

The Role of Individual and Structural Factors in Explaining Television Channel Choice and Duration

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Most previous research on predicting media choice has considered either individual or structural factors but has not integrated both approaches empirically. This study examines how individual and structural factors of media choice impact TV channel choice and duration using an integrated model. Using Nielsen Korea's TV-Internet Convergence Panel data that electronically recorded television and Internet use behavior, this study analyzes which factors influence TV channel choice and duration. The results reveal that television channel choice is influenced by individual factors such as viewing motivations, age, and gender in addition to structural factors such as access and cost. However, duration is largely affected by structural factors such as lead-in and other media use. Overall, structural factors seem to increase the explanatory power of models for both television choice and duration to a much larger extent than individual factors.

Keywords: television viewing, channel choice, channel duration, duality of media, uses and gratifications, inheritance effects

Introduction

Television use behavior has received much attention from both scholars and professionals in the past several decades. With the proliferation of content sources from traditional and new media platforms, the issue of why and how viewers choose to watch television has become a challenging question to answer. Existing literature on television viewing behavior is broadly divided into two distinctive research programs: The first approach emphasizes the role of individual factors such as audience needs, preferences, and gratifications (Katz, Blumler, & Gurevitch, 1974; Papacharissi & Mendelson, 2007; Richins & Root-Shaffer, 1988). The second approach focuses on structural factors including viewer availability, access to or costs paid for media services, programming strategies, and viewing environments

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(Cooper, 1993; Webster & Wang, 1992). Despite the academic inquiry into integrating individual and structural factors into a single model and empirically testing it (for example, see Cooper & Tang, 2009; Webster & Wakshlag, 1983), most previous research has taken one approach or the other. Only a few recent studies have tested the integrated model of television viewing with empirical data (Cooper & Tang, 2009; Taneja & Viswanathan, 2014; Wonneberger, Schoenbach, & van Meurs, 2011).

This study follows such scholarly efforts and tests individual and structural factors of television viewing simultaneously. In doing so, we make four contributions to existing literature on media choice. First, we test the impact of individual and structural factors that constitute the “duality of media” (Webster, 2011) that have been treated separately in previous studies. Thus, we are able to examine which individual and structural factors influence television viewing behavior and which factors matter more by comparing the relative effect size of each factor. Second, we conceptualize television viewing as a process of channel choice and usage and test the integrated model using both choice and duration as dependent variables. This enables us to deepen our understanding of which factors drive channel choice and which factors motivate the decision to stay on a specific channel. Third, this study increases the reliability and validity of media-use measures by using Nielsen Korea’s TV-Internet Convergence Panel data that electronically recorded people’s television and Internet use for a four-week period. The data minimize concerns of construct validity because they provide us with more accurate measures of media use than self-reports or observational data. Furthermore, four weeks of data collection allows us to examine more reliable patterns of media use because it reduces the potential impact of situational or contextual factors (e.g., weather, day of the week, or national events). Last, this is an initial study that applies the integrated model of media choice to media users in an Asian country, thus contributing to the generalizability of the integrated model of television viewing in conjunction with previous findings from Western contexts.

Integrated Model of Television Viewing

Research on television viewing has taken two theoretical approaches to explaining audience exposure to television. The first approach is grounded in the uses and gratifications tradition, which assumes that people are aware of their needs and choose media content that provides the gratifications they seek (Katz et al., 1974; Rubin, 2002). This approach argues that individual factors such as viewer characteristics, preferences, and gratifications guide media choice. Empirical evidence suggests that media users choose media offerings in response to their preferences and expectations (Cohen, 2002; Cooper & Tang, 2012; Nathanson, Ferguson, & Perse, 1997; Papacharissi & Mendelson, 2007; Rubin, 1983). The second approach acknowledges the roles of other media use, viewing environment, or programming strategies that constrain the free agency of individual factors (Webster, 2009). This line of research has shown that television viewing is influenced by structural factors such as viewer availability, access to or use of other media, willingness to pay for media services, programming factors, and group viewing (Cooper, 1993, 1996; Cooper & Tang, 2009; Rust & Alpert, 1984; Webster, 2006; Webster & Wang, 1992; Wonneberger et al., 2011).

Although numerous studies have examined the determinants of television viewing, previous research has focused on either individual or structural factors and limited its investigation to either side.

We bring our attention to Webster and Wakshlag's (1983) initial attempt to integrate individual and structural factors of television viewing in a single model and Webster's (2011) later approach on the structuration of public attention as an overarching theoretical framework for this study. Webster and Wakshlag (1983) acknowledged the lack of a theoretical framework encompassing the disparate perspectives of uses and gratifications and models of program choice. They proposed a comprehensive model of television program choice that demonstrated how viewers' individual needs or preferences lead to specific program choice while viewer availability, structure of available program options, and group viewing restrict the influence of individual traits. Webster's (2011) conceptualization of the "duality of media," which he adopted from Giddens' (1984) notion of the "duality of structure," is a continuation and further conceptual development of Webster and Wakshlag's (1983) integrated model. The duality of media is a structurational process by which agents (i.e., media users) and structures (i.e., infrastructure, programming, or rules and regulations) affect each other recursively to produce the attention of media users. While media users actively fulfill their needs and gratifications, media structures constrain the enactment of their preferences. At the same time, individual preferences represented in some forms of public measures (e.g., ratings, social media buzz) change media structures, thereby constructing the duality of media.

