

# The Role of Smart Growth in Transportation Planning

Wendell Cox • 3 May 2012

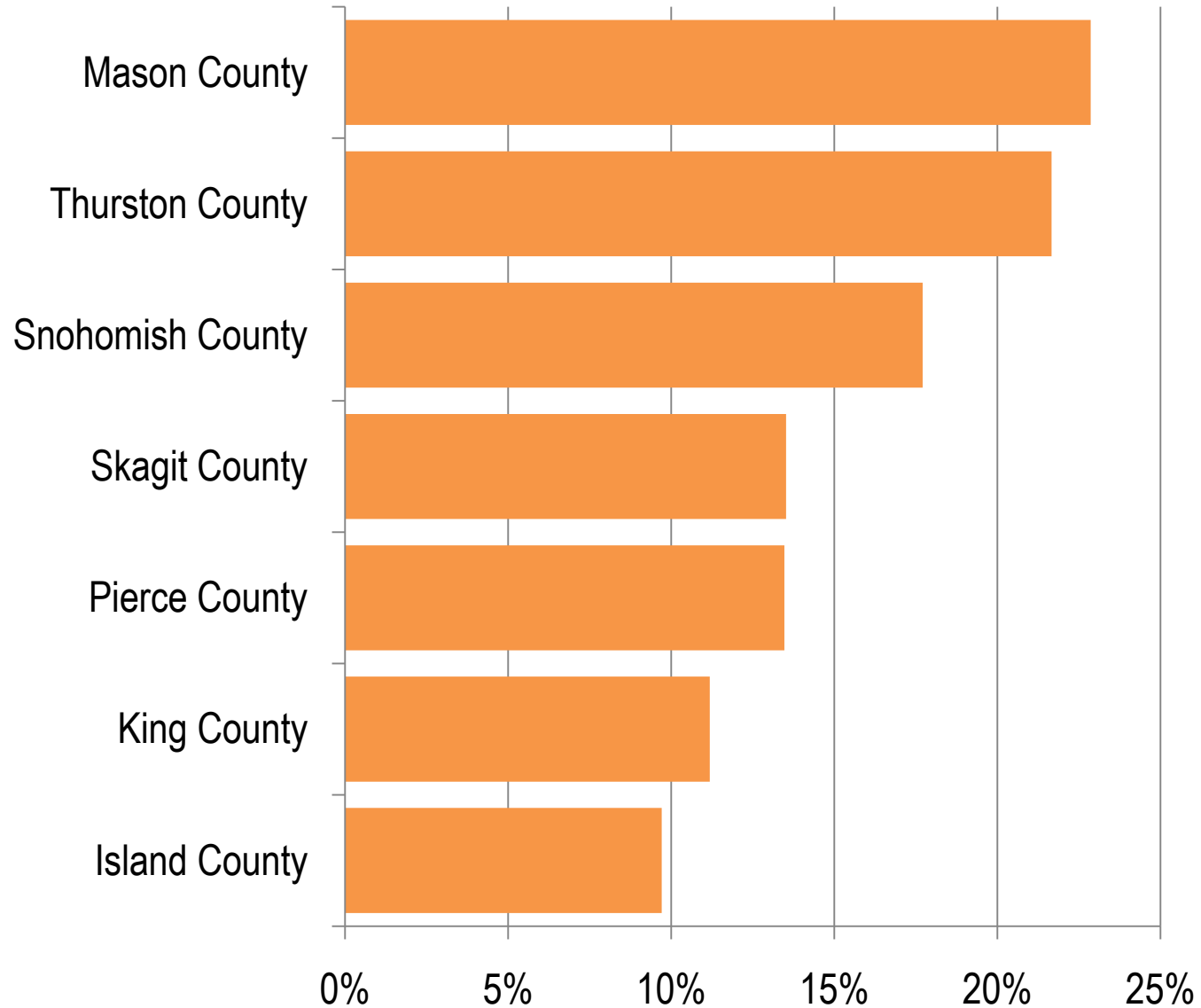


DEMOGRAPHIA



# Population Growth by County

SEATTLE COMBINED STATISTICAL AREA (CSA): 2000-2010




# The Evolving Urban Form

Development Profiles of  
World Urban Areas

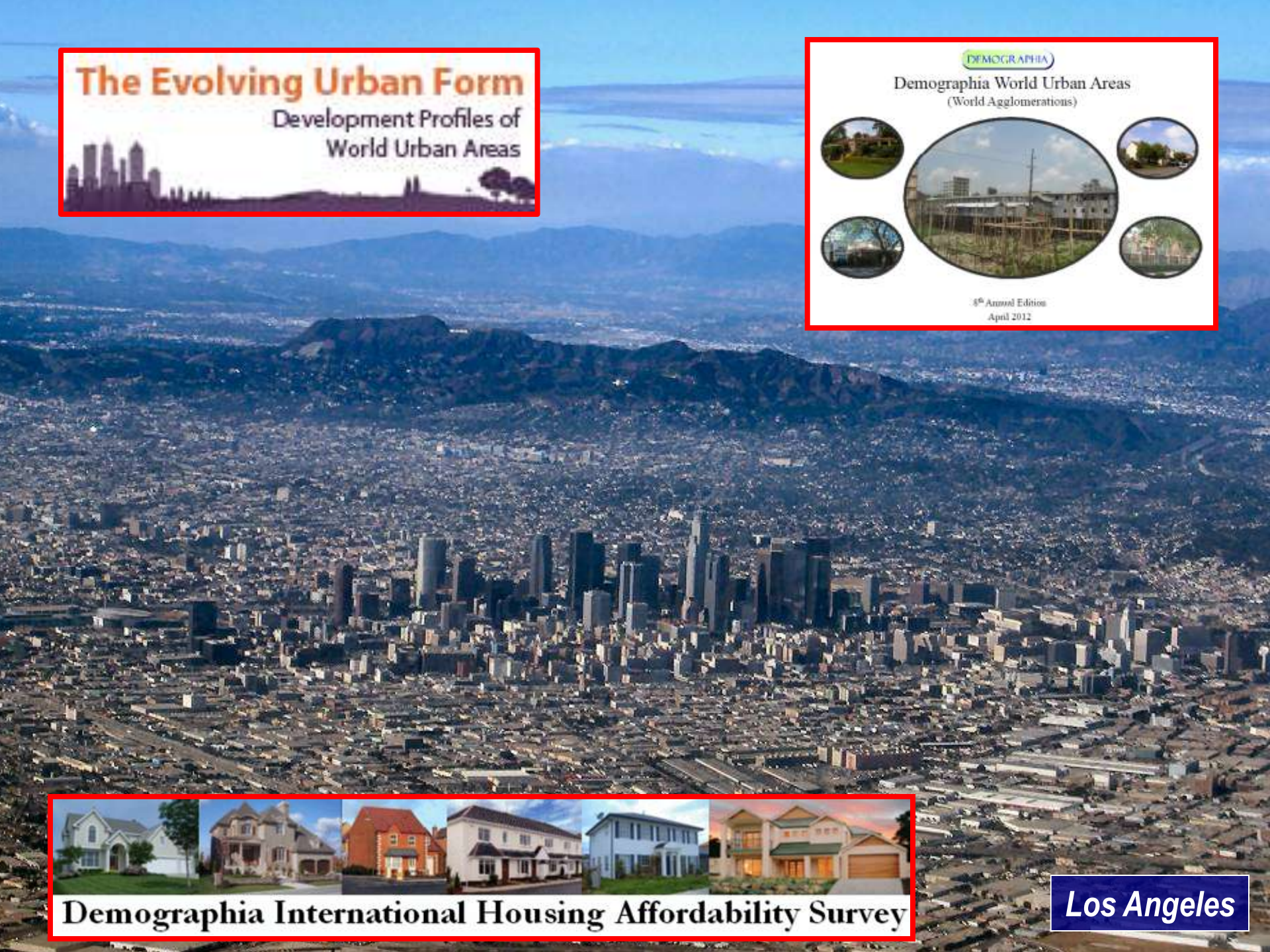


DEMOGRAPHIA

## Demographia World Urban Areas (World Agglomerations)



8<sup>th</sup> Annual Edition  
April 2012



Demographia International Housing Affordability Survey

Los Angeles

theguardian

Independent.ie

THE GLOBE AND MAIL

Bloomberg Businessweek

Thursday January 26, 2012

REUTERS

EDITION: U.S.

nzherald.co.nz

Star Advertiser

Australian

The Province

It starts here.

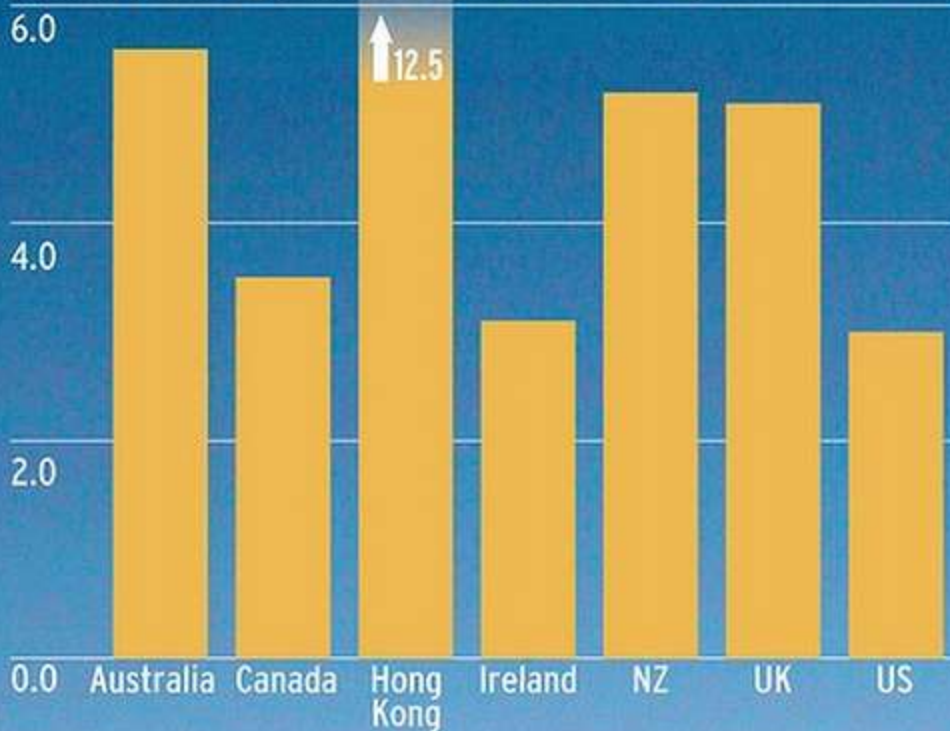
NEWS SPORTS ENTERTAINMENT OPINION BUSINESS HEALTH LIFE

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# HOME, HOME OUT OF RANGE

NATIONAL HOUSING AFFORDABILITY  
MEDIAN MULTIPLE (HIGHER IS LESS AFFORDABLE)



MEDIAN MULTIPLE: MEDIAN HOUSE PRICE DIVIDED BY MEDIAN HOUSEHOLD INCOME  
SOURCE: 2012 8th EDITION DEMOGRAPHIA INTERNATIONAL HOUSING AFFORDABILITY SURVEY

CALGARY HERALD

PROUDLY CALGARY SINCE 1883

RADIO NEW ZEALAND NEWS

The Street

# The Costs of Smart Growth

**Background on the “city”  
Mobility (VMT Reduction)**

**Land Use (Growth  
Management)**

**Balkanizing the City  
With Transit Centers**

**A Sustainable  
Environment**

**A Sustainable  
Economy**





## SMART GROWTH

Favors higher density

Favors transit

Fundamentally anti-suburban

Ignoring Costs (such as greater poverty  
and higher cost of living)



*Beijing Subway*

*Athens*

# Why Cities (Urban Areas) Exist

## THE PURPOSE OF CITIES

Urban areas exist  
because of the  
economic opportunities  
they provide.

