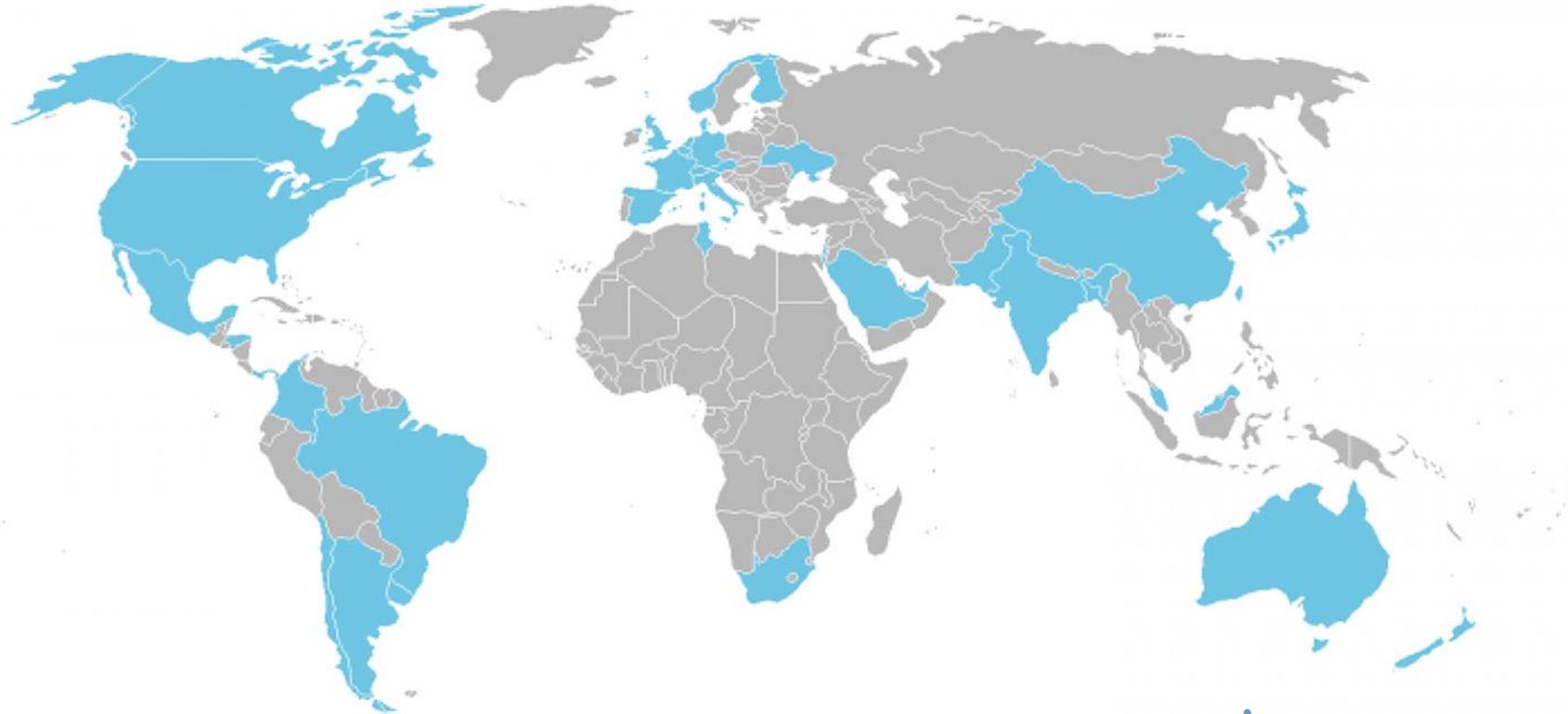


# Challenges and Opportunities Facing Today's Recycling Industry

**23rd Annual RAM/SWANA Conference & Show**  
**Minneapolis, Minnesota**  
**October 16, 2018**

Joseph C. Pickard  
Chief Economist and Director of Commodities  
Institute of Scrap Recycling Industries, Inc.

# Voice of the Recycling Industry™



**1,300+**  
Members

**41**  
Countries

**4,000+**  
Locations

**Manufacturers, Processors  
Industrial Consumers,  
Brokers, Traders,  
Equipment/Service Providers**



**Ferrous & non-ferrous metals**



**Paper**



**Plastics**



**Tire &  
Rubber**



**Textiles**



**Electronics**

## **OUR MISSION** To promote safe, economically sustainable & environmentally responsible recycling through networking, advocacy & education.

