

Prosperity or death by a thousand cuts?

Fifty years of subnational population trends
in Canada and the United States

Fazley Siddiq

Professor, School of Public Administration, Dalhousie University;
Fellow, John F. Kennedy School of Government, Harvard University; and
Fulbright Visiting Research Chair in Canada-U.S. Relations, Wilson Center

Jordan Fischer

Scholar Intern, Woodrow Wilson International Center for Scholars

Wednesday, May 1, 2013 ~ 10:00 a.m. – 11:30 a.m.

Woodrow Wilson International Center for Scholars

Outline

- Motivation
- Background and Literature
 - Canadian Trends
 - Trends in the United States
- Definitions: Canada
- Definitions: United States
- Comparison of Subnational Jurisdictions
- Data Sources
- Data Constraints
- Summary of Trends
 - Increasing metropolitan populations
 - Expanding metropolitan boundaries
- Comparison of Trends
- Highlights
- Policy Implications
- Summary and Conclusion
 - Trends
 - Key Findings



Prosperity or death by a thousand cuts?

– F. Siddiq and J. Fischer

Motivation

- Migration patterns influence economic well-being in mature economies such as Canada and the U.S.
 - Rapidly changing population distributions warrant an explanation
- Metropolitan areas
 - Account for higher share of population, even higher share of GDP
 - Economic engines
 - High levels of intellectual, political and social activity
- Non-metropolitan areas
 - Shrinking population, shrinking contribution to GDP and politics
 - Declining economies
 - Brain drain



Analyze reasons behind demographic volatility

Background and Literature:

General Trends in Canada

- Immigration:
 - Each province requires additional migrants to sustain its population
 - More deaths than births
 - Immigration flows are highly concentrated geographically, in large metropolitan areas
 - Only 4% of new immigrants chose to live in rural areas (Malenfant et al, 2007)
 - 75% of immigrants settle in Toronto, Montreal or Vancouver (Slack et al, 2003; Wulff and Vineberg, 2008)

Background and Literature:

General Trends in Canada ...cont.

- Interprovincial migration:
 - Beneficial to national economic performance
 - Increases economic inequalities between provinces, including skills disparities
 - Increasing migration of skilled workers from Atlantic Canada and Saskatchewan to Ontario, Alberta, British Columbia (Statistics Canada)
 - Most mobile component of the population is the educated youth
 - “Zero-sum demographic game” (Polese & Shearmur, 2006)
- Suburbanization: increasing trend
 - Lower housing prices, improved quality of life
 - Proximity to metropolitan center (Malenfant, 2007)
 - Strong central business districts lead to lower levels of suburbanization (Bunting and Fillion, 2001)

Background and Literature:

Economic Trends in Canada

- Relative decline in non-metropolitan areas
 - Aging populations
 - Remote/isolated locations and economies
 - Small populations and market size (Slack, Bourne & Gertler, 2003b)
 - Brain drain
- Most migrants motivated by economic/labor opportunities (Bernard, Finny and St-Jean, 2008)
 - Most were young adults
 - Individuals left provinces with poor local labor market performance for provinces with better labor market prospects

Background and Literature:

Regional Volatility in the United States

- Movement to the South and West
 - In 1900, 62% of the U.S. population lived in the Northeast or Midwest
 - By 2000, the trend was reversed: 58% lived in the South or West (US Census Bureau, 2001)
 - Rapidly growing metropolitan areas in South and West
 - Las Vegas, Seattle, Austin, Miami
 - Majority of interstate migrants between 1965 and 1990 resettled in new and growing metropolitan areas, rather than more established ones (Elliot & Perry, 1996)
- Regional economic specialization
 - Regional economic contraction
 - Historical reasons – economic growth/decline is not contagious
 - Decline in Midwest due to historical clustering of industry, lack of regional economic diversification (Beeson and Tannery, 2004)
 - Regional population loss, gains in another region
 - Losses in Northeast/Midwest, gains in South/West

Background and Literature:

General Trends in the United States

- Suburbanization
 - Lower housing prices, improved quality of life, but proximity to metro center
 - Majority of all racial groups now live in suburbs (Brookings Institution, 2010)
- Age-related trends
 - Most migrants were motivated by economic opportunities
 - Most were young adults
 - Individuals leaving states with poor local labor market performance for states with better labor market prospects (Newbold, 2011)
 - Young adults → metropolitan centers
 - Working-age → suburbs
 - Retirees follow quality of life (Snowbelt → sunbelt)

Background and Literature:

General Trends in the United States ...cont.