Despite the theoretical rigor involved in developing an integrated model of television viewing, only recently have scholars begun to test the integrated model empirically (Cooper & Tang, 2009; Taneja & Viswanathan, 2014; Wonneberger et al., 2011). The difficulty of testing an integrated model is partly due to the different levels of analysis taken by the two different perspectives (Cooper & Tang, 2009). Studies in the uses and gratifications tradition mostly examined variables measured at the individual (i.e., micro) level using surveys or observational data. Research on models of program choice mainly used television ratings data collected at the aggregate (i.e., macro) level. The discrepancy between the different levels of operationalization and measurement of key variables has been a challenge for audience-behavior research with the integrated approach.

Three studies are noteworthy in that they overcame the analytic discrepancy and incorporated both micro- and macro-level factors in a single model. Cooper and Tang (2009) examined how variables from both approaches influence audience exposure to television. They found that a combination of individual and structural factors—ritualistic/instrumental motivations, age, gender, Internet use, audience availability, and cost paid for multichannel services—influences exposure to television. Their study was an initial study that empirically tested the integrated model but used a self-reported measure of television viewing, which may suffer from imperfect recall. Also, it did not distinguish television channel characteristics (e.g., whether it is an entertainment or a news channel). Wonneberger et al. (2011) tested motivational and situational determinants of television news viewing. Although their findings are limited to news consumption, it suggests that viewing context such as social viewing or audience availability is more influential than viewing motivations, and individual factors such as viewers' interest in news and politics have a moderating effect on the situational factors. In a recent study, Taneja and Viswanathan (2014) examined factors that influence exposure to different TV content genres in a multichannel environment. They found a moderating effect of situational factors such as viewer availability and group viewing on individual traits such as age, education, and motivations. They did not find a significant influence of Internet usage on TV viewing but did find a negative impact of time-shifted viewing.

In sum, the current study acknowledges Cooper and Tang's (2009) conclusion that "no single theoretical construct explains the complexities that determine exposure to television" (p. 412). We adopt the integrated model and test factors from both micro- and macro-level approaches. Below, we provide theoretical explanations from both approaches and propose our hypotheses accordingly, followed by a research question derived from a discussion of predicting channel choice and duration of use.

Individual Factors of Television Viewing

Among individual-level factors, the influence of viewers' individual characteristics such as age, gender, and socioeconomic status has been widely studied in previous research. Generally, television is regarded as a medium for older (Cooper & Tang, 2009; Kang, 2002) and female viewers (Taneja, Webster, Malthouse, & Ksiazek, 2012). Viewers with higher socioeconomic status tend to spend less time with television compared to their low socioeconomic status counterparts (Comstock & Scharrer, 1999), but people with higher education tend to watch more news media and public television (Delli Carpini & Keeter, 1996).

Another individual-level factor that affects television use is viewers' motivations to watch television. As mentioned previously, the uses and gratifications approach provides theoretical explanations about when and why media users choose to use certain types of media or content genres, stressing the importance of the agency of media users. Early studies on television-viewing motivations have identified several typologies of viewing motivations and their associations with television-viewing behaviors. For example, Greenberg (1974) found seven viewing motivations—learning, companionship, habit, relaxation, passing time, arousal, and escape—among children and adolescents. Similarly, Rubin (1983) retained five viewing motivations—passing time/habit, information/learning, entertainment, companionship, and escape. Subsequent studies showed that these motivations can be categorized into two types—instrumental and ritualistic television viewing (Papacharissi & Mendelson, 2007; Rubin, 1984). Instrumental viewing refers to active and goal-oriented media use, for instance, learning and information seeking, and relates to watching news or information programs. On the other hand, ritualistic viewing involves passive and habitual media use such as passing time, relaxation, and entertainment and is connected to consuming entertainment content. Based on the discussion, we pose the following hypotheses.

H1 (viewer characteristics): Viewer characteristics will affect television use. More specifically:

H1a: Older viewers will use television more than younger viewers.

H1b: Female viewers will use television more than male viewers.

H1c: More educated viewers will use information-oriented channels more, whereas less educated viewers will use entertainment-oriented channels more.

H2 (motivations): Television-viewing motivations will affect television use. More specifically:

H2a: Learning motivation will positively affect use of information-oriented channels.

H2a: Relaxation motivation will positively affect use of entertainment-oriented channels.

Structural Factors of Television Viewing

Previous research that emphasizes the role of structural factors has examined various contextual and programming-related factors that influence television viewing (Wonneberger, Schoenbach, & van Meurs, 2009). These factors include viewing environments (e.g., other media use), programming strategies (e.g., lead-in and lead-out), and viewer availability. Regarding viewing environments, if a viewer subscribes to cable or satellite television and has access to a multichannel viewing environment, he or she is more likely to spend more time with television (Webster, Phalen, & Lichty, 2006). On the contrary, we expect the opposite tendency will be observed regarding Internet use because television will compete with the Internet given the limited time available to viewers or functional overlaps between television and the Internet, because of the media substitution hypothesis (Ferguson & Perse, 2000; Ha & Fang, 2012; Kayany & Yelsma, 2000; Lee & Leung, 2008).

We also hypothesize that a viewer is more likely to stay on the same channel if he or she watched a preceding show on that channel because of the tendency to remain within one channel (i.e., inheritance effects) (Cooper, 1993; Goodhardt, Ehrenberg, & Collins, 1975; Webster, 2006). Regarding viewer availability, we minimize its influence by confining our analysis to prime-time viewing (i.e., 7–11 p.m.) when viewers are most available at home without constraints from work or daily activities. We propose the following hypotheses on structural factors.

