Discussion of

Globalization, Trade Imbalances, and Labor Market Adjustment

by Dix-Carneiro, Pessoa, Reyes-Heroles, Traiberman

Oleg Itskhoki
Princeton and UCLA

Conference on Macroeconomic Implications of Trade Policies and Trade Shocks
UC Berkeley, 2020

Question

- What are the current account implications of trade shocks?
  1. Can tariffs be a useful tool to close current account deficits?
  2. Does productivity growth abroad lead to trade deficit at home?

  and, if yes, what does this imply for labor market adjustment?

Question

- What are the current account implications of trade shocks?
  1. Can tariffs be a useful tool to close current account deficits?
  2. Does productivity growth abroad lead to trade deficit at home?

  and, if yes, what does this imply for labor market adjustment?

- First-order questions on which the literature largely puns
  - Quantitative trade papers typically avoid modeling intertemporal trade (making some ad hoc assumption)

Question

- What are the current account implications of trade shocks?

  1. Can tariffs be a useful tool to close current account deficits?
  2. Does productivity growth abroad lead to trade deficit at home?

  and, if yes, what does this imply for labor market adjustment?

- First-order questions on which the literature largely puns
  - Quantitative trade papers typically avoid modeling intertemporal trade (making some ad hoc assumption)

- This papers attempts to offer a serious quantitative treatment of this issue, with the implication for labor market dynamics
  - two separate issues: (a) trade imbalance & (b) labor adjustment

Tariffs and Current Account
(The Macroeconomic Effects of Tariffs, 2019)

- **Lerner symmetry** Lerner (1936) fundamental result:

$$\text{Import tariff} = \text{Export tax}$$

Tariffs and Current Account

(The Macroeconomic Effects of Tariffs, 2019)

- **Lerner symmetry** Lerner (1936) fundamental result:

Import tariff = Export tax

— follows from (intertemporal) budget constraint of a country

Import tariff $\Rightarrow$ Imports $\downarrow$ $\Rightarrow$ CA imbalance $\Rightarrow$ RER appreciation $\Rightarrow$ Exports $\downarrow$

Tariffs and Current Account

(The Macroeconomic Effects of Tariffs, 2019)

- **Lerner symmetry** Lerner (1936) fundamental result:

$$\text{Import tariff} = \text{Export tax}$$

— follows from (intertemporal) budget constraint of a country

Import tariff $\Rightarrow$ Imports $\downarrow$ $\Rightarrow$ CA imbalance $\Rightarrow$ RER appreciation $\Rightarrow$ Exports $\downarrow$

— holds generally under flex prices (Costinot & Werning 2019)

Tariffs and Current Account

(The Macroeconomic Effects of Tariffs, 2019)

- **Lerner symmetry** Lerner (1936) fundamental result:

  Import tariff = Export tax

  — follows from (intertemporal) budget constraint of a country

  Import tariff $\Rightarrow$ Imports $\downarrow$ $\Rightarrow$ CA imbalance $\Rightarrow$ RER appreciation $\Rightarrow$ Exports $\downarrow$

  — holds generally under flex prices (Costinot & Werning 2019)

  — implies neutrality of *border adjustment taxes*, e.g., VAT, BAT (Grossman 1980, Feldstein & Krugman 1990)

Tariffs and Current Account

(The Macroeconomic Effects of Tariffs, 2019)

- **Lerner symmetry** Lerner (1936) fundamental result:

Import tariff = Export tax

— follows from (intertemporal) budget constraint of a country

Import tariff $\Rightarrow$ Imports $\downarrow$ $\Rightarrow$ CA imbalance $\Rightarrow$ RER appreciation $\Rightarrow$ Exports $\downarrow$

— holds generally under flex prices (Costinot & Werning 2019)

— implies neutrality of *border adjustment taxes*, e.g., VAT, BAT (Grossman 1980, Feldstein & Krugman 1990)

— this perhaps suggests tariffs are not a macro policy tool

Tariffs and Current Account

(The Macroeconomic Effects of Tariffs, 2019)

- **Lerner symmetry** Lerner (1936) fundamental result:

  Import tariff = Export tax

  — follows from (intertemporal) budget constraint of a country

  Import tariff $\Rightarrow$ Imports $\downarrow$ $\Rightarrow$ CA imbalance $\Rightarrow$ RER appreciation $\Rightarrow$ Exports $\downarrow$

  — holds generally under flex prices (Costinot & Werning 2019)

  — implies neutrality of *border adjustment taxes*, e.g., VAT, BAT (Grossman 1980, Feldstein & Krugman 1990)

  — this perhaps suggests tariffs are not a macro policy tool

- **However**: Lerner symmetry does **not** hold under sticky prices

  1. Fiscal devaluations (Farhi, Gopinath & Itskhoki 2014)
  2. BAT and VAT (Barbiero, Farhi, Gopinath & Itskhoki 2019)
  3. Output gap shifting in liquidity traps (Jeanne 2018)