- Changing nature of U.S. metro areas

- 7 categories:

	Growth	Education	Diversity	Examples
Next Frontier	high	high	high	Seattle, WA
New Heartland	high	high	low	Des Moines, IO
Diverse Giant	low	high	high	NYC, LA
Border Growth	high	low	high	Orlando, San Antonio
Mid-Sized Magnet	high	low	low	Oklahoma City, OK
Skilled Anchors	low	high	low	Boston, MA
Industrial Cores	low	low	low	Detroit, MI

Source: Brookings, 2010

- Growing disparity in education levels

- As in Canada, educated migrants tend to cluster, increasing disparity
 - Racial disparity in education (Most to least: Asian, White, Black, Latino) (Brookings, 2010)

Definitions: Canada

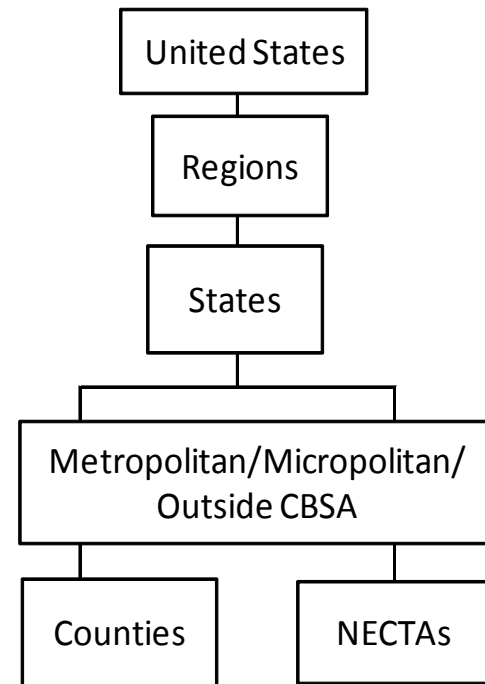
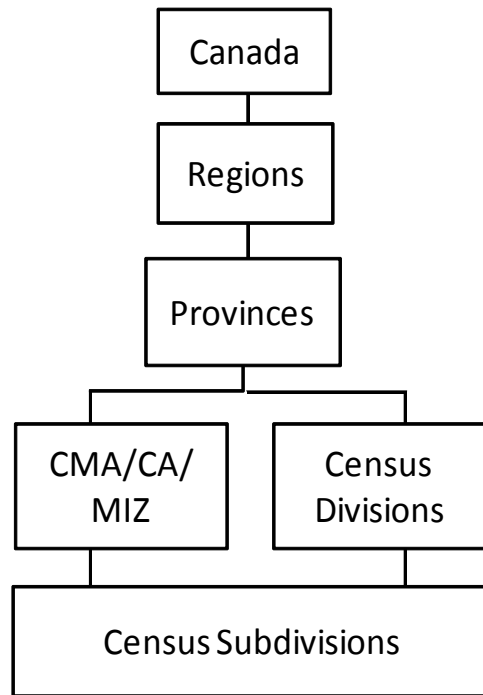
- Comparison of geographic building blocks (Statistics Canada, 2011):