H3 (other multichannel TV services): Use of other multichannel television services such as cable and satellite TV will affect television use. More specifically:

- H3a: Multichannel television subscribers will use television more than nonsubscribers.*
- H3b: Viewers who allocate more money to multichannel television services will use television more than those who are nonsubscribers.*
- H3c: Viewers who spend more time using multichannel television services in general will use television more than those who spend less time using these services.*

H4 (Internet): Internet use will affect television use. More specifically:

- H4a: Viewers who pay more for Internet services will use television less than those who pay less for Internet services.*
- H4b: Viewers who spend more time using the Internet will use television less than those who spend less time using the Internet.*

H5 (inheritance effects): Viewers will stay on the same channel if they watch a preceding show from the same channel.

In addition, we ask the question of the relative effect size between individual and structural variables to see which exerts larger influence on television viewing:

RQ1 (relative effect size): Among individual and structural factors, which exerts more influence? What is the relative effect size in the integrated model?

Television Viewing: Decision to Choose or Stay on a Channel

This study also brings up the discussion of the model of television viewing (Heeter, 1985; Rust, Kamakura, & Alpert, 1992; Wonneberger et al., 2009). Media scholars have long maintained that television viewing is a two-stage process in which audiences first decide to watch television and then choose what to watch (Webster et al., 2006). Generally, the decision to watch television is known to be influenced by structural factors, whereas the decision to choose what to watch is guided by a combination of individuals' preferences, available content options, and program scheduling (Cooper & Tang, 2009; Webster & Wakshlag, 1983). Wonneberger et al. (2009) noted that previous research mainly concerned program choice in a "mechanical" manner and called for a need to consider television viewing as sequential activities, including the decision to view, initial program choice, evaluation of content chosen, decision to stay or switch, and decision to stop watching.

Our literature review reveals that previous studies do not clearly distinguish between choice and process when they predict television viewing. In most cases, channel or program choice and time spent on channel or program are used interchangeably as an operationalization of television viewing. We follow Wonneberger et al.'s (2009) approach and propose that television viewing includes both the decision to use a specific channel and the decision to stay tuned to that channel. Thus, we differentiate channel choice and usage time (i.e., duration) as two related but separate dependent variables and test the above hypotheses using channel choice and duration as dependent variables, which leads to our second research question:

RQ2 (choice or duration): What are the differences in the influence of individual and structural factors when television use is operationalized as channel choice or duration?

Methods

Data

We used data from Nielsen Korea's TV-Internet Convergence Panel. The panel consisted of 597 individuals from Nielsen's TV People Meter panel who agreed to be members of the Convergence Panel. The Convergence Panel provided electronically recorded measures of TV and Internet usage from the same respondents, thus offering an accurately measured single-source data set at the respondent level.

TV viewing and Internet use were monitored by Nielsen's TV People Meters and Nielsen KoreanClick's iTrack software for a four-week period from January 3 to 30, 2011. We focused our analysis on prime-time media use to minimize the influence of viewer availability, as viewers are most available during this time period. Thus, we examined 4 hours of TV viewing at a one-hour interval each day for the study period. In addition, an e-mail invitation to participate in a survey was sent to the members of the Convergence Panel who were selected based on quota sampling. The postsurvey was conducted from February 7 to 27, 2011. A total of 223 panel members completed the survey. The survey collected information on individual and structural factors such as access to and cost of multichannel television services (e.g., cable, satellite, and IPTV), television use gratifications, and sociodemographic

characteristics. The final sample for the analysis consisted of 24,976 observations (223 participants × 4 one-hour intervals from 7 to 11 p.m. × 7 days × 4 weeks). We describe the data in further detail below.

Main Variables

Dependent Variables: Television Use as Channel Choice and Duration

The dependent variables (television viewing) were operationalized as channel choice and usage duration. We examined channel choice and duration for six channels—four terrestrial and two cable channels—during prime time. The four terrestrial channels were KBS1, KBS2, MBC, and SBS. The two cable channels were the most popular channels in each content genre: YTN (news) and tvN (entertainment). By comparing terrestrial and cable channels, we can see whether and how individual and structural factors influence choice and usage duration of channels for more general programming (e.g., terrestrial channels) and specialized offerings (e.g., cable channels) differently. Channel choice was measured as a binary variable, taking on a value of 1 if the channel was viewed in a one-hour time interval and 0 if not. Channel duration was measured as a count variable, specifically as the number of minutes spent watching a channel in a one-hour time interval.

The South Korean television market is broadly divided into terrestrial, cable, satellite, and Internet protocol television (IPTV). Terrestrial television comprises five channels (KBS1, KBS2, MBC, SBS, and EBS).² We excluded EBS in the analysis because it is an educational channel delivering educational content only. Terrestrial channels dominated the market but have gradually lost the lion's share since the late 1990s with the increasing competition from cable and satellite television. Cable and satellite television launched their services in 1995 and 2001, respectively. The ratings of the four terrestrial channels have dropped from 33.8% to 22.1% in the past decade, whereas those of cable and satellite channels have increased from 9.1% to 15.5%, showing the growing importance of multichannel platform services (Korean Communications Commission, 2015). As of 2015, there are more than 100 channels available from cable television (Korean Cable Television Association, 2015) and more than 200 channels from satellite television.³ IPTV was introduced in 2009 and has gained popularity in recent years.

