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Who Pays for Online Content? A Media Dependency Perspective Comparing Young and Older People

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This study examines predictors of online content purchases through media dependency theory and comparing young and older people. It focuses on actual online content purchases instead of willingness-to-pay used in previous studies. The effects of two dimensions of media dependencies are compared: intensity and referent scopes. Social media dependency and mobile media dependency are examined specifically, in addition to general Internet dependency as new media dependency. Our results show young people make more actual purchases of online content than older people. Predictors of online content purchases include age group, online shopping habits, ownership of mobile applications and mobile devices, Internet referent dependency, and social media intensity dependency. New media referent dependency is more important than intensity dependency for predicting online content purchases.

INTRODUCTION

These past few years have marked the soaring of the online content market and the decline in the traditional media market. The digital movies and TV show market grew 30% and subscriptions streaming (e.g., Netflix) increased 26% in 2014 (Digital Entertainment Group, 2015). About 25% and 22% of all Internet users subscribe to Spotify and Hulu (Hoelzel, 2015). Digital music revenue grew 7% and accounted for 46% of global music sales in 2014 (International Federation of the Phonographic Industry, 2015). *New York Times* paid digital subscribers increased 25 times, from 35,000 in 2014 to

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910,000 in 2015 (*Forbes*, 2015). Both physical video products and rental service sales dropped 11% in 2014 and the print newspaper ads revenue dropped 66% from 2005 to 2014 (Pew Research Center, 2014). Although the online content market is promising, it is difficult to be profitable due to consumers' "online content-should-be-free" ethos (Dou, 2004) and piracy (Bustinza, Vendrell-Herrero, Parry, & Myrthianos, 2013). Young people, the so called "digital natives," who grew up with digital media, are heavy users of new media, but have low income and positive attitudes toward illegal downloading (Giletti, 2012). Older people, the so called "digital immigrants," have high income, but learn digital skills in adulthood, and have more experiences in consuming traditional media content (Strauss & Howe, 1991). It is important for media managers to know whether young people or older people make more purchases of online content and understand the predictors of actual online content purchases, which are not examined in previous studies, but crucial in estimating potential sales and revenue of online content.

LITERATURE REVIEW

Media Dependency Theory

Media system dependency (MSD) theory states that the more the media could meet people's demands, the more likely they would depend on the media. As a result, the media will exert more influences on them. It suggests people use media for three main needs, including the need to understand the world, to act meaningfully, and to escape. The media affect people's cognition, affection, and behavior (Ball-Rokeach & DeFleur, 1976). The dependency relationship has been conceptualized as intensity dependency, referent dependency, and goal dependency (Ball-Rokeach, 1998). Intensity dependency refers to the strength of dependency relationship. Referent dependency refers to the diversity of using media features or media activities. Goal dependency is users' goals that are met such as understanding or entertainment.

In this study, we focus on two types of the media dependency including intensity and referent dependency, which can be measured objectively. Three specific new media dependencies including dependencies of Internet, social media, and mobile phones are examined. Mobile application ownership and mobile device ownership are added in this study as referent dependency, because they are related to the online content distribution or sharing and contribute to the diversity of new media dependency. The benefit of separating media dependency dimensions by a specific medium is that it can help identify which dependency dimension exerts more influences on online content purchases.

New media meet people's various goals such as surveillance, entertainment, socializing, etc. As a result, the dependency on new media

influences people's behavior including purchase behavior. Television dependency is related to people's television shopping (Grant, Guthrie, & Ball-Rokeach, 1991). The Internet dependency predicts people's intention to shop online (Mafé & Blas, 2006) and their general online shopping experiences (Patwardhan & Yang, 2003). However, none of the published studies examines the relationship between dependency of different types of new media such as the Internet, social media, and mobile phones and actual online content purchases.

