LONG WAVES, LIFECYCLES, AND URBAN DEVELOPMENT: CONTEXT FOR SHORT-TERM PURPOSEFUL ACTION

ALAN E. ALVAREZ*, JUSTIN ROOT*, DAVID C. PROSPERI* & ZEYNEP ENLIL^

*FLORIDA ATLANTIC UNIVERSITY, ^YILDIZ TECHNICAL UNIVERSITY

FORT LAUDERDALE, FLORIDA, USA / ISTANBUL, TURKEY

MAY 20, 2011 / REAL CORP 2011

OUTLINE

Introduction

Theory of Long Waves

Research Problem

Heuristic Model

Results

Conclusions / Take Home Points

INTRODUCTION

Cities and Regions are path dependent

Long waves and urban development: seen in transport, economic development

Planners focus on “short waves” when long waves ask us, “what is the context” of our actions

Long wave theory focuses on very *SLOW* transformational changes

LONG WAVE THEORY

Braudel: Events are path dependent and rarely deviate; View history with *Longue Duree*

Berry: Technology comes in waves; Cyberspace is the Fifth Wave

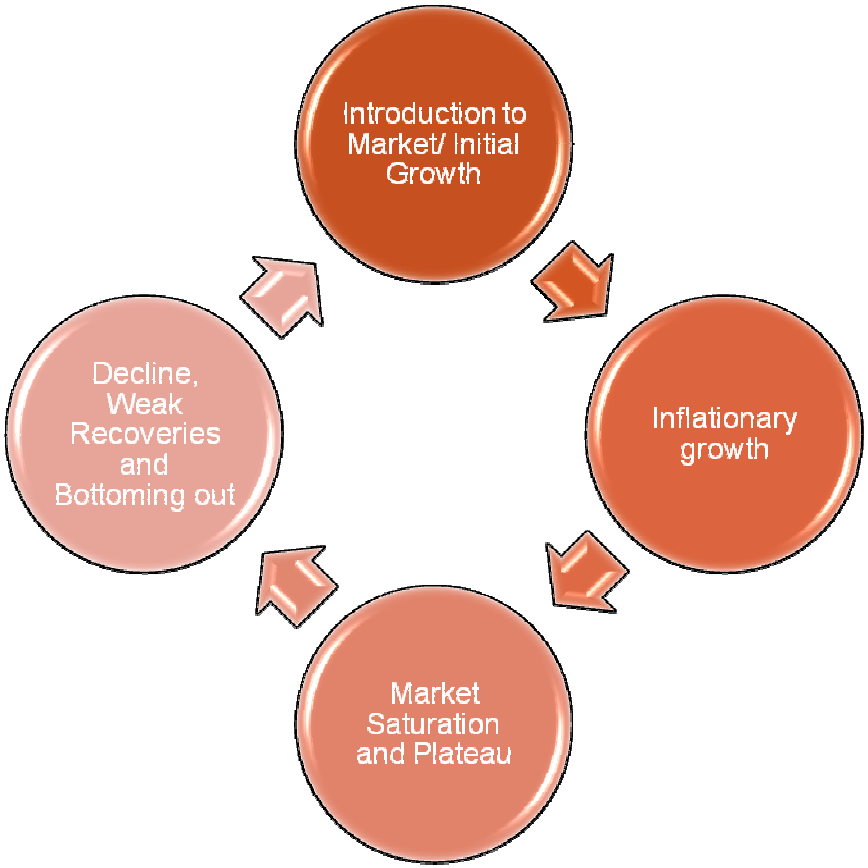
Lifecycles: in the form of S-curves

BRAUDEL

- TIME
  - Environmental
  - Empires, Civilization, Society
  - People and la vie quotidienne
- A WORLD ECONOMY
  - Boundaries
  - Dominant Capitalist City at Center
  - Hierarchy of Zones

BERRY & LIFECYCLES

Processes are characterized in terms of a pattern growth, decline, and then growth



