

**9th United Nations Conference on Competition and Consumer Protection
Room XIX, Palais des Nations
Geneva
7-11 July 2025**

Investigative Techniques and Digital Tools in a Modern Enforcement World

Presentation

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**Ninth United Nations Conference on Competition and Consumer Protection
Roundtable on “Investigative techniques and digital tools in a modern enforcement world”**

Thursday July 10, 2025, 10:00 – 11:00 hours.

Palais des Nations (8, Av. de la Paix 14, 1202, Geneva)

[Video address by Chair Andrea Marván](#)

- Good morning, esteemed colleagues and delegates.
- I regret not being able to join you in person, but I’m honored to address the United Nations Conference on Competition and Consumer Protection and to be part of this panel.
- My sincere thanks to Ms. Teresa Moreira, Head of the UNCTAD Competition and Consumer Protection Branch, for inviting me to share the Mexican experience regarding the use of digital tools in antitrust enforcement.

Digital investigation tools or techniques implemented by Cofece

- Let me begin by describing the digital investigation tools and techniques Cofece has adopted and their impact.
- Since 2014, Cofece’s Investigative Authority has operated a Market Intelligence Unit, tasked with monitoring and screening market data. Today, it comprises 21 professionals—including lawyers, psychologists, economists, and data scientists—who collaborate daily with teams investigating cartels, abuse of dominance, and barriers to competition.
- This Unit also extracts digital information during dawn raids and conducts intelligence inquiries for cases.
- To detect and investigate anticompetitive conducts, this Unit employs digital tools and techniques which can be grouped in two sets:
 - Economic analysis tools – for obtaining, processing, and analyzing market and company data; and
 - Forensic tools – for identifying, acquiring, preserving, and extracting digital evidence.
- **On economic analysis tools**, they support the detection of potentially anticompetitive conduct and generate structural or behavioral insights into markets. These tools have helped us define relevant markets, assess public procurement data, and analyze pricing coordination.
- For instance, in evaluating competition in the LP Gas retail market, the Intelligence Unit created a tool to apply the Hypothetical Monopolist Test. They used techniques such as ETL processes, neural networks, routing services, predictive and classification analysis via machine learning, and GIS-based visualization.
- This geostatistical analysis proved essential for our investigation and later enabled regulation of LP Gas prices in Mexico.

- We've also developed automated tools for downloading and analyzing public procurement data to detect potential bid-rigging. These tools use predictive algorithms to process historical procurement data from CompraNet (now Compras MX), the website with the government contracts' information.
- Similarly, Web Scraping, Natural Language Processing and Data Science helped us in proving collusions to manipulate prices in the markets for the leasing of non-residential real estate spaces in, and in for the retail sale of fuels.
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- Likewise, artificial intelligence algorithms, expert systems, and other types of automation systems were also key for declaring the lack of competition conditions in the market for domestic transaction-processing services provided by clearinghouses for card payments, in 2023.
- Similarly, in 2024, the Investigative Authority relied on analytical tools such as web scraping, clustering, geomatics and unsupervised learning to identify barriers that affect competition in the federal passenger transportation.
- **Now, turning to forensic tools**, these are deployed during dawn raids to extract data from company devices. This data is analyzed using keyword searches and metadata, with relevant findings added to case files.
- In response to remote work post-COVID, we developed the Remote Forensic Acquisitions Mechanism. It enables copying of data from off-site devices if it's relevant to the investigation.
- This mechanism uses information containerization, remote transmission, video recording, and local extraction, supported by a strong legal framework.

Enforcement challenges

- Let me now briefly outline **three challenges** Cofece faces when using digital tools, and potential innovations that may help.
- **First**, accessing complete and analyzable information remains difficult because of:
 - A lack of reliable, up-to-date databases (for example, in freight transport or public procurement);
 - Adverse selection, where companies withhold business data, leading to suboptimal agency decisions based on insufficient information.
- Solutions we have found effective include:
 - Tools for downloading and processing public procurement documents;
 - Web scraping tools for automated data collection;
 - Relational database systems for handling large retail datasets.
- **A second challenge we have faced** consists of managing the complexity introduced by disruptive technologies—AI, algorithms, and big data.

- Agencies must bridge technical gaps between disciplines. We need to understand these technologies and explain them clearly to professionals, including judges, whose legal assessments rely on understanding such evidence.
- **A third challenge**, corporate communications have evolved: key evidence now resides on mobile devices and instant messaging platforms.
- This demands new tools and frameworks for extracting and using such evidence. As communication complexity grows, forensic analysis may increasingly require AI to streamline search and analysis.

Collaboration among agencies

- I'd like to close by highlighting areas where agency collaboration can strengthen enforcement, particularly for newer authorities.
- Timely data-sharing and exchange of methodologies can:
 - Reduce information asymmetries;
 - Enable early detection of anticompetitive practices—especially in digital and globalized markets;
 - Strengthen analytical capacity from the start.
- In this regard, UNCTAD and the International Competition Network, specially through its Technologist Forum seek to promote the adoption of best practices and shared or convergent evidentiary standards and criteria for evaluating evidence in investigations with an international dimension.
- Other areas where collaboration is important to strengthen effective enforcement capabilities include:
 - Market data analysis techniques;
 - Forensic tools for analyzing digital data (e.g., cloud storage, remote work);
 - Investigation of digital or globally interconnected markets.
- Finally, I'd like to share that Cofece has built strong international partnerships.
- These include training exchanges with Latin American agencies (Argentina, El Salvador, Peru, Colombia), and North American partners (United States, Canada). We've also engaged with Asian and European counterparts on mobile forensic tools and data analysis in public procurement.
- A notable example is our ongoing collaboration with the U.S. DOJ and the Canadian Competition Bureau in preparing for the 2026 FIFA World Cup, including efforts in both traditional and digital markets.
- Thank you again to the UNCTAD Competition and Consumer Protection Branch, to my esteemed colleagues from the panel, and the Conference delegates for your attention,
- Greetings from Mexico.