Rules of Origin and the Use of NAFTA

José Ramón Morán Alfonso Cebreros

Discussed by Manuel García-Santana (World Bank)[1]

Structure of the discussion

1. Motivation
2. What the paper does
3. My comments
   - Focus
   - Modeling
   - Measurement/calibration

Rules of Origin (1)

- When is a good considered as "domestic"?
  - Relevant for the application of RTAs
  - Extremely (and increasingly) difficult

Rules of Origin (1)

- When is a good considered as "domestic"?
  - Relevant for the application of RTAs
  - Extremely (and increasingly) difficult
- RoO specify the conditions for a good to be considered domestic
  - Present in most (if not all) regional trade agreements (RTAs)

Rules of Origin (1)

- When is a good considered as "domestic"?
  - Relevant for the application of RTAs
  - Extremely (and increasingly) difficult
- RoO specify the conditions for a good to be considered domestic
  - Present in most (if not all) regional trade agreements (RTAs)
  - Two types of RoO

    Value-added requirements

    - At least $X\%$ of the the value of a particular final good must be "domestic" VA

Rules of Origin (1)

- When is a good considered as "domestic"?
  - Relevant for the application of RTAs
  - Extremely (and increasingly) difficult
- RoO specify the conditions for a good to be considered domestic
  - Present in most (if not all) regional trade agreements (RTAs)
  - Two types of RoO

    Value-added requirements

    - At least $X\%$ of the the value of a particular final good must be "domestic" VA

    Change of tariff classification

    - Some inputs cannot be sourced (at all) from outside the RTA
    - Restricted inputs are final good specific

Motivation

Rules of Origin (2)

- What is the policy maker's main goal when using RoO?

Rules of Origin (2)

- What is the policy maker's main goal when using RoO?
  - Original goal: avoid tariff circumvention, i.e., trade deflection
    - Felbermayr et al. (2019): not profitable given tariff differences + transportation costs

Rules of Origin (2)

- What is the policy maker's main goal when using RoO?
  - Original goal: avoid tariff circumvention, i.e., trade deflection
    - Felbermayr et al. (2019): not profitable given tariff differences + transportation costs
  - Most likely goal these days: maximize trade within the RTA

Rules of Origin (2)

- What is the policy maker's main goal when using RoO?
  - Original goal: avoid tariff circumvention, i.e., trade deflection
    - Felbermayr et al. (2019): not profitable given tariff differences + transportation costs
  - Most likely goal these days: maximize trade within the RTA
- What tradeoff do firms (e.g., a Mexican exporter to the US) face?
  - $\overbrace{\text{Low tariffs when exporting to the US}}^{\text{Benefit of complying}}$

Rules of Origin (2)

- What is the policy maker's main goal when using RoO?
  - Original goal: avoid tariff circumvention, i.e., trade deflection
    - Felbermayr et al. (2019): not profitable given tariff differences + transportation costs
  - Most likely goal these days: maximize trade within the RTA
- What tradeoff do firms (e.g., a Mexican exporter to the US) face?
  - $\overbrace{\text{Low tariffs when exporting to the US}}^{\text{Benefit of complying}}$

versus

Rules of Origin (2)

- What is the policy maker's main goal when using RoO?
  - Original goal: avoid tariff circumvention, i.e., trade deflection
    - Felbermayr et al. (2019): not profitable given tariff differences + transportation costs
  - Most likely goal these days: maximize trade within the RTA
- What tradeoff do firms (e.g., a Mexican exporter to the US) face?
  - $\overbrace{\text{Low tariffs when exporting to the US}}^{\text{Benefit of complying}}$

    versus
  - $\underbrace{\text{Restrictions when sourcing inputs from third countries}}_{\text{Cost of complying}}$

This paper

Main point

- The extent of this tradeoff depends on firm size

This paper

Main point

- The extent of this tradeoff depends on firm size
  - Larger firms find optimal to source from third countries (Antràs et al. (2017))

This paper

Main point

- The extent of this tradeoff depends on firm size
  - Larger firms find optimal to source from third countries (Antràs et al. (2017))

    ⇒ High cost of complying ⇒ Less likely to comply ⇒ Use NAFTA less

This paper

Main point

- The extent of this tradeoff depends on firm size
  - Larger firms find optimal to source from third countries (Antràs et al. (2017))

    ⇒ High cost of complying ⇒ Less likely to comply ⇒ Use NAFTA less
  - Smaller firms don't rely on sourcing from third countries ⇒ Low cost of complying

This paper

Main point

- The extent of this tradeoff depends on firm size
  - Larger firms find optimal to source from third countries (Antràs et al. (2017))