**Workplace Safety**



**Responsible Recycling**



**Education, Training & Networking**



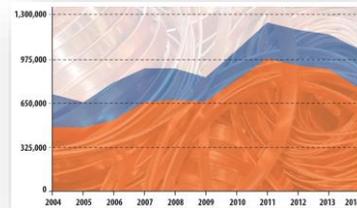
**Specifications**



**Design for Recycling™**



**Market Intelligence**

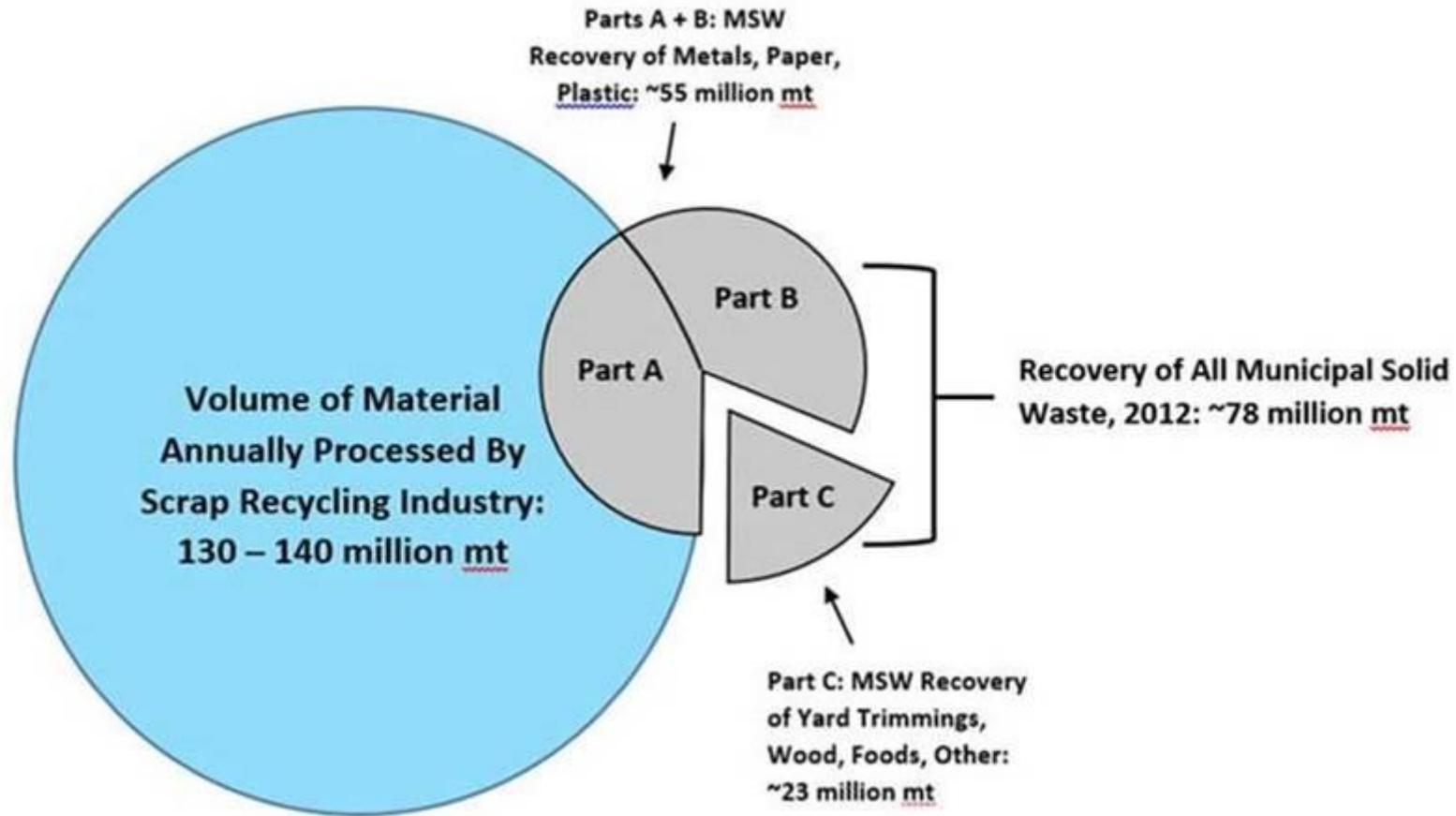


**Awareness**



**Free & Fair Trade**





## What is Recycling?

Is it different than reuse? Is waste-to-energy recycling? What are recyclables? Who is the true recycler?

Households?



Municipalities?



Scrap Recyclers?



Manufacturers?



## Recent Harris Poll Survey on Recycling:

- 66% of Americans agree that “if a product is not easy/convenient for me to recycle, I probably would not recycle it.”
- 81% of Americans would like to see manufacturers and/or retailers display a “Recycling Guide” label on products to let them know what can be recycled and how.
- Younger Americans (aged 18-34) are more likely to consider a product’s packaging than older Americans (over 34) including whether or not the packaging can be recycled (17% to 11%), what the packaging is made of (16% to 9%) and whether it’s made from recycled materials (16% to 8%).
- **80% of Americans agree that governments at all levels should prioritize the use of recyclable products/materials when making purchasing decisions.**
- 86% of U.S. adults agree that **recycling collection sites need to be more readily accessible** to consumers.

## ECONOMIC BENEFITS

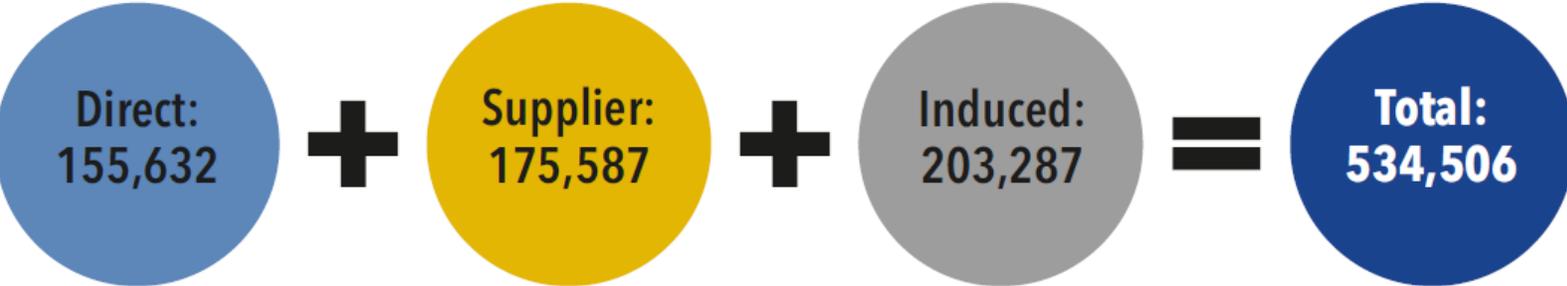
Recognized as one of the world’s first green industries, the scrap recycling industry creates and supports jobs while also having a positive impact on the environment. In 2017, the independent economic consulting firm of John Dunham and Associates performed an economic impact analysis to document the size and scope of the scrap recycling industry in the United States as well as its significant contribution to the U.S. economy in terms of employment, tax generation, and overall economic benefit.

The study found that the U.S. scrap recycling industry is a thriving economic engine and job creator. Specifically, the study found that the people and firms that purchase, process,

and broker recycled materials to be manufactured into new products in America support 534,506 well-paying jobs in the United States and generate more than \$116.9 billion annually in economic activity.

According to the Dunham study, U.S. scrap processors and brokers directly employ more than 155,000 people and indirectly support more than 375,000 other jobs. These workers earn \$34.3 billion in wages and benefits, while the industry pays \$13.2 billion in direct federal, state, and local taxes, excluding state, and local sales taxes.

*NOTE: The Dunham Study is a snapshot of the industry as of April 2017.*



# Economic Impact of Recycling in Minnesota



## Economic Impact

 \$2,810,136,100

## Total Jobs

 13,491

## Total Wages

 \$848,516,700

## Taxes

 \$350,201,900

Source: John Dunham & Associates, Economic Impact of the Scrap Recycling Industry 2017.  
Find out more at: <http://www.isri.org/jobstudy>

## Environmental Benefits

In addition to generating significant economic benefits, the scrap recycling industry is a pivotal player in environmental protection, resource conservation, and sustainable development. The industry recycled approximately 130 million metric tons of materials in 2017, transforming outdated or obsolete scrap into useful raw materials needed to produce a range of new products. In so doing, scrap recycling:

- Reduces the need to mine for new ore, cut down more trees, and otherwise deplete our natural resources;
- Produces significant energy savings as compared to using virgin materials, thereby reducing greenhouse gas emissions; and
- Reduces the amount of material being sent to landfills, saving the land for better uses.

