

OTT service recommendation for 20s

Final Report

IT Investment Analysis Team 1 project

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Contents.

01 OTT
Environmental
Analysis

02 OTT Service analysis

03 AHP



A photograph of a person's hands resting on a wooden desk. They are wearing a red and blue plaid shirt. In the background, a laptop screen is visible, showing some graphical data. The overall atmosphere is one of focus or contemplation.

#OTT

Environmental Analysis

1.1
about

OTT service



5G

01

20x faster transfer speeds

"Downloading a large volume movie 20 times faster than LTE"

* HD급 2GB 영화 1편 다운로드 시

4G  16초

5G  0.8초

02

10x faster reaction rate

"Enjoying games without freezing in anytime and anywhere"

4G  자연속도 0.01초

5G  자연속도 0.001초

03

Connection with 10x more devices

"Connection between 1 million devices is available (10x more than LTE)"



4G
10만대

5G
100만대

OTT concepts



Online video service

that provides **video content** such as dramas and movies **through the Internet**.

- 'Top' : set-top box connected with TV
- 'Over-The-Top' : service beyond set-top box



provided over public Internet networks and open devices

unlike traditional closed video services like broadcasting studios, cable TV, IPTV

- Widely, OTT includes sharing services with user-created videos like YouTube.



Premium paid videos created by commercial production companies

are **key success factors** of them

- Netflix Original and so on.

Characteristics of OTT



Variety of distribution channels

thanks to using IP network.

- Media player, app, web browser etc.



Outstanding contents library

Leading-edge in content by creating or securing original content only available for certain OTT service

- Netflix Original etc.



Low cost price

under \$10 per month

- No need to care about operation expenses thanks to public IP network

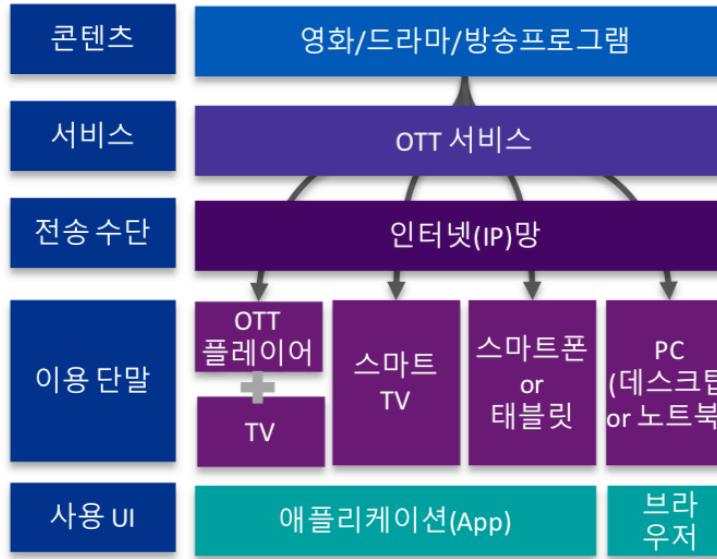


Personalization

Recommend content or provide customized curations based on the user's data

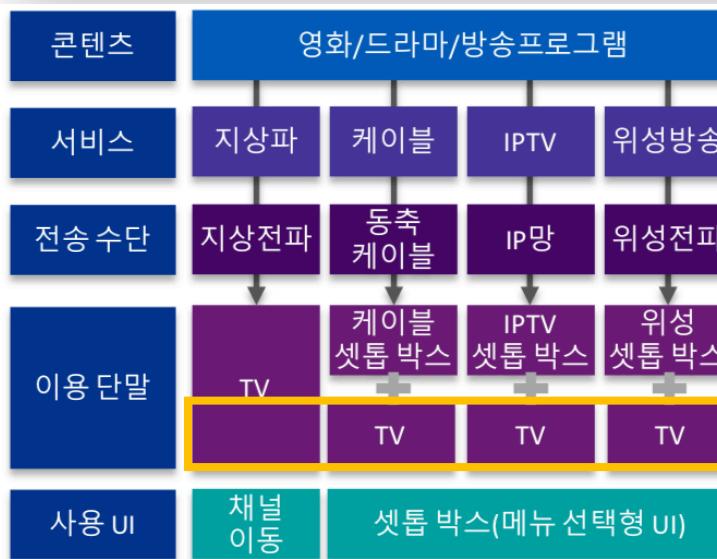
- Collect user's usage patterns, such as content title, genre, viewing time, and movement
- Secure enormous user data

OTT VS Existing system



OTT

- Available in various devices that can be connected to the Internet
- Easy and fast to use due to touch interface in smart devices
- Personalized recommendations, searches, and content curation



Existing broadcasting system

- Only available on TV
- Supporting only minimal control due to using remote controller

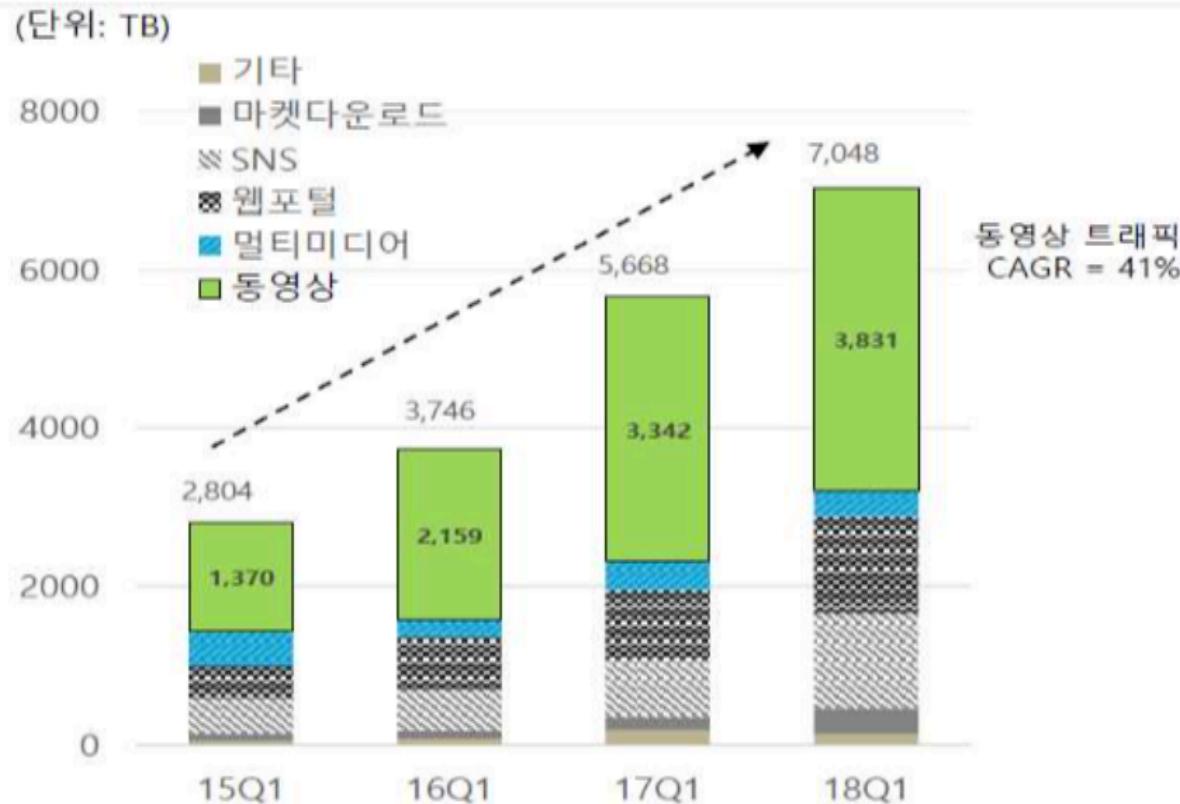
1.2

Market



Video Usage

Mobile Traffic Change



Traffic share

- Online video usage **41% increased** (average annual growth rate)
- The proportion of video traffic
2015 Q1 **48.9%** → 2018 Q1 **54.4%**

Subscribers

Domestic OTT subscribers

Advertisement based Free OTT



Naver TV
33.33M



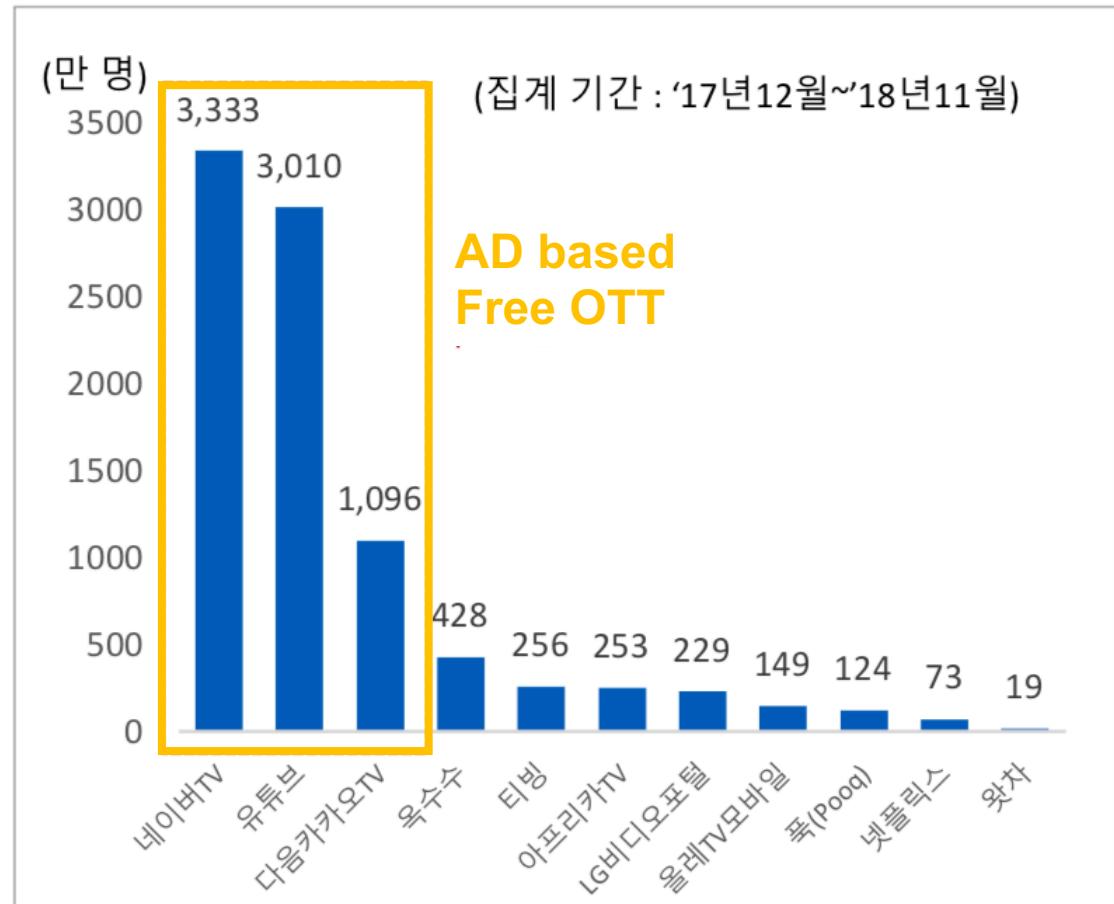
Youtube
30.01M

Subscription based Paid OTT



okusu **TVING** **POOQ** **NETFLIX**
4.28M 2.56M 1.24M 0.73M

>> 주요 국내 OTT 서비스별 월평균 순이용자 수



Source: KISDI(2019.3), 삼정KPMG 경제연구원 재구성

Note: 순이용자 수는 조사 기간 내 해당 서비스에 중복 접속한 값을 제거한 수치로 실제 이용자 규모의 근사값으로 활용됨
네이버TV, 유튜브, 카카오TV, 아프리카TV는 광고 기반 OTT

Market Size

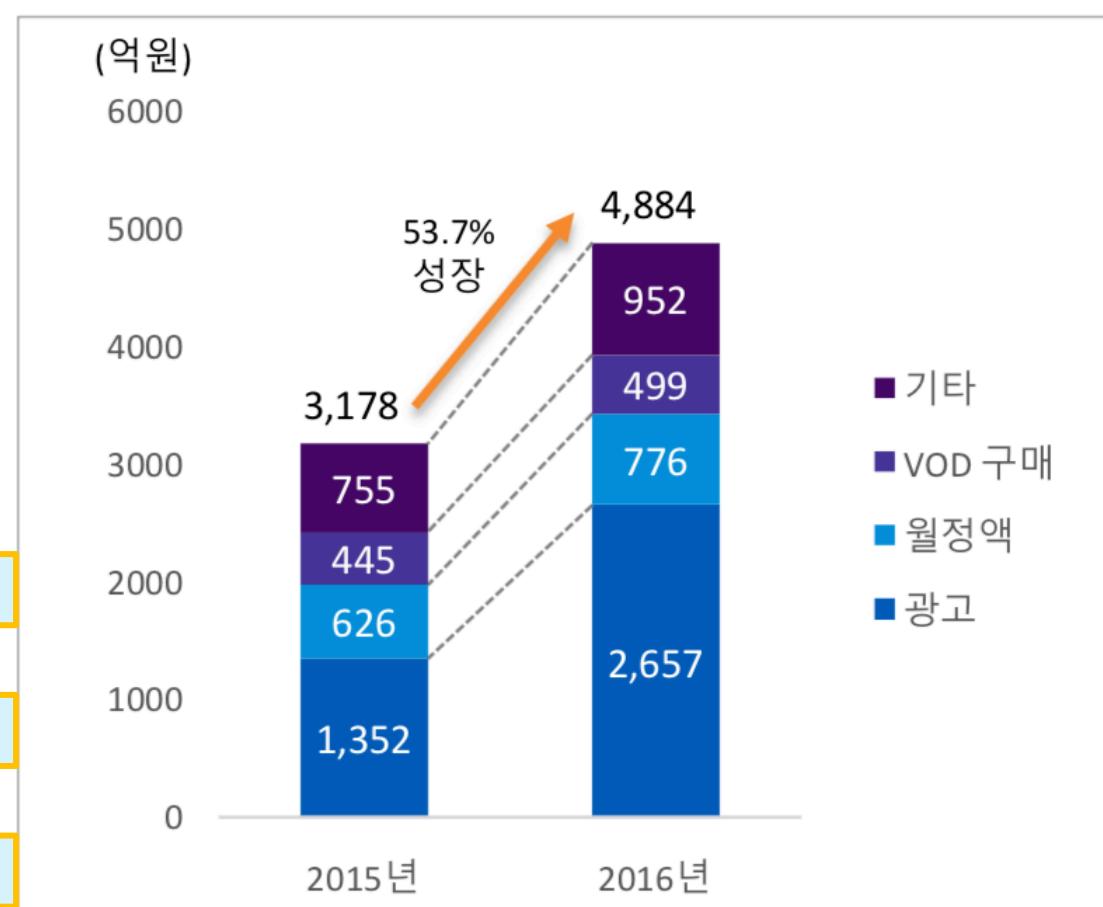
Estimated Total Sales

2015 **317.8B** → 2016 **488.4B**

Sales share

- AD sales (256.7B): 54.4% **96.5% annual growth**
- Subscription sales (77.6B): 15.9% **24% growth**
- Video sales (49.9B): 10.2% **12.1% growth**

>> 국내 OTT 시장 규모 추정



Source: 방송통신위원회(2016), 삼성KPMG 경제연구원 재구성

Note: 해당 통계는 방통위의 '2016년도 방송시장 경쟁상황 평가'에 수록, '16년 이후 업데이트된 후속 자료는 없음

1.2.4

Expected life cycle

According to many indicators...

