



January 14, 2015

Afternoon Session

## **Panel 2: Manufacturing**

Semiconductor Industry Association (“SIA”) 8 minutes

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### **“Trans-Pacific Partnership Agreement: Likely Impact on the U.S. Economy and on Specific Industry Sectors”**

#### **Introduction**

- Good Afternoon. My name is Devi Keller, Director of Global Policy at the Semiconductor Industry Association (SIA). On behalf of the SIA, thank you for the opportunity to testify here today on the importance of the TPP to the U.S. semiconductor industry.
- I note that I am testifying under the “Manufacturing” Panel. While the semiconductor industry is a major manufacturing sector, many of our companies are design companies and do not manufacture. Thus, our industry is very interested in the digital trade and 21<sup>st</sup> century features of the TPP as well as the ground-breaking tariff elimination section.
- Semiconductors, or “microchips” are the brains of any electronic product. They are components in a staggering variety of products from computers, smart phones, medical devices, LEDs, automobiles, industrial infrastructure, jets, to name a few. If something can turn “on,” it is powered by a semiconductor.
- The U.S. semiconductor industry is thus a key driver of U.S. innovation, technology leadership, and economic strength.
- For our industry, **trade equals growth**. This is because:
  - **95%** of the world’s consumers live outside the United States.
  - **82% of our products** are sold to customers overseas.
  - In fact, semiconductors are the United States’ **3<sup>rd</sup> largest manufactured goods export**, after automobiles and airplanes.

- The semiconductor industry supply chain is highly globalized. Most manufacturing by U.S. semiconductor companies occurs in the United States, but U.S. companies source technology, equipment, services, R&D, and capabilities from **around the world**.
- International trade is thus **vital** to the semiconductor industry's ability to compete, innovate and grow. Access to global markets has allowed the U.S. to maintain a leading market position with **51% of the \$336 billion global** semiconductor share in 2014. Overseas revenue supports **1.25 million jobs** and billions of dollars of R&D and capital investments here in the United States.
- The TPP is incredibly important to our industry as it promotes even greater access to the large and growing global markets in Asia, and strengthens the global semiconductor supply chain on which our industry depends.
- It is also ground-breaking in addressing some of the protectionist policies and trade barriers that are on the rise throughout the world, thus sending the important message to our competitors that fairness and collaboration – not discrimination and protectionism – will be the hallmarks of 21<sup>st</sup> century trade.
- Yet perhaps the most important aspect of the TPP is its potential to shape the future of the global trading system. We are currently at a critical juncture in international trade, a juncture between the U.S.-led model of free and open markets, upon which U.S. companies have thrived, or a model – largely led by China – that is interwoven with threads of mercantilism and protectionism.
- Successful ratification of the TPP will promote free and open trade upon which our industry has thrived, thus reaffirming America's global technology and trade leadership, and ensuring that more products made in America – including technology products like semiconductors – can be shipped to customers around the world.
- My testimony today focuses on three specific ways the TPP benefits the semiconductor industry.

## **1. The TPP enhances access to Asia-Pacific Markets: Trade = Growth for our Industry**

- The importance of the huge and growing markets of the Asia-Pacific to U.S. semiconductor companies cannot be overstated. U.S. exports of semiconductors to TPP countries accounted for **41% of total U.S. semiconductor exports** to the world in 2014

(\$17 billion). The broader Asia-Pacific region represents a whopping 85% of total U.S. semiconductor exports.

- Moreover, the Asia-Pacific export market is the fastest growing market vis-à-vis the world, thus making it one of the most significant opportunities for semiconductor industry growth.
- By eliminating tariffs and non-tariff barriers, the TPP provides even greater access to this important Asia-Pacific market.

## **2. The TPP strengthens the global semiconductor supply chain**

- The semiconductor industry is one of the most global industries in the world. The semiconductor supply chain and ecosystem - from raw materials, to research and design, to manufacturing, to assembly, packaging and testing, and finally to distribution - are spread across the entire globe.
- The journey of a chip, from silicon to incorporation into an end-product, typically involves four or more countries and three trips around the world.
- The globalization of our industry has greatly contributed to the growth of U.S. semiconductor companies as it enables them to leverage the technological skill and cost advantages of countries to source technology, equipment, services, R&D, and capabilities on a scale never before thought possible.
- TPP Parties such as Japan, Malaysia, Singapore, and Vietnam are key players in this global supply chain.
- Taiwan, South Korea, and Thailand - countries that have signaled interest in joining the TPP, are also very important players. Their future participation in the TPP will further enhance the global semiconductor innovation ecosystem.
- Because of the global nature of our industry, TPP provisions such as the simplification and harmonization of customs and trade procedures, regulatory coherence, removal of impediments to e-commerce, and requirements to eliminate tariffs on tech products are very important to our industry. These provisions strengthen the semiconductor supply chain and better enable companies to achieve efficiency, lower costs, and reduce risks.

### 3. The TPP Aligns global trade rules with 21<sup>st</sup> century trade

- The TPP sets the rules for cross-cutting issues not previously included in trade agreements that will lay down important precedents for other trading partners, particularly China. There are several key provisions that will positively impact the U.S. semiconductor industry, including:
  - Rules preventing market-access restrictions on commercial products with encryption
  - Increased penalties to protect trade secrets and other forms of IP.
  - Tariff elimination on semiconductor-rich products and applications (i.e. autos/auto parts)
  - Simplification and harmonization of customs and trade procedures and removal of impediments to e-commerce
  - Rules that require state-owned enterprises to compete fairly and transparently without undue government advantage
- Given the short amount of time, I'd like to focus on just one example that illustrates the TPP's importance in removing non-trade barriers, focusing on commercial encryption rules in the TPP, the first of their kind to be included in a free trade agreement.
- Very simply, encryption converts data so that it cannot be recognized by unauthorized Parties. Encryption is used nearly **all** electronic products commonly used and traded globally to protect and secure personal information, data transfer, and online services like e-commerce and e-banking. Everyone here has used encryption today in some form or another: sending a text message or an email, using a keycard to enter your office, checking your bank balance online, buying a coffee with a chip-enabled credit card, even opening your garage door.
- Encryption, enabled and inseparable from semiconductor technology, is **ubiquitous** in commercial high-tech products. That is why the increasing number of broad and discriminatory requirements related to commercial encryption -particularly by China and India as part of their indigenous innovation efforts- threaten the large trade flows of semiconductors and other ICT products.
- The TPP prohibits Parties from imposing discriminatory restrictions on commercial products with encryption, such as requirements to turn over proprietary information as a

condition of market access, to partner with a domestic entity, or to use a particular technology or standard.

- Quantifying the economic impact of this provision is a difficult task, but given the ubiquity of commercial encryption in everyday technology products<sup>1</sup>, mitigating against the adoption of restrictive policies will protect trade flows of semiconductors and other ICT products on the scale of hundreds of billions of dollars.

## **Conclusion**

- The TPP is an incredibly important agreement as it will have a significant and positive impact on the future of the global trading system.
  - If successfully ratified, the TPP will preserve and strengthen the global model of free and open markets, to the immense benefit of U.S. companies, including innovation leading semiconductor companies, and our global partners.
  - If the TPP never comes to pass, U.S. leadership in global trade will be significantly weakened, as will the ability of companies to compete in international markets on a level playing field.
- SIA urges congressional approval of TPP this year and looks forward to working with Congress and the Administration as the process moves forward.

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<sup>1</sup> Virtually all semiconductor and ICT products include encryption or enable encryption to function as a primary or secondary function.