Metro	<ul style="list-style-type: none">○ Census Metropolitan Area<ul style="list-style-type: none">• A large area, economically and socially integrated with adjacent urban and rural areas, having a population of at least 100,000 of which at least 50,000 live in the urban core.• Each CMA has one or more census subdivisions (CSDs)<ul style="list-style-type: none">○ At least 50 percent of the employed labour force living in the CSD works in the urbanized core; or at least 25 percent of the employed labour force working in the CSD lives in the urbanized core• Generally speaking, CMAs consist of one or more municipalities situated around a major urban core
Non-metro	<ul style="list-style-type: none">○ Census Agglomeration<ul style="list-style-type: none">• Must have an urban core population of at least 10,000, below which it is retired• Formed by one or more adjacent municipalities centred on a large urban area (urban core)• To be included in a CA, other adjacent municipalities must have a high degree of integration with the central urban area, as measured by commuting flows○ Metropolitan Influence Zone<ul style="list-style-type: none">• A census subdivision that lies outside CMAs and CAs, but is influenced by them• Category assigned to a municipal unit not included in either a CMA or a CA

Definitions: United States

- Comparison of geographic building blocks (US Census Bureau, 2010):
 - **A Core Based Statistical Area (CBSA)**
 - An area associated with at least one core whose population is at least 10,000
 - Also has adjacent territory that is linked to the core by commuting ties, and social and economic integration
 - Two categories of CBSAs: Metropolitan Statistical Areas, Micropolitan Statistical Areas.
 - Metro** {
 - **Metropolitan Statistical Area (CBSA)**
 - Consists of at least one urban area with a population of at least 50,000
 - Has a central county (or counties) as well as outlying counties, connected to the urban core through social and economic integration as measured through commuting
 - Non-metro** {
 - **Micropolitan Statistical Area (CBSA)**
 - Has at least one urban area (often called an urban cluster) with a population of at least 10,000, but less than 50,000
 - Consists of a central county (or counties) containing the core as well as outlying areas, which are connected to the urban area through social and economic integration as measured through commuting
 - **Outside Core Based Statistical Areas**
 - Counties that do not qualify for inclusion either as Metropolitan or Micropolitan Statistical Areas

Comparison of Subnational Jurisdictions



New England City and Town Area

Prosperity or death by a thousand cuts?

– F. Siddiq and J. Fischer

Comparison of Subnational Jurisdictions ...cont.

- Comparability
 - Discrepancies in the unit of analysis
 - Census definitions vary over time and across the two countries
 - Varying administrative boundaries
 - Continuity and size of the building blocks differ
 - Changing measures used to determine commuter sheds
 - Similarities in U.S. and Canadian definitions of “metropolitan area”
 - Large, population-dense core of at least 50,000
 - Total population (including hinterlands) of 100,000
 - Surrounding communities with relatively high population densities that are closely linked to the core by commuting

Comparison of Subnational Jurisdictions ...cont.

Division	US	Canada	Difference	US: Canada Ratio
Population (2010 _{US} & 2011 _{Can})	308,745,538	33,476,688	275,268,850	9:1
Counties _{US} / Census Divisions _{Can}	3,142	293	2,849	11:1
Metropolitan _{US} / CMA _{Can}	366	33	333	11:1
Micropolitan _{US} / CA _{Can}	576	117	459	5:1
CSD _{US} / CSD _{Can}	36,363	5,253	31,110	7:1

- o Ratio of counties to census divisions is aligned with the ratio of metropolitan areas to census metropolitan areas (similar units of measure)
- o Ratio of census agglomerations to micropolitan areas was relatively lower (terms are not as well matched)

Data Sources

- Canada
 - Statistics Canada
 - Censuses: 1961, 1971, 1981, 1991, 2001, 2011
- United States
 - US Census Bureau
 - Censuses: 1960, 1970, 1980, 1990, 2000, 2010

Data Constraints

- Data constraints
 - Periodic changes in the composition of the metropolitan areas

Year	Metropolitan Area	Components	Population
1960	Miami	Dade County	935,047
1970	Miami	Dade County	1,267,792
1980	Miami-Fort Lauderdale	Dade County, Broward County	2,643,766
1990	Miami-Fort Lauderdale	Miami-Dade County, Broward County	3,192,582
2000	Miami-Fort Lauderdale	Miami-Dade County, Broward County	3,876,380
2010	Miami-Fort Lauderdale-Pompano Beach	Miami-Dade County, Broward County, Palm Beach County	5,564,635