5+ years

Continue to grow for more than 5 years
Unless the market is disappeared

Even if the way the media is delivered changes, it will follow the new one

1.3

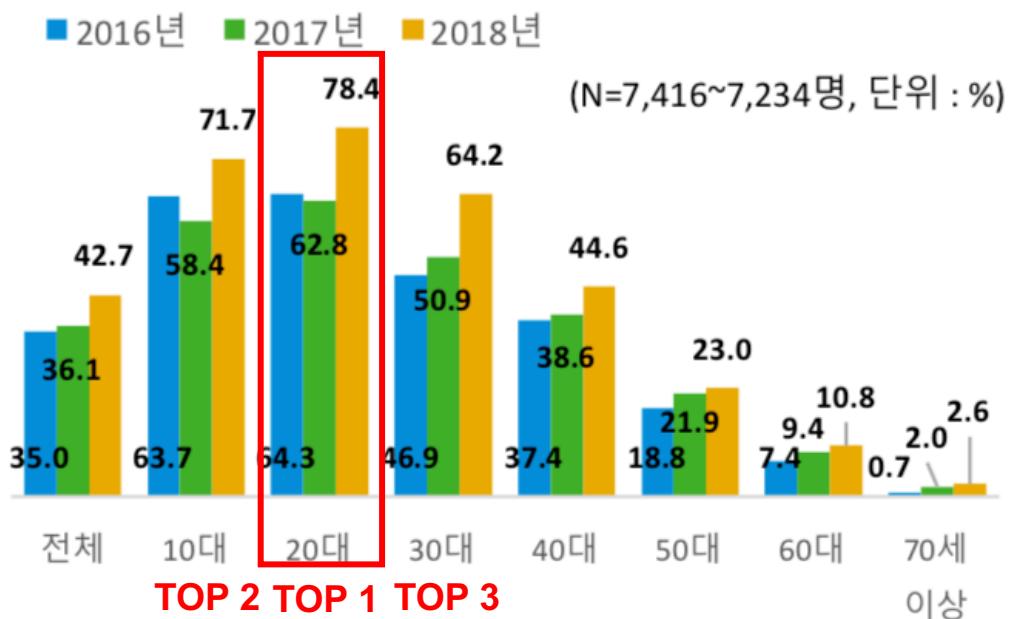
Consumer



OTT usage

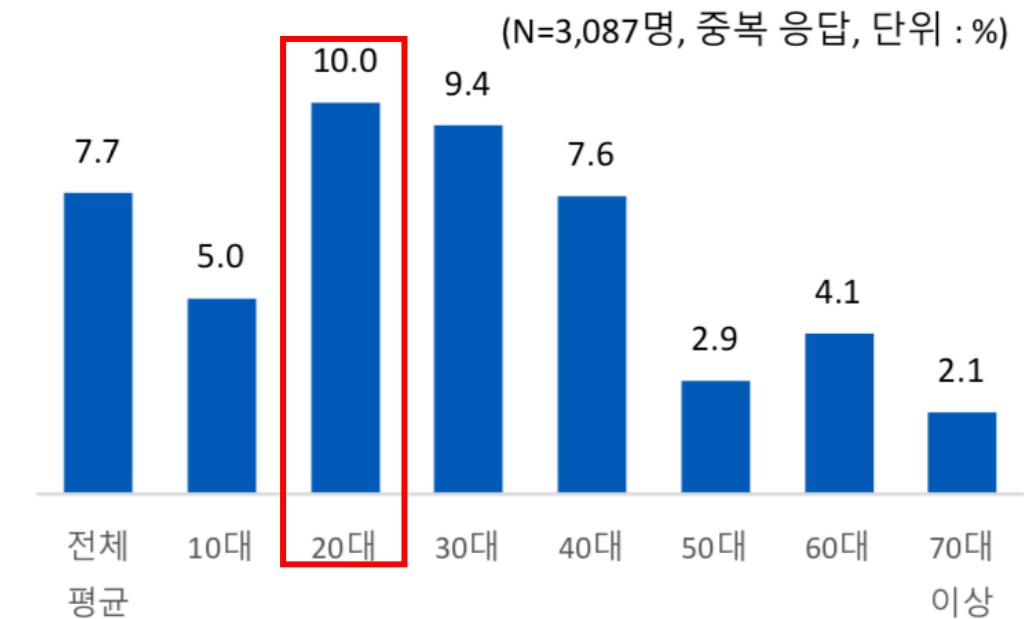
OTT Usage by age group

- 2018년 기준 연령별 이용률은 20대가 78.4%로 가장 높고, 해가 갈수록 전 연령대에서 OTT 이용률이 증가



Paid OTT Usage by age group

- 구독 요금제나 VOD 건당 구매를 이용하는 비율은 20대 (10.0%)가 가장 높았으며, 30대(9.4%), 40대(7.6%)가 뒤따름



In 2018,

- 20s had the highest rate of **78.4** percent
- followed by 10s (71.7 percent) and 30s (64.2 percent)
- The proportion of 20s and 30s have been increased since 2016

"People hesitate to pay the price"

- Only average 7.7%** of OTT users paid the price or enrolled in monthly subscription
- Although the number of paid user has been gradually increased, its proportion is **still low**

OTT gender balance



* OTT 이용자 기준, N= 2018년 3,087명, 2017년 2,677명, 2016년 2,585명



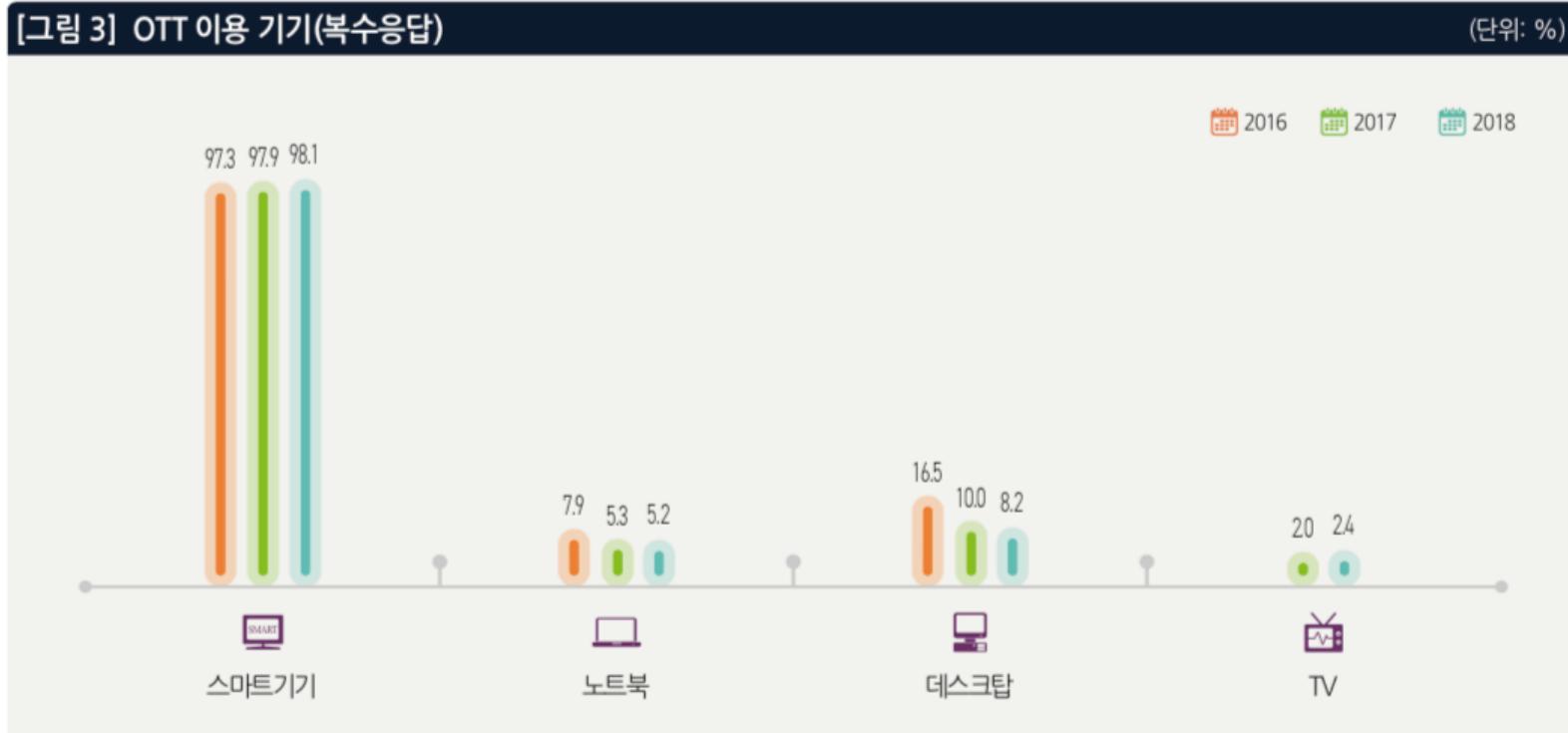
Gender ration between men and women are almost the same

Even though the proportion of men are slightly larger than women's counter part

- However, genre of videos can be separated (Game, sports for men / Beauty, Cooking for women)

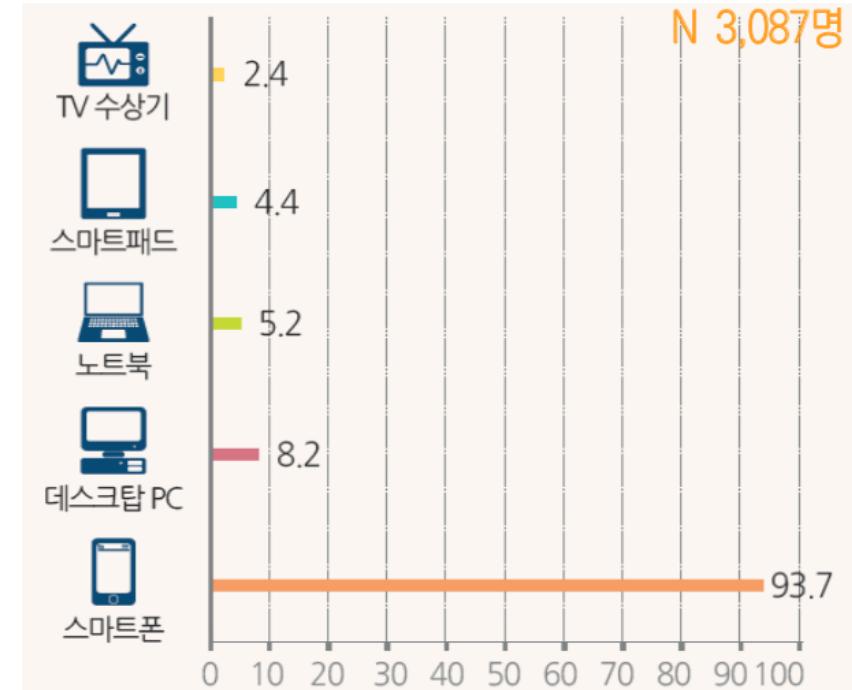
OTT device usage

[그림 3] OTT 이용 기기(복수응답)



* OTT 이용자 기준, N= 2018년 3,087명, 2017년 2,677명, 2016년 2,585명
주) TV는 2017년 조사 문항부터 포함

- Most users (**98.1%** in 2018) use OTT through smart devices (**smart phones, smart pads**)
- the usage of PCs and laptops are decreasing for 3 years



[OTT 서비스 이용 시 사용 기기(단위: %)]

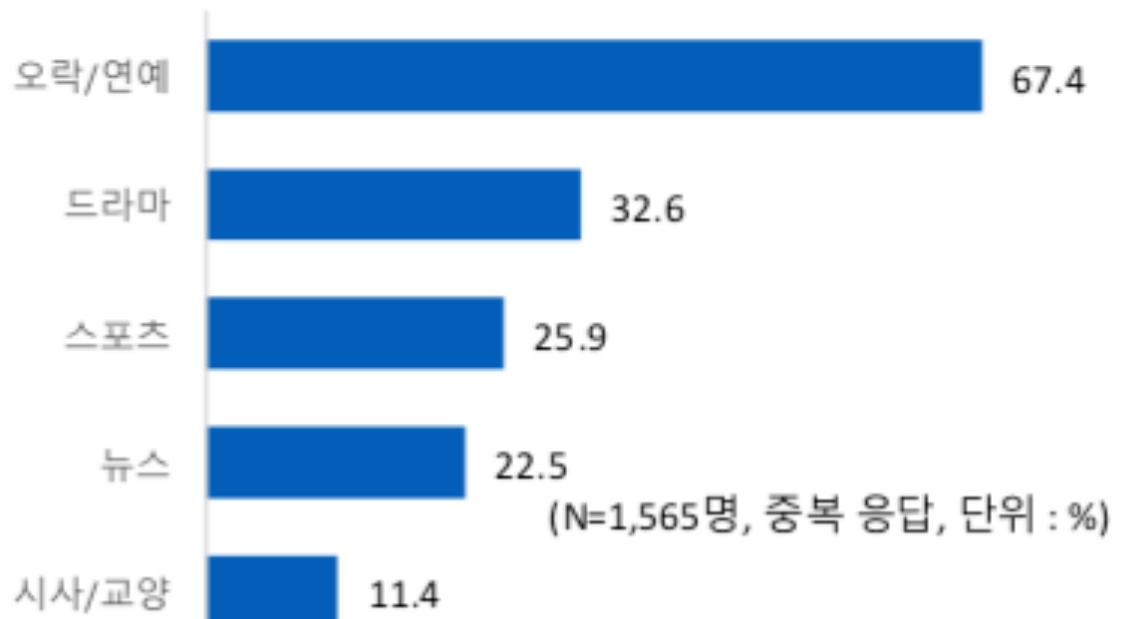
Specifically

1. Smart phone has 93.7%
2. PC has 8.2%
3. Laptop has 5.2%

OTT program types (TV broadcasting only)

Types of program watched via OTT

- OTT로 시청한 방송 프로그램 유형 중 오락/연예(67.4%)가 이용률이 가장 높고, 드라마(32.6%), 스포츠(25.9%)가 뒤따름



1st Entertainment, variety



2nd Drama



3rd Sports

A photograph of a person wearing a red and blue plaid shirt, sitting at a wooden desk. They are holding a white rectangular card with black text. In the background, a laptop is open on the desk, showing some content on its screen.

#OTT

Service Analysis

2.1.1

Target services

01

NETFLIX

02

 WATCHA
PLAY

03

 YouTube
Premium

04

 wavve

Survey

Current Subscribers



Collection Items

- Gender, Age
- Currently subscribing service
- Preferable genres
- Impact of Original contents to service selection
- Average time spent per week
- Review



PSM analysis

- Only for currently subscribing service
- Too cheap, Cheap, Expensive, Too expensive
- Price range

Non Subscribers



Collection Items

- Gender, Age
- Preferable genres
- Impact of Original contents to service selection
- Expectation



PSM analysis

- About all 4 services (Netflix, Watcha, Youtube, Wavve)
- Too cheap, Cheap, Expensive, Too expensive
- Price range

5000	5500	6000	6500	...	11000	11500	12000	12500	13000
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Unit: 500won

2.2.1

NETFLIX



Key features

- The largest OTT company in the world
- Personalized curation by big data analysis
- Many Original contents
- Attractive preview
- User-friendly UI
- Compatible with various kinds of devices



Price

- Basic : 9,500won / month
 - SD, 1 concurrent user, 1 device
- Standard : 12,000won / month
 - HD, 2 concurrent users, 2 device
- Premium : 14,500won / month
 - 4k , 4 concurrent users, 4 device



Contents

- The largest amount of contents in the market
- Netflix Original
 - House of Card, Orange is the new Black (US)
 - 킹덤, 미스터 션샤인, SKY 캐슬 (Korean)
 - Animation (Devil Man)



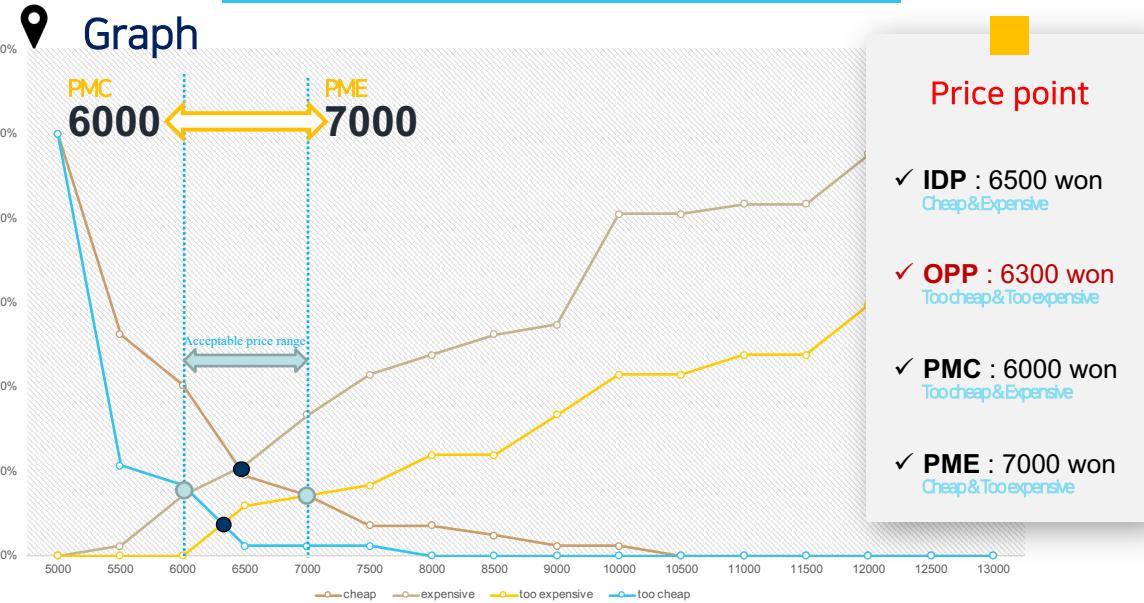
Comment

- 139million paid subscribers
- The only service for Netflix original

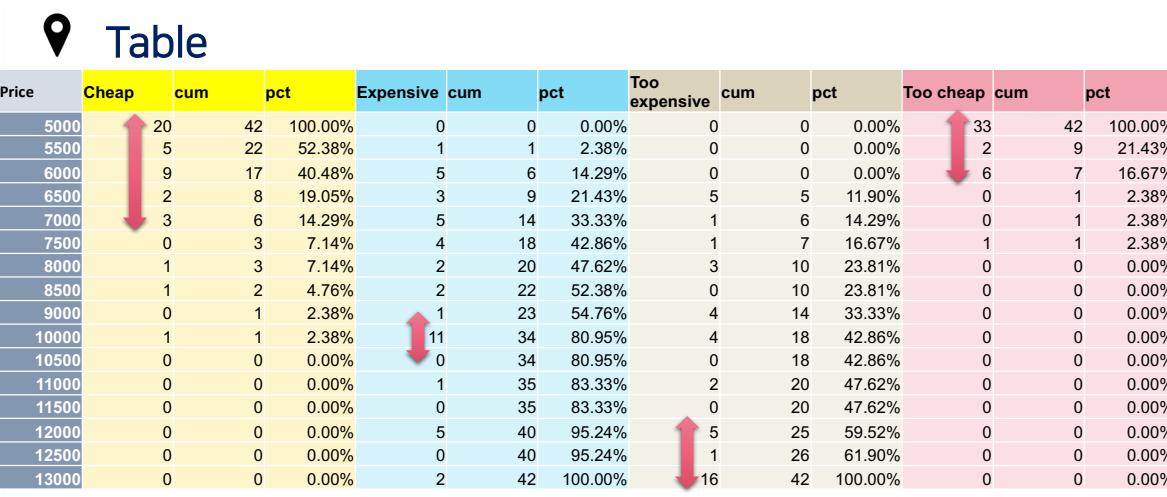
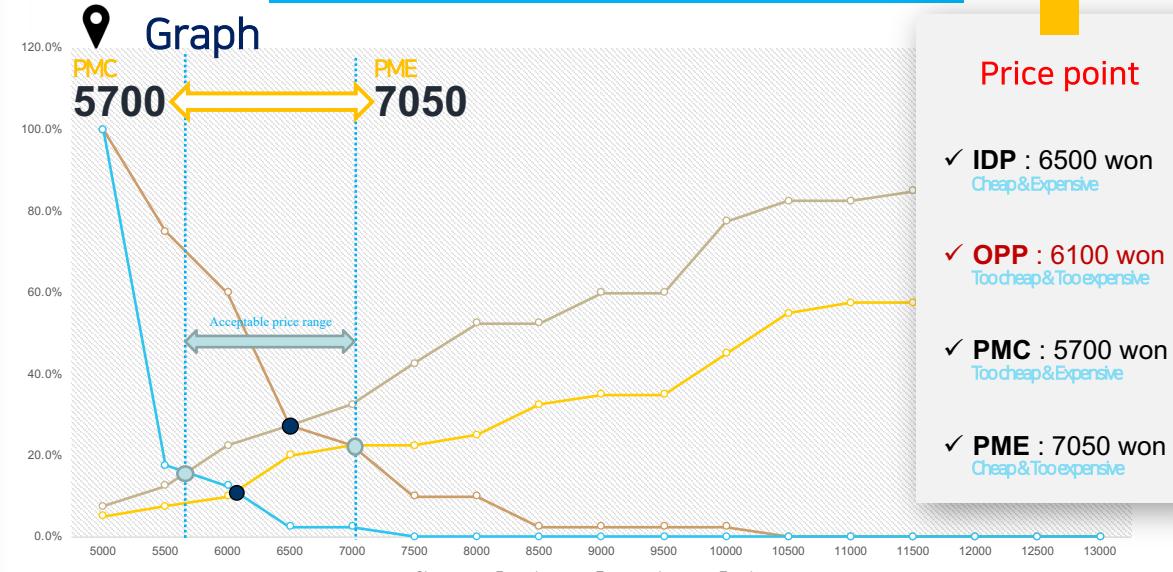
2.2.2

