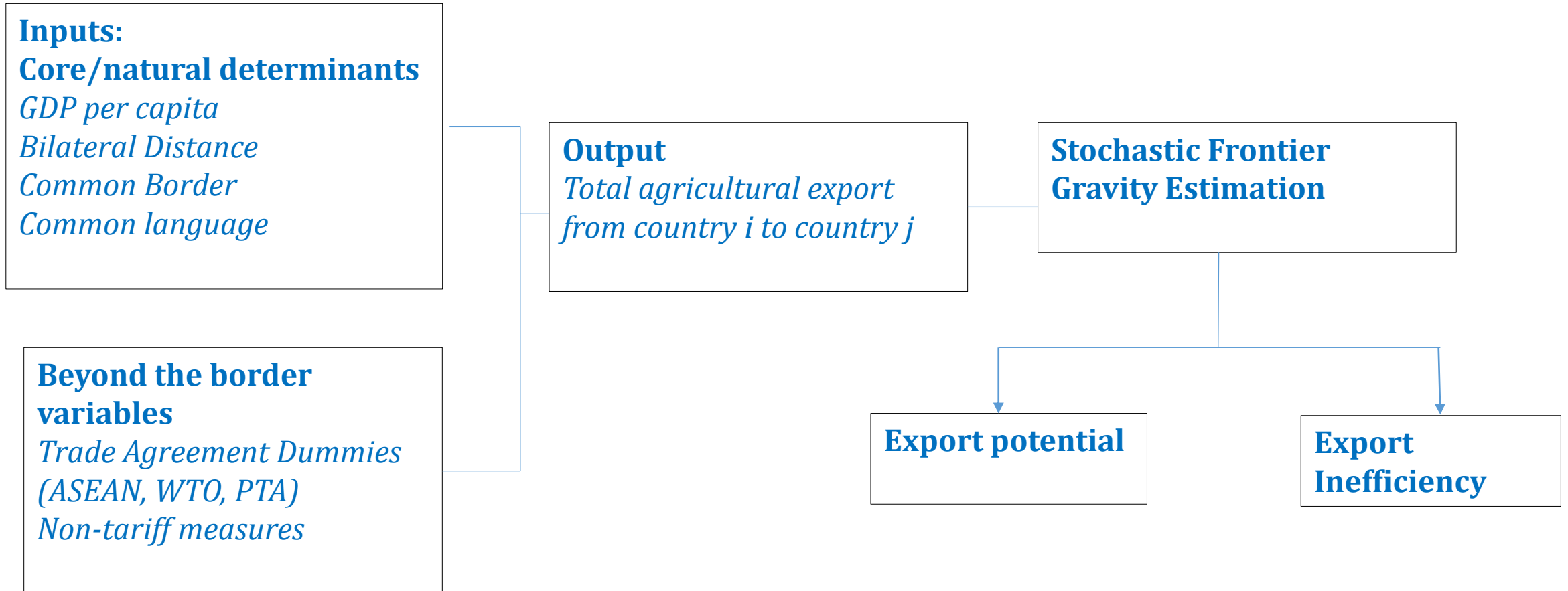
where X_{ijt} represents actual export from country i country j
 Y_{ijt} a vector of determinants of potential trade

Proposed Methodology

Research questions

- What forms of NTMs faced by agricultural exporters?
- What core factors would determine potential export?
- Do non-tariff measures affect export inefficiency?

Conceptual frameworks



Proposed estimation method

- $\ln X_{ijt} = \beta_0 + \beta_1 \ln GDP_{jt} + \beta_2 \ln Dist_{ij} + \beta_3 border_{ij} + \beta_4 comlang_{ij} - u_{ijt} + v_{ijt}$
- X_{ijt} total value of export of agricultural and agro-food products from Lao PDR (i) to trading partner (j) at time t
- GDP_{jt} GDP per capita of importing country (j) as proxy for market size
- $Dist_{ij}$ geographical distance between the capital city of country i and j measured in kilometers
- $border_{ij}$ the dummy variable is 1 if two countries share a border
- $comlang_{ij}$ the dummy variable is 1 if two countries use a similar language

Proposed estimation method (cont.)

- $u_{ijt} = \delta_0 + \delta_1 NTM_j + \delta_2 WTO + \delta_3 EU + \delta_4 ASEAN + w_{ijt}$
- u_{ijt} export inefficiency
- NTM_j an average of NTB index of importing country j
- WTO the dummy variable is 1 if country j is a member of WTO
- EU the dummy variable is 1 if country j is a member of EU
- $ASEAN$ the dummy variable is 1 if country j is a member of ASEAN

Data sources

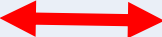



Variable	Source
Bilateral export	UN COMTRADE
GDP per capita	WDI (World Bank)
Bilateral distance	CEPII
Border	CEPII
NTMs	WITS

Expected Implications for Policy

For trade and agricultural policy

- This study is expected to provide recommendations to policy makers based on the results, especially the effect of NTMs and other factors determining export inefficiency in order for formulating effective strategies that can help the Lao agricultural exporters as well as farmers to improve their product quality, productivity and .

Research timelines

No	Activities	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.	Literature Survey							
2.	Data collection and processing							
3.	Writing & Submission of first draft							
4.	Revision and final submission							

Thank you!

Contact @
Dr. Vanthana Nolintha
v.nolintha@gmail.com

Chansamone Vongphaisit
chansamonex@yahoo.com