RESEARCH PROBLEM

Develop a Heuristic Model

Based on Long Waves, Lifecycles

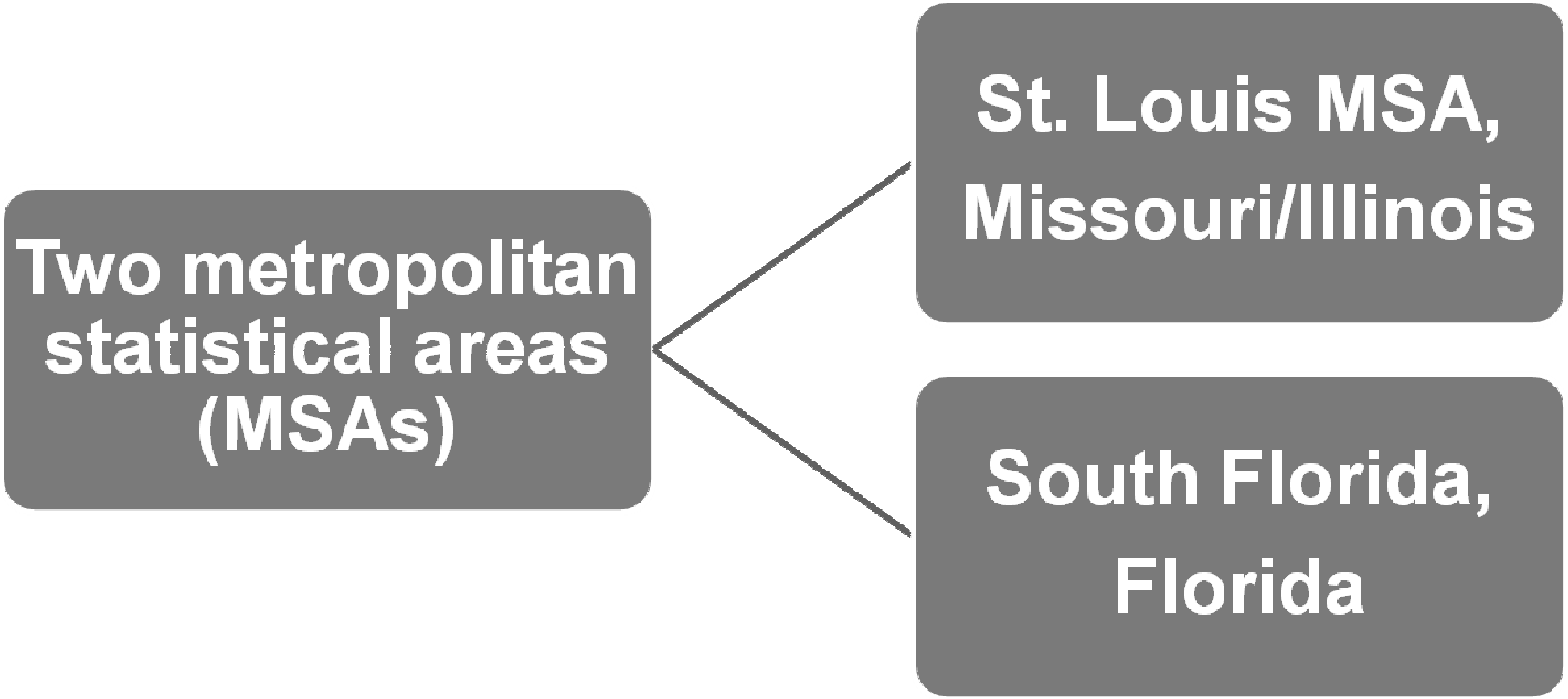
Use the model to examine two metropolitan regions (that seem to be at different stages in their lifecycle)

Suggest how “long wave thinking” can (better?) inform planning practice

HEURISTIC MODEL

- Diversification of Economic Base
- Established vs. Emerging Companies
- Migration
- Education / Human Resource / Creativity
- Connectivity