Netflix price

Current Subscribers



Non Subscribers



2.2.3

Netflix B/C

Current Subscribers



Benefit

Average of acceptable range

OPP 6300 won



Cost

$\frac{(9500 * 7) + (6000 * 25) + (4125 * 10)}{42} = 6137 \text{ won}$

$\Sigma \text{Price} \times \text{number of person} / \text{total people}$

Non Subscribers



Benefit

Average of acceptable range

OPP 6100 won



Cost

From current subscribers

6137 won

Expected amount of pay



B/C ratio

With AW (equivalent monthly cost)

$$\frac{6300}{6137} = 1.027 \geq 1$$

No initial cost, only monthly subscription fee



B/C ratio

With AW (equivalent monthly cost)

$$\frac{6100}{6137} = 0.994 < 1$$

Netflix Implications



Well known friendly service

Even to the non-subscribers

- Both acceptable price ranges are very similar to each other.
 - Non Subscribers have slightly wider range (cover up subscribers' range)
- OPPs for both sides are almost the same (200 won difference)



- Subscribers and non-subscribers share almost the same expectations for the service.
- Word of mouth^{입소문} from subscribers and Netflix's know-how for its promotions have had positive impact on large amount of non-subscribers.
- Great social awareness

Netflix review

A d v a n t a g e

- Contents
 - Netflix Original
 - High level story
 - Spectacular production
- Quality
- Convenience
 - 4 concurrent user access
 - Register multiple profiles to access content separately for each profile
 - accurate personalized recommendation

D i s a d v a n t a g e

- Contents
 - Shortage of drama series except for Netflix Original
 - Too much weight to contents of specific country
 - Lack of K-drama contents
- Quality
 - Can not change the resolution
- Convenience
 - Some vague criterion for classifying movies
 - Lack of community page (need third party services to get access to reviews)

2.2.6

Netflix word-cloud (1)

Google Play : Rate 1 and 2 (n = 1999)

N e g a t i v e



“Subtitle”

- Subtitle has overall problem including accuracy, sink, brightness, continuity, and so on.



Dongkiba동키바

★★★★★ 2019년 12월 3일



14

자막이 떴다가 안꺼졌다가 매번 설정해줘도 도루묵이네요. 다른건 업데이트 되는데 도대체 이건 언제 업데이트 될런지~ 1년 동안 쓰고 있는데 이건 절대 못고치나봐요? 그리고 자막 틀린게 너무 많아요. 그냥 자막이랑 소리랑 다른말을 떠드네요. 꺼다가 다시 켰을때 한 두편 뒤로 빠한다던지 그런 경우도 가끔 있고요.

“Payment”, “Free”

- The payment system is unexpectedly malfunctioning



은서

★★★★★ 2019년 10월 12일



2

장난하세요? 결제는 결제대로 되고 앱은 들어가지도 않고 왜이러는데요. 결제취소를 해주시던지 아니면 볼수있게해주시던지 지웠다시깔아도 똑같고 어떻게 하라구요!!! 바로답주세요!



정훈

★★★★★ 2019년 11월 3일



1

30일 무료가 있다고 해서 체험해보기 위해서 설치한 사람입니다. 분명 30일 무료로 가입을 했는데 첫날에 결제가 되어있네요. 어떻게 된일인지 좀 알려주세요

“Screen”, “Playback”, “Video”

- A lot of errors are occurring during playback (brightness etc.)



민

★★★★★ 2019년 10월 13일



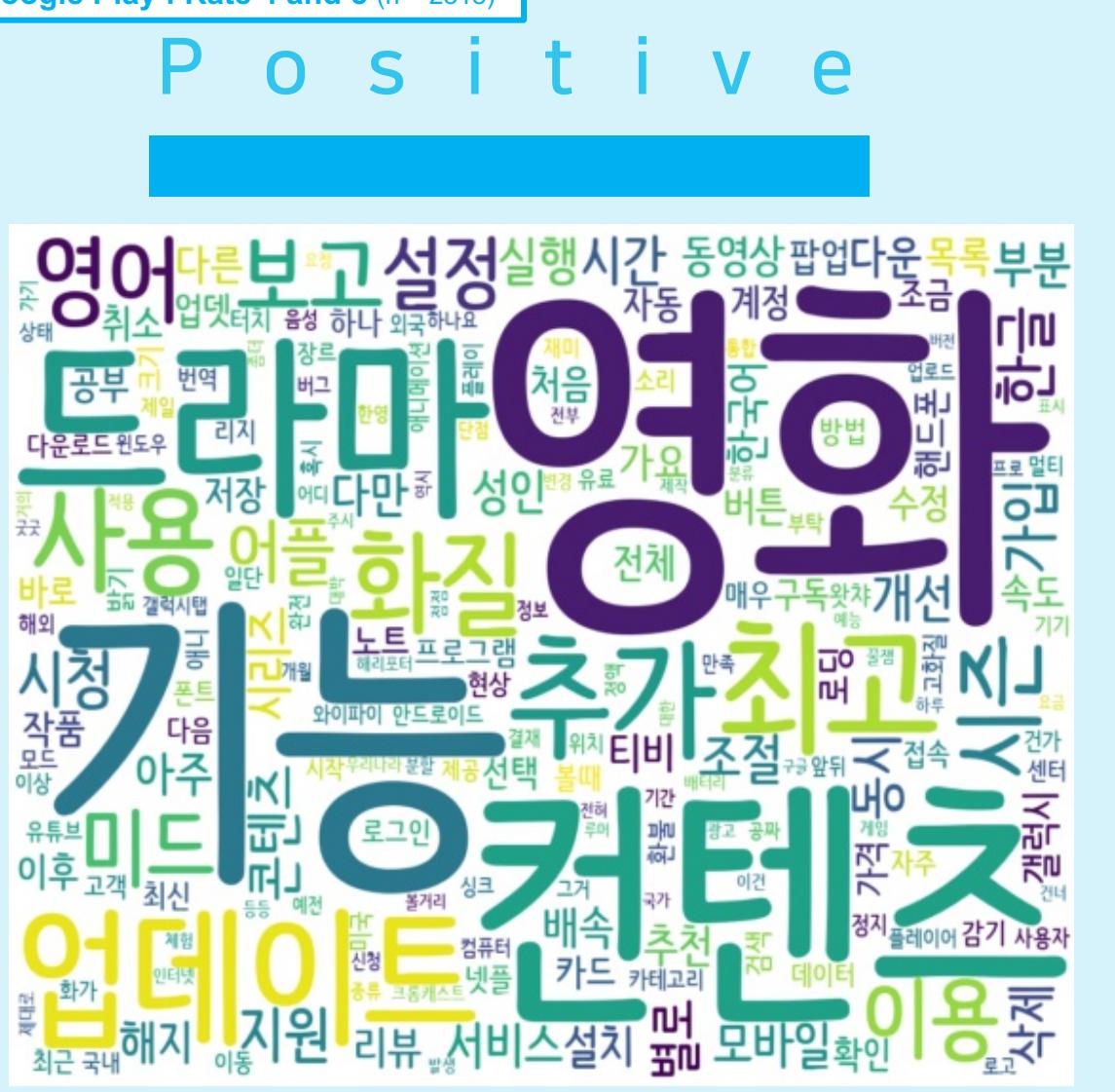
19

노트9 사용 중인데요 갈수록 새로 뜨는 영상들을 재생할때 화면이 너무 어두워서 밝기를 엄청 올려도 자막만 너무 밝아지고 화면은 하나도 안보여서 눈이 아파서 볼수가 없어요ㅠㅠㅠㅠ 제발 개선해주시던가 영상 밝기 조절할수있게 해주세요ㅠ

2.2.7

Netflix word-cloud (2)

Google Play : Rate 4 and 5 (n = 2818)



Positive에 별점을 잘 주는 대신에 변경사항을 요구하는 경우가 많아서,
꽤 많은 부분이 **Negative**와 겹치는 것을 볼 수 있었습니다.
이 부분을 해결하기 위해 **Negative**에서 **Positive** 보다 100회 이상
많이 언급된 단어의 경우 **Positive** 단어에서 제외하였습니다.

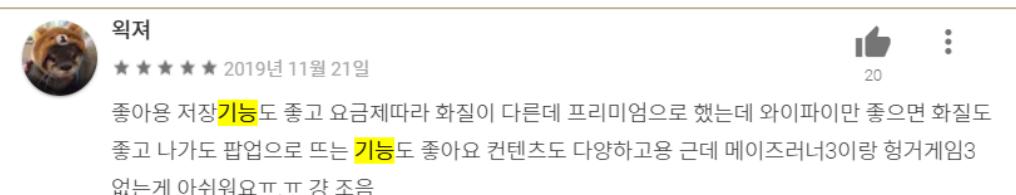
“Movie”, “Drama”, “Contents”

- Hold many most viewed contents treated as 'masterpiece' in all over the world

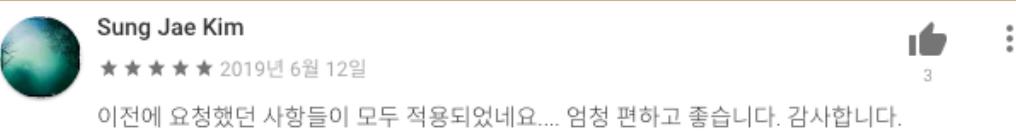


“Functions”

- A lot of user-friendly features

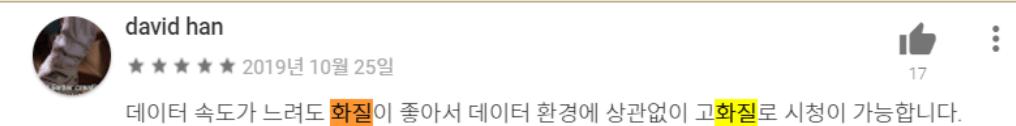


- Fast and adaptive response to user's feedbacks



“Resolution”

- Consistent high-resolution regardless of data transmission environment thanks to 'Dynamic Optimized Encoding'



2.3.1



WATCHA PLAY



Key features

- Movie based domestic OTT service
- Relatively cheaper price than others
- Association with Watcha (big data based curation)
- Personalized curation based on user review



Price

- 7900 won / month
 - 20900 for 3 month, 39900 for 6 month
- HD resolution
- Maximum 5 download devices



Contents

- Massive amount of films
- Exclusive service on famous American drama
 - Walking dead
 - Game of Thrones
- Multiple K-drama contents
- 리틀드러머걸



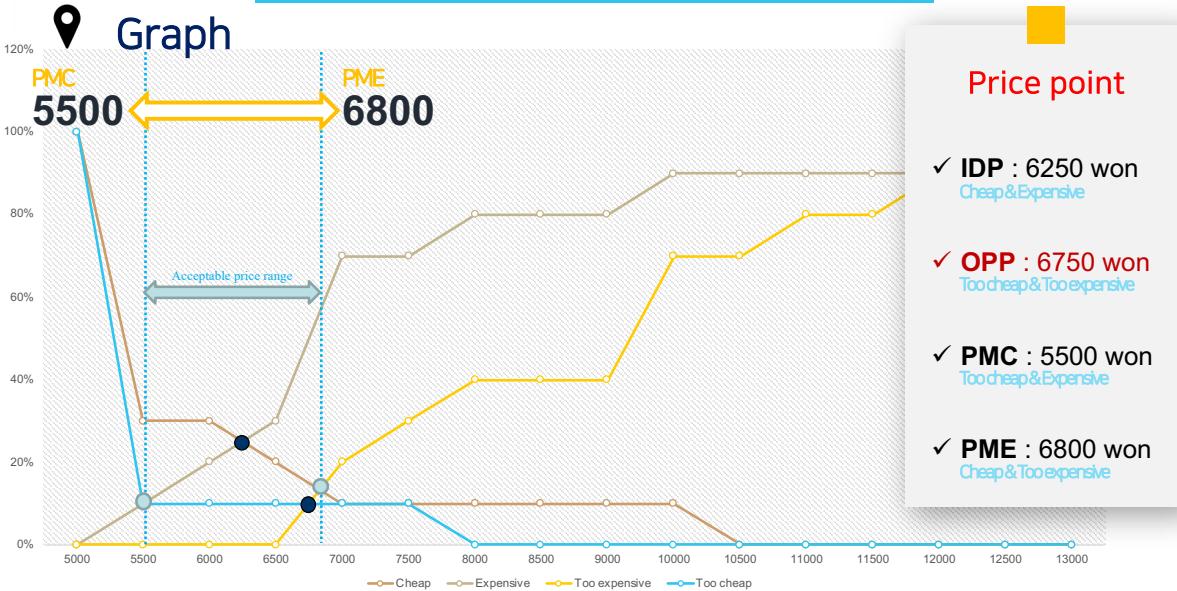
Comment

- The best cost-effectiveness (가성비)
- Korean fitted contents

2.3.2

Watcha Play price

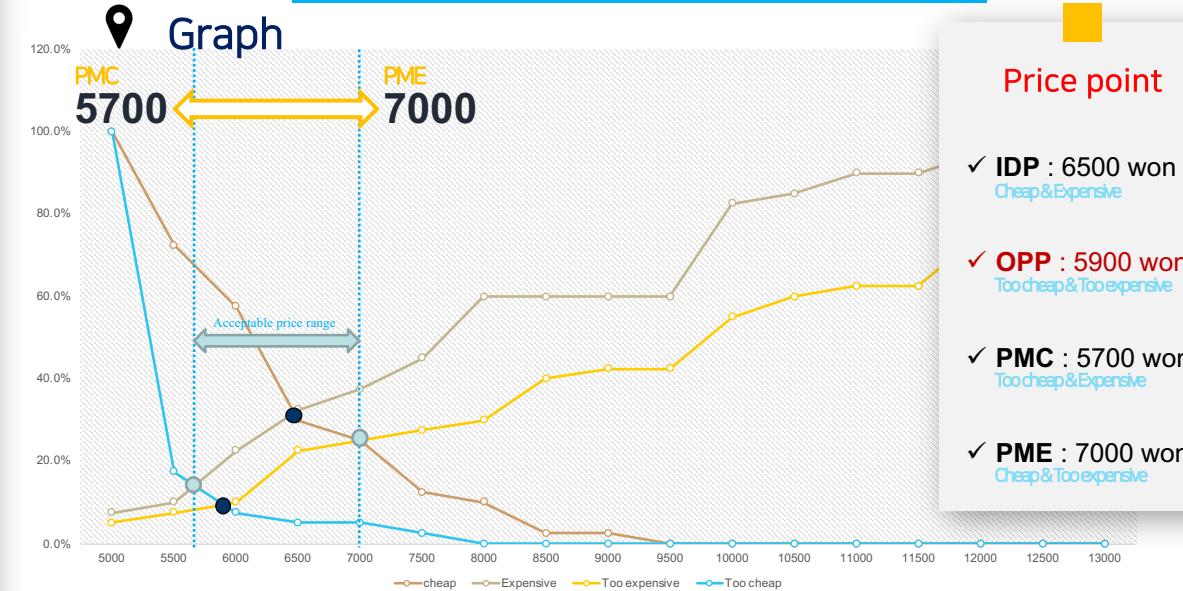
Current Subscribers



Table

Price	Cheap	cum	pct	Expensive	cum	pct	Too expensive	cum	pct	Too cheap	cum	pct
5000	7	10	100%	0	0	0%	0	0	0%	9	10	100%
5500	0	3	30%	1	1	10%	0	0	0%	0	1	10%
6000	1	3	30%	1	2	20%	0	0	0%	0	1	10%
6500	1	2	20%	1	3	30%	0	0	0%	0	1	10%
7000	0	1	10%	4	7	70%	2	2	20%	0	1	10%
7500	0	1	10%	0	7	70%	1	3	30%	1	1	10%
8000	0	1	10%	1	8	80%	1	4	40%	0	0	0%
8500	0	1	10%	0	8	80%	0	4	40%	0	0	0%
9000	0	1	10%	0	8	80%	0	4	40%	0	0	0%
10000	1	1	10%	1	9	90%	3	7	70%	0	0	0%
10500	0	0	0%	0	9	90%	0	7	70%	0	0	0%
11000	0	0	0%	0	9	90%	1	8	80%	0	0	0%
11500	0	0	0%	0	9	90%	0	8	80%	0	0	0%
12000	0	0	0%	0	9	90%	1	9	90%	0	0	0%
12500	0	0	0%	0	9	90%	0	9	90%	0	0	0%
13000	0	0	0%	1	10	100%	1	10	100%	0	0	0%