The purpose of urban  
areas is to improve the  
affluence of their  
residents





# What is the City?

Physical:  
**Urban Area**

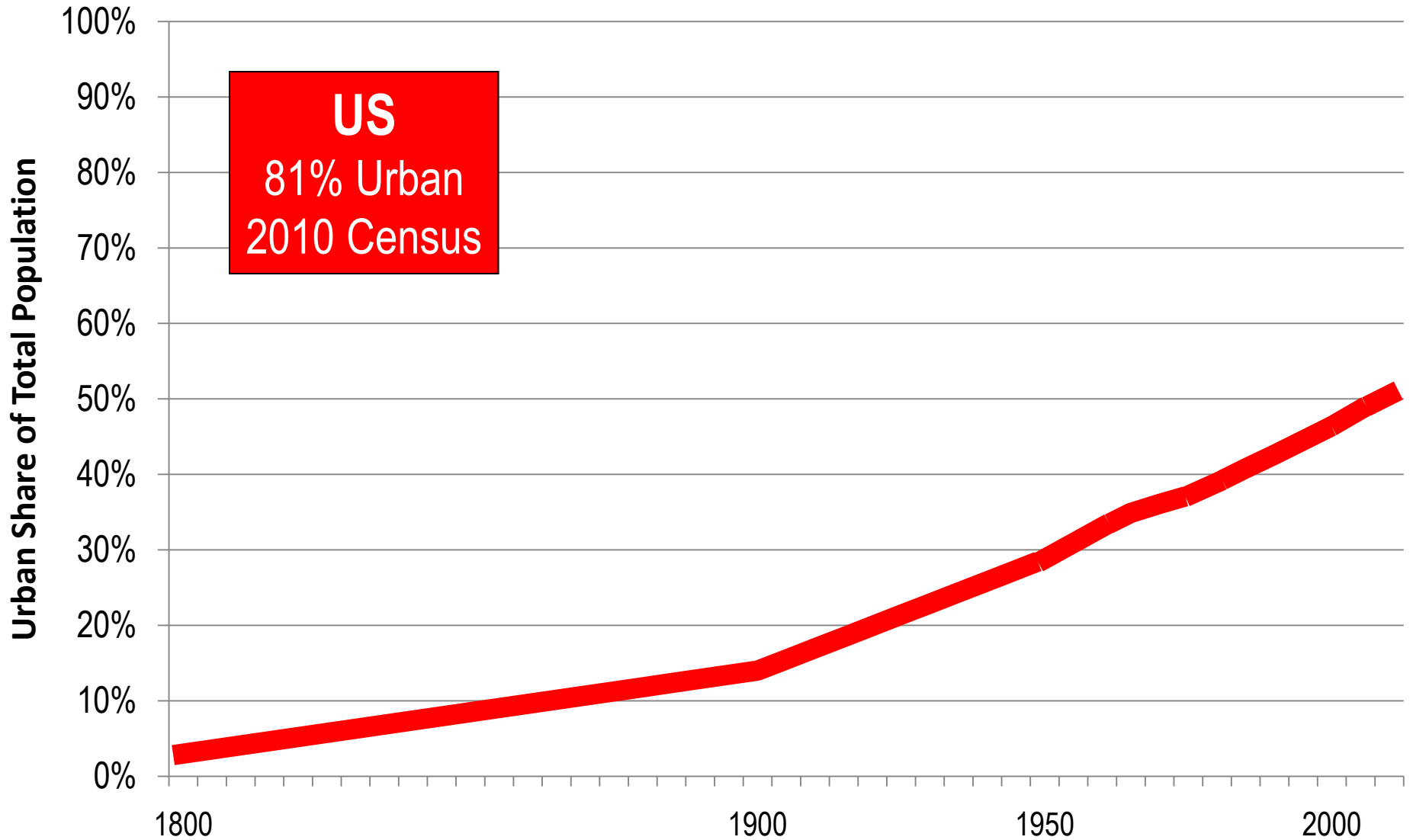
Functional:  
**Metropolitan Area**

*Not the  
City of Seattle,  
City of Bellevue  
or  
City of Puyallup*



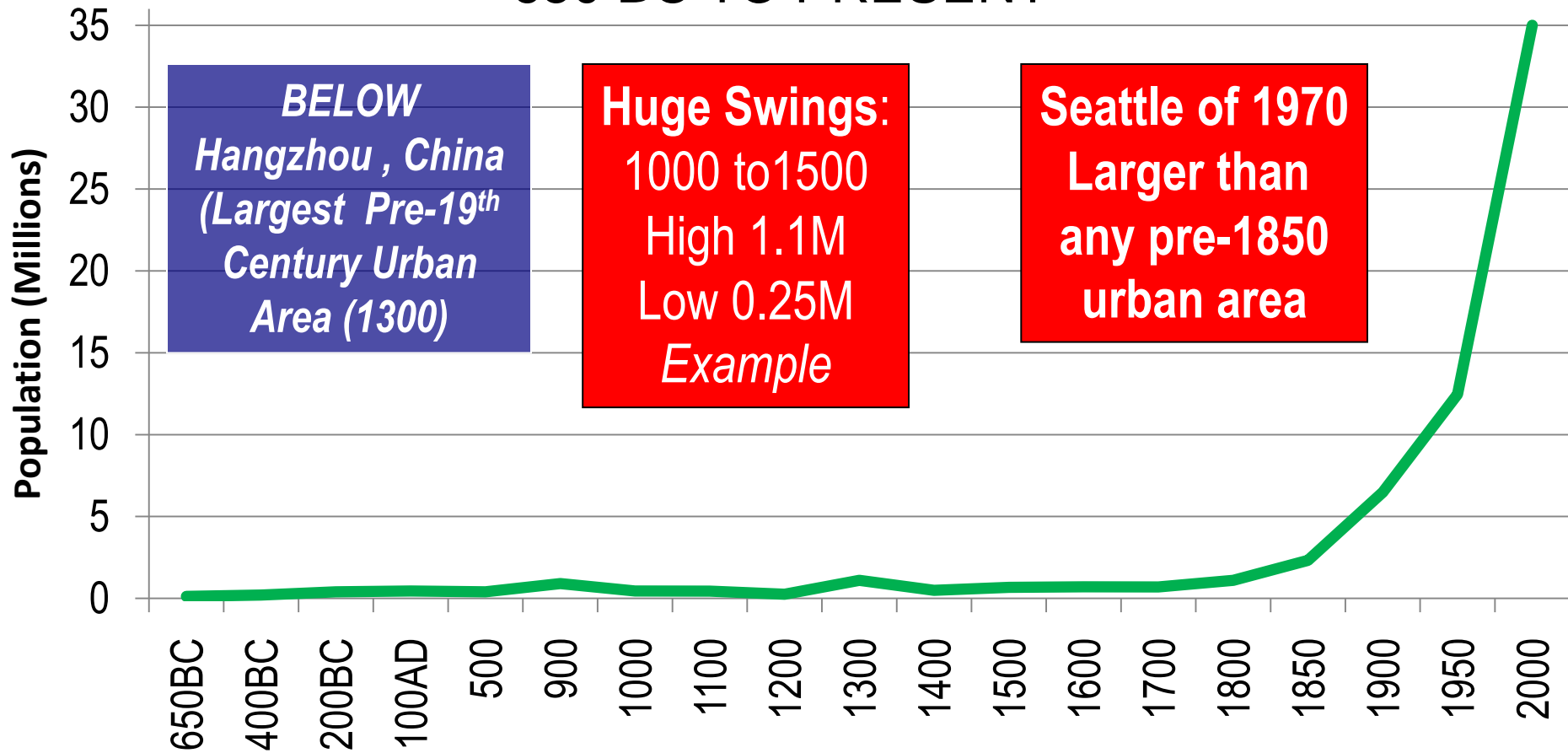
# World Urban Population

## 1800-2050



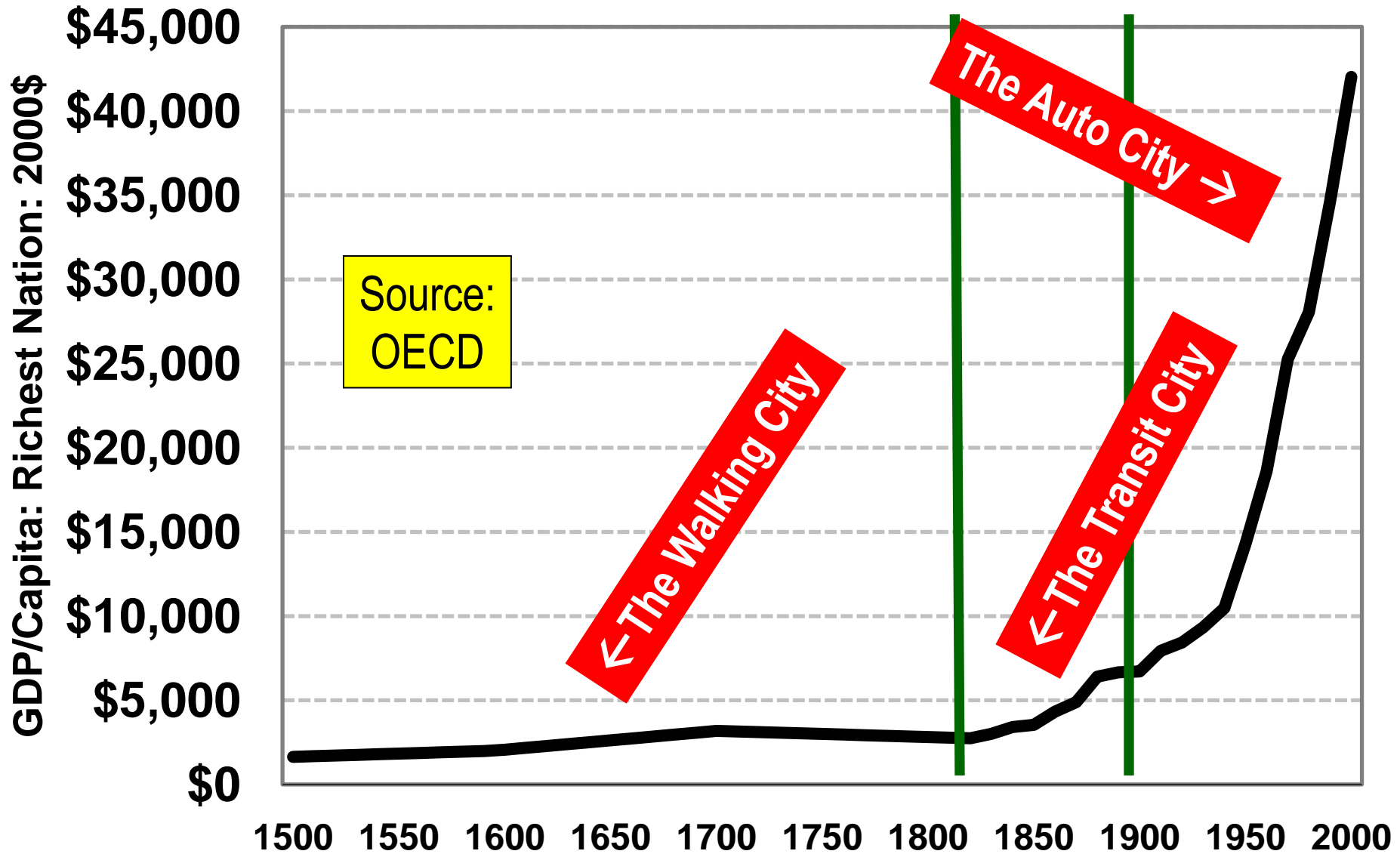
# World's Largest Cities (Urban Areas)

650 BC TO PRESENT



# Mobility Made Large Urban Areas Possible

RELATIONSHIP: MOBILITY & AFFLUENCE



A photograph of the Shanghai skyline across a body of water. The Oriental Pearl Tower is prominent on the left. A boat is visible in the foreground. The sky is clear and blue.

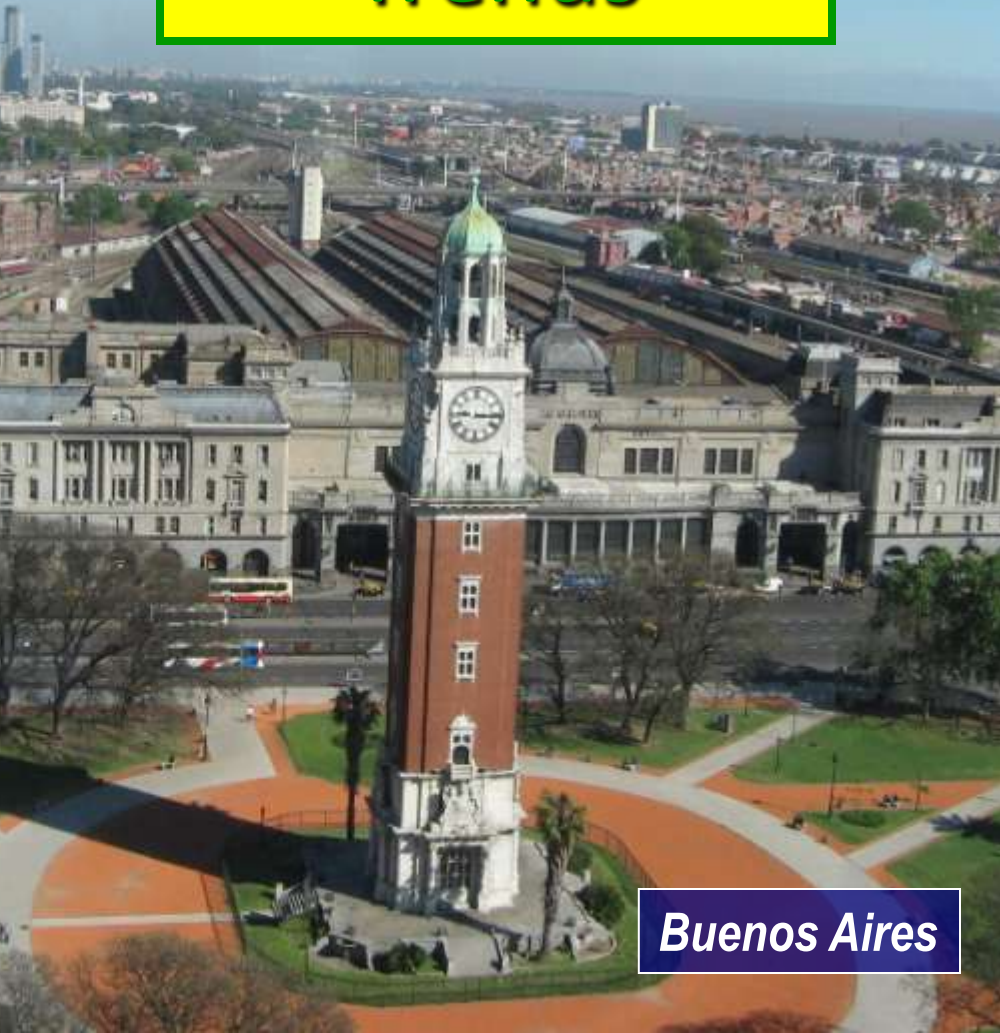
# Purpose of Cities is Economic

PEOPLE MOVE THERE FOR BETTER LIVES

Shanghai

...large labor markets are the only raison d'être of large cities  
*Alain Bertaud, World Bank*

# Urban Demographic Trends



*Buenos Aires*

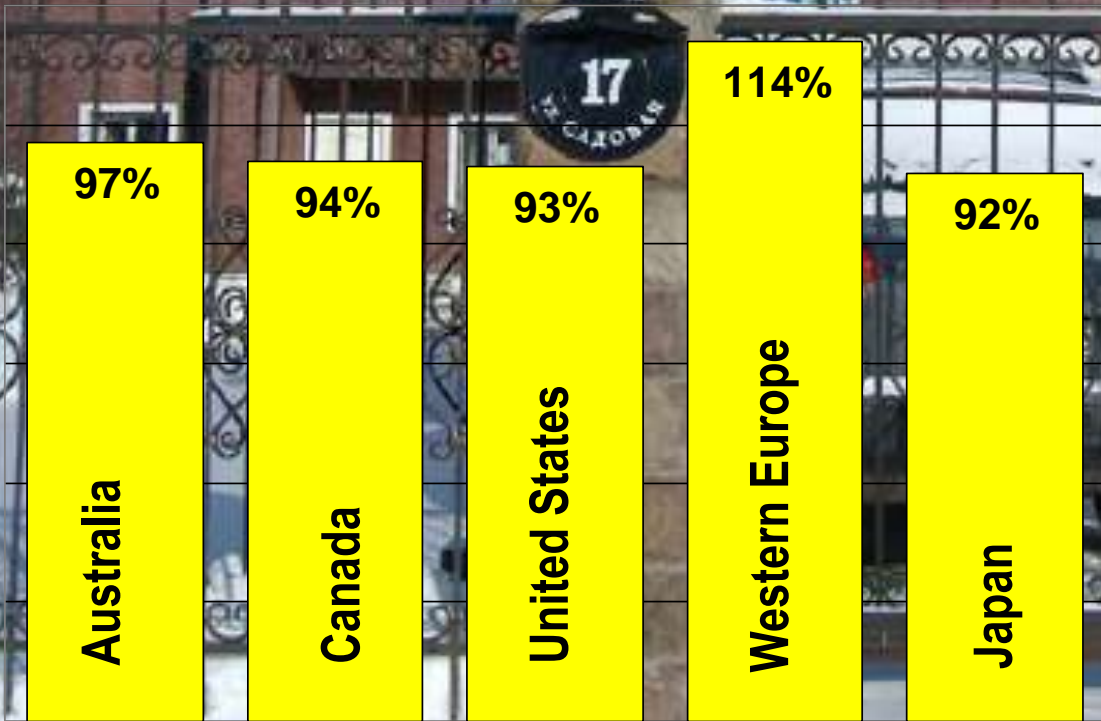
**Virtually all urban growth has been suburban.**

**High income world,  
lower income world &  
Seattle metropolitan  
area**

**Despite claims to the  
contrary, the trend  
continues.**

# Suburban World: 1960s-2000s

NEARLY ALL URBAN GROWTH IN SUBURBS: 35+YEARS



Moscow

# Major Metropolitan Growth by Sector

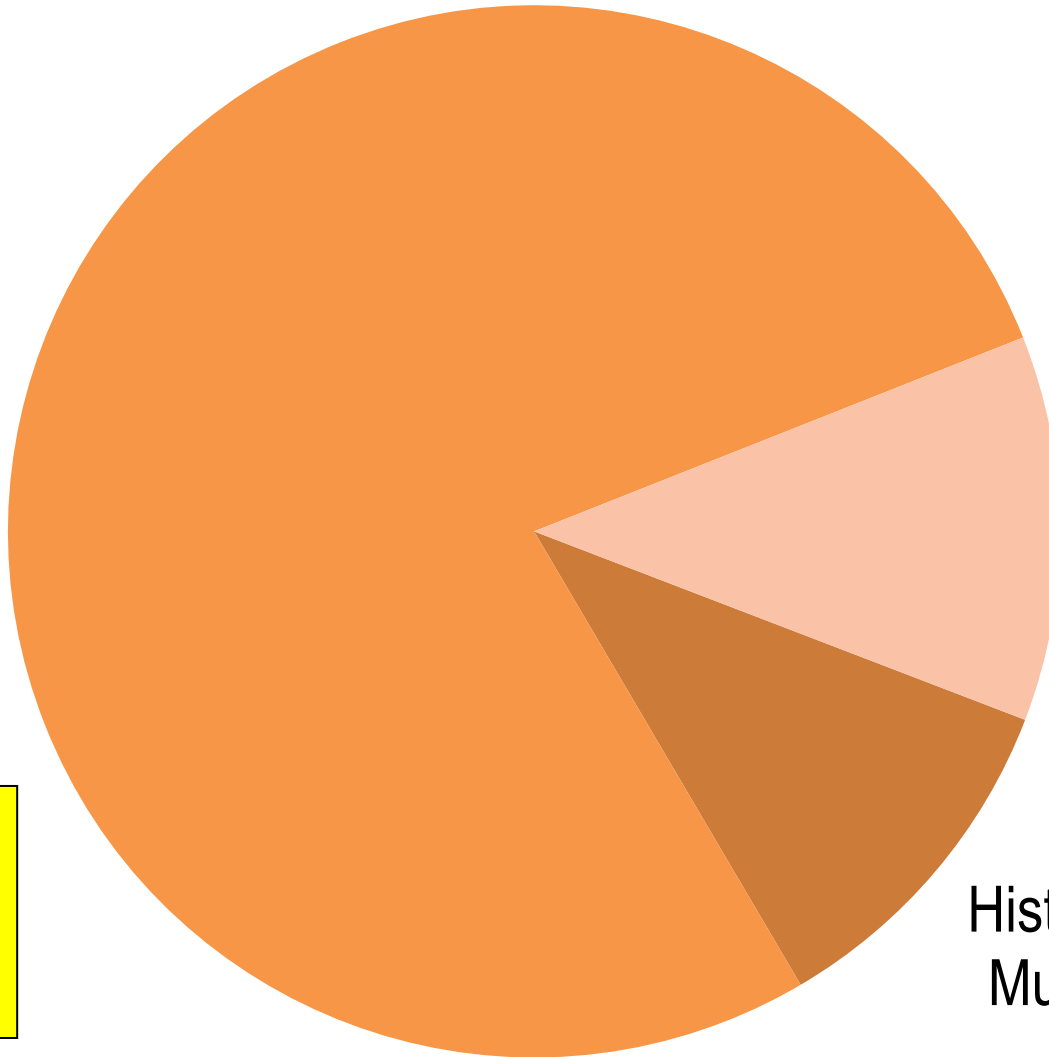
2000-2010: AREAS OVER 1,000,000 POPULATION