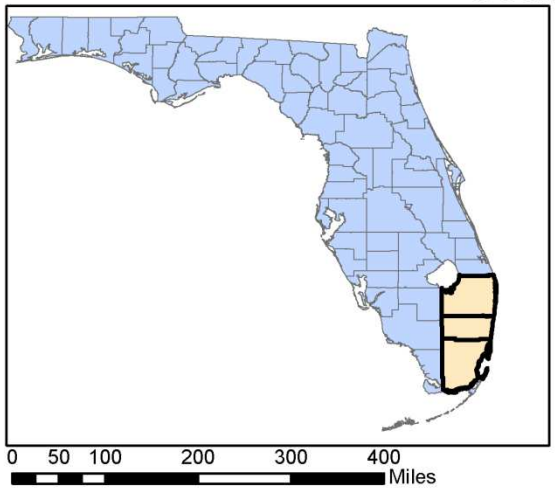
ANALYTICAL COMPARISON

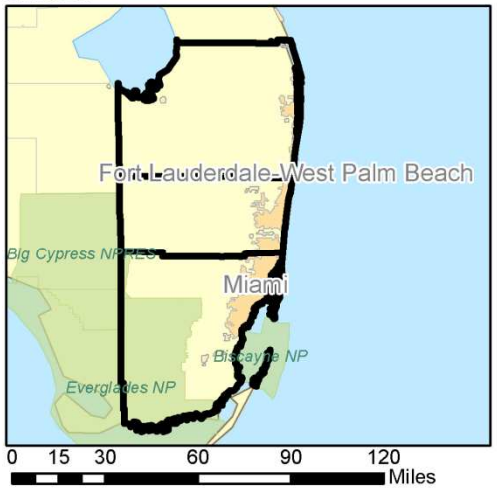


P-Census, Articles, Reports

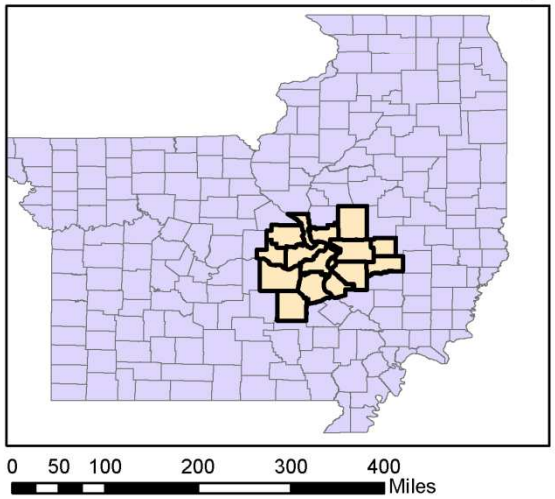
South Florida and St. Louis Metropolitan Areas

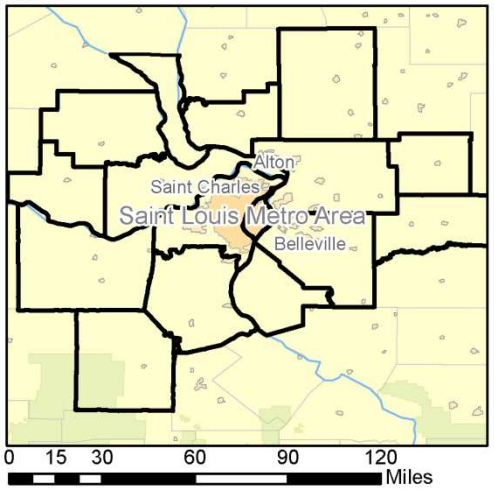
South Florida





St. Louis





SOME ROUGH COMPARISONS

ST. LOUIS MSA

MSA population (2009): 2,892,874

Land area covers roughly 9,100 sq. mi (14,645 sq. km)

GDP as of 2008: 128.5 billion dollars

SOUTH FLORIDA MSA

MSA population (2009): 5,547,051

Land area covers 6,137 sq. miles (9,876.5 sq. km)

