



*Achieve
Ambitions*

The Changing Global Economy — Impacts on Seaports and Trade

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Agenda

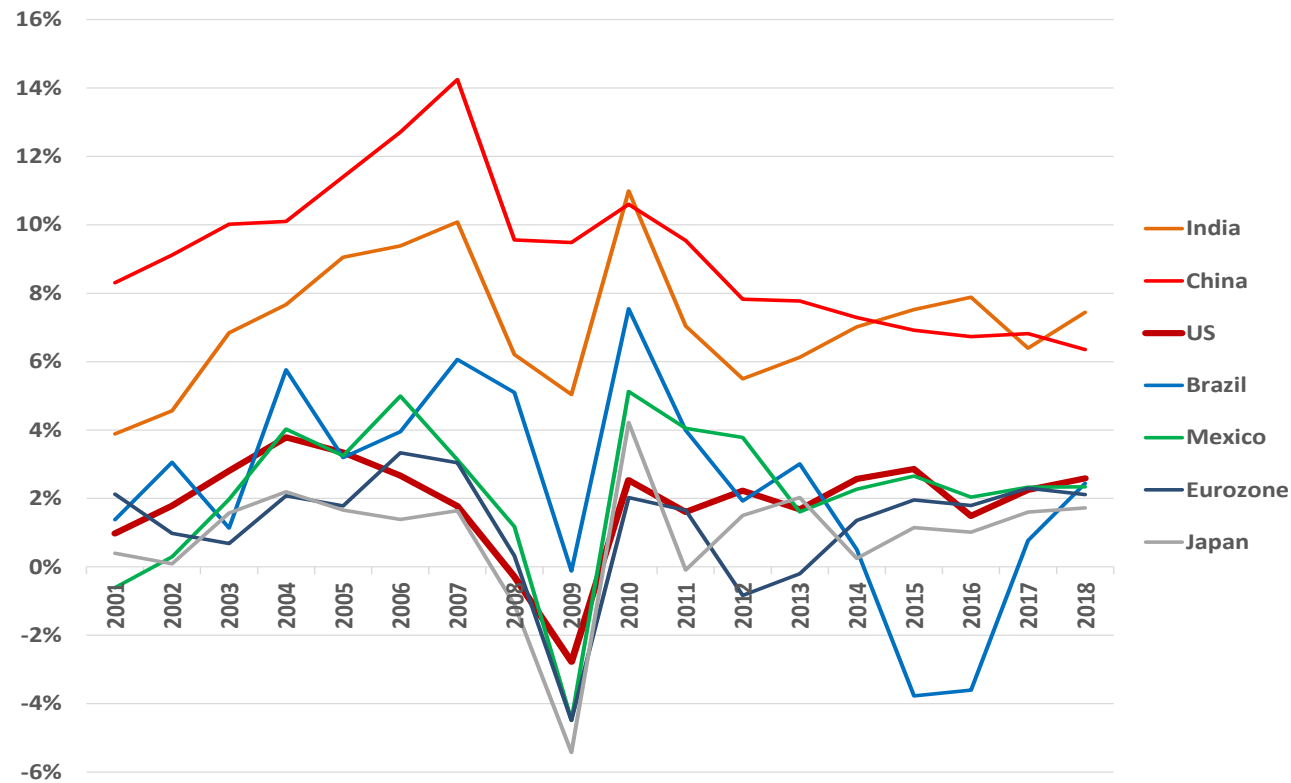


- Where are we in the cycle?
- What are the barriers to growth?
- What comes next?

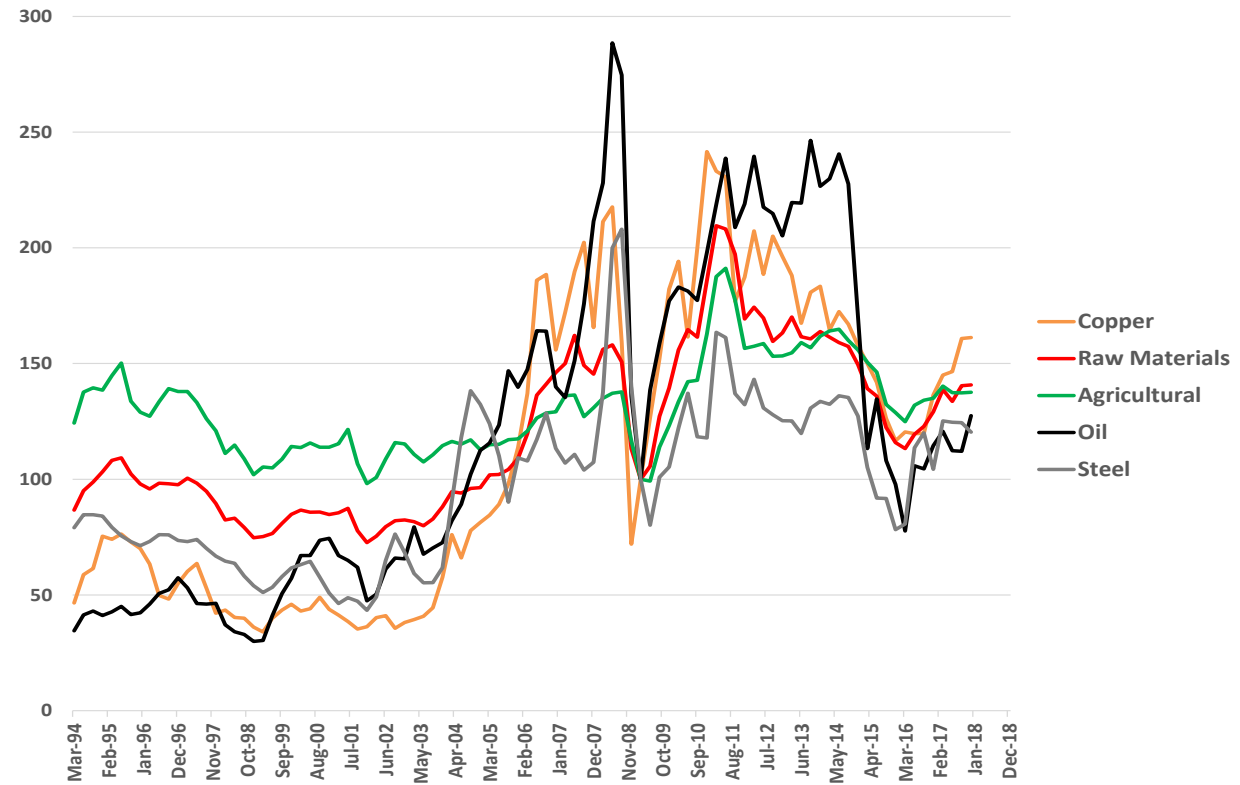
Best global economic environment in 20 years