    ⇒ High cost of complying ⇒ Less likely to comply ⇒ Use NAFTA less
  - Smaller firms don't rely on sourcing from third countries ⇒ Low cost of complying

    BUT: using NAFTA entails a fixed cost

This paper

Main point

- The extent of this tradeoff depends on firm size
  - Larger firms find optimal to source from third countries (Antràs et al. (2017))

    ⇒ High cost of complying ⇒ Less likely to comply ⇒ Use NAFTA less
  - Smaller firms don't rely on sourcing from third countries ⇒ Low cost of complying

    BUT: using NAFTA entails a fixed cost

    ⇒ Small firms less likely to comply ⇒ Use NAFTA less
- Medium firms more likely to comply with RoO

This paper

Main point

- The extent of this tradeoff depends on firm size
  - Larger firms find optimal to source from third countries (Antràs et al. (2017))

    ⇒ High cost of complying ⇒ Less likely to comply ⇒ Use NAFTA less
  - Smaller firms don't rely on sourcing from third countries ⇒ Low cost of complying

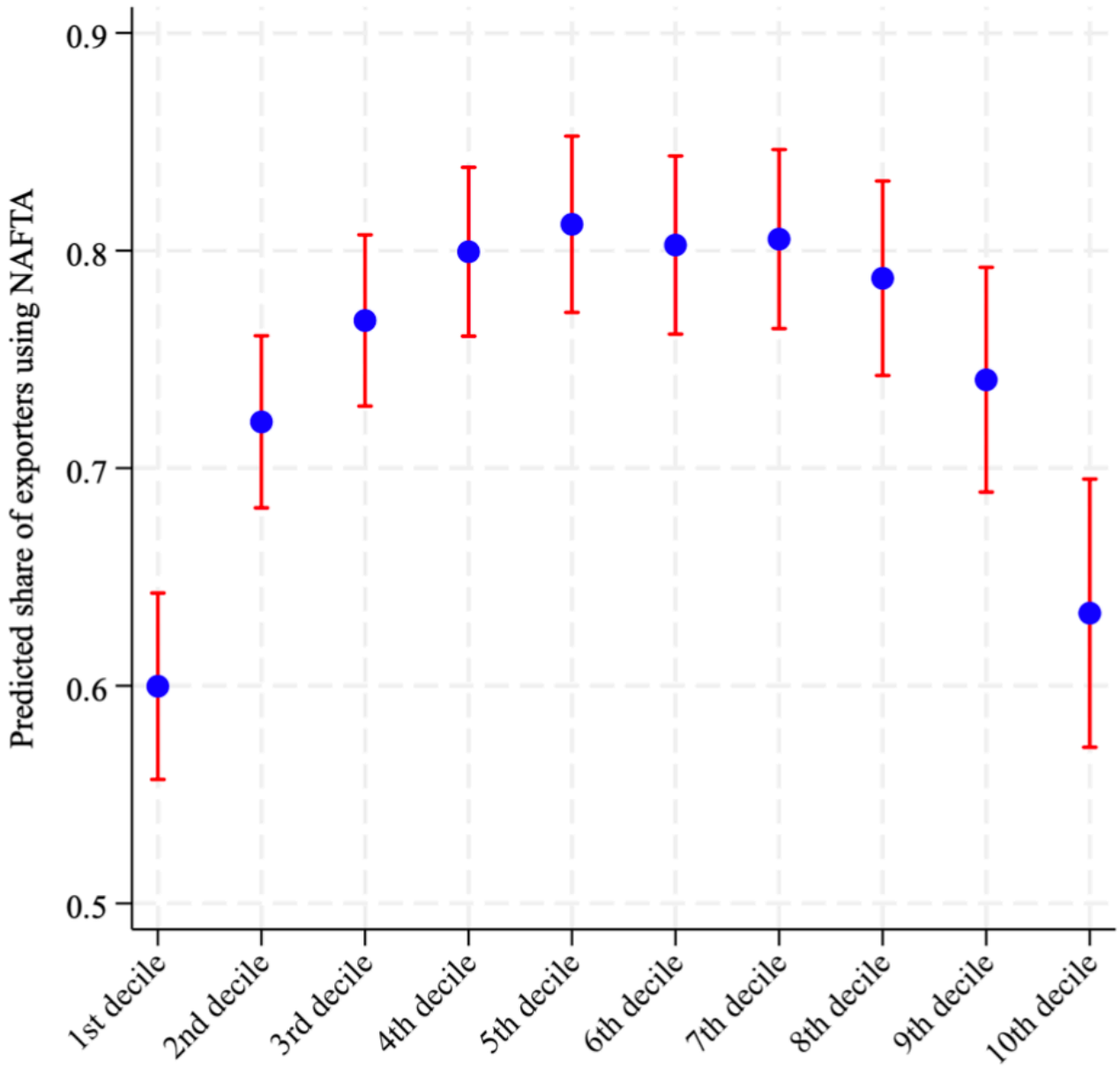
    BUT: using NAFTA entails a fixed cost

