

By Peter F. Cowhey

Abstract: *The NAFTA trade partners agree on the need for new provisions to address the expanding digital economy. But a super-charged, fast-track trade negotiation could restrict the talks to a narrow agenda championed by U.S. companies. Instead, negotiators could use NAFTA as a launching pad for broader global digital economy measures. Information and production disruptions are changing the way that all industries innovate and compete, requiring an expansion of the scope of trade policy innovations.*³

The Trump administration wants to revamp trade agreements to strengthen U.S. manufacturing and commodities. Achieving this goal will require implementing an ambitious agenda for revolutionary digital technologies essential to sustaining high value-added manufacturing and commodity production. Given NAFTA's integrated production system, the United States, Canada, and Mexico all need to embrace a global digital agenda.

Continuing dramatic advances in information and production technologies are modifying the dominant global model for innovation.⁴ Today's innovation model is anchored by the Silicon Valley model, which relies on specialized startups, venture capital, and the use of global production chains. It especially focuses on information and communication technology (ICT) and biotechnology.

Information and production disruptions promote the evolution of digital platform clusters that are more geographically widespread than the Silicon Valley model, partly because they are transforming innovations and business models in older sectors ranging from automobiles to sophisticated building climate-control systems (which package climate and energy analysis systems with their hardware). Digital inputs are averaging about 25% of the value of U.S. manufacturing products already. The economics of commodity markets,

³ For further exposition see: Peter F. Cowhey and Jonathan D. Aronson. 2017. *Digital DNA: Disruption and the Challenges for Global Governance*. New York: Oxford University Press.

⁴ The drivers of disruption include the dramatic drop in info tech and broadband costs, the rise in the internet of things, the use of machine learning and artificial intelligence to increase the value of Big Data, and the rise of modular (standardized, easy to use) technology interfaces with the expansion of open-source software that can be blended freely into new products. Breakthroughs in production include additive manufacturing, robotics, and new smart materials with sensors.

such as those of oil fracking and agriculture, have also changed due to digital technology innovation.

Underlying the platform clusters are digital tools (i.e., software operating systems) and common capabilities provided to diverse pools of customers, audiences, and related product suppliers that vary in their complexity and cost to duplicate. The tools are continuously updated because they are digitally intensive and rely on user feedback and big data. The “store”—exemplified by Amazon and Apple—is one tool that opens new ways to organize global markets for specialized information applications and physical goods. Digital tools also enable new forms of financing. (Crowdsourced project funding is less biased geographically than traditional venture capital funding.)

Smaller firms, the drivers of employment growth, are especially empowered because the costs for start-ups of information and communication hardware, software, and personnel dropped as much as 70 percent or 80 percent between 2000 and 2012. ICT inputs became easier to maximize and turned ICT into the largest, value-added input for many traditional goods, from key-making kiosks to auto systems. Platform strategies allow smaller specialist firms to integrate sophisticated physical goods with IT analytics to pioneer new products such as wireless medical devices, thereby bolstering the business case for product innovation because information derived from products can generate collateral revenues.

Start-ups, especially for consumer products, are introducing novel business models as they substitute an experimentation and discovery model for the traditional development and marketing model. Digital platforms increase the significance of “user interaction,” which propels firms to globalize more rapidly to gather data to differentiate products according to local patterns of use. Together, these changes permit more product customization to the tastes of specific groups of consumers and allow more cost-effective alteration of product specifications (including local customization), even on a global scale.

Short-term Policy Strategies

Older trade agreements such as NAFTA seldom addressed possibilities raised by digital innovation. Revisions should address the use of industrial policies to block global data flows and transnational access to cloud infrastructure and the misuse of competition policy as a digital trade barrier. A minimum agenda for NAFTA should affirm:

1. The freedom to choose the location of cloud ecosystem infrastructure for services and the right of foreign firms to provide a service by accessing their own business data across national borders. (The freedom of cross-border information flows also is required).
2. The freedom of suppliers to locate infrastructure wherever they wish without local presence requirements. (The use of large global cloud hubs located in another country should be permitted). Discrimination against electronic delivery of services, including software, and quantitative limits on the number or volume of services delivered should be banned and cross-border payments for services, subject to prudential regulation, should be permitted.
3. The right of customers to use extraterritorial suppliers of services via public telecommunications networks. Government policy also should respect technological neutrality in the delivery and technical organization of a service.
4. The use of international standards for encryption technology and the right of firms to use encryption for commercial purposes that qualify as “data controllers” within rules on a trusted digital environment (discussed below) should be recognized.

