

AAPA Cargo Optimization Conference

Forecasting the Future of Freight



JUNE 7TH-8TH

**Hyatt Regency Jersey City on the Hudson
Jersey City, NJ**

Today's Daunting Objective

Address the topic

“Best Practices for Forecasting Freight, Land Use & Capital Plans that Allow a Port to be Ready to Optimize its Cargo in the Medium and the Long-Term”

Today's presentation—a more practical alternative

- Explore the applicability of the Kinked Oligopoly Demand Curve and the Giffin Good theories to hybrid managed ports in post recession environments
- Assess if such theories, given an appropriate number of hypothetical assumptions, can benefit federal bureaucracies in regulating international transport

The Agenda

- Definitions
- Forecasting Applications
- Macro vs Micro Factors
- Options & Observations

My three most important lessons learned about forecasting

“It is tough making predictions, especially about the future”, Yogi Berra

“If one took all the economists in the world and laid them end to end.....”

“It would be a good thing!”

“The darkest hour is just before,”

.....things get really fuzzy!

Definitions

- Forecasting: foresee, to serve as a ...prophecy
- Macroeconomic: how the aggregate economy behaves. In **macroeconomics**, a variety of economy-wide phenomena is thoroughly examined
- Microeconomic: the market behavior of individual consumers and firms in an attempt to understand the decision-making process

Definitions-continued

- Exogenous variable: An exogenous variable is used for setting arbitrary external conditions, and not in achieving a more realistic model behavior.
- Independent variable: one that refuses to provide the justifiable means to a forecaster's desired end [see recalcitrant]
- Assumption: a convenient hypothesis or figment of one's imagination used to explain away inconvenient facts or realities

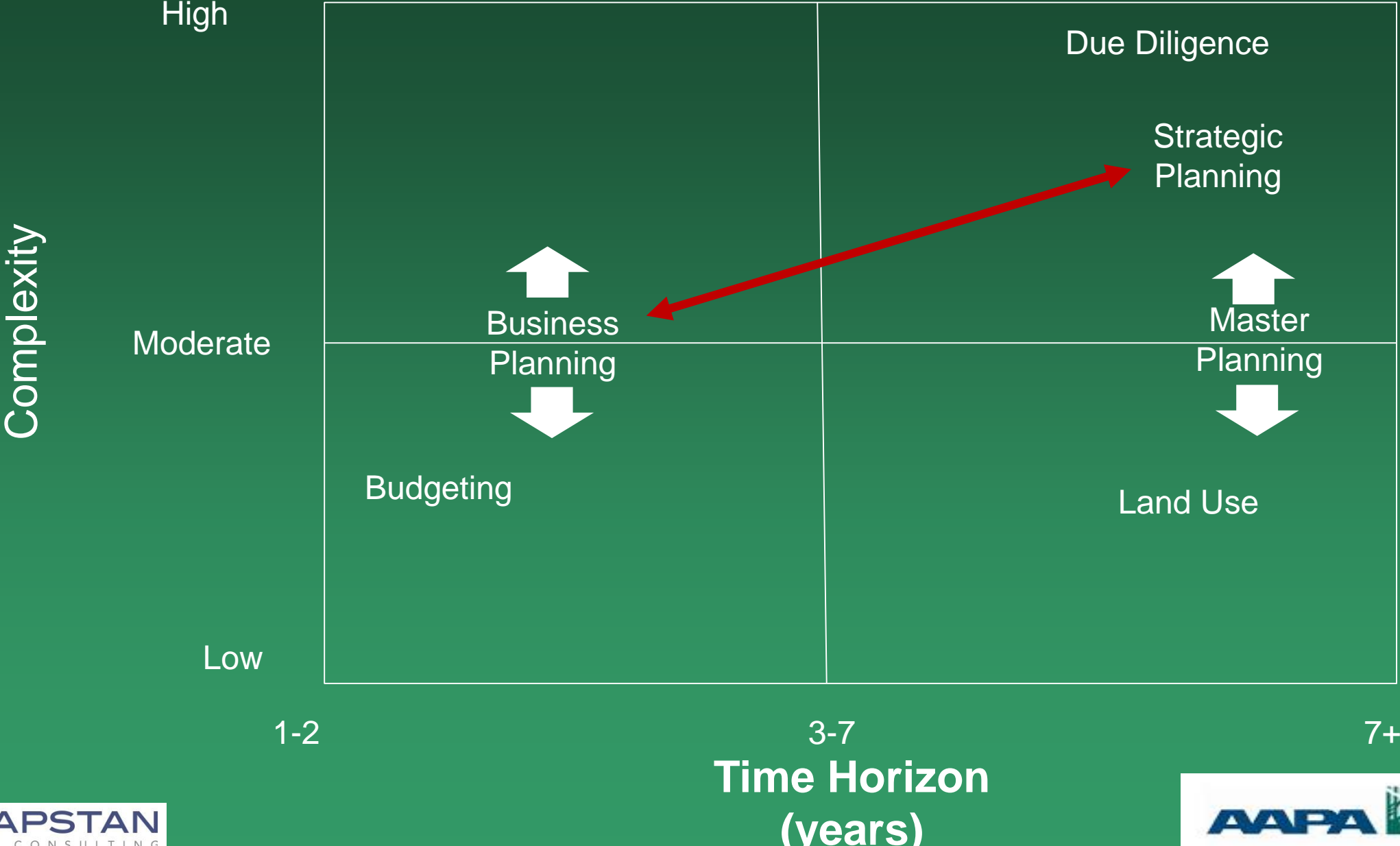
Economics

Does one need further proof for why Economics is termed the *Dismal Science*?