Non Subscribers



Table

Price	Cheap	cum	pct	Expensive	cum	pct	Too expensive	cum	pct	Too cheap	cum	pct
5000	11	40	100.0%	3	3	7.5%	2	2	5.0%	33	40	100.0%
5500	6	29	72.5%	1	4	10.0%	1	3	7.5%	4	7	17.5%
6000	11	23	57.5%	5	9	22.5%	1	4	10.0%	1	3	7.5%
6500	2	12	30.0%	4	13	32.5%	5	9	22.5%	0	2	5.0%
7000	5	10	25.0%	2	15	37.5%	1	10	25.0%	1	2	5.0%
7500	1	5	12.5%	3	18	45.0%	1	11	27.5%	1	1	2.5%
8000	3	4	10.0%	6	24	60.0%	1	12	30.0%	0	0	0.0%
8500	0	1	2.5%	0	24	60.0%	4	16	40.0%	0	0	0.0%
9000	1	1	2.5%	0	24	60.0%	1	17	42.5%	0	0	0.0%
9500	0	0	0.0%	0	24	60.0%	0	17	42.5%	0	0	0.0%
10000	0	0	0.0%	9	33	82.5%	5	22	55.0%	0	0	0.0%
10500	0	0	0.0%	1	34	85.0%	2	24	60.0%	0	0	0.0%
11000	0	0	0.0%	2	36	90.0%	1	25	62.5%	0	0	0.0%
11500	0	0	0.0%	0	36	90.0%	0	25	62.5%	0	0	0.0%
12000	0	0	0.0%	2	38	95.0%	5	30	75.0%	0	0	0.0%
12500	0	0	0.0%	1	39	97.5%	0	30	75.0%	0	0	0.0%
13000	0	0	0.0%	1	40	100.0%	0	40	100.0%	0	0	0.0%

2.3.3

Watcha Play B/C

Current Subscribers



Benefit

Average of acceptable range

OPP **6750 won**



Cost

Fixed cost (only one price plan)

7900 won



B/C ratio

With AW (equivalent monthly cost)

$$\frac{6750}{7900} = 0.854 < 1$$

No initial cost, only monthly subscription fee

Non Subscribers



Benefit

Average of acceptable range

OPP **5900 won**



Cost

Fixed cost (only one price plan)

7900 won



B/C ratio

With AW (equivalent monthly cost)

$$\frac{5900}{7900} = 0.747 < 1$$

Watcha Play Implications



Poor number of subscribers

Even to the non-subscribers

- Insufficient samples : only 10 available subscribers during the survey (very hard to find)
- For subscribers, OPP > IDP (but OPP should be less than or equal to IDP)



- Lack of promotions 홍보 and word of mouth 입소문 from subscribers
 - Non-subscribers barely know about Watcha Play
- Poor social awareness



Attractive features

Especially for non-subscribers

- Acceptable price range for non-subscribers is slightly higher than subscribers (200 won difference)
 - Most non-subscribers have been aware of Watcha play thanks to this survey
- ↓
- Key features of Watcha Play (big data based curation etc.) would have been attractive to non-subscribers, although they didn't actually experience them.
 - However, subscribers are dissatisfied with it (considering reviews and B/C ratio)

Watcha Play review

A d v a n t a g e

- Contents
 - Famous American tv series
 - Japanese anime and movies
- Convenience
 - accurate curation service based on Watcha's review
 - clear classification of movie genres

D i s a d v a n t a g e

- Contents
 - Low contents coverage
 - Lack of recent movies
- Quality
 - Lots of buffering during playback
- Convenience
 - concurrent access is not available
 - Late update for newly released contents

2.3.6

Watcha Play word-cloud (1)

Google Play : Rate 1 and 2 (n = 3092)

N e g a t i v e



“Payment”, “Refund”, “Canceling”

- Many people who were using free-trial try to cancel it, but it doesn't work as they expected



Google 사용자

★ ★ ★ ★ ★ 2018년 10월 27일

첫 달 무료 혜택 탈퇴 후 다시 가입했어도 이미 혜택받은 사람은 첫 달 무료 혜택 없습니다. 물론 그런 안내도 없고 첫 달 무료인 줄 알고 이용권 구매하시게 되면 금액 결제된다는 안내 없이 바로 유료로 돈 결제 됩니다. 그 뒤 나중에 돈 결제 된 거 알고, 뭐지? 싶어서 고객센터 자주 묻는 말과 답변에서 이미 혜택받은 사람은 혜택 없다는 글을 보게 될 거예요. 전화 상담은 아예 안 하고 메일로 문의해도 답변은 5일 만에 받을 수 있고 환불도 안해줍니다. 이런 식으로 돈을 버는 앱인 것 같아요. 드라마 영화도 다 예전 거고 제가 찾던 것도 없고 돈만 6,500원 썼어요. 만약 1년 정기 결제 놀렸으면 큰일 날 뻔했네요.

“Update”, “Movie”

- Late contents update (lack of recent contents)

“Screen”, “Play”, “Error”, “Video”

- A lot of error related to quality of videos
 - 'sound-sink', 'buffering', 'inaccessible' etc.



이원준

★ ★ ★ ★ ★ 2019년 11월 8일

45

아니 1년치 결제해서 잘보고 잘쓰고있다가 요 한두달전부터 소리는 나오고 하는디 화면이 검게나오고 아님 처음에는 화면 잘재생되다가 다시 검게나오거나..또 근데 팝업창으로하면 나오긴하고 어쩌자는건지 재생문제원할하지않을때 고객센터에 나와있는대로 했는데도 이런데 좀 해결좀해줘요!!!!!!
돈받았으면좀!!!

Watcha Play word-cloud (2)

Google Play : Rate 4 and 5 (n = 7092)



“Movie”, “Drama”, “Contents”

- A lot of Korean contents



YS Park

★ ★ ★ ★ ★ 2019년 9월 6일



(3)

다른어플 무료쓰다넘어왔어요 저는 **한국**드라마,**한국**영화만 보기때문에 왓챠플레이가 훨씬편하네요 근데 무료체험기간이 너무짧아요ㅜ

“Update”, “Now”, “Solution”

- Fast and clear feedback to user's complaints



채널알뜨란

★★★★★ 2019년 11월 16일



1

Required output protections are not active 4 오류가 갑자기 발생하면서 재생불가 / 그로인해 별점 1개 주었으나 주말임에도 곧바로 오류 수정해주셔서 별점 5개로 복구합니다.

“American drama”, “J-drama”, “Animation”

- Contents which are NOT available on Netflix



이름은너의

★ ★ ★ ★ ★ 2019년 5월 12일



1

영화나 미드, **애니메이션** 등 넷플에서는 없던게 많이 있어서 별 5개 드려요ㅎ 보고 싶었던 거 보니까 좋네요 :)

2.4.1

YouTube Premium



Key features

- Premium service of Youtube
- Saving videos
- nonstop video playback (no ADs)
- Youtube Originals
- Watching videos concurrently
- Youtube Music
 - Download & offline play
 - Background play



Price

- 7900won / month
- Cheaper than steaming plans of domestic digital music service (Melon etc.)



Contents

- Every videos available on Youtube
- Youtube Originals
 - English drama, documentary, animations etc.
- Still small size (only 10 drama series were released)



comment

- Bunch of user-friendly features
- Great option for music streaming
- Unlimited contents pool



YouTube Originals



Original series only available to Premium subscribers

So that we decide to **limit the 'Contents' of Youtube Premium** in bound of **Youtube Originals**



Variety of genres

More than what you expected

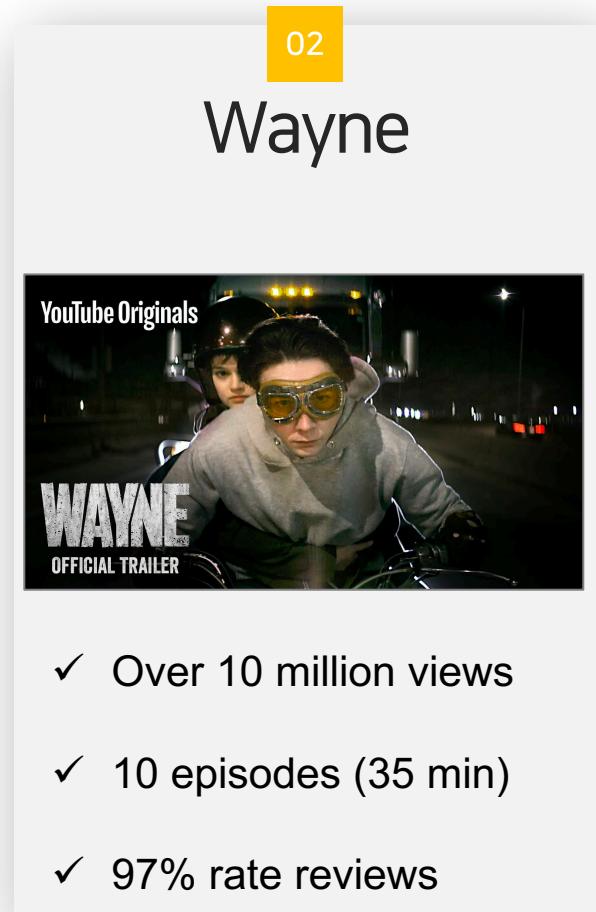
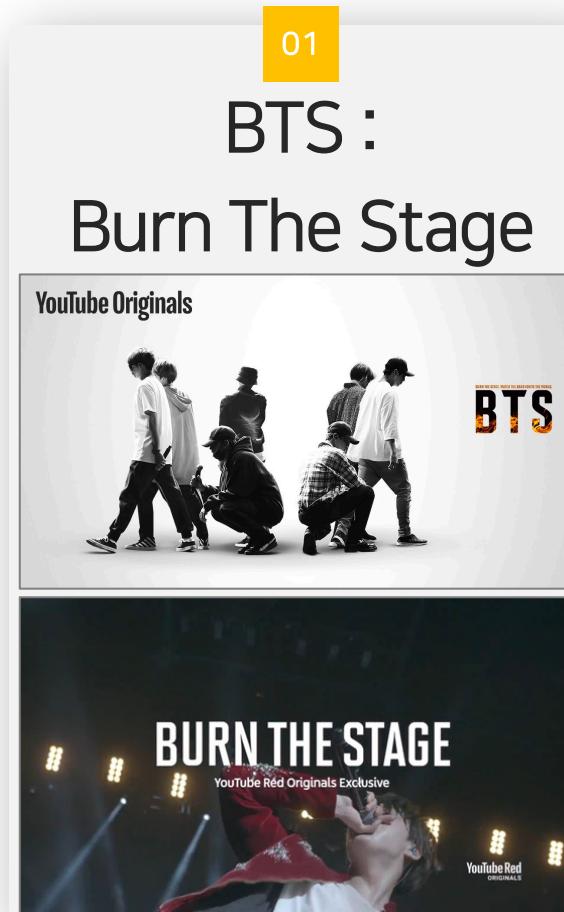
- Book, History
- Trip Vlog
- Drama, Documentaries
- Comedies
- Music, Reality etc.



150+ series

, Each series has average 10 episodes

- Length of an episode is up to an hour

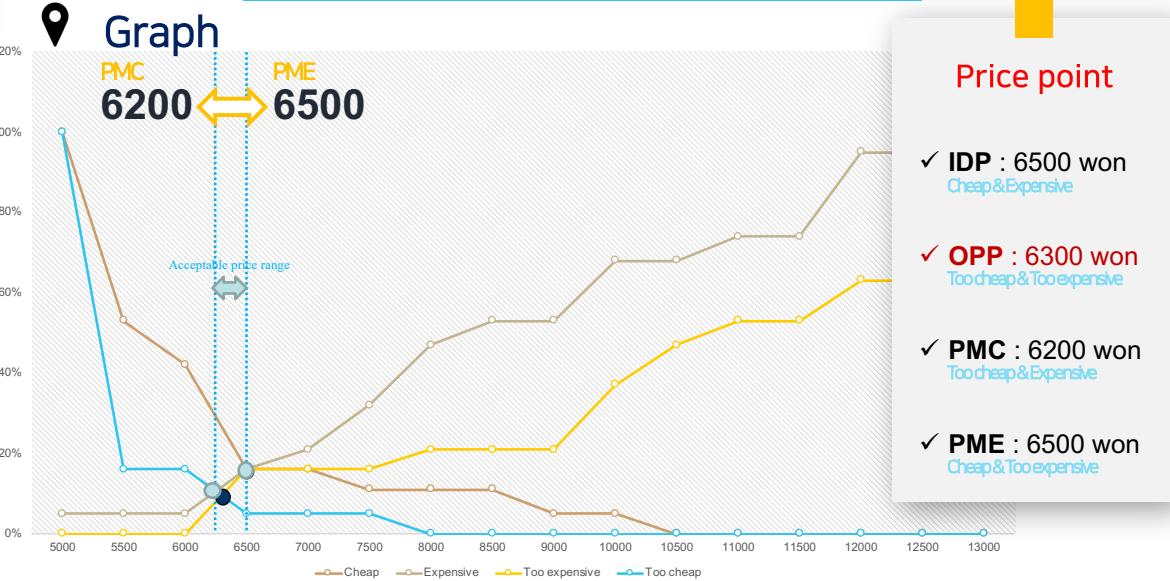


- ✓ Over 10 million views
- ✓ 10 episodes (35 min)
- ✓ 97% rate reviews

2.4.2

Youtube Premium price

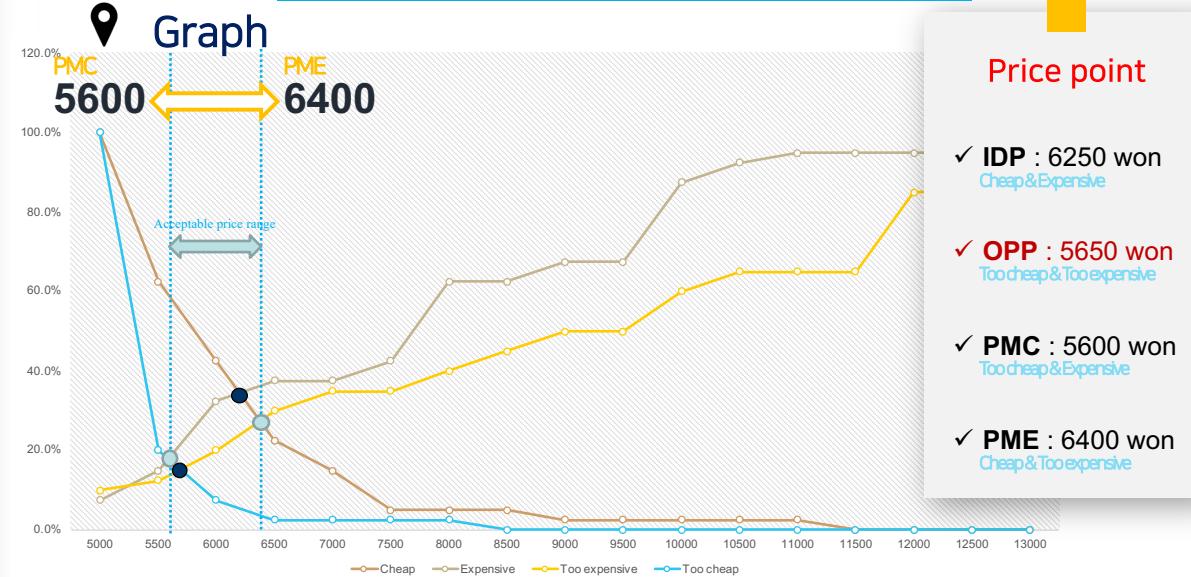
Current Subscribers



Table

Price	Cheap	cum	pct	Expensive cum	pct	Too expensive	cum	pct	Too cheap cum	pct		
5000	9	19	100%	1	1	5%	0	0	0%	16	19	100%
5500	2	10	53%	0	1	5%	0	0	0%	0	3	16%
6000	5	8	42%	0	1	5%	0	0	0%	2	3	16%
6500	0	3	16%	2	3	16%	3	3	16%	0	1	5%
7000	1	3	16%	1	4	21%	0	3	16%	0	1	5%
7500	0	2	11%	2	6	32%	0	3	16%	1	1	5%
8000	0	2	11%	3	9	47%	1	4	21%	0	0	0%
8500	1	2	11%	1	10	53%	0	4	21%	0	0	0%
9000	0	1	5%	0	10	53%	0	4	21%	0	0	0%
10000	1	1	5%	3	13	68%	3	7	37%	0	0	0%
10500	0	0	0%	0	13	68%	2	9	47%	0	0	0%
11000	0	0	0%	1	14	74%	1	10	53%	0	0	0%
11500	0	0	0%	0	14	74%	0	10	53%	0	0	0%
12000	0	0	0%	4	18	95%	2	12	63%	0	0	0%
12500	0	0	0%	0	18	95%	0	12	63%	0	0	0%
13000	0	0	0%	1	19	100%	7	19	100%	0	0	0%

Non Subscribers



Table

Price	Cheap	cum	pct	Expensive cum	pct	Too expensive	cum	pct	Too cheap cum	pct	
5000	15	40	100.0%	3	3	7.5%	4	10.0%	32	40	100.0%
5500	8	25	62.5%	3	6	15.0%	1	5	12.5%	5	20.0%
6000	8	17	42.5%	7	13	32.5%	3	8	20.0%	2	7.5%
6500	3	9	22.5%	2	15	37.5%	4	12	30.0%	0	1
7000	4	6	15.0%	0	15	37.5%	2	14	35.0%	0	1
7500	0	2	5.0%	2	17	42.5%	0	14	35.0%	1	2.5%
8000	0	2	5.0%	8	25	62.5%	2	16	40.0%	1	2.5%
8500	1	2	5.0%	0	25	62.5%	2	18	45.0%	0	0.0%
9000	0	1	2.5%	2	27	67.5%	2	20	50.0%	0	0.0%
9500	0	1	2.5%	0	27	67.5%	0	20	50.0%	0	0.0%
10000	0	1	2.5%	8	35	87.5%	4	24	60.0%	0	0.0%
10500	0	1	2.5%	2	37	92.5%	2	26	65.0%	0	0.0%
11000	1	1	2.5%	1	38	95.0%	0	26	65.0%	0	0.0%
11500	0	0	0.0%	0	38	95.0%	0	26	65.0%	0	0.0%
12000	0	0	0.0%	0	38	95.0%	8	34	85.0%	0	0.0%
12500	0	0	0.0%	0	38	95.0%	0	34	85.0%	0	0.0%
13000	0	0	0.0%	2	40	100.0%	6	40	100.0%	0	0.0%

2.4.3

Youtube Premium B/C

Current Subscribers



Benefit

Average of acceptable range

OPP 6300 won



Cost

Fixed cost (only one price plan)

7900 won



B/C ratio

With AW (equivalent monthly cost)

$$\frac{6300}{7900} = 0.797 < 1$$

No initial cost, only monthly subscription fee

Non Subscribers



Benefit

Average of acceptable range

OPP 5650 won



Cost

Fixed cost (only one price plan)

7900 won



B/C ratio

With AW (equivalent monthly cost)

$$\frac{5650}{7900} = 0.715 < 1$$

Youtube Premium Implications



Both subscribers and non-subscribers can access the same contents

- Everybody can watch Youtube videos for free (with multiple times of Ads while watching the video).



