E-Commerce Issues in the Free Trade Agreements Negotiations

Submitted by: Korea

Free Trade Area of Asia-Pacific Capacity Building Workshop on E-Commerce Elements in Free Trade Agreements and Regional Trade Agreements
Seoul, Korea
17-18 September 2019

E-Commerce Issues in the FTA Negotiations

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FTAAP CBNI E-Commerce Workshop

Sep. 17, 2019

Plan of Talk

- E-Commerce-related domestic laws
- Current State of RTAs with E-Commerce-Related Provisions
- Several Facts
- Cutting-Edge Issues
- Protection of Users of E-Commerce
  - Economic reasoning
- General Provisions
- Market Access
- Enabling E-commerce
- Looking Ahead

E-Commerce-related domestic laws

Type	Legislation	Draft	No Legislation	No Data
e-transaction	79	9	5	7
consumer protection	52	6	10	32
data protection, privacy	58	10	21	12
cybercrime	72	9	18	1

Source: UNCTAD, Adoption of E-Commerce Legislation Worldwide

# Current State of RTAs with E-Commerce-Related Provisions
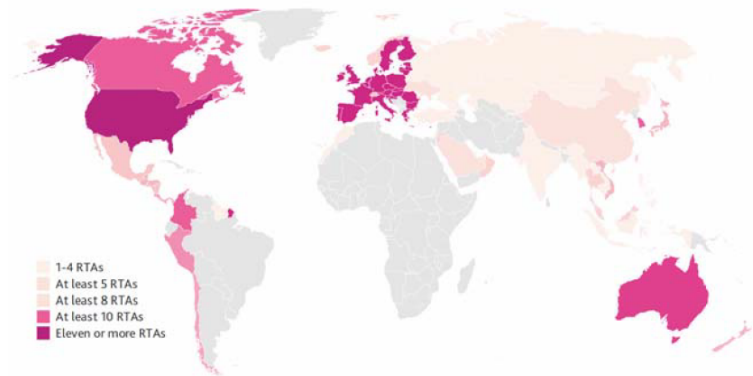
Fact 1: USA's FTAs

FTA	Year	Duties	Non Discr.	Data Flows	Localization	Source code
Morocco	2004	O	O	X	X	X
Chile	2004	O	O	△	X	X
Australia	2005	O	O	X	X	X
Barrain	2006	O	O	X	X	X
Peru	2009	O	O	X	X	X
Auman	2009	O	O	X	X	X
Korea	2012	O	O	△	X	X
Columbia	2012	O	O	X	X	X

Notes: Customs duties(Duties), non-discriminatory treatment(Non Discr.), cross-border transfer of information(Data Flows), data localization(Localization). O, △, and X represent, respectively, 'included', 'cooperation', and 'not included'

Fact 2: data localization measures
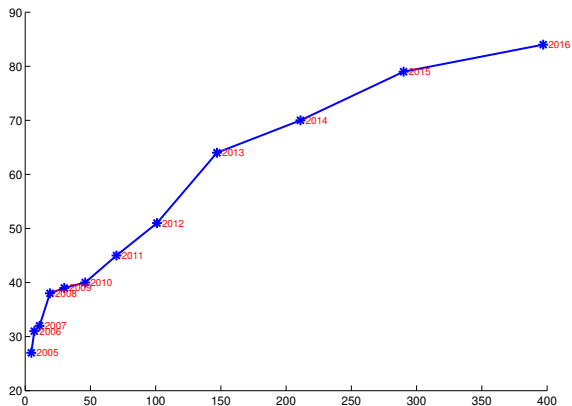
Notes: Author's calculation. The horizontal line represents terabits per second and the vertical line represents the number of data localization measures.

Fact 3: USMCA, CPTPP, KORUS

Provisions	USMCA	TPP	KORUS
Customs duties	19.3	14.3	15.3
Non-Discriminatory treatment	19.4	14.4	15.3
E-Authentication/Signatures	19.6	14.6	15.4
Online consumer protection	19.7	14.7	15.5
Cross-border transfer of info.	19.11	14.11	15.8
Personal Information protection	19.8	14.8	-
Location of computing facilities	19.12	14.13	-
Source code	19.16	14.7	-
Interactive computer service	19.17	-	-
Open government data	19.18	-	-

Source: Digital trade chapter 19(USMCA), Electronic Commerce chapter 14(TPP), Electronic Commerce chapter 15(KORUS)