GDP as of 2008: 261.2 billion dollars

SOME SIMILARITIES AND DIFFERENCES

Variable	St Louis MSA	South Florida MSA
Population Size (2008, 2000, growth rate)	2,828,3998 / 2,700,011 / 4.8%	5,525,947 / 5.007,564 / 5.9%
Households (2008, 2000, growth rate)	1,117,722 / 1,048,818 / 6.6%	2,072,456 / 1,905,394 / 8.8%
Average Household Income (2008, US Average)	$66,294 / $67,918	$69,600 / $67,918
Projected HH Income Growth Rate (Local, US Ave)	9.7% / 11.7%	11.9% / 11.7%
Median Household Income (2008, 2000)	$51,253 / $44,539	$48,346 / $40,778
Per Capita Income (2008, US Average)	$26,465 (22,473) / $25,933	$26.350 (22,339) / $25,933
Masters, Professional or Doctorate Degree (Place,US)	8.93% (9.02) / 8.9%	9.45% (9.34) / 8.9%
Bachelors Degree (2008, 2000)	15.78% (15.82) / 15.8%	14.95% (14.77) / 15.8%
% Owner Occupied (2008, 2000)	72.4% / 68.6%	66.5% / 66.32%
% Built < 1939	15.2% / 16.2%	2.16 % / 2.54%
Median Year Structure Built (2008, 2000)	1966	1980 / 1977
% Black (Place, 2008, 2000, 2008 US Average)	18.3% (17.74) / 12.4%	19.8% (18.9%) / 12.4%
% Hispanic (Place, 2008, 2000, 2008 US Average)	2.05% (1.50) / 15.2%	39.2% (34.03) / 15.2%
% Speak Only English at Home	94.83%	55.56%
Estimated Median Owner-Occupied Housing Unit Value	139,543 / 95,103	288,438 / 110,247
% 1 Unit Detached (2008, 2000)	68.56% / 68.24%	42.8% / 42.46%
% 3-19 Units (2008)	13.94%	16.96%
% 20+ Units (2008, Total, 20-49, 50+)	4.64% / 1.81, 2.83	25.01% / 9.63, 15.38
% Mobile Home, Trailer, Boat, RV, Van, etc	5.22%	2.99%
Average Length of Residence	10	8
Peak Building Period	1939 or earlier (15.2%)	1970s, 22.2%, same as US 16.2%
% Familes Below Poverty (2008, 2000)	7.6% / 7.5%	10.78% / 10.78%
% HH < 15K, 15K-25K	11.64% (14.13) / 10.35% 12,28)	14.08% (17.39) / 11.17% 13.49)

RESULTS

1. Diversification of the economic structure
2. Shift Share Analysis & Sectors
3. Migration In, Out and Foreign Born
4. Education & Creativity
5. Connectivity

SHANNON DIVERSITY MEASURE

Basically a calculation using the formula

Ranges from 0 (perfect concentration) to 1 (perfect diversity)

