TRANSIGHT 4.0 LAUNCH SERIES

REMI TranSight

Presentation to Begin Shortly After 2:00 PM (EST)

SESSION 2:
EYES WIDE OPEN- THE ECONOMIC AND DEMOGRAPHIC EFFECTS OF FEDERAL POLICY

what does REMI say? ^sm

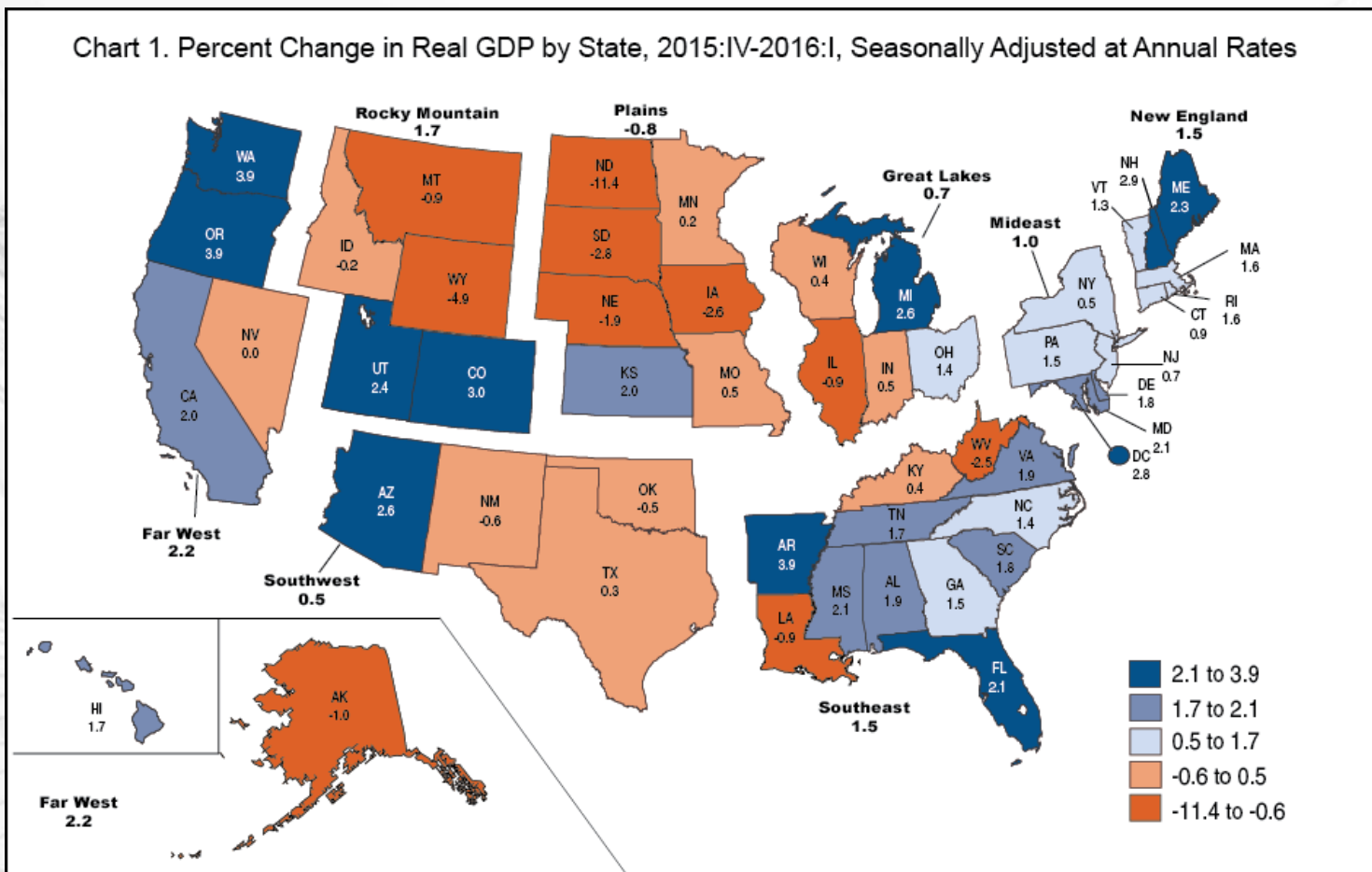**Presented by Marley Buchman, Senior Economic Associate**