ANNUAL REAL GDP GROWTH 2001 – 2018(E)



COMMODITY PRICES 1994 – 2018 (INDEXED TO 100 IN 2008)



Where are we in the business cycle?



Recovery, mid-cycle, recession?

2007 – 2016 was a “21st Century Great Depression”

Financial system has recovered

Europe had a “triple dip” recession

Public sector financial crisis has been stabilized

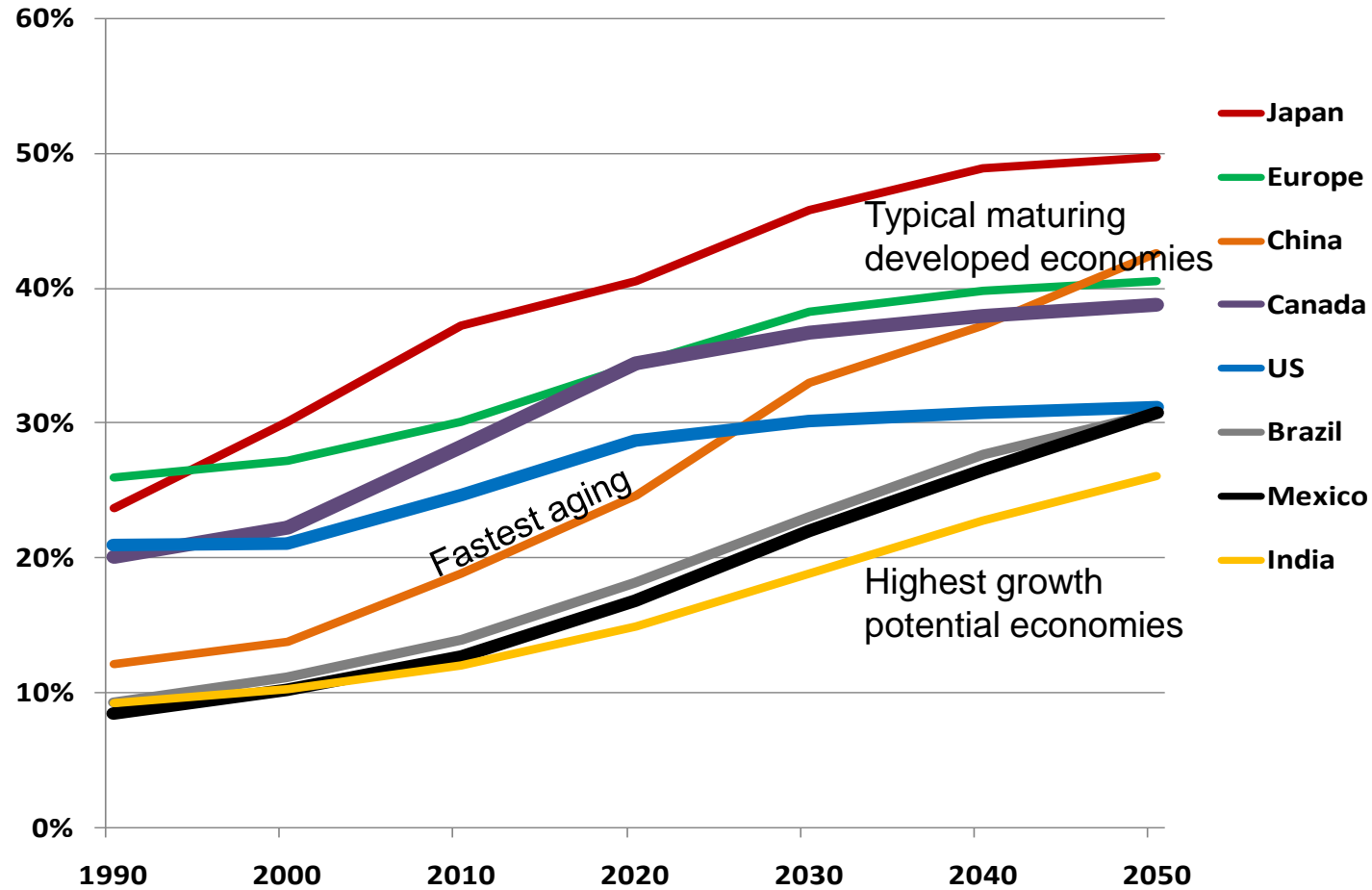
Inflation and growth risks are balanced

Central bankers everywhere not under pressure to increase interest rates

Differentials in ages is equivalent to differentials in growth



PROPORTION OF POPULATION OVER 55 YEARS OF AGE



What are the barriers to growth?