- The price 7900 won is mostly for user convenience, not other factors.



Only those who have used it know its true value

- Everybody can watch Youtube videos for free (with multiple times of Ads while watching the video).
- Subscribers have higher value on both acceptable price range and OPP point than non-subscribers.
- For non-subscribers, distributions of 'Expensive' and 'Too expensive' are pretty much skewed to the lowest price point (5000 won).



- Convenience come from those features (remove Ads, offline use, background play) exceeds the expectations which subscribers had been expected.
- Non-subscribers are not willing to pay for those additional features. They have at least a little bit of interest, but they think existing way (without premium) is enough to watch the videos.



Still, 7900 won is expensive for additional features

Since the B/C ratio for subscribers is less than 1

Youtube Premium review

A d v a n t a g e

- Contents
 - Existing Youtube videos
 - diversity of type of contents
 - variety of informations
 - deeper knowledges
 - Youtube Original (BTS: Burn The Stage)
 - Youtube Music (enormous amount of music)
- Quality
 - No advertisements
 - Background play
 - No buffering
- Convenience
 - Personal music playlist
 - Personal video recommendation

D i s a d v a n t a g e

- Contents
 - Lack of original contents
 - relatively low percentage of official releases

2.4.6

Youtube Premium word-cloud (1)

Review에서 ‘프리미엄’ 또는 ‘premium’이라는 단어가 언급된 경우만 추출하였습니다.

Google Play : Rate 1 and 2 (n = 566)



“Playback”, “Screen”, “Function”

- Many Users experienced error during the video playback

Galaxy Note 8 유튜브 **프리미엄** 이용자입니다. 최근에 동영상 2-3개정도보면 동영상이 끊기고 홈으로 돌아가기버튼도 잘 안눌리지면서 폰에 렉이 걸리는 현상이 심했었는데요, 처음엔 그냥 앱을 껐다가 키면 상태가 괜찮아졌어요.근데 왜 이 앱은 업데이트가 될수록 렉이 심해지고 앱을 끄기도 힘들고 다시 앱을 킬때까지 시간이 오래걸릴까요? 저만 이런 현상을 겪는게 아닌데 이런 심각한 오류는 해결해줘야하는거아닌가요? 동영상을 보다가도 갑자기 멈추면 너무 화나서 그냥 앱끄고 다른앱을 키게 되네요. 오늘 아침엔 한 영상을 보는데 세번이 끊기길래 끄는데 끌때도 렉이 걸리는거보고 이건 아니다싶어서 글을 남깁니다. 이런 오류를 빨리 해결해주시면 감사하겠습니다.



“Premium”, “Payment”, “continuous”

- Payment is continued after termination the subscription

취소 했는데 다시 갱신 됐어요 ;; 분명 해지 날짜에 맞춰서 비활성화 하는 거 했는데 왜 **프리미엄**이 그 대로인가요? 아— 모르고 그냥 유튜브 보다 화면 아웃했더니 그대로 화면이 팔로 해오더라구요 빨리 해지해주세요 진짜 아



“ADS”

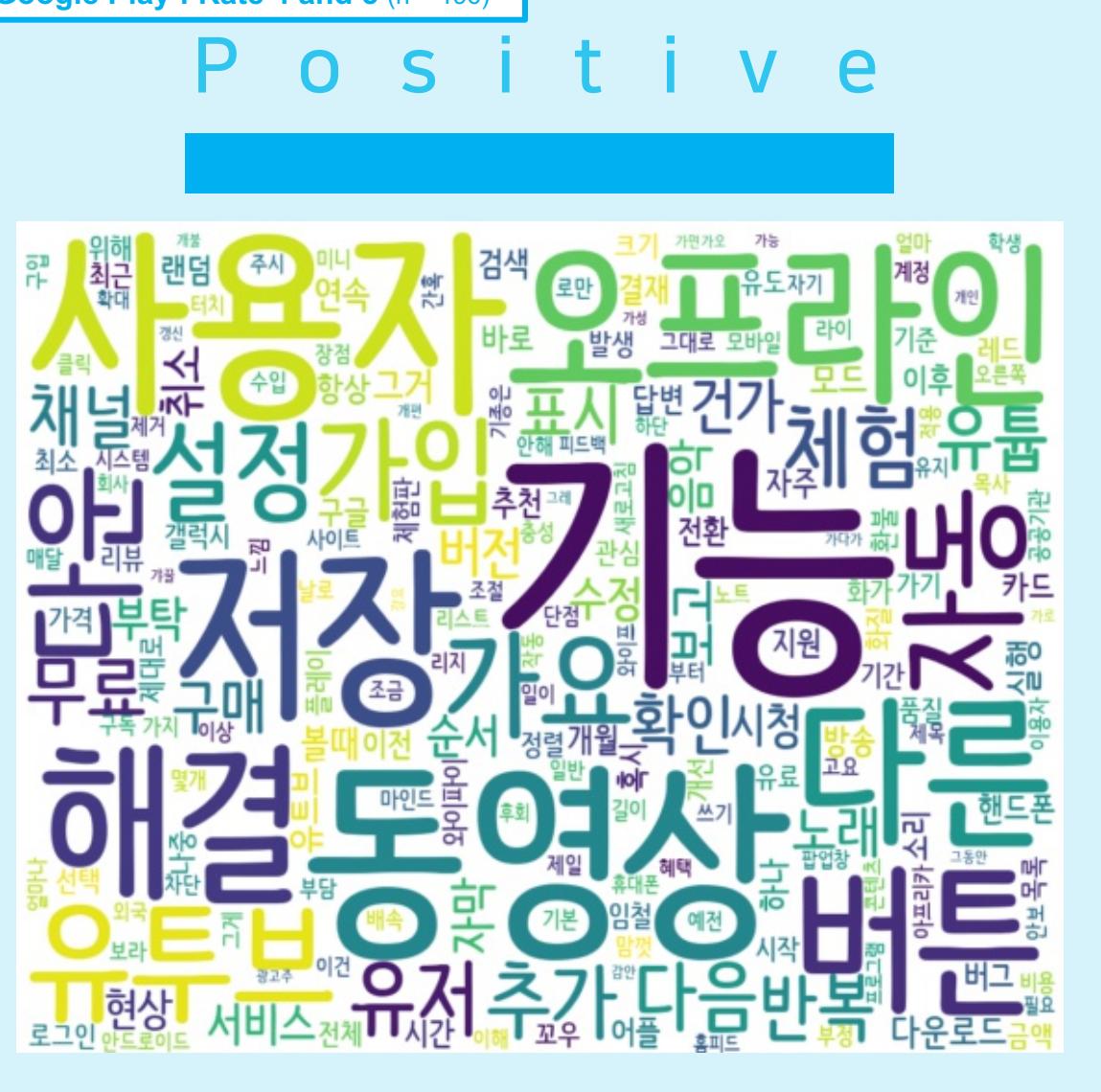
- Subscribers keep watching Ads after subscribing premium service

유튜브 **프리미엄** 사용자입니다. 왜 갑자기 난데없이 광고가 난무하죠? 광고 싫어서 **프리미엄** 결제한 건데 플레이리스트에 맨 위에 떡하니 나온거는 뭔가요? 장난하시나요 :) 광고 싫어서 돈을 냈는데 광고를 줄이기는 커녕 더 넣다니 이건 뭐죠? 답장 부탁드려요.

Youtube Premium word-cloud (2)

Negative에서 **Positive**보다 30회 이상 많이 언급된 단어의 경우 **Positive** 단어에서 제외하였습니다.

Google Play : Rate 4 and 5 (n = 196)



“Function”, “Videos”

- Subscribers are very satisfied with those functions added in premium service (No Ads)

프리미엄 구입했을 때, 화면 꺼도 계속 소리 들리고 다른 앱 활성화해도 작은 화면으로 볼 수 있어요.

프리미엄 구입하지 않으면 광고때문에 끊기고, 화면 끄면 재생도 멈춰서 불편하더라구요. 그거 외에는 멈춤현상도 적어진것같고 좋아요~

정신건강을 위해 **프리미엄** 이용하세요 ㅋㅋㅋㅋ 쓰다가 일반유튭쓰면 광고때문에 정신병걸리겠던데요 ㅋㅋㅋㅋㅋㅋㅋㅋ

“Save”, “Offline”, “Download”

- Offline playback thanks to saving videos are very attractive to many users

오프라인 저장 기능, 일반 저장 기능(그룹제목 설정 가능) 매우 유용.

“Music”

- Youtube music contained in premium service are another comfortable and useful features to users

프리미엄사면 다른 음악앱 필요없음



📍 Key features

- The largest number of subscribers in Korea
- Subscription base paid OTT
- Live time machine
- 360 VR entertainment contents
- 80 live channels (including terrestrial broadcasters)

📍 Price

상품	화질	이용 기기	동시접속	가격
Basic	HD	모바일 + PC	1	7,900원
Standard	FHD	전체 디바이스	2	10,900원
Premium	FHD이상 최상위 화질	전체 디바이스	4	13,900원

상품	화질	이용 기기	동시접속	가격
Basic X PLAYY영화	HD	모바일 + PC	1	13,900원
Basic X Bugs 듣기	HD	모바일 + PC	1	13,750원

📍 Contents

- KBS, SBS, MBC's variety show + darama
- Exclusive contents
 - 조선로코 녹두전
 - Exo 의 사다리타기, 레드벨벳 레벨업 프로젝트
- 270 major movies + 5000 Korean released movies
- American TV Series exclusive opening

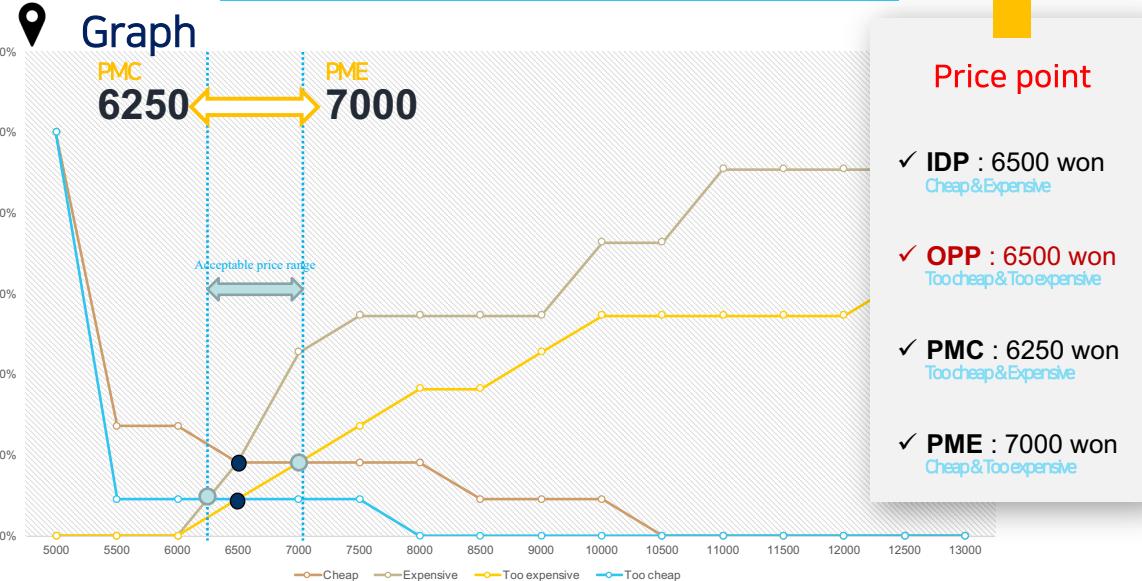
📍 Comment

- Oksusu + POOQ (M&A)
- Combination with Bugs (music streaming service)
- The most criticized service by users

2.5.2

Wavve price

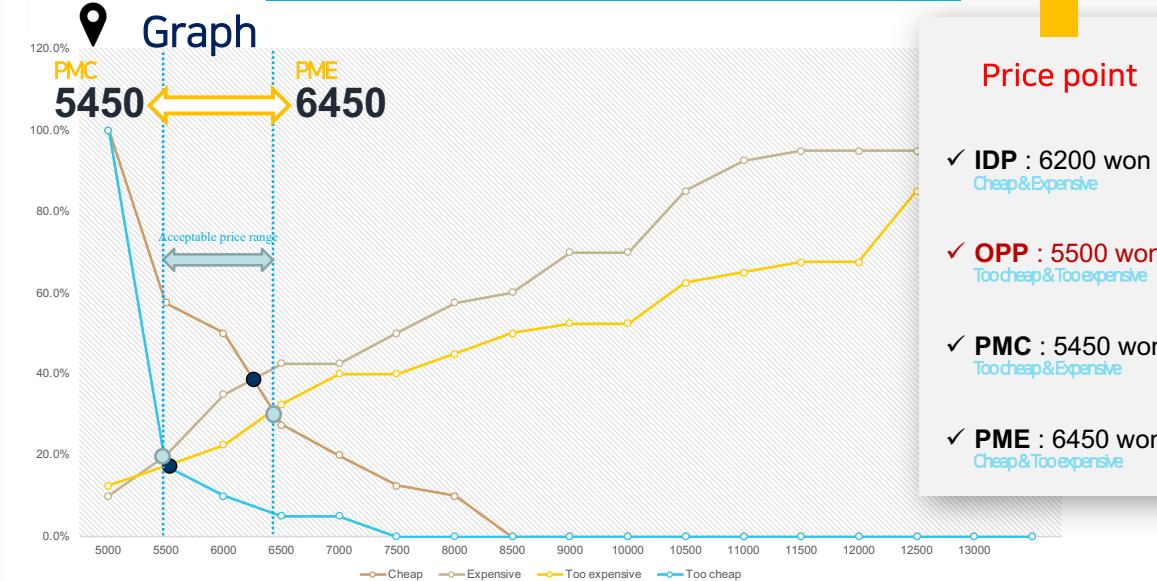
Current Subscribers



Table

Price	Cheap	cum	pct	Expensive	cum	pct	Too expensive	cum	pct	Too cheap	cum	pct
5000	8	11	100.00%	0	0	0.00%	0	0	0.00%	10	11	100.00%
5500	0	3	27.27%	0	0	0.00%	0	0	0.00%	0	1	9.09%
6000	1	3	27.27%	0	0	0.00%	0	0	0.00%	0	1	9.09%
6500	0	2	18.18%	2	2	18.18%	1	1	9.09%	0	1	9.09%
7000	0	2	18.18%	3	5	45.45%	1	2	18.18%	0	1	9.09%
7500	0	2	18.18%	1	6	54.55%	1	3	27.27%	1	1	9.09%
8000	1	2	18.18%	0	6	54.55%	1	4	36.36%	0	0	0.00%
8500	0	1	9.09%	0	6	54.55%	0	4	36.36%	0	0	0.00%
9000	0	1	9.09%	0	6	54.55%	1	5	45.45%	0	0	0.00%
10000	1	1	9.09%	2	8	72.73%	1	6	54.55%	0	0	0.00%
10500	0	0	0.00%	0	8	72.73%	0	6	54.55%	0	0	0.00%
11000	0	0	0.00%	2	10	90.91%	0	6	54.55%	0	0	0.00%
11500	0	0	0.00%	0	10	90.91%	0	6	54.55%	0	0	0.00%
12000	0	0	0.00%	0	10	90.91%	1	7	63.64%	0	0	0.00%
12500	0	0	0.00%	0	10	90.91%	1	7	63.64%	0	0	0.00%
13000	0	0	0.00%	1	11	100.00%	4	11	100.00%	0	0	0.00%

