Workshop on E-Commerce
Ministry of Economy, Turkey

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Concept of ‘digital economy’

* Data/telecommunication
* Cross border data flows
  — *ICT enabled delivery of services*
  — *Data generated and transmitted by goods*
* Over-the-top (OTT) services
* E-commerce
* Computer related services (CRS), consultancy services
* Digital products
Increasing importance of cross-border data flows

* E-commerce alone $1tn turnover; 3 times growth rate of China
* Half of services exports enabled by ICT
  — Practically replacing mode 1 & 2
  — Reducing investment requirements
  — Also goods via servification
* Internet responsible for one-fifth (21%) of GDP growth in developed economies in the last five years
* With 4 to 31% of services inputs being ‘data’
  — Exceeds inputs from energy
  — Barriers affect also manufacturing via productivity losses in financial, retail, logistics, communications
  — Dynamic effect via price increases, trade barriers, factor productivity losses, investment and R&D losses

* Considerable difference in data-center costs
  — 57% more expensive in Brazil
  — Economy of scale vs latency
## Data input intensity in production

<table>
<thead>
<tr>
<th>GTAP sector</th>
<th>Sector description</th>
<th>Data processing intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>communication</td>
<td>Post and Telecommunication services</td>
<td>0.318</td>
</tr>
<tr>
<td>obsict</td>
<td>Other Business and ICT services</td>
<td>0.069</td>
</tr>
<tr>
<td>fininsurance</td>
<td>Financial and Insurance services</td>
<td>0.050</td>
</tr>
<tr>
<td>machinery</td>
<td>Machinery and Electronic equipment</td>
<td>0.049</td>
</tr>
<tr>
<td>oconsumer</td>
<td>Other Consumer services</td>
<td>0.048</td>
</tr>
<tr>
<td>oservices</td>
<td>Public services, dwellings</td>
<td>0.040</td>
</tr>
<tr>
<td>distribution</td>
<td>Trade and Distribution services</td>
<td>0.037</td>
</tr>
<tr>
<td>water</td>
<td>Water and other Utility services</td>
<td>0.034</td>
</tr>
<tr>
<td>transport</td>
<td>Transport services</td>
<td>0.032</td>
</tr>
<tr>
<td>construction</td>
<td>Construction</td>
<td>0.024</td>
</tr>
<tr>
<td>othermanuf</td>
<td>Manufactures nec.</td>
<td>0.024</td>
</tr>
<tr>
<td>fabmetals</td>
<td>Metal products</td>
<td>0.020</td>
</tr>
<tr>
<td>nonmetmin</td>
<td>Mineral products nec.</td>
<td>0.014</td>
</tr>
<tr>
<td>lumberpaper</td>
<td>Wood and Paper products</td>
<td>0.014</td>
</tr>
<tr>
<td>energy</td>
<td>Coal, Petroleum and Gas production</td>
<td>0.011</td>
</tr>
<tr>
<td>transequip</td>
<td>Motor vehicles and parts</td>
<td>0.008</td>
</tr>
<tr>
<td>chemicals</td>
<td>Chemicals, Rubber and Plastic Products</td>
<td>0.008</td>
</tr>
<tr>
<td>bevtextcloth</td>
<td>Beverages/tobacco products; Clothing and leather products</td>
<td>0.007</td>
</tr>
<tr>
<td>metals</td>
<td>Ferrous metals and Metals nec.</td>
<td>0.007</td>
</tr>
<tr>
<td>primagrother</td>
<td>Primary agricultural products</td>
<td>0.007</td>
</tr>
<tr>
<td>procfoods</td>
<td>Meat, Vegetable oils, Dairy, Sugar and Food products nec.</td>
<td>0.006</td>
</tr>
</tbody>
</table>

Source: Author's calculations using BEA
Digital barriers

* Often internal, domestic discrimination against digital delivery
* Rather than a obvious case of non-national treatment
* Implicitly cover commercial and non-commercial activities
* Opaque regulations
  — Guidelines, circulars to unwritten practices
* Elements of anti-competitive behavior
  — Incumbents in telecom sector
  — Standard essential patents (SEPs)
* Often a ‘hard’ sensitivity
  — Privacy; national security concerns
  — Crisis and jobs narrative
* Non elastic or ad-valorem; weakest chain
* Anti-competitive practices
  — Bitpipe, VoIP, VPN
  — Net neutrality, zeroing