Data Constraints

- Changing geographical boundaries between 1961 and 2011

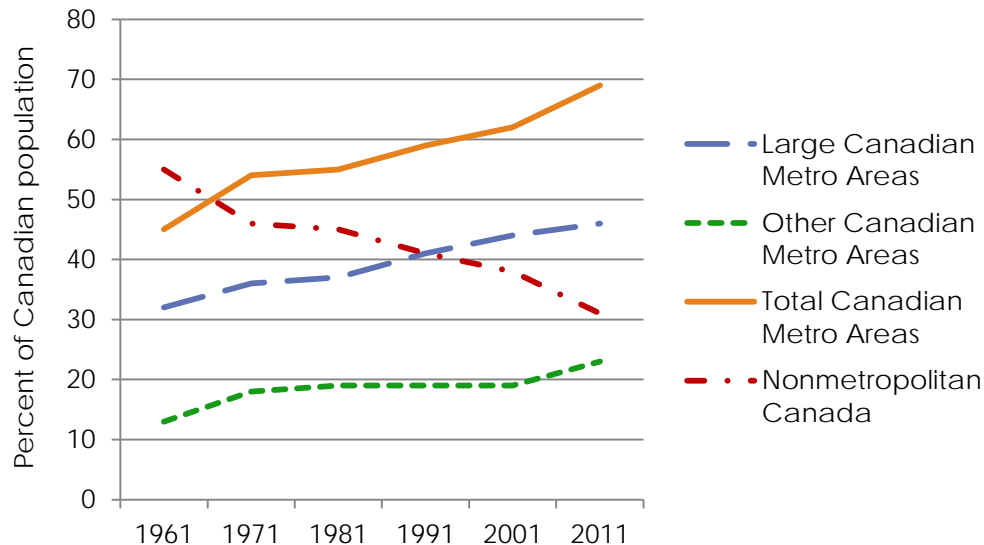
	Land area growth rate (%)					
	1961-1971	1971-1981	1981-1991	1991-2001	2001-2011	1961-2011
Canada - large metros	172	2	76	3	4	423
Montréal, QC	109	0	25	15	5	216
Ottawa-Gatineau, ON/QC	370	0	29	4	18	639
Vancouver, BC	115	0	0	3	0	123
Toronto, ON	81	0	49	6	0	185
Edmonton, AB	663	7	130	-1	0	1,761
Calgary, AB	4	21	907	0	0	1,166
Non-CMAs	0	0	0	-2	-1	-4
All CMAs	208	2	61	19	17	606
Total Canada	0	0	0	-2	-1	-3

- Every major metropolitan area experienced changing boundaries

Summary of Trends:

Increasing Canadian Metropolitan Populations

- Metropolitan areas (population > 1,000,000) are a large and growing proportion of national populations



	1961	1971	1981	1991	2001	2011
Large Canadian Metro Areas	32	36	37	41	44	46
Other Canadian Metro Areas	13	18	19	19	19	23
Total Canadian Metro Areas	45	54	55	59	62	69
Nonmetropolitan Canada	55	46	45	41	38	31

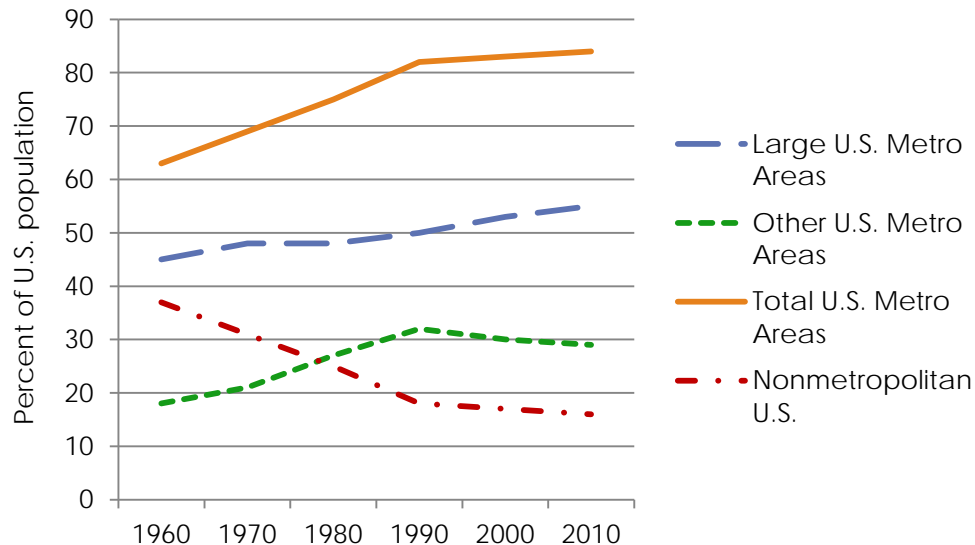
Prosperity or death by a thousand cuts?

