

VARIETIES OF SPACE ECONOMY

CONTEXT

- VARIETIES OF CAPITALISM
- VARIETIES OF SPACE ECONOMY
- THE DYNAMICS OF UNEVEN DEVELOPMENT
- THE EXCEPTIONALITY OF THE U.S.

METHODS

- THE CHALLENGES OF AREA-BASED DATA
 - SCALE QUESTIONS
 - RELATION TO THE UNDERLYING DISTRIBUTION
 - TIME SERIES

METHODS (CONTINUED)

- A MEASURE OF DEVELOPMENT AND ITS UNEVENNESS
 - CHANGES IN THE DISTRIBUTION OF POPULATION
 - REGIONAL SHARES OF THE NATIONAL POPULATION

METHODS I: CORRELATIONS

- THE DECAY (?) OF CORRELATIONS OVER TIME

	T1	T2	T3	T4	T5
T1	*				
T2	.98	*			
T3	.92	.97	*		
T4	.85	.90	.99	*	
T5	.73	.84	.92	.96	*

CORRELATION ANALYSIS: APPLIED TO 9 U.S. CENSUS DIVISIONS (EXTRACT)

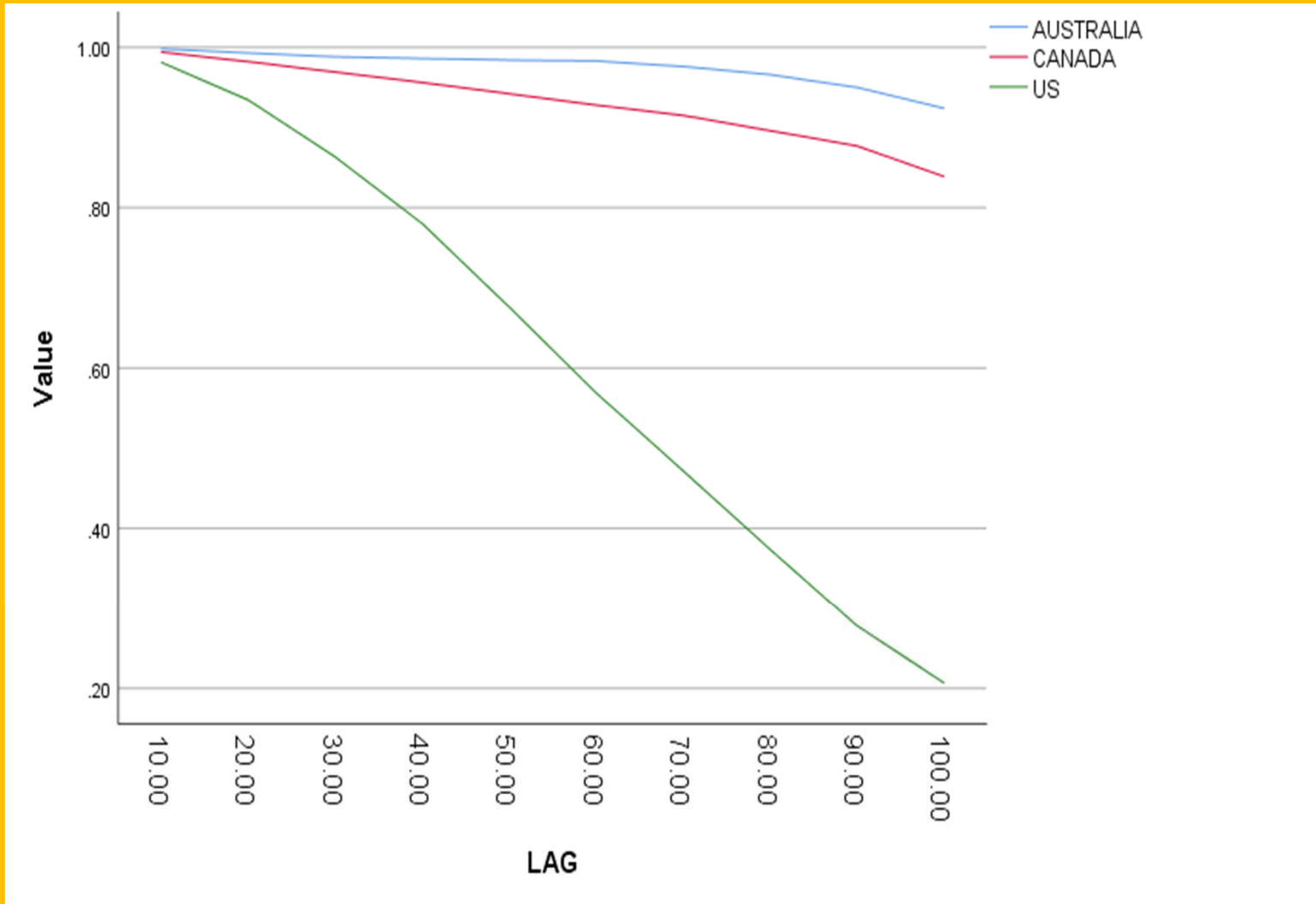
	1940	1950	1960	1970	1980	1990	2000
1940	1.000						
1950	0.987	1.000					
1960	0.955	0.990	1.000				
1970	0.912	0.966	0.992	1.000			
1980	0.846	0.917	0.959	0.983	1.000		
1990	0.734	0.826	0.888	0.934	0.981	1.000	
2000	0.653	0.753	0.825	0.881	0.950	0.991	1.000