Tight labor markets

High capacity utilization

Worsening congestion

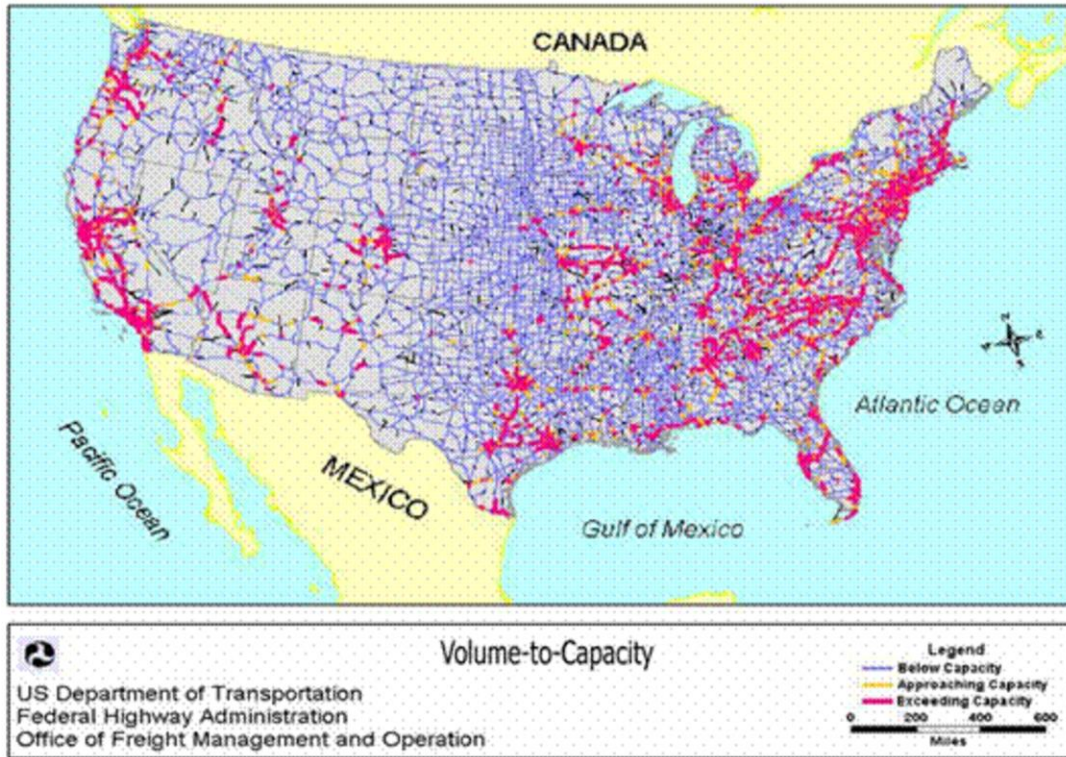
Need infrastructure and plant, property and equipment investment to grow

Otherwise inflation could accelerate and induce central bankers to be aggressive

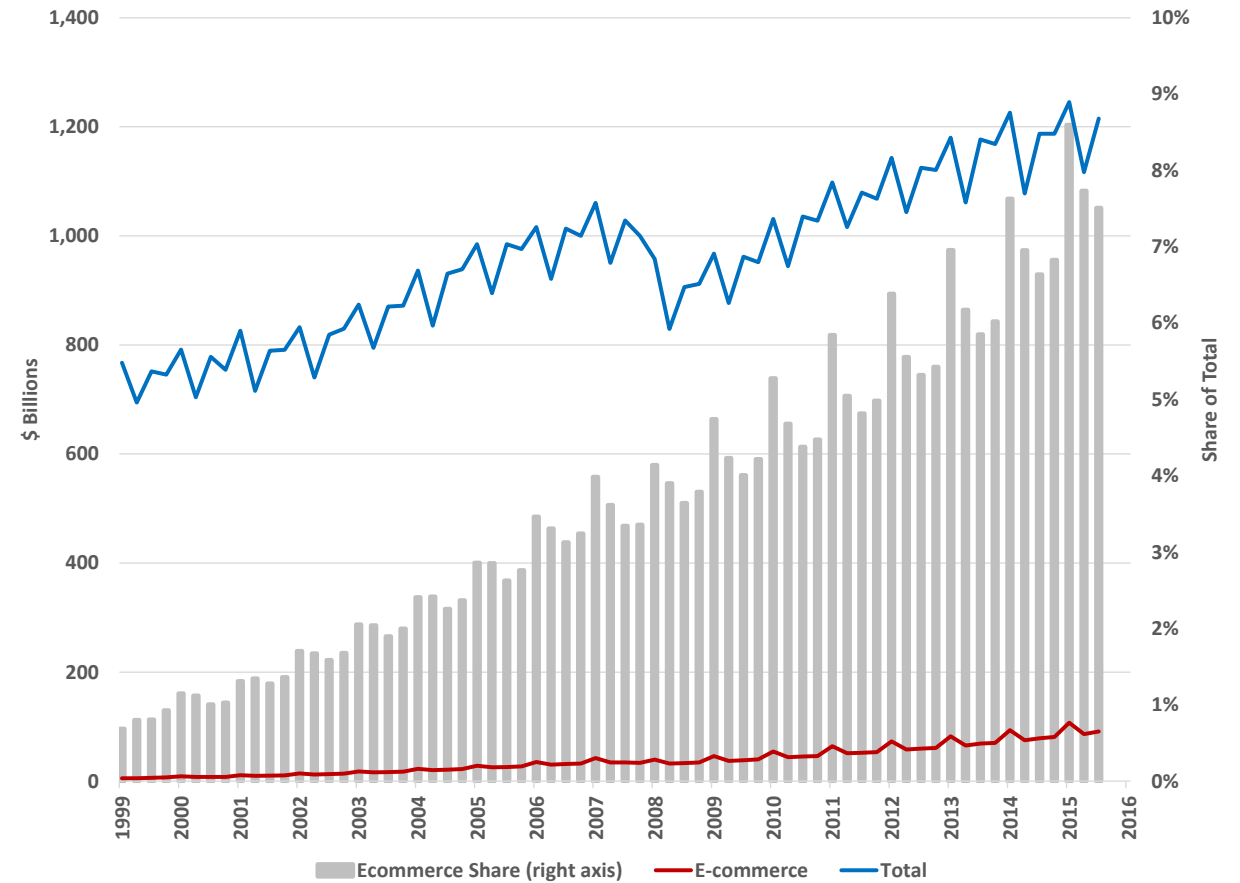
Congestion is getting worse and ecommerce is growing