New Media Dependency Between Young and Older People

Age is related to dependency of both traditional media and new media (Loges, 1994; Mafé & Blas, 2006). Young people spend more time on new media (Ha, Yoon, & Zhang, 2013) and consume more streaming services such as Netflix than older people (Statista, 2013). MSD theory suggests the heavy media usage could reflect people's dependency on media and the extent to which media could satisfy their goals (Ball-Rokeach, 1985). When people use the media, the dependency is activated since their needs are fulfilled in the usage process (Grant et al., 1991). For example, when individuals use mobile phones or social media, their socializing, entertainment, and understanding needs are fulfilled (DeFleur & Ball-Rokeach, 1989). The fulfillment of needs drives future media use and online shopping experiences. Thus, the interrelationship between the new media usage and the audience's engagement in these media builds and develops the dependency relationship (Csikszentmihalyi, 1997).

Online Content Purchases

Online content is the textual, visual, or aural content that is distributed through the Internet such as online videos, music, news, etc. (Koiso-Kanttila, 2004). Creating "value-in-use" is pivotal for online content success (Payne & Holt, 2001). The key for creating "value-in-use" is to create superior customer experiences when consuming online content, which is dependent on the quality of online content, distribution processes, and payment strategies, etc. (Woodruff & Gardial, 1996). The current online content industry applies multiple business models that generate revenue such as paying per view of item, subscription, free content with added ads, or the bundle model, etc. (Mings & White, 2000).

Previous studies have examined the predictors of willingness to pay for online content (e.g., Chyi, 2012; Giletti, 2012). Users' income, risk perceptions, purpose for consuming online content, their belief that "everything-should-be-free" online ethos, and their credit card usage experiences can predict willingness to pay for online content (Chiang & Assane,

2009; Dou, 2004). However, it is important to note that people's behavior is not always consistent with their intention. The correlation between intention and actual behavior is found to be moderate ranging from 0.41 to 0.53 (e.g., Kim & Hunter, 1993). Thus, it is more directly related to reality by examining the predictors of the actual online content purchases instead of just willingness to pay. This study examines the predictors of online content purchases including both information and entertainment content instead of only one specific online content type such as online news (e.g., Chyi & Lee, 2013) or online music (Chiang & Assane, 2009) to give more insight to media managers and different online content producers.

Age and Online Purchase Behaviors

Age is negatively related to intention to buy online (e.g., Akhter, 2003; Chyi & Lee, 2013). It may be because young and older people's attitudes differ toward online shopping. Young people like shopping online because they prefer searching product information and getting the best deals online. They prefer downloading music online because of the convenience and the variety of music choices. Also, they could share music with their friends. They believe buying physical CDs is an outdated and inconvenient way to access music (McIntyre, 2011). Older people have negative attitudes toward new technology (Gilly & Ziethaml, 1985). As age group is a well-recognized factor in online content consumption, this study will examine factors beyond simple age difference by including online shopping and different forms of media dependency in predicting online content purchases.

Based on the literature on media dependency, we propose two hypotheses and one research question:

H1.   Young people are more dependent on new media than older people in terms of both intensity and referent scopes.
H2.   Young people make more actual purchases of both online entertainment and information content than older people.
RQ1.   Between age group and new media dependencies, which is more influential in predicting people's actual online content purchases?

RESEARCH METHOD

This study was based on a mail and web survey in a local mid-size market in the Midwestern United States from September 6 to 30, 2012. This study compared young and older people. We defined young people as individuals aged between 16 and 35 and older people as people aged 48 or older in 2012. There were two sampling frames for this study to cover older people

and young people: (1) a northwestern Ohio resident database supplied by a local newspaper and (2) college students in a northwestern Ohio state university. For the residents, a simple random sample from a local newspaper database ($n = 1,500$) was sent the questionnaire package with a fresh one dollar bill as an incentive for participation. The response rate of the residents was 21.1%. Since a random sample of college students was hard to get, they were recruited through a campus recruitment process. A total of 36 small general education classes with a variety of majors and class standings from a public university in the same market were used to recruit young people. Extra course credit incentives were provided to encourage participation.

Measurement

ONLINE CONTENT PURCHASES

We summed up all online content respondents purchased among seven categories including online downloaded video and music, premium view subscription service such as Netflix, other entertainment content, online news, magazines, and other information content. The score ranged from 0 to 7.