* Interconnection, termination fees?
  — WCIT proposals for new ITU ITRs
## Data privacy regulation

<table>
<thead>
<tr>
<th></th>
<th>Brazil</th>
<th>China</th>
<th>EU28</th>
<th>India</th>
<th>Indonesia</th>
<th>Korea</th>
<th>Vietnam</th>
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</thead>
<tbody>
<tr>
<td>Data localisation requirement</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Partial</td>
<td>Yes</td>
<td>Partial</td>
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<tr>
<td>Consent required for data collection</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Consent required for transfer to third parties</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Right to review</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Right to be forgotten</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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<td>Breach notification</td>
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<td>Yes</td>
<td>No</td>
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<td>Impact assessment</td>
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<td>Yes</td>
<td>No</td>
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<td>Data privacy officers</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Sanctions for non-compliance</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Government access required</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Data retention requirement</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
* Examples
  — Brazil: *Marco da Civil, Brazil* (article 12 withdrawn);
  — China:
    — Resolution relating to Strengthening the Protection of Information on the Internet;
    — Standardization Administration and the General Administration of Quality Supervision, Inspection, and Quarantine;
    — Notice to Urge Banking Financial Institutions to Protect Personal Financial Information;
    — MIIT ban on ‘collection of data without a purpose’
  — European Union: General Data Privacy Regulation (“by effect”)
  — Indonesia: *EIT Law, government regulation 82*
  — Korea: *Personal information protection act; prohibition of outsourcing of financial information*
  — Vietnam: *Decree 72*
  — Russia: Executive Order 2014
Effects on GDP (%)
Effects on exports (%)
Security regulations

* Regulation based approach vs risk based approach
* ‘Non-international’ cyber security standards
* Product screening
  — Proposals in China, the US on mainframes
* Encryption technology mandates
  — WAPI wi-fi encryption standard use obligatory in China
  — Despite existence of functionally equivalent and internationally accepted standard IEEE 802.11i
  — Ban, backdoor or escrows on encryption technologies
Content access, censorship

* Legal ban
  - Online gambling case
  - Yahoo LICRA case

* Network barriers to digital content delivery:
  - Religious, political and commercial blocking
  - Great Firewall of China; Golden Shield
  - ‘All countries censor’; Child pornography, IPR violations
  - Filtering requirement
    - Online content (e-commerce, news provision, audiovisuals)
    - Search engines (previews, outright blocks)
    - Mapping
  - Slowdowns
Next step

* License to operate
  — Internet Content Provider (ICP license); China
  — Decree 72; Vietnam
  — WTO (GATS art XIV) compliance
Disproportionate copyright enforcement?
  — Fair use?

Intermediary liability
  — Liability for content outside provider’s (ISP) control; caching, web platforms, services
  — Short notice and take down periods
  — Rule of law, strict liability (court order, means of appeal) for intermediaries
  — High sanctions
* Patents
  — Indigenous innovations
  — Standard essential patents (SEPs); antitrust enforcement in the EU/US
  — Merger concessions (Nokia/Microsoft; Motorola/Google)
E-commerce

* Conflicts with off-line licensing requirements
  — Conflicting with offline requirements; car-sharing vs taxis.

* Fulfilment
  — Bans on free delivery for online retailers; France.
  — Holdup at border; taxation purposes.

* Online payment
  — UnionPay monopoly; challenged in DSB
  — Restrictions on online payment intermediaries
Ownership restrictions
- Foreign equity caps; joint-venture requirements
- De facto/de jure on telecoms; bindings in GATS

Strategic industry or critical infrastructure designations
- Ex. telecoms; United States; DanOne; Dailymotion/Yahoo; France

Mode 4, business mobility
- Intra-corporate transferees
- Global market-driven standards on qualifications
Public procurement, local content requirement

* Non-openness (foreign business forbidden or not invited to bid)
  - Lack of binding liberalization in WTO GPA
  - Discrimination in the bidding process