Suburban  
77.5%

Exurban  
11.8%

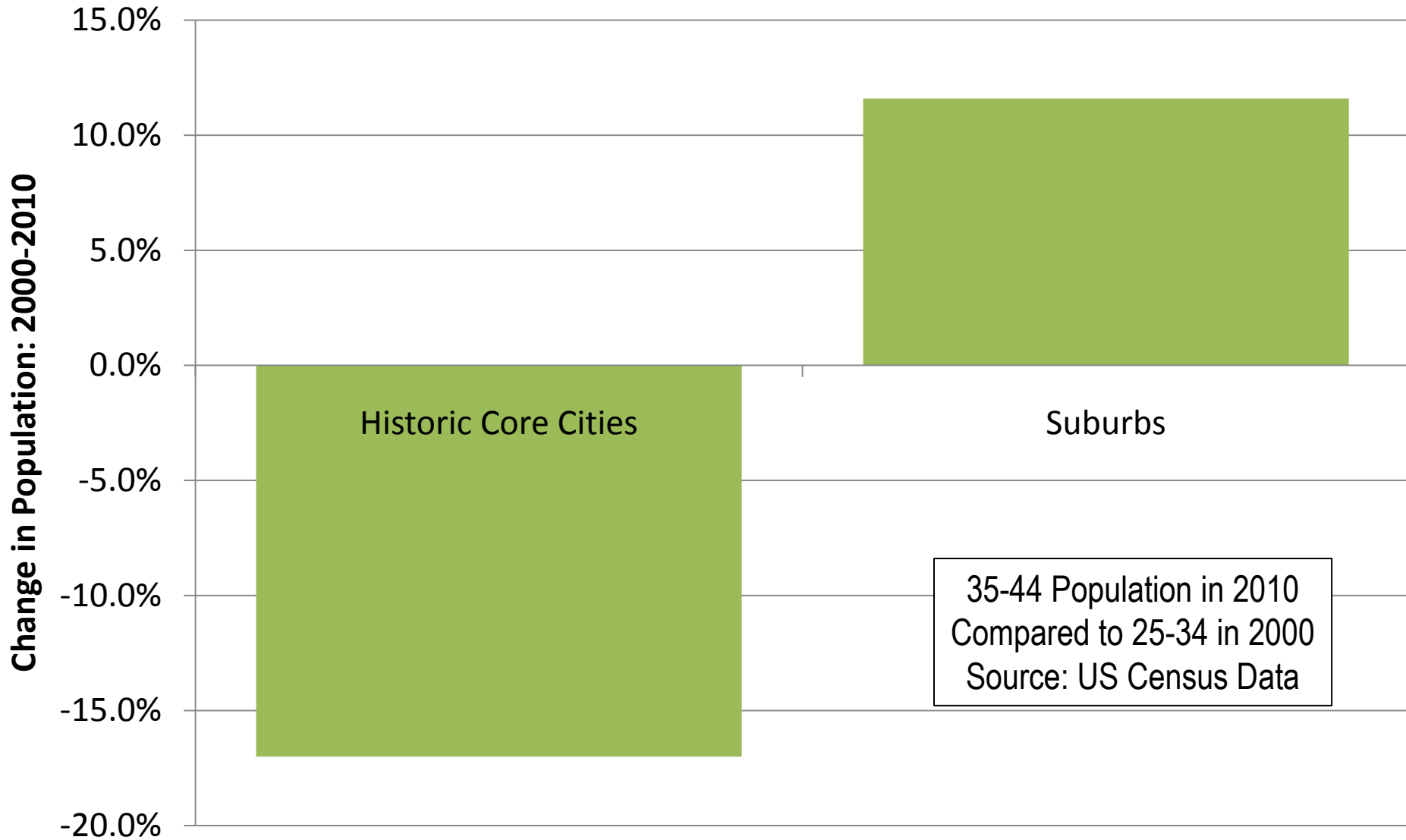
Historical Core  
Municipalities  
10.7%

Derived from  
2010 Census  
Data



# Age 25-34 in 2000: Change by 2010

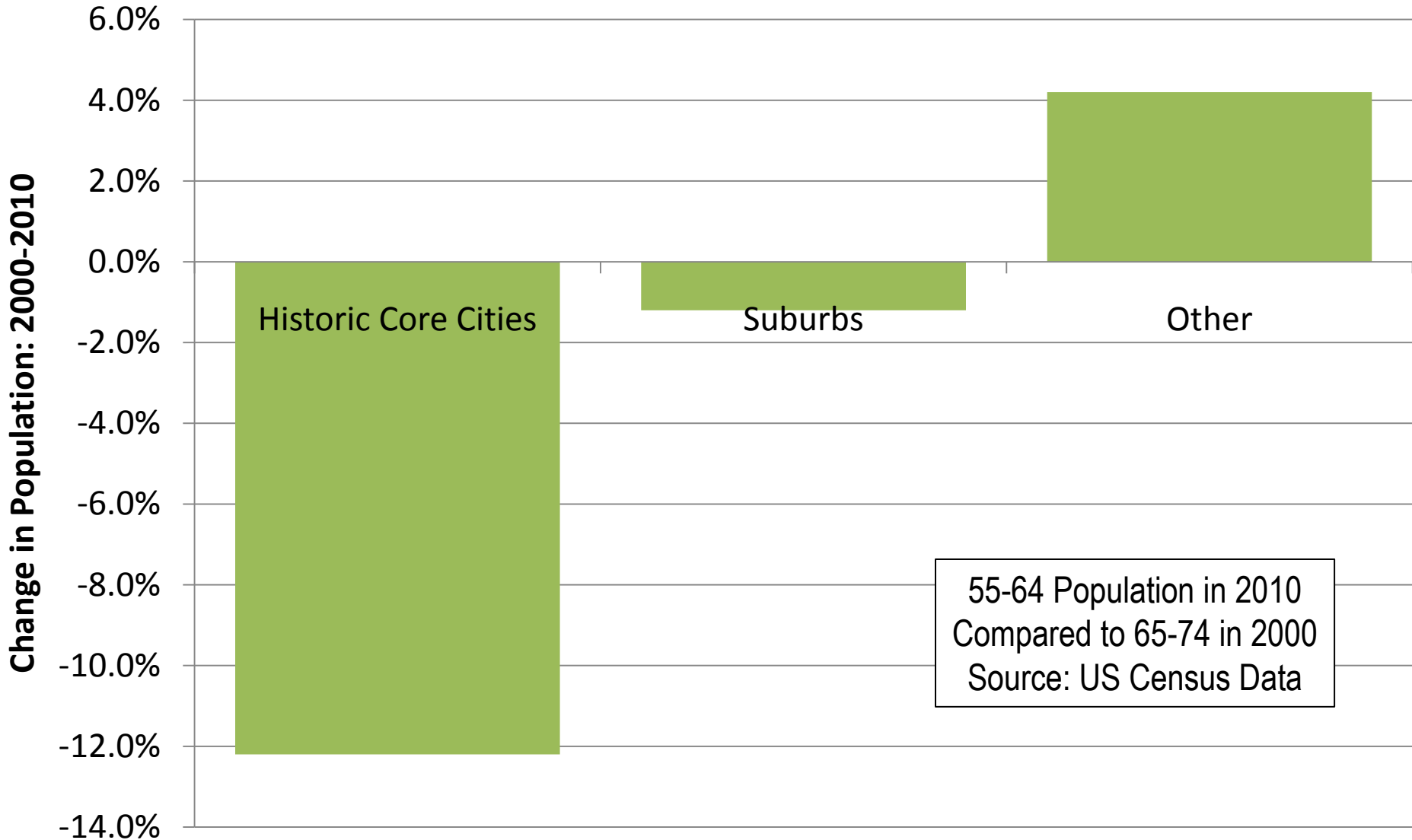
MAJOR METROPOLITAN AREAS: CORE & SUBURBAN





# Age 55-64 in 2000: Change by 2010

MAJOR METROPOLITAN AREAS: CORE & SUBURBAN



# Seattle MSA Growth by Sector

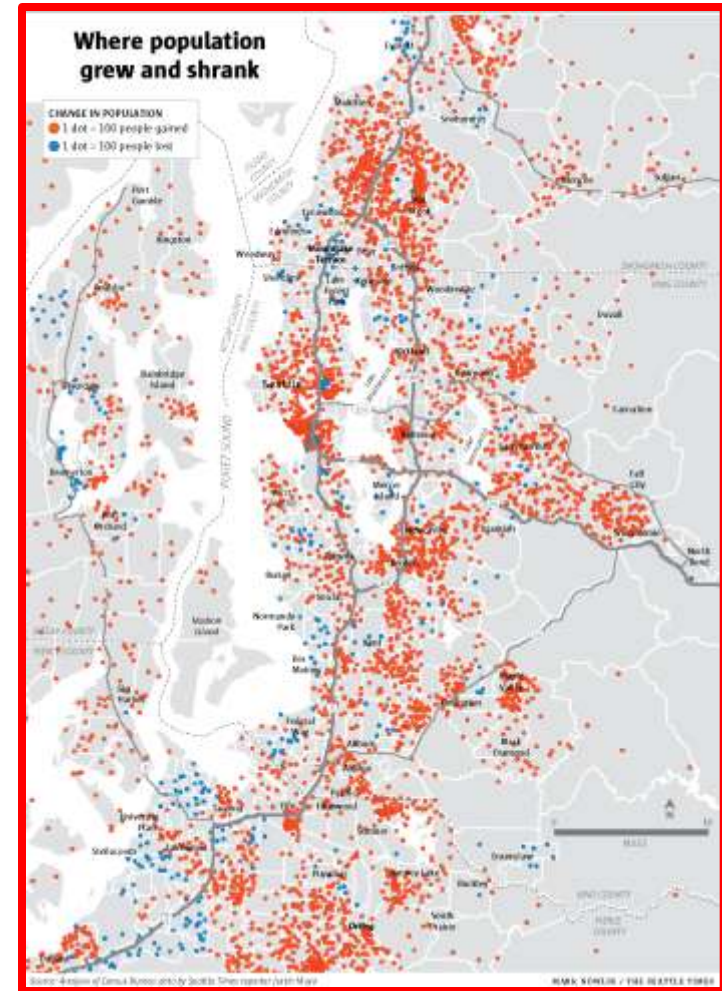
2000-2010 (NOT COMBINED STATISTICAL AREA)

