DIGITAL OPPORTUNITIES FOR SPS SYSTEMS AND THE TRADE FACILITATION EFFECTS OF SPS ELECTRONIC CERTIFICATION

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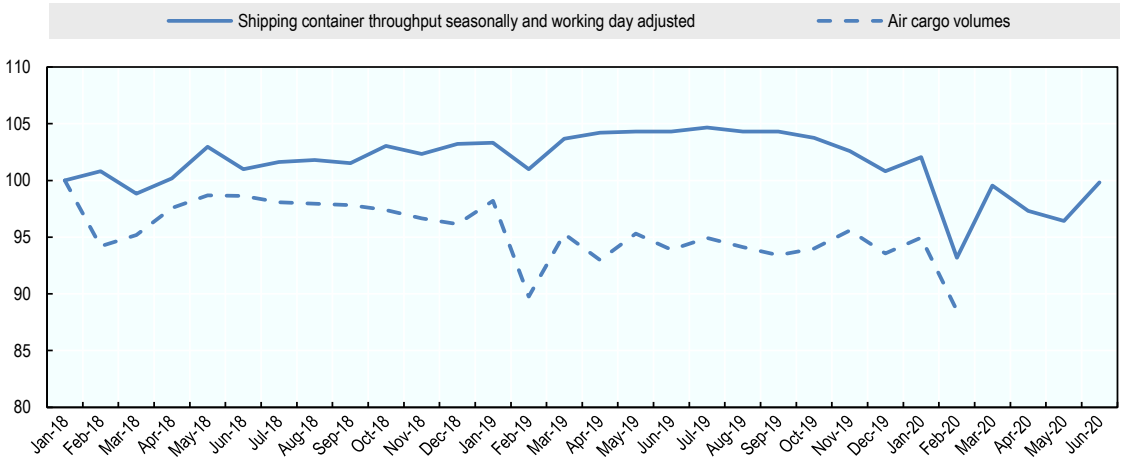
Background

- Digital technologies offer ways to achieve efficiencies within each of the three stages of the SPS regulatory framework:
  - **Risk assessment,** e.g. OIE World Animal Health Information System
  - **Risk management,** e.g. STDF regional pest detection framework
  - **Product movement and compliance verification,** e.g. SPS e-certification systems
- Given rising trade volumes and the risk of trade disruptions, countries and businesses are prioritising these technologies
- This paper examines:
  - Trends in country use of these digital technologies
  - The potential for these technologies to create additional efficiencies
  - The challenges and conditions associated with the expanded use of these technologies

Digital technologies and COVID-19

- Digital SPS technologies (most notably e-certification) are helping to minimise the effects of trade disruptions due to COVID-19
- E-certification reduces the need for personal contact and the exchange of paper certificates, making it easier to adjust to travel and contact restrictions
- Many countries have made time-bound exceptions to SPS verification requirements, including switching to electronic documentation
- Countries are exchanging ePhytos in greater numbers – 45,351 in Aug 2020 (up from 7,992 in Dec 2019)



Source: OECD, drawing on data from Innovative Solutions in Maritime Logistics (www.isl.org/en/containerindex) and International Air Transport Association (www.iata.org). (Accessed October 2020)

Key trends in digital technologies

- Digital technologies are mostly used in SPS systems in relation to product movement and compliance verification (stage 3)
- Countries are advancing e-certification through bilateral, plurilateral, and multilateral channels
- The exact number of active e-certification systems continues to evolve
- E-certificates for plant products are used more widely than animal products
- Completely paperless exchanges are not yet commonplace, but do exist between some trading partners (e.g. Australia and New Zealand)
- There is an opportunity to push for greater adoption of digital technologies in the context of the response to COVID-19