Launch Series Schedule

☐ **Session 3: Transportation Revolution – Analyzing the Effects of Innovation in Transportation**

　　☐ April 11th and April 13th, 2:00 PM EST

　　Register for these presentations and more @ www.remi.com

State GDP Growth (2015-2016)

Chart 1. Percent Change in Real GDP by State, 2015:IV-2016:I, Seasonally Adjusted at Annual Rates

U.S. Bureau of Economic Analysis

what does REMI say? ˢᵐ

Determinants of Long Run Growth

Long Run Output Growth = Labor Force Growth + Productivity Growth

Y = Output
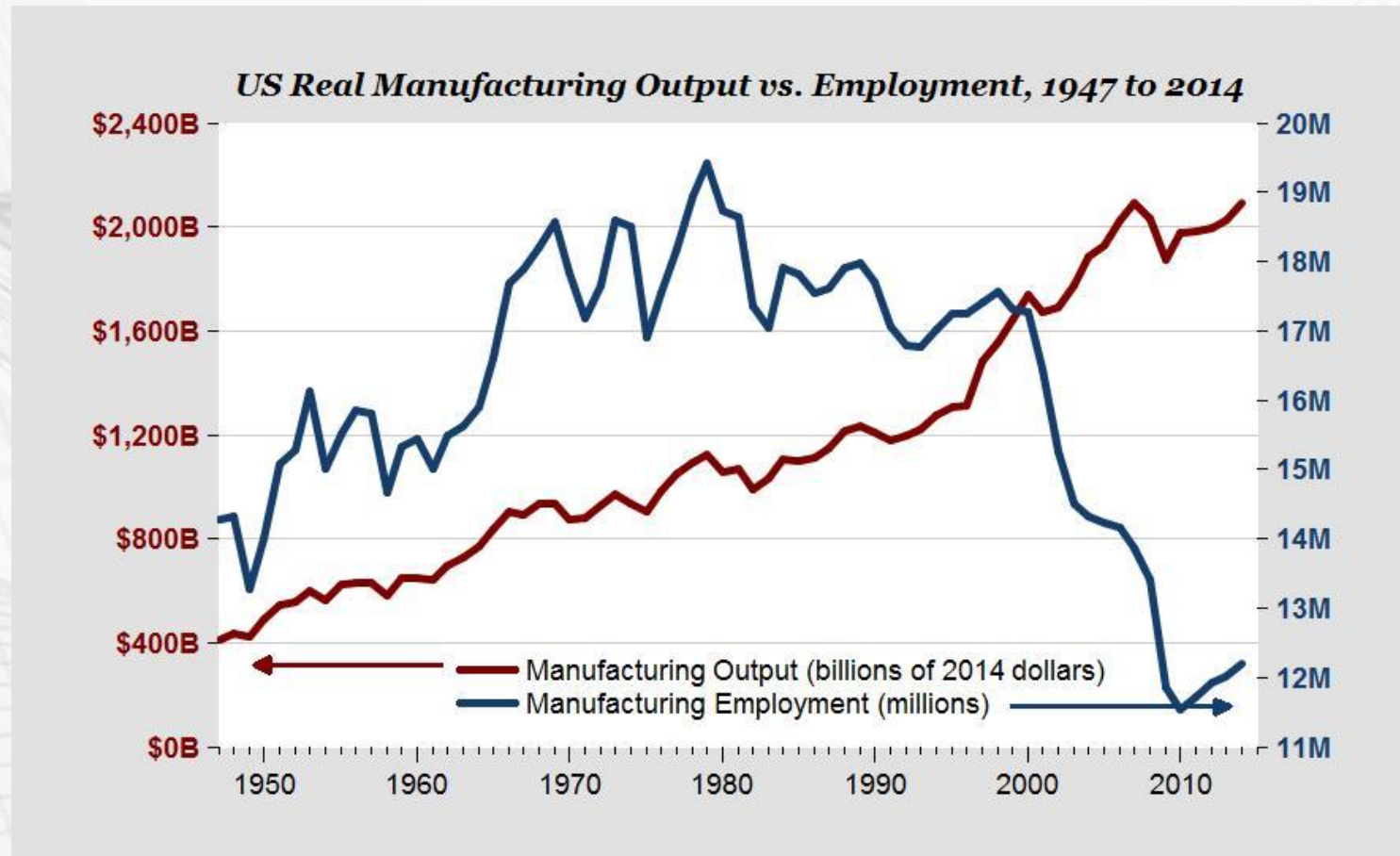P = Productivity
LF = Labor Force