St. Louis: .94 and .94

South Florida: .94 and .90

DIVERSIFICATION

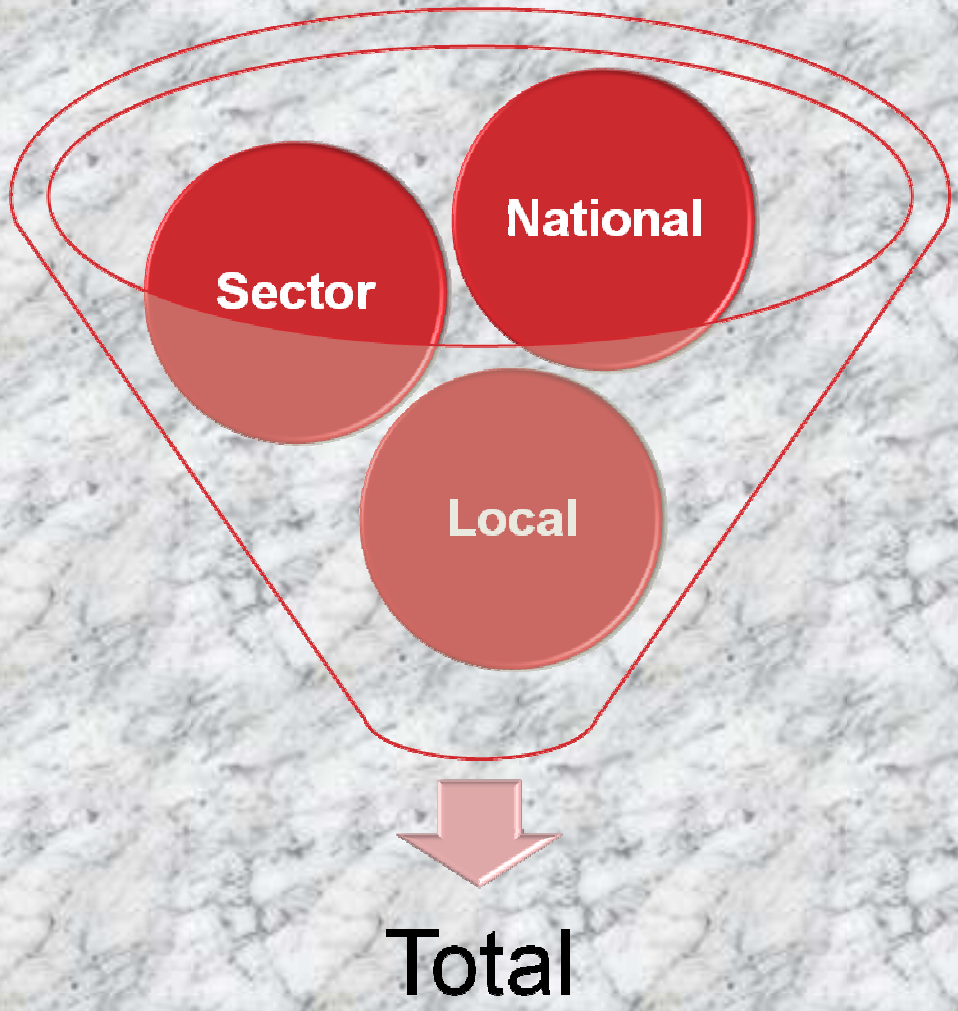
Based on calculations from ’91 and ‘09…

St. Louis has maintained its highly diversified economy

South Florida has become more mildly more specialized

St. Louis employment grew at rate of 4.9%, South Florida at rate of 5.4%

SHIFT-SHARE ANALYSIS



SHIFT SHARE ANALYSIS

ST. LOUIS

119K jobs from 1991 to 2009

Examples: Growth in Education/Health, Professional/ Business

Loss in Manufacturing

100% of growth due to larger economy

SOUTH FLORIDA

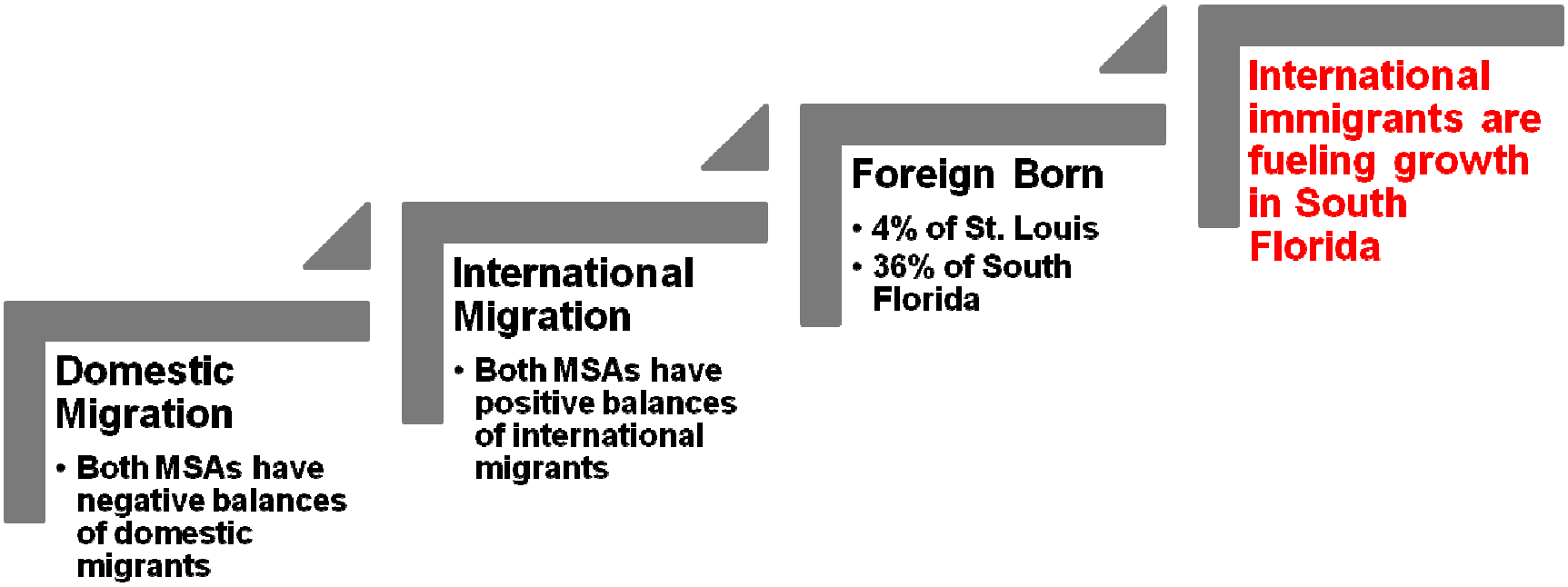
437K jobs from 1991 to 2009

Examples: Growth in Education/Health, Professional/ Business

Loss in Manufacturing

Local Competitive Advantage: *21% of growth*

MIGRATION


Domestic Migration
• Both MSAs have negative balances of domestic migrants
International Migration
• Both MSAs have positive balances of international migrants
Foreign Born
• 4% of St. Louis
• 36% of South Florida
International immigrants are fueling growth in South Florida

EDUCATION & CREATIVITY

Both MSAs are average in comparison to the rest of the USA in Bachelor's degrees

- Percentage of Bachelor's: 15.78% of St. Louis MSA
- 14.95% of South Florida MSA

Neither MSA is particularly "creative"

- Florida's Creative Index: St. Louis ranks 66th
- Miami ranked 116th
- West Palm Beach ranked 130th

CONNECTIVITY

ST LOUIS

Lambert Airport

$5.1 billion impact on region

Steady loss of passengers: 14 million in 2004 to 6 million in 2010

The region is losing connectivity

SOUTH FLORIDA

Three major airports: MIA, FLL, PBI

Each are able to specialize: International flights and freight, low-cost carriers and cruise ship flights and North-South flights

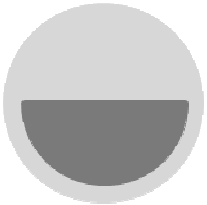
CONCLUSIONS

Regions can be placed on a long-term trajectory

Location, location, location: where a region is located can determine its growth

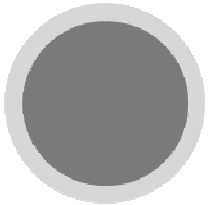
Knowing one's place: Re-invention is necessary for regions to remain relevant, since change is inevitable and hierarchy changes long term