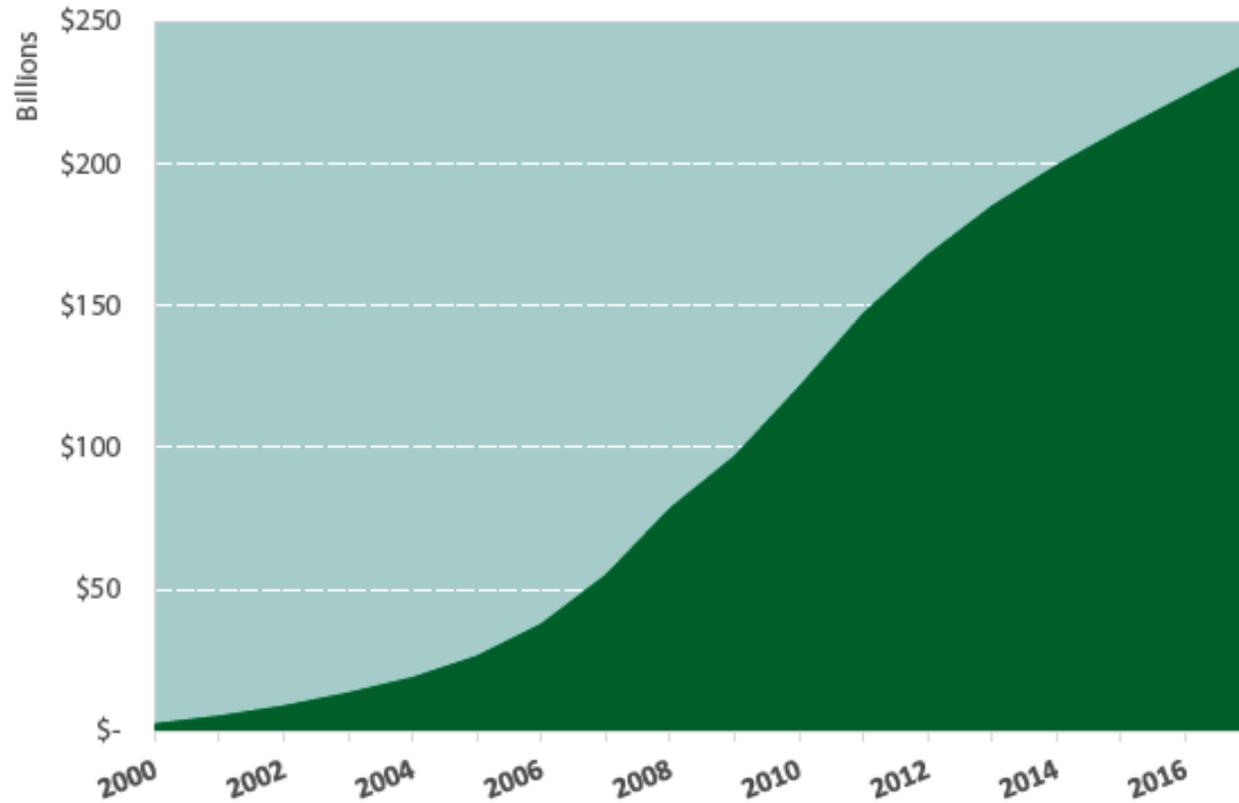
While market forces provide the incentives to recycle and consume scrap material, scrap recycling offers real sustainable solutions for balancing economic growth and environmental stewardship. Not only does recycling conserve our limited natural resources, it

also reduces greenhouse gas emissions by significantly saving the amount of energy needed to manufacture the products that we buy, build, and use every day. The energy saved by recycling may then be used for other purposes, such as heating our homes and powering our automobiles.



# Trade Benefits of Recycling

Cumulative Impact of U.S. Scrap Exports on the U.S. Trade Balance since 2000



Did you know that since 2000, net exports of U.S. scrap have made a positive contribution to the U.S. balance of trade amounting to more than \$235 billion?



- **Uncertainty on the Trade and Policy Fronts**
- **Plunging Chinese Demand and Rising Domestic Inventories**
- **Wide Discounts to Primary Commodity Prices**
- **Rising U.S. Interest Rates and Dollar Volatility**
- **Tight Labor Market Conditions**
- **Elevated Transportation Costs**
- **Constantly Changing Supply Stream**
- **Pressure on Profit Margins**

# Recent Pressures Placed on U.S. Recycling Industry

## 7/27/17: Chinese State Council Policy Statement

July 2017: **China Ban** on post-consumer 24 categories [mixed paper; residential plastics; eff. 1/1/18]

August 2017: China proposes "**carried waste**" standards on ALL scrap at levels far below global stds

March 2018: final **carried waste standards** take effect; remain below global stds

April 18: China announces **bans** on post-industrial scrap & category 7 metals by Dec 2018; SS scrap & nonferrous scrap (ex Al & Cu) by end 2019

May 3<sup>rd</sup>: Suspension of **CCICNA** for one month; complete halt of scrap exports to China through June 3<sup>rd</sup>

June 16th: China announces intention to ban "**solid waste**" imports by 2020

### US-China Trade War

China imposes 25% tariff on Al scrap; U.S. imposes 25% tariff on Shredder Castings Imported from China; China retaliates w/tariffs on ALL scrap (Al scrap tariff 50%)

## Spring/Summer 2018: Other Int'l Markets

August 2018: US announces doubling its import tariffs on **Turkish steel** (50%) & Al (20%) at time of heightened Turkish market volatility



## Exposes Domestic Challenges

Processing **equipment/infrastructure** designed to produce grades for which there is no longer demand

Long term **contracts** without flexibility to address current conditions

**Brands** want their products deemed recyclable & able to go through the residential recycling stream

Time needed to create **demand** within the U.S.

Recycling **equipment mfg** report sharply improved equipment orders; therefore sig. delivery delays

**Enforcement** varies from community to community

**Public** confusion  
What can go in the bin? What can't?

**Wishcycling**

**Prices** for certain banned commodities (e.g., mixed paper) have plummeted, forcing review of municipal recycling programs

Lack of consistent **messaging**; uniform labeling

**Freight** costs/driver shortages

## Summary of Section 232 Measures

### Steel

- 25% tariff on iron and steel imports from all countries except Argentina, Australia, Brazil, and South Korea
- Tariff rate quotas on Argentina, Brazil, and South Korea
- Blanket exemption for imports from Australia
- Tariffs on Canada and Mexico linked to NAFTA negotiations?

### Aluminum

- 10% tariff on imports from all countries except Argentina and Australia
- Quota on imports from Argentina
- Blanket exemption for imports from Australia
- Tariffs on Canada and Mexico linked to NAFTA negotiations?

Source: Wiley Rein LLC

## Summary of Section 301 Measures

<b>March 22, 2018</b>	USTR found that Chinese intellectual property and tech transfer policies are violations within the meaning of Section 301
<b>June 20, 2018</b>	USTR announced 25% tariff on 818 tariff lines covering \$34 billion in Chinese imports effective July 6, 2018
<b>July 6, 2018</b>	China retaliated in kind
<b>July 17, 2018</b>	USTR proposed a 10% tariff on an additional \$200 billion in Chinese imports, likely effective early Fall 2018 absent bilateral resolution – proposed tariff increased to 25% on August 7, 2018
<b>August 16, 2018</b>	USTR announced 25% tariff on 279 tariff lines covering \$16 billion in Chinese imports effective August 23, 2018

Source: Wiley Rein LLC

- The new rules require that 75 percent of a car or truck have content made in North America to qualify for tariff-free imports, up from current level of 62.5 percent.
- In addition, 70 percent of steel and aluminum must be produced in North America, and 40 percent a car or truck would have to be made by workers earning at least \$16 per hour.
- Producers of passenger cars must either comply with the new rules or forgo the regional tariff preference.
- The USMCA removes some distortions in Canadian pricing schemes for dairy products.
- Limiting access to investor-state dispute settlement procedures.
- Obligating each signatory to notify the text of a deal with a nonmarket economy (read: China) at least 30 days before signature to allow for review and assessment of the impact on the North American pact. Entry into force of the pact with a nonmarket economy is grounds for divorce, after a six-month notice.

Source: Peterson Institute for International Economics.