We used consumers' actual media use as a quantitative measure of intensity dependency because users' actual media use is the essence of the media dependency. Although we noted that this was different from Ball-Rokeach and Grant (1990) who considered Media Dependency as a more qualitative alternative to measure media exposure as a predictor of media effects. Ball-Rokeach, Rokeach, and Grube (1984) asked how helpful the media was for attaining one's goals to measure intensity dependency. We followed Ball-Rokeach's (1998) definition of referent dependency and measured it by the diversity of media use for content consumption.

INTERNET DEPENDENCY

The Internet intensity dependency was measured by the total hours respondents spent on the Internet per week in various locations such as home, work places, etc. The Internet referent dependency was measured by the variety of ways of accessing the Internet such as computer, mobile phone, etc.

SOCIAL MEDIA DEPENDENCY

To measure social media intensity dependency, we counted the frequency of doing various activities on social media sites such as communicating with friends, posting news, etc. A 5-point Likert scale was used. The social media

referent dependency was measured by the variety of popular social media sites respondents used such as Facebook, Twitter, YouTube, etc.

MOBILE PHONE DEPENDENCY

Mobile phone intensity dependency was measured by the total hours respondents used different features such as text messaging, calling, etc. in a week. Mobile phone referent dependency was measured by the variety of mobile phone features users used.

MOBILE PHONE APPLICATION OWNERSHIP

The more unique mobile phone applications respondents had, the greater the mobile phone application ownership.

MOBILE MEDIA DEVICE OWNERSHIP

The more unique mobile media devices (e.g., iPad, iPod, tablets, etc.) respondents had, the greater the mobile media device ownership.

ONLINE SHOPPING AMOUNT

Online shopping amount, as a potential predictor variable, was measured by asking respondents how much money they spent online per month.

AGE GROUP

We categorized the age of respondents into two groups to make it a dummy variable: 1 is the older people (aged 48 or above) and 0 is the young people (aged 16–35).

RESULTS

Among all 599 Internet users, there were 424 young people (70.8%), 175 older people (29.2%), 272 males (45.4%), and 327 females (54.6%). The average age of young people was 20.5 and that of older people was 63.60. There were 85.2% Caucasians, 8.3% African Americans, 0.9% Native Americans, 1.4% Hispanics, and 1.2% Asians. The average disposable income per month of older people ($1,200) was more than double of that of young people (<$500).

TABLE 1 Comparison of New Media Dependency Between Young and Older People ($N = 599$)

New Media Dependency	Young People ($N = 424$)		Older People ($N = 175$)		
	Mean	SD	Mean	SD	t
Internet intensity dependency	37.08	56.36	15.82	13.74	7.13***
Internet referent dependency	2.16	0.80	1.54	0.72	8.30***
Social media intensity dependency	47.53	15.05	33.13	9.31	11.74***
Social media referent dependency	2.90	1.08	3.02	1.86	−0.77
Mobile phone Intensity dependency	43.42	36.14	10.17	14.71	9.67***
Mobile phone referent dependency	9.15	4.24	4.55	4.17	12.13***
Mobile app ownership	5.20	2.12	4.54	1.84	3.60***
Mobile device ownership	1.45	0.79	1.27	0.69	2.86**

Note. The unit for intensity dependency of the Internet and mobile phones is hours/per week.
*$p < .05$, **$p < .01$, ***$p < .001$.

Independent *t*-tests were run to examine H1 (Table 1). As expected, young people were more dependent on new media both in intensity and referent scopes than older people. Compared to older people, young people spent significantly more time on the Internet (37.08 versus 15.82 hours/week), $t(537) = 7.13$, $p < .001$, and mobile phones (43.42 vs. 10.17 hours/week), $t(574) = 9.67$, $p < .001$. Young people were involved in various activities such as communicating with friends, posting pictures, etc. more frequently on social media than older people, $t(483) = 11.74$, $p < .001$. Also, young people used more ways to access the Internet, $t(563) = 8.30$, $p < .001$ and used more different mobile phone features, $t(597) = 12.13$, $p < .001$. Young people owned more different mobile phone applications, $t(595) = 3.60$, $p < .001$ and mobile media devices, $t(368) = 2.86$, $p = .003$ than older people. As many as 76% of young people had a smartphone compared to 32% of older people. The most popular mobile devices used by both groups were iPods, portable DVD players, Kindles, and iPads. However, on average, it was similar that young and older people used three social media sites, $t(594) = −0.77$, $p = .44$. The most popular social media sites for both groups were Facebook, Twitter, and YouTube. Hence, H1 was partially supported.