Independent Variables: Individual Factors

Viewing motivations. We conducted a factor analysis of 10 questions on participants' motivations for using television. Those questions are derived from previous studies on television viewing motivations. A Varimax rotation revealed that four factors with eigenvalues greater than 1 explained nearly 73% of the sum of squared loadings. We found that the four factors are associated with learning ($M = 3.22$, $SD =$

² Although terrestrial channels provide general programming, each channel has a different emphasis in its programming strategy. KBS1 is a public channel that mostly airs news, current affairs, and documentaries. KBS2 mainly broadcasts drama and entertainment. MBC is a public channel delivering a general mix of news, information, and entertainment. SBS is a commercial channel that broadcasts a balanced programming with a heavier emphasis on entertainment content.

³ Information retrieved from http://tv.olleh.com/renewal_sub/skylife/skylife1.asp

0.62), relaxation ($M = 3.70$, $SD = 0.76$), self-driven ($M = 2.67$, $SD = 0.76$), and social interaction ($M = 3.43$, $SD = 0.64$) and have respectable reliability scores (Table 1). Learning, relaxation, and social interaction motivations are similar to television viewing motivations identified in previous use and gratification studies. Self-driven motivations involve a desire to know more about other peoples' lives or to be seen as important by others.

Table 1. Motivations for Watching Television.

Variable	Learning	Social interaction	Relaxation	Self-driven
To get new ideas	0.714			
To learn what is necessary	0.810			
To improve what I do	0.708			
To be informed of what is happening in the world	0.349	0.356		
To maintain an emotionally stable life		0.721		
To mingle with people around me		0.668		
To be entertained			0.584	
To know more about other people's lives	0.390			0.491
To kill time/boredom			0.567	
To be seen as an important person by other people				0.550
Cronbach's alpha	0.79	0.69	0.59	0.64

Note. Factor loadings < 0.3 are suppressed.

Sociodemographic variables. Individual factors included demographic information such as age, gender, education, and income. The average age of the participants was 36.66 years old ($SD = 12.69$). Gender was operationalized as a binary variable with a value of 1 for males (42%) and 0 for females (58%). Education was measured using an indicator variable with a value of 1 for participants who had not progressed beyond high school (38%) and 0 for participants who at least enrolled in college (62%). Thus, a unit increase in education is a fall in education level from college education or higher (0) to high school or lower (1). Individuals in households with less than a monthly income of 2.5M K won (approx. 2,250 U.S. dollars) were categorized as low income. Initially, we differentiated between low-, medium-, and high-income households, but we did not find a significant difference, so we collapsed them into low- and high-income households. Around 15% of the participants belonged to low-income households.

Independent Variables: Structural Factors

Media access. We included participants' responses to whether they used cable, satellite, and IP television (yes/no) as measures of media access. Approximately 78% of the participants used cable, 18% used satellite, and 10% used IPTV.

Time on other media use. We included time spent with other multichannel television services (i.e., cable TV) or other media (i.e., Internet) in each one-hour time interval. We found that the participants on average spent around 6 minutes watching cable TV and 189 seconds on the Internet each hour.

Cost of using other media. Participants were asked how much money they spent on using television and Internet services per month and were provided 6 options to record their responses: "not at all," "less than 5K K won," "5K-10K K won," "10K-20K K won," "20K-30K K won," and "more than 30K K won." Whereas 35% of households spent between 10K and 20K K won each month on TV, only 3.59% spent less than 5K K won, and 2.69% spent more than 30K K won per month. In all, approximately 75% of the participants spent more than 10K K won (approx. 9 U.S. dollars) per month on television. For the Internet, nearly 49% of the sample reported spending between 20K and 30K K won per month. Only 12% of the sample spent less than 10K K won per month, and nearly 88% spent more than that amount on Internet services.

Inheritance effects. We considered inheritance effects (i.e., lead-in) by including an indicator variable with a value of 1 if the individual watched that channel in the previous hour and 0 if not. To be consistent with the two-stage process of television viewing (i.e., individuals first make a channel choice and then decide whether to stay with it), we used this as an independent variable only in the model with duration as the dependent variable.

Weekend effect. Finally, we included time of the week (i.e., weekday vs. weekend) as a control variable because television viewing patterns could be different on weekdays than on weekends because of individuals' situational variables that we could not observe. This variable was operationalized using a dummy variable with a value of 1 for a weekend and 0 for a weekday.

Model Estimation

We first used a logistic regression to examine how the structural and individual factors influence channel choice. Specifically, we carried out six logistic regressions to explain factors that explain choice of each viewed channel. We were able to estimate the coefficients for the time-invariant individual-specific variables using a random effects model. A logistic model can be written mathematically as

$$\text{logit}(Y) = \log(\text{odds}) = \text{Iog}\left(\frac{\pi}{1-\pi}\right) = \alpha + \beta X \quad (1)$$

We can then derive the equation below

$$\pi = \Pr(Y = y | X) = \frac{e^{\alpha + \beta X}}{1 + e^{\alpha + \beta X}} \quad (2)$$

where $y = 1$ if the channel was being watched and 0 if not, X is a set of variables that comprise the

individual and structural factors mentioned above, and β is a vector of coefficients estimated from the regression.