## Reactive Import Restrictions Across Southeast Asia

*Temporary (3mo – 2yr) import bans on plastic scrap and electronics; greater enforcement of import licenses for recovered paper; stricter pre-shipment requirements*

## China as Global Competitor

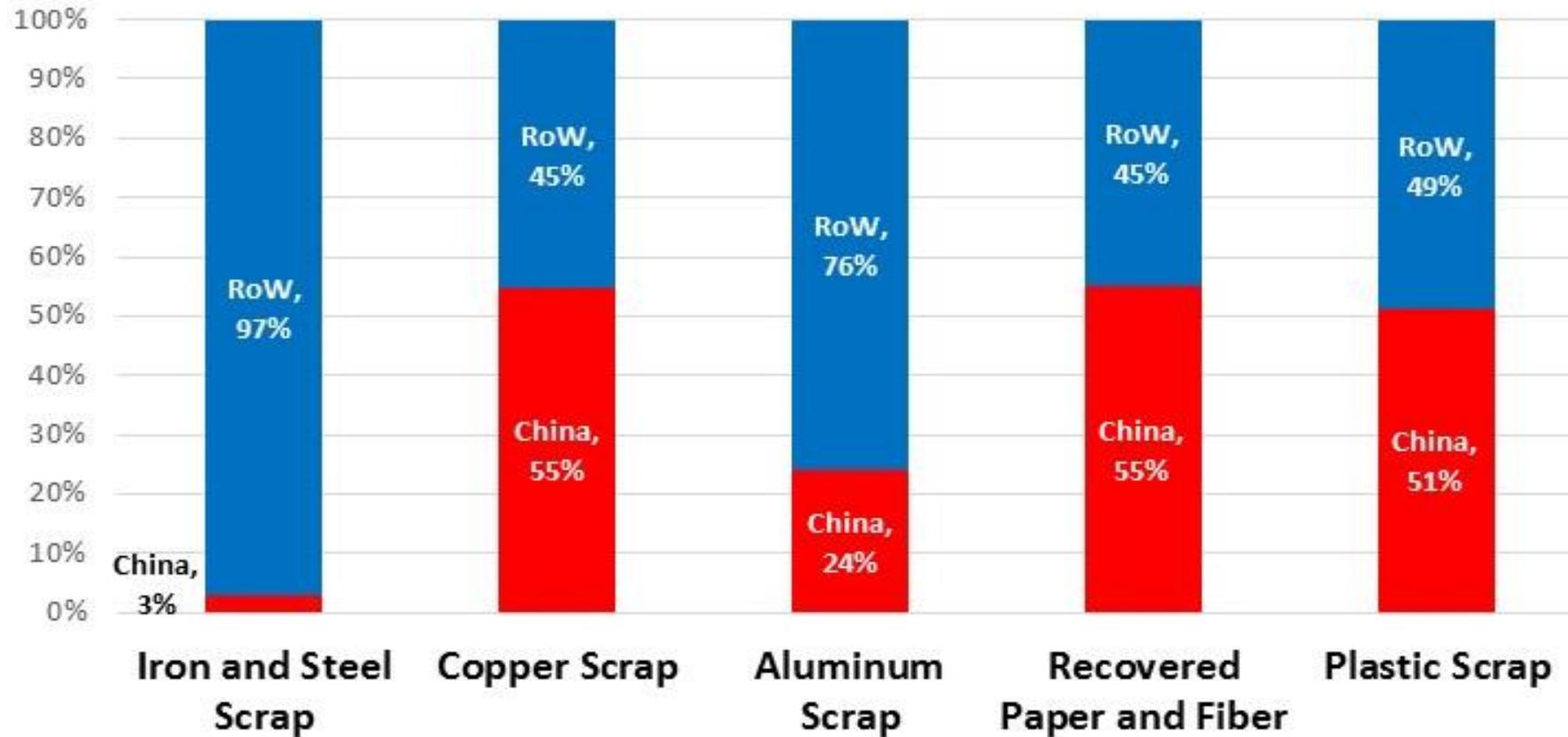
*Govt is directing funding/education towards enhancing domestic recycling and equipment development with view towards total self-sufficiency and potential net-exports*

## Proposed Basel Convention Classification of Plastics as Hazardous

*Would impose onerous administrative burdens in the very limited circumstances where U.S. plastic scrap exports/imports would be allowed*