– F. Siddiq and J. Fischer

Summary of Trends:

Increasing U.S. Metropolitan Populations

- Metropolitan areas (population > 1,000,000) are a large and growing proportion of national populations



	1960	1970	1980	1990	2000	2010
Large U.S. Metro Areas	45	48	48	50	53	55
Other U.S. Metro Areas	18	21	27	32	30	29
Total U.S. Metro Areas	63	69	75	82	83	84
Nonmetropolitan U.S.	37	31	25	18	17	16

Prosperity or death by a thousand cuts?

– F. Siddiq and J. Fischer

Summary of Trends: Expanding Metropolitan Boundaries

- The aggregate metropolitan land area in Canada grew 423% between 1961 and 2011
 - Spiked 172 percent in just ten years between 1961 and 1971
(Statistics Canada, 1962, 1972, 1982, 1992, 2002, 2012)
 - Generally more compact than in the U.S.
- Aggregate metropolitan land area increased 194% in the U.S. between 1960 and 2010
 - 216% increase in the South
 - 213% increase in the Midwest
 - Physical boundaries barely changed between 1980 and 1990, every other decade studied saw at least a 20% increase
(US Census Bureau, 1961, 1971, 1981, 1991, 2001, 2011)

Suburbanization in Canada

- Expanding geographical boundaries, decreasing population density

	1961		2011	
	land area (sq. mi)	population density (residents/sq. mi)	land area (sq. mi)	population density (residents/sq. mi)
↓ Montréal, QC	520	4,058	1,644	2,326
↓ Ottawa-Gatineau, ON/QC	329	1,308	2,427	509
↑ Vancouver, BC	499	1,582	1,113	2,079
↑ Toronto, ON	799	2,282	2,280	2,448
↓ Edmonton, AB	196	1,726	3,640	319
↓ Calgary, AB	156	1,791	1,972	616
↓ Canada - large metros	2,499	2,309	13,077	1,172
▬ Non-CMAs	3,555,170	3	3,425,741	3
↓ All CMAs	5,068	1,611	35,773	646
↑ Total Canada	3,560,238	5	3,461,514	10

Prosperity or death by a thousand cuts?

–. Siddiq and J. Fischer

Comparison of Trends: Canada and the United States

- Geographic differences
 - Canada has more land but much less temperate land than the U.S.
 - 77% of Canadian land area is Arctic or Sub-Arctic (Janelle, Warf, & Hansen, 2004)
 - Extremely sparse population in Canada's harsh northern territories
 - 75% of Canadian population lives within 100 miles of U.S. border (National Geographic, n.d.)
 - "Sunbelt" in the U.S.
 - Attracts migrants with warm weather
 - Linguistic divide in Canada
 - Francophone immigrants settle in Quebec, other immigrants settle predominantly in Ontario, Alberta and British Columbia (Statistics Canada, 2006)

