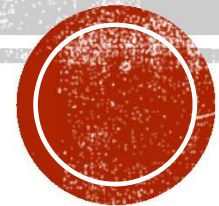


TOPICS IN REAL ESTATE RESEARCH, 1973-2010: A LATENT SEMANTIC ANALYSIS

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架構

▪ **ABSTRACT**

- BRIEF HISTORY OF REAL ESTATE ACADEMIC ORGANIZATIONS AND JOURNALS

▪ **BACKGROUND**

- TOPICS IN THE REAL ESTATE DISCIPLINE

▪ **METHOD**

- DATA COLLECTION
- LATENT SEMANTIC ANALYSIS

▪ **RESULTS**

- SEMANTIC DISAGGREGATION OF RESEARCH IN REAL ESTATE: A HIGH-LEVEL VIEW
- RESEARCH TOPICS IN REAL ESTATE: A MORE DETAILED VIEW

▪ **CONCLUSION**

- SEMANTIC DISAGGREGATION OF RESEARCH IN REAL ESTATE: A HIGH-LEVEL VIEW

▪ **APPENDIX**

- RESEARCH TOPICS IN REAL ESTATE: A MORE DETAILED VIEW



摘要

- **Latent Semantic Analysis**

- 三大核心期刊

1. Real Estate Economics
2. Journal of Real Estate Finance and Economics
3. Journal of Real Estate Research

- **1973-2010**

- 兩大領域

1. Real property markets 53%
2. Real estate portfolios 47%

- **25種主題**



BACKGROUND

- **BRIEF HISTORY OF REAL ESTATE ACADEMIC ORGANIZATIONS AND JOURNALS**
- 1964/12/29 American Real Estate and Urban Economics Association (AREUEA)
- 1973 AREUEA journal published
- 1989 AREUEA journal → Real Estate Economics
- 1985 American Real Estate Society (ARES)
→ 1986 Journal of Real Estate Research founded
- 1988 Journal of Real Estate Finance and Economics (JREFE) printed



BACKGROUND

TOPICS IN THE REAL ESTATE D

**Exhibit 1
Article Data (1973–2010)**

Journal	Number of Articles				Total
	1973–1980	1981–1990	1991–2000	2001–2010	
<i>Journal of Real Estate Finance & Economics</i>		68	324	413	805
<i>Journal of Real Estate Research</i>		117	404	227	748
<i>Real Estate Economics</i>	166	284	269	254	973
Total	166	469	997	894	2,526

Notes: The article counts for *Real Estate Economics* include counts for its predecessors, *AREUEA Journal* in the period 1973–1976, and *Journal of the American Real Estate and Urban Economics Association* in the period 1977–1994. Our analysis excluded editorials and book reviews.

ARES annual meetings titles 1985-1994 998 paper	
Urban economics/development	18.54%
Valuation	14.63%
Mortgage applications	9.02%
International	6.71%
Corporate real estate/asset management	6.61%
Brokerage	6.41%
investments	6.01%
Taxes	5.31%
Securitization	4.71%
Body of knowledge	3.31%
Cases	3.21%
Legal issues	3.11%
Computer applications	3.11%
Markets and institutions	2%
Government programs	1.7%

JRER 1986-1994	
Investment	
Appraisal	
Corporate real estate	12.7%
Housing values	12.17%
Brokerage	11.11%
REITs	7.94%
Housing markets	6.35%
Regional	6.35%
Environment	5.82%
Mortgages	5.82%

Appraisal
brokerage
housing
institutions
investments
mortgages
nonresidential
public policy
Other(research technique: empirical, method, literature review, simulation, theory

70% of 119 academic journal based on JREL classification
real estate business/industry
type of decision
government policy/planning
type of real estate



METHOD

▪ DATA COLLECTION

- 1973-2010 in JREFE(1988-),JRER(1986-),REE
- AREUEA journal 1973-1976
- Journal of the America Real Estate and Urban Economics Association 1977-1988

→total 2,526



METHOD

- **Latent Semantic Analysis**
- Singular Value Decomposition(SVD)

$$\mathbf{A} = \mathbf{U}\mathbf{\Sigma}\mathbf{V}^T, \quad \text{求U}$$



RESULTS

SEMANTIC DISAGGREGATION A HIGH-LEVEL VIEW

Exhibit 3
Semantic Disaggregation Diagram

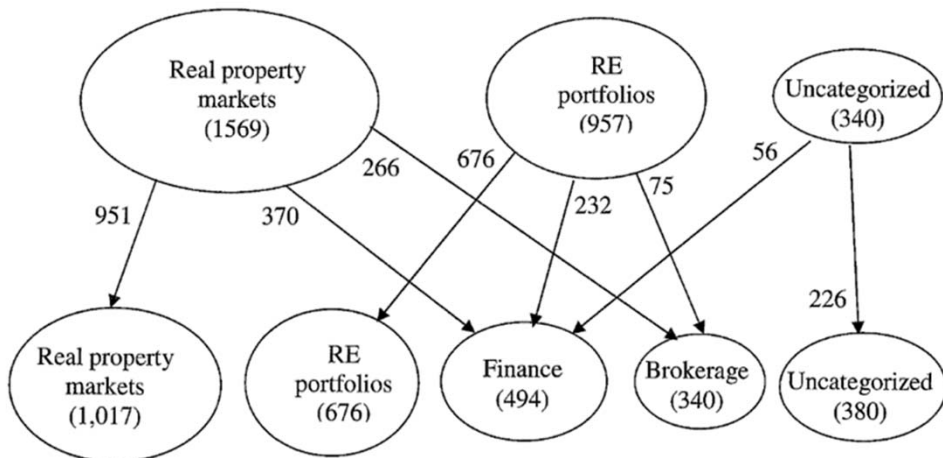


Exhibit 2
High-level Semantic Factors in Real Estate Research

Factor	Label	% Var. Expl.	High-loading Article Count			
			3 Journals	JREFE	JRER	REE
F2.1	Real property markets	52.98	1,569	476	444	649
F2.2	RE portfolios	47.02	957	320	274	363
	Total	100.00	2,526	796	718	1,012
F3.1	Real property markets	36.67	1,198	340	376	482
F3.2	RE portfolios	33.60	758	251	245	262
F3.3	Finance	29.74	572	211	97	264
	Total	100.00	2,528	802	718	1,008
F4.1	Real property markets	30.12	1,017	296	302	419
F4.2	RE portfolios	27.01	676	224	226	226
F4.3	Finance	24.00	494	187	79	228
F4.4	Brokerage	18.87	340	96	136	108
	Total	100.00	2,527	803	743	981
F5.1	RE portfolios	21.88	574	190	198	186
F5.2	Real property markets	21.86	680	174	187	319
F5.3	Research, pricing & valuation methods	21.68	611	200	192	219
F5.4	Finance	19.90	428	160	67	201
F5.5	Brokerage	14.69	234	68	94	172
	Total	100.00	2,527	792	738	997
F6.1	RE portfolios	19.78	537	182	183	172
F6.2	Research, pricing & valuation methods	18.66	515	167	167	181
F6.3	Finance	17.37	394	152	60	182
F6.4	Land use, policies and regulations	17.16	564	150	155	259
F6.5	Real property markets	14.10	312	82	115	115
F6.6	Brokerage	12.92	208	60	84	64
	Total	100.00	2,530	793	764	973



RESULTS

RESEARCH TOPICS

Exhibit 4
Research Topics in Real Estate: 25-Factor Solution

Factor	Label	% Var. Expl.	High-loading Article Count			
			3 Journals	JREFE	JRER	REE
F25.1	Research Methods	6.80	195	71	60	64
F25.2	REITs	5.63	193	71	60	62
F25.3	Brokerage and agency	5.23	119	33	45	41
F25.4	Portfolios, risk & asset diversification	4.97	138	36	59	43
F25.5	Mortgage termination options	4.70	131	58	16	57
F25.6	Urban land	4.58	134	45	42	47
F25.7	Default and foreclosure	4.56	124	45	19	60
F25.8	Homeownership	4.54	137	43	16	78
F25.9	Market integration/cointegration	4.49	117	60	27	30
F25.10	Office property	4.36	122	25	52	45
F25.11	Lending	4.09	125	50	26	49
F25.12	Policies and regulation	3.75	109	52	18	39
F25.13	Rent	3.73	114	33	40	41
F25.14	Corporate real estate	3.66	90	15	57	18
F25.15	Appraisal	3.47	76	19	24	33
F25.16	Tax	3.35	81	19	23	39
F25.17	Indices	3.35	70	31	13	26
F25.18	Capital and leverage	3.28	95	24	25	46
F25.19	Adjustable-rate mortgages	3.26	48	19	7	22
F25.20	Inflation	3.24	63	15	15	33
F25.21	Brokerage industry	3.22	69	15	39	15
F25.22	Journals, publications and authors	3.21	40	12	17	11
F25.23	Retail	2.98	45	10	30	5
F25.24	Auctions	2.84	46	13	16	17
F25.25	Leases	2.71	45	12	18	15
	Total	100.00	2,526	826	764	936

LED VIEW



CONCLUSION

Exhibit 5 (continued)
Trends in Real Estate Topics: 25-Factor Solution

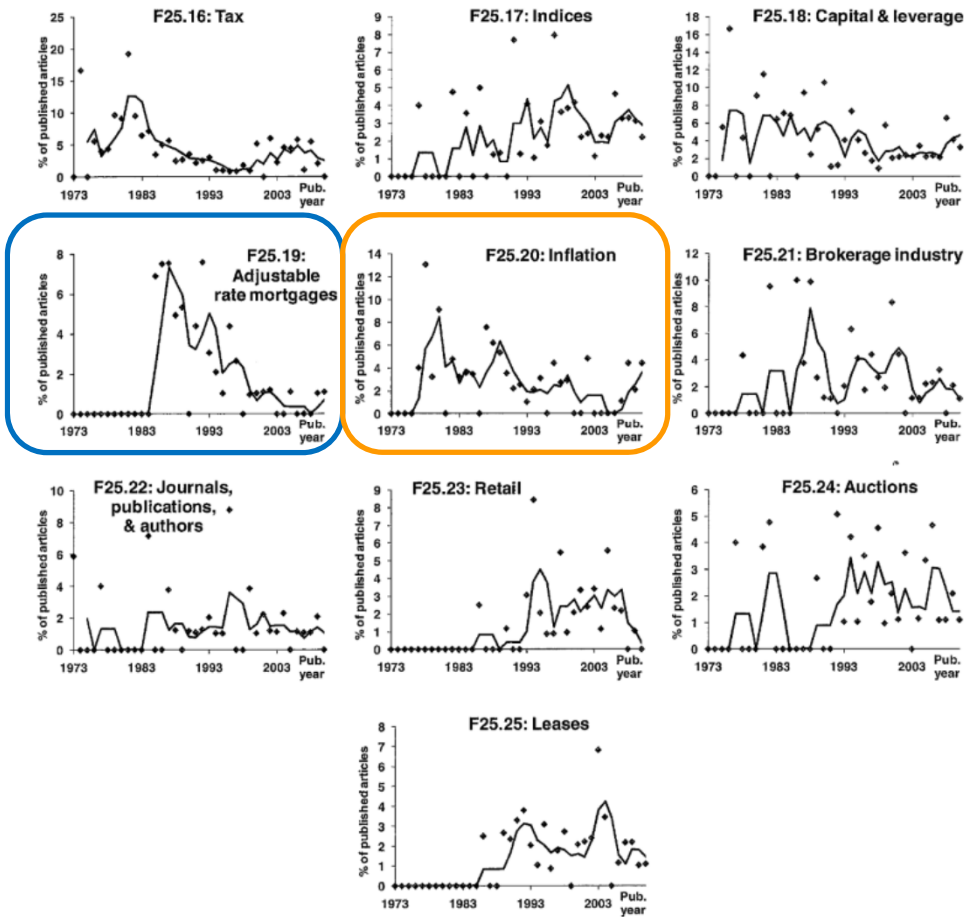
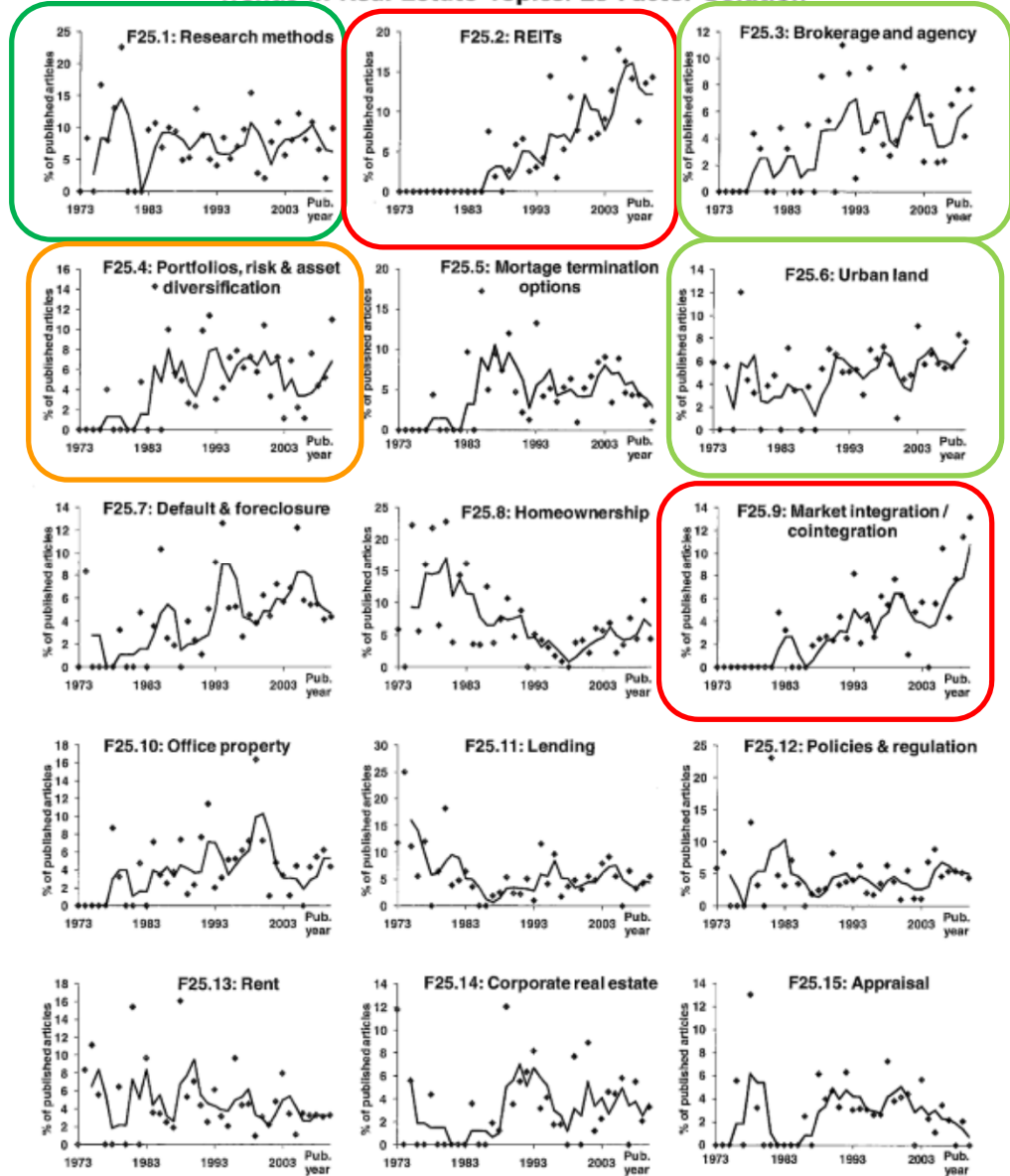


Exhibit 5
Trends in Real Estate Topics: 25-Factor Solution



APPENDIX

Exhibit A1
High-loading Terms for the First Two Factors in the 25-Factor Solution

Term	Factor Loading	
	F25.1	F25.2
<i>method</i>	1.090	
<i>estim</i>	0.997	
<i>regres</i>	0.952	
<i>techniqu</i>	0.874	
<i>hedon</i>	0.822	
<i>spatial</i>	0.755	
<i>approach</i>	0.691	
<i>reit</i>		2.073
<i>trust</i>		1.134
<i>stock</i>		1.050
<i>invest</i>		0.868
<i>equiti</i>		0.793
<i>perform</i>		0.745
<i>institi</i>		0.684
<i>liquid</i>		0.659

Exhibit A2
High-loading Articles for the First Two Factors in the 25-Factor Solution

Author(s)	Title	Journal	Factor Loading	
			F25.1	F25.2
Panel A: First Factor				
Kang & Reichert	An Empirical Analysis of Hedonic Regression...	<i>REE</i>	0.431	
Dubin	Predicting House Prices Using...	<i>JREFE</i>	0.418	
Richardson & Thalheimer	Alternative Methods of Variable Selection...	<i>REE</i>	0.417	
Han & Reichert	An Evaluation of Alternative Estimation Techniques...	<i>JRER</i>	0.403	
Bourassa et al.	Predicting House Prices with Spatial Dependence...	<i>JRER</i>	0.401	
Isakson	The Nearest Neighbors Appraisal Technique...	<i>REE</i>	0.397	
Panel B: Second Factor				
Below et al.	An Examination [...] of Real Estate Investment Trusts	<i>JRER</i>		0.5307
Chan et al.	Institutional Investment in REITs...	<i>JRER</i>		0.4978
Ciochetti et al.	Institutional Investors' Preferences for REIT Stocks	<i>REE</i>		0.4734
Chan et al.	Changes in REIT Structure and Stock Performance...	<i>REE</i>		0.4539
Glascocock et al.	Analysis of REIT IPOs Using...	<i>JREFE</i>		0.4455



心得

- 主要研究方向/主題:多參考文獻和完整理論架構
→ 突破困難 → 創新領域
- 研究趨勢:大眾注重的議題