Fact 4: digital trade environment
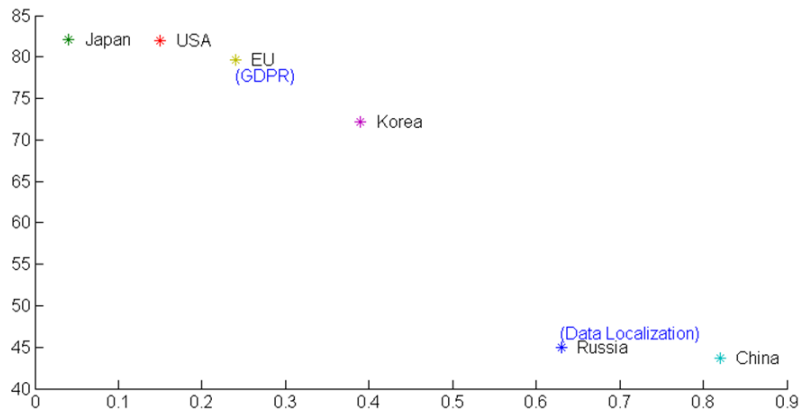
Source: Author's calculation by using ECIPE and BSA data

Cutting-Edge Issues

- Cross-border data flows
    - the ability to transfer data across borders is **vital** to the functioning of e-commerce
    - "shall allow the cross-border transfer of information by electronic means, **including personal information**, when this activity is for the conduct of the business of a covered person"
- Data localization
    - ex) some gov'ts require a copy of data stored within its territory
    - protecting citizens' data vs. protectionist policy
    - "**no party shall require** a covered person to use or locate computing facilities..."
- Treatment of source code

Protection of Users of E-Commerce

- Consumer protection
- Protection of Personal Information
    - **Many of the FTAs** include language **requiring** each party to take into account international standards and the criteria of relevant international bodies
    - **A few FTAs** have **weaker** language in which the parties simply recognise the need for such protection and/or employ the "shall endeavour" language
    - EU GDPR, APEC Privacy Framework
- Unsolicited electronic messages

Wait a minute: let's think

- Unlike many advanced countries, the EU effectuated the GDPR.
- Unlike many advanced countries and the EU, developing countries enacted data localization measures.
- Why do many advanced countries want free data flows unlike the EU GDPR and want to ban data localization measures?

❖ **Different position of Members on digital trade related issues**
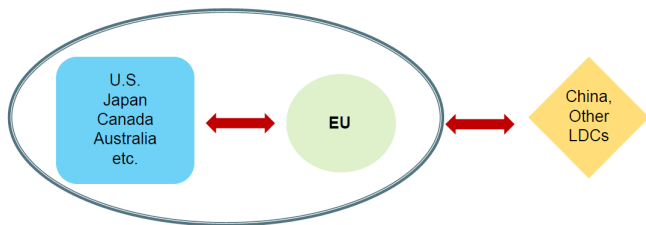
The EU General Data Protection Regulation

- The EU GDPR is effective on May 25, 2018 and applies to all firms processing the personal data of data subjects in the EU.

What is about?

The GDPR protects all EU citizens from privacy and data breaches

What to protect?

For example, age, sex, name, home address, ID numbers, income, web data location, IP address, cookie data, RFID tags, health and genetic data, biometric data, racial or ethnic data, political opinions, sexual orientation, etc

What is the goal?

It aims to achieve a higher institution quality by harmonizing data privacy laws across Europe

Data Localization measures

What countries?
China, Russia, Indonesia, India, many others (see NTE report by USTR)

Why?
To prevent or relieve increasing concerns of privacy violations and online security issues.

How?
Countries impose measures requiring data about a nation's residents that be collected, processed, and/or stored inside the country.

Key question and related literature

- What is the **welfare effect** of the EU GDPR? How about data localization measures?
  - both the EU GDPR and data localization measures can affect optimal pricing decisions of firms and ultimately welfares in trading partners!
- Welfare effects: in a quantitative model
  - Constantin et al.(2013): DSGE
  - Baur et al.(2014): CGE
  - **Mine(2018)** is based on a quantitative trade model with data regulation, which is sharply contrasted with above papers(at least in terms of methodology)

General features of new data regulations

Regulation/compliance/implementation costs
both the EU GDPR and laws including data localization measures

Fines as penalties
For example in the EU GDPR, (up to) 4% of annual global turnover or 20 million Euros(whichever is greater)

Fixed exporting costs
Building data facilities/servers within a country's terriory