An independent *t*-test was performed to test H2. Young people purchased more different types of online content than older people, $t(597) = 4.25$, $p < .001$ (Table 2). They also bought twice as much of the online entertainment content compared to older people, $t(319) = 6.96$, $p < .001$. However, the online information content purchase was low

TABLE 2 Independent *t*-Test Comparing Online Media Content Purchases Between Young and Older People ($N = 599$)

	Young People			Older People			
	N	Mean	*SD*	*N*	Mean	*SD*	*t*
Total online content purchases	424	0.83	0.81	175	0.55	0.48	4.25***
Online entertainment content purchases	226	0.72	0.83	93	0.20	0.48	6.96***
Online information content purchases	226	0.15	0.44	93	0.11	0.34	0.75

Notes. Range for total online content purchases: 1–7; range for online entertainment content purchases: 1–4; range for online information content purchases: 1–3.
*p < .05, **p < .01, ***p < .001.

for both groups, t (319) $=$ 0.75, $p =$ .45. Hence, H2 was partially supported.

In total, 37.6% of all respondents bought online content (225 out of 599). 46.2% of young people had bought any type of online content while 16.6% of older people had done so (Table 3). The percentage of young people who had purchased specific entertainment and information content was higher than that of older people, except other information content (e.g., online journal articles). Generally, both young and older people purchased more online entertainment content than information content. Young people purchased more online video (7.8%), music (19.8 %), or a subscription service such as Netflix (5.0 %) than online news (1.4%) and magazines (3.5%). Downloaded music was the entertainment content that people purchased most. Both young and older people purchased more online magazines and other information content such as educational articles than online news.

Hierarchical multiple regressions were performed to test RQ1 (Table 4). No problem of multicollinearity was detected based on the predictors' variance inflation factor (VIF) scores. The model with all referent dependencies of new media and ownership of mobile apps and mobile devices could explain 8% of the variance of online content purchases, F (5, 296) $=$ 6.23, $p <$ .001. Adding age group and amount of online shopping explained 3% of the additional variance respectively. Model 4 with all variables explained 14% of the variance of online content purchases. In Model 4, the strongest individual factor was age group ($\beta = -.22$, $p <$ .001), followed by online shopping amount ($\beta = 0.18$, $p <$ .001) and income ($\beta = 0.15$, $p =$ .02). The negative regression coefficient of the age group showed the young group made more online content purchases. Considering four models, Internet referent dependency, mobile app ownership, and mobile device ownership were stronger than referent dependencies of social media and mobile phone in terms of predicting online content purchases.

TABLE 3 Purchase of Specific Online Media Content Between Young and Older People ($N = 599$)

Online Content Purchases	Young People ($N = 424$)		Older People ($N = 175$)	
	N	Percentage	N	Percentage
Downloaded video	33	7.78	1	0.57
Downloaded music	84	19.81	11	6.29
Premium view subscription	21	4.95	4	2.29
Other entertainment content	25	5.90	3	1.71
Online news	6	1.42	2	1.14
Online magazine	15	3.54	3	1.71
Other information content	12	2.83	5	2.86
Total online content purchases	196	46.23	29	16.57
Online entertainment content purchases	163	38.44	19	10.86
Online information content purchases	33	7.78	10	5.71

TABLE 4 Relationship Between New Media Referent Dependency and Online Content Purchases ($N = 599$)

	Model 1 (beta)	Model 2 (beta)	Model 3 (beta)	Model 4 (beta)
Internet referent dependency	0.15*	0.15*	0.14*	0.12*
Social media referent dependency	−0.01	−0.01	−0.01	−0.03
Mobile phone referent dependency	0.04	0.06	−0.01	−0.01
Mobile apps ownership	0.13*	0.13*	0.12*	0.12*
Mobile device ownership	0.14*	0.14*	0.13*	0.14*
Income		0.08	0.18**	0.15*
Age Group (0/1)			−0.23***	−0.22***
Online shopping amount				0.18***
R^2_{change}	0.10***	0.01	0.03***	0.03***
F	6.23***	5.51***	6.47***	7.25***
Adjusted R^2	0.08	0.08	0.11	0.14

Notes. Dependent variable is online content purchases; all VIF scores were less than 10.
*$p < .05$, **$p < .01$, ***$p < .001$.

