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Conference Paper

Concentrated growth and spatial disparities in Korea

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ERSA 55th Congress

Concentrated Growth and Spatial Disparities in Korea

Aug. 26, 2015.

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Dong-Ho Shin (Hannam University, Korea)

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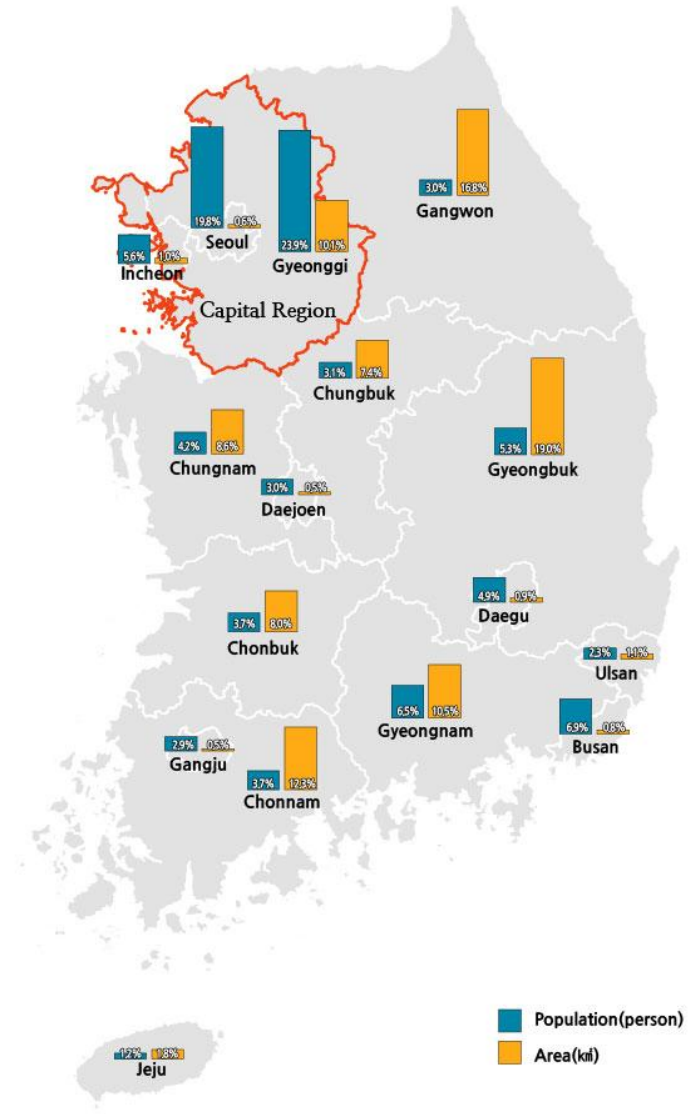
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1. Introduction

- The Geography
- The Capital Region and the Rest
- Nine Provinces and 6 Metro. Cities



2. Korean Regional Policies and Disparity Debates

1) Modernization and Industrialization in Korea

- 1960s-1980s: Rapid growth
- 1990s: Growth and adjustment
- 2000s and present: Stagnant

2) The Ideology of the Central Governments

- 1960s-1980s: Rapid growth and balance
- 1990s: Slow growth and adjustment
- 2000s and present: Stagnant

3) The Leader each Government

- Park in the 1960s and in the 1970s: Rapid growth
- Two Kim's in the 1990s: Adjustment
- Ro in the period between 2003-2007: Strong focus on Balance
- Lee and the present Park since then: Growth

3. The Research Outline

1) Analytical Tools

$$\text{Concentration of the Capital Region}_i = \frac{Seoul_i + INcheon_i + Gyeonggi_i}{\sum \text{The Total of Korea}_i} * 100$$