CORRELATION ANALYSIS APPLIED TO 9 CANADIAN PROVINCES (EXTRACT)

	1940	1950	1960	1970	1980	1990	2000
1940	1.000						
1950	0.998	1.000					
1960	0.994	0.999	1.000				
1970	0.987	0.994	0.998	1.000			
1980	0.975	0.985	0.992	0.998	1.000		
1990	0.964	0.975	0.984	0.993	0.998	1.000	
2000	0.948	0.960	0.972	0.985	0.993	0.998	1.000

COMPARATIVE LAGS IN COEFFICIENTS OF DETERMINATION

LAG	N	AUSTRALIA	CANADA	U.S.
10	10	.998	.994	.981
20	9	.993	.982	.934
30	8	.988	.969	.863
40	7	.986	.956	.780
50	6	.984	.942	.676
60	5	.983	.928	.569
70	4	.976	.915	.472
80	3	.966	.896	.374
90	2	.950	.877	.278
100	1	.924	.839	.207



METHODS II: COEFFICIENTS OF LOCALIZATION

	SHARE AUTO EMPLOYM'T	SHARE OF ALL MAN'F'G	DIFFERENCE
REGION A	65%	25%	40
REGION B	25%	25%	0
REGION C	0%	25%	-25
REGION D	10%	25%	-15

APPLIED TO POPULATION CHANGE

	SHARE OF POP @ T1	SHARE OF POP @ T2	DIFF'CE
REGION A	65%	25%	40
REGION B	25%	25%	0
REGION C	0%	25%	-25
REGION D	10%	25%	-15