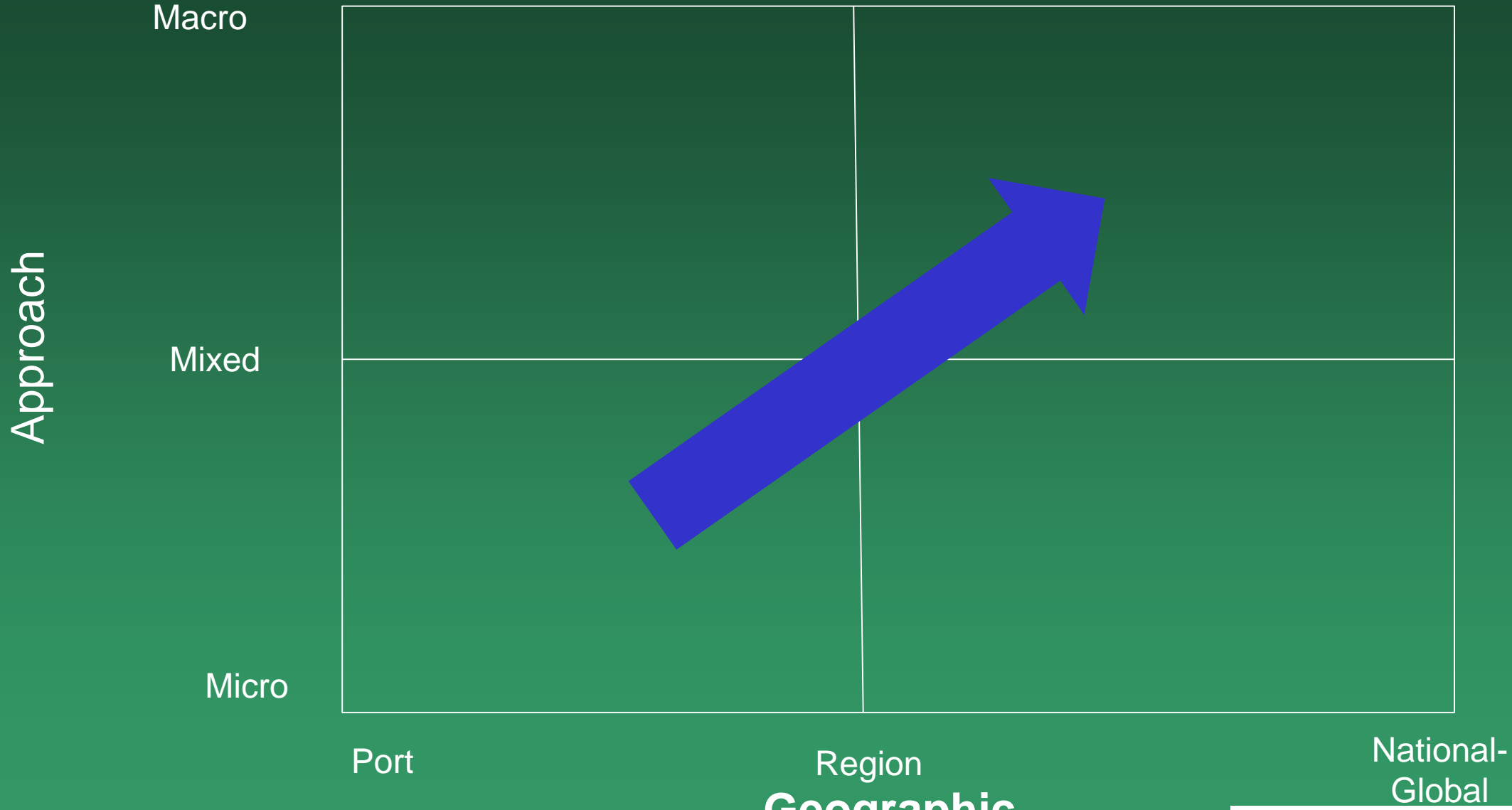
Simplistically, two things drive cargo growth