Suburban  
76.3%

Exurban  
12.4%

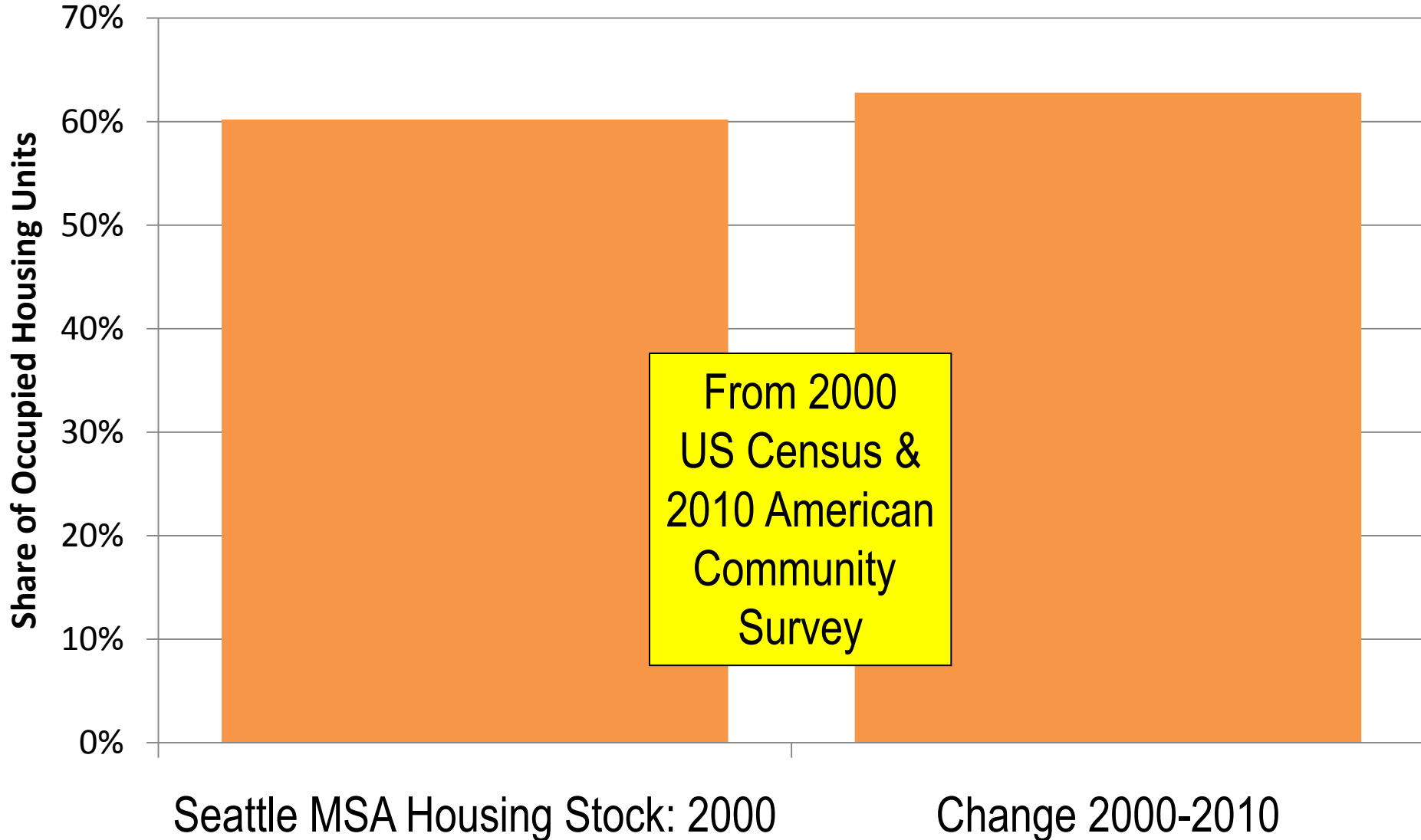
City of Seattle  
11.4%

Derived from  
Census  
Data



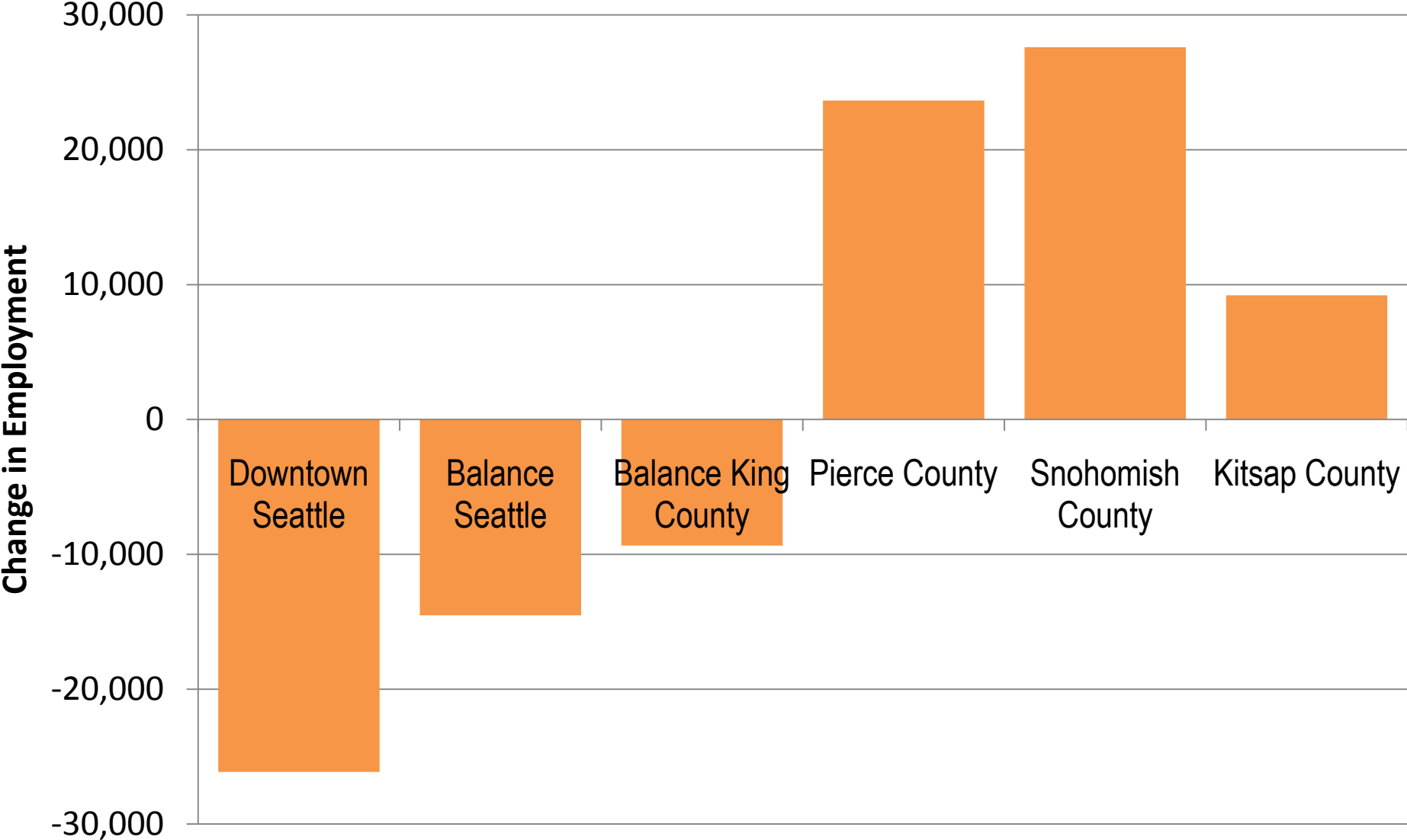
# Detached Housing Change & Stock

## SEATTLE 2000-2010 COMPARED TO 2000 STOCK



# Employment Trend: 4 County Area

2000-2010: NUMBER OF JOBS



# Mobility & Access

**Mobility is the key to  
metropolitan job growth**

**Greater traffic  
congestion is  
associated with higher  
densities**

**Transit cannot  
substitute for most  
automobile trips**

**Low income citizens  
commute mainly by car**

*Manila*

# Democratization of Prosperity

## ASSOCIATION BETWEEN MOBILITY & AFFLUENCE

Chicago

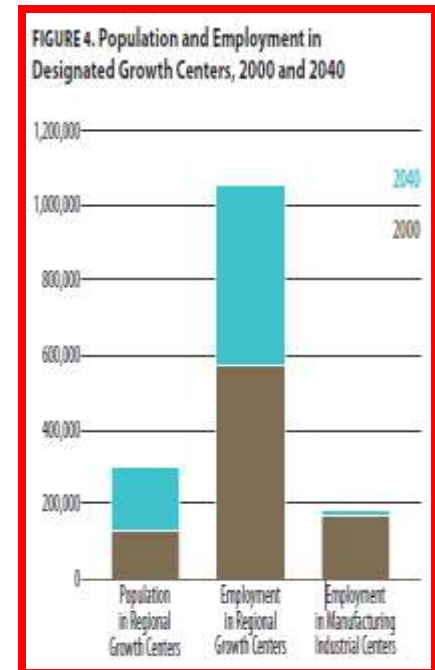
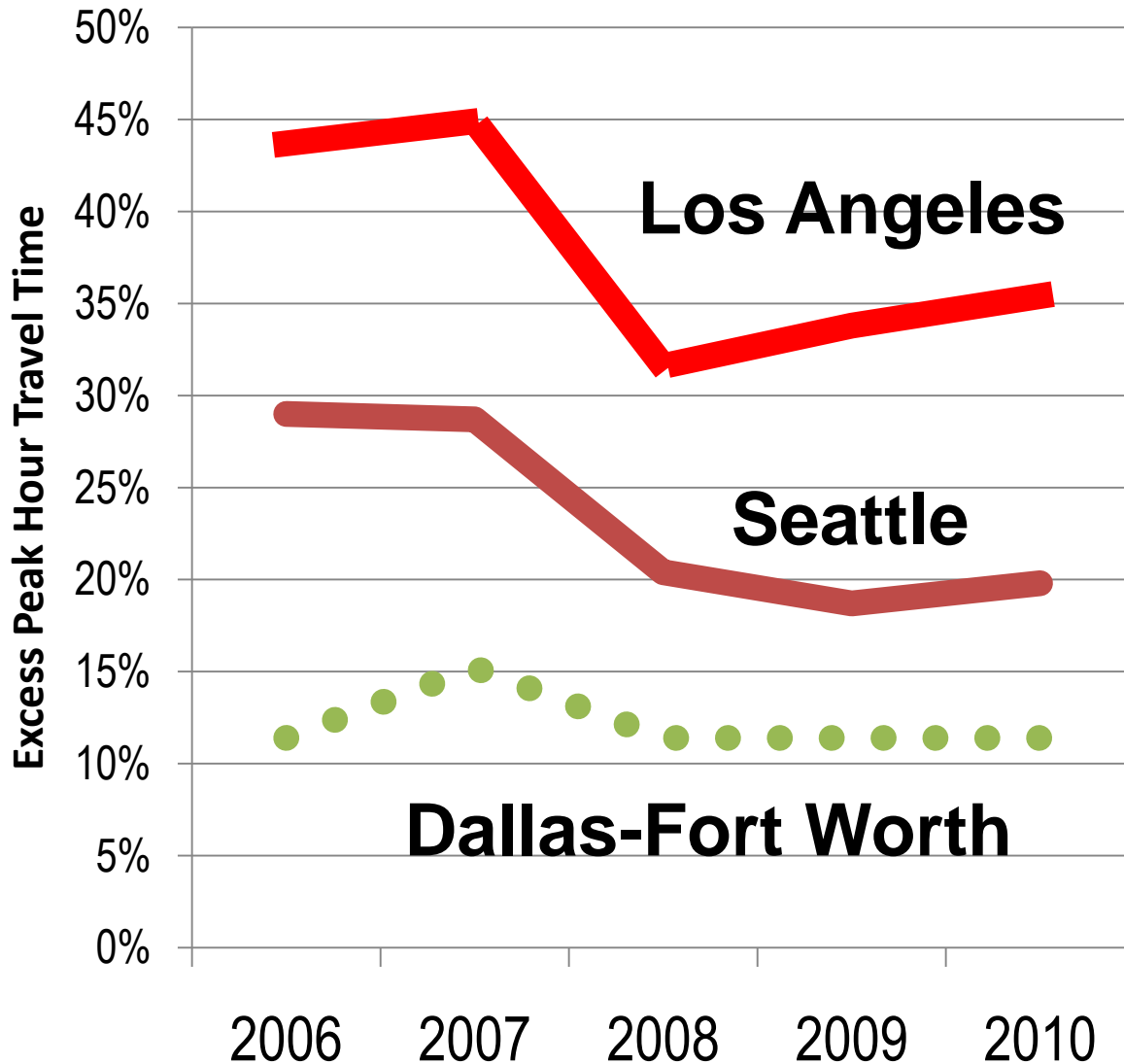
Reduced Minority  
Unemployment  
With Cars  
*U. of California*

PRUD'HOMME  
Mobility Improves  
Productivity  
*U. Of Paris*

HARTGEN-FIELDS  
Mobility Improves  
Productivity

# Traffic Congestion (Inrix)

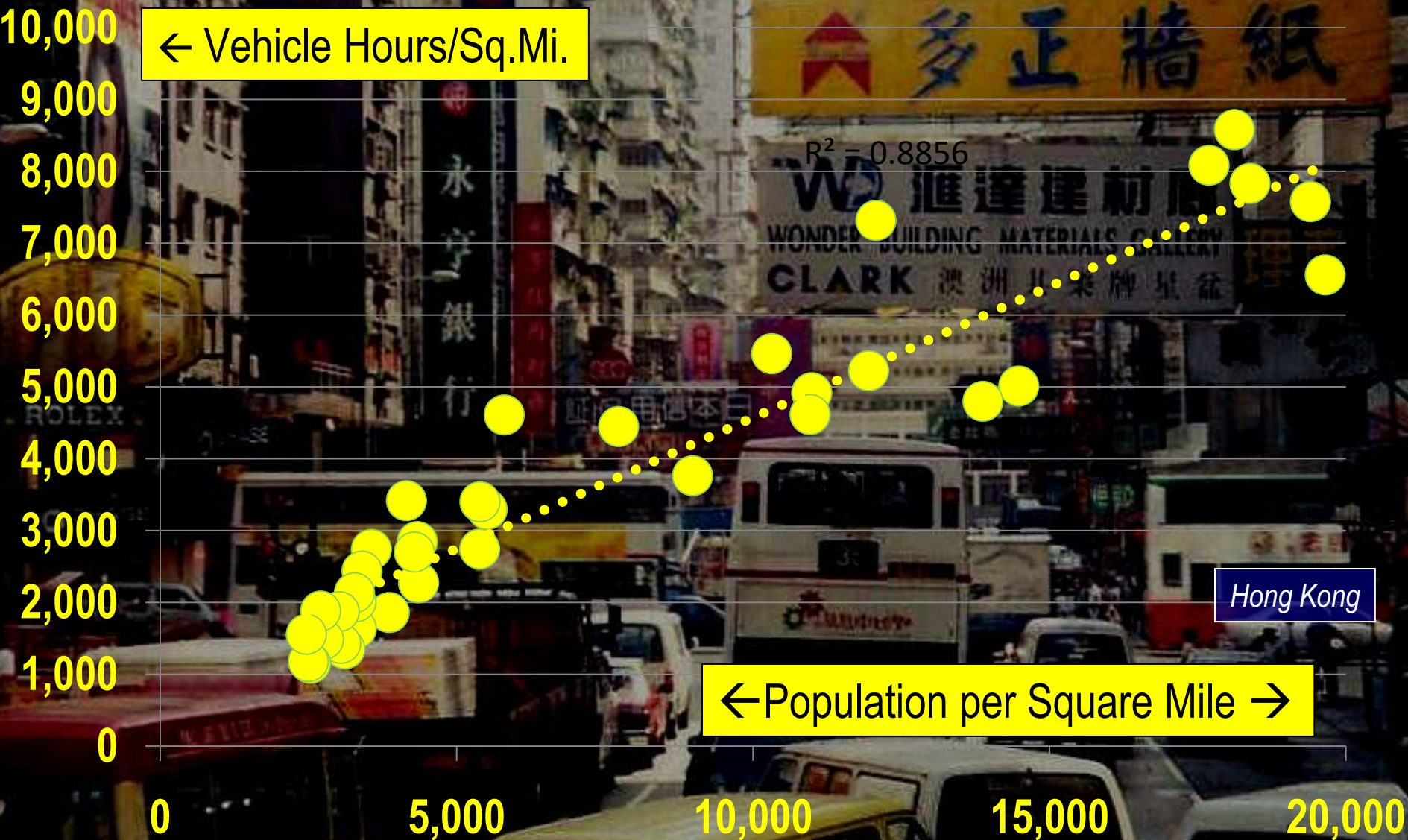
2006-10: LOS ANGELES, SEATTLE, DALLAS-FORT WORTH



# Higher Density Means More Traffic Congestion

DENSITY & TRAFFIC VOLUMES: INTERNATIONAL

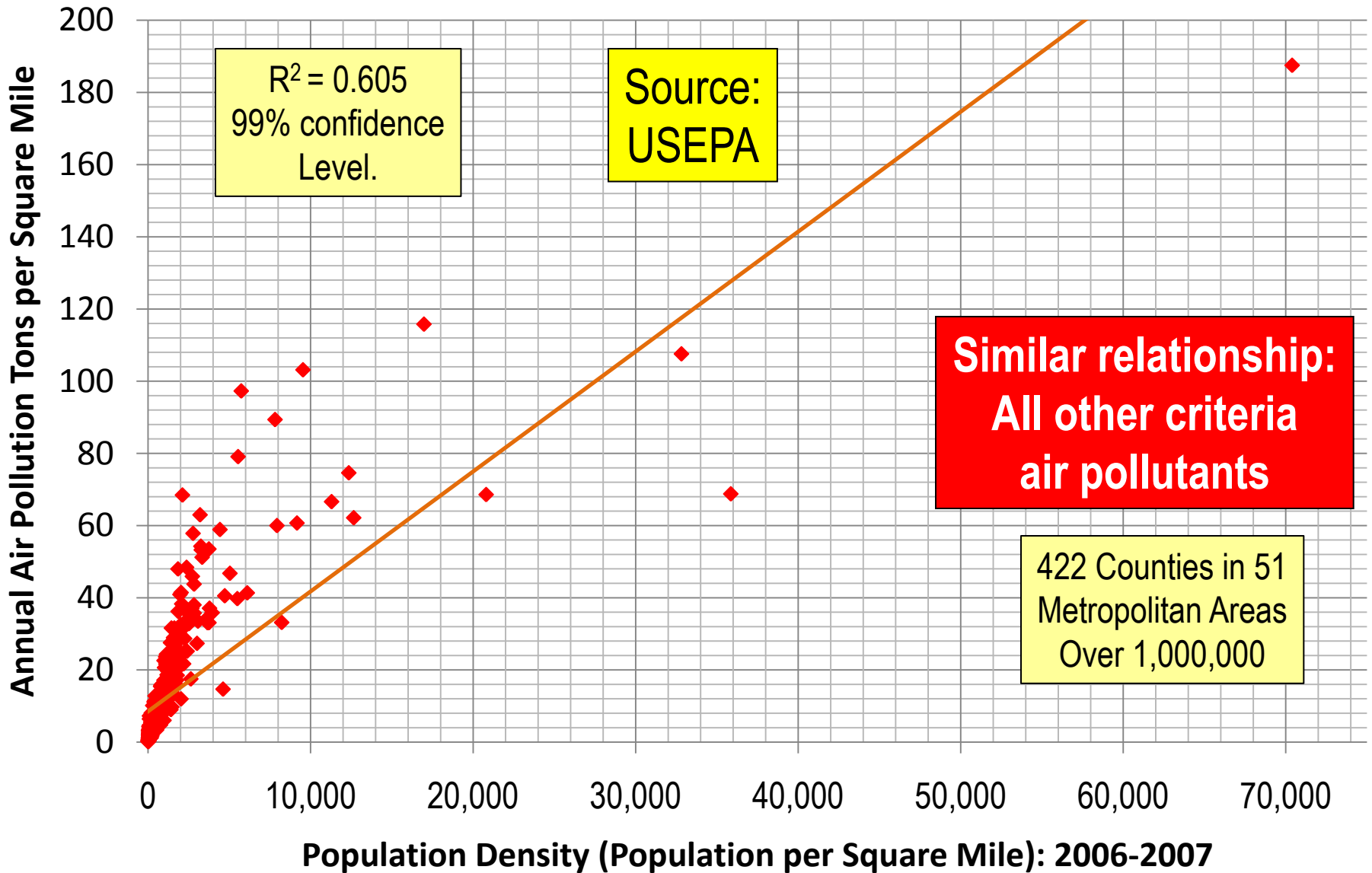
← Vehicle Hours/Sq.Mi.





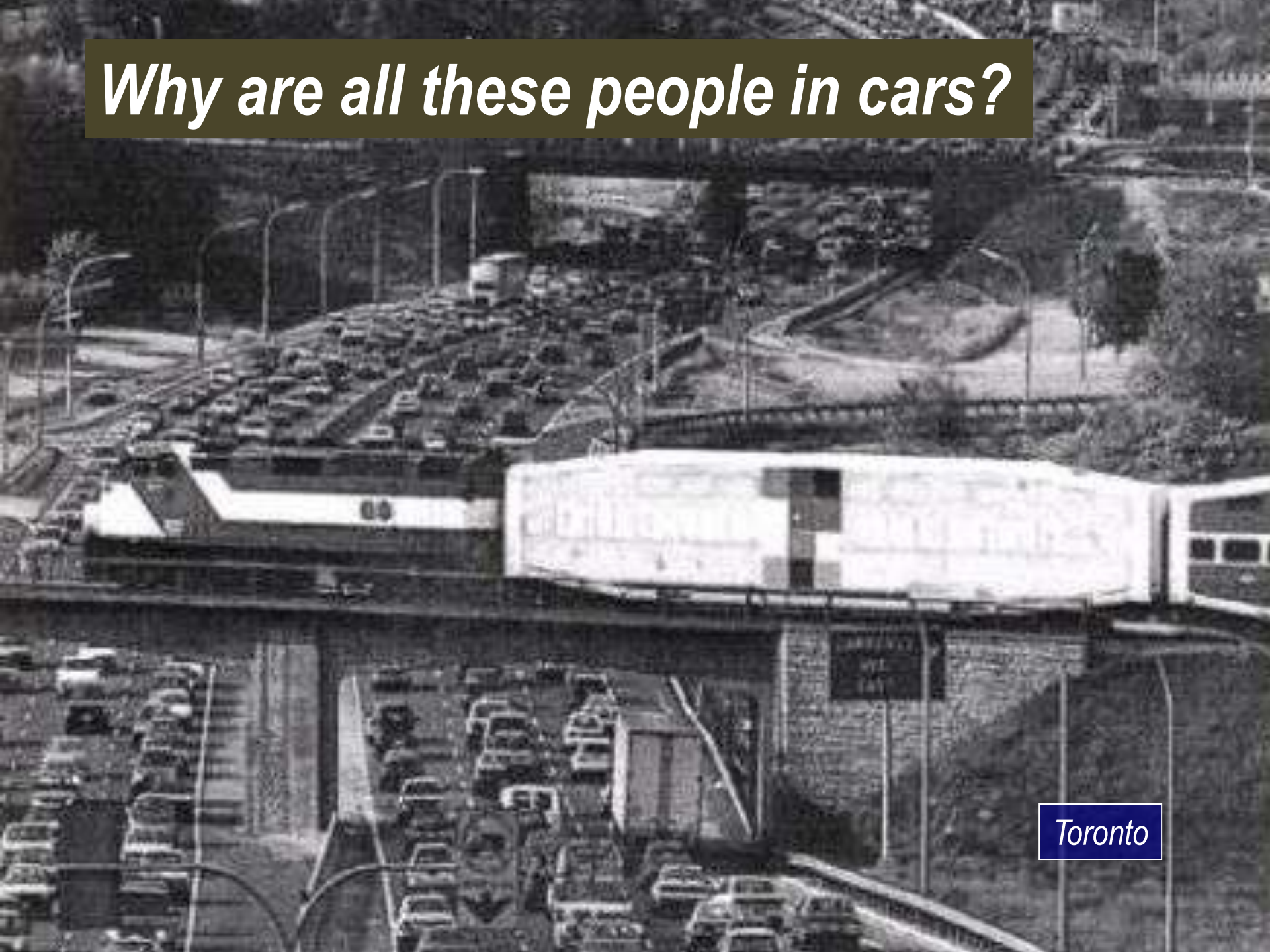
# Density Increases Vehicle Air Pollution