Social media intensity dependency was the strongest intensity dependency factor among all new media intensity dependencies in predicting online content purchases (Table 5). The model with intensity dependencies of the Internet, social media, and mobile phone explained 3% of the variance of online content purchases, $F (3, 250) = 3.54$, $p = .02$. Adding the age group explained the additional 3% of the variance significantly, $F (5, 248) = 4.47$, $p < .001$. Adding online shopping amount made the most increase in R^2 (6%) ($p < .001$). Model 4 with all variables could explain 12%

TABLE 5 Relationship Between New Media Intensity Dependency and Online Content Purchases ($N = 599$)

	Model 1 (beta)	Model 2 (beta)	Model 3 (beta)	Model 4 (beta)
Internet intensity dependency	0.01	0.01	0.01	0.02
Social media intensity dependency	0.19**	0.21***	0.16*	0.13*
Mobile phone intensity dependency	0.03	0.04	−0.02	−0.03
Income		0.13*	0.19**	0.15*
Age group (0/1)			−0.20**	−0.18**
Online shopping amount				0.26***
R^2_{change}	0.04*	0.02*	0.03**	0.06***
F	3.54*	3.68**	4.47***	6.99***
Adjusted R^2	0.03	0.04	0.06	0.12

Notes. Dependent variable is online content purchases; all VIF scores were less than 10.
*$p < .05$, **$p < .01$, ***$p < .001$.

of the variance of online content purchases. In Model 4, the strongest individual factor was online shopping amount ($\beta = 0.26$, $p < .001$) and age group ($\beta = -0.18$, $p = .002$), followed by income ($\beta = 0.15$, $p = .03$), and social media intensity dependency ($\beta = 0.13$, $p = .04$). For RQ1, we could conclude that age group was more important than new media dependency in predicting online content purchases.

In summary, young people were more dependent on the Internet, social media, and mobile phones than older people. They also purchased more online information and entertainment content than older people. The statistically significant predictors of online content purchases included age group, general online shopping amount, ownership of mobile applications and mobile devices, Internet referent dependency, and social media intensity dependency. The predicting power of age group and online shopping amount were more important than the new media dependency on online content purchase. The new media referent dependency was stronger than the intensity dependency in predicting online content purchases.

DISCUSSION

This study has three main contributions. Previous studies have found age is negatively related to willingness to pay (e.g., Chyi & Lee, 2013), but without empirical evidence using actual purchases. This study confirms that young people indeed make more actual purchases of online content, even though their disposable income is lower than older people. This shows young people have higher recognition of the value of online content than older people. Also, this study covers all kinds of online content purchases instead of one

specific type of online content such as online news (e.g., Chyi, 2012) or online music (Chiang & Assane, 2009). Most importantly, we have found that the new media referent dependency is more important than the intensity dependency for predicting overall online content purchases, which is also a new contribution to the theory of media dependency and its application to the field of media management and economics.

Findings of this study have several important implications for the media industry. First of all, overall content purchases are still low among both young and older people. Second, age is negatively related to actual purchases of online content. Young people are developing the habits of buying online media content in addition to getting free content. This study echoes the previous result that young people are more willing to pay for online content (e.g., Chyi & Lee, 2013). Adding the new media dependency as a predictor, we explain why young people are more likely to pay for more types of online content than older people. Also, young people's positive attitudes toward innovation and new technology play a role (Bigne, Ruiz, & Sanz, 2005). They are more skillful in using various new technologies than older people. Past experiences of using digital devices skillfully are found to be related to intention to consume online content (Kihyun, Gyeung-Min, & Eun Sook, 2009). Considering young people may have higher income in the future, online content, especially entertainment content producers, should target young people instead of older people to make a profit.