## Mainland China's Share of Global Imports for Selected Recycled Commodities, 2016(p)

Source: UN Comtrade Database



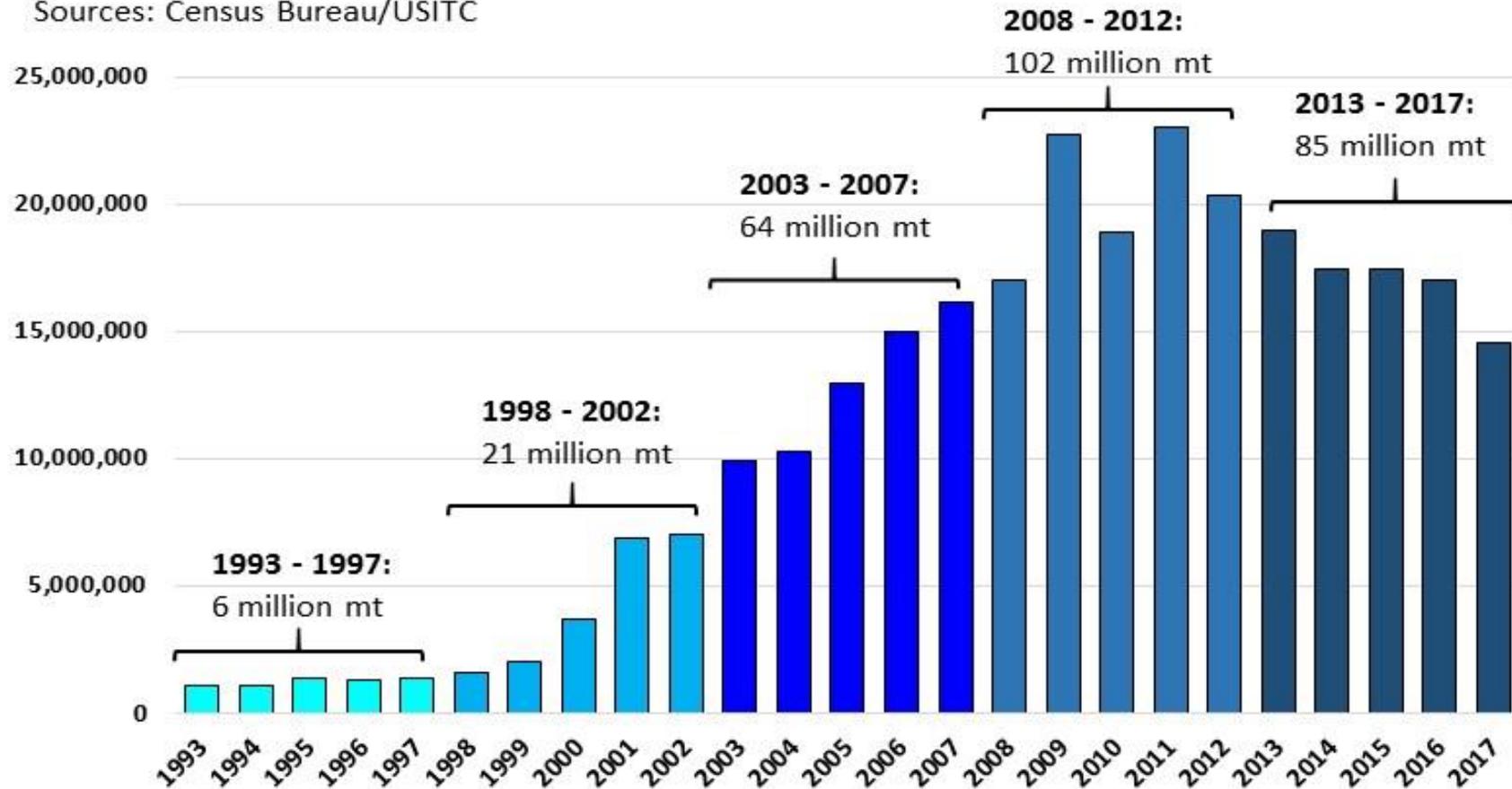
**43M**  
metric tons

China's Total  
**IMPORTS** from  
the World

# Snapshot of Scrap Trading with China

## U.S. Exports of All Scrap Commodities to China (incl. Hong Kong) 1993-2017 (metric tons)

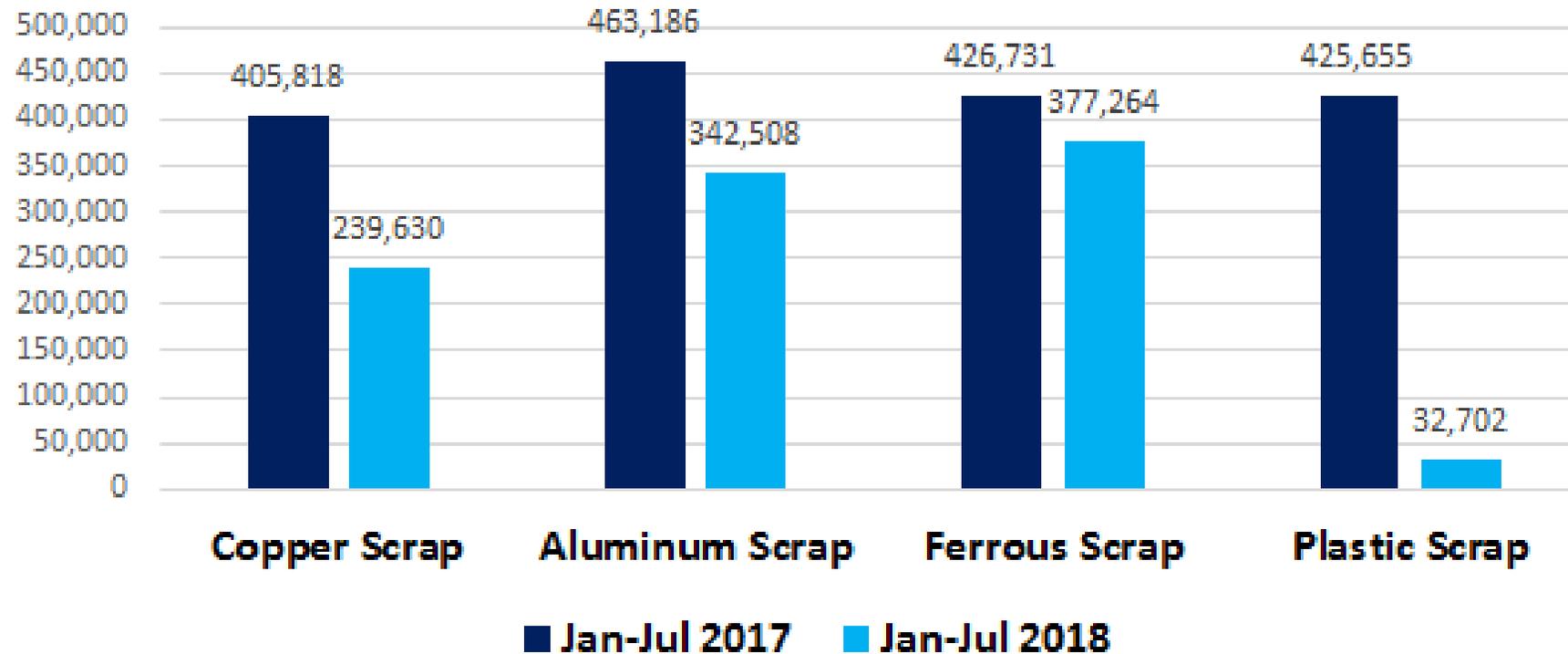
Sources: Census Bureau/USITC



U.S. Scrap Exports to Mainland China	
Jan-Aug 2017	10.28mmt
Jan-Aug 2018	6.03mmt
YTD % CHG	-41%

## YTD U.S. Exports of Scrap to Mainland China for Selected Commodities, Jan-Jul 2017 vs. Jan-Jul 2018 (metric tons)

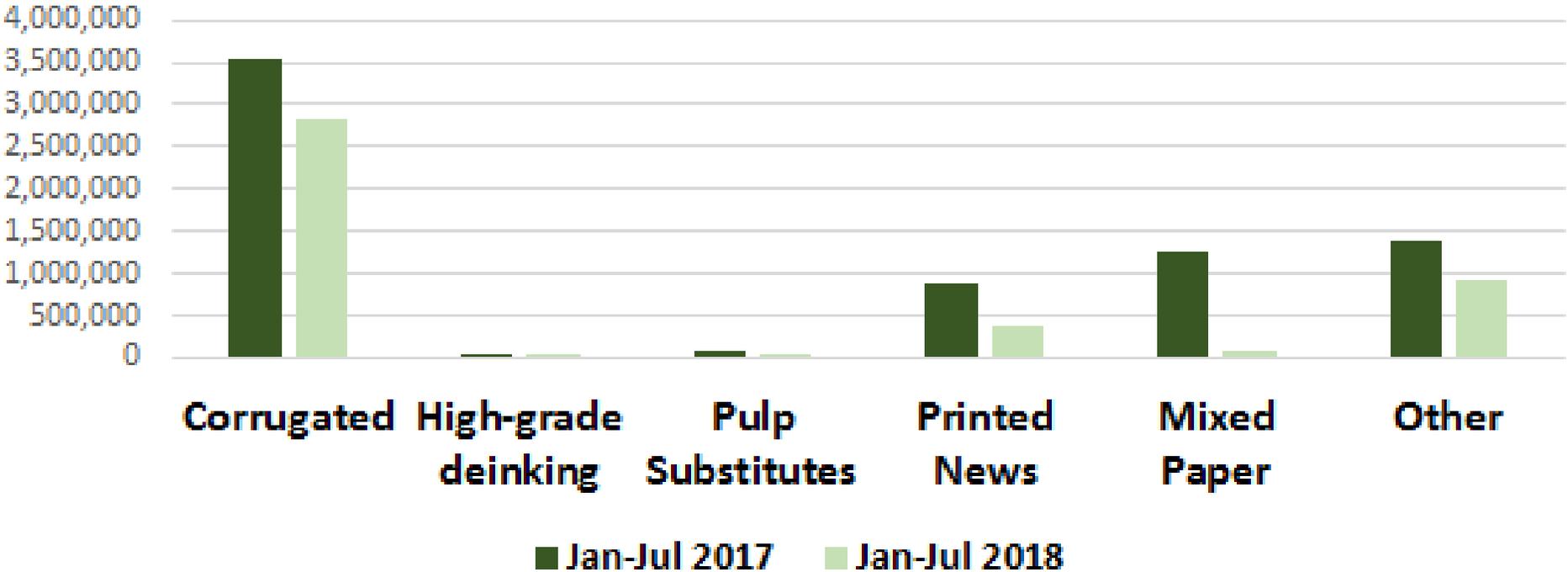
Sources: U.S. Census Bureau/U.S. International Trade Commission