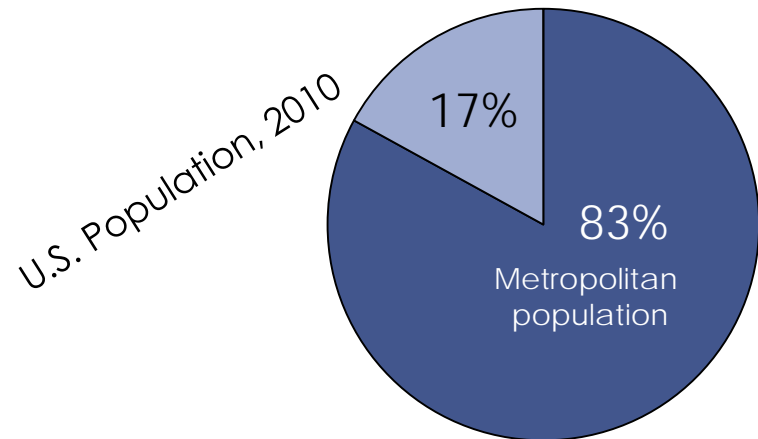
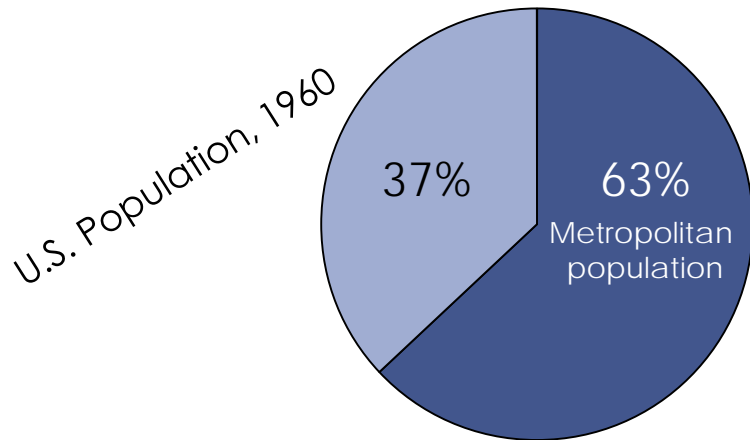
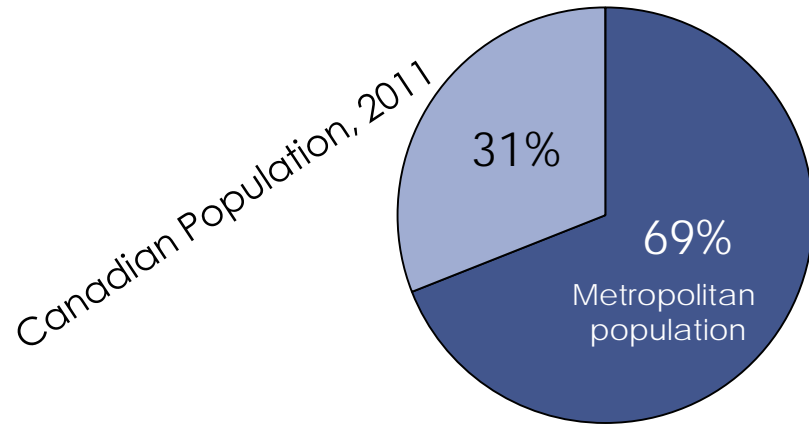
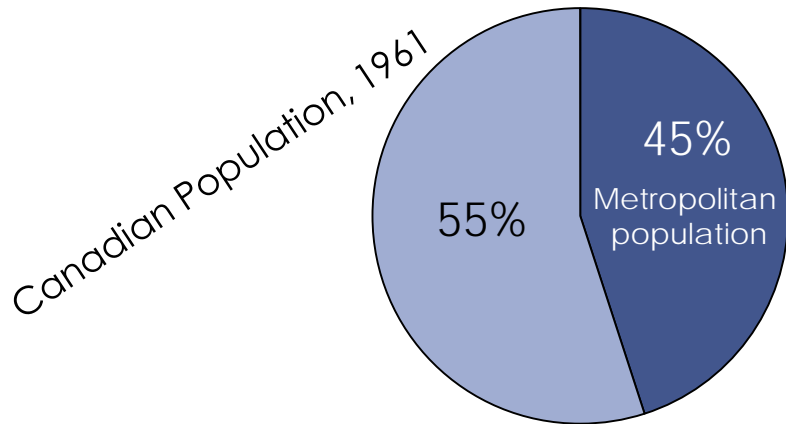
Comparison of Trends: Canada and the United States

...cont.