- People: they consume things
- Industry: they make things

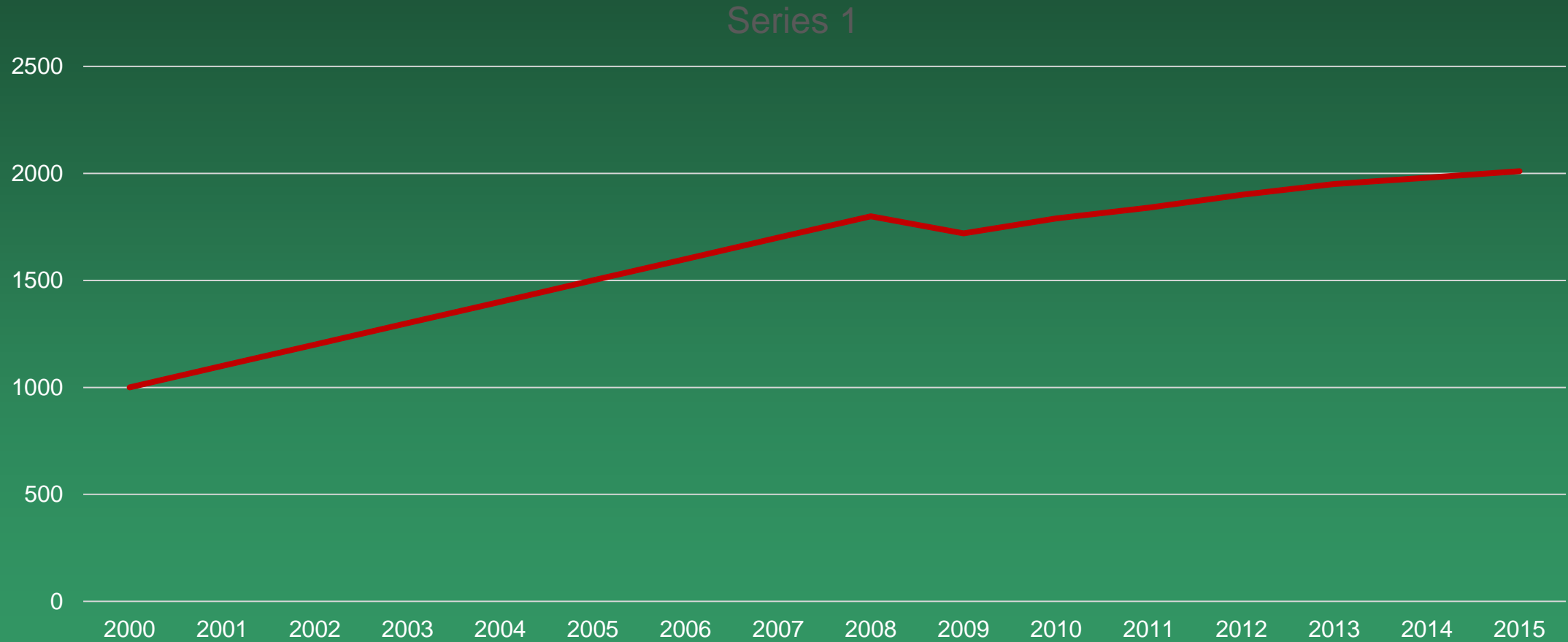
Forecasting Applications: they vary significantly depending on the relative importance of people and industry



Generally speaking, macro approaches are most applicable to forecasting activity at the global, trade lane and or the national level



Macroeconomic analyses are orderly



Microeconomic analyses are complicated & disorganized



*(estimated % of global capacity)

Examples of macro and micro forecast applications

Macroeconomic Examples

- Long-term forecast of global container trade
- Mid-term forecast of US auto sales
- Long-term electricity demand for Canada

Microeconomic Examples

- Liquid bulk: future demand for the Jones Act petroleum products fleet
- Dry bulk: future US east steam coal exports to the EU
- Container: Asia-USEC trade via Panama vs. Suez for the period 2016-2020

Macro vs Microeconomic Considerations

Macroeconomic

- Global or national
- Long-term
- Fundamentals
 - GDP
 - Population
 - Employment
 - Consumer spending
 - Per capita income
 - Trade weighted exchange rates
 - Housing

Microeconomic

- Regional, sub-regional, or port
- Short to medium
- Fundamentals
 - Cargo types
 - Industries
 - Commodities
 - Customers
 - Infrastructure
 - Pricing/costs
 - Labor



There are a number of frequently used macroeconomic forecasting techniques

- Trend line & shares
- Regression analyses
- GDP multipliers
- Macroeconomic modeling

The objectives, scope, schedule & available resources are all factors to be considered

Microeconomic forecasting techniques typically involve focused analyses of specific industries or issues

- Landed cost analyses via competitor gateways
- Modal economic analyses
- Potash segment of the global fertilizer industry
- Electric arc furnace share of global steel production



Some things defy forecasting: e.g. specific ports' container & RoRo trade with Cuba in 2018



- How fast will political relations “normalize”?
- When will Cuba eliminate its restrictive currency regulations?
- When will Cuba’s foreign investment regulations be liberalized?
- When will per capita income exceed poverty levels?

Some Observations: tainted by one's perspective on is the glass half full, or half empty



Some observations

- ✓ One size (methodology) does not fit all
- ✓ Ranges yield better results than point estimates
- ✓ Sensitivity testing is essential
- ✓ Scenario planning probably yields the best results
 - Assuming the need justifies the effort
 - Time & resources permitting
- ✓ Often times the process yields more lasting benefits than the results themselves