Fostering an Enabling Policy Environment for Data-Utilizing Businesses: AI, payments, encryption, and accounting/tax services

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The Information Technology and Innovation Foundation (ITIF)

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Overview

- Payment Services and Digital Trade
- Encryption Services and Digital Trade
- Electronic Invoices and Digital Trade
- Artificial Intelligence and Digital Trade

Conclusion:
- From the Firm and Policymaker’s Viewpoint
- For the Future of Digital Trade Policy
Paytm  GO-PAY  true money wallet  Mynt  toss

Payment Services and Digital Trade

- Tech and market changes: Incumbent payment services vs. fintech.
- Firm A: U.S.-based global multinational financial services firm.
- Payment services and digital trade are inseparable: but restricted.
  - ITC survey: 23 percent of 2,200 MSME respondents from more than 100 economies identified e-payment services as a major obstacle.
Payment Services, Data Use/Flow, & Barriers

- Data is central: payment networks clear and settle transaction information, not funds.

- Data restrictions on a sliding scale of impact
  - Mirroring of data => full and only local data storage => local data processing and routing.
  - Acts as market barrier & discriminates against foreign firms, especially SMEs.

- E.g. Indonesia, Russia, India, Viet Nam, and elsewhere.
Impact of Restrictions on Payment Services Data

- Limits use of globally distributed data analytics platforms
  - Cost/technical feasibility of pulling down global platform to local IT ecosystem.

- Impacts:
  - Less innovation: Firm A uses diverse data sets to drive innovation.
  - Security risks: Firm A needs global data to fight money laundering & fraud.
  - Lower firm competitiveness and economic productivity:
    Prevents access to best and lowest cost provider.
Digital Trade and Encryption: An Overview

- Encryption is ubiquitous to digital trade:
  - It protects security/confidentiality of data and services.
- Firm: U.S.-based Virtru provides client-side encryption services.
- Protection, flow, and use of data is critical to Virtru’s business model.
Digital Trade and Encryption: Policy

- Constructive policy: Economies require firms use “technical measures” to protect sensitive data to mitigate data protection concerns.
  - E.g. European Union’s GDPR, health & payment data in United States.

- Policy that undermines encryption:
  - Local key & data storage, source code disclosure, backdoors/tech assistance, & discriminatory licensing.
  - Undermine core functionality and integrity/security of encryption services.
Electronic Invoicing (EI) and Digital Trade: Overview

- Many benefits to EIs:
  - Support traditional/digital trade. E.g. more efficient ‘factoring.’
  - Efforts to combat fraudulent activities and improve tax and other business services.

- Firm: Chile-based GoSocket
  - Uses cloud-based services to operate across Latin America.
  - Over 20,000 firms processing 5 million EIs daily.
Electronic Invoicing: Legal/Regulatory Issues

- EIs involve data, data flows, and cybersecurity issues.
  - E.g. e-signatures and certificates to certify parties and protect integrity/security of EIs.

- Economy-specific technical requirements undermine cloud-based EI services.
  - Brazil: Use of local tech standard and local IT services for e-signatures.
  - Mexico: Until recently, required local storage of digital certificate, which equals de facto data localization.
Electronic Invoicing: Impact and Solution

- Mexico made the smart correction:
  - Allowed providers to use cloud-based hardware security modules, which use best-in-class, audited/certified cybersecurity measures.

- GoSocket example shows:
  - Behind-the-border technical measures can act as barrier to cross-border data flows, service provisions, and use of best-in-class security tools.
  - Need for holistic assessment and cybersecurity expertise in policymaking.
AI and Digital Trade: The Firms

- Mindbridge Ai is based in Ottawa, Canada.
  - Uses AI/ML to investigate/audit past activity, detect active inadmissible behavior (e.g., fraud), and prevent potential transgressions.

- Pondera Lab is based in Mexico City, Mexico.
  - Uses AI/ML to help firms and government agencies use AI to better organize, analyze, and visualize data to help make better business decisions.

- Certn is based in Victoria and Toronto, Canada.
  - Uses AI/ML to help clients analyze prospective customers, employees, and renters.
Use of Data and Key Data-Related Policy

- As Certn put it: “business is data.” Same for all.
  - But for each firm, the source and use of data is different.
  - Collected or provided or mixed data sets; structured vs. unstructured; hosted on home cloud services or access provided to client’s data provider.

- Two sets of rules that affect use of AI for digital trade:
  - the rules on data; and
  - source code protection.
AI and Data Privacy/Protection

- Key point: Privacy regulations are central
  - All firms carefully consider data-related laws before entering a market.
  - Mindbridge Ai = built to “high watermark” of EU GDPR, in part, due to threat of major fines.
  - Certn = made up-front investment to help it be GDPR compliant. Also has to abide by province-level data localization in Canada.

- Firms (like Mindbridge Ai) operate from cloud services in key markets (Canada, US, and EU).
AI and Digital Trade:

- Privacy/data protection is competitive advantage.
- Formal laws only one piece of the puzzle:
  - Clients use contractual law to ensure additional legal protections:
    - E.g. where to store data and how to manage access to the data.
  - Firm itself demands additional steps above and beyond the law:
    - E.g. Additional technical and administrative controls.
    - E.g. Third-party auditing/certification services.
Protecting AI

- Source code of AI/ML is susceptible to exposure and theft.

- Multiple methods:
  - Source code protections (domestic laws, trade provisions (USMCA));
  - The use of strict contractual arrangements;
  - Strict control over AI development process; and
  - The use of technical and administrative controls to manage access and use.

- Many firms: refuse to enter and upload AI systems to cloud service providers in certain markets due to risks.
Conclusion: From the Firm’s Perspective

- The optimal scale of a digital firm is global.
  - E.g. AI systems were designed for the cloud.

- Importance of economies of scale to digital businesses.
  - Core vs. non-core markets: Firms weigh up cost and complexity involved in tailoring (often global) IT systems for local conditions.
  - Sum of multiple minor regulatory differences/changes can add up and equal major barrier to digital trade.

- Unnecessary/overly restrictive artificial barriers prevent this.
  - Impact can be direct and indirect (customer risk aversion).
Conclusions: For Policymakers

- Policymakers challenge:
  - Grasping the challenges of today’s data/AI-driven economy.
  - Understanding technology and intersection with policy issues.
    E.g. Data localization ≠ data security. Data protection can flow with data.
  - Identify policy best-practices and the need to balance competing goals, such as consumer privacy, productivity, and innovation.
    E.g. APEC’s CBPR ensures data protection flows with the data, wherever it is stored.
    E.g. Policies that encourage firms to use encryption and cloud-based cybersecurity measures.
Overall Conclusions for Digital Trade Policy

- The critical role of data and digital technologies and services.
- Future of trade policy:
  - Central role of data means future trade policy will likely focus on these points of friction and/or bridges for interoperability.
  - Potential for long-term divergence: Interoperability vs. fragmentation.
  - Which norm prevails will play a part in determining the impact of AI and other data-driven technologies in driving economic productivity and innovation.
Thank You!

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