## NOX EMISSIONS: MAJOR METROPOLITAN COUNTIES



**Figure 25**

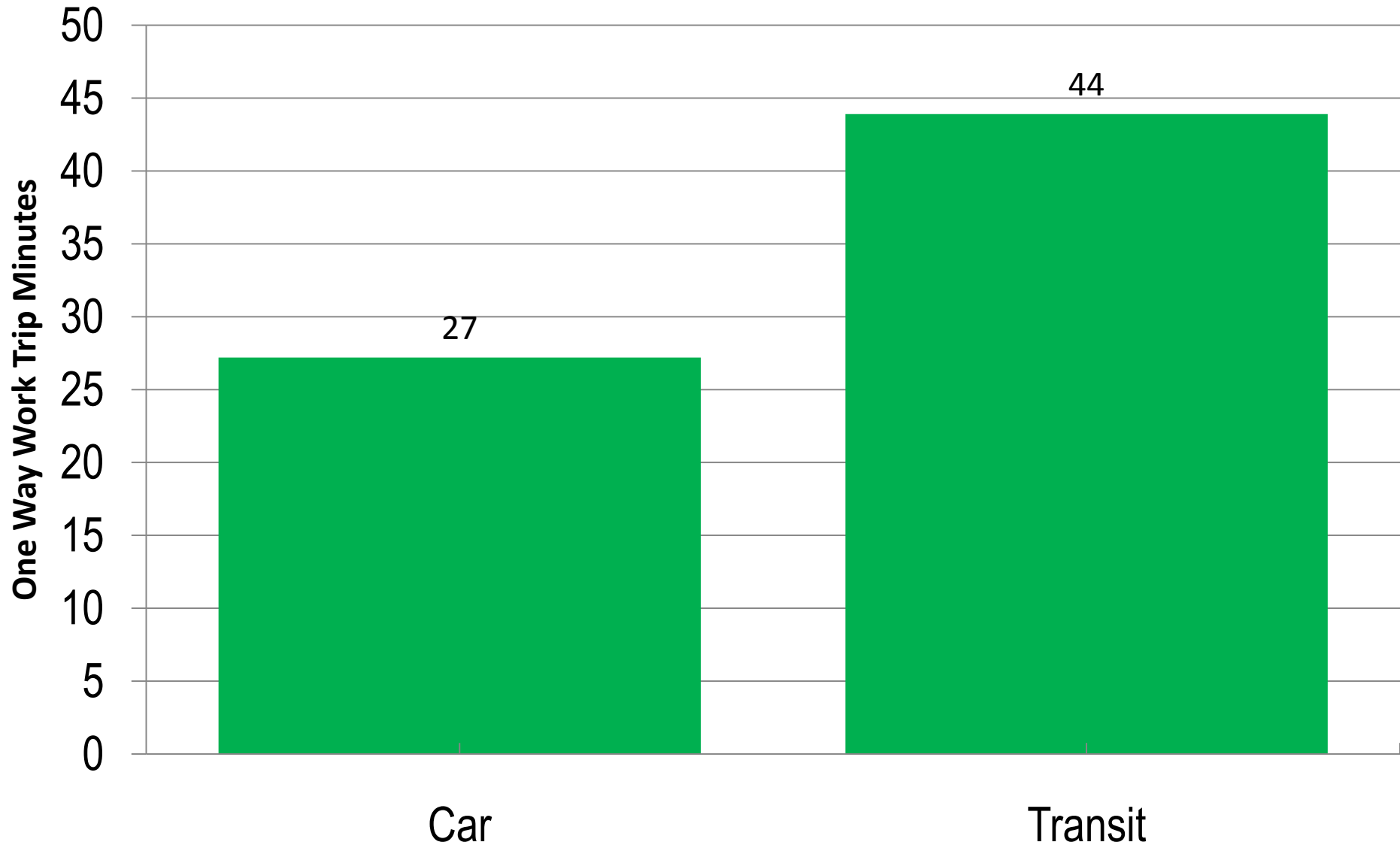
*Why are all these people in cars?*



Toronto

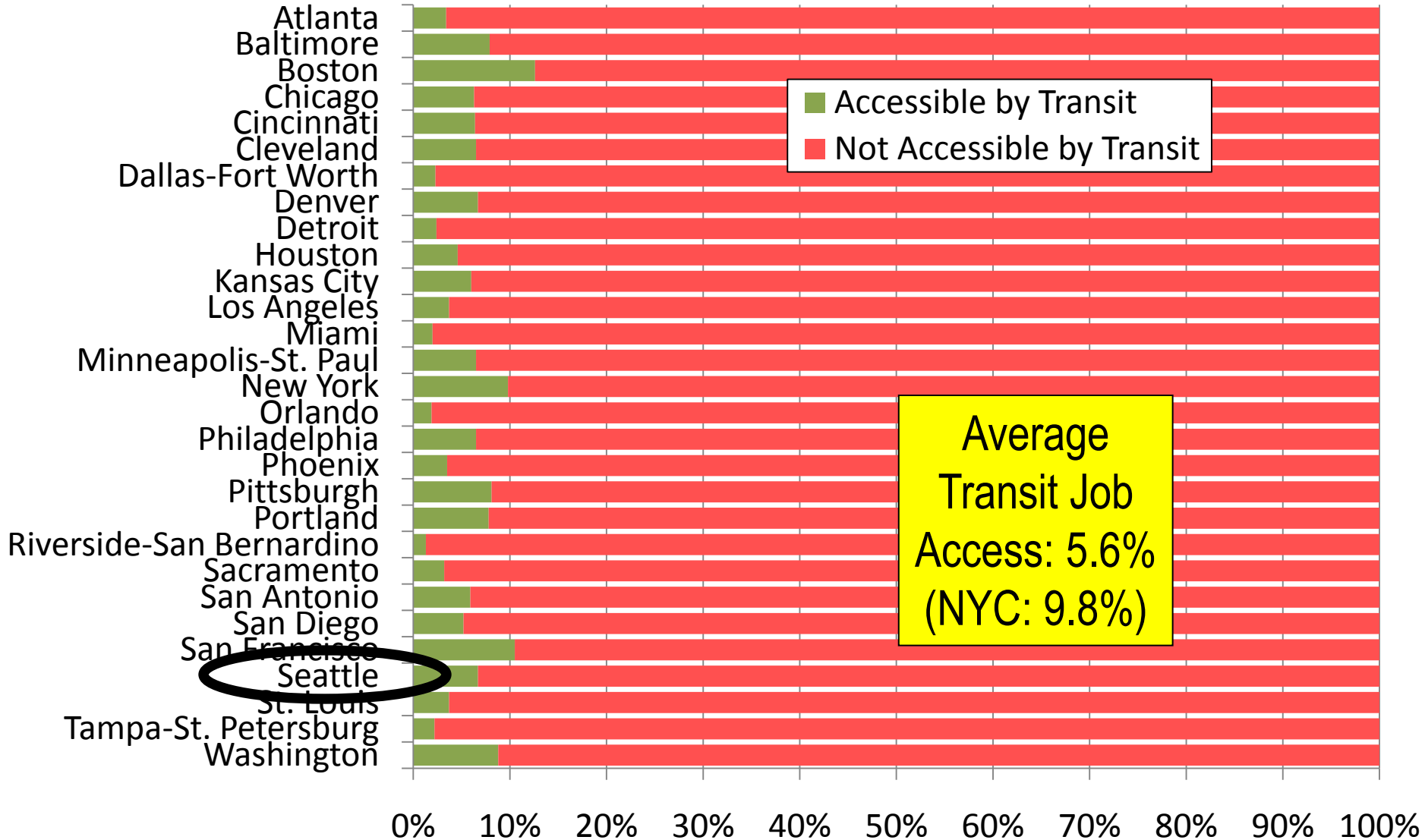
# Travel by Transit Takes Longer

## SEATTLE METROPOLITAN AREA



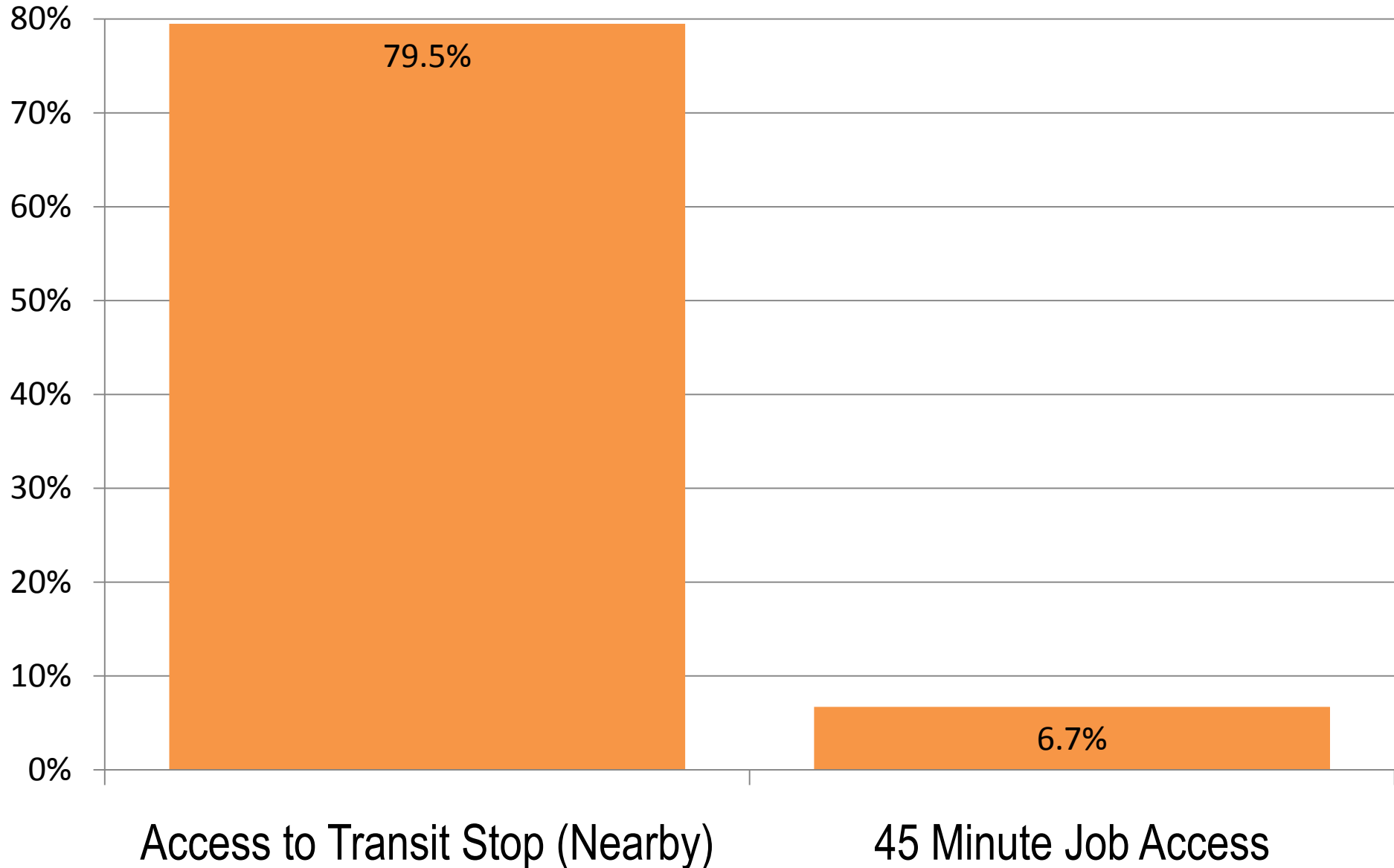
# Capability of Transit: 45 Minute Job Access

METROPOLITAN AREAS OVER 2,000,000: 2008



# Transit Access in Seattle MSA

## ACCESS TO TRANSIT STOPS/ACCESS TO JOBS

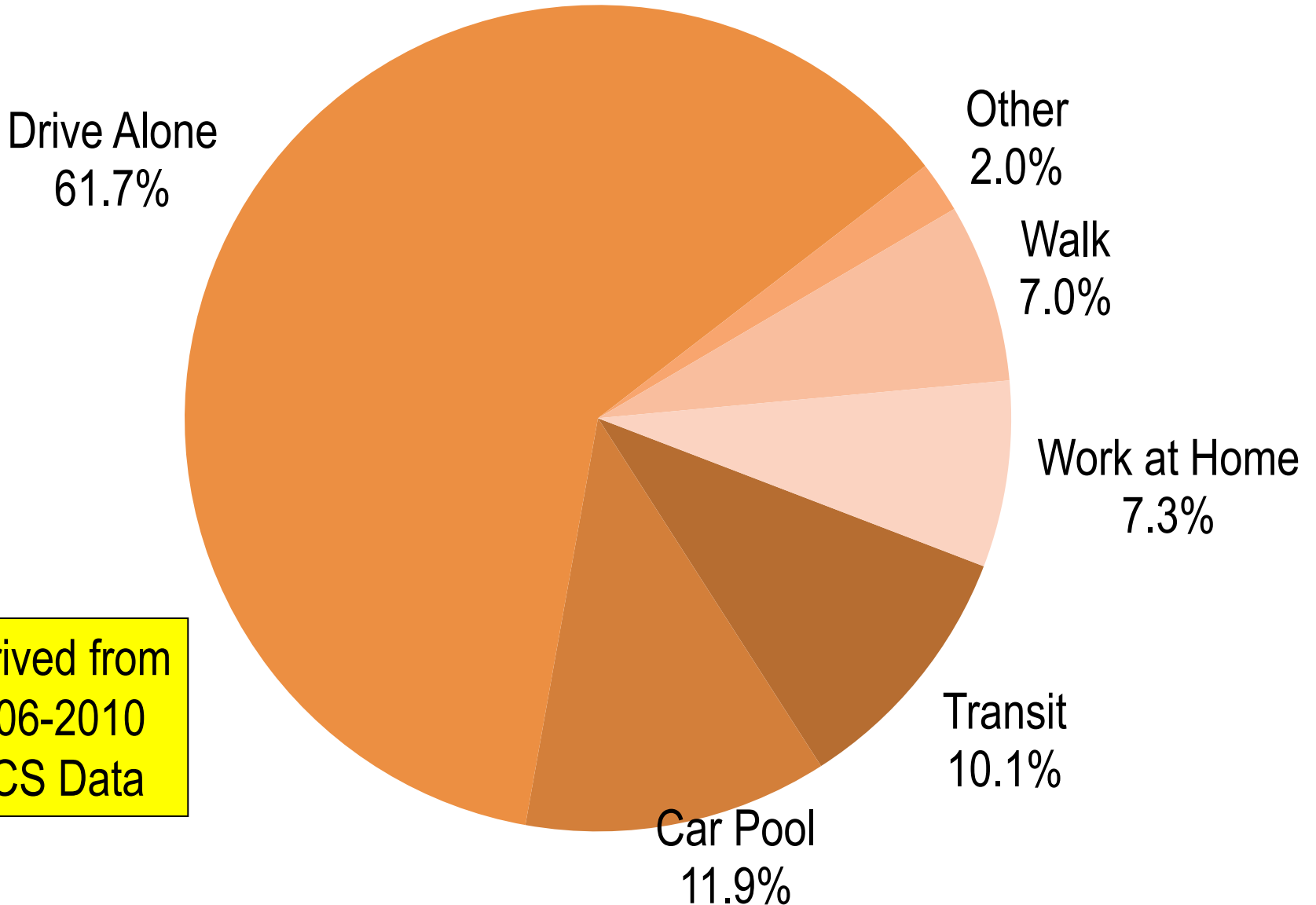


# 30 Minute Car & Transit Access FROM BELLEVUE



# Work Trip Mode: Lower Income

## SEATTLE METROPOLITAN AREA



Derived from  
2006-2010  
ACS Data

# Low Income Households & Mobility

## THE NECESSITY OF CARS

*In most cases, **the shortest distance between a poor person and a job is along a line driven in a car.** Prosperity in America has always been strongly related to mobility and poor people work hard for access to opportunities. **For both the rural and inner-city poor, access means being able to reach the prosperous suburbs of our booming metropolitan economies, and mobility means having the private automobile necessary for the trip.***

Waller and Hughes  
Progressive Policy Institute 1999.



An aerial photograph of a city, likely Seattle, showing a large body of water (the waterfront) with a port area and a dense urban area with many skyscrapers. The sky is overcast.

# VMT Reduction & Low Income Households

## NEGATIVE IMPACTS: TRANSIT ILLUSIONS

...for the majority of low income households, a VMT charge would have a negative and disproportionate effect.

If tolling proceeds were invested in public transit...