Two additional items are important for specialist, smaller firms.

1. Extend the World Trade Organization’s International Technology Agreement (ITA) to further cover innovation-intensive industries. Since the 2015 revision of the ITA, the spread of digital platforms makes more industries ripe for coverage.
2. Negotiate the highest possible standards of liberalization for products that cross the traditional boundaries between a good and a service. Allow smaller firms to produce and then ship specialized manufactured products produced by a 3-D printer across national boundaries or to transmit the design to a 3-D printer at a subsidiary, the customer, or an intermediary in another country.

Long-term Policy Options

It will be difficult to address the thicket of legitimate, unavoidable public policy issues related to digital privacy and cyber security that will grow more important as digital technologies become more pervasive. These issues already undergird many of the challenges to using cross-border data flows to support production and innovation strategies. Critical to the success of digital

innovation is the creation of an accepted global policy framework—a “trusted digital environment”—that can be supported by trade rules.

1. As proposed in the Trans-Pacific Partnership, countries should expand the trade disciplines for domestic regulations of digital services and goods. Administrative rule making should be transparent and use timely, objective criteria. Nondiscrimination among member country firms should be based on national origin, policies should be technologically neutral, and when designing policies a “least burdensome to trade” requirement should be adopted.⁵
2. Quasi-convergence of national regulations, based on common trade principles and norms featuring flexible mixes of binding “hard” and “soft” rules and policies within a common governance regime to address daunting new issues such as digital privacy and security.⁶ Specific hard policy rules should forbid certain types of conduct. For example, a digital hard rule might forbid a government to demand a firm’s software source code as a condition for market entry. Soft rules require the embrace of policy capabilities based on key principles that frame the parameters of national rules.⁷ Authoritative soft rules could further anchor quasi-harmonization of national rules on topics such as privacy protection. Soft trade rules provide countries direction on how to achieve certain hard-rule obligations, such as principles companies might use to earn compliance certificates for binding privacy rules.
3. A trusted digital environment should work through Multi-Stakeholder Organizations (MSOs) that incorporate civil society organizations to improve governance but are subject to government oversight. Many complex technology decisions on implementing rules would benefit from the “bottom up” expertise of MSOs, such as figuring out how firms can fulfill compliance with government rules for digital privacy. MSOs also can help coordinate between national-level regulators and transnational MSOs within the checks and balances created by hard and soft trade

⁵ Policies also should recognize the work of competent NGOs in some policy issues, including technical certifications and standards making.

⁶ Hard rules are binding (enforceable) obligations on countries that forbid particular policies, such as tariffs higher than those mutually agreed upon. Soft rules are binding; they specify commitments to maintain capabilities for making and enforcing rules or for creating rules to achieve certain agreed-on purposes. The specific mechanisms or policies are up to the individual nation so long as they fulfill the intent of the obligation. Soft rules are how the WTO successfully promoted compatible regulations for global telecom competition in the Basic Telecommunications Agreement (BTA) in 1997. In contrast, APEC Principles are not binding.

⁷ For example, the BTA required meaningful competition policies to govern interconnection of competing telecom networks.

rules.⁸ Soft rules also should outline conditions about the operation and membership of recognized MSOs.⁹

4. The creation of a trusted digital environment also requires reciprocity. NAFTA should feature “conditional most-favored-nation” clauses for the trusted digital environment commitments, so only signatories would benefit. Many privacy and security challenges will require interpreting soft rules through the MSO process. Who should participate and who should benefit in the MSO process? Thus, if a Chinese firm could benefit from revised NAFTA privacy and security certifications through a Canadian subsidiary, this would complicate the politics and technocratic implementation of soft rules.¹⁰

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⁸ For example, negotiators could develop language that allows the FTC and other national privacy authorities to accept MSOs as auditors and reviewers of privacy guidelines.

⁹ Examples of such process qualifications are the WTO rules about technical standards organizations and the U.S. Government requirements for the processes of ICANN.

¹⁰ The TPP provisions on services (Articles 10.3 and 10.4) had useful starting points on conditionality.