To model duration, which is a count measure, a Poisson distribution was used. However, descriptive statistics in Table 2 suggest that the variance of the dependent variable exceeded its mean (i.e., overdispersion). Therefore, we used a negative binomial model for this part of the analysis. In other words, if y is the minutes spent with a certain channel such that $y | \lambda \sim \text{Poisson}(\lambda)$ and $\lambda \sim \text{Gamma}(\alpha, \beta)$, then

$$P(y) = \frac{\Gamma(\alpha + y)}{\Gamma(\alpha)y!} \left(\frac{\beta}{1 + \beta} \right)^y \left(\frac{1}{1 + \beta} \right)^\alpha, \quad y = 0, 1, 2, \dots \quad (4)$$

and $E(Y) = \alpha\beta$, $V(Y) = \alpha\beta + \alpha\beta^2$. If the negative binomial parameters $\mu = \alpha\beta$ and $\kappa = 1/\alpha$, then Equation 4 can be rewritten as

$$P(y) = \frac{\Gamma(\kappa^{-1} + y)}{\Gamma(\kappa^{-1})y!} \left(\frac{\kappa\mu}{1 + \kappa\mu} \right)^y \left(\frac{1}{1 + \kappa\mu} \right)^{\kappa^{-1}}, \quad y = 0, 1, 2, \dots \quad (5)$$

If $\kappa \rightarrow 0$, then the distribution approaches a Poisson distribution. For the regression, we take the log link $\log(\mu) = X\beta$, where X is a vector of the individual and structural variables mentioned above.

Table 2. Summary Statistics for Channel Viewing Time Each Hour.

Variable	Mean (minutes)	SD	Min (minutes)	Max (minutes)
KBS1	0.80	5.31	0	60
KBS2	1.03	6.03	0	60
SBS	1.04	6.06	0	60
MBC	1.08	6.21	0	60
tvN	0.13	1.89	0	60
YTN	0.08	1.36	0	60

Results

Predicting Channel Choice

Table 3 summarizes the logistic regression results that explain the choice of six television channels. The top half of the table displays the effects for individual factors and the bottom half shows the effects for structural factors. Below, we describe the results for only those variables that have a significant effect on channel choice or time spent with each channel.

H1 predicted that viewer characteristics affect television viewing. Specifically, we predicted that being older and being female will positively influence the use of television. We also predicted a positive (negative) association between education level and the use of information-oriented (entertainment-oriented) channels. Consistent with H1a, we found a positive influence of age on channel choice. Among all six channels analyzed, greater age increases the odds of using each of them. Television is again found to be a medium for older viewers regardless of its content, which confirms H1a. Regarding H1b (gender), the findings are consistent with our predictions with some exceptions. We identified female viewers' preference for KBS2, MBC, and SBS, most of which focus more on entertainment content and less on news and public affairs. The choice of tvN (cable entertainment channel) was also preferred by female viewers, although the result was not statistically significant. We found that male viewers chose KBS1 and YTN more than female viewers, but the results were not statistically significant. Overall, this shows male viewers' tendency to choose news and information channels and female viewers' penchant for entertainment-oriented channels. H1b is partially confirmed. We also found results partially consistent with H1c: People with a higher level of education chose an information-oriented channel (KBS), and the relationship was reversed for an entertainment-oriented channel (KBS2). We did not see any significant results for cable channels. H1c is therefore partially supported.

H2 concerned the association between viewing motivations and television viewing. We hypothesized a positive (negative) association between learning motivation (relaxation motivation) and television viewing depending on channel genre. We found that learning motivation increased the odds of choosing information-oriented channels (KBS1 and YTN), confirming H2a. However, we saw mixed results for entertainment-oriented channels. Relaxation motivation was positively associated with the choice of SBS (an entertainment-oriented) channel but did not predict viewing of other entertainment channels. Thus, H2b is partially confirmed.

H3 and H4 examined the influence of structural variables. For the subhypotheses of H3, we found inconsistent patterns regarding H3a (multichannel subscription and television viewing) and H3b (cost and television viewing) but significant results for H3c (overall television use time and television viewing). Cable TV subscription had a negative effect, contrary to our prediction. Cost of using multichannel services was positively associated with only one terrestrial channel (SBS) and was negatively associated with the choice of cable channels. We found that television viewers who spent more time using multichannel television services had higher odds of choosing all six channels. Thus, H3c is confirmed. We found partial support for cost for Internet services on channel choice, partially confirming H4a. We did not find significant results on the impact of Internet usage time on channel choice. H4b is not supported.

We can use the coefficients from the logistic regression to compute odds ratios. We found that the odds of choosing KBS1 increase the greatest for a unit increase in learning (36%) and relaxation (30%) motivations, age (6%) and time on cable television (2%). The odds of choosing SBS increase the highest on a weekend (41%) or for a one-unit increase in social interaction motivations (20%), TV cost (18%), relaxation motivations (16%), and age (2%). The odds of choosing KBS2 increase the most with the use of IPTV (75%), learning (30%), and lower level of education (30%). The presence of cable lowers the odds of this channel being chosen by 30%. The odds of choosing tvN increase dramatically with greater need for the self (65%), higher cable TV time (6%), and age (2%). Weekends (37%), need for social interaction (33%), and higher TV cost (23%) lower the odds of this channel being chosen. Finally, the odds of choosing YTN increase dramatically in households with IPTV, need for learning (68%), on weekends (32%), increasing cable TV time (6%), and age (3%). To summarize the results for channel choice, we found that both individual and structural factors influence choice. However, we also found that there are differences in the combination and extent to which different factors influence choice of these channels. Among individual factors, we confirmed the effects of age and learning motivations across most channels. We partially confirmed the influence of gender, education, and other television-viewing motivations such as relaxation and social interaction. Among structural factors, access to and time spent on cable television and cost of Internet services influence the choice of the given channels.