(Math) Data regulation and firm's problem

The firm's max problem is

$$max_{p_{js}} \quad \Pi_{is}(p_{js}) \quad = \quad \underbrace{\frac{p_{js}q_{js}(p_{js})}{1 + f_{ijs}}}_{fines} \quad - \quad \underbrace{\frac{r_{ijs}x_{is}^{p}q_{js}(p_{js})}{z_{is}}}_{regul.\ costs} \quad - \quad \underbrace{x_{ijs}^{ex}\delta_{ijs}}_{fixed\ costs}$$

- f_{ijs}: fines imposed on exporting firm's revenue
  - facing risk of being fined penalited when it violates data regulation in country j
- r_{ijs}: frictions(costs) when complying data regulations
  - ex) man power
- δ_{ijs}: fixed exporting costs
  - ex) data facilities/servers
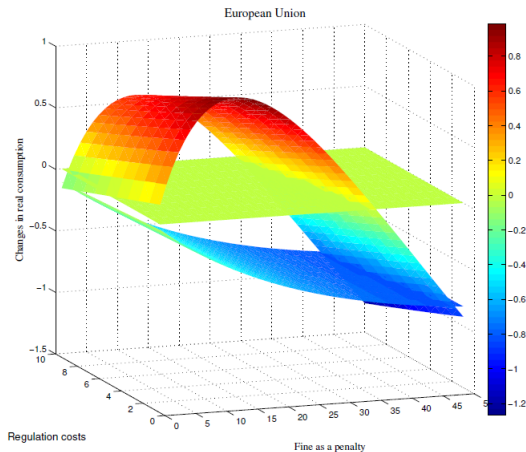
(Math) Welfare calculation

(**Equilibrium**) For given fines $\{f_{ijs}\}$, regulation costs $\{r_{ijs}\}$, and fixed exporting costs $\{\delta_{ijs}\}$, a trade equilibrium can be described by bilateral expenditure share at the sector-level $\{\pi_{ijs}\}$, sector-level expenditures $\{E_{is}\}$, sector-level revenues $\{R_{is}\}$, and aggregate income levels $\{Y_i\}$.

The **WELFARE** meausred in terms of real consumption is

$$Q_j = \left(Y_j + \frac{\sum_{i=1}^{N}\sum_{s=1}^{S}\rho^s \frac{f_{ijs}\pi_{ijs}}{1+f_{ijs}}\left(\alpha_{js}Y_j + \sum_{k=1}^{S}\gamma_{j,sk}R_{jk}\right)}{1 - \sum_{i=1}^{N}\sum_{s=1}^{S}\alpha_{js}\rho^s\frac{f_{ijs}\pi_{ijs}}{1+f_{ijs}}} \right) \frac{1}{P_j}$$

with $P_j = Y_j \prod_{s=1}^{S}\prod_{k=1}^{S}\pi_{jjk}^{-1}[R_{jk}E_{jk}^{\mu^s}B_k]^{-\frac{\alpha_{js}\tilde{\gamma}_{j,sk}}{\epsilon^k}}$.

Welfare effects by GDPR

Source: Author's calculation.

Welfare effects by data localization

Country	Changes in real consumption
Australia	-0.13%
Brazil	-0.18%
China	-0.70%
India	-0.36%
Indonesia	-0.57%
Japan	-0.11%
Korea	-0.36%
Russia	-0.26%
US	-0.04%
EU	-0.06%

Source: Author's calculation.

Explanations

- Data localization measures can create additional trade costs
  - which can be trade barriers for firms in trading parterns that rely on cross-border data flows.
- The EU GDPR aims to protect all EU citizens from privacy and data breaches, leading the EU to achieve a higher institutional quality by harmonizing data privacy laws across the Europe.
  - however, the EU's achievements by the GDPR may com mainly at a cost of trading parters consisting of non-EU countries.

General Provisions

- Definitions
  - Digital Product
  - Electronic authentication
  - Electronic transmission
  - Unsolicited commercial electronic message
- Non-discriminatory treatment of digital products
  - NT
  - MFN

Market Access

- Customs duties
    - By far, the most common provision found in FTAs with electronic commerce provisions is an obligation to not impose customs duties on digital products
    - ex) software, e-books, music, movies, etc
- Services

Enabling E-commerce

- Adoption of the UNICTRAL Model Law
- Electonic Authentication/Signatures
- Paperless trading

Looking Ahead

- FTAs are likely to remain the laboratories through which updated e-commerce rules evolve for the near future