$$\text{Spatial Disparities}(CV) = \frac{\sigma}{\bar{X}}$$

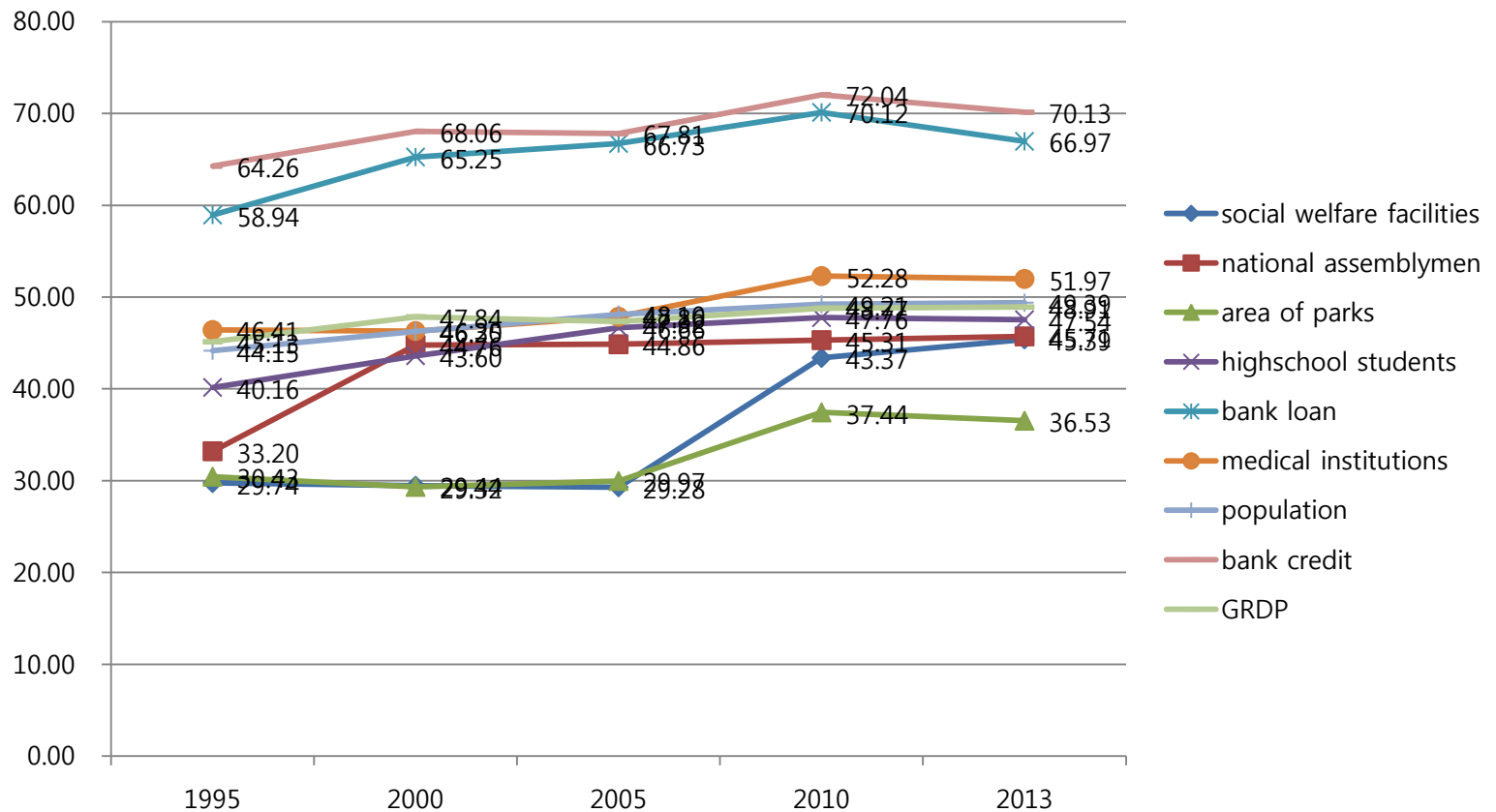
2) Variables and Period

-16 variables (1995-2013): population, GRDP, labor cost, firms in the service sector, manufacturing firms, bank credit, bank loan, parks, water supply, social welfare facilities, medical institutions, university student, high school students, local tax, public institutions, national assemblymen

4. The Results

Concentration in the Capital Region (%)