2020 congestion forecasts, with trucks



eCommerce vs. total retail sales

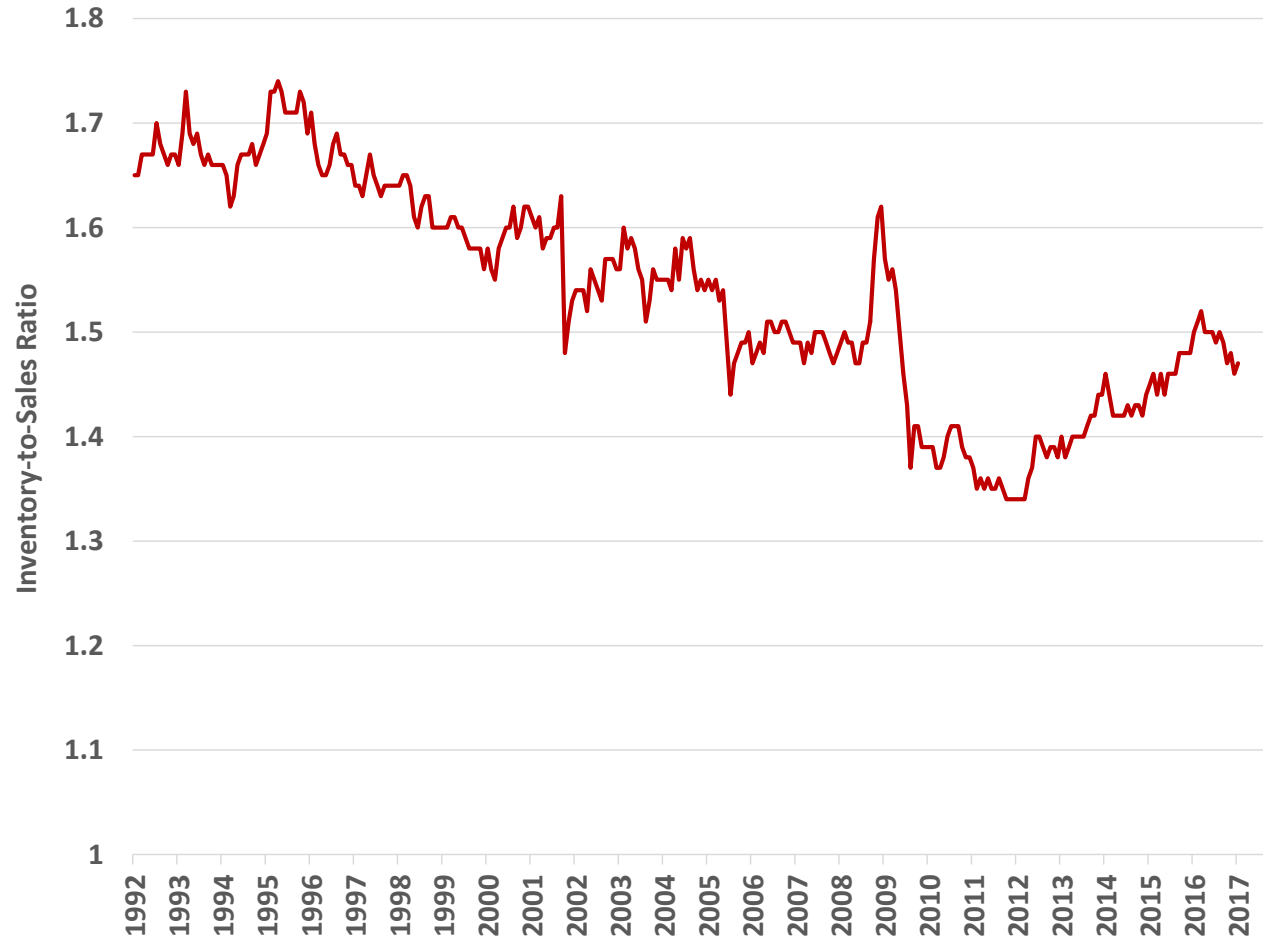


Source: US DOT, Census Bureau, JLL

Why is the inventory-to-sales ratio rising?