- Demographic similarities
 - Advanced economies reliant on human capital for growth
 - Core-periphery relationships
 - US core: coasts
 - Canadian core: west/central metro areas (Montreal, Toronto, Calgary, Vancouver)
 - Immigrant gateway cities
 - US: NYC, LA, Miami, San Francisco, etc.
 - Canada: Montreal, Toronto, Calgary, Vancouver
 - Age-dependent migration patterns
 - Educated youth migrate to metropolitan areas
 - Retired populations seek higher quality of life
 - Suburbanization patterns
 - Seeking higher quality of life, convenience
 - Increases metropolitan land area and population

Highlights

- Changing makeup of Canadian and U.S. societies



Prosperity or death by a thousand cuts?

– F. Siddiq and J. Fischer

Highlights

...cont.

- Strong metropolitan growth
 - Accounted for disproportionately high percentage of national employment, income, production, exports, and technology development
 - Canadian metro growth in both old and new metropolitan areas
 - Toronto, ON: 206% growth
 - Edmonton, AB: 244% growth
 - U.S. metro growth primarily in new metropolitan areas
 - Phoenix, AZ: 532% growth
 - New York City, NY: 77% growth
 - Unchecked metropolitan growth is problematic
 - San Bernardino county: 304% growth, based on housing bubble
 - San Bernardino city: bankrupt in 2012

Highlights

...cont.

- Declining non-metropolitan areas
 - Canadian non-metropolitan population: 0% growth
 - U.S. non-metropolitan population: 24% decline
 - Official municipal agglomerations
 - Ontario, Quebec, Nova Scotia
 - Unofficial collaboration
 - Pennsylvania, Michigan

Highlights

...cont.

- Prosperity

- Edmonton, AB – 244% growth
- Calgary, AB – 335% growth
- Orlando, FL – 570% growth
- Las Vegas, NV – 1436% growth



- Death by a Thousand Cuts

- Guysborough, NS – 39% contraction
- Stikine, BC – 45% contraction
- Henry County, OH – 63% contraction
- McDowell County, WV – 69% contraction



Prosperity or death by a thousand cuts?

– F. Siddiq and J. Fischer

Policy Implications

- Metropolitanization is generally positive
 - Boosts national economy (effective allocation of resources)
 - Metropolitan areas account for proportionately more national income, output, employment, exports, and innovation (Weiss, 2006; Weiss, 2001)
 - Over 95% of patents were filed in metropolitan areas, 2000-2011 (US Patent and Trademark Office, Patent Technology and Monitoring Team, 2013)
- Municipal amalgamations
 - Official (Nova Scotia, Ontario, Quebec)
 - Collaboration (Pennsylvania, Michigan)
- Government subsidies to ease rural woes
 - Medical professionals
 - Lawyers (South Dakota)

Summary and Conclusion:

Canada and the United States

- Share a similar history, democratic institutions, and level of development
 - High level of social and economic development
 - Low natural population growth, high levels of immigration
- Divided in important aspects of geography/climate, population size, and politics
 - Canadian harsh northern climate leads residents to cluster in the south, in spite of much larger total land area
 - U.S. population is larger and more diverse
 - Canadian government is more federalist, less centralized

Summary and Conclusion:

Trends

- Increasing metropolitan population

	1960		2010	
	Population	Percent of Total	Population	Percent of Total
Canada	8,163,986	45	23,123,441	69
United States	112,885,178	63	258,317,763	84

- Increasing metropolitan land area
 - Suburbanization
 - Decreasing metropolitan population density, despite increasing metropolitan population
- Emergence of rapidly growing metropolitan areas
 - Las Vegas, Seattle, Calgary
 - Majority of migrants resettled in newer metropolitan areas, rather than long-established ones, between 1965 and 1990 (Elliot & Perry, 1996)
- Declining non-metropolitan areas
 - Population loss (US), stagnation (Canada)
 - Loss of educated youth and professionals