Young people make more purchases of entertainment content than older people. Young people use new media for socializing, escaping, showing affection, and presenting a different persona (Leung, 2003). Consuming entertainment content meets these needs better than consuming information content. Also, both young and older people purchased more entertainment content than information content. One reason might be that it is easier to find free substitutes of online information content than online entertainment content. Customers' perceived value is the key for generating digital content profit (Payne & Holt, 2001). People may perceive online entertainment content as more valuable than online information content. Thus, it is more difficult to charge customers for online information content than online entertainment content. However, both young and older people purchased more other information content such as online magazines or educational content than online news, which we may infer that people may perceive some information content, such as online magazines or educational articles, as more valuable than online news. Media producers could offer more information content that is perceived valuable such as educational content to make a profit.

Internet referent dependency and ownership of mobile devices and applications play a key role in predicting online content purchases. The Internet is the precondition of accessing online content. The accessibility, speed, and locations of the Internet affect users' experiences of consuming

online content. Mobile apps direct people to online content by just clicking a button anytime and anywhere, which saves consumers' time and effort. Users use mobile apps for five gratifications including constant availability, novelty, convenience, entertainment, and instrumentality (Tan, 2008). The ease of use and usefulness plus the novelty of new technology of mobile apps increases the perceived playfulness of consuming digital content, making people more likely to pay for it since playfulness is one predictor of intention to pay (Moon & Kim, 2001). Also, people have the intention to consume the online content when they download apps such as a news app or entertainment apps (e.g., Netflix). Some of them may already be users, shoppers, or subscribers of the online content by PC or laptops before downloading apps. Mobile apps become a platform for continuous consumption or repurchase. Hence, media managers should target those who download media-related mobile apps or use their own mobile apps to push for purchases on exclusive or high quality content that cannot be found online for free.

Mobile media devices such as iPads provide a convenient and easy way for people to get online content anytime and anywhere, and offer more opportunities to allow users to be exposed to online content and related advertisements (Kaplan, 2012). Mobile devices become a "time-killer" and a "time-filler." People use mobile media for fulfilling their needs including time-critical needs, spontaneous needs and decisions, efficiency needs and ambition, mobility-related needs, and entertainment needs (Anckar & D'incau, 2002). Most content of mobile media is online content. Researchers have found people are more willing to pay for online content in the mobile channel than PC channel. Also, people perceive that the switching costs are higher for mobile channel than the PC channel, making people more loyal to mobile devices (Kim & Sugai, 2008). Besides, utility maximization in economics suggests a consumer attempts to get the greatest value possible from expenditure of the least amount of money when making a purchase decision. Since consumers have spent money buying these media devices, they want to utilize them as much as they can, which stimulates them to consume and buy more online content.

However, in our study, the intensity and referent dependencies of mobile phones are insignificant for predicting online content purchases, but ownership of mobile devices and mobile applications predict online content purchases. This result shows the intensity and diversity of mobile phone activity are not related to paying behavior, because people who use phones for more activities and more time may be using them for calling or messaging unrelated to consuming online media content. Yet, the importance of mobile phones should not be undermined because of the high predicting power of mobile application ownership for online content purchases. The effect of the Internet referent dependency on online content purchases also indicates the importance of mobile devices. Many devices that have access to the Internet

are mobile devices such as mobile phones, tablets, video game consoles, etc. Hence, future promotion of fee-based online content should focus on using mobile media devices and mobile apps to achieve the best result.

This study finds the referent dependency of new media is more important than the intensity dependency for predicting buying online content, which helps explain the mechanism of perceived value and purchase behavior of online content. The reason is that people who are dependent on the referent scope of new media, especially mobile media, have a stronger relationship with new media and are more appreciative of the attributes of the new media (Ha & Fang, 2012). If individuals are used to doing things such as listening to music, watching videos, getting news, or shopping online anytime, anywhere, and through any new media devices, they are more dependent on new media. Also, people are busy in today's fast-paced society. They need to relax, but do not have much time. Online content on mobile media is a convenient, fast, fashionable, and low-cost way to relax during spare time. Therefore, people would pay for online content that meets their goals, and saves their time and effort. Mobile media users who have not yet paid for online content should be the prime target for fee-based online content.