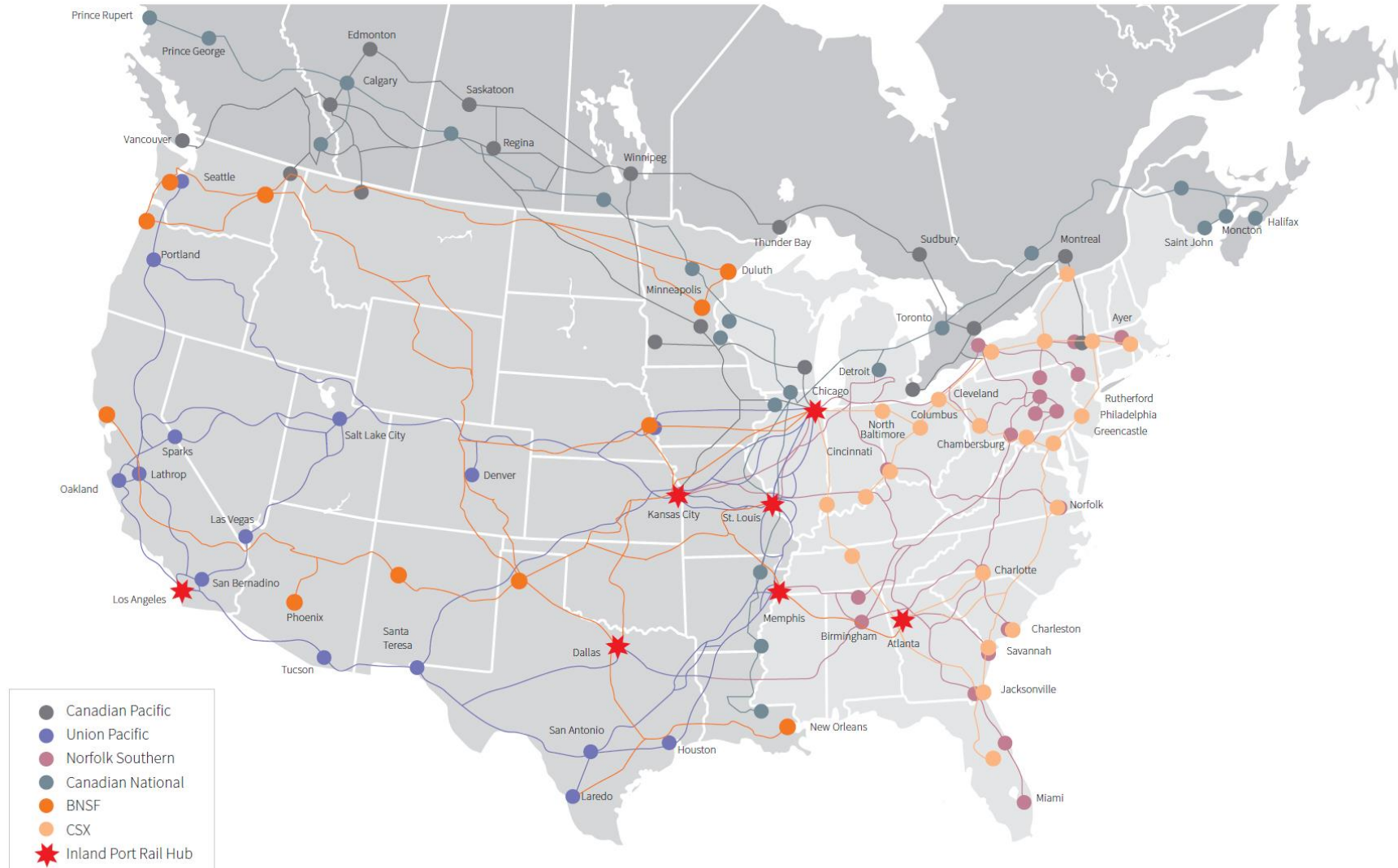
Inventory-to-sales ratio: 1992 - 2017



Some theories:

- **Lower interest rates means capital tied up in inventories is less expensive**
- **Ecommerce/omnichannel means retailers hold more inventory in more places**
- **Worsening congestion and truck driver shortage requires greater safety stocks**

Inland hubs are becoming more numerous



What comes next?



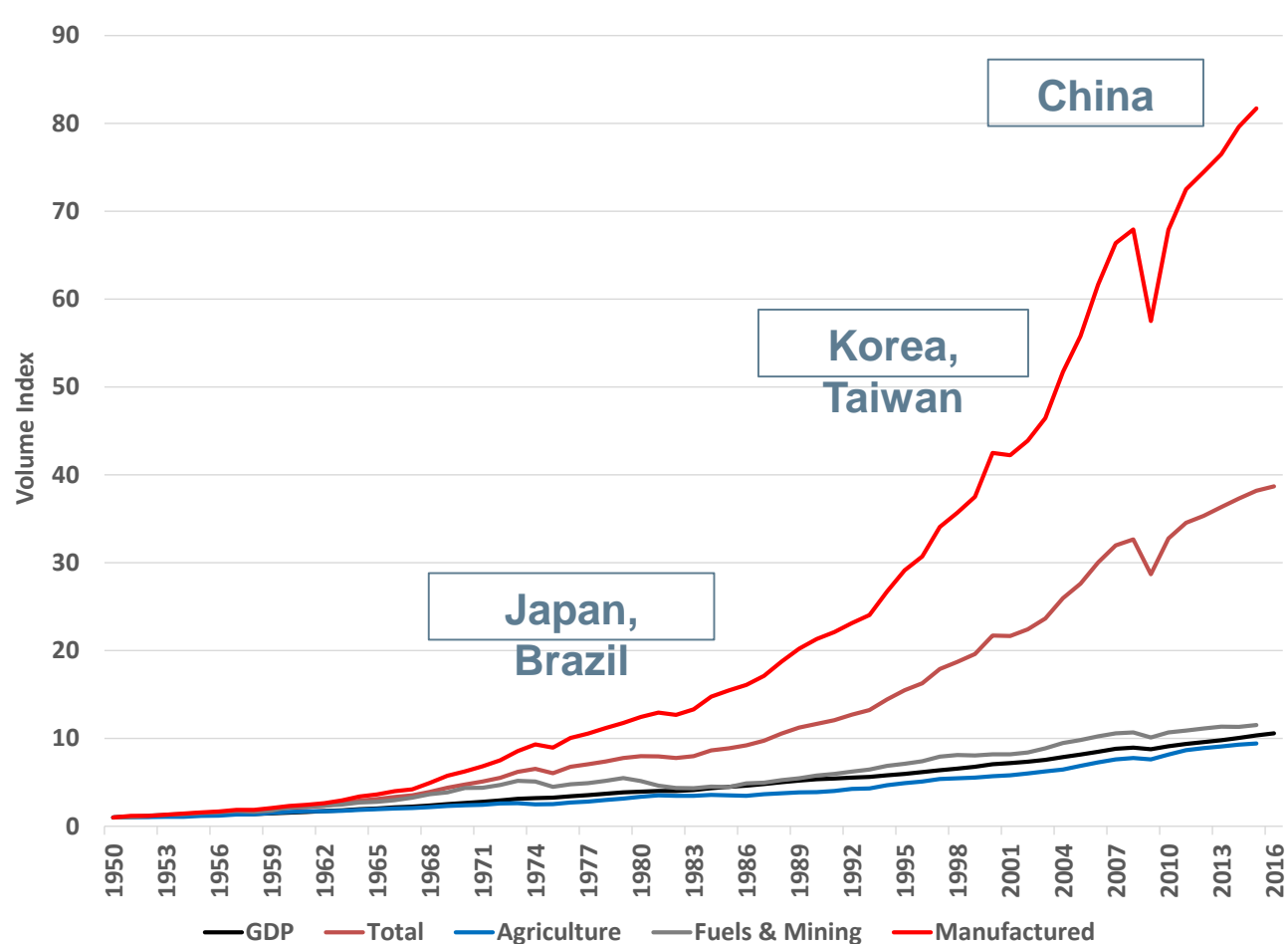
New US trade terms – ball is in trading partner's court

