Trade Creation and the Status of FTAs - Empirical Evidence from East Asia

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Motivation and Research Question

Free Trade Agreements (FTAs) and Anticipation

- **Anticipation:** Do FTAs exhibit increasing trade flows before they become effective (Magee (2008))?
- **BTA vs MTA:** Do bilateral and multilateral trade agreements differ in this respect?
- Trade effects depend strongly on whether there is implementation in sight (Croce et al. (2004))
- **We focus on the trade impact of FTAs at different stages that East Asian economies participate in.**

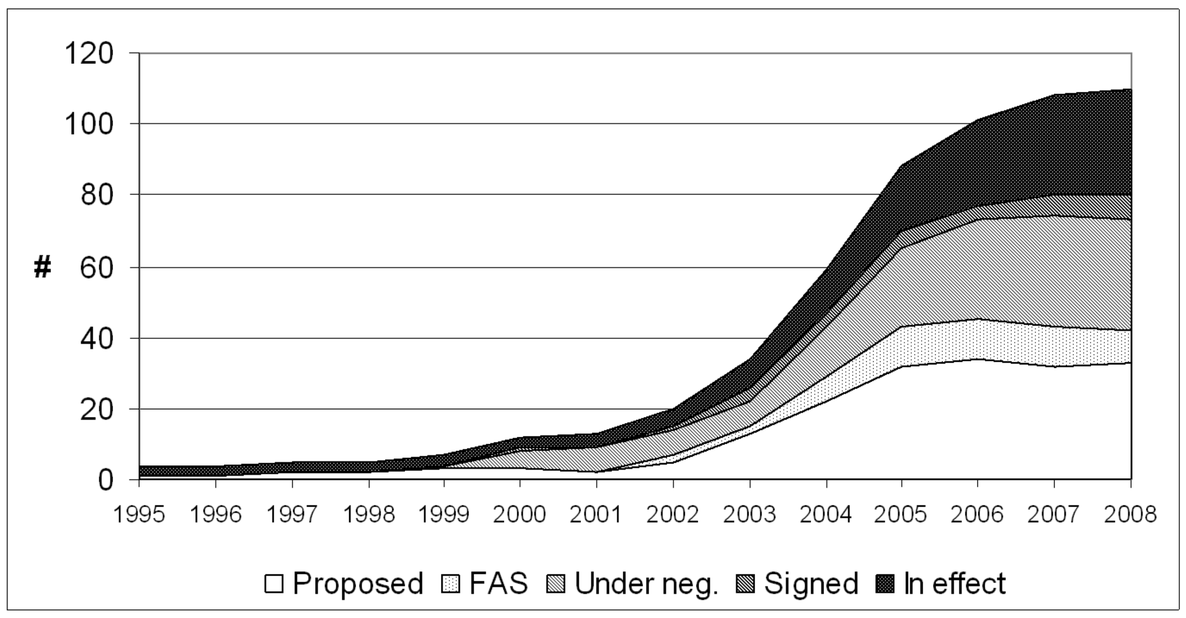
Evidence

- **Eichengreen and Irwin (1998)**: FTAs often phased in by less official agreements
- **Kose et al. (2004):** Increasing trade and financial flows before NAFTA implementation
- **Magee (2008):** Trade increases on average by 26% in the four years leading to an agreement
- **Elliott and Ikemoto (2004):** In the case of the ASEAN FTA, trade effects were more prominent before its implementation than after
- **Coulibaly (2006):** Other regional groupings (SADC, ECOWAS) also point towards positive effects prior implementation

East Asian Regionalism

Regional integration in East Asia is market- rather than institutional driven

- High level of economic interdependence ("Factory Asia")
- **But:** Revealed weaknesses during Asian crisis as a consquence of missing institutionalized integration
- Lack in FTAs prior 2000 and surge into trade initiatives since then
- Unique and detailed database on East Asian FTAs in its various stages by Asian Development Bank (ADB)



Source: Own illustration. Data based on ADB (2009).

Method - The Gravity Model

FTA Stages (I_{ijt}): 5 dummy variables denoting stage of implementation
$\Rightarrow$ *Proposed, Framework agreement signed, Under negotiation, Signed, In Effect*

Econometric Specification:

$$Trade_{ij} = \beta_0 + \beta_1 ln(\underbrace{Distance_{ij}}_{-}) + \beta_2 \underbrace{Border_{ij}}_{+} + \beta_3 \underbrace{Language_{ij}}_{+} + \beta_4 ln(\underbrace{GDP_{it} GDP_{jt}}_{+}) + \beta_5 ln(\underbrace{Pop_{it} Pop_{jt}}_{-}) + \beta_6 \underbrace{WTO_{ijt}}_{+} + \beta_7 \underbrace{I_{ijt}}_{?} + \epsilon_{ijt}$$

- Endogeneity demands for treatment with either IV- or fixed effects estimation. Weak instruments (e.g. Kaufmann indices) prevent us from using IV.
- Fixed effects estimation eliminitates all time-invariant correlation with the error term and thereby partly controls for potential endogeneity.

Model estimated via fixed effects Poisson (Santos Silva and Tenreyro (2006)) and Negative-binomial models due to

- Inclusion of zero trade flows
- Heteroskedastic error term
- Overdispersion in the data.

Data sources/summary

- **Trade flows:** IMF Direction of Trade Statistics
- **Distance-, Border-, Language-Dummies:** CEPII
- **GDP, Population:** IMF World Economic Outlook
- **FTA-Dummies:** Asian Development Bank - Asian Regional Integration Center

- Trade data for the period 1995-2007
- 13 intra-regional and 78 extra-regional trading partners for each East Asian economy: 15,379 observations

Results

Anticipatory effect exists with respect to bilateral FTAs

- **Bilateral FTAs:** Stage in which bilateral FTAs are close to being negotiated reflects highest and most significant effect (+39%)
- **Multilateral FTAs:** Effects less robust and often insignificant

- Bilateral FTAs take around 2.5 years to switch to the next stage, Multilateral FTAs almost 3 years
- Results highly sensitive to the econometric specification
- Data reveal overdispersion and heteroskedasticity in the error term

Conclusions

Positive trade effects before implementation of agreements

- Anticipatory trade effects dominate for bilateral agreements.
- Effects for bilateral FTAs more prominent as the realization of the agreement is considered more realistic and fruitful.

- Bilateral trade agreements correspond to a more rapid implementation process than multilateral initiatives.
- The actual depth of trade integration with bilateral agreements provides a more comprehensive coverage of goods than multilateral agreements.

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