Predicting Channel Duration

Table 4 presents the influence of individual and structural factors on the time spent with television. Overall, we see similar results for the influence of viewer characteristics in predicting channel duration. In terms of age and gender, we see a positive effect of being older and being female. Except for YTN, we found that older viewers tend to spend more time with television, as do female viewers. In general, female viewers are more likely to watch television than males. People with a higher level of education spend more time with information-oriented channels. Contrary to our prediction, viewers with a higher education level also spend more time with entertainment channels. Thus, H1a, H1b, and H1c are all partially supported. The power of viewing motivations was minimal. We only found a positive impact of learning motivation on the use of YTN and of relaxation motivation on the use of MBC.

Regarding the structural variables, we found that cable TV viewing time was positively associated with duration of using all six channels, suggesting that people who watch television more in general tend to spend more time on any type of channel. H3c is confirmed. An interesting result is that each of the lead-in variables that measure inheritance effects has a significant effect on time with their respective channels. This shows that viewers are more likely to stay on the same channel once they choose to watch that channel. H5 is supported. However, the rate drops for households with higher Internet costs (10%), individuals in school (19%), on weekends (25%), and for households that use IPTV (40%). For YTN, the incidence rate increases with more time with cable TV (5%) and greater need for learning (70%). However, the rate decreases with higher cost of cable TV (22%), greater need for social interaction (24%), lower income (32%), greater need for self (40%), and the use of satellite television (60%). To summarize, we again detected the influence of individual and structural factors, especially the strong impact of inheritance effects. Similar to the results on channel choice, we found that different combinations of individual and structural factors influence time with different channel.

Table 3. Determinants of Channel Choice.

Variable	KBS1	KBS2	MBC	SBS	YTN	tvN
Age	0.058** (0.00)	0.033** (0.00)	0.035** (0.00)	0.026** (0.00)	0.030* (0.01)	0.019* (0.01)
Gender (male = 1)	0.125 (0.07)	-0.359** (0.06)	-0.908** (0.06)	-0.455** (0.07)	0.411 (0.26)	-0.117 (0.18)
Education (low education = 1)	-0.241** (0.07)	0.141* (0.07)	0.469** (0.07)	-0.023 (0.08)	-0.172 (0.27)	-0.341 (0.18)
Income (low income = 1)	0.133 (0.09)	-0.050 (0.09)	-0.173* (0.09)	0.020 (0.10)	0.473 (0.39)	0.174** (0.21)
UG Learning	0.310** (0.08)	0.270** (0.07)	-0.123 (0.07)	-0.304** (0.06)	0.518* (0.23)	-0.230 (0.18)
UG Social interaction	-0.382** (0.05)	-0.348** (0.05)	0.233** (0.05)	0.182** (0.05)	0.097 (0.15)	-0.413** (0.13)
UG Relaxation	0.263** (0.05)	0.012 (0.04)	0.076* (0.04)	0.150** (0.05)	0.066 (0.21)	0.07 (0.13)
UG Self-driven	-0.060 (0.06)	0.050 (0.06)	-0.261** (0.05)	-0.139** (0.05)	-0.849** (0.16)	0.501** (0.16)
Use cable	-0.637** (0.14)	-0.354* (0.15)	0.607** (0.11)	-0.730** (0.11)	-0.084 (0.30)	0.518 (0.36)
Use satellite	-0.148 (0.14)	0.261 (0.17)	0.660** (0.10)	-0.043 (0.11)	-0.695 (0.39)	0.145 (0.35)
Use IPTV	0.060 (0.14)	0.565** (0.13)	1.062** (0.13)	-0.395** (0.11)	1.736** (0.29)	-0.0398 (0.00)
Cost of TV services	-0.000 (0.03)	0.002 (0.03)	0.011 (0.03)	0.165** (0.03)	-0.525** (0.13)	-0.273** (0.08)
Time on cable TV	0.022** (0.00)	0.022** (0.00)	0.023** (0.00)	0.021** (0.00)	0.057** (0.00)	0.062** (0.00)
Cost of Internet	-0.410** (0.03)	0.042 (0.04)	-0.092** (0.03)	-0.178** (0.03)	0.037 ,	-0.075 (0.08)
Time on Internet	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	-0.000** (0.00)	-0.000** (0.00)
Day of week (weekend = 1)	0.031 (0.05)	0.024 (0.05)	-0.024 (0.05)	0.342** (0.04)	0.278* (0.12)	-0.462** (0.11)
Intercept	-3.576**	-3.929**	-4.098**	-2.820**	-6.029**	-4.632**

	(0.33)	(0.32)	(0.32)	(0.28)	(1.07)	(0.85)
Chi square	832.29	790.32	942.98	737.56	519.00	797.00
p value	0.000	0.00	0.00	0.00	0.00	0.00
Log Likelihood	-6179.02	-7413.728	-7822.72	-7791.27	-1467.95	-1950.30

Note. SE in parentheses.

* $p < 0.05$. ** $p < 0.01$.

Table 4. Determinants of Channel Duration.