Growth-oriented infrastructure policies

Trade growth trends underlie global economic growth

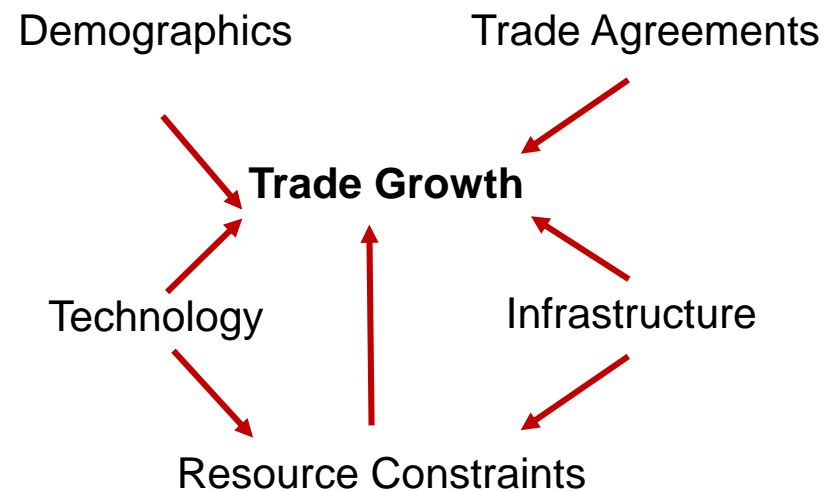


World real GDP and trade volume indexes 1950-2015E



| | 1950 - 2015 CAGR | Relative to GDP Growth |
|---------------------------|------------------|------------------------|
| GDP | 3.7% | 1.0 |
| Manufactured Goods | 7.0% | 1.9 |
| Fuels and Mining Products | 3.8% | 1.0 |
| Agricultural Goods | 3.5% | 1.0 |
| Total Trade | 5.8% | 1.6 |

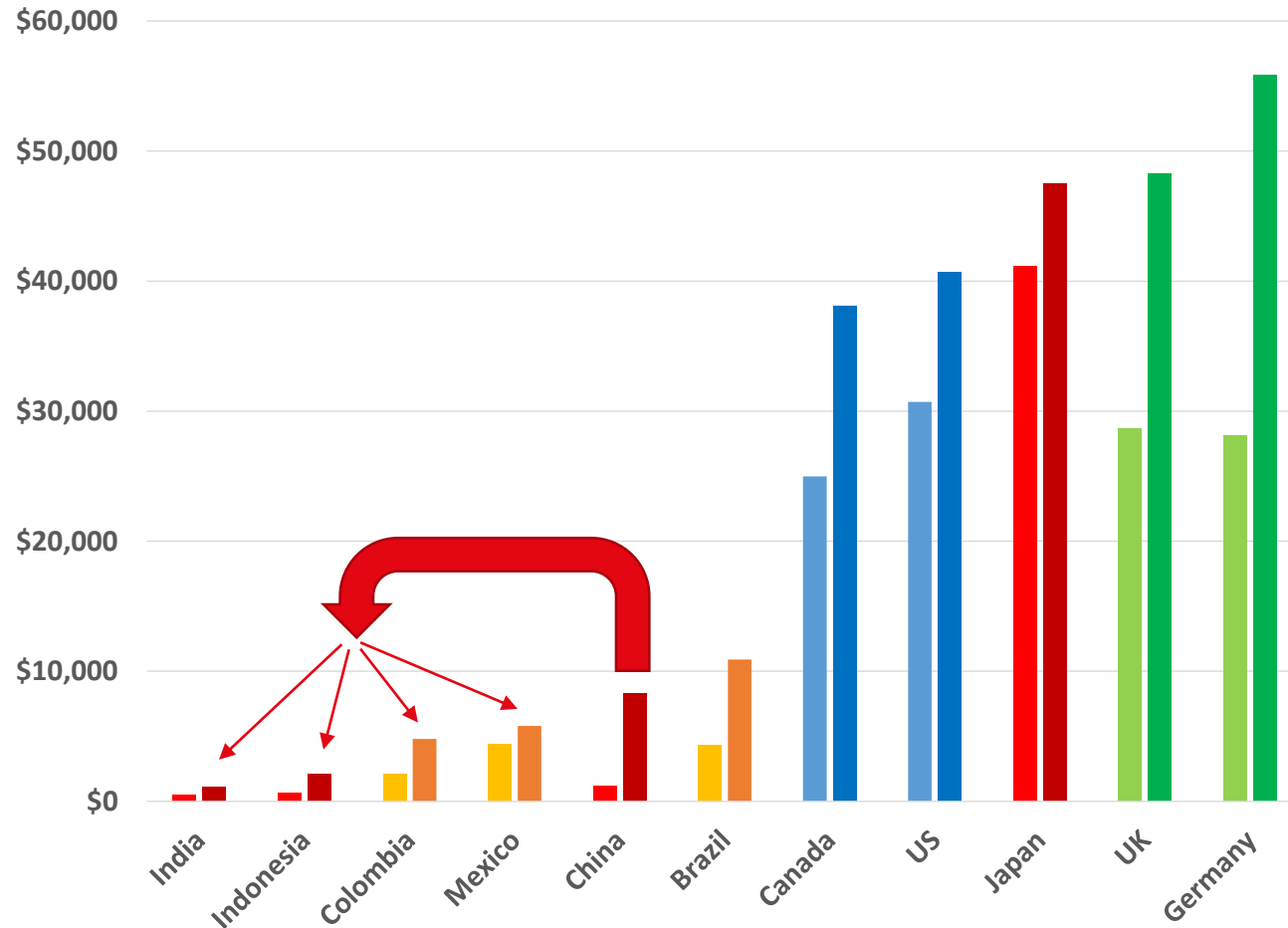
Trade growth drivers



International labor cost comparisons – then and now



Local manufacturing wages converted into us\$ at prevailing exchange rates in 2001 and 2016