Assumptions:
These factors are the long run, smoothing fundamentals that determine growth

This description of economic growth applies when the economy is close to full employment
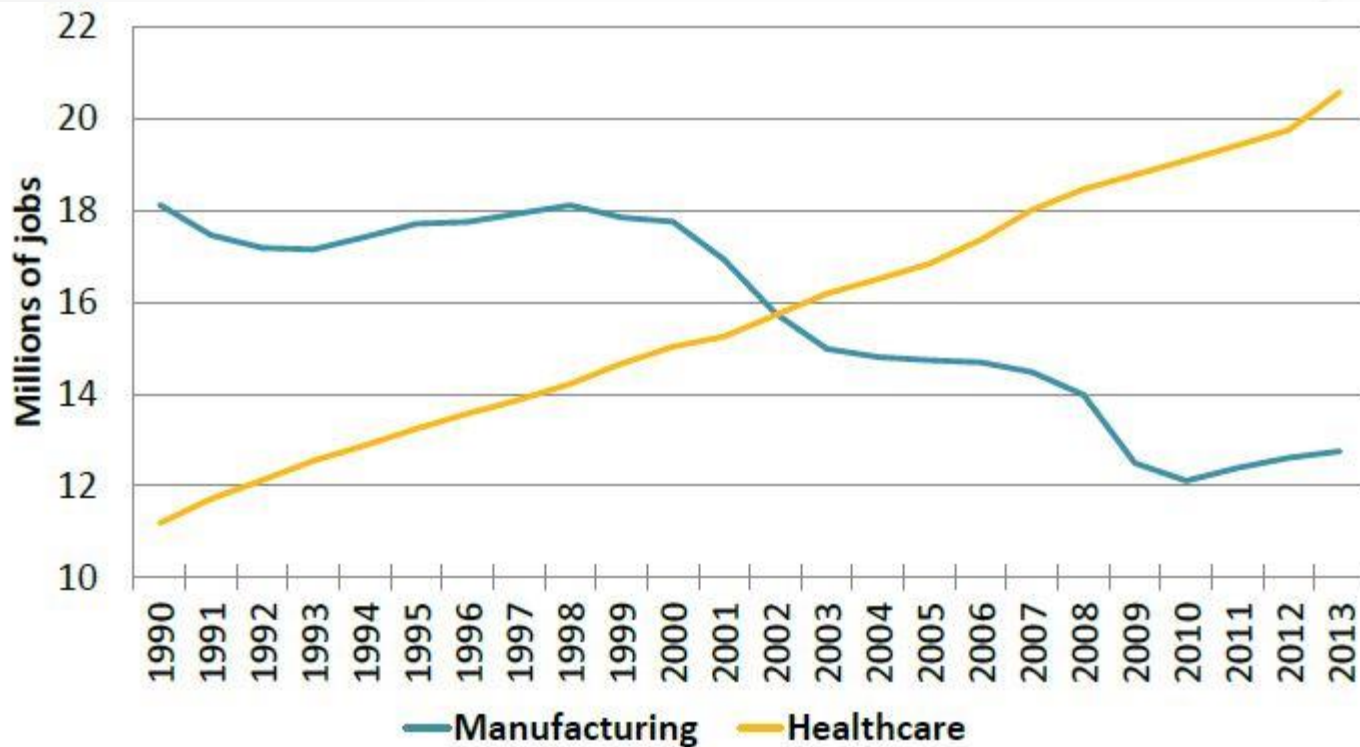
Manufacturing Productivity/Output

US Real Manufacturing Output vs. Employment, 1947 to 2014

Manufacturing Output (billions of 2014 dollars)
Manufacturing Employment (millions)