* Security testing and nationality requirement
  - Requirement to give up IPR, source codes and other rights in public procurement
  - Multilevel Protection Scheme (MLPS)

* Local content or supplier requirement in public procurement
  - Local content requirement proposed in the private sector
    - 50% local content in value requirement for OEMs (Nigeria)
    - Preferential Market Access Regulation (India)
* Discriminatory standards on goods common across the board
  
  — Discrimination in product safety standards and certification for digital goods/services (processing time, application)
  — Local non-market standards where global standards exists
  — Non-participation of foreign firms in standard setting

* EMC/EMI in WTO

* Mobile chargers

* CCC
Fiscal & quantitative measures

* Tariffs
  — *At least additional 17% more coverage*
  — *Trade defense, rules of origin*

* Levies
  — *Copyright levies on storage media; extended to laptops and mp3 players*
  — *Reversed VAT sales rules, registry requirement ‘web tax’; Italy*

* Export restrictions

* Corporate taxation
  — *Base erosion and profit shifting (BEPS); OECD*
OECD admits ‘no evidence of base erosion’
No correlation between corporate and income taxes
Not a novelty introduced by the internet, but cross-border trade in services
‘Digital presence’ – de facto abolishing mode 3
Corporate tax revenues in OECD

FIGURE 1. CORPORATE INCOME TAX REVENUE AS % OF GDP (OECD COUNTRIES, 1965-2011)

Source: OECD, 2013.
Fiscal measures (cont’d)

* State subsidies
  — Direct support, semiconductor race of the 1970s
* Moving towards discriminatory tax credits, R&D funding
* Export credits
  — Threat of the first ex officio CVD case against China on telecom equipment
  — OECD agreement; US/China negotiations
ECIPE-DTE: Digital Trade Estimates

* Mapping barriers to digital trade in over 60 countries
  — Near all TPP, TISA and EU FTA counterparts
  — All measures catalogued and listed
* Raising awareness for barriers to digital trade; creating a solid tool for trade negotiators to identify priorities
* A restrictiveness index (DTRi)
W(h)ither the *digital* Europe?
Europe’s legislative packages

* From Digital Agenda 2020
  - Roaming ban
  - Fixed line Spectrum harmonisation
  - Net neutrality
* Connected Continent, 2013-2015
* General Data Privacy Regulation (GDPR), 2013
* Digital Single Market (DSM), 2015-
* Review of the entire telecom framework, 2016-
* A ban on roaming charges or mandatory basic roaming allowances
  — Introduction of price caps
* Spectrum harmonization abandoned
  — Pascal Lamy report on spectrum usage
* Net neutrality
  — Competition policy vs legislation
  — Exceptions
    — Cyber security?
    — Legal obligations (illegal content, IPR violations)?
    — ‘Traffic management’ and network congestion?
General Data Privacy Regulation

* Horizontal treatment of all data types
  - Applying to all data controller/processor or subjects in EU
  - Extraterritorial application

* Harmonized enforcement; One stop shop

* Explicit consent

* International transfers
  - Adequacy ruling, i.e. equivalent
  - Binding corporate rules or contract clauses

* Data protection by design and default

* DPIA, breach notification, and sanctions (2% global turnover)

* Right to be forgotten
Assumptions behind the DSM

* Fragmentation factors
* Platform ‘abuse’ or ‘dominance’
* Concerns of non-copyright related violations
* Privacy, security and hate speech: Precautionary principle?
* “0.5% increase in GDP”
* Jurisdiction?
  — Jurisdiction one stop shop; ‘home option’ – whose home?

* Legal harmonization?
  — Copyright, Audiovisuals
  — VAT

* Access issues
  — Data localization?
  — Geo-blocking

* Competition
  — Platform neutrality and transparency

* Other legislative acts
  — Cloud regulation & cyber security guidelines
  — Data privacy
External agreements

* Model text in Korea, Singapore, CETA
  — *IP chapter: Direct transposition of e-commerce directive*
  — *Free flow of data for financial services (uni/bi-directional)*
  — *GATS XIV exceptions*
* TTIP
  — *Safe Harbor negotiations*
* TISA
  — *Exceptions*
* Other FTAs?
  — *Japan*
Determinants for EU trade policy