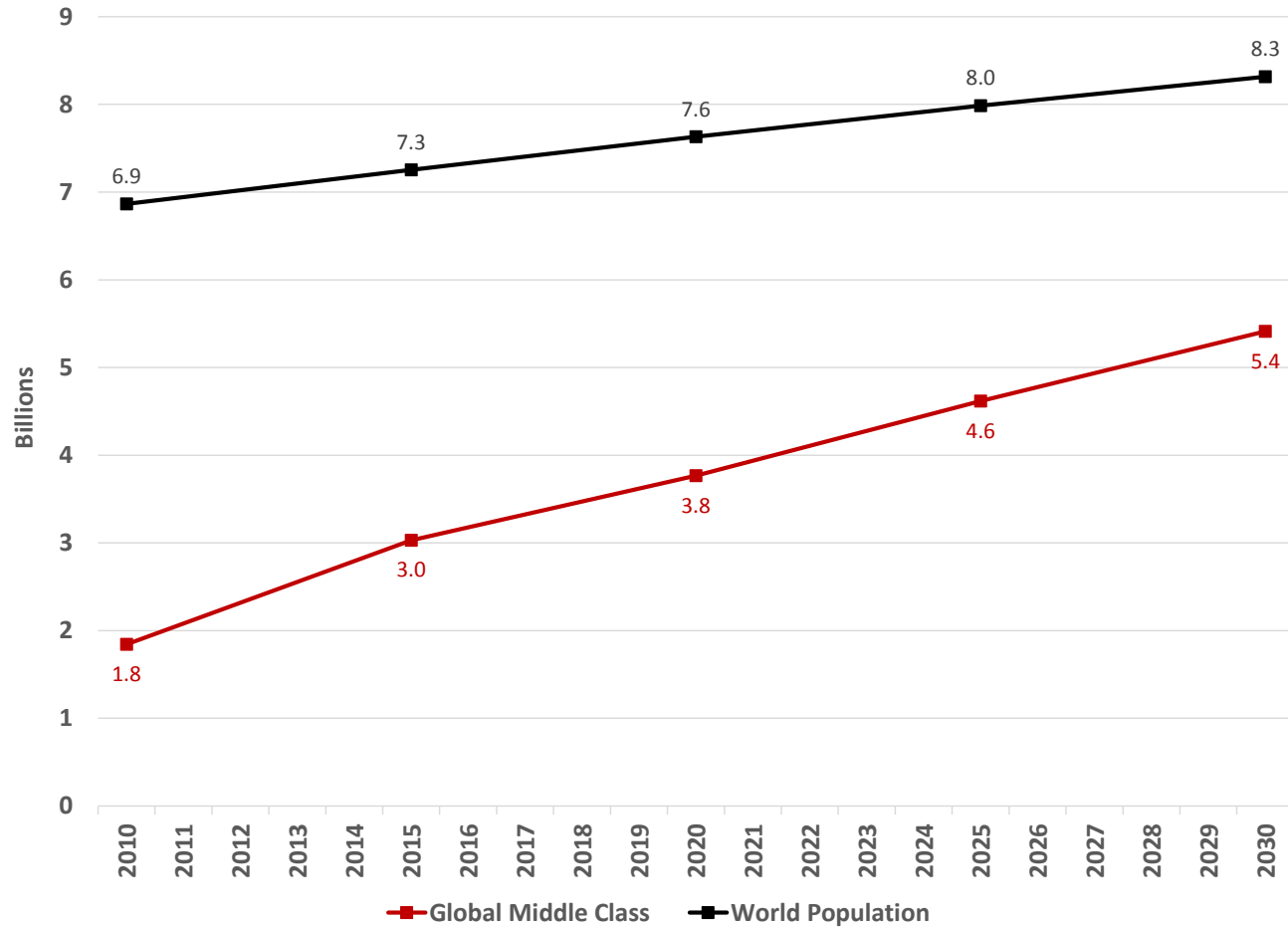


Source: Government statistics agencies, Trading Economics. JLL

The largest global middle class ever!