LOCALIZATION COEFFICIENTS: APPLIED TO 9 U.S. CENSUS DIVISIONS

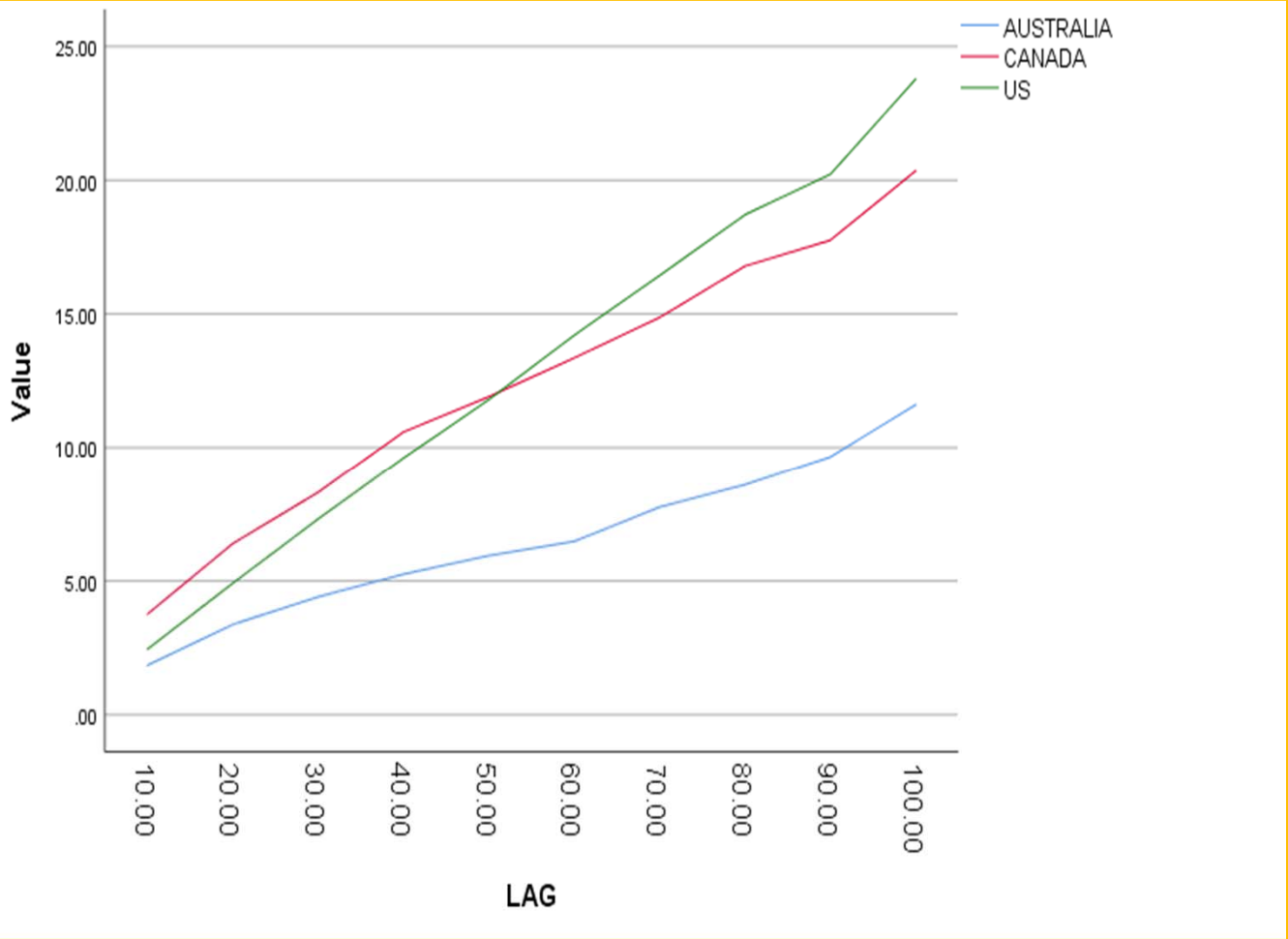
	1940	1950	1960	1970	1980	1990	2000
1940	***						
1950	3.04	***					
1960	5.77	2.09	***				
1970	8.03	4.99	2.35	***			
1980	11.53	8.72	6.23	4.09	***		
1990	15.15	12.35	9.86	7.52	3.63	***	
2000	17.70	14.89	12.41	10.06	6.18	2.55	***