# Over-reliance on China... (cont.)

## YTD U.S. Recovered Paper and Fiber Exports to Mainland China by Major Grade (metric tons)

Sources: U.S. Census Bureau/U.S. International Trade Commission

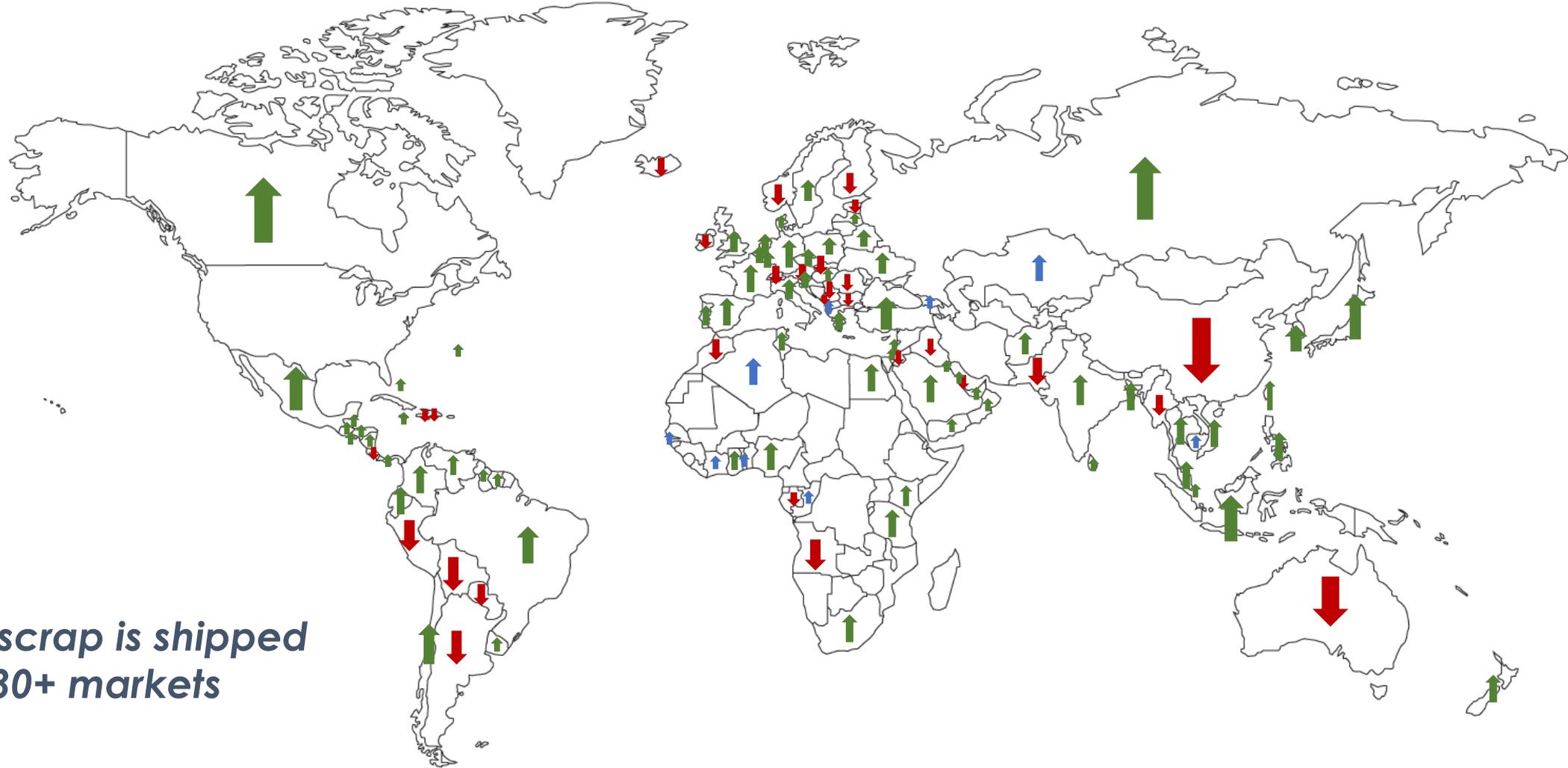


## Year-to-Date EU-28 Scrap Exports to Mainland China by Major Commodity (metric tons)

	Jan-Jul 2017	Jan-Jul 2018	YTD % CHG
<b>Plastic Scrap</b>	825,836	48,177	-94%
<b>Paper &amp; Fiber</b>	5,026,246	2,186,653	-56%
<b>Ferrous Scrap</b>	241,824	85,874	-64%
<b>Copper Scrap</b>	512,385	318,295	-38%
<b>Aluminum Scrap</b>	136,402	116,625	-14%