Variable	KBS1	KBS2	MBC	SBS	YTN	tvN
Age	0.026** (0.00)	0.010** (0.00)	0.016** (0.00)	0.014** (0.00)	-0.006 (0.01)	0.010* (0.00)
Gender (male = 1)	-0.084 (0.06)	-0.145** (0.05)	-0.294** (0.05)	-0.320** (0.05)	0.268 (0.14)	-0.156 (0.10)
Education (low education = 1)	-0.291** (0.06)	-0.083 (0.05)	-0.234** (0.05)	-0.197** (0.05)	-0.073 (0.16)	-0.221* (0.10)
Income (low income = 1)	-0.147 (0.08)	-0.223** (0.08)	-0.104 (0.07)	-0.214** (0.07)	-0.384* (0.18)	-0.019 (0.12)
UG Learning	0.049 (0.06)	0.066 (0.06)	-0.102 (0.05)	-0.084 (0.05)	0.536** (0.14)	-0.047 (0.10)
UG Social interaction	-0.139** (0.05)	-0.035 (0.04)	0.018 (0.04)	-0.102* (0.04)	-0.264 (0.12)	-0.121 (0.08)
UG Relaxation	0.029 (0.04)	0.008 (0.03)	0.100** (0.03)	0.019 (0.03)	0.04 (0.11)	0.108 (0.08)
UG Self-driven	0.065 (0.05)	0.044 (0.04)	-0.03 (0.04)	0.052 (0.04)	-0.521** (0.12)	0.097 (0.08)
Use cable	-0.085 (0.12)	-0.002 (0.1)	0.247** (0.08)	-0.135 (0.09)	-0.273 (0.29)	0.159 (0.24)
Use satellite	-0.132 (0.12)	0.167 (0.11)	0.258** (0.08)	0.028 (0.1)	-0.858 (0.35)	0.239 (0.24)
Use IPTV	0.081 (0.12)	0.17 (0.1)	0.152 (0.09)	-0.043 (0.10)	0.28 (0.24)	-0.515* (0.26)
Cost of TV services	-0.007 (0.02)	0.017 (0.02)	-0.002 (0.02)	0.018 (0.02)	-0.239** (0.08)	-0.229** (0.05)
Time on cable TV	0.009** (0.00)	0.010** (0.00)	0.006** (0.00)	0.007** (0.00)	0.048** (0.00)	0.054** (0.00)

Cost of Internet	-0.035 (0.02)	0.015 (0.02)	-0.021 (0.02)	0.036 (0.02)	-0.079 (0.07)	-0.108* (0.04)
Time on Internet	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	-0.000** (0.00)	-0.000** (0.00)
Day of week (weekend = 1)	0.089 (0.05)	-0.094* (0.04)	-0.023 (0.04)	0.163** (0.04)	0.187 (0.11)	-0.284** (0.10)
Inheritance effects	1.903** (0.05)	1.991** (0.04)	2.055** (0.04)	1.956** (0.04)	1.086** (0.14)	1.666** (0.11)
Intercept	-4.628** (0.29)	-4.318** (0.26)	-4.372** (0.23)	-3.814** (0.24)	-3.504** (0.84)	-5.27** (0.55)
Chi square	2137.85	2862.78	3405.65	3267.77	1478.84	1676.07
<i>p</i> value	0.00	0.00	0.00	0.00	0.00	0.00
Log likelihood	-14414.9	-17653	-20330.1	-19973.9	-3792.1	-3746.4

Note. SE in parenthesis.

* $p < 0.05$. ** $p < 0.01$.

Model Fit

RQ1 asked about the relative effect size of individual and structural factors in the integrated model. Although we present the results for the overall model for television choice and duration in Tables 3 and 4, we built each model using a stepwise approach. We first added the variables pertaining to the individual factors and checked the significance of the model using the chi-squared statistic. For all the models examining choice and duration, we found that adding variables pertaining to individual factors resulted in a significant change in the log-likelihood values, and consequently all the models were significant ($p < 0.05$). The addition of variables pertaining to structural factors, however, increased the explanatory power of all the models examining choice and duration to a much greater extent than did variables pertaining to individual factors. The Nagelkerke *R*-square computed using the log-likelihood values revealed that the addition of structural factors increased the explanatory power of all the models with only variables pertaining to individual factors anywhere from 6 (for KBS1 choice) to 47 (for tvN duration) times. The results therefore suggest that although individual factors do have a significant effect on television viewing, especially while making channel choices, structural factors seem to play a more dominant role in predicting choice and viewing time of a television channel.

Channel Choice vs. Duration as Dependent Variables

RQ2 posed a question about the difference between using channel choice and duration as separate dependent variables. We found that channel choice is guided by a combination of individual and structural factors, whereas channel duration is explained less by a number of factors, for instance, gender, age, education, cable television viewing, and inheritance effects. The strong effect of inheritance effects,

along with the almost null effect of viewing motivations on channel duration, implies that the decision to stay on a specific channel is heavily dependent on viewers' inertia.

Discussion

This study is one of the initial attempts to test an integrated model of television viewing empirically in an international context. Whereas most studies have attempted to explain viewing of broad television genres, we investigated how individual and structural factors influence viewing of specific television channels. In doing so, we compared which factors matter more when predicting television viewing. Furthermore, we explored whether differences exist in how these factors influence television channel choice and duration. We used a unique data set that allowed us to include a comprehensive list of individual and structural factors in a single model with improved measures of television viewing and Internet use.

Our findings again confirm that no single theoretical perspective can solely explain what influences people's decision to choose or stay on a television channel. Age, gender, education, and time spent on cable television were commonly associated with channel choice and duration. Viewing motivations, access to other multichannel services, and paying for Internet services had an impact on channel choice more than duration. We also found strong inheritance effects on duration, indicating people tend to stay on the same channel once they decide to watch television and turn on their television sets.

