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The stalemate of cable digital switchover

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Cable digitization

Country	Penetration rate of pay-TV service* (%)	Penetration rate of digital pay-TV service (%)	Penetration rate of cable service (%)	Penetration rate of digital cable service (%)
South Korea	100	43	80	23
Taiwan	90	14	81	6
Hong Kong	83	83	42	42
India	79	19	63	3
Singapore	66	66	48	48
New Zealand	53	53	2	2
Malaysia	51	51	0	0
Pakistan	47	5	47	5
China	46	26	46	26
Australia	32	32	9	9
Japan	28	25	15	12
Vietnam	17	5	13	1
Thailand	13	7	7	2
Philippines	10	5	8	3
Sri Lanka	9	7	3	0.4
Indonesia	5	5	1	0.5

Cable digitization

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Analog cable	4,463	4,566	4,690	4,752	4,629	4,767	4,724	4,703	4,491	3,940
Digital cable	28	43	52	55	57	118	256	381	571	1,049
Cable total	4,491	4,609	4,742	4,807	4,686	4,885	4,980	5,084	5,062	4,989
DSB	12	13	15	17	18	20	22	25	31	33
IPTV	0	28	100	249	401	676	698	815	1,064	1,205
Total	4,503	4,650	4,857	5,073	5,105	5,581	5,700	5,924	6,157	6,227

criteria	attributes	Weight across criteria	ranking
Lifting vertical and horizontal integration restriction (Static efficiency)	One-third cap on vertical integration lifted	0.163	1
	Vertical integration restricted lifted	0.075	7
	Equal access to programming	0.083	5
Providing economic incentive (dynamic efficiency – investment)	Tax reduction	0.058	9
	Low-interest loan	0.023	13
	Party-government clause repealed	0.039	11
	Foreign investment cap lifted	0.018	14
	Set-up-box subsidies	0.113	3
	Switchover introduction	0.080	6
	Digital content subsidies	0.060	8
Promulgating positive regulation (dynamic efficiency – reform)	Service zones lifted with the over-built requirement	0.032	12
	Standards of digital set-up-boxes mandated	0.044	10
	Analog tariff deregulated	0.122	2
	Digital tariff deregulated	0.091	4

The underpinnings

- *1. cable rate*
- *2. firm size* (scale economies or network effects)
- *3. characteristics of firm (MSO or ISO)*
- *4. intra-platform competition:*
  - *a. “big-big” firm competition (MSO vs. MSO)*
  - *b. “big-small” firm competition (MSO vs. ISO)*
  - *c. “small-small” firm competition (ISO vs. ISO)*
- *5. inter-platform competition:* with IPTV

Cable digitization

	2006	2007	2008	2009	2010	2011	2012
Total SOs	67	66	66	64	63	63	63
MSO	35	35	35	35	35	35	35
average size (unit: 1000)	94.53	97.30	102.42	104.54	106.74	105.87	103.86
ISO	32	31	31	29	28	28	28
average size (unit: 1000)	39.05	41.30	42.05	45.56	48.16	48.44	48.36
Total FAs	51	51	51	51	51	51	51
Monopoly FAs	35	36	36	38	39	39	39
Duopoly FAs	16	15	15	13	12	12	12
Type 1: MSO-MSO	4	4	4	4	4	4	4
Type 2: MSO-ISO	9	8	8	7	6	6	6
Type 3: ISO-ISO	3	3	3	2	2	2	2

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Cable digitization

	(A)	(B)	(C)	(D)
Dependant variables	Offer	Offer	Ratio_o	Ratio_o
Subscribers	0.033*	0.031*	0.020**	0.018**
	[0.014]	[0.014]	[0.002]	[0.001]
Cable rate	0.003	0.002	0.000	-0.000*
	[0.002]	[0.002]	[0.000]	[0.000]
Independent	-0.206	-0.239	0.039**	-0.022**
	[0.107]	[0.132]	[0.010]	[0.007]
Dummy for duopoly	0.162*		0.114**	
	[0.058]		[0.012]	
Type 1: MSO-MSO		0.268**		0.193**
		[0.088]		[0.015]
Type 2: MSO-ISO		0.075		0.017
		[0.064]		[0.009]
Type 3: ISO-ISO		0.324**		0.312**
		[0.109]		[0.018]
Observations	1,620	1,620	1,620	1,620
Year dummy	v	v	v	v
Quarter dummy	v	v	v	v
county dummy	v	v	v	v

Note: *: at the 5% significance level; **: at the 1% significance level

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Cable digitization

	(E)	(F)	(G)	(H)
Dependant variables	Ratio_f	Ratio_f	Ratio_f (year<=2008)	Ratio_f (year>=2009)
Subscribers	0.016**	0.016**	0.023**	0.007**
	[0.002]	[0.001]	[0.002]	[0.002]
Cable rate	-0.000*	-0.000**	0.000	-0.001**
	[0.000]	[0.000]	[0.000]	[0.000]
IPTV	-0.008*	-0.006*	-0.008	0.028**
	[0.003]	[0.003]	[0.009]	[0.007]
Dummy for duopoly	0.006			
	[0.006]			
Type1: MSO-MSO		0.012	-0.012	0.031*
		[0.010]	[0.009]	[0.015]
Type2: MSO-ISO		-0.054**	-0.078**	-0.050**
		[0.008]	[0.015]	[0.010]
Type3: ISO-ISO		0.182**	0.127**	0.241**
		[0.016]	[0.018]	[0.025]
Observations	1,200	1,200	528	672
Year dummy	v	v	v	v
Quarter dummy	v	v	v	v
county dummy	v	v	v	v

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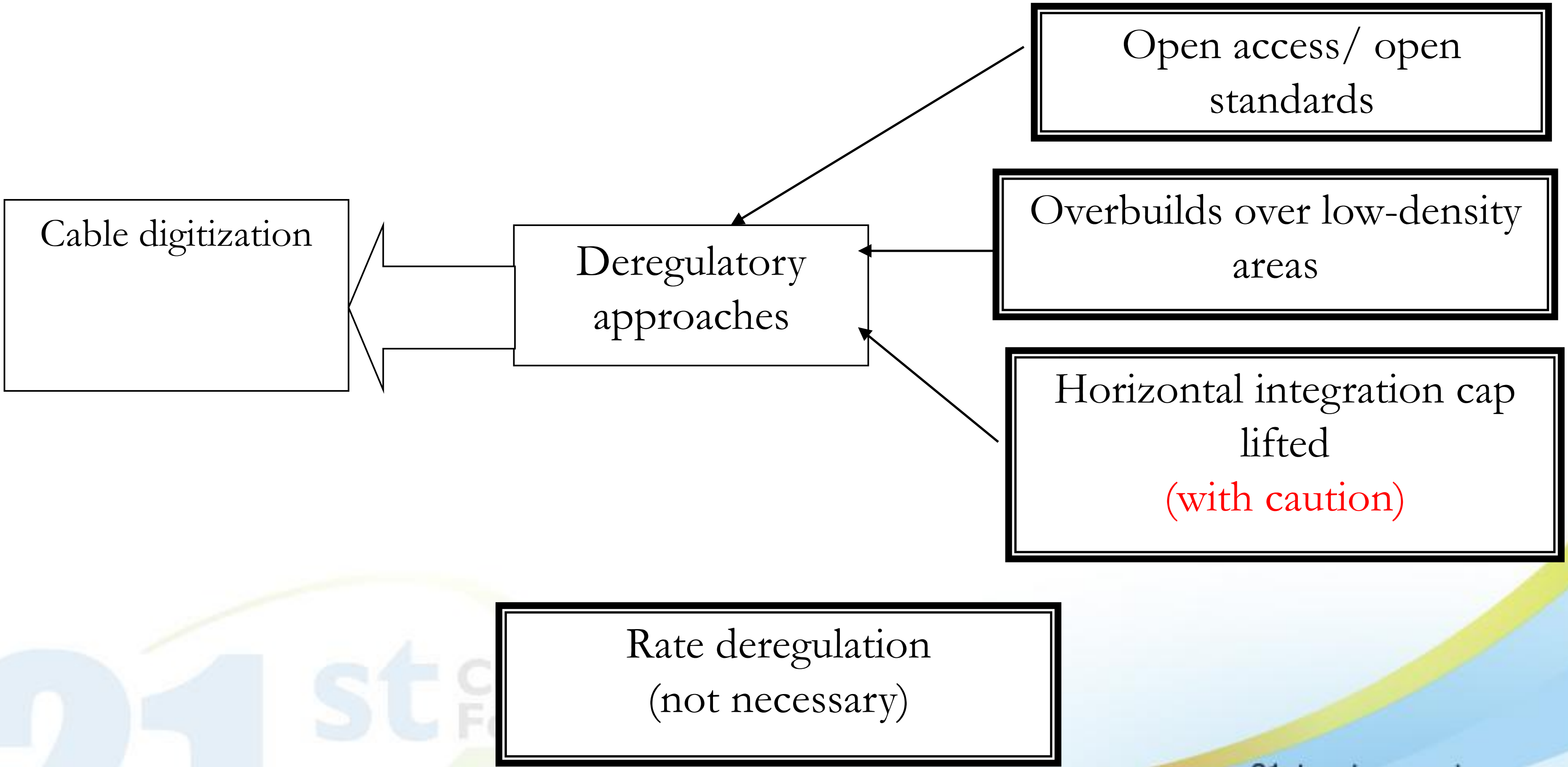
Econometric Results

1. IPTV generates the strong and positive impact on the digitization of cable service after it acquires sizeable customers (since 2009);
2. **the cable installed base** induces economies of scale that increase its digital penetration;
3. **the overbuild of the equivalent-size** rivalry can increase digital adoption while the unequal-sized competition might reversely decrease it; and
4. the monthly flat fee charged to customers does not influence the digital adoption.

Policy path of cable digitization



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THE END

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