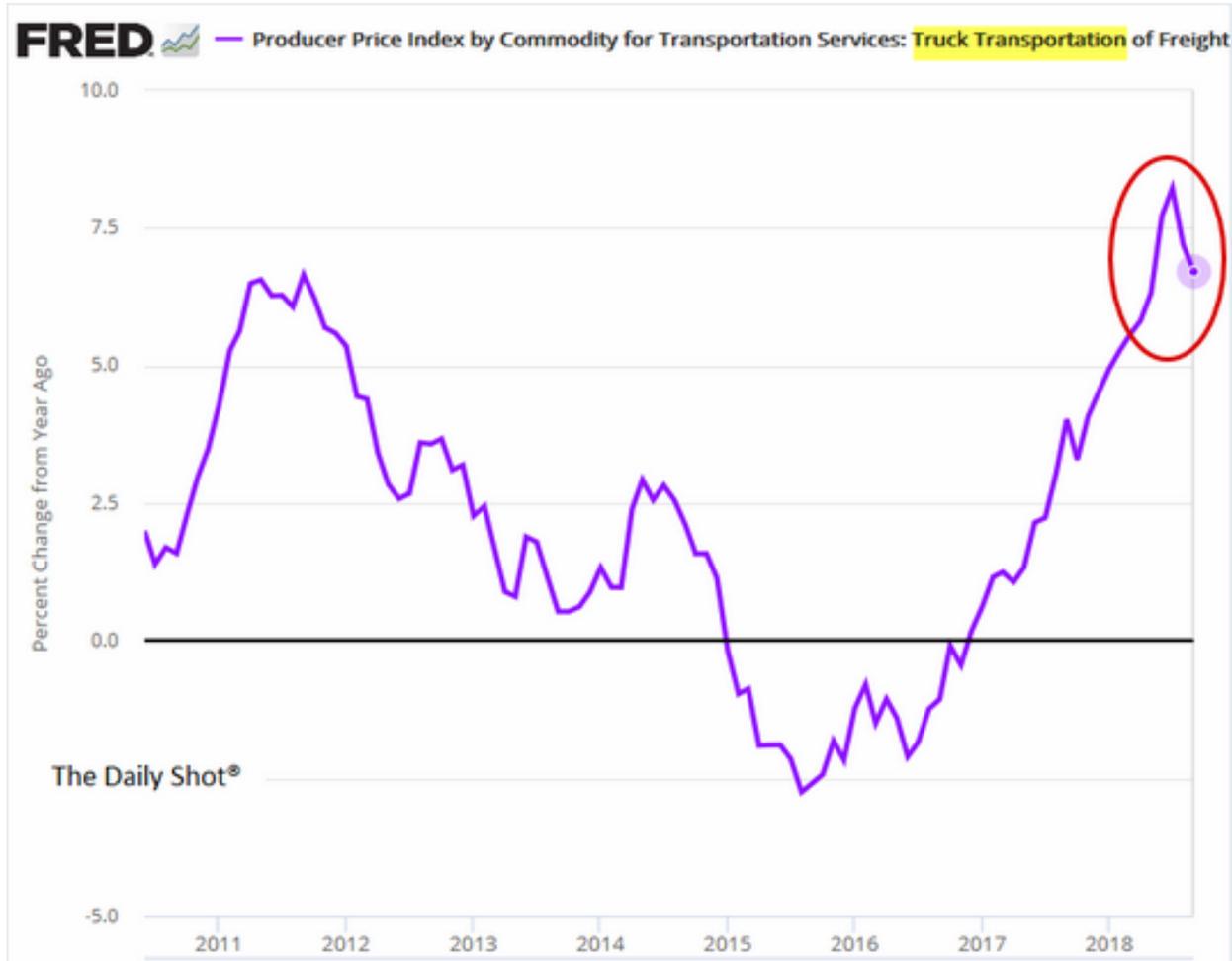
Source: Eurostat

# As a Result, Trade Shifts



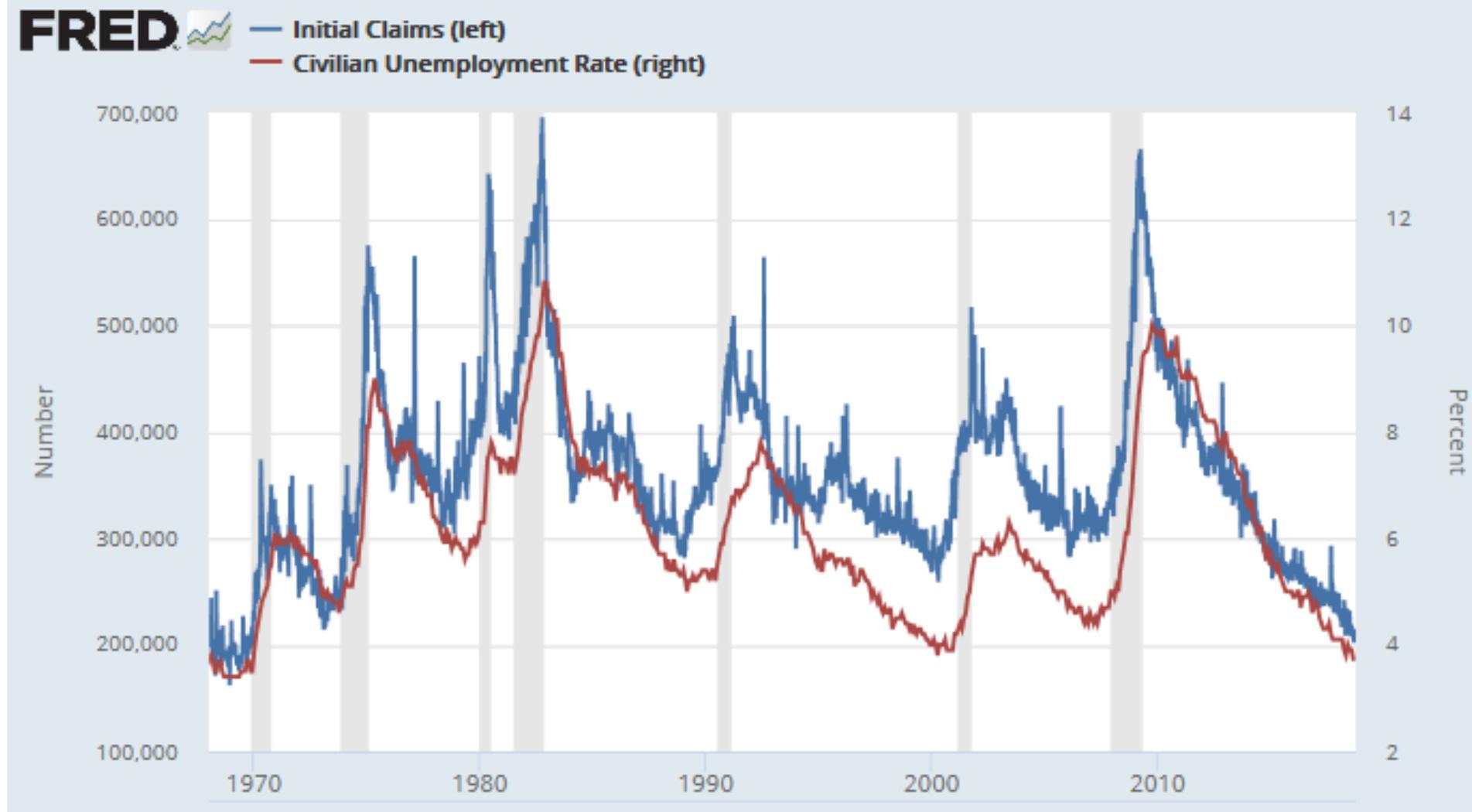
**U.S. scrap is shipped  
to 130+ markets**

# Other Issues: Transportation Costs



According to the Bureau of Labor Statistics, the producer price index for truck transportation has moderated recently, although as the Wall Street Journal reports, “transportation/logistics bottlenecks remain, {but} they don't appear to be worsening.”

# Other Issues: Tight Labor Markets



# Reflection of Strong Economic Growth

Category	Q2	Q1	Q4	Q3	Q2
GDP	4.2%	2.2%	2.3%	2.8%	3.0%
Inventories (change)	-\$10.4B	\$30.3B	\$16.1B	\$64.4B	\$11.9B
Final Sales	5.4%	1.9%	3.2%	1.8%	2.8%
PCE	3.8%	0.5%	3.9%	2.2%	2.9%
Nonresidential Inv.	8.7%	11.5%	4.8%	3.4%	7.3%
Structures	14.5%	13.9%	1.3%	-5.7%	3.8%
Equipment	4.6%	8.5%	9.9%	9.8%	9.7%
Intellectual Property	10.5%	14.1%	0.7%	1.7%	6.6%
Residential Inv.	-1.3%	-3.4%	11.1%	-0.5%	-5.5%
Net Exports	-\$841.0B	-\$902.4B	-\$899.2B	-\$845.9B	-\$844.1B
Export	9.3%	3.6%	6.6%	3.5%	3.6%
Imports	-0.6%	3.0%	11.8%	2.8%	2.5%
Government	2.5%	1.5%	2.4%	-1.0%	0.0%
GDP Price Index	3.0%	2.0%	2.5%	2.2%	1.2%