* An entirely new dynamic between COM/EUMS/EP
* Member States’ policy objectives
  — EU demandeurship of TTIP
  — Sensitivities, expressed in TTIP; EP positions
* Internal sequencing
  — GDPR vs TTIP
  — DSM
* Internal hierarchy/portfolio division between external trade, industry, justice, intelligence?
Digital trade policy

* Internet – more than Google, Facebook & Amazon
  — *E-commerce still exceeds car manufacturing in GDP contribution*

* Hapless post-war model of EU industrial policy
  — *Fostering national champions*
  — *Picking winners through public investment*
  — *Emphasis on export-led manufacturing*
  — *Business environment missing*

* Productivity aspects
  — *Constant labor productivity gap against the US ~10%*
  — *Attributed to better use of ICT*
Delinking security, trade
- Bi-partisan support for industry stance on cyber security
- China policy, US-China BIT
- No WTO cases raised against online censorship; IPOs, Alibaba.com
- Network equipment

Privacy continues to be a commercial/contractual issue

Net neutrality
- FCC proposal of Chairman Tom Wheeler
- Reclassification of internet services to telecommunication operators under Title II
US Trade Policy

* Priority on TPP
  - Geopolitical imperative
  - Business priority – growth potentials, market access value
  - “21st century standards”

* Less urgency on TTIP
  - Business lacking interest
  - Europe sufficiently open, or asks are beyond redlines
  - Other means to address concern in DSM/GDPR?
  - Sequencing of the negotiations – from TPP, TISA to TTIP

* Emphasis on data localization; cross-border data flows
“Secure and controllable”

— detailed action plans requiring Chinese banks to ensure that 75% of their ICT products are “secure and controllable” by 2019.

— Foreign business unable to meet criteria unless they surrender key technologies to Chinese authorities

— Source code, encryption algorithms, increase substantially their manufacturing and research facilities in China, and implement Chinese standards

— Concerns for back doors and vulnerabilities
Chinese telecom markets

* World’s largest 4G deployment
* Four major MNOs are SOEs
* Tier-1 cities more ‘online’ than Europe
* ‘Secure and controllable’ – expanded to telecoms
  — Security testing on critical software and hardware
  — Mandatory security commitment with SOEs
  — Telecom industry must implement "national cybersecurity review regime", which targets both foreign and local ICT products and services for security risks.
China’s trade policy objectives

* Services accounting for 43% GDP
  - En par with Cambodia, Laos
  - Mostly retail related services, construction

* Employment imperative
  - Less than 40% of employment coming from services
  - 20 million new jobs must be created annually

* Insufficient capital and technology inflows from ASEAN and SARs/Taiwan
  - Technological glass ceiling
  - Mofcom planning to expand services to 20% of trade
* Question not if China opens up
  — *But when, where and to whom.*
  — *East & West strategy – CJK, EU, TISA*
  — *US-China BIT, FTAs with NZ/Australia/CH*

* Unilateral reforms, FTZs
  — *Wholly-owned e-commerce*
  — *Lifting of censorship on Facebook?*
The Asia-Pacific

* Korea
  — Online identification requirement
  — Content access issues: Online filtering, national security on DPRK
  — ‘The Interview’, attacks on credit institutions, ‘defamation’ of Pres. Park
  — TPP; China bilateral; CJK

* Japan
  — Increasingly offensive interests on services and investments
  — TPP; EU-Japan FTA

* Australia
  — TPP
  — EU PNRs
  — Huawei
Using trade as a remedy

* No California effect
  — 14% of EU services trade with adequate countries

* Few international standards
  — Different views on legal prescription
  — Council of Europe Cybercrime convention (51 countries)

* Proliferation on MLATs but mutual legal assistance not working
  — Dual criminality, different views on safeguards and proportionality
  — DOJ, Microsoft, Ireland

* Localization or extraterritoriality
  — Trade agreements used to address localization or extraterritoriality issues
Brazil, Russia, India not part of any geometry that would force it to open up
   — Different reasons for their sensitivities
* Data flows likely to remain a political sensitivity for foreseeable time
   — Both commercial and security reasons
   — The real pivot is the German shift in attitudes
* Digital barriers leverage for intelligence co-operation
* Pillars of economic governance