Three sisters: approaches to e-certification

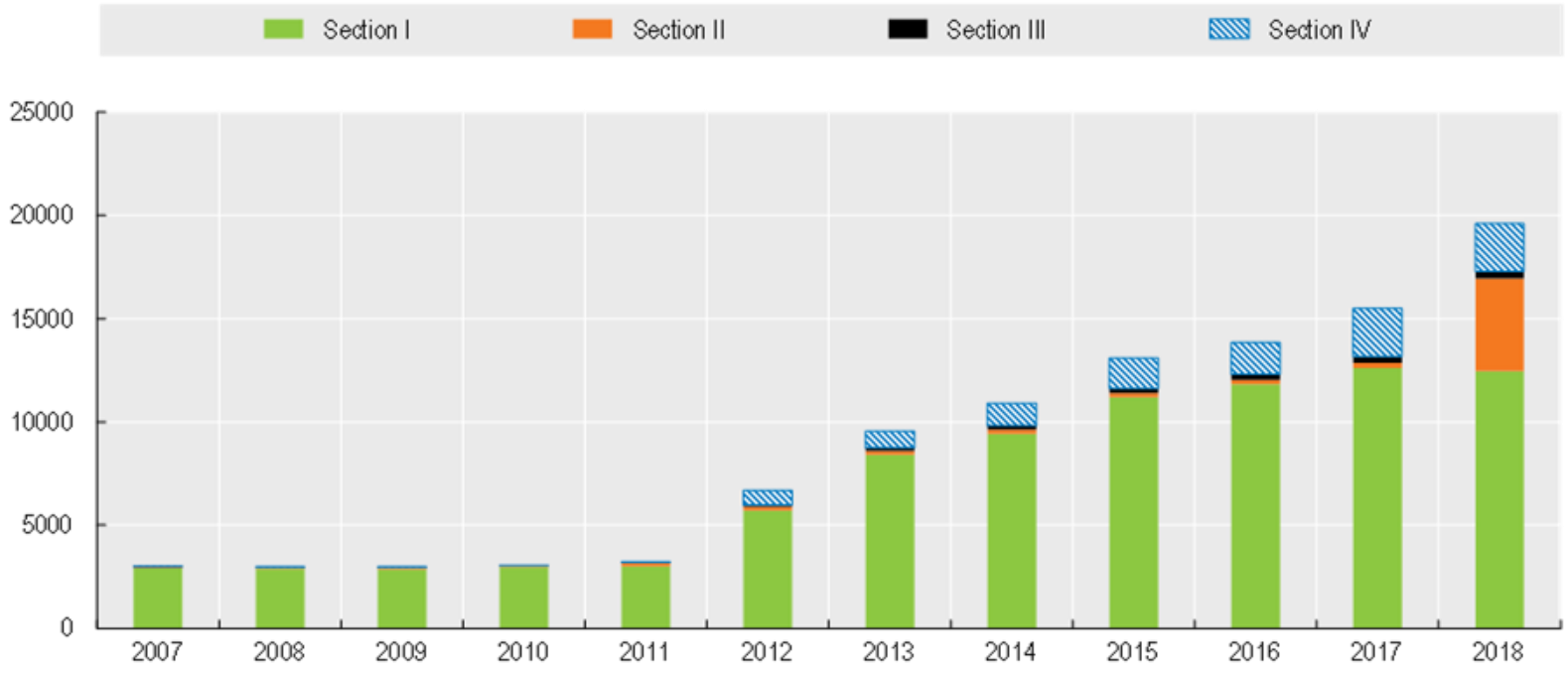
- The IPPC, OIE, and Codex Alimentarius Commission have to date taken different approaches to e-certification within SPS systems:
  - **IPPC:** Guidelines for phytosanitary e-certification issued in 2017, established multilateral exchange of phytosanitary e-certificates via the ePhyto Hub
  - **OIE:** Developed *Terrestrial Animal Health Code* Article on e-certification for animal health in 2014, managed STDF project on a framework for e-veterinary certification
  - **Codex:** Established electronic working group (EWG) in 2016 to consider e-certificates, proposed guidance on paperless e-certificates currently under consideration
- There is scope for cooperation among the three organisations, especially in harmonising the exchange of e-certificates through XML messages

Potential for greater efficiencies

- Increased security and reduced processing time
  - Digital technologies enable risk-based and risk-proportional SPS systems
  - Avoids uncertainties of paper-based analogue systems, including risk of delays
  - Estimated savings from switch to paperless trade: annual export gains of USD 257 billion, 44% reduction in export time, 33% reduction in export costs (STDF, 2017)
- Fast and trusted flow of data
  - Helps to build trust and reduce transaction costs
  - Highlights new solutions for least trade restrictive measures
  - Enables better SPS service design, delivery, and oversight
- Greater equity, inclusion, and access within international trade
  - Helps overcome duplicative, costly, and inefficient SPS processes
  - Supports developing countries to participate in trade system
  - Reduces barriers for SMEs, may contribute to increased gender inclusivity in trade