# CEOs Remain Optimistic

CEO Survey Results & Sub-Indices	2018 Q1				2018 Q2				Quarter-Quarter Change in Sub-Index
	Increase	No Change	Decrease	Sub-Index	Increase	No Change	Decrease	Sub-Index	
<i>How do you expect your company's sales to change in the next six months?</i>	93%	7%	1%	<b>141.9</b>	84%	12%	4%	<b>130.3</b>	<b>-11.6</b>
<i>How do you expect your company's U.S. capital spending to change in the next six months?</i>	68%	30%	2%	<b>115.4</b>	61%	35%	4%	<b>107.6</b>	<b>-7.8</b>
<i>How do you expect your company's U.S. employment to change in the next six months?</i>	61%	26%	13%	<b>98.5</b>	58%	29%	13%	<b>95.5</b>	<b>-3.0</b>

Source: Business Roundtable

# U.S. Manufacturing PMI At 59.8 in September

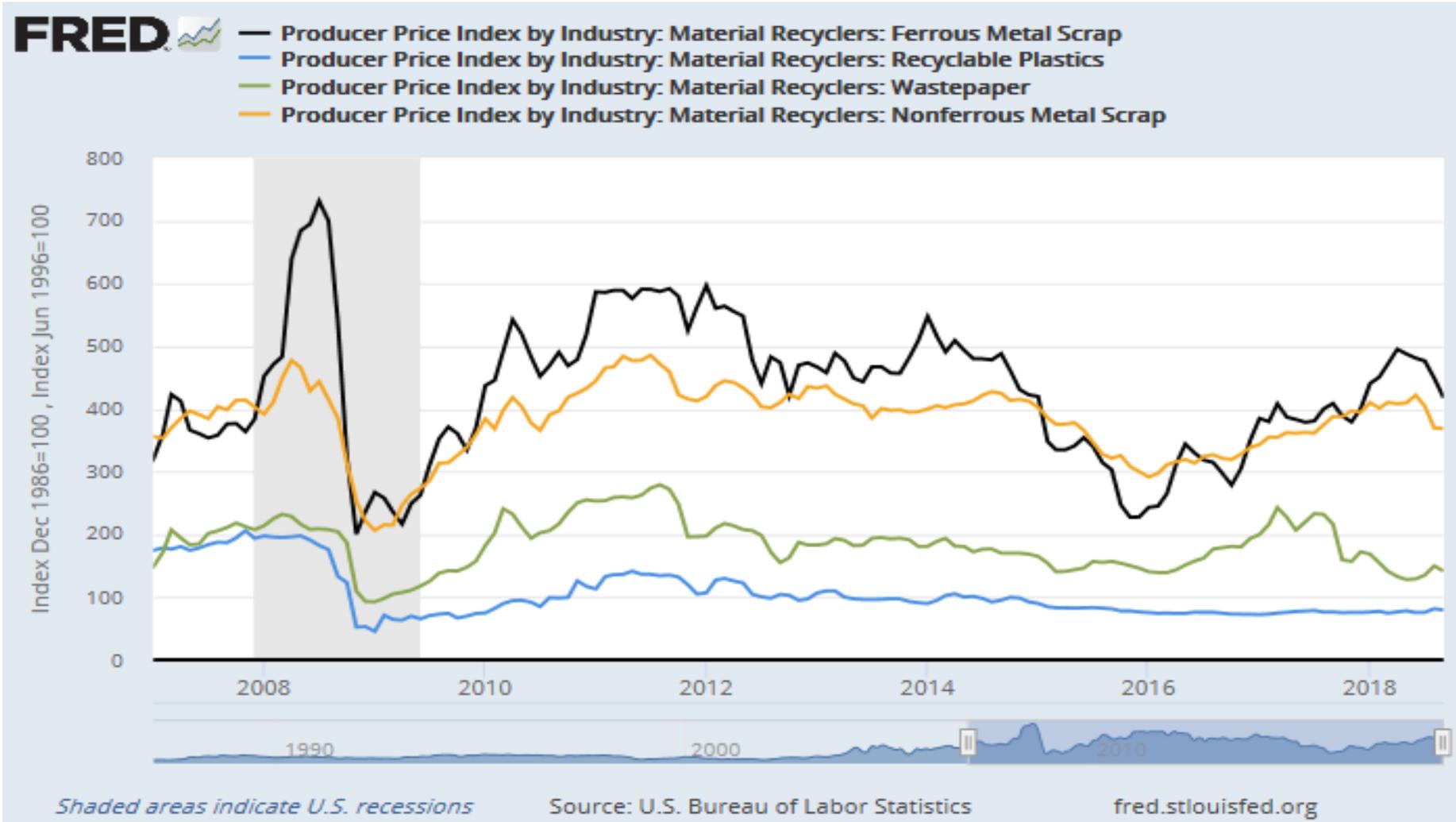
Economic activity in the **manufacturing sector** expanded in September, and the **overall economy** grew for the 113th consecutive month, say the nation's supply executives in the latest **Manufacturing ISM® Report On Business®**.

"The September PMI® registered 59.8 percent, a decrease of 1.5 percentage points from the August reading of 61.3 percent.

## WHAT RESPONDENTS ARE SAYING

- "The market is in a state of chaos with the latest round of tariffs. As an electronics original equipment manufacturer, our component prices have been impacted almost across the board. The tariffs have caused a mass rush to buy up inventories of affected products in order to minimize the long-term financial impact. This, in turn, is causing market constraints, which further drive up the cost and increase lead times." (Computer & Electronic Products)
- "Tariffs starting to take a bite out of profitability." (Chemical Products)
- "Business is strong and relatively stable. Tariffs are putting pressure on Chinese imports. Labor rates are increasing as it is very difficult to find help." (Furniture & Related Products)
- "The economy's strength is holding [and] outlook for the industry is positive, although continuing margin compression in consumer packaged goods is restricting general growth momentum from the greater economy." (Food, Beverage & Tobacco Products)
- "Still extremely strong through November; starting to see a decline for steel prices for December." (Fabricated Metal Products)

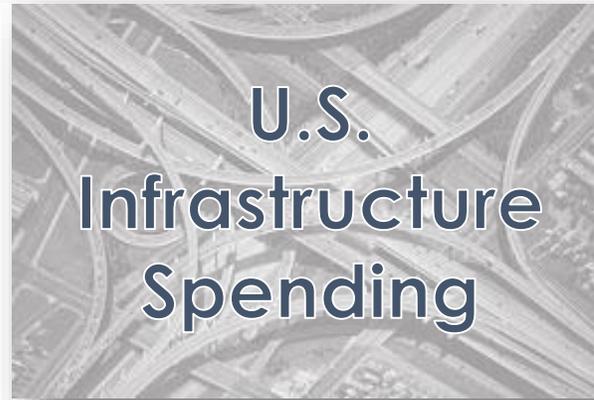
# But Scrap Prices Have Not Been Keeping Pace



## A Better Bin



**BASEL CONVENTION**  
*Partnership on Plastic Waste*



- **The U.S. scrap recycling is in the middle of a restructuring phase.**
- **Focus on **QUALITY** and consistency to meet consumer demands at home and abroad has become the key.**
- **Targeted investment in recycling equipment, technology, and consumption could lead to further consolidation.**
- **Exporters need to develop new overseas markets, but quality concerns are everywhere.**
- **Scrap recyclers are resilient!**

# Thank you

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