CONCLUSIONS



Regions midway up the S-curve

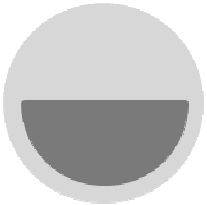
- Higher Growth Rate
- Lower per capita income but higher projected income growth rate
- Higher average HH size
- Lower % of owner-occupied dwellings
- Newer average age of built environment



Regions at the top of the S-curve

- Lower Growth Rate
- Higher per capita income but lower projected income growth rate
- Lower average HH size
- Higher % of owner-occupied dwellings
- Older average age of built environment

CONCLUSIONS

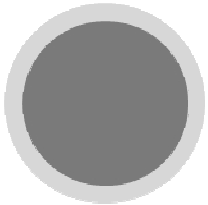


Regions midway up the S-curve

More specialized economy

Economic growth due to some local advantage

Domestic migration is negative but international migration is fueling growth



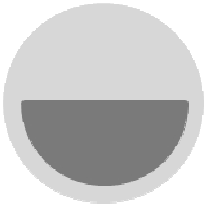
Regions at the top of the S-curve

More diversified economy

Economic growth reliant on nat'l/sectoral growth

Domestic migration is negative and international migration is negligible

CONCLUSIONS

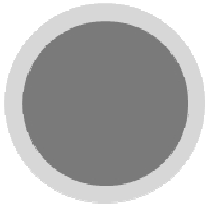


Regions midway up the S-curve

Region is “connected” via most technologically advanced method of transport (Air)

Region does not identify strongly with any corporate HQ

Region is expected to continue to grow, population-wise



Regions at the top of the S-curve

Region is losing “connectivity” because it lags in the most advanced method of transport (Air)

Dominated by several HQs; region identifies with long term corporate presence

Region is losing dominance population-wise; growth not keeping up with average

THANK YOU FOR YOUR ATTENTION!

Cities and Regions Exist Within a Broad Time-Space Continuum and On a Hierarchy

At the scale of the City/Region, development patterns and economic and social structures are largely 'GIVENS'

Short term purposeful action is often limited in geographic scope and impact

It will take thousands of "glocalized" events to move the position of the city or region "up" or "down" the global hierarchy of inter-urban geography.