Non Subscribers



Table

Price	Cheap	cum	pct	Expensive	cum	pct	Too expensive	cum	pct	Too cheap	cum	pct
5000	17	40	100.0%	4	4	10.0%	5	5	12.5%	33	40	100.0%
5500	3	23	57.5%	4	8	20.0%	2	7	17.5%	3	7	17.5%
6000	9	20	50.0%	6	14	35.0%	2	9	22.5%	2	4	10.0%
6500	3	11	27.5%	3	17	42.5%	4	13	32.5%	0	2	5.0%
7000	3	8	20.0%	0	17	42.5%	3	16	40.0%	2	2	5.0%
7500	1	5	12.5%	3	20	50.0%	0	16	40.0%	0	0	0.0%
8000	4	4	10.0%	3	23	57.5%	2	18	45.0%	0	0	0.0%
8500	0	0	0.0%	1	24	60.0%	2	20	50.0%	0	0	0.0%
9000	0	0	0.0%	4	28	70.0%	1	21	52.5%	0	0	0.0%
9500	0	0	0.0%	0	28	70.0%	0	21	52.5%	0	0	0.0%
10000	0	0	0.0%	6	34	85.0%	4	25	62.5%	0	0	0.0%
10500	0	0	0.0%	3	37	92.5%	1	26	65.0%	0	0	0.0%
11000	0	0	0.0%	1	38	95.0%	1	27	67.5%	0	0	0.0%
11500	0	0	0.0%	0	38	95.0%	0	27	67.5%	0	0	0.0%
12000	0	0	0.0%	0	38	95.0%	7	34	85.0%	0	0	0.0%
12500	0	0	0.0%	0	38	95.0%	0	34	85.0%	0	0	0.0%
13000	0	0	0.0%	2	40	100.0%	6	40	100.0%	0	0	0.0%

2.5.3

Wavve B/C

Current Subscribers



Benefit

Average of acceptable range

OPP **6500 won**



Cost

$\frac{(3475 * 2) + (5450 * 4) + (7900 * 5)}{11} = \text{6205 won}$

Σ Price x number of person / total people



B/C ratio

With AW (equivalent monthly cost)

$$\frac{6500}{6205} = 1.048 \geq 1$$

No initial cost, only monthly subscription fee

Non Subscribers



Benefit

Average of acceptable range

OPP **5500 won**



Cost

From current users

6205 won



B/C ratio

With AW (equivalent monthly cost)

$$\frac{5500}{6205} = 0.886 < 1$$

Wavve Implications



Only those who have used it know its true value

- $B/C > 1$
- Subscribers' acceptable price range is quite higher than non-subscribers (more than 800 won)



- For domestic contents (especially terrestrial contents), there are no competitors.
 - Consumers should choose Wavve to watch '무한도전', '꽃보다 남자' etc.
 - Beneficiaries of monopolization



Lack of subscribers

20s are more interested in abroad or CJ ENM's contents, not terrestrial contents, which makes us very hard to find



Subscribers are enjoying both domestic (Wavve) and abroad (Netflix) contents

- 80% of subscribers are also subscribing Netflix at the same time
 - They also prefer both 'K-drama' and 'Abroad drama' genres



- For 20s, it seems that Wavve is a kind of complementary service, not mainly used service.

Wavve review

A d v a n t a g e

- Contents
 - Lots of K-contents for all genre
 - Wavve original
 - Independent media
 - Kids contents

D i s a d v a n t a g e

- Contents
 - Lack of abroad contents
- Quality
 - lack of device optimization
- Convenience
 - Old fashioned basic search

2.5.6

Wavve word-cloud (1)

Google Play : Rate 1 and 2 (n = 6560)

N e g a t i v e



"OKSUSU"

- Most subscribers are come from OKSUSU, not POOQ
 - Everything became a lot worse than OKSUSU
 - Contents removal
 - Uncomfortable & complex UI, Low resolution
 - Frequent error (playback, choppy, black out, loading)



이소연

★ ★ ★ ★ ★ 2019년 11월 15일



3

저도 진짜 화가나요!! 실시간도 볼만한 프로그램도 없고 전 tvn이나 jtbc 거의 고정인데—— 인터페이스도 그지같아여.. 최신영화 업데이트되었다고 들어가보면 몇십년전 영화랑 뒤죽박죽 섞여있고 무료영화는 그렇다쳐도 검색하면 영화나 tv프로그램도 거의 없어요~ 영화 기생충 보고싶은데 그것도 없고 tv프로그램 러브캐쳐도 없고 더더군다나 옥수수는 거의다 btv로 연계되어 볼수 있었는데 웨이브는 그것조차 안되더라구여—— 진짜 좋아지지는 못할망정.. 저는 시그니처 요금제에다가 옥수수 미디어데이터팩요금제 까지 가입했는데 웨이브로 바뀌고나서 월 제대로 써본적이 없네여.. VIP 혜택도 점점 그지같아지고—— 옥수수땜에 티비도 비티비로 바꾼건데!!! 어휴.. 진짜 최.악. 이예여드드 별하나주기도 아까운듯..



“Payment”, “Ticket”

- Telecom discount removal, subscription termination



북0

★ ★ ★ ★ ★ 2019년 11월 30일



10

가입 한 당일에는 시청 가능하다가 12시 지나자마자 바로 1분 미리보기로 바뀌고 보다가 끊으면 처음부터 다시봐야하고 옥수수는 5천원이면 다 볼 수 있는 수준이었는데 웨이브는 요금도 너무 비싸고 통신사 할인도 사라지고 옥수수에서 소장용 구매한건 이전도 안되고 게다가 CJ 컨텐츠마저 없어서 볼게 없네요 기존 정기 결제도 해지했습니다 옥수수를 쭉 했으면 더 좋았을것 같네요

Benefit / Cost summary



Current Users

$$\frac{6300}{6137} = 1.027 \geq 1$$

Recommended

Non-Current Users

$$\frac{6100}{6137} = 0.994 < 1$$

Not Recommended



WATCHA PLAY

Current Users

$$\frac{6750}{7900} = 0.854 < 1$$

Not Recommended

Non-Current Users

$$\frac{5900}{7900} = 0.747 < 1$$

Not Recommended



YouTube Premium

Current Users

$$\frac{6300}{7900} = 0.797 < 1$$

Not Recommended

Non-Current Users

$$\frac{5650}{7900} = 0.715 < 1$$

Not Recommended



wavve

Current Users

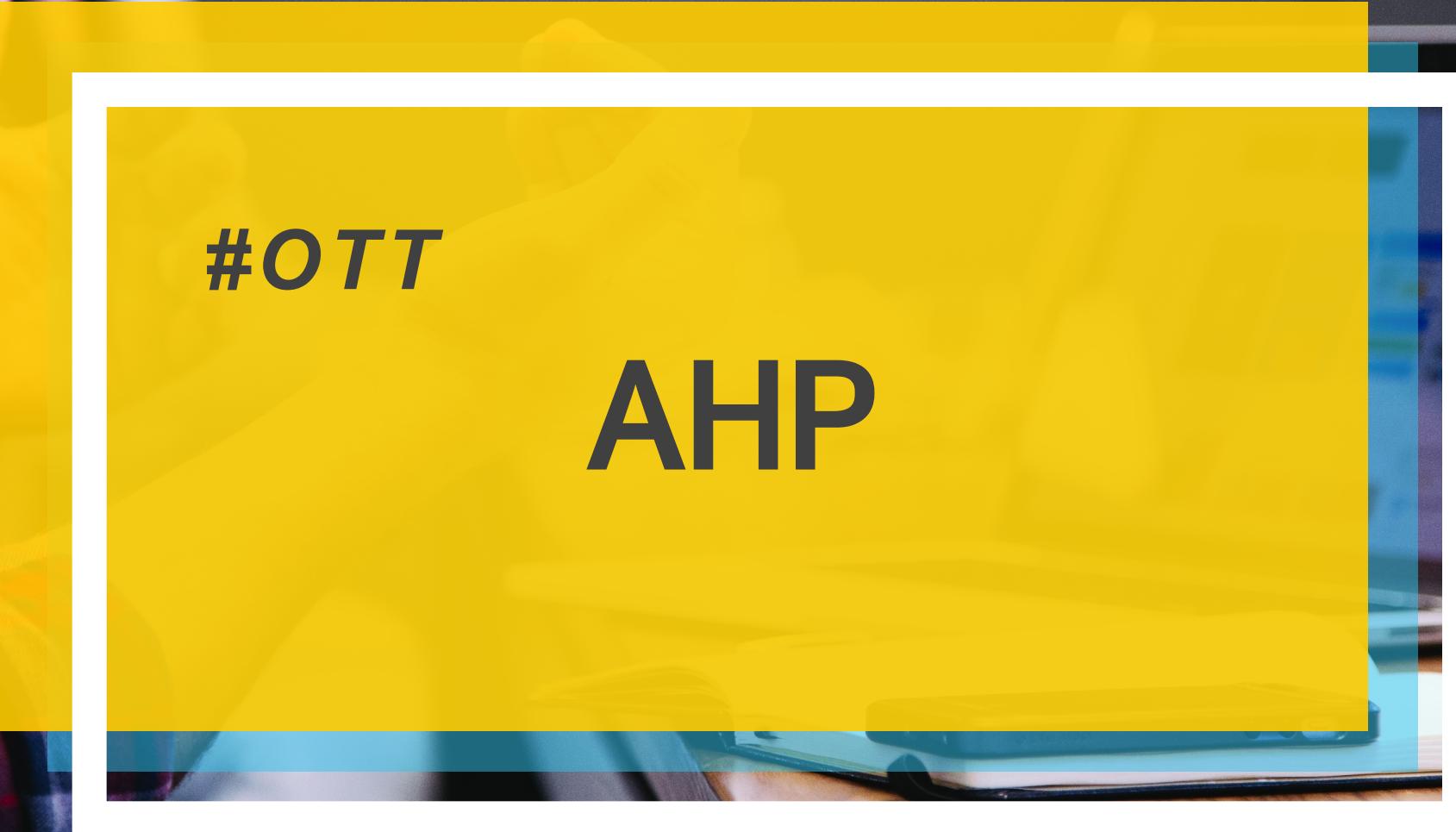
$$\frac{6500}{6205} = 1.048 \geq 1$$

Recommended

Non-Current Users

$$\frac{5500}{6205} = 0.886 < 1$$

Not Recommended



#OTT

AHP

Key evaluation factors for 20s

20대 OTT 서비스 속성 평가 요인의 가중치 및 우선순위							
평가 항목	20대		평가 항목	20대		20대 a)	
	가중치	순위		가중치	순위		
콘텐츠	.290	1	국내 콘텐츠의 양	.306	1	.088	2
			해외 콘텐츠의 양	.225	3	.065	6
			오리지널 콘텐츠의 양	.191	4	.055	8
			장르의 다양성	.276	2	.080	3
비용	.283	2	이용가격의 합리성	.516	1	.109	1
			요금제의 다양성	.258	2	.055	9
			프로모션	.224	3	.047	12
서비스 품질	.242	3	화질	.310	1	.075	4
			음질	.191	4	.046	13
			안정성	.295	2	.071	5
			광고 없음	.202	3	.049	11
이용 편의성	.183	4	맞춤형 콘텐츠 추천	.176	4	.040	15
			UI 및 검색 정확성	.228	2	.052	10
			N-스크린	.196	3	.044	14
			콘텐츠 업로드의 실시간성	.253	1	.058	7
			콘텐츠 정보	.145	5	.033	16

Reference: Hanyang Univ. Research centre

1st. Contents

- Domestic
- Genre diversity
- Abroad
- Original

2nd. Price

- rationality
- Plan diversity
- Promotions

3rd. Quality

- Resolution
- Stability
- No ADs
- sound

4th. Convenience

- Real-time update
- UI
- Multiple screens
- Curation
- Contents info

3.1.2 Survey details (respondents)

Hanyang University

- Total respondents : 303
- Gender distribution
 - Male : 153 (50.5%)
 - Female : 150 (49.5%)
- Age distribution
 - Average : 34.5 year-old (8.10 standard deviation)
 - 20s : 100 (33%)
 - 30s : 100 (33%)
 - 40s : 103 (34%)
- Region distribution
 - Seoul : 123 (40.6%)
 - Gyeonggi-do : 72 (23.8%)
 - Incheon : 25 (8.3%)
 - Other regions : 83 (27.3%)
- Income level
 - Under 1 million won: 20 (6.6%)
 - 1 Million ~ 2 Million won: 55 (18.2%)
 - 2 Million ~ 3 Million won: 81 (26.7%)
 - 3 Million ~ 4 Million won: 78 (25.7%)
 - Over 4 million: 69 (22.8%)

Our survey

- Subscribers
 - Total respondents : 71
 - Netflix : 53 (74.6%) [종복응답]
 - Watcha Play : 18 (25.4%) [종복응답]
 - Youtube Premium : 21 (29.6%) [종복응답]
 - Wavve : 9 (12.7%) [종복응답]
 - Other services : 6 (7%) [종복응답]
- Gender distribution
 - Male : 31 (43.7%)
 - Female : 40 (56.3%)
- Age distribution (all 20s, 100%)
 - below 25 : 62 (87.3%)
 - Above 25 : 9 (12.7%)
- Non-subscribers
 - Total respondents : 40
 - Gender distribution
 - Male : 12 (30%)
 - Female : 28 (70%)
 - Age distribution (all 20s, 100%)
 - Below 25 : 38 (95%)
 - Above 25 : 2 (5%)