what does REMI say? sm

Manufacturing and Healthcare Employment

Cohort-Component

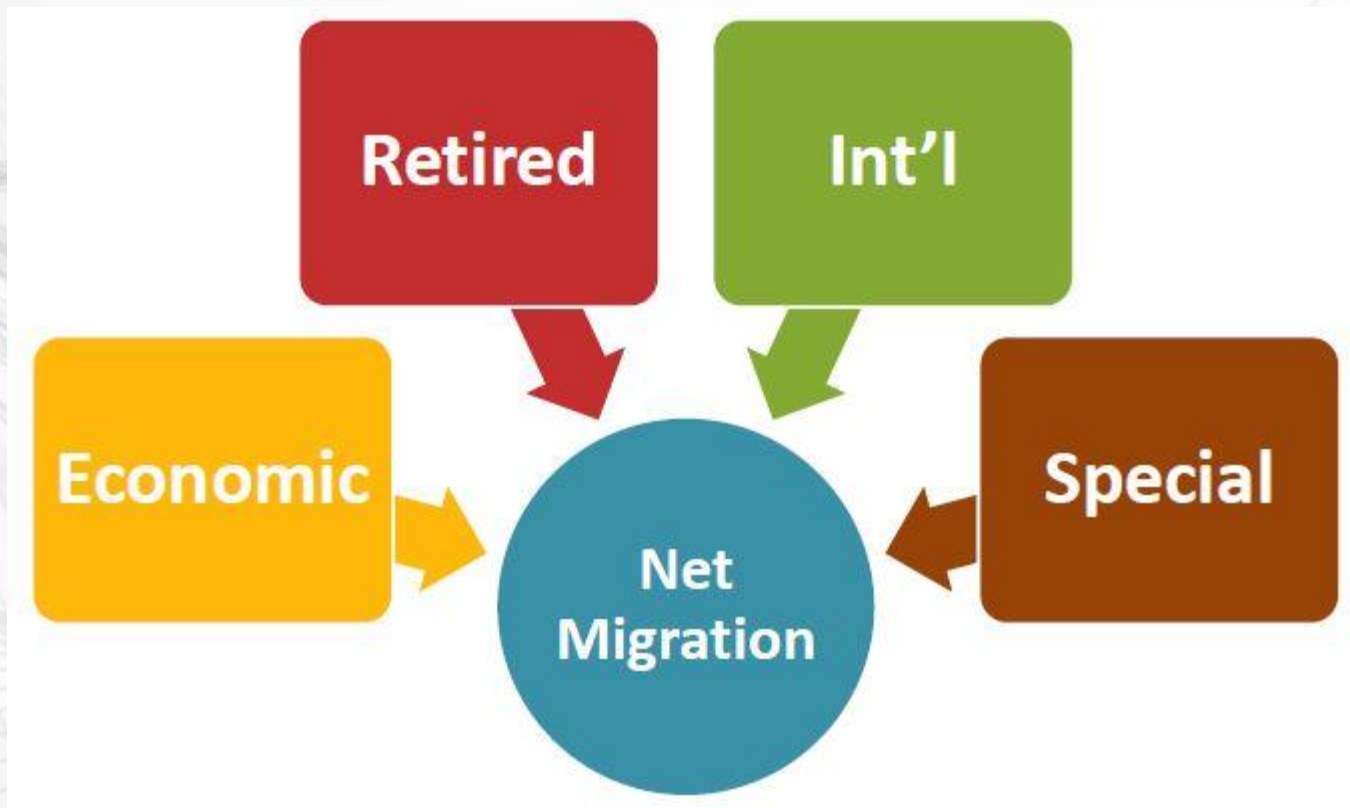□ = **Starting Population**

\+ Natural Growth (+Births, -Deaths)

\+ Net Migrants (+In, -Out)

= **Ending Population**

Region Portland MSA			
Category	Units	2015	2016
▶ Starting Population	Thousands	1885.899	1899.318
Natural Growth	Thousands	9.079	8.793
Population Before Migrants	Thousands	1894.978	1908.111
Migrants	Thousands	4.340	6.638
Unexplained Growth	Thousands	0.000	0.000
Ending Population	Thousands	1899.318	1914.748

Demographics in the Model

□ Sex: Male/Female

□ Race: White-NonHispanic, Black-NonHispanic, Other-NonHispanic, Hispanic

□ Age: 101 Age Cohorts from (0 – 100+)

what does REMI say? sm

Migration Concepts

Economic Migration

$$ECMG_t^l = \left[\lambda^l + \beta \ln\left(REO_t^l\right) + \beta \ln\left(RWR_t^l\right) + \beta \ln\left(MIGPROD_t^l\right)\right] * LF_{t-1}^l$$