Rapid rise of e-certificates in agriculture & food trade

Count of bilateral flows HS 6 covered by e-certification



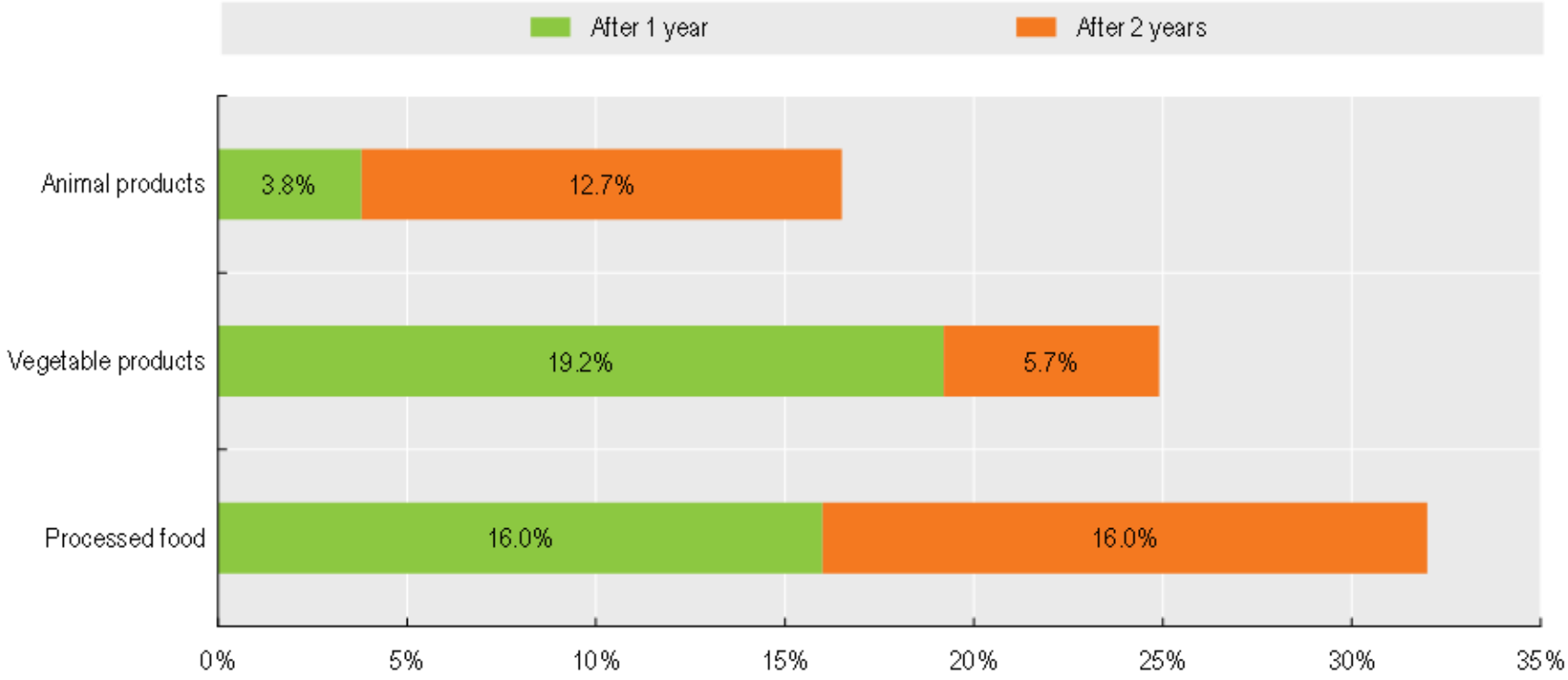
Source: OECD estimates.

Section I: live animals, animal products (HS chapters 1-5); Section II : vegetable products (HS chapters 6-14); Section III: animal or vegetable fats and oils (HS chapter 15); Section IV: prepared foodstuffs, beverages, spirits and vinegar, and tobacco (HS chapters 16-24).

Does it matter?
Estimating trade effects of e-certificates

- Gravity model to quantify effects of electronic certificates on bilateral trade volume and value
- Among others, variation in bilateral trade volume or value is explained by:
  - Changes in tariffs and regional trade agreement participation
  - Two lag variables indicating the effects of e-certificates one and two years after their implementation
- 2007-2018 bilateral trade flows data at the six-digit level of the Harmonized System (HS6) from BACI database (CEPII)
- Electronic certification data was collected for this project from responses sent by several jurisdictions to the OECD Secretariat in August 2020
- More recent data would be nice to have

Export values increase from implementing SPS e-certificates – with a time lag



Source: OECD estimates.

Estimating e-certificate trade facilitation

- Electronic certificates have a positive impact on bilateral trade value and strong market-creation potential
- Findings for vegetable products show value of central platforms:
  - Leverage central platforms (such as the IPPC ePhyto Hub) to further decrease information asymmetry and trade costs
- Future research could focus on:
  - Including more recent data when it becomes available
  - Assessing trade-off for SMEs between investing in e-certificates systems and benefitting from larger trade value revenue

Challenges and conditions

- Digital technologies require careful planning, analysis, and investment
  - Technically complex process to adopt digital technologies within SPS systems
  - Existing systems must be mapped, and must remain operational during implementation
  - E-certification relies on country expertise and sustainable long-term funding
- Need for a clear and enabling legal framework
  - E-certification must have the same value as traditional paper certificates
- Capacity and capability to adopt digital technologies is mixed
  - Expertise and familiarity with digital tools (e.g. e-certification) is not always widespread
  - Sharing case studies and technical expertise can help
- Digital technologies can give rise to trust concerns regarding data
  - Countries and organisations must consider trust, privacy, and data security safeguards

Recommendations and conclusions

This paper recommends that countries:

- Identify their automation needs within SPS systems and consider the appropriate expansion of digital tools
- Consider the elements needed to support this expansion, including:
  - Careful planning and analysis
  - Building capacity in the use of digital technologies
  - Accessing dependable long-term sources of funding
  - Interoperability and equivalence
- Examine the increased use of these technologies in response to COVID-19
- Continue to exchange best-practice guidance regarding the use of these digital technologies to develop a shared pool of expertise
- Examine the potential for further harmonisation between countries and international organisations using these technologies

For more information

OECD (2021), "Digital opportunities for Sanitary and Phytosanitary (SPS) Systems and the trade facilitation effects of SPS Electronic Certification", *OECD Food, Agriculture and Fisheries Papers*, No. 152, OECD Publishing, Paris, https://doi.org/10.1787/cbb7d0f6-en.

THANK YOU

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