3.1.3

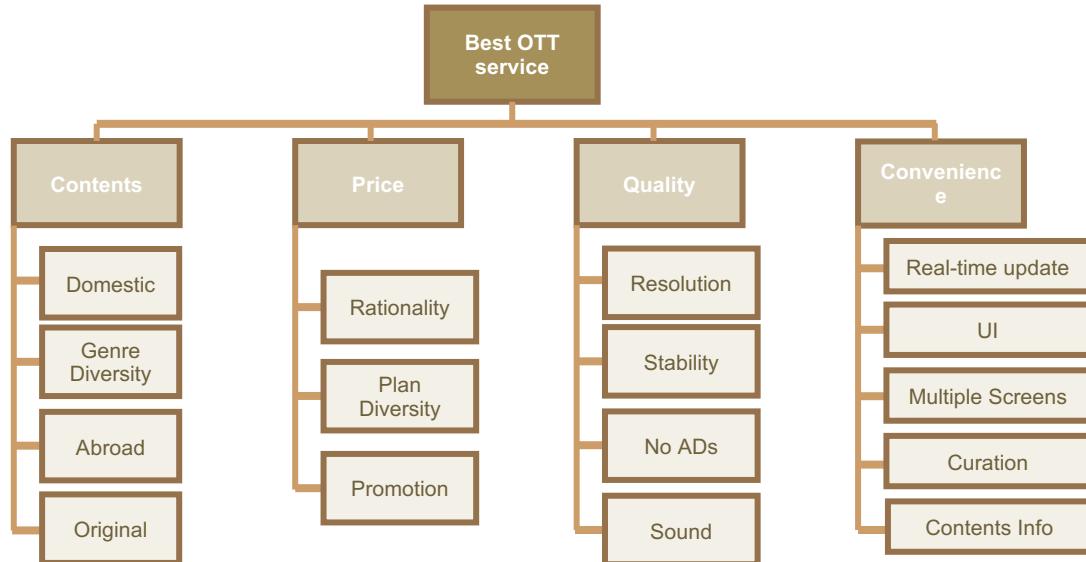
Decision Tree



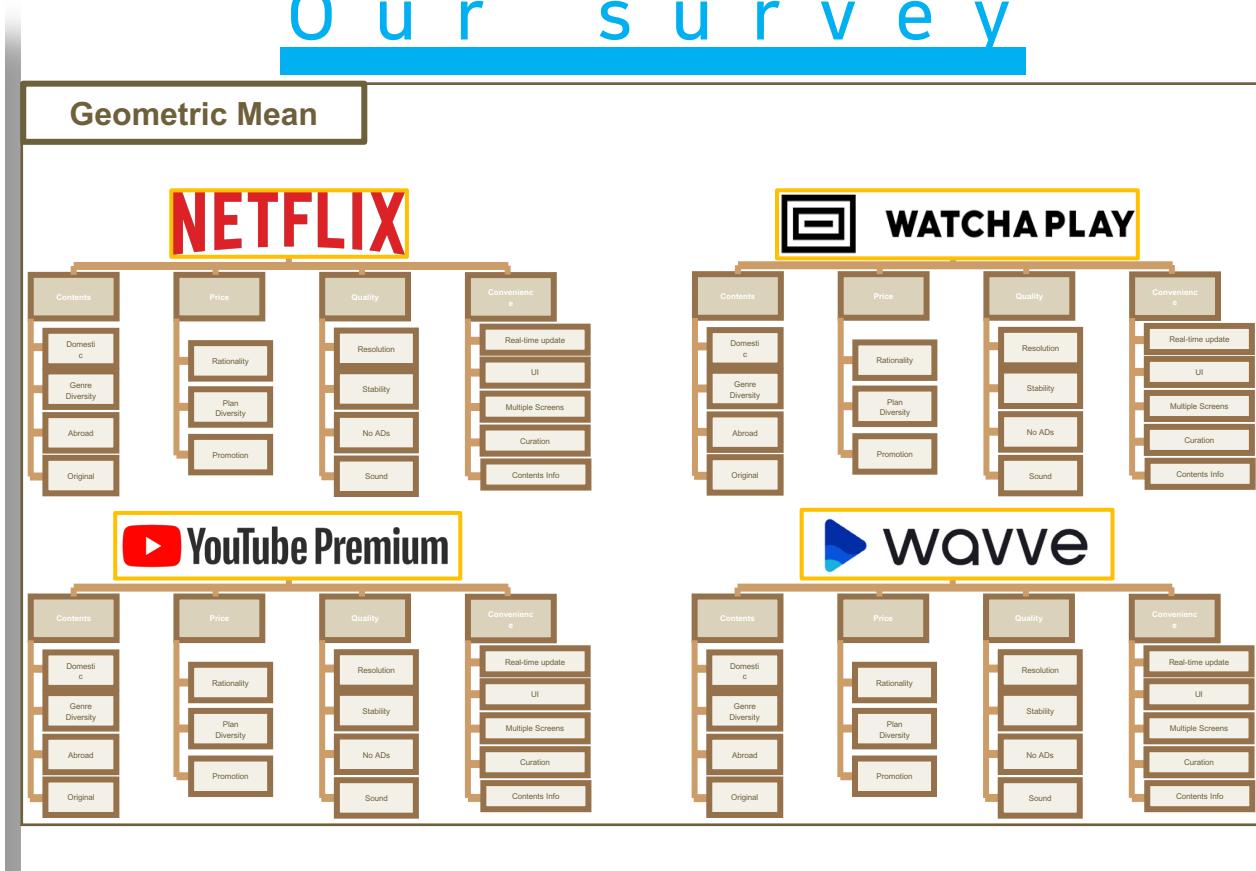
3.1.4

Decision Tree

Hanyang University



Our survey



Compare scores of Hanyang Univ. and Our survey

NETFLIX

WATCHA PLAY

YouTube Premium

wavve

3.2.1 Supporting materials



(표 2) 확인적 요인 분석 결과

측정 변인	측정 문항	표준화 계수값	표준화 오차	AVE	C.R.	측정 변인	측정 문항	표준화 계수값	표준화 오차	AVE	C.R.
해외 콘텐츠 다양성	1 .839 .116	.25	.834 .128			해외	.908				
	2 .858 .114 .826 .934		콘텐츠 인족	.26 .757 .188 .801	.924	국내	.193** .889				
	3 .793 .207			.28 .892 .123							
국내 콘텐츠 다양성	4 .771 .184					오리	.436** .122** .903				
	5 .868 .123 .791 .919		요금제 인족	.29 .924 .094 .879	.956	요금 다양	.189** .097** .202** .904				
	6 .780 .211			.30 .905 .118		비용 수준	.117** .085* .174** .397** .917				
オリ지널 콘텐츠 다양성	7 .742 .216			.31 .877 .120		추천	.204* .070* .204* .290* .350** .863				
	8 .883 .111 .817 .930		편의 기능 만족	.32 .868 .131 .844	.942	검색	.230** .159** .186** .287** .210** .911				
	9 .873 .132			.33 .838 .159		정보	.171* .034 .176 .257** .270* .299* .106** .903				
국내 제작 다양성	10 .834 .219			.34 .750 .262		콘텐츠 만족	.454** .190* .481* .351** .239* .325* .260** .264** .894				
	11 .915 .127 .819 .931		인지도 유용성	.35 .853 .181 .766	.907	비용 만족	.149** .085* .200* .444** .788* .381** .236** .231** .280** .937				
비용 수준	13 .921 .103			.37 .800 .184		편의 기능 만족	.263** .111** .320* .355** .403* .644** .327** .363** .393** .420** .918				
	14 .901 .136 .842 .941		유용성	.38 .813 .204 .791	.919	유용성	.424** .175** .377** .317** .338* .341** .299* .252* .456** .408* .419** .875				
	15 .855 .206			.39 .867 .153		유희성	.356** .085* .342** .300* .314** .340** .239* .232* .419** .355** .407** .503** .889				
영상 추천	16 .889 .139			.40 .779 .197		용이성	.281* .073* .339* .304** .326* .257** .288* .228* .316** .336* .330* .411** .527** .880				
	17 .903 .136 .745 .942		인지도	.41 .790 .217 .775	.912	지속 이용	.369** .139** .400** .274** .344** .337* .275* .309* .409* .369* .444** .605** .550** .468** .870				
감독	18 .881 .161										
	19 .890 .152										
	20 .933 .102 .831 .937		지속적 이용 정도	.44 .856 .167 .758	.904						
	21 .835 .225										
	22 .866 .217										
영상 정보	23 .913 .134 .817 .931										
	24 .877 .171										

: 대각 행렬에 있는 값은 각 임계변수의 계급근 AVE값임

Reference: 글로벌 OTT 서비스 이용자 지속적 이용 의도에 미치는 요인 연구 넷플릭스 사례를 중심으로



Reference: 대학내일 20대 연구소

유튜브 프리미엄, 쓸 것인가 말 것인가

한 달에 8,690원이나 되는 돈을 들여가며 유튜브 프리미엄에 가입해야 할까, 말아야 할까. 그러나 적어도 아래 계산대로라면, 그리고 당신이 하루에 한 시간 이상 유튜브에 투자하는 열성 시청자라면 결론은 명확합니다. 오히려 가입하는 것이 이득입니다.

유튜브에 올라오는 영상은 대부분 2분에서 3분을 넘기지 않습니다. 하루에 한 시간씩 유튜브 영상을 본다고 가정 하면 이런 영상을 20개 가량 보는 셈입니다. 그리고 적어도 한 영상당 한 번은 광고가 끼어들기 마련입니다.

이 광고를 정확히 5초 뒤에 넘길 수도 있고, 광고 내용이 재미있어서 저도 모르게 끊지 못하고 계속 보게 될 수도 있습니다. 그러나 당신이 충분히 야박한(?) 시청자라고 가정한다면 한 시간에 100초 가량 광고를 보게 됩니다. 한 달은 30일이니 결국 3,000초, 한 달에 50분 이상을 광고로 허비하는 셈입니다.



References

- Environmental analysis result
- B/Cratio
- Word-cloud

- "Watcha" has the largest number of Korean movie and drama-oriented content.
- It is a great advantage to be able to see images for a cup of coffee. Other OTT movies cost 3,000-4,000 won per movie.
- according to direct and Internet research, both picture quality, sound quality and stability are very poor compared to other OTT services.



[표 22] 콘텐츠기반 OTT 유형별 미디어 총족자원에 대한 기술통계

구분	PP기반 OTT		지상파기반 OTT		독립 OTT		
	티빙	폭	넷플릭스	143	170	103	
사례수(N)				143	170	103	
기술통계	평균(M)	표준편차(SD)	평균(M)	표준편차(SD)	평균(M)	표준편차(SD)	
인지적 정서적 차원	휴식/시간보내기	5.035	0.926	5.071	0.918	5.288	1.027
	오락추구	5.121	0.882	5.071	0.962	5.453	1.026
	정보획득	4.657	0.998	4.655	0.997	4.544	1.094
	자기파시	4.381	1.105	4.276	1.196	4.748	1.207
서비스 차원	이용용이성	4.937	0.930	4.996	0.894	5.052	0.989
	이용편의성	4.721	0.890	4.676	0.894	5.085	0.887
	콘텐츠 다양성	4.911	0.946	4.804	0.994	5.191	0.944
총족 기회	휴대성	5.238	0.916	5.204	0.947	5.239	0.949
	경제적 이익	4.481	0.992	4.403	1.001	4.148	1.172

Reference: 국내 OTT(OverTheTop) 서비스 시장에서의 시업자 유형간 경쟁 관계에 대한 적소분석 연구

[표 23] 콘텐츠기반 OTT 사업자 유형별 장르별 총족자원에 대한 기술통계

구분	PP기반 OTT		지상파기반 OTT		독립 OTT	
	티빙	폭	넷플릭스	143	170	103
기술통계	평균(M)	표준편차(SD)	평균(M)	표준편차(SD)	평균(M)	표준편차(SD)
국내영화	4.888	1.181	4.659	1.182	4.718	1.396
해외영화	4.685	1.213	4.429	1.291	5.631	1.180
국내드라마	5.077	1.157	5.100	1.205	4.272	1.429
해외드라마	4.755	1.323	4.282	1.364	5.563	1.304
오리지널	4.524	1.326	3.976	1.418	5.068	1.555
스포츠	4.552	1.377	4.294	1.205	4.000	1.521
애니메이션	4.531	1.408	4.235	1.279	4.505	1.441
게임	4.224	1.355	4.012	1.250	3.864	1.541
다큐/교양	4.371	1.314	4.247	1.239	4.194	1.585
교육	4.322	1.422	4.129	1.290	4.019	1.553
키즈	4.280	1.406	4.112	1.294	4.126	1.551
예능	4.993	1.196	4.835	1.263	4.544	1.385

3.2.2 Weight matrices



Key factor weights

Feature	Netflix	Watcha	Youtube	Wavve	Geometric Mean
contents	0.281597418	0.519849459	0.211650922	0.562115516	0.363277082
price	0.145400894	0.343003065	0.523841655	0.176955172	0.260754668
quality	0.05775489	0.089707493	0.0528565	0.135352586	0.078027126
convenience	0.515246798	0.047439983	0.211650922	0.125576726	0.159651236

$\sqrt[4]{(A \times B \times C \times D)}$

Contents

Feature	Netflix	Watcha	Youtube	Wavve
domestic	0.111076832	0.525550413	0.281703532	0.561028891
genre	0.04167238	0.151002411	0.545549921	0.218778936
abroad	0.320295717	0.274242822	0.105805939	0.086065623
original	0.526955071	0.049204355	0.066940607	0.13412655

Domestic > Abroad >= Genre diversity > Original

Geo. Mean
0.309923028
0.165545754
0.168173104
0.123522304

Feature	Netflix	Watcha	Youtube	Wavve	Geo. Mean
rationality	0.776592016	0.722534918	0.668696895	0.387301587	0.505233757
plan	0.15489776	0.103328469	0.08820212	0.16984127	0.108851565
promotions	0.068510224	0.174136613	0.243100985	0.442857143	0.126540178

Rationality >> Promotions > Plan diversity

Quality

Feature	Netflix	Watcha	Youtube	Wavve
resolution	0.143035714	0.221880131	0.047999695	0.268618317
stability	0.62625	0.167487685	0.208274867	0.49212946
no ads	0.057678571	0.543103448	0.642681527	0.135433159
sound	0.173035714	0.067528736	0.101043911	0.103819064

Stability > No ADs > Resolution > Sound

Geo. Mean
0.142227721
0.32200433
0.22850961
0.105221117

Feature	Netflix	Watcha	Youtube	Wavve	Geo. Mean
real-time	0.037401985	0.050172943	0.344714345	0.370176507	0.124396485
UI	0.162620332	0.134432228	0.136238115	0.340424846	0.178443005
screens	0.075014032	0.074538907	0.038095081	0.156281338	0.075958326
curation	0.562343319	0.184981509	0.136238115	0.083718337	0.185593289
info	0.162620332	0.555874414	0.344714345	0.049398973	0.198076156

Contents info >= Curation >= UI > Real-time update > Multiple screens

3.2.3

Weight summary

Hanyang University

평가 항목	20대		평가 항목	20대		Integrated	
	가중치	순위		가중치	순위		
콘텐츠	.290	1	국내 콘텐츠의 양	.306	1	.088	2
			해외 콘텐츠의 양	.225	3	.065	6
			오리지널 콘텐츠의 양	.191	4	.055	8
			장르의 다양성	.276	2	.080	3
비용	.283	2	이용가격의 합리성	.516	1	.109	1
			요금제의 다양성	.258	2	.055	9
			프로모션	.224	3	.047	12
			화질	.310	1	.075	4
서비스 품질	.242	3	음질	.191	4	.046	13
			안정성	.295	2	.071	5
			광고 없음	.202	3	.049	11
			맞춤형 콘텐츠 추천	.176	4	.040	15
이용 편의성	.183	4	UI 및 검색 정확성	.228	2	.052	10
			N-스크린	.196	3	.044	14
			콘텐츠 업로드의 실시간성	.253	1	.058	7
			콘텐츠 정보	.145	5	.033	16

Our survey

Attribute	Weight	Rank	Sub	Weight	Rank	Integrated	Rank
Contents	0.3633	1	Domestic	0.3099	1	0.1126	2
			Abroad	0.1682	2	0.0611	3
			Original	0.1235	4	0.0449	5
			Genre Diversity	0.1655	3	0.0601	4
Price	0.2608	2	Rationality	0.5052	1	0.1317	1
			Plan diversity	0.1089	3	0.0284	10
			Promotion	0.1265	2	0.0330	6
Quality	0.0780	4	Resolution	0.1422	3	0.0111	15
			Sound	0.1052	4	0.0082	16
			Stability	0.3220	1	0.0251	11
			No ads	0.2285	2	0.0178	13
Convenience	0.1597	3	Curation	0.1856	2	0.0296	8
			UI	0.1784	3	0.0285	9
			Multi Screen	0.0760	5	0.0121	14
			Real-Time-Update	0.1244	4	0.0199	12
			Contents info	0.1981	1	0.0316	7

Weight analysis

Compare Hanyang's weight and our weight



'Plan Diversity' and 'Promotion' ranks are swapped

"Promotion" took higher place in our survey

- Promotion has an important role regarding to new user inflow.
- Since the gaps between subscribers and non-subscribers is relatively high in terms of people's perception to the service, its importance has been increased.



'Stability' beats 'Resolution' in quality category

'Resolution' was the most important sub-factor in Hanyang, yet 'Stability' took its place in our survey

- Since transmission techniques for video quality 화질 are equalized in these days, subscribers of all OTT services can watch videos in high resolution. Most of services use 5G
- Subscribers can enjoy high resolution videos from the cheapest price plan. From Basic plan to Premium plan
- However, the errors related to playback of those videos are still frequently occurring according to reviews

3.2.5

Weight analysis

Compare Hanyang's weight and our weight



Ranking between quality and convenience category has been changed

Convenience is treated as more important factor than quality in our survey

- Promotion has an important role regarding to new user inflow.
- Variety of videos are flowing out in these days.
- Those rapid changes in OTT contents market make subscribers pay attention to "how much those services provide convenience to choose the videos"



'Abroad' and 'Genre diversity' ranks are swapped

'Abroad' took higher place in our survey

- Thanks to Netflix and Youtube, people now have more opportunity to approach world -wide videos than ever before.
- Since most subscribers' preferences are focused on drama and entertainment shows, we can conclude that people consider whether the video is from overseas or not in the first place.

Weight analysis

Compare Hanyang's weight and our weight



The pool of contents is the most considerable factors

according to our survey

In integrated ranks, sub-factors of contents took TOP2 to TOP5 places, which is more skewed than Hanyang

- Participants choose their OTT service based on available contents
- The correlation between preferred genres and OTT service selection was considerably high.
 - Abroad → Netflix, Domestic → Wavve, etc.



Convenience ranking is reversed

“Real-time update”, “UI”, “Multi screen” in Hanyang → “Contents info”, “Curation”, “UI” in our survey

- Even though chances to access various kinds of videos have been dramatically increased thanks to OTT services, user's capacity to accommodate them remains the same.
- Peoples need an assistant to find what they want to watch based on their preferences.
- Contents information including not only synopsis and casts but also opinions from other subscribers are very important factor for user to judge whether they are going to watch the video or not
- Sophisticated and personalized recommendation algorithm is the exact tool to solve the problem

3.3.1 Score (1)



Contents - Domestic

var \var	Netflix	Watcha	Youtube	Wavve
Netflix	1.000	0.333	1.000	0.143
Watcha	3.000	1.000	4.000	0.333
Youtube	1.000	0.250	1.000	0.125
Wavve	7.000	3.000	8.000	1.000

var	weights	Ranks
Netflix	0.0792	3
Watcha	0.2405	2
Youtube	0.0718	4
Wavve	0.6085	1

Terrestrial broadcaster's power
 <1박2일>, <무한도전>



Contents - Abroad

var \var	Netflix	Watcha	Youtube	Wavve
Netflix	1.000	4.000	6.000	6.000
Watcha	0.250	1.000	3.000	2.000
Youtube	0.167	0.333	1.000	2.000
Wavve	0.467	0.500	0.500	1.000

var	weights	Ranks
Netflix	0.6085	1
Watcha	0.1992	2
Youtube	0.1099	3
Wavve	0.0824	4

Tremendous amount of videos
 from all around the world



Contents - Original

var \var	Netflix	Watcha	Youtube	Wavve
Netflix	1.000	9.000	6.000	6.000
Watcha	0.111	1.000	0.167	0.333
Youtube	0.167	6.000	1.000	4.000
Wavve	0.167	3.000	0.250	1.000

var	weights	Ranks
Netflix	0.6261	1
Watcha	0.0454	4
Youtube	0.2297	2
Wavve	0.0988	3

Center of the originals
 <House of cards>, <킹덤>



Contents - Genre Diversity

var \var	Netflix	Watcha	Youtube	Wavve
Netflix	1.000	5.000	1.000	2.000
Watcha	0.200	1.000	0.333	0.333
Youtube	1.000	3.000	1.000	0.500
Wavve	0.500	3.000	2.000	1.000

var	weights	Ranks
Netflix	0.3849	1
Watcha	0.0803	4
Youtube	0.2454	3
Wavve	0.2894	2

Well-structured & wide
 Category of videos

3.3.2 Score (2)

 Price - Rationality

var \var	Netflix	Watcha	Youtube	Wavve
Netflix	1.000		3.000	0.500
Watcha	0.333	1.000		0.500
Youtube	2.000	3.000	1.000	
Wavve	1.000	2.000	0.500	1.000

var	weights	Ranks
Netflix	0.2502	2
Watcha	0.1105	4
Youtube	0.4170	1
Wavve	0.2224	3

Perfect complement
For Youtube users

 Price- Plan Diversity

var \var	Netflix	Watcha	Youtube	Wavve
Netflix	1.000		3.000	3.000
Watcha	0.333	1.000		0.333
Youtube	0.333	1.000	1.000	
Wavve	1.000	3.000	3.000	1.000

var	weights	Ranks
Netflix	0.375	1
Watcha	0.125	3
Youtube	0.125	3
Wavve	0.375	1

Basic / Standard / Premium
3-way plan selections

 Price - Promotions

var \var	Netflix	Watcha	Youtube	Wavve
Netflix	1.000		2.000	1.000
Watcha	0.500	1.000		0.250
Youtube	1.000	2.000	1.000	
Wavve	3.000	4.000	2.000	1.000

var	weights	Ranks
Netflix	0.1966	3
Watcha	0.1083	4
Youtube	0.2166	2
Wavve	0.4786	1

