No “Flocking” to the Cities
US MAJOR METROPOLITAN AREAS: 2000-2010

Data from Census Bureau

Population Growth

-272,000  206,000  1,105,000  3,473,000  2,989,000  8,566,000

0-2 Miles  2-5 Miles  5-10 Miles  10-15 Miles  15-20 Miles  20+ Miles
20-29s Moving to Suburbs
MAJOR METROPOLITAN COUNTIES BY DENSITY

<table>
<thead>
<tr>
<th>Density Range</th>
<th>Share of Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 500</td>
<td>35%</td>
</tr>
<tr>
<td>500 - 1,000</td>
<td>20%</td>
</tr>
<tr>
<td>1,000 - 2,500</td>
<td>40%</td>
</tr>
<tr>
<td>2,500 - 5,000</td>
<td>15%</td>
</tr>
<tr>
<td>5,000 - 10,000</td>
<td>10%</td>
</tr>
<tr>
<td>10,000 &amp; Over</td>
<td>5%</td>
</tr>
</tbody>
</table>

2000 Population Share
2000-2010 Change Share
US: Work Trip Share: Ages 16-24
2000 & 2011

Work Trip Market Share

- **Drive Alone**
  - 2000: 66.9%
  - 2011: 69.7%

- **Car Pool**
  - 2000: 17.4%
  - 2011: 12.6%

- **Transit**
  - 2000: 5.4%
  - 2011: 5.8%

- **Work at Home**
  - 2000: 1.4%
  - 2011: 2.6%

Calculated from US Census (2000) and American Community Survey (2011)
Empty Nesters: To Less Dense Areas

MAJOR METROPOLITAN & SMALLER AREAS

- **Major Metro Core Cities**: -12.0%
- **Major Metro Suburbs**: -4.0%
- **Smaller Areas**: 6.0%

65-74 Population in 2010 Compared to 55-64 in 2000

Source: US Census Data
Transit is About Downtown

TRANSIT WORK TRIP MARKET SHARE: 2000

<table>
<thead>
<tr>
<th>City</th>
<th>Transit Share of Work Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>70%</td>
</tr>
<tr>
<td>Chicago</td>
<td>55%</td>
</tr>
<tr>
<td>Boston</td>
<td>50%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>48%</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>45%</td>
</tr>
<tr>
<td>Washington</td>
<td>40%</td>
</tr>
</tbody>
</table>
6 Transit Legacy Cities (Municipalities) DOMINATE US TRANSIT COMMUTING (2008-2010)

THE LAST MILE PROBLEM

Municipalities of NYC
Chicago
Philadelphia
San Francisco
Boston
Washington (45%)

All Other US (2%)

45.5%
54.5%
Transit Oriented Development?

ISSUE: ACCESS TO DOWNTOWN, NOT DENSITY

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

Suburban Toronto (Newmarket)
Impossibility of Auto Competitive Transit

ANNUAL COST RELATIVE TO GROSS DOMESTIC PRODUCT

Los Angeles: 57%
New York: 79%
Paris: 56%
Gross CO2 Emissions: United States
FROM LIGHT DUTY VEHICLES: 2005 TO 2035

@ 2005 MPG

New MPG Regulation
Demand for Detached Housing
2 ANALYSES: CALIFORNIA

- Modeled 2010
- Demand: 2000-2008

SCAG, ABAG, SANDAG & SACOG Planning Areas
Fleeing the High Cost of Housing (Living)
MAJOR MARKETS: NET DOMESTIC MIGRATION: 2000-2009

- Less Costly
  - LA, SF-SJ
  - San Diego
  - 2.0 Million Loss

- More Costly
  - Median Multiple
  - 4.5 & Over

- Smaller (Not Classified)
  - Median Multiple
  - Median House Price/Median Household Income
Smart Growth: Miniscule GHG Reduction
2000-2050 TRB REPORT (DRIVING AND THE BUILT…)

Presumptions
Denser Housing
Discourage Cars

From Smart Growth 1%

From Auto Fuel Economy (2005 MPG) 99%
Cities exist because of the economic opportunities they facilitate.

Purpose of cities: The economic good of residents
City
(Urban Organism)

Metropolitan Area or Labor Market (Functional Expanse)

Urban Area or Agglomeration (Physical Expanse)

Chicago
The raison d’être of large cities is the increasing return to scale inherent to large labor markets. The cities’ economic efficiency requires, therefore, avoiding any spatial fragmentation of labor markets.
Urban Containment Raises House Prices
SMART GROWTH LAND RATIONING

OPEC
The Dynamics of OPEC

Anthony Downs
Brookings Institution

Kate Barker
Bank of England

Paul Krugman
Nobel Laureate

Nick Boles
UK Planning Minister
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 4th Annual Demographia International Housing Affordability Survey
Housing Affordability 1950-2012
MAJOR US METROPOLITAN AREAS: MEDIAN MULTIPLE

Median Multiple: Median House Price divided by Median Household Income

Less Restrictive Markets
More Restrictive Markets: Outside California
More Restrictive Markets: California

DENVER MEDIAN MULTIPLE
NEARLY 50% ABOVE 1980-2000

Median Multiple: Median House Price divided by Median Household Income
Mobility Improves Prosperity
ASSOCIATION BETWEEN MOBILITY & AFFLUENCE

PRUD’HOMME
Mobility Improves Productivity
U. Of Paris

HARTGEN-FIELDS
Mobility Improves Productivity
UNC-Charlotte

Chicago
Higher Density Means More Traffic Congestion & SLOWER JOURNEY TO WORK TRAVEL TIMES

R² = 0.8856

NEGATIVE HEALTH IMPACTS

- Vehicle Hours/Sq.Mi.
- Population per Square Mile

Hong Kong
PERHAPS A MALAISE MORE THAN A CLIFF
Economic Growth is Imperative

CANNOT TAKE ECONOMIC GROWTH FOR GRANTED
Aligning policy with the purpose of cities (With sufficient environmental Protection)

URBAN POLICY
FROM MEANS: URBAN FORM & MODE OF TRANSPORT
TO OBJECTIVES: ECONOMIC GROWTH & AFFLUENCE
STRATEGIES

Housing Affordability
Maintain/Restore
Competitive
Land Supply

Transport
Investments:
Minimum Cost per
Delay Hour Reduced

by Wendell Cox