This study also confirms social media's important role in affecting purchase behaviors. All intensity dependencies are not related to online content purchases except social media intensity dependency. Social media offer marketers an interactive platform to connect with their consumer, build relationships, and spread electronic word-of-mouth (e-WOM) (Kaplan & Haenlein, 2010). e-WOM refers to opinions people share in social media community with themselves or other members (Dellarocas, 2003). Compared to face-to-face word-of-mouth, e-WOM spreads the word to millions of people online, increasing the customers' power and the value of economic activities (Fiona, 2005). Studies have reported e-WOM has an impact on sales of a variety of products such as beverages, books, music albums, or box office, etc. (e.g., Chevalier & Mayzlin, 2006; Godes & Mayzlin, 2004; Liu, 2006). However, fewer studies have examined the effect of social media on online content purchases. The effect of social media or e-WOM is based on trust (Hu & Ha, 2013). People trust their friends and families and disinterested people in their social network (Duana, Gub, &Whinston, 2008). Thus, they may trust the products such as online music or movies recommended by their acquaintances, increasing the likelihood to pay. However, the social media referent dependency is not related to online content purchases. One reason may be most popular social media sites such as Facebook are free platforms, strengthening the online "free ethos." Additionally, YouTube offers a lot of free online content, adding to the difficulty of charging users for online content. Although social media referent dependency is a weak predictor of online content purchases, social media's role cannot be ignored due to the key effect of e-WOM.

People's online shopping habits are found to play a key role in predicting their purchase patterns of online content in this study, which confirms the literature. Users' previous adoption behavior can predict if they adopt a similar technology in the future (Rogers, 1995). People who have bought online movies, TV, or e-books are more likely to pay for online news than those who had never purchased online content (Goyanes, 2014). As we found in this study, individuals who have a habit of purchasing things online also are more likely to buy online content. Both users' mobile media dependency and online shopping habits should be considered in grooming more people to pay for online content.

Who makes more purchases of online content? According to our findings, young people who shop and spend more money online, have higher income, have more diverse mobile applications and media devices, access the Internet in diverse ways, and are involved in various activities on social media more frequently would buy more types of online content. Therefore, online media producers should target young people with these characteristics. Also, they should focus on the market of mobile phones and mobile media devices, and try to offer diverse platforms especially various mobile applications and media devices for people to access online content.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

There are some limitations in this study. This study applies the data from a large dataset that is not designed for this study specifically. Some measures were not as ideal such as no dollar amount spent on online content was asked of respondents. As all dependency measures were self-reported by respondents, under-estimation or over-estimation cannot be avoided. Readers should be cautioned that the results on the hour use of specific medium and mobile app ownership only show the relative importance of each type of media use rather than accurate hour use and mobile app ownership.

The low adjusted R^2 of online media content purchases by media dependency factors in this study shows that new media dependency is not the most important factor in predicting online media content purchases. Yet, the new media dependency indicators are still statistically significant variables. As our original research question is to explore the importance of new media dependency in explaining online content payment, our findings show that it is indeed a factor that should be considered, but there are many other factors that should be considered as well, which have not been included in the model. Adjusted R^2 increases when adding online shopping amount in the model, which shows the key role of online shopping habits in predicting online media content purchases. In future studies, purchases of online content should be treated as part of online shopping and researchers can

compare how similar or different the criteria people purchase online content is with other non-media products/services. Future research may also ask Internet users to rank in order the value of different types of content to them.

Online content purchases are low among both young and older people. The comparison of young and older people is comparing people who have generally low online content purchases. The results probably show a conservative estimate of online content purchases. The middle aged group with higher purchasing power may have higher purchases that can be included in future studies to understand the effect of age cohorts in online content purchase decisions. Middle aged people are digital immigrants, but have higher income, shop online more, and are also increasingly highly dependent on new media (Pew Internet & American Life Project, 2009). They may exhibit similar or dissimilar patterns as young people.

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