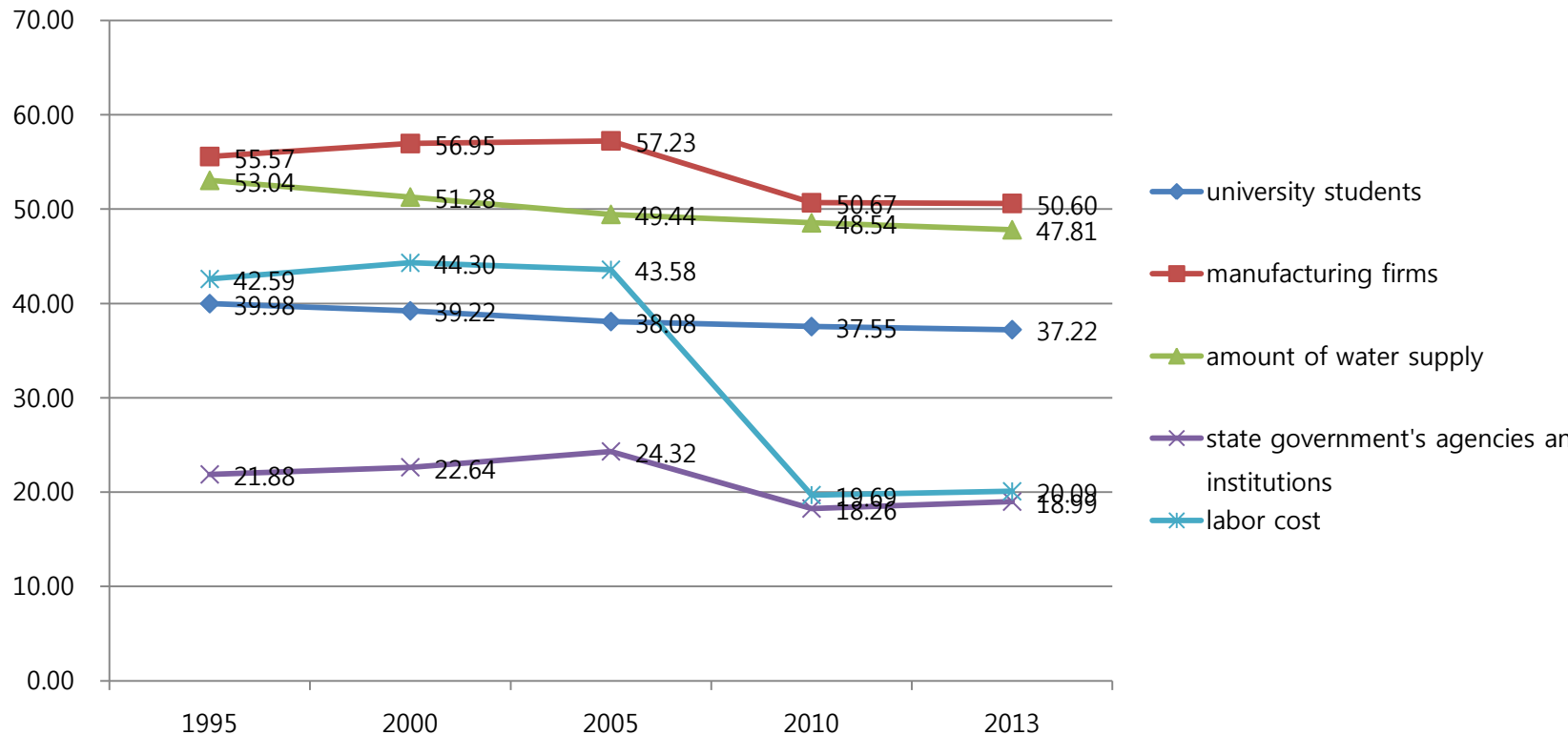
- 9 Increased



4. The Results

Concentration in the Capital Region(%)