    ⇒ Small firms less likely to comply ⇒ Use NAFTA less
- Medium firms more likely to comply with RoO

  ⇒ inverse U-shaped relationship between the use of NAFTA and firm size

This paper

Main point



This paper

What they do

- A model of Mexican exporters to the US (Antràs et al. (2017)) extended to:
  1. RoO: A fraction of intermediates must be sourced within NAFTA
  2. Firms' endogenous decision to use comply with RoO $\iff$ use NAFTA

This paper

What they do

- A model of Mexican exporters to the US (Antràs et al. (2017)) extended to:
  1. RoO: A fraction of intermediates must be sourced within NAFTA
  2. Firms' endogenous decision to use comply with RoO $\iff$ use NAFTA
- Given observed RoO, calibrate the model to match (among others)
  - Share of firms using NAFTA to export
  - Share of firms sourcing from each region

This paper

What they do

- A model of Mexican exporters to the US (Antràs et al. (2017)) extended to:
  1. RoO: A fraction of intermediates must be sourced within NAFTA
  2. Firms' endogenous decision to use comply with RoO $\iff$ use NAFTA
- Given observed RoO, calibrate the model to match (among others)
  - Share of firms using NAFTA to export
  - Share of firms sourcing from each region
- Run counterfactuals (among others)
  - An overall increase in 25% of RoO strictness

This paper

What they do

- A model of Mexican exporters to the US (Antràs et al. (2017)) extended to:
  1. RoO: A fraction of intermediates must be sourced within NAFTA
  2. Firms' endogenous decision to use comply with RoO $\iff$ use NAFTA
- Given observed RoO, calibrate the model to match (among others)
  - Share of firms using NAFTA to export
  - Share of firms sourcing from each region
- Run counterfactuals (among others)
  - An overall increase in 25% of RoO strictness
- Main result

This paper

What they do

- A model of Mexican exporters to the US (Antràs et al. (2017)) extended to:
  1. RoO: A fraction of intermediates must be sourced within NAFTA
  2. Firms' endogenous decision to use comply with RoO $\iff$ use NAFTA
- Given observed RoO, calibrate the model to match (among others)
  - Share of firms using NAFTA to export
  - Share of firms sourcing from each region
- Run counterfactuals (among others)
  - An overall increase in 25% of RoO strictness
- Main result
  - US exports of intermediates to MEX $\downarrow$ by 0.72%

This paper

What they do

- A model of Mexican exporters to the US (Antràs et al. (2017)) extended to:
  1. RoO: A fraction of intermediates must be sourced within NAFTA
  2. Firms' endogenous decision to use comply with RoO $\iff$ use NAFTA
- Given observed RoO, calibrate the model to match (among others)
  - Share of firms using NAFTA to export
  - Share of firms sourcing from each region
- Run counterfactuals (among others)
  - An overall increase in 25% of RoO strictness
- Main result
  - US exports of intermediates to MEX $\downarrow$ by 0.72%
  - Substitution towards US suppliers not enough to compensate the fact that:

    MEX exporters' MC $\uparrow \Rightarrow$ demand for their products $\downarrow \Rightarrow$ overall use of inputs $\downarrow$

My comments

(1) Paper's main message/focus

- The paper emphasizes a new fact

  → RoO compliance & NAFTA use depends on firm size

My comments

(1) Paper's main message/focus

- The paper emphasizes a new fact

  → RoO compliance & NAFTA use depends on firm size

- Writes a model consistent with that fact

My comments

(1) Paper's main message/focus

- The paper emphasizes a new fact

  → RoO compliance & NAFTA use depends on firm size

- Writes a model consistent with that fact

- Uses the model to answer a relevant question: What are the effects of RoO?

My comments

(1) Paper's main message/focus

- The paper emphasizes a new fact

  → RoO compliance & NAFTA use depends on firm size

- Writes a model consistent with that fact

- Uses the model to answer a relevant question: What are the effects of RoO?

- However, the paper looses focus towards the end

My comments

(1) Paper's main message/focus

- The paper emphasizes a new fact

  → RoO compliance & NAFTA use depends on firm size

- Writes a model consistent with that fact

- Uses the model to answer a relevant question: What are the effects of RoO?