China Shock and Current Account

- What about the "China shock" $\Rightarrow$ the US current account?
  1. Large/broad productivity increase in China
  2. Major reduction in trade barriers
  3. Global savings glut (and perhaps exchange rate policy)

China Shock and Current Account

- What about the "China shock" $\Rightarrow$ the US current account?
  1. Large/broad productivity increase in China
  2. Major reduction in trade barriers
  3. Global savings glut (and perhaps exchange rate policy)

- We expect real exchange rate (relative wage) adjustment

China Shock and Current Account

- What about the "China shock" $\Rightarrow$ the US current account?
  1. Large/broad productivity increase in China
  2. Major reduction in trade barriers
  3. Global savings glut (and perhaps exchange rate policy)

- We expect real exchange rate (relative wage) adjustment

- Two disciplining equations:
  1. Intertemporal budget constraint $\longrightarrow$ on-impact jump in RER
  2. Risk-sharing $\longrightarrow$ future path of RER

China Shock and Current Account

- What about the "China shock" $\Rightarrow$ the US current account?
  1. Large/broad productivity increase in China
  2. Major reduction in trade barriers
  3. Global savings glut (and perhaps exchange rate policy)

- We expect real exchange rate (relative wage) adjustment

- Two disciplining equations:
  1. Intertemporal budget constraint $\longrightarrow$ on-impact jump in RER
  2. Risk-sharing $\longrightarrow$ future path of RER

- This allows for a one-time on-impact adjustment to the shock that ensures long-run balanced budget
  - Is it really the case in practice?

Simple three-equation model

From Itskhoki and Mukhin (2019)

- Risk sharing and intertemporal budget constraint:

$$\mathbb{E}_t\{\sigma(\Delta c_{t+1} - \Delta c^*_{t+1}) - \Delta q_{t+1}\} = 0,$$

$$nx_t = 2\hat{\theta} q_t - (c_t - c^*_t), \qquad b_0 + \sum_{t=0}^{\infty} \beta^t nx_t = 0$$

Simple three-equation model

From Itskhoki and Mukhin (2019)

- Risk sharing and intertemporal budget constraint:

$$\mathbb{E}_t\{\sigma(\Delta c_{t+1} - \Delta c^*_{t+1}) - \Delta q_{t+1}\} = 0,$$

$$nx_t = 2\hat{\theta} q_t - (c_t - c^*_t), \qquad b_0 + \sum_{t=0}^{\infty} \beta^t nx_t = 0$$

- Market clearing:

$$c_t - c^*_t = \kappa_a(a_t - a^*_t) - \kappa_q q_t$$

Simple three-equation model

From Itskhoki and Mukhin (2019)

- Risk sharing and intertemporal budget constraint:

$$\mathbb{E}_t\{\sigma(\Delta c_{t+1} - \Delta c^*_{t+1}) - \Delta q_{t+1}\} = 0,$$

$$nx_t = 2\hat{\theta} q_t - (c_t - c^*_t), \qquad b_0 + \sum_{t=0}^{\infty} \beta^t nx_t = 0$$

- Market clearing:

$$c_t - c^*_t = \kappa_a(a_t - a^*_t) - \kappa_q q_t$$

- **Result**: Random-walk shocks lead to a one-time adjustment

Simple three-equation model

From Itskhoki and Mukhin (2019)

- Risk sharing and intertemporal budget constraint:

$$\mathbb{E}_t\{\sigma(\Delta c_{t+1} - \Delta c^*_{t+1}) - \Delta q_{t+1}\} = 0,$$

$$nx_t = 2\hat{\theta} q_t - (c_t - c^*_t), \qquad b_0 + \sum_{t=0}^{\infty} \beta^t nx_t = 0$$

- Market clearing:

$$c_t - c^*_t = \kappa_a(a_t - a^*_t) - \kappa_q q_t$$

- **Result**: Random-walk shocks lead to a one-time adjustment
- ◦ Assumptions: flexible prices, no J-curve delayed adjustment, **flexible reallocation** (within and across sectors)

Simple three-equation model

From Itskhoki and Mukhin (2019)

- Risk sharing and intertemporal budget constraint:

$$\mathbb{E}_t\{\sigma(\Delta c_{t+1} - \Delta c^*_{t+1}) - \Delta q_{t+1}\} = 0,$$

$$nx_t = 2\hat{\theta} q_t - (c_t - c^*_t), \qquad b_0 + \sum_{t=0}^{\infty} \beta^t nx_t = 0$$

- Market clearing:

$$c_t - c^*_t = \kappa_a(a_t - a^*_t) - \kappa_q q_t$$

- **Result**: Random-walk shocks lead to a one-time adjustment
  - Assumptions: flexible prices, no *J*-curve delayed adjustment, **flexible reallocation** (within and across sectors)
- Not if there is endogenous transition dynamics — **this paper!**