ECMG = Net Economic Migration

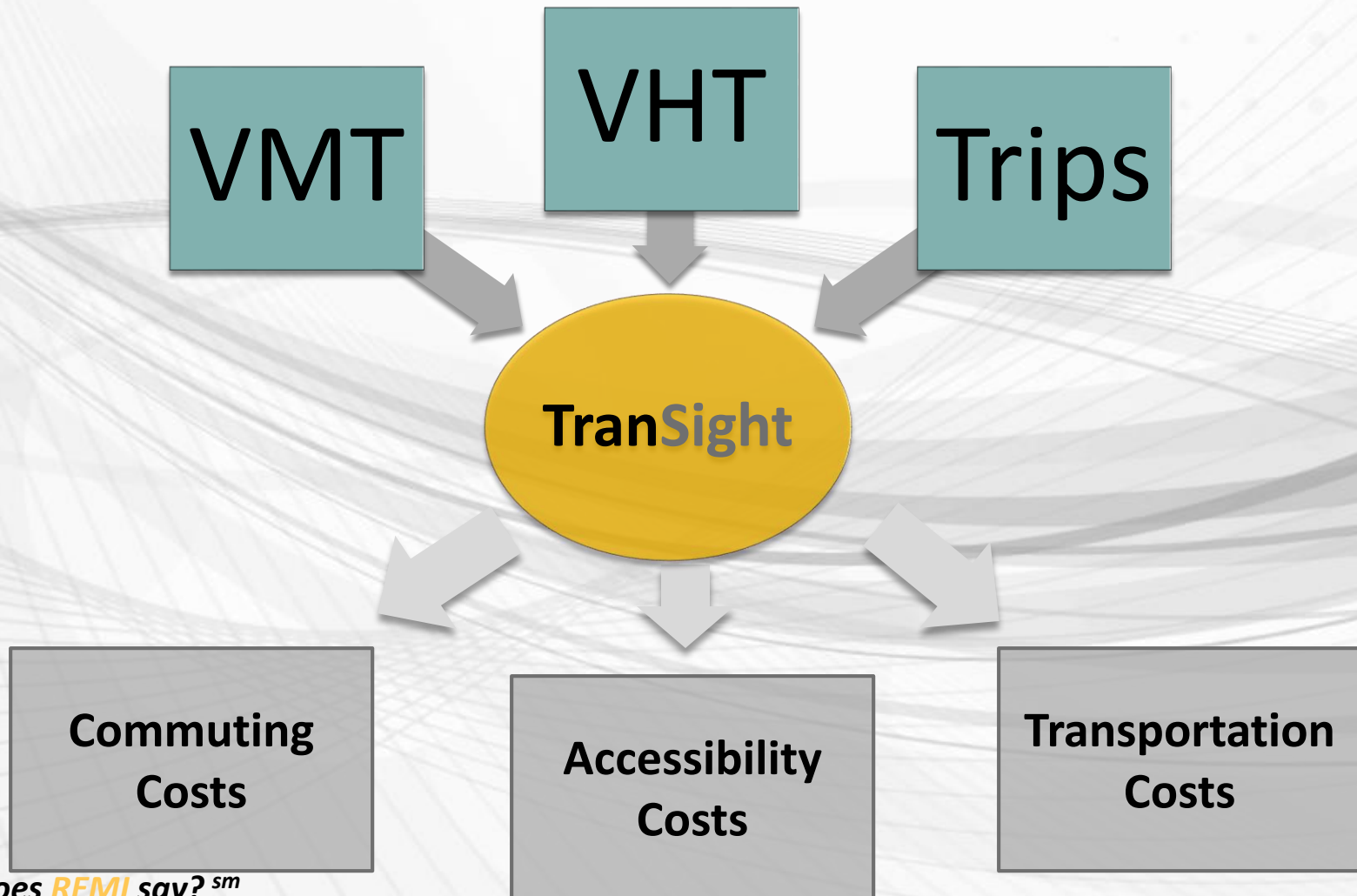REO = Relative Employment Opportunity

RWR = Relative (Real) Wage Rate

MIGPROD = Consumption Access

Lambda = Fixed Amenity

Exogenous Concepts

- International Migrants:
  - Based on historical patterns
  - Many of the determinants of international migration are not closely tied to regional factors (economic/political conditions of foreign countries, available visas for U.S. immigration)
- Special Populations:
  - These demographic groups don't respond to changes in labor market conditions

Integration with TranSight

Model Demonstration & Results

Contact Information

Marley Buchman
marley.buchman@remi.com
(Dir) 413-362-8869