- However, the paper looses focus towards the end
  - Still unclear what's the relevance of that fact in understanding the effects of RoO

My comments

(1) Paper's main message/focus

- The paper emphasizes a new fact

  → RoO compliance & NAFTA use depends on firm size

- Writes a model consistent with that fact

- Uses the model to answer a relevant question: What are the effects of RoO?

- However, the paper looses focus towards the end
  - Still unclear what's the relevance of that fact in understanding the effects of RoO
  - Conceptually: If we were to ignore that fact, how different would the answer to that question be?

My comments

(1) Paper's main message/focus

- The paper emphasizes a new fact

  → RoO compliance & NAFTA use depends on firm size

- Writes a model consistent with that fact

- Uses the model to answer a relevant question: What are the effects of RoO?

- However, the paper looses focus towards the end
  - Still unclear what's the relevance of that fact in understanding the effects of RoO
  - Conceptually: If we were to ignore that fact, how different would the answer to that question be?
  - In practice: e.g., versions of the model with different degrees of firm heterogeneity

My comments

(1) Paper's main message/focus

- The paper emphasizes a new fact

  → RoO compliance & NAFTA use depends on firm size

- Writes a model consistent with that fact

- Uses the model to answer a relevant question: What are the effects of RoO?

- However, the paper looses focus towards the end
  - Still unclear what's the relevance of that fact in understanding the effects of RoO
  - Conceptually: If we were to ignore that fact, how different would the answer to that question be?
  - In practice: e.g., versions of the model with different degrees of firm heterogeneity

⇒ Keep the focus of the paper as closed as possible to your novel empirical fact

My comments

(2) Modeling choices/limitation

- The model contains rich mechanisms and produce valuable insights

My comments

(2) Modeling choices/limitation

- The model contains rich mechanisms and produce valuable insights
- However, it abstracts from potentially important factors

My comments

(2) Modeling choices/limitation

- The model contains rich mechanisms and produce valuable insights
- However, it abstracts from potentially important factors

My comments

(2) Modeling choices/limitation

- The model contains rich mechanisms and produce valuable insights
- However, it abstracts from potentially important factors
  1. How different would things be if US exporters reacted to the change in the policy?
     - E.g., different firms' size distribution in MEX and US

My comments

(2) Modeling choices/limitation

- The model contains rich mechanisms and produce valuable insights
- However, it abstracts from potentially important factors
  1. How different would things be if US exporters reacted to the change in the policy?
     - E.g., different firms' size distribution in MEX and US
  2. How different would things be if firms could reallocate production/assembly?
     - E.g., Estevadeordal (2006), Head et al. (2024)

⇒ Discuss potentially important limitations of the framework. Compare to others'

My comments

(3) Measurement/calibration

1. Not sure why it is necessary to target the size-dependent specific moments
    - Why are not model structure + average moments enough?

My comments

(3) Measurement/calibration

1. Not sure why it is necessary to target the size-dependent specific moments
   - Why are not model structure + average moments enough?
   - How is this extra "stretch" of the distribution of fixed costs helping?

My comments

(3) Measurement/calibration

1. Not sure why it is necessary to target the size-dependent specific moments
   - Why are not model structure + average moments enough?
   - How is this extra "stretch" of the distribution of fixed costs helping?
2. I would like to see more details on the λ's plugged into the model
   - Not sure how they are computed

My comments

(3) Measurement/calibration

1. Not sure why it is necessary to target the size-dependent specific moments
   - Why are not model structure + average moments enough?
   - How is this extra "stretch" of the distribution of fixed costs helping?
2. I would like to see more details on the λ's plugged into the model
   - Not sure how they are computed
   - How do they look like?

My comments

(3) Measurement/calibration

1. Not sure why it is necessary to target the size-dependent specific moments
   - Why are not model structure + average moments enough?
   - How is this extra "stretch" of the distribution of fixed costs helping?
2. I would like to see more details on the λ's plugged into the model
   - Not sure how they are computed
   - How do they look like?
   - Do they matter in predicting the differential effects across industries?

My comments

(3) Measurement/calibration

1. Not sure why it is necessary to target the size-dependent specific moments
   - Why are not model structure + average moments enough?
   - How is this extra "stretch" of the distribution of fixed costs helping?
2. I would like to see more details on the λ's plugged into the model
   - Not sure how they are computed
   - How do they look like?
   - Do they matter in predicting the differential effects across industries?
   - Mapping between λ in the data versus the model

My comments

Summary

- I really enjoyed reading this paper
- New facts + serious quantitative work + policy relevant results
- Nice contribution to the RoO literature