Simple three-equation model

From Itskhoki and Mukhin (2019)

- Risk sharing and intertemporal budget constraint:

$$\mathbb{E}_t\{\sigma(\Delta c_{t+1} - \Delta c^*_{t+1}) - \Delta q_{t+1}\} = 0,$$

$$nx_t = 2\hat{\theta} q_t - (c_t - c^*_t), \qquad b_0 + \sum_{t=0}^{\infty} \beta^t nx_t = 0$$

- Market clearing:

$$c_t - c^*_t = \kappa_a(a_t - a^*_t) - \kappa_q q_t$$

- **Result**: Random-walk shocks lead to a one-time adjustment
  - Assumptions: flexible prices, no *J*-curve delayed adjustment, **flexible reallocation** (within and across sectors)

- Not if there is endogenous transition dynamics — **this paper!**

- Risk sharing condition in trade with China is perhaps violated

Simple three-equation model

From Itskhoki and Mukhin (2019)

- Risk sharing and intertemporal budget constraint:

$$\mathbb{E}_t\{\sigma(\Delta c_{t+1} - \Delta c^*_{t+1}) - \Delta q_{t+1}\} = 0,$$

$$nx_t = 2\hat{\theta} q_t - (c_t - c^*_t), \qquad b_0 + \sum_{t=0}^{\infty} \beta^t nx_t = 0$$

- Market clearing:

$$c_t - c^*_t = \kappa_a(a_t - a^*_t) - \kappa_q q_t$$

- **Result**: Random-walk shocks lead to a one-time adjustment
- ○ Assumptions: flexible prices, no *J*-curve delayed adjustment, **flexible reallocation** (within and across sectors)

- Not if there is endogenous transition dynamics — **this paper!**

- Risk sharing condition in trade with China is perhaps violated
  - Brunnermeier, Gourinchas & Itskhoki (2020) drop risk sharing to study growth trajectories under arbitrary path of CA

What about Labor Market Dynamics?

- Costs of switching ($C_{k,k'}$) are highly relevant for big trade shocks
  - but firms, or industries, or occupations, or geography?
  - perhaps, a stand-in for specific human capital

What about Labor Market Dynamics?

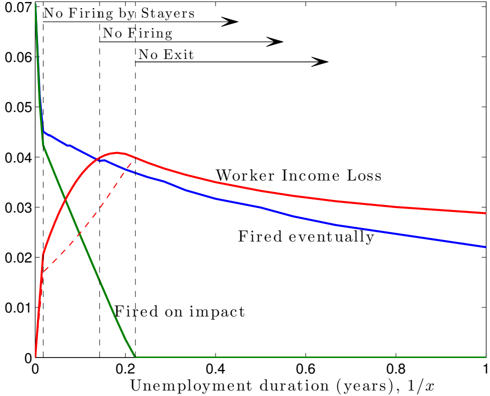
- Costs of switching ($C_{k,k'}$) are highly relevant for big trade shocks
  - but firms, or industries, or occupations, or geography?
  - perhaps, a stand-in for specific human capital
- DMP labor search frictions, perhaps, not as much
  - if duration of unemployment is only 4–6 months
  - one-time adjustment to a permanent shock

What about Labor Market Dynamics?

- Costs of switching ($C_{k,k'}$) are highly relevant for big trade shocks
  - but firms, or industries, or occupations, or geography?
  - perhaps, a stand-in for specific human capital
- DMP labor search frictions, perhaps, not as much
  - if duration of unemployment is only 4–6 months
  - one-time adjustment to a permanent shock
- Perhaps, downward wage rigidity or wait unemployment are more relevant than search unemployment in response to large trade shocks

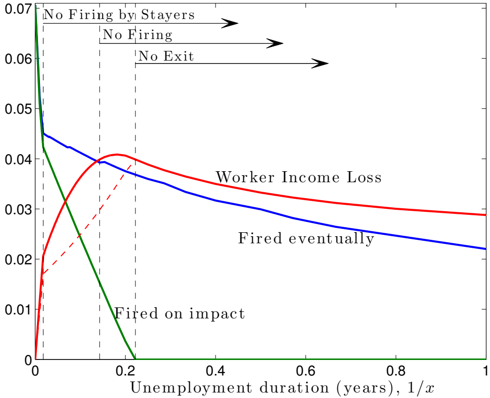
Labor Dynamics with Search Frictions

Itskhoki and Helpman (2016)



Labor Dynamics with Search Frictions

Itskhoki and Helpman (2016)



- Necessary ingredients (conclusion slide):
  1. Downward wage rigidity and inefficient separations
  2. Slow mobility across sectors ✓
  3. Slow firm entry and job creation (perhaps, causing CA deficits)