**Downtown**

# Transit's "Last Mile" Problem

ELSEWHERE TRANSIT IS SLOWER FOR MORE TRIPS

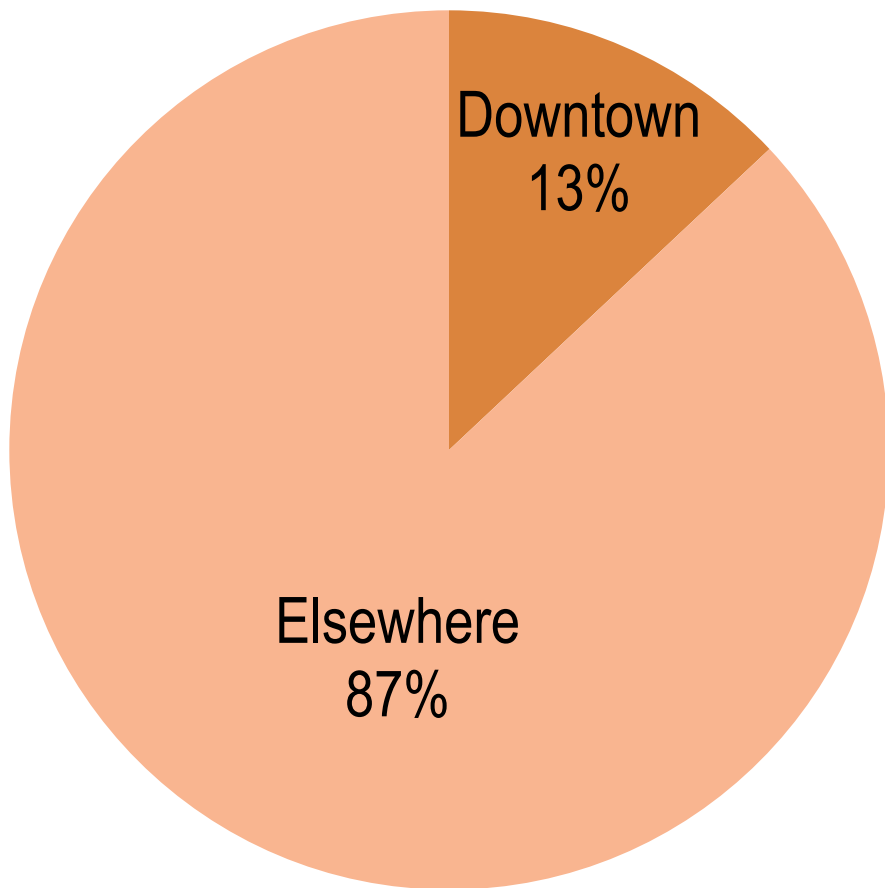
Annual Cost:  
More than gross  
annual income of  
metropolitan area

An auto competitive  
system for Portland?  
 $\frac{1}{2}$  Mile  
Subway (Metro) Grid

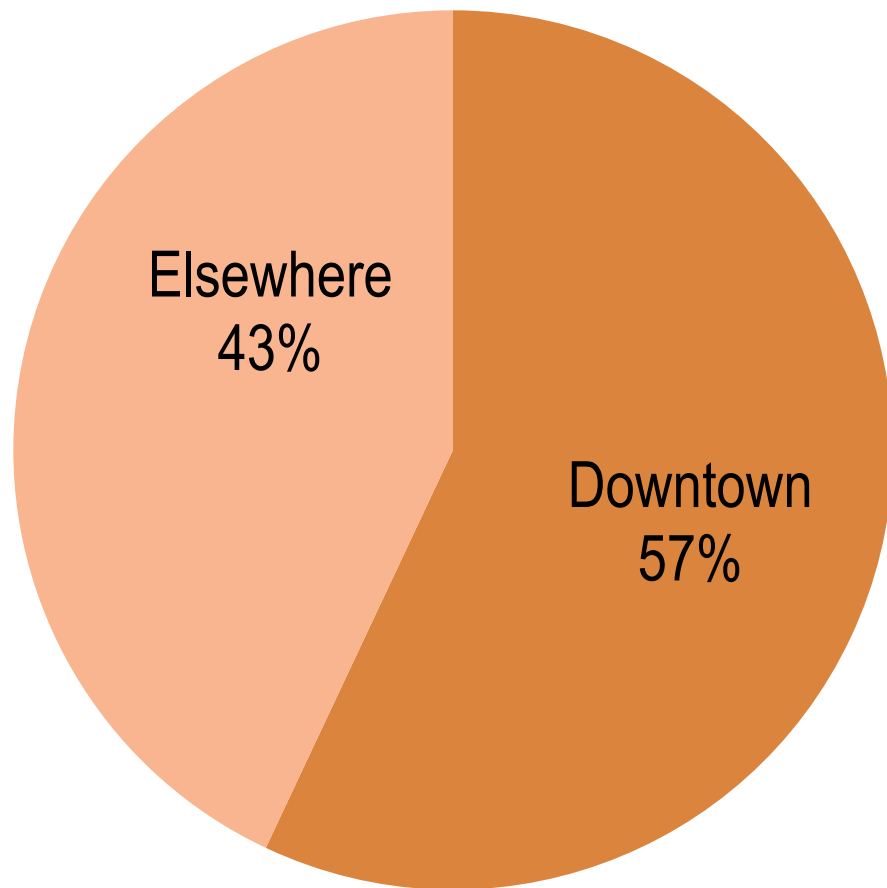
# Transit: Strong Downtown: Weak Elsewhere

SEATTLE URBAN AREA: 2000

## EMPLOYMENT



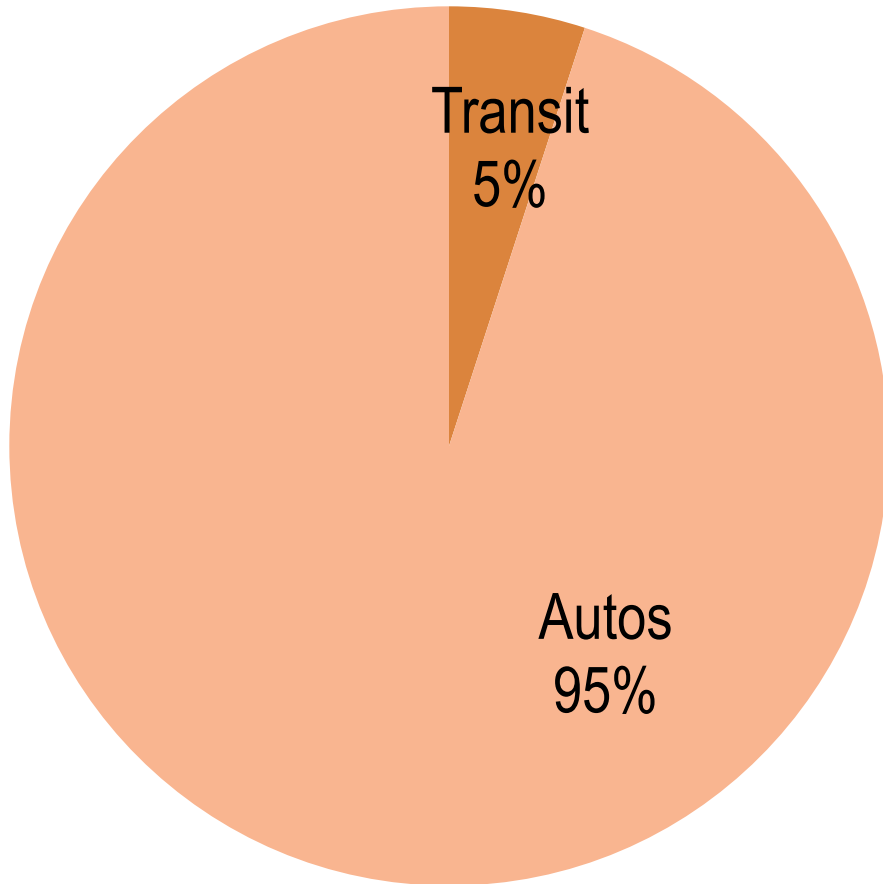
## # OF TRANSIT COMMUTERS



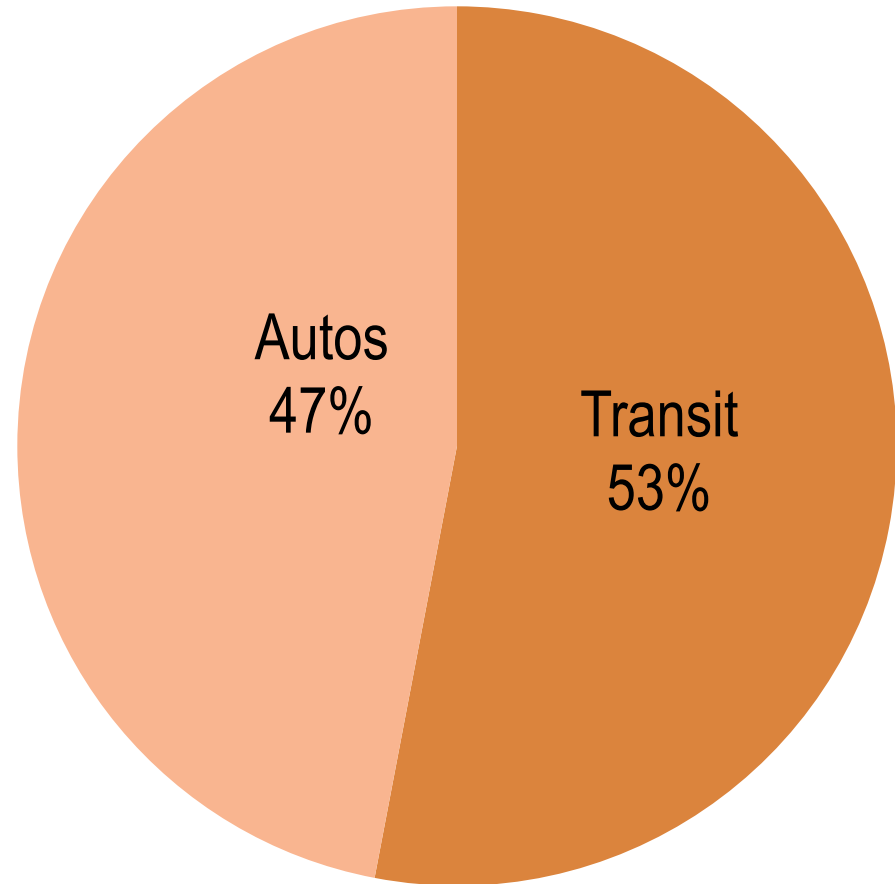
# Disproportionate Spending on Transit

PSRC: 2010-2040 TRANSIT & AUTOS

**TRAVEL SHARE: 2040**



**SPENDING 2010-2040**



An aerial photograph of a city skyline, likely New York City, showing a dense cluster of skyscrapers and a highway with multiple lanes of traffic. The sky is clear and blue.

## **Land Use & Discretionary Income**

## **GROWTH MANAGEMENT**

**Raises house prices  
(especially urban growth  
boundaries).**

**Reduces discretionary  
incomes**

**Increases poverty**

**Associated with less  
economic growth**

# Seattle's Housing Affordability Crisis

## AVOIDED WHERE NO LAND RATIONING

VISION 2040

people



prosperity



planet



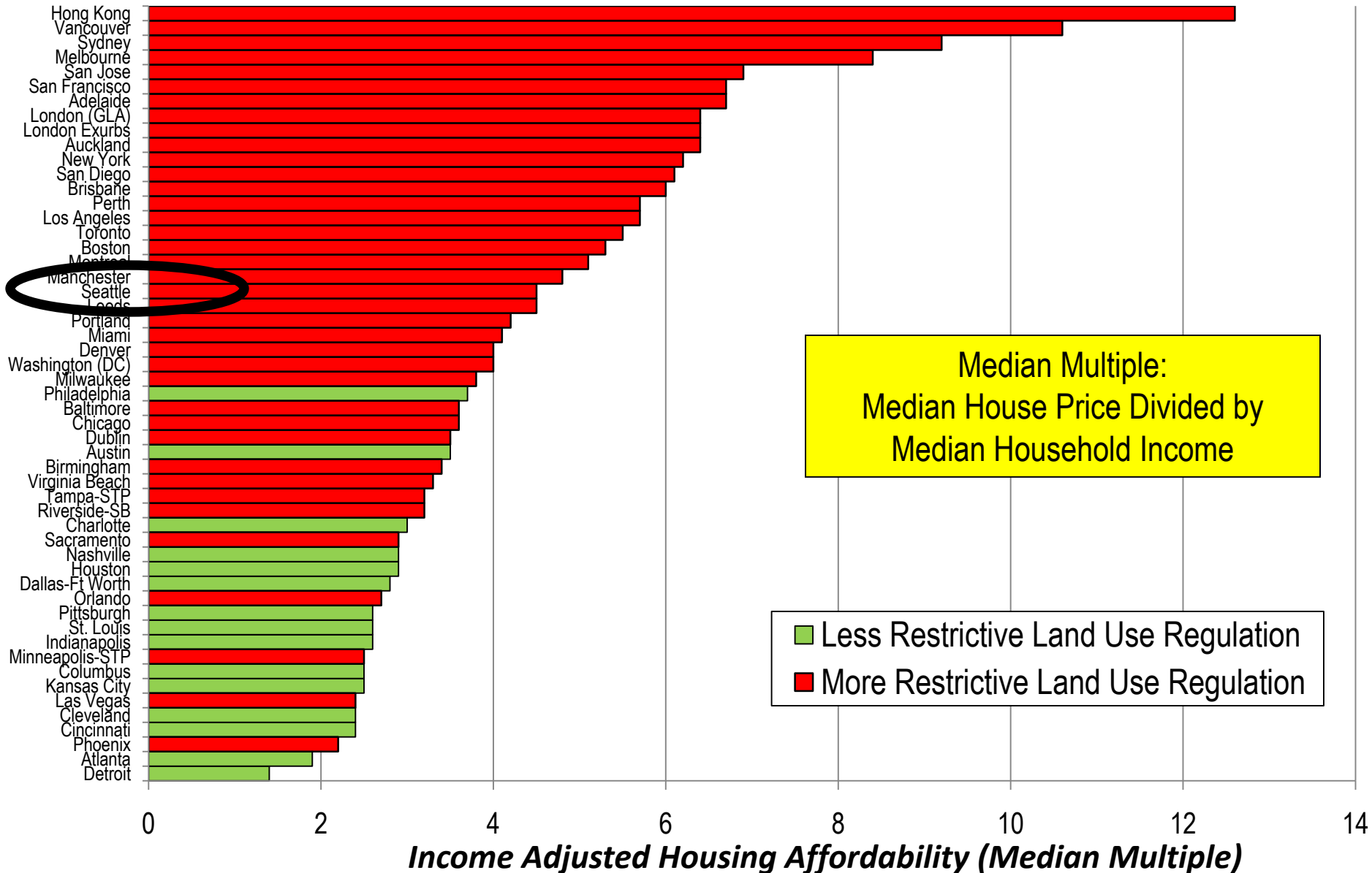
Puget Sound Regional Council  
PSRC December 2009

With housing prices significantly outpacing income growth over the last several years...

... a primary goal of the (Growth Management) Act is to facilitate sufficient and appropriate housing production and supply

# Smart Growth Drives Up House Prices

## LARGER METROPOLITAN MARKETS



# Land Rationing is the Issue

## DESTROYS HOUSING AFFORDABILITY



... the affordability of housing is overwhelmingly a function of just one thing, the extent to which governments place artificial restrictions on the supply of residential land.