The results revealed how individual factors influence viewing of television channels in South Korea in similar or different ways compared to findings from previous research conducted in Western contexts. Females and older individuals tended to use television more than males or younger individuals, respectively. This is consistent with previous studies that found that females and older viewers had a greater affinity for television (Comstock & Scharrer, 1999; Cooper & Tang, 2009; Kang, 2002; Taneja et al., 2012). We confirmed older viewers' preference for television, and female viewers' preference for entertainment-oriented television channels. Contrary to our expectations, the effect of education was not directionally consistent and differed depending on the type of channels a viewer chose to watch. Viewers with higher education showed a greater preference for a public channel that mainly broadcasts news and information. Viewing motivations drove choice of each channel but exerted minimal influence on channel duration. Learning motivation (i.e., instrumental motivation) significantly affected choice of information-oriented channels, whereas relaxation motivation influenced choice of entertainment-oriented channels.

Similarly, we found how structural variables influence viewing of television channels in different ways. Time spent with cable television mattered more than subscription to other multichannel television services such as cable television. Cable TV subscription negatively impacted the decision to choose television channels, but it did not affect the decision to stay on the channel. This finding implies that subscribing to cable services keeps viewers from watching terrestrial channels, possibly because viewers pay for it. Once you pay for the basic or premium cable services, you attempt to make the maximum use of the service, thus increasing your choice of terrestrial channels. However, the positive impact of time spent on watching cable television tells us that once you start watching cable television, you will also flow across cable and terrestrial channels, resulting in choosing or increasing time spent on terrestrial channels

(Webster et al., 2006). Regarding Internet use, we did not find evidence of the time displacement effect. Although cost paid for Internet services has a negative effect on choosing television channels, Internet use time did not affect television channel choice or duration. This finding suggests that the relationship between the two media is not supplementary, as previous studies on media substitution theory suggest (Ferguson & Perse, 2000; Flanagin & Metzger, 2001; Kayany & Yelsma, 2000). It may be the case that the Internet has become fully integrated into people's existing media environment to a point where a "new equilibrium position" of media use patterns has emerged (Perse & Dunn, 1998; Vitalari, Venkatesh, & Gronhaug, 1985). Finally, we found that inheritance effects persist. Viewers tend to stay on one channel from program to program rather than to actively search for their preferred content (Cooper, 1993, 1996; Webster, 2006).

Given that television viewing is a sequential process that starts with a decision to watch and proceeds to initial choice, to evaluation of content chosen, and to staying or switching (and ultimately ending with a decision to turn off), the results suggest that initial choice is determined by a combination of individual and structural factors. Whether a viewer is young or old, is female or male, or has instrumental or ritualistic motivations combined with whether the viewer subscribes to multichannel television services or how much time he or she spends on cable television all influence television choice. On the contrary, when a viewer has already decided to watch and has turned the television on, the duration of usage is influenced to a great extent by which channel the viewer is on because it is very likely that he or she will stay on the same channel, along with the viewer's level of cable television use in general. In addition, it is noteworthy that viewing motivations becomes less important (or unimportant) once a viewer starts to watch television. Our findings indicate that the decision to choose a specific channel is partially driven by viewing motivations, but when it comes to the decision to stay on the channel, the influence of viewing motivations disappears, and viewer characteristics and other structural variables matter more. This suggests that the choice of what to watch is guided by individual factors such as preferences or motivations (Cooper & Tang, 2009; Webster & Wakshlag, 1983), but viewers' inertia or scheduling exerts a bigger influence on keeping the viewers on the same channel. Practically, building a strong channel equity becomes even more critical to maintaining lead-in ratings and attracting viewers on other channels to make a switch (McDowell & Sutherland, 2000).

We acknowledge that the study has its limitations and thus raises important questions for future research. First, although the data used in this study are unique, the sample size could be larger. In addition, although we chose six channels to distinguish terrestrial from cable television and news/information from entertainment, future research can examine other types of niche channels available on cable television. Second, although the study includes an extensive list of individual and structural variables, we lacked appropriate information on a few individual and structural factors such as availability and social viewing. We tried to control for viewer availability by restricting our analysis to prime time, but we acknowledge that not all individuals are available at home during prime time. Future research should include these missing variables and potential interactions between individual and structural variables. Third, although we examined channel viewing, we were unable to examine the choice of specific programs because of complexities of program scheduling during the study period. Such an examination would reflect individuals' preferences more precisely. Fourth, an additional analysis revealed that the majority of the sample exhibited channel-switching behaviors while they were watching television.

We ran a robustness test with nonswitchers and found no significant difference between nonswitchers and the full sample. However, future research should consider including switching behavior in the integrated model. Last, we did not consider online TV viewing behavior in our analysis because of the inability to track such behavior in our data, but future research should take it into account when explaining television viewing.

Despite these limitations, this study offers insights for researchers and practitioners. First, the findings confirm the need to take both individual and structural factors into account to explain media choice. We provided more detailed explanations regarding choice and use of channels with different content orientations. Second, this study offers insights that media choice and duration may imply different mental and cognitive processes, which should be examined separately. This is in line with previous studies that maintained that television viewing is a process model (Heeter, 1985; Rust et al., 1992; Wonneberger et al., 2009). Third, this study provides an explanation about how media users interact with television in conjunction with other multichannel services and the Internet, an important point of inquiry regarding the supplementary and complementary relationships of different media. Last, this study can help marketers and media planners understand the influence of various determinants of television viewing and better target their key audiences. Using individual variables, marketers can target their preferred demographic groups or psychologically homogenous segments. Using structural variables, they can optimize channel-mix strategies by looking at the relationship between television use and other media use. With future investigations on this topic that incorporate use of newer and emerging media, we will be able to improve the predictive power of the integrated model.

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