LOCALIZATION COEFFICIENTS APPLIED TO 9 CANADIAN PROVINCES

	1940	1950	1960	1970	1980	1990	2000
1940	***						
1950	2.52	***					
1960	4.76	2.56	***				
1970	7.71	5.50	2.95	***			
1980	10.3	8.1	5.54	2.65	***		
1990	12.61	10.41	6.32	4.90	2.31	***	
2000	15.21	13.01	10.45	7.50	4.91	2.60	***

COMPARATIVE LAGS IN COEFFICIENTS OF LOCALIZATION

LAG	N	AUSTRALIA	CANADA	U.S.
10	10	1.85	3.76	2.45
20	9	3.37	6.39	4.91
30	8	4.40	8.31	7.31
40	7	5.25	10.59	9.61
50	6	5.94	11.91	11.80
60	5	6.47	13.36	14.21
70	4	7.75	14.87	16.44
80	3	8.59	16.79	18.71
90	2	9.65	17.76	20.22
100	1	11.61	20.35	23.78



UNEVEN URBANIZATIONS

TWENTY LARGEST CITIES: COEFFICIENTS OF LOCALIZATION, 2000-2014

COUNTRY	COEFFICIENT
GERMANY	2.165
ITALY	2.173
UK	2.202
US	4.728

FORTY LARGEST CITIES: COEFFICIENTS OF LOCALIZATION, 2000-2014

COUNTRY	COEFFICIENT
GERMANY	1.780
UK	2.020
ITALY	2.030
CANADA	2.748
AUSTRALIA	3.229
US	3.040

HOW TO EXPLAIN?

- THE LAND OF SHOCK CITIES
- SIZE MATTERS
- THE VIRTUES OF THE GROWTH COALITION

COMPARATIVE URBANIZATIONS

	MEAN POP'N 2000 TOP TEN	MEAN GROWTH RATE (2000-2014)
U.S.	2,063, 274	43.6%
CANADA	1,088,111	33.0%
FRANCE	519,388	19.6%
GERMANY	863,790	7.5%
UK	1.575,647	20.6%

US	LAS VEGAS; AUSTIN; CHARLOTTE; ORLANDO; HOUSTON; FORT WORTH; SAN ANTONIO; PHOENIX; DALLAS; TAMPA.
CANADA	CALGARY; RED DEER; FRASER VALLEY; EDMONTON; OKANOGAN; LETHBRIDGE; TORONTO; VANCOUVER; NAMAIMO; KITCHENER.
FRANCE	TOULOUSE; RENNES; PERPIGNAN; MONTPELLIER; ANNECY; NIMES; BORDEAUX; LA ROCHELLE; NANTES; ST. NAZAIRE.
GERMANY	MUNICH; MUNSTER; MAINZ; INGOLSTADT; REGENSBURG; FREIBURG; AUGSBURG; KÖLN; KARLSRUHE; DRESDEN.
UK	DERBY; CAMBRIDGE; MILTON KEYNES; PETERBOROUGH; BRADFORD; LONDON; LEICESTER; BRISTOL; MANCHESTER; EDINBURGH.

SOME HISTORIC DATA

	BASE YEAR	T1-T2	T2-T3	T3-T4	T4-T5
CHICAGO	1860 (112,872)	165%	68%	119%	54%
DALLAS	1920 (158,976)	70%	9%	47%	56%
DETROIT	1900 (285,704)	63%	113%	58%	4%
HOUSTON	1920 (138,276)	111%	32%	55%	57%
L.A.	1890 (50,395)	103%	212%	81%	115%
SAN JOSE	1950 (95,280)	114%	125%	37%	24%

SUMMARY STATS

- IN ONE THIRD OF ALL CASES:
 - DECADAL GROWTH GREATER THAN 100%

- IN TWO-THIRDS OF ALL CASES:
 - DECADAL GROWTH GREATER THAN 50%

SIZE MATTERS

- THE EXCEPTIONAL SIZE OF THE DOMESTIC MARKET AND OF CAPITAL MARKETS (THINK FELDSTEIN-HOROIKA EFFECT)
- LEAPFROGGING (THINK STORPER AND WALKER)