1 month free trial
LTE / 5G plan discount (통신사결합)
50% discount for first 3 months

 Quality – Resolution

var \var	Netflix	Watcha	Youtube	Wavve
Netflix	1.000		2.000	0.500
Watcha	0.500	1.000		0.250
Youtube	2.000	4.000	1.000	
Wavve	1.000	2.000	0.333	1.000

var	weights	Ranks
Netflix	0.2166	2
Watcha	0.1083	4
Youtube	0.4786	1
Wavve	0.1966	3

Adaptive resolution
From 144p to 8K

3.3.3 Score (3)

 Quality - Sound

var \ var	Netflix	Watcha	Youtube	Wavve	
Netflix	1.000		3.000	4.000	1.000
Watcha	0.333	1.000		2.000	0.333
Youtube	0.250	0.500	1.000		0.333
Wavve	1.000	3.000	3.000	1.000	

var	weights	Ranks
Netflix	0.3905	1
Watcha	0.1468	3
Youtube	0.0971	4
Wavve	0.3655	2

Consistent (the same for all videos)
High Quality sound system

 Quality - Stability

var \ var	Netflix	Watcha	Youtube	Wavve	
Netflix	1.000		4.000	4.000	5.000
Watcha		0.250	1.000	1.000	3.000
Youtube		0.250	1.000	1.000	2.000
Wavve		0.200	0.333	0.500	1.000

var	weights	Ranks
Netflix	0.5724	1
Watcha	0.1829	2
Youtube	0.1602	3
Wavve	0.0845	4

Seamless play thanks to
'Dynamic Optimized Encoding'

 Quality - No ADs

var \ var	Netflix	Watcha	Youtube	Wavve	
Netflix	1.000		1.000	1.000	3.000
Watcha	1.000	1.000		1.000	3.000
Youtube	1.000	1.000	1.000		3.000
Wavve	0.333	0.333	0.333	1.000	

var	weights	Ranks
Netflix	0.3	1
Watcha	0.3	1
Youtube	0.3	1
Wavve	0.1	4

No banner, search Ads
No commercial break
No logos (on Netflix)

 Convenience - Personalized Curation

var \ var	Netflix	Watcha	Youtube	Wavve	
Netflix	1.000		4.000	3.000	7.000
Watcha		0.250	1.000	0.333	5.000
Youtube		0.333	3.000	1.000	6.000
Wavve		0.143	0.200	0.167	1.000

var	weights	Ranks
Netflix	0.5256	1
Watcha	0.1510	3
Youtube	0.2742	2
Wavve	0.0492	4

Enormous amount of user data
Highly sophisticated machine-learning
Based algorithm

3.3.4 Score (4)



Convenience - UI

var \ var	Netflix	Watcha	Youtube	Wavve	
Netflix	1.000		3.000	1.000	5.000
Watcha	0.333	1.000	0.333		4.000
Youtube	1.000	3.000	1.000		6.000
Wavve	0.200	0.250	0.167	1.000	

var	weights	Ranks
Netflix	0.3803	2
Watcha	0.1632	3
Youtube	0.3959	1
Wavve	0.0606	4

Simple & intuitive
User-friendly UI



Convenience - Multiple screens

var \ var	Netflix	Watcha	Youtube	Wavve	
Netflix	1.000		5.000	6.000	2.000
Watcha	0.200	1.000		2.000	0.250
Youtube	0.167	0.500	1.000		0.333
Wavve	0.500	4.000	3.000		1.000

var	weights	Ranks
Netflix	0.5175	1
Watcha	0.1097	3
Youtube	0.0783	4
Wavve	0.2945	2

Maximum 4 concurrent users
Support various kinds of devices



Convenience - Real-time update

var \ var	Netflix	Watcha	Youtube	Wavve	
Netflix	1.000		4.000	0.143	0.125
Watcha	0.250	1.000	0.111		0.111
Youtube	7.000	9.000	1.000		0.500
Wavve	8.000	9.000	2.000	1.000	

var	weights	Ranks
Netflix	0.0878	3
Watcha	0.0393	4
Youtube	0.3543	2
Wavve	0.5186	1

Real-time replay service
(only 5 seconds delay)



Convenience - Contents information

var \ var	Netflix	Watcha	Youtube	Wavve	
Netflix	1.000		0.200	0.250	1.000
Watcha	5.000	1.000		3.000	5.000
Youtube	4.000	0.333	1.000		3.000
Wavve	1.000	0.200	0.333	1.000	

var	weights	Ranks
Netflix	0.0902	4
Watcha	0.5465	1
Youtube	0.2685	2
Wavve	0.0948	3

Operating own community
For each channels

3.4.1

Combine weights & scores



Integrated weights

Vector
Multiplication

Attribute	Sub	Weight
Contents	Domestic	0.1126
	Abroad	0.0611
	Original	0.0449
	Genre Diversity	0.0601
Price	Rationality	0.1317
	Plan diversity	0.0284
	Promotion	0.0330
Quality	Resolution	0.0111
	Sound	0.0082
	Stability	0.0251
	No ads	0.0178
Convenience	Curation	0.0296
	UI	0.0285
	Multi Screen	0.0121
	Real-Time-Update	0.0199
	Contents info	0.0316



Score summary

Sub \ Score	Netflix	Watcha	Youtube	Wavve
Domestic	0.0792	0.2405	0.0718	0.6085
Abroad	0.6085	0.1992	0.1099	0.0824
Original	0.6261	0.0454	0.2297	0.0988
Genre Diversity	0.3849	0.0803	0.2454	0.2894
Rationality	0.2502	0.1105	0.4170	0.2224
Plan diversity	0.375	0.125	0.125	0.375
Promotion	0.1966	0.1083	0.2166	0.4786
Resolution	0.2166	0.1083	0.4786	0.1966
Sound	0.3905	0.1468	0.0971	0.3655
Stability	0.5724	0.1829	0.1602	0.0845
No ads	0.3	0.3	0.3	0.1
Curation	0.5256	0.1510	0.2742	0.0492
UI	0.3803	0.1632	0.3959	0.0606
Multi Screen	0.5175	0.1097	0.0783	0.2945
Real-Time-Update	0.0878	0.0393	0.3543	0.5186
Contents info	0.0902	0.5465	0.2685	0.0948
# 1st Place	9	2	4	4

3.4.2

Final results

Hanyang University

Attribute	Sub	Netflix	Watcha	Youtube	Wavve
Contents	Domestic	0.006968	0.021166	0.006322	0.053545
	Abroad	0.039555	0.012949	0.007141	0.005354
	Original	0.034435	0.002495	0.012636	0.005434
	Genre Diversity	0.030791	0.006426	0.019631	0.023152
Price	Rationality	0.027267	0.012045	0.045450	0.024239
	Plan diversity	0.020625	0.006875	0.006875	0.020625
	Promotion	0.009239	0.005089	0.010179	0.022494
Quality	Resolution	0.016242	0.008121	0.035894	0.014742
	Sound	0.017964	0.006755	0.004467	0.016814
	Stability	0.040643	0.012985	0.011371	0.006001
	No ads	0.014700	0.014700	0.014700	0.004900
Convenience	Curation	0.030482	0.008758	0.015906	0.002854
	UI	0.019773	0.008487	0.020586	0.003154
	Multiple-Screen	0.022770	0.004827	0.003446	0.012957
	Real-time-update	0.003514	0.001570	0.014174	0.020742
	Contents Info	0.002977	0.018035	0.008862	0.003127
Summation		0.3379453	0.1512812	0.2376393	0.2401342
Ranking		1	4	3	2

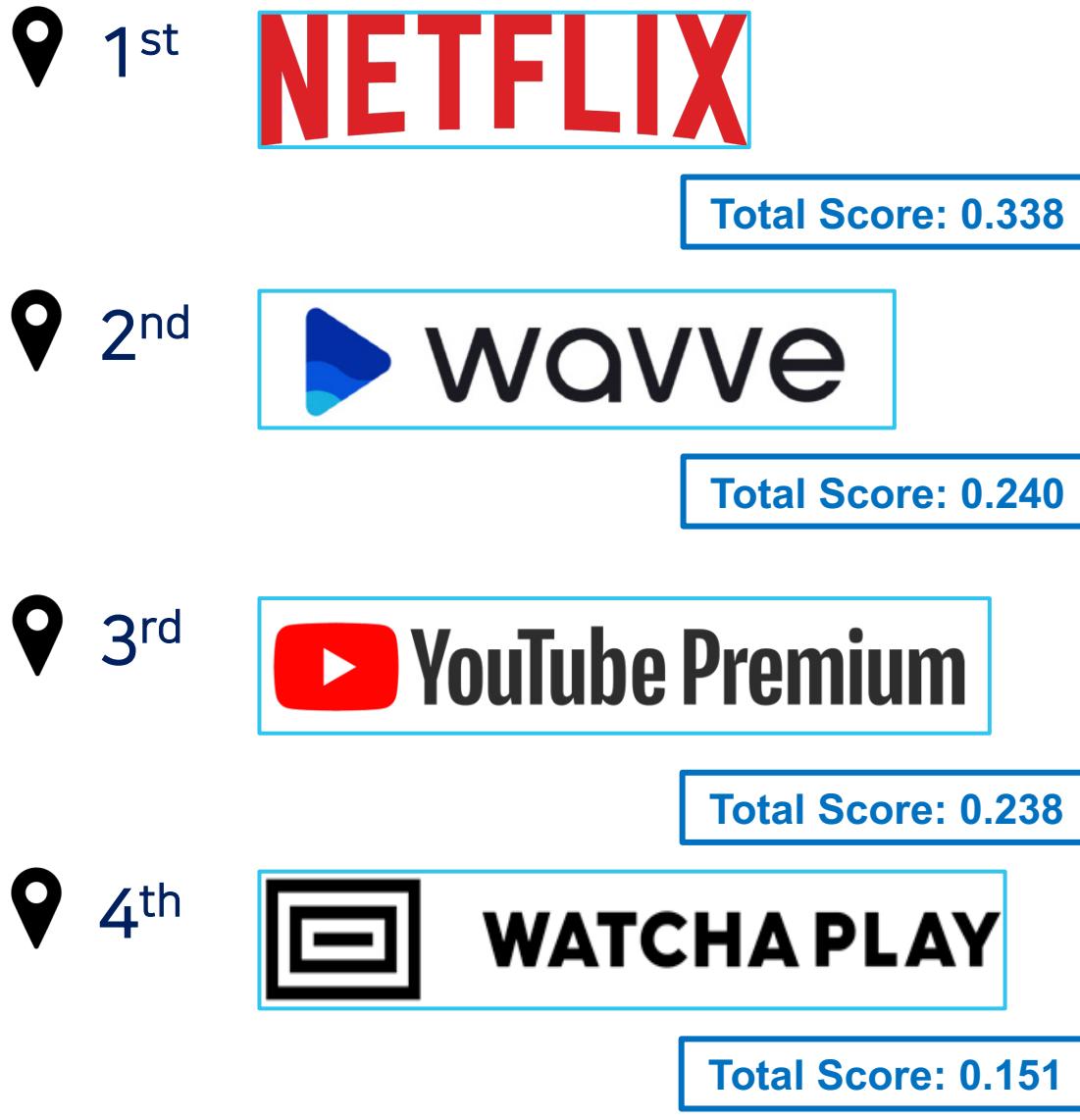
Our survey

Attribute	Sub	Netflix	Watcha	Youtube	Wavve
Contents	Domestic	0.008914	0.027079	0.008089	0.068505
	Abroad	0.037178	0.012171	0.006712	0.005033
	Original	0.028095	0.002035	0.010309	0.004434
	Genre Diversity	0.023147	0.004830	0.014758	0.017404
Price	Rationality	0.032956	0.014558	0.054933	0.029296
	Plan diversity	0.010644	0.003548	0.003548	0.010644
	Promotion	0.006486	0.003573	0.007146	0.015791
Quality	Resolution	0.002403	0.001202	0.005311	0.002181
	Sound	0.003206	0.001206	0.000797	0.003001
	Stability	0.014382	0.004595	0.004024	0.002124
	No ads	0.005349	0.005349	0.005349	0.001783
Convenience	Curation	0.015572	0.004474	0.008126	0.001458
	UI	0.010833	0.004650	0.011278	0.001728
	Multiple-Screen	0.006276	0.001330	0.000950	0.003571
	Real-time-update	0.001744	0.000780	0.007037	0.010299
	Contents Info	0.002853	0.017282	0.008492	0.002996
Summation		0.2100385	0.1086616	0.1568581	0.1802481
Ranking		1	4	3	2

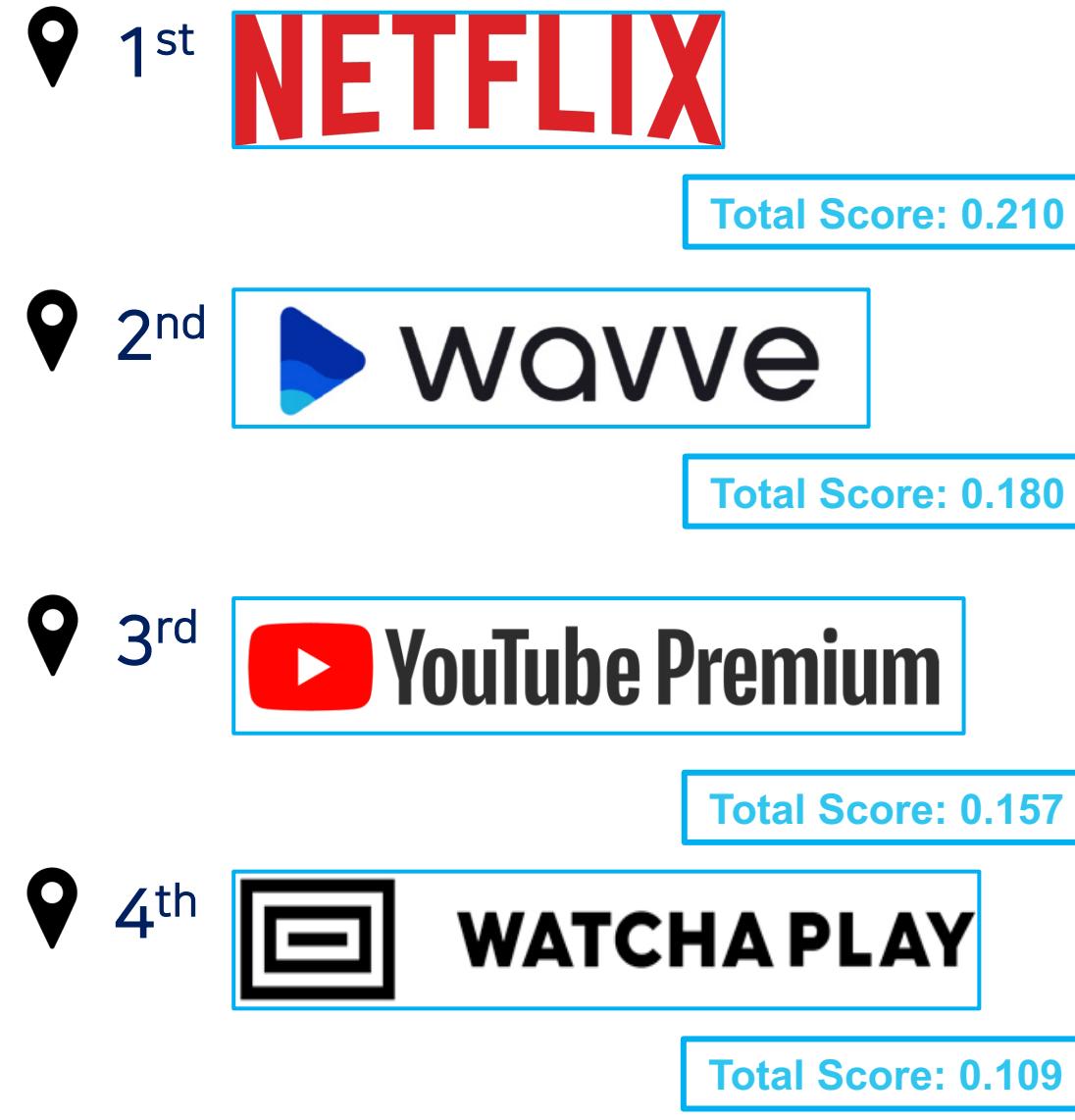
3.4.3

Final results comparison (recommendation)

Hanyang University



Our survey



Conclusion

OTT



Youtube and Wavve subscribers
are willing to pay for the service

People mostly care about
Contents (type & info & curation)
Affordable price

Environmental
Analysis

Service
Analysis
(B/C&Review)

AHP
Analysis

Passionate support
by 10s, 20s, 30s

Most people are
Satisfied with the contents
Suffered from many errors

Cumulated knowhow [Netflix]
Victory of local contents [Wavve]
It could beat Watcha thanks to domestic contents

Conclusion

Well Done

"Perfect Original contents pool"

"Highly accurate curation algorithm"



Need improvement

"Need place which users can freely share their opinions"

"Need additional Korean contents from originals to existing one"

"Fastest Quick VOD service"



wavve

"lack of contents except for Korean"

"add other contents or increase freely released contents"

"Famous Korean drama and variety show"

"Need a huge improvement on UI by adapting user's opinions"

"Impressive and satisfying user experience"



"Need enhancement on stability of the app"

"Newly added user-friendly features"

"Need a lot of device optimization"

"Various contents information and comments thanks to connection with Watcha"



WATCHA PLAY

"Need huge improvement regarding to quality of the videos and user experience"

"Targeting niche contents market 틀새정 not available for Netflix"

"Need further evolution to curation algorithm"

Thank You!

감사합니다!