World population and OECD global middle class projections

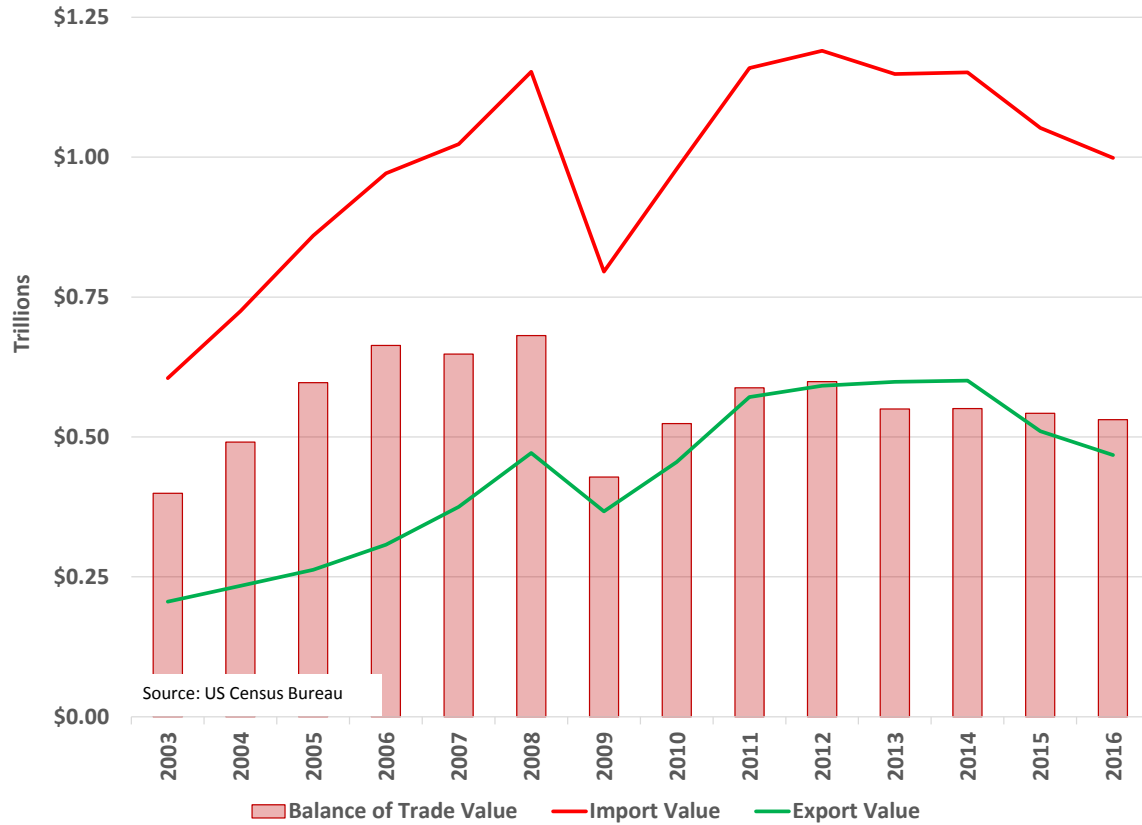


Source: OECD, US Census Bureau

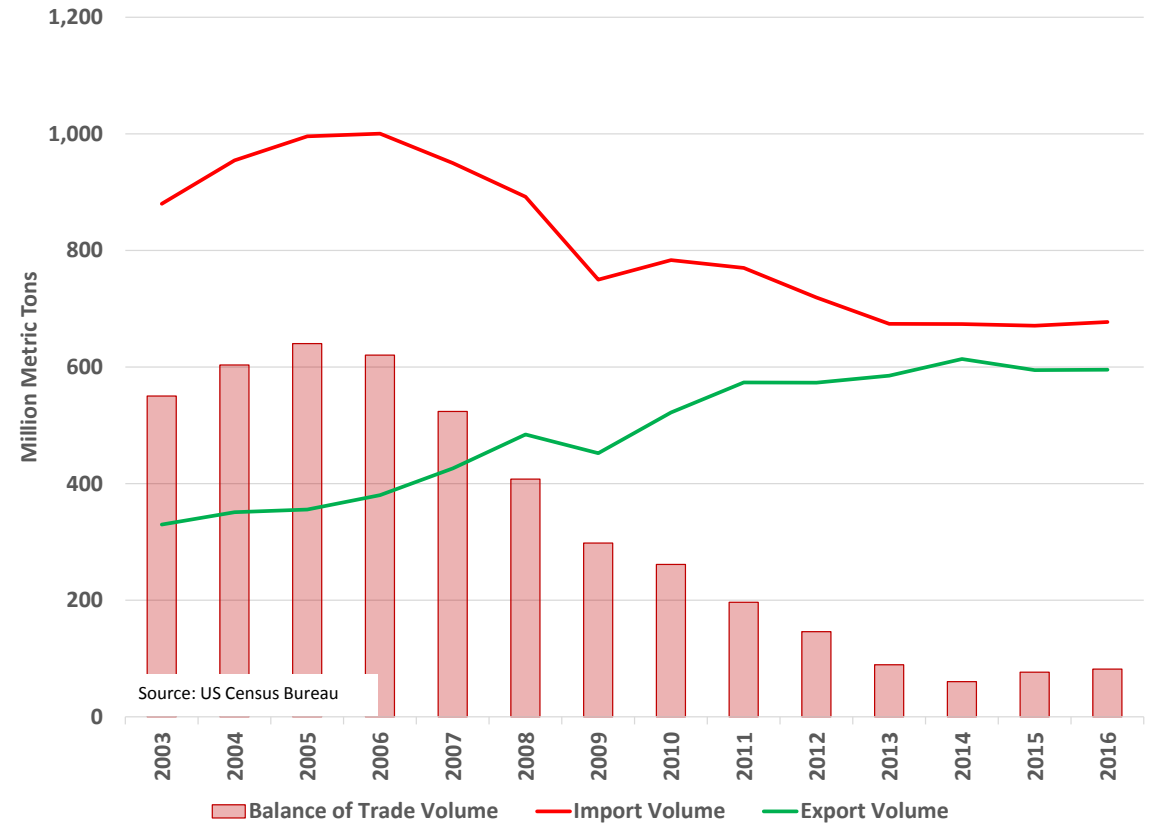
The trade deficit value gap



Goods trade deficit measured in us dollars: 2003 – 2016e



Goods trade deficit measured in metric tons: 2003 – 2016e



Summary: trade, congestion and infrastructure



- **Rumors of the death of globalization are premature**
 - (More people, more consumption, more trade)
 - (Ecommerce, 3D Printing, Automation is a reaction to congestion)
- **Freight movement is suffering from congestion**
 - (Not enough roadway capacity)
 - (Worsening truck driver shortage)
- **The 3 T's of Trump are creating opportunities to tap into global middle class growth**
 - (Trade agreements (NAFTA), Tax reform, Transportation infrastructure)
 - (But the infrastructure market place is not waiting for Washington)

PAGI thanks you for your time

Thank you

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