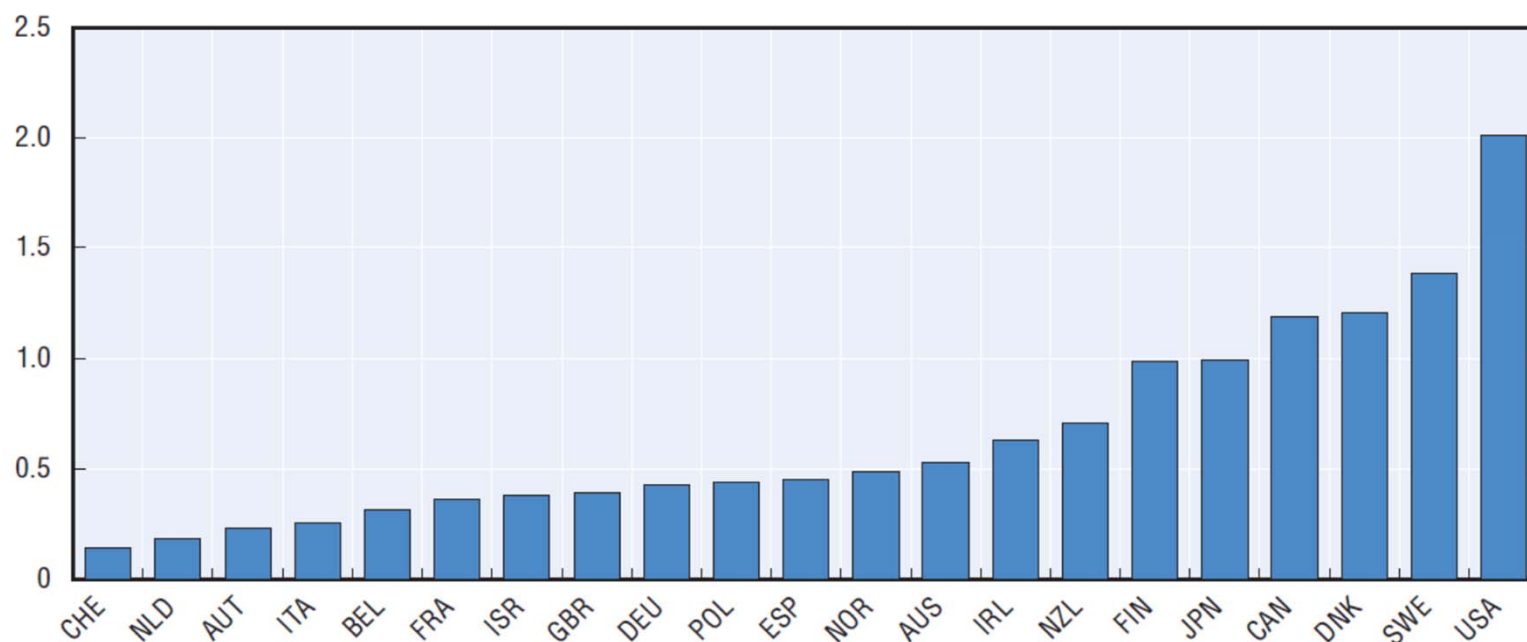
THE LAND OF THE GROWTH COALITION

- RESPONSIVENESS TO HOUSING MARKET PRESSURES
- HOW STATE STRUCTURE ENABLES

PRICE ELASTICITY OF SUPPLY FOR HOUSING, 1980-2014

Figure 4.1. **Variations in responsiveness of new housing supply to prices, selected OECD countries**

Estimates of the long-run price-elasticity of new housing supply¹



SUMMING UP

- THE EXTRAORDINARY DYNAMISM OF THE U.S. SPACE ECONOMY
- SUGGESTED EXPLANATIONS
 - SIZE MATTERS
 - THE RESPONSIVENESS OF LOCAL DEVELOPMENT INDUSTRIES