Donald Brash, Governor,  
Reserve Bank of New Zealand  
1988-2002

Introduction to

*4<sup>th</sup> Annual Demographia International Housing Affordability Survey*





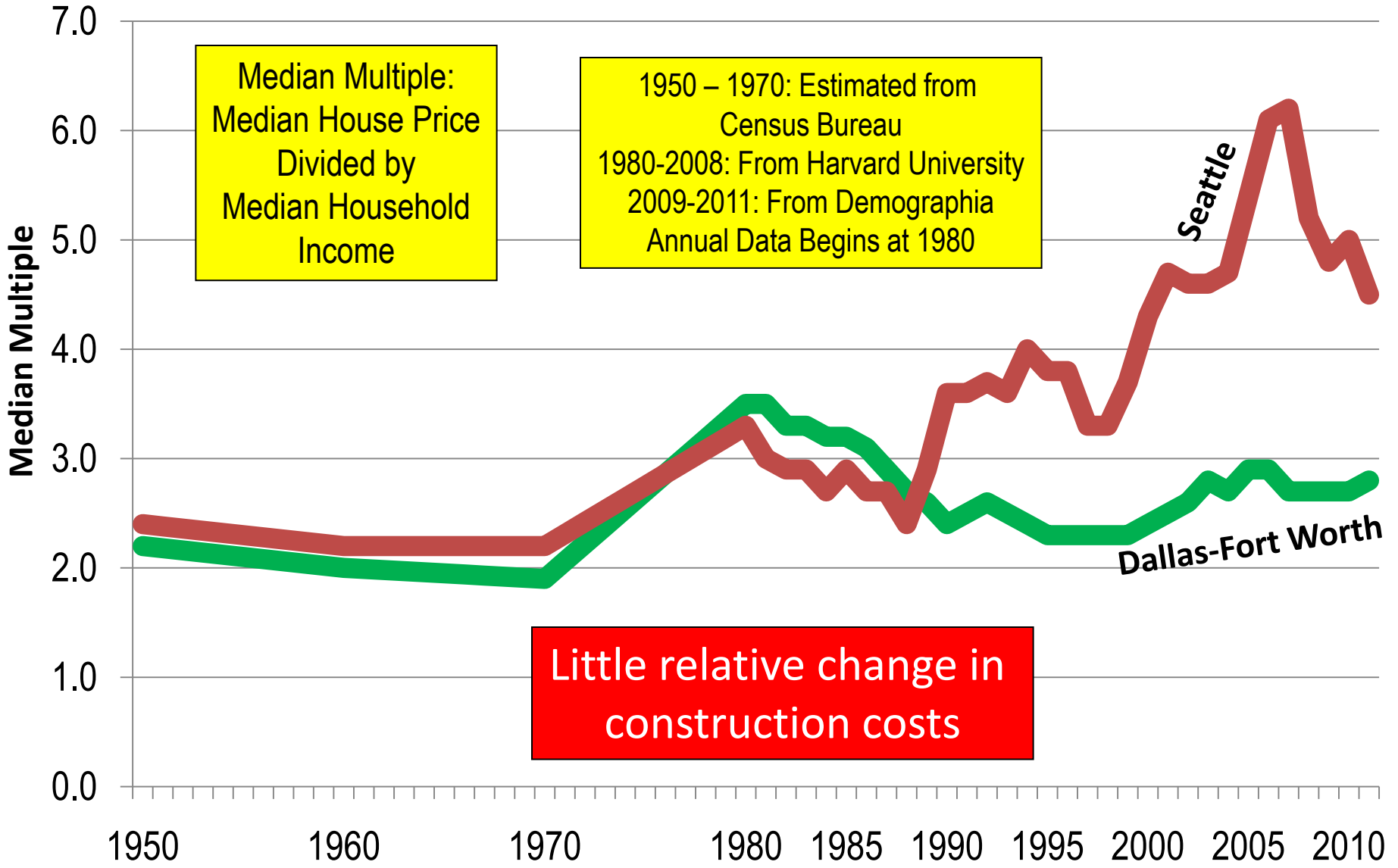


Economic Principle  
Rationing (Scarcity) Raises Prices

Economic Research is  
Virtually Unanimous

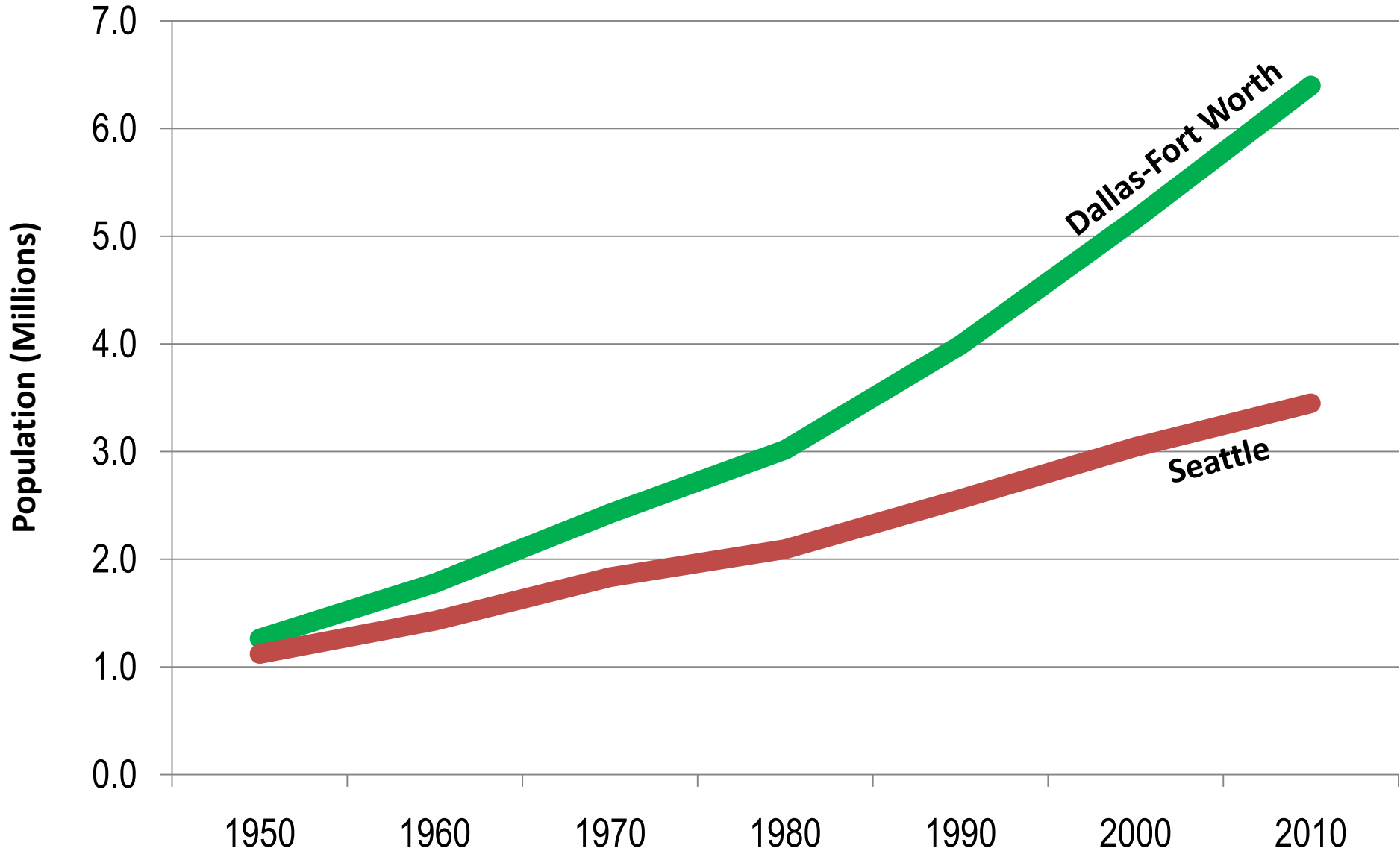
# Housing Affordability: Seattle & DFW

## MEDIAN HOUSE PRICE/MEDIAN HOUSEHOLD INCOME



# Population: Seattle & DFW: 1950-2010

CURRENT METROPOLITAN AREA DEFINITION



# Strong Land Regulation: Less Growth

## EUROPEAN & US RESEARCH

*London*

20% less job growth  
than expected in  
metropolitan areas  
with strongest  
land use regulation

-Raven Saks  
US Federal Reserve Board

Reduced employment  
in Amsterdam/Rotterdam

-Vermuelen & Ommeren  
Netherlands Bureau of Econ. Rsch.

Higher unemployment  
in the UK

-Mayo & Angel  
World Bank

# Balkanizing the City with “Centers”



*Stockholm (Tensta)*

## “TRANSIT ORIENTED CENTERS”

Transit can effectively  
serve only one center  
(downtown)

Travel behavior similar to  
adjacent low density  
areas

Far greater traffic  
congestion.

More intense air pollution

# Reality of “Centers” (Balkanization)

IT HAS ALREADY BEEN TRIED

- Balkanizing: Trying to get people to live nearer work
- Tried Before: Pre-19<sup>th</sup> century urban areas
- Transit can effectively serve only one center (downtown)
- As a result, greater traffic congestion
  - More intense air pollution
- London new towns
- Stockholm
- Violates the very purpose of the “city”

# Jobs Housing Balance: China Work Units

PRE-DENG XIAO PENG ERA “DANWEIS” NOW ABANDONED (SOLD)



Quanzhou (Fujian), China

# Jobs Housing Balance: Favela in Rio

GOOD OPPORTUNITY TO SEE: 2016 OLYMPICS

Rio de Janeiro  
Favela (Rocinha)

An aerial photograph of Rio de Janeiro, Brazil, showing a dense favela (Rocinha) in the foreground, modern high-rise buildings in the middle ground, and a large mountain (Sugarloaf Mountain) in the background. The favela is characterized by tightly packed, multi-story buildings with various colors and textures. The modern buildings are taller and more uniform in design. The mountain is a prominent feature on the right side of the image, with a steep, rocky slope. The sky is overcast, and the water of the bay is visible in the distance.



# High Density Outside Core

TRAVEL PATTERNS NO DIFFERENT THAN LOW DENSITY

Statistics Canada:  
High Density 6+ Miles  
From Downtown  
Relies on Cars

*Suburban Toronto (Newmarket)*



# North Shore Times

FRIDAY, APRIL 14, 2006

YOUR LOCAL CUMBERLAND NEWSPAPER

PH 9414 1400 \$1.20 incl. GST



## EASTER GREETINGS

Enjoy a happy and safe holiday



# We're in the poo!



### KIM CHRISTIAN

RAW sewage spilled into the streets of Chatswood this week leaving passers-by and motorists to make their way through the putrid mess.

spill to Sydney Water at 11am on Monday and then again at 3pm when nothing had been done.

"Cars were coming past and splashing it onto the steps," she said.

"It's pretty revolting.

Sydney Water effluent people as they walked past."

The company managing the block at 3 Help St is responsible for fixing the

of the affected unit. An said she had arranged to discover human waste at her doorstep.

healthy and not hygienic.

going to get someone to clean it up?"

walking through this.

Clients of nearby businesses were seen walking through the mess.



Mayor Pat Reilly at Scotts Creek.

## Sewage flows into creek

THIS week's sewage spill in Chatswood has affected nearby Scotts Creek which flows directly into the harbour.

Full report Page 5

**HIGHER DENSITY:**  
May have to upgrade infrastructure to maintain service



# Lessons Learned

Transit doesn't make the market

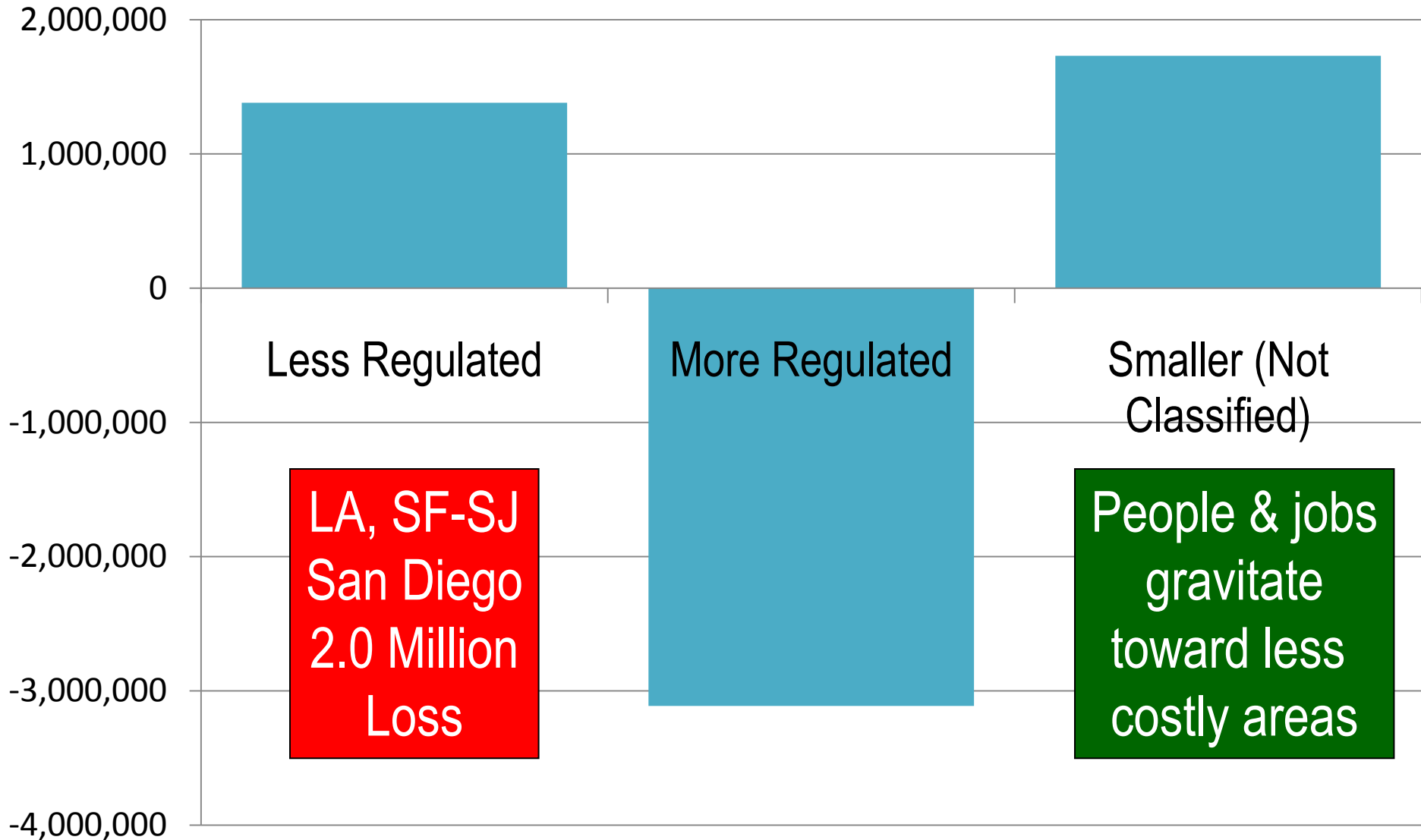
The market picks you (not vice versa)

Can't build TOD urban form in suburbs  
without deep subsidy (in any market)

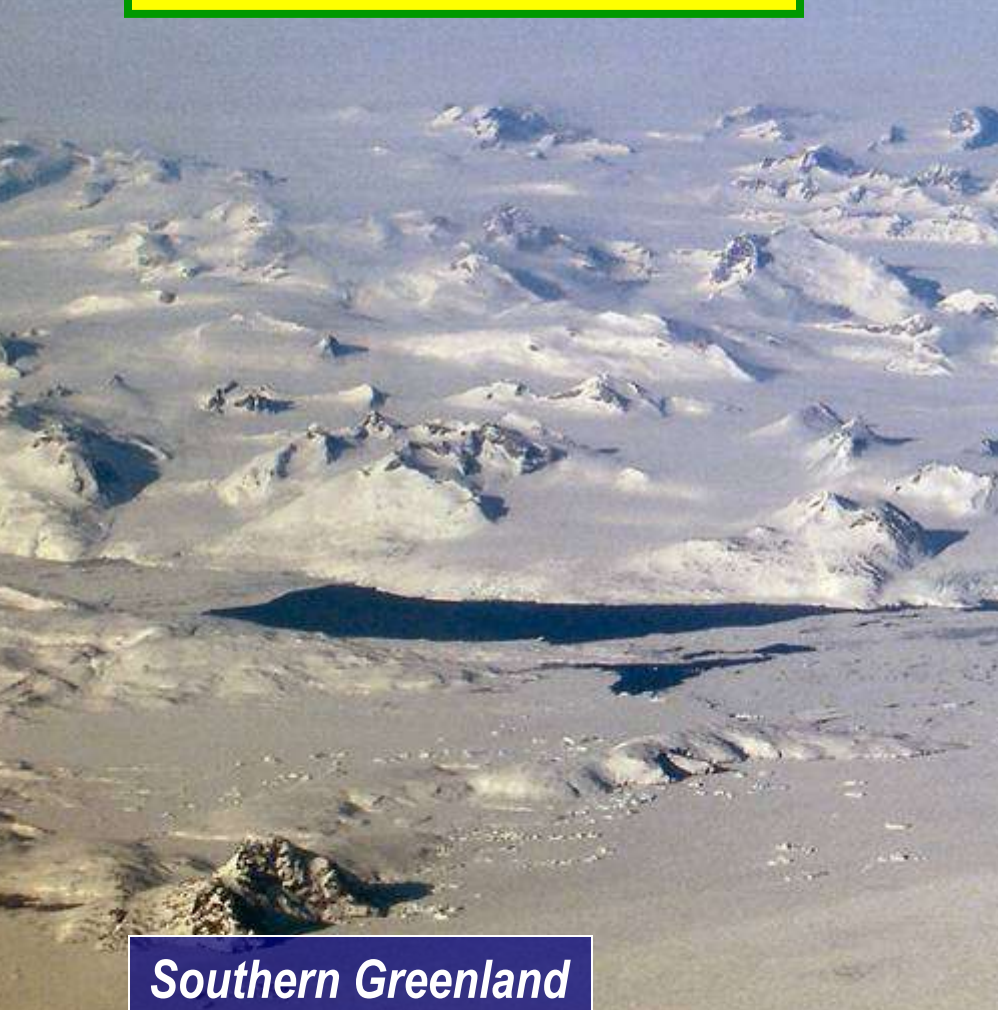
Must have local staff that understand  
difference between "planning" and "real  
estate development"

