SOCIAL MEDIA INFