
Competitive dynamics in the Korean video platform market: Traditional pay TV platforms vs. OTT platforms

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Introduction

- **Background**

- Consumers can use the technologies to enjoy unlimited content anywhere and at anytime
- Over-the-top(OTT) media take a role of a video platform changing the market.
- The number of OTT subscribers In the U.S is expected to surpass 81.2 million by 2017.

- **Research Question**

- Q1: what is the extent of the niche overlap between the OTT platforms and traditional pay TV platforms?
- Q2: Which patterns of competitive superiority are presented between the OTT platforms and traditional pay TV platforms?
- Q3: How do the niche values (niche breadth and niche overlap) of "time spent using media" resources differ from those of gratification resources?

Theoretical Background

- **Media competition: displacement effect**
 - New media can succeed only by diverting resources from the older media (Dimmick, 1997)
 - Displacement occurs when the emergence of new media reduces a consumer's time allocation toward existing, older media (Bergman, 2004; Kim et al., 2013)
- **The concept of niche theory**
 - To understand how populations adapt to environments with limited resources.
 - Niche theory has been adapted to explore the competition between new and older media for limited resources such as consumer satisfaction (Dimmick, 2003)

Research Method

- **Data collection**

- Method : Survey (data : May 9 to May 14,2014)
- Usage scale : 7-point scale ranging
- Used Resources : gratification, time spent
- Media type : Cable TV, IPTV, satellite TV(sTV), NaverTV(NTV), poog, tving
- Motivation : passing time(PT), entertainment(ET), information(IF), social interaction(SI)
Financial benefit (FB), convenience (CV), and ease of use (EU)

- **Used Measures**

- **Niche breadth (for gratification)** : the range of consumers' gratification ($0 \leq B \leq 1$)

$$B = \frac{\sum_{n=1}^N \frac{[\sum_{k=1}^K GO_n] - Kl}{K(u-1)}}{N}$$

u, l = the upper and lower bounds of a scale

GO = a gratification obtained rating on a scale

N = the number of respondents using a medium

n = the first respondent

K = the number of scales on a dimension

k = the first gratification scale

Research Method

- **Niche Overlap (for gratification)** extent of the similarity between two media
(0=Max , 6=Min)

$$O_{i,j} = \frac{\sum_{n=1}^N \sqrt{\sum_{k=1}^K \frac{(GO_i - GO_j)^2}{K}}}{N}$$

i, j = medium i and medium j

GO = a gratification obtained rating on a scale for i and j

N = the number of respondents who use both i and j

- **Competitive superiority** : superiority between two media

$$\text{Superiority } S_{i>j} = \frac{\sum_{n=1}^N \sum_{k=1}^K (m_{i>j})}{N}$$

$$\text{Superiority } S_{j>i} = \frac{\sum_{n=1}^N \sum_{k=1}^K (m_{j>i})}{N}$$

$m_{i>j}$ = the value of a respondent's rating for those scale items on which i is rated greater than j (the sum of the actual values)

$m_{j>i}$ = the value of a respondent's rating for those scale items on which j is rated greater than i (the sum of the actual values)

Research Method

- **Niche breadth (for time spent with media)** : the range of the time durations of consumers' media usage.

$$B = \frac{1}{c \sum_{i=1}^c p_i^2}$$

$k =$ media type category

$c =$ number of media type categories

$p_i =$ the proportion of a given media type

- **Niche Overlap (for time spent with media)** : Niche overlap measures the extent of the similarity between two media in terms of resource consumption.

$$D_{ij} = \sum (p_i k - p_j k)^2$$

Research Results

- Niche breath (for gratification)

Niche breadth for each video platform.

	IF	PT	ET	SI	FB	EU	CV
Cable	0.608	0.667	0.631	0.445	0.570	0.604	0.544
IPTV	0.616	0.681	0.654	0.461	0.608	0.594	0.610
sTV	0.602	0.650	0.621	0.437	0.533	0.559	0.551
pooq	0.572	0.654	0.623	0.454	0.494	0.568	0.621
tving	0.572	0.649	0.619	0.456	0.511	0.572	0.626
NTV	0.565	0.630	0.603	0.461	0.480	0.562	0.595
YouTube	0.690	0.710	0.718	0.540	0.501	0.672	0.673

- Niche overlap (for gratification)

	IF	PT	ET	SI	FB	EU	CV
CA-IPTV	0.807	0.753	0.809	0.749	0.927	0.809	1.117
CA-sTV	0.801	0.811	0.876	0.794	0.966	0.902	1.046
CA-pooq	0.892	0.893	0.955	0.827	1.086	0.904	1.272
CA-tving	0.910	0.798	0.923	0.853	0.987	0.920	1.241
CA-NTV	0.962	0.870	0.932	0.868	1.133	0.942	1.201
CA-YT	1.114	0.878	1.029	1.074	1.411	1.002	1.424
IPTV-sTV	0.762	0.706	0.850	0.766	0.996	0.821	1.065
IPTV-pooq	0.896	0.797	0.887	0.809	1.246	0.867	1.105
IPTV-tving	0.925	0.750	0.884	0.851	1.180	0.890	1.104
IPTV-NTV	0.973	0.852	0.970	0.857	1.345	0.931	1.166
IPTV-YT	1.110	0.866	0.986	1.017	1.722	1.114	1.291
sTV-pooq	0.859	0.795	0.888	0.790	0.982	0.819	1.175
sTV-tving	0.899	0.816	0.936	0.827	0.984	0.832	1.157
sTV-NTV	0.988	0.861	0.965	0.863	1.028	0.887	1.173
sTV-YT	1.134	0.937	1.094	1.085	1.420	1.163	1.387
pooq-tving	0.755	0.715	0.779	0.731	0.718	0.675	0.795
pooq-NTV	0.866	0.840	0.939	0.777	0.977	0.773	0.964
pooq-YT	1.201	0.944	1.097	1.069	1.259	1.100	1.138
tving-NTV	0.814	0.686	0.824	0.702	0.751	0.739	0.882
tving-YT	1.172	0.885	1.120	1.084	1.291	1.072	1.110
NTV-YT	1.231	0.970	1.158	1.025	1.128	1.098	1.088



Research Results

Competitive superiority

Group	Information		Pass time		Entertainment		Social interaction		Financial benefit		Ease of use		Convenience	
	S-score	t-Value	S-score	t-Value	S-score	t-Value	S-score	t-Value	S-score	t-Value	S-score	t-Value	S-score	t-Value
CA>IP	3.769	-1.712	2.496	-2.619**	3.333	-4.878**	3.318	-3.521**	2.027	-6.672**	4.269	1.652	4.880	-10.040**
IP>CA	4.353		3.205		5.058		4.548		3.550		3.676		10.052	
CA>SA	4.120	1.072	3.403	2.936**	4.702	2.193*	4.537	1.809	3.579	6.666**	5.554	6.904**	7.095	-0.087
SA>CA	3.758		2.597		3.924		3.862		2.014		3.019		7.140	
CA>PQ	5.262	5.451**	3.502	1.750	4.952	1.559	4.264	-0.756	4.331	11.531**	5.645	6.576**	5.562	-9.470**
PQ>CA	3.335		2.994		4.368		4.550		1.680		3.203		11.045	
CA>TV	5.434	5.590**	3.281	2.607**	4.924	2.121*	4.093	-1.504	4.004	9.203**	5.215	4.805**	5.242	-10.451**
TV>CA	3.424		2.564		4.141		4.663		1.855		3.421		11.056	
CA>NA	5.783	5.983**	3.977	5.386**	5.475	4.922	4.171	-2.231*	4.496	13.192**	5.736	7.149**	6.165	-6.221**
NA>CA	3.587		2.463		3.682		5.047		1.463		3.141		9.583	
CA>YT	2.810	-12.927**	2.188	-7.010**	2.384	-14.637**	2.318	-15.213**	4.262	7.428**	2.857	-10.552**	4.184	-18.175**
YT>CA	7.777		4.213		7.810		8.502		2.527		7.029		14.331	
IP>SA	4.231	3.081**	3.390	5.641**	5.339	5.792**	4.998	5.065**	4.264	12.680**	5.072	5.957**	10.297	10.968**
SA>IP	3.203		1.921		3.273		3.176		1.384		2.950		4.682	
IP>PQ	5.572	7.283**	3.550	4.158**	5.333	4.995**	4.643	1.616	5.103	16.480**	4.922	4.078**	7.874	-0.261
PQ>IP	3.064		2.386		3.543		4.043		1.397		3.432		8.021	
IP>TV	5.676	6.859**	3.612	5.538**	5.618	5.772**	4.913	1.624	4.969	14.882**	4.915	3.223**	7.657	-0.951
TV>IP	3.223		2.099		3.498		4.285		1.585		3.700		8.202	
IP>NA	5.990	7.683**	4.300	8.635**	6.488	8.866**	4.814	1.105	5.428	17.878**	5.409	5.258**	9.256	3.863**
NA>IP	3.196		1.876		3.194		4.388		1.370		3.444		7.048	
IP>YT	3.304	-11.438**	2.502	-5.046**	2.998	-11.446**	2.845	-12.396**	5.238	10.952**	3.176	-10.785**	6.453	-8.780**
YT>IP	7.762		3.979		7.258		7.921		2.647		7.568		11.516	
SA>PQ	5.045	4.955**	2.781	-0.874	4.285	-0.429	3.676	-3.000**	3.370	6.145**	3.791	-0.900	5.244	-9.623**
PQ>SA	3.298		3.021		4.442		4.769		2.014		4.114		10.758	
SA>TV	5.091	5.095**	3.002	0.359	4.574	0.084	3.649	-3.152**	3.141	3.134**	3.612	-2.231*	4.899	-10.947**
TV>SA	3.312		2.903		4.543		4.800		2.411		4.421		10.994	
SA>NA	5.537	5.579**	3.545	3.170**	5.287	3.358**	3.727	-3.965**	3.674	7.298**	4.217	-0.418	6.564	-5.445**
NA>SA	3.523		2.657		4.045		5.207		1.986		4.372		9.610	
SA>YT	2.760	-13.867**	1.952	-9.966**	2.264	-16.172**	2.151	-17.012**	3.729	2.693**	2.236	-15.757**	4.368	-17.665**
YT>SA	8.058		4.787		8.320		9.050		3.099		8.390		14.227	
PQ>TV	3.564	0.090	2.810	1.300	4.105	0.803	4.033	-0.295	1.893	-2.265*	3.360	-0.772	6.182	-0.030
TV>PQ	3.535		2.467		3.826		4.140		2.362		3.618		6.198	
PQ>NA	4.267	1.304	3.651	4.298**	5.112	3.763**	4.105	-1.139	2.705	2.752**	3.969	0.889	8.824	5.256**
NA>PQ	3.820		2.438		3.746		4.525		2.110		3.659		5.895	
PQ>YT	2.132	-18.437**	2.167	-8.514**	2.484	-15.773**	2.628	-14.914**	3.052	-1.124	2.293	-15.890**	5.820	-9.098**
YT>PQ	8.857		4.645		8.432		8.618		3.312		8.318		11.072	
TV>NA	4.072	1.451	3.098	3.236**	4.672	3.403**	3.802	-1.061	2.775	5.041**	4.012	2.353*	8.357	6.132**
NA>TV	3.587		2.202		3.514		4.186		1.690		3.213		5.126	
TV>YT	2.184	-18.112**	1.756	-9.990**	2.366	-16.107**	2.847	-13.503**	3.246	0.426	2.287	-15.136**	6.087	-8.389**
YT>TV	8.826		4.605		8.461		8.409		3.147		8.167		11.031	
NA>YT	2.138	-18.632**	1.649	-12.622**	2.074	-19.397**	2.645	-13.656**	2.264	-4.027**	1.990	-17.466**	4.234	-13.558**
YT>NA	8.884		5.240		9.105		8.281		3.128		8.564		11.764	

* p < .05.

Research Results

- Niche breadth (for time spent with media)

Niche breadth for each media from 2010 to 2012.

	2010	2011	2012
Cable TV	0.269	0.270	0.273
IPTV	0.240	0.191	0.246
Satellite TV	0.267	0.194	0.268
OTT	0.183	0.152	0.173

Note: 0 = minimum possible breadth, 1 = maximum possible breadth.

- Niche Overlap (for time spent with media)

Niche overlap values for each media from 2010 to 2012.

	2010	2011	2012
Cable-IPTV	0.606	0.594	0.589
Cable-sTV	0.601	0.636	0.584
Cable-OTT	0.618	0.586	0.600
IPTV-sTV	0.636	0.772	0.620
IPTV-OTT	0.715	0.799	0.707
sTV-OTT	0.720	0.765	0.714

Conclusion

- YouTube was a generalist platform that may satisfy the needs of consumers in almost all dimensions, while **Naver TV was a specialist platform.**
- The niche breadth values of **traditional pay TV are bigger than those of OTT media except for YouTube,** and a fair proportion of participants reported that they accessed YouTube rather than the traditional TV platforms.
- **overlap between traditional pay TV and OTT is not very high.** instead, the niche overlap among the traditional pay TV services is relatively high.
- YouTube was excluded, traditional pay TV services have competitive superiority over the remaining OTT.
- as the analysis focused entirely on the concept of displacement, any form of complementary relationship between the two media could not be covered in this study.