# The Exodus from Expensive Areas

NET DOMESTIC MIGRATION: 2000-2009



# A Sustainable Environment



*Southern Greenland*

## UNNECESSARY HARSH STRATEGIES

GHG reduction objectives can be met without radical lifestyle changes

Radical lifestyle changes would threaten the economy

Higher poverty levels

Less discretionary income



# McKinsey & Conference Board

## NO RADICAL LIFESTYLE CHANGES NEEDED

### Reducing U.S. Greenhouse Gas Emissions: *How Much at What Cost?*

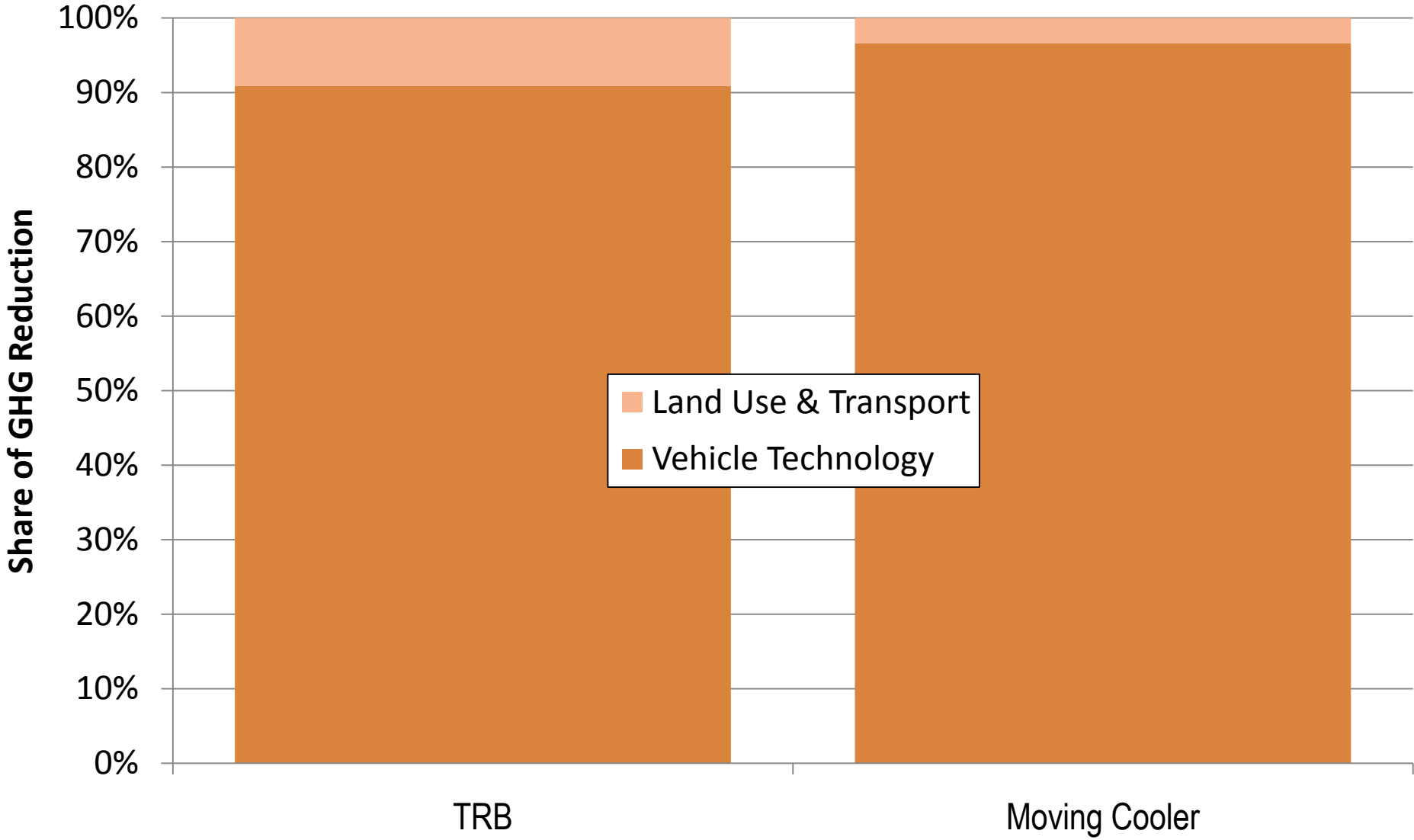


**...no change in thermostat settings or appliance use, no downsizing of vehicles, home or commercial space and traveling the same mileage**

**...no shift to denser housing**

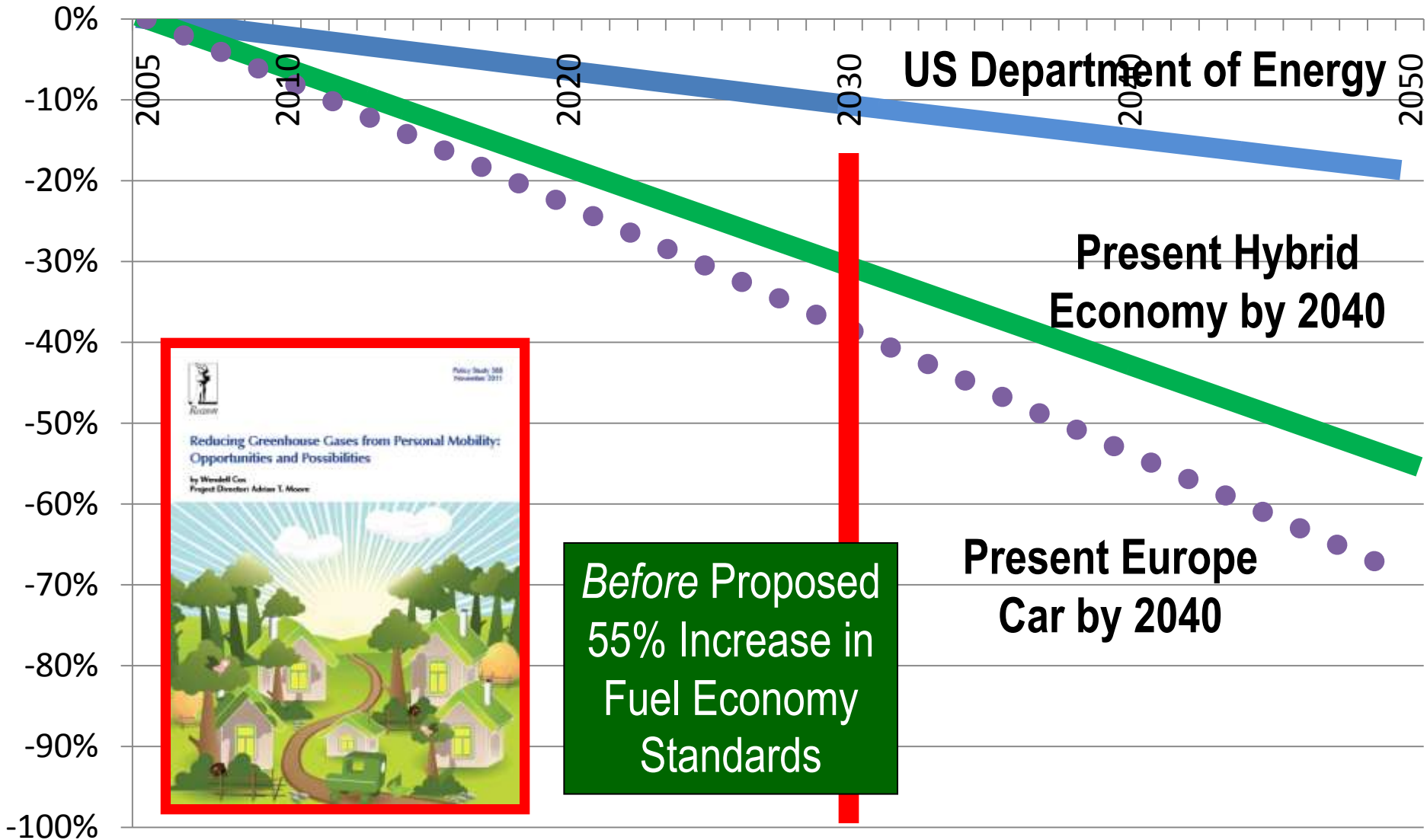
# GHG Reduction Effectiveness

## SMART GROWTH V. VEHICLE TECHNOLOGY



# Potential to Reduce Auto GHGs: US

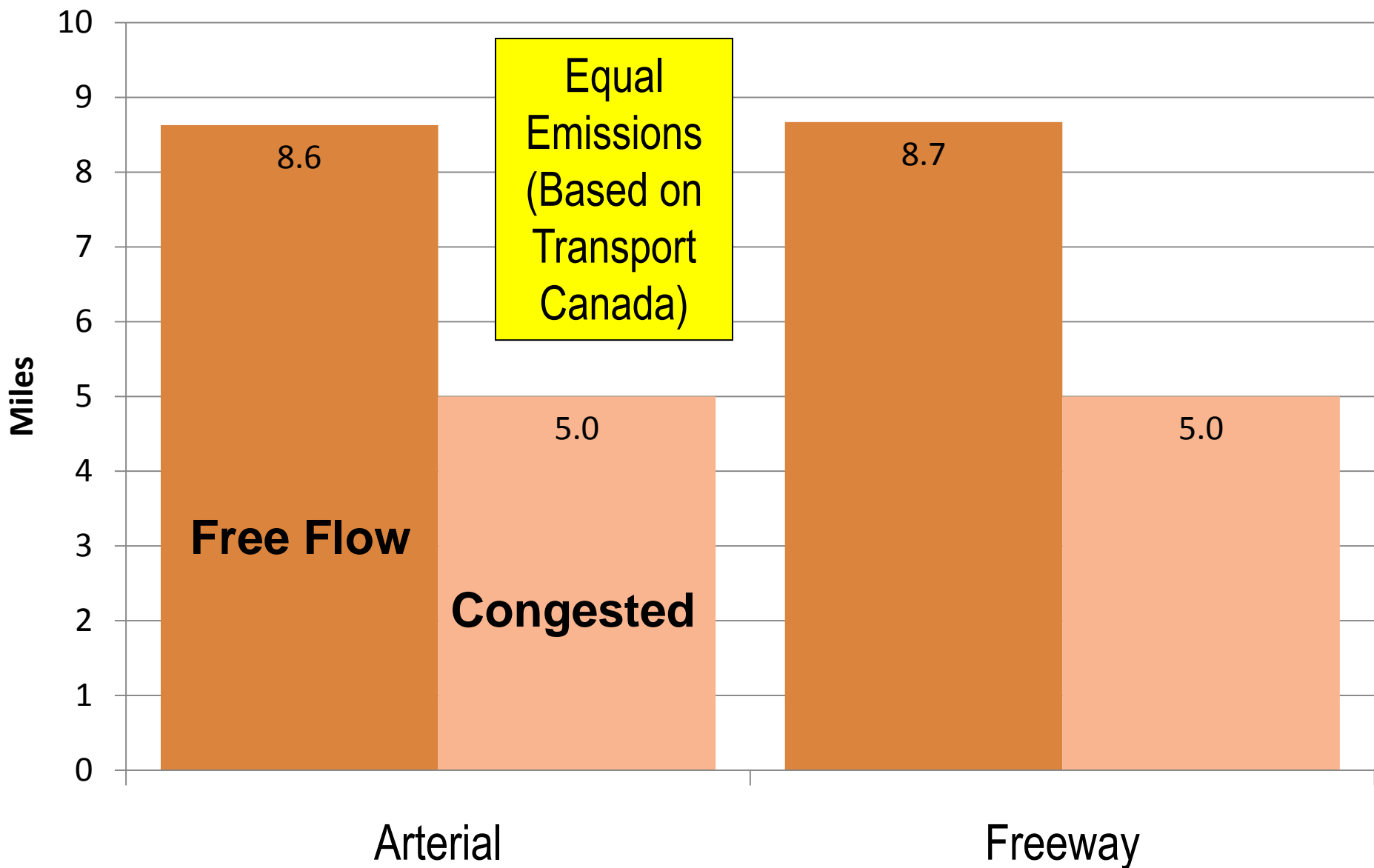
WITH BASELINE VKT GROWTH: ADDITIONAL STRATEGIES





# Less Driving in Congestion: More GHGs

HIGHER EMISSIONS FROM CONGESTION, SLOWER SPEEDS



# Cost Effectiveness is Crucial

UN IPCC MAXIMUM RANGE PER METRIC TON

Olympia  
(and Sacramento)  
cannot make  
effective GHG policy

PSRC:  
No Economic  
Analysis

**\$20**

**\$50**

Market  
Less than  
\$10

Above \$50 is unnecessary

Shenyang,  
China



# A Sustainable Economy

**Economic sustainability is necessary.**

**A well governed urban area delivers:**

**Access & economic growth**

**Lower cost of living (housing affordability)**

Shenzhen

# Fiscal Realities

## BUDGET DEFICITS AS A % OF GDP (2011)

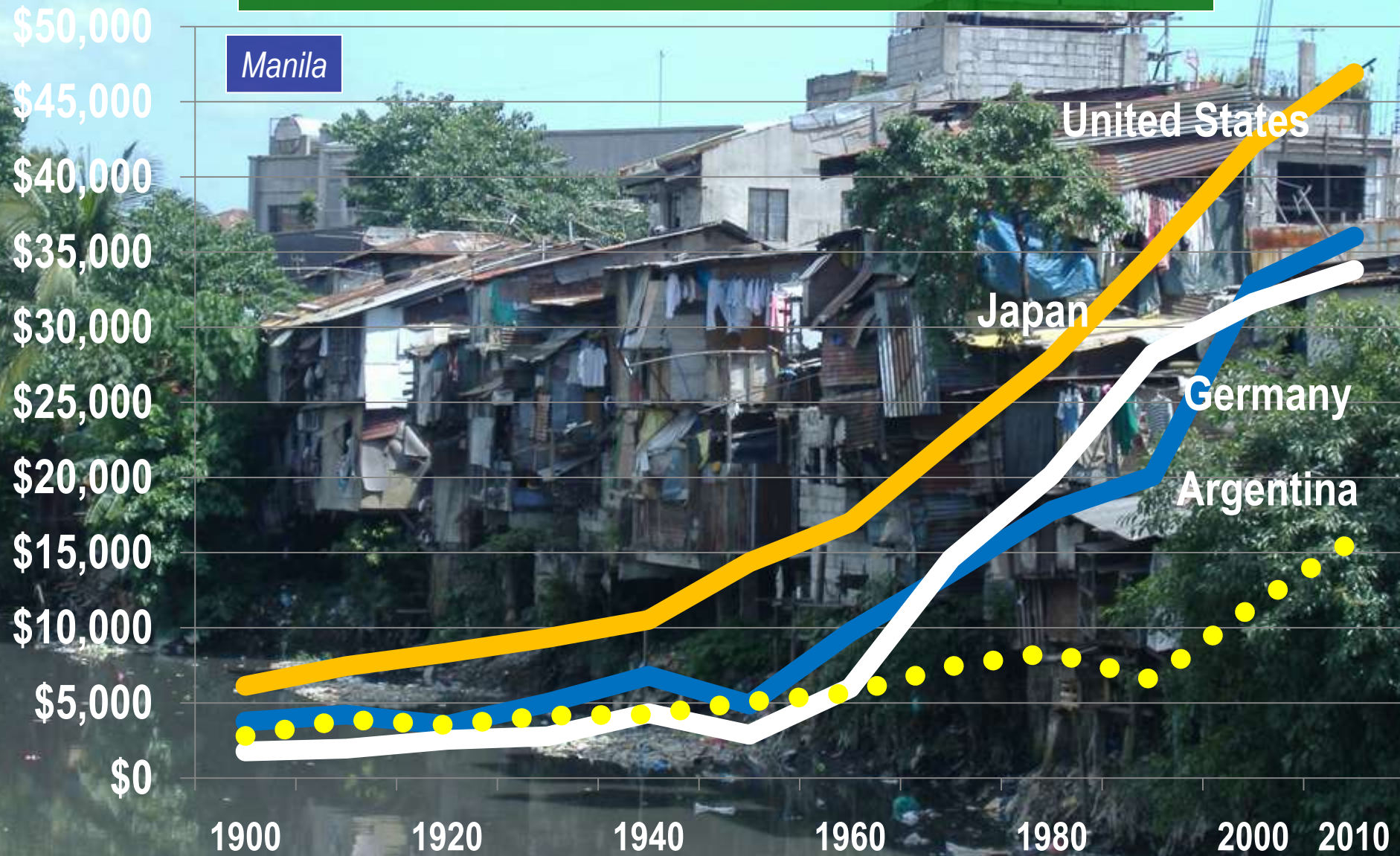
**Greece**  
**8.5%**

**United States**  
**10.8%**



# Prosperity is not Guaranteed

## ECONOMIC POLICIES MATTER



# Choices

**Smart Growth Has Significant Costs**

**VMT Reduction v. Job Creation**

**Growth Management v. Lower Cost of Living**

**VMT Reduction & Growth Management v. Higher  
Rates of Poverty**

# The Long Overdue Debate

## INCREASING ATTENTION, CITIZEN ACTIVITY

CROSS COUNTRY | Updated April 9, 2012, 6:38 p.m. ET

### California Declares War on Suburbia

*Planners want to herd millions into densely packed urban corridors. It won't save the planet but will make traffic even worse.*

Article Video Comments

  Save   +1 35  Tweet 446  

By WENDELL COX

THE WEEKEND INTERVIEW | April 20, 2012, 7:19 p.m. ET

### Joel Kotkin: The Great California Exodus

*A leading U.S. demographer and 'Truman Democrat' talks about what is driving the middle class out of the Golden State.*

LETTERS | May 1, 2012, 6:57 p.m. ET

### A Bold Plan for Sustainable California Communities

**Sen. Darrell Steinberg**

*President pro Tempore*

*California State Senate*