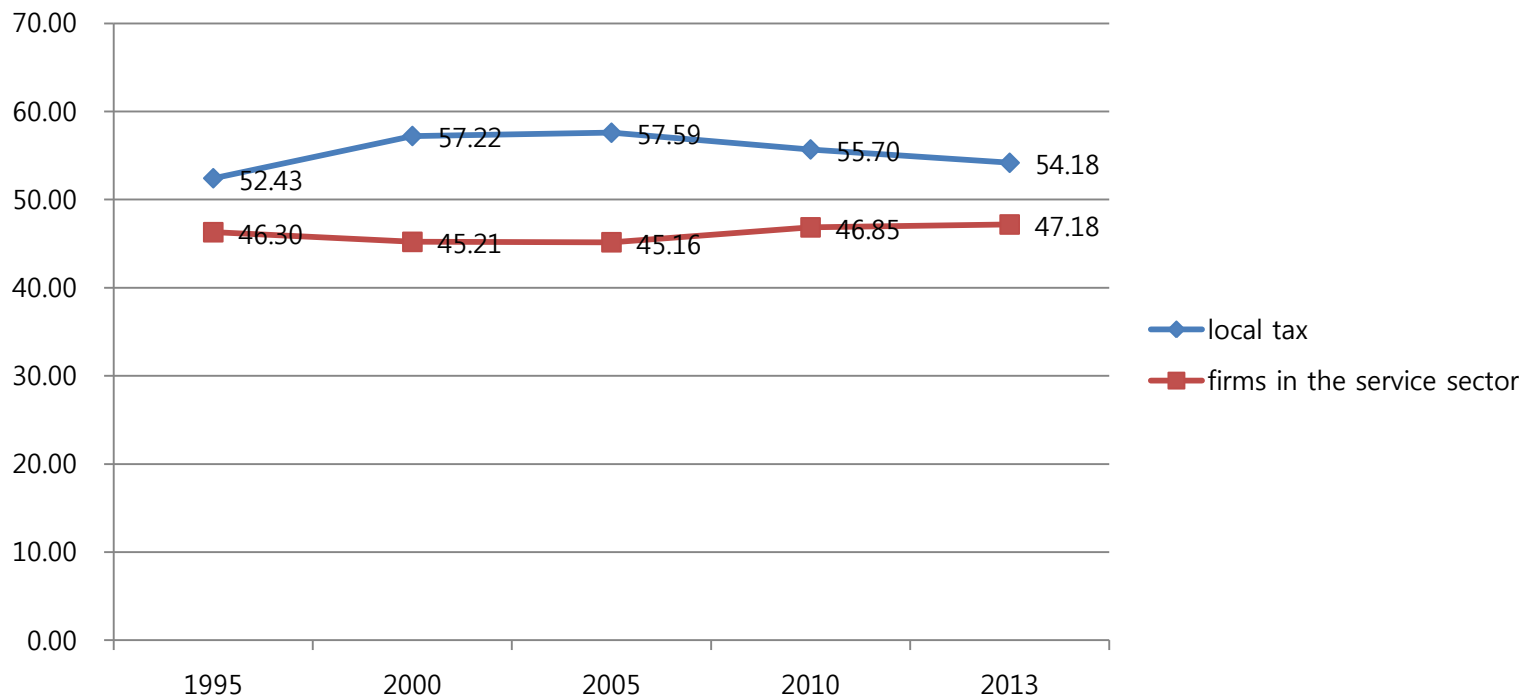
- 5 decreased



4. The Results

Concentration in the Capital Region (%)

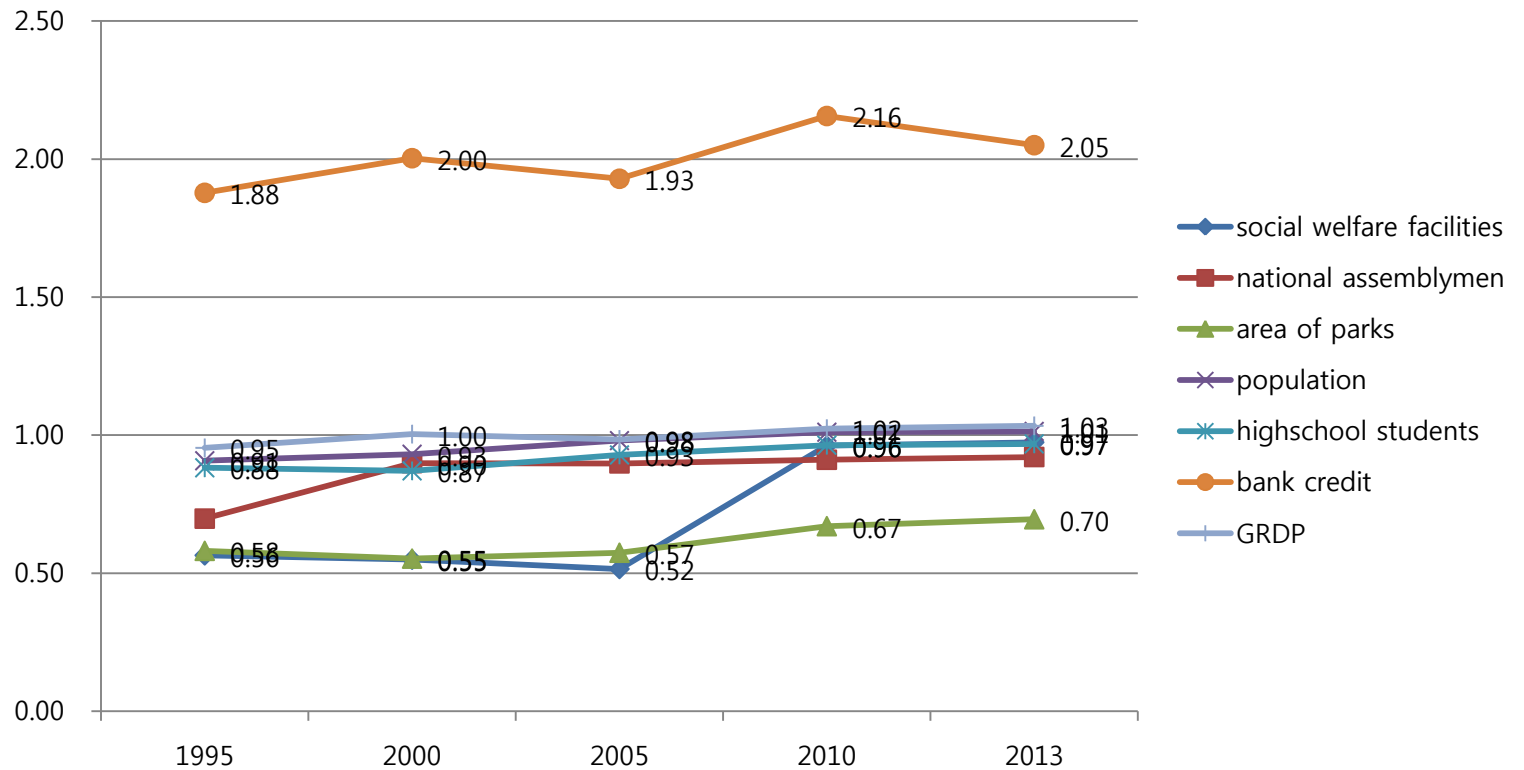
- 2 unchanged



4. The Results

Spatial Disparity (CV)

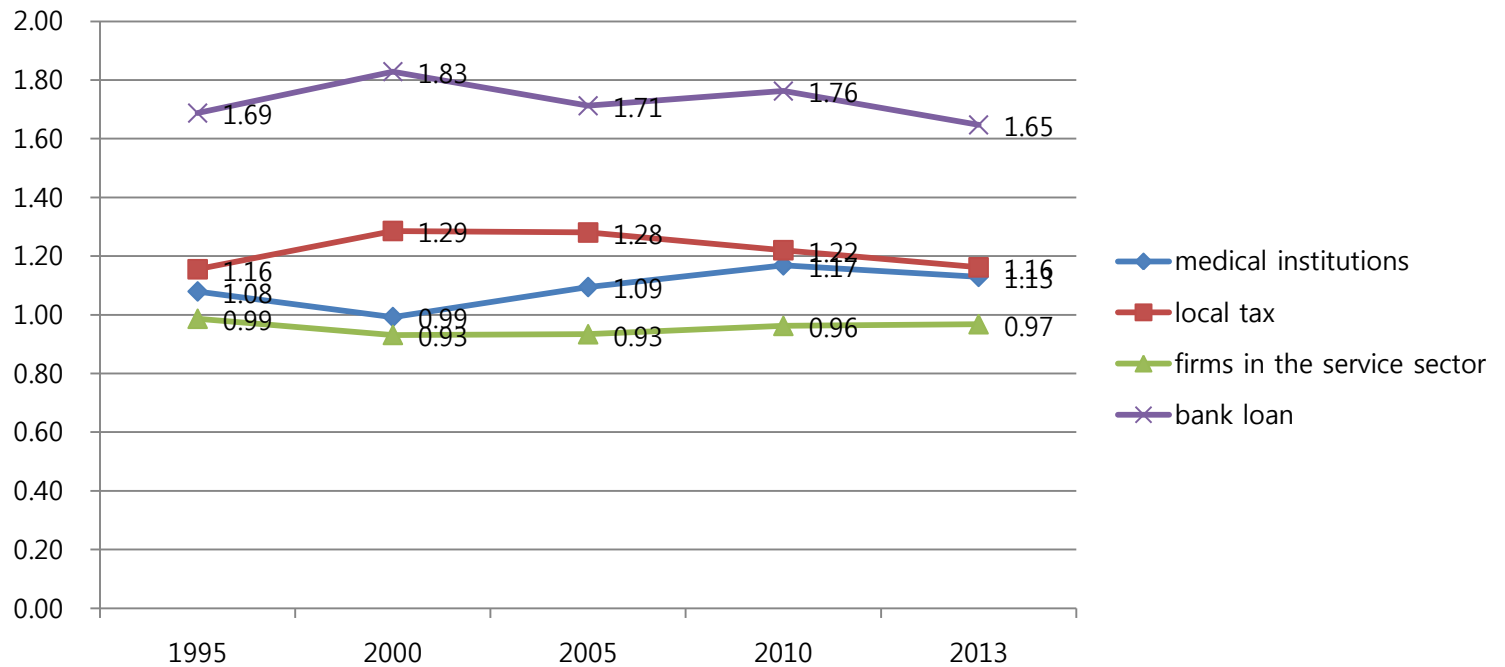
- 7 Increased



4. The Results

Spatial Disparity(CV)

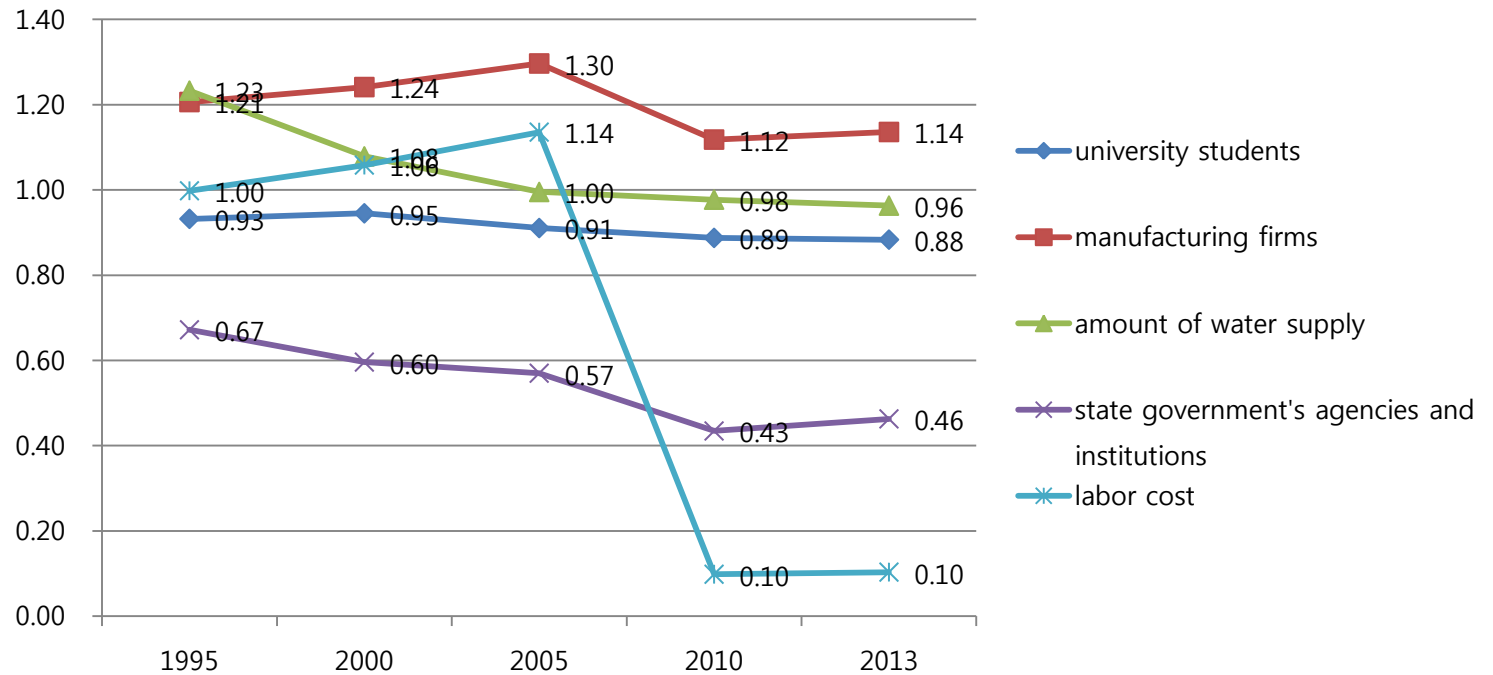
- 4 decreased



4. The Results

Spatial Disparity (CV)

- 5 unchanged



4. The Results

The Changes in the Concentration in the Capital Region

- Paired T-test

	Mean	SD	t-value	prob
1995-2013	-2.15	2.21	-0.97	0.3454
1995-2000	-2.09	0.86	-2.44	0.0277
1995-2005	-2.49	0.98	-2.54	0.0226
1995-2010	-2.46	2.24	-1.10	0.2887
1995-2013	-2.15	2.21	-0.97	0.3454
2000-2005	-0.40	0.32	-1.26	0.2280
2000-2010	-0.37	2.08	-0.18	0.8613
2000-2013	-0.06	2.08	-0.03	0.9772
2005-2010	0.03	2.01	0.01	0.9895
2005-2013	0.34	2.01	0.17	0.8695
2010-2013	0.31	0.30	1.04	0.3129

4. The Results

The Changes in Spatial Disparity

- Paired T-test

	Mean	SD	t-value	prob
1995-2013	0.02	0.07	0.28	0.7826
1995-2000	-0.02	0.02	-0.94	0.3644
1995-2005	-0.02	0.03	-0.79	0.4444
1995-2010	0.01	0.07	0.09	0.9326
1995-2013	0.02	0.07	0.28	0.7826
2000-2005	0.00	0.02	0.12	0.9040
2000-2010	0.03	0.07	0.39	0.7002
2000-2013	0.04	0.07	0.58	0.5676
2005-2010	0.03	0.08	0.34	0.7356
2005-2013	0.04	0.08	0.53	0.6025
2010-2013	0.01	0.01	1.24	0.2345

4. The Results

Multivariate Statics of Canonical Correlation Analysis

Classification	Value	F-Value	df	Prob
Wilks' Lambda	0.000	8.15	25	0.0001
Pillai's Trace	3.277	3.80	25	0.0001
Hotelling-Lawley Trace	49.585	10.67	25	0.0001
Roy's Greatest Root	33.565	67.13	5	0.0001

Fits of Models

Canonical Correlation	Squared Cano. Correlation	Eigenvalue	F Value	DF	prob
0.985	0.971	33.565	8.15	25	0.0001
0.958	0.918	11.187	5.34	16	0.0002
0.889	0.790	3.768	3.53	9	0.0093
0.695	0.483	0.936	2.15	4	0.1160
0.338	0.114	0.129	1.29	1	0.2826

4. The Results

The Changes in the Concentration and Spatial Disparity

- Canonical Correlation

Classification		Canonical Function(1)			Canonical Function(2)		
		L	%	C-L	L	%	C-L
Concentration in the Capital Region							
	1995	-0.3072	0.2035	1.0000	0.9263	0.1955	0.9129
	2000	-0.2870	0.1776	-0.3021	0.9349	0.1991	0.9074
	2005	-0.2661	0.1527	-0.3571	0.9481	0.2048	0.9124
	2010	0.3127	0.2108	0.3243	0.9439	0.2030	0.9323
	2013	0.3442	0.2554	0.3562	0.9317	0.1977	0.9224
Spatial Disparity							
	1995	-0.3027	0.2034	-0.3057	0.8875	0.1954	0.0382
	2000	-0.2828	0.1776	-0.2977	0.8957	0.1991	0.8693
	2005	-0.2622	0.1526	-0.3519	0.9084	0.2048	0.8742
	2010	0.3082	0.2109	0.3195	0.9044	0.2030	0.8932
	2013	0.3392	0.2555	0.3510	0.8927	0.1977	0.8837

5. Conclusion

1) Findings on Gaps and Disparities

- High concentration on the capital region
- Rather increasing gaps between the capital region and the rest with sectorial difference among variables
- Decreasing spatial disparities up to 2010; but increasing since then
- Positive relationships between the gaps and disparities

2) Research Questions

- The nature of increasing and decreasing gaps and disparities:
Sectorial difference
- Questionable regional and provincial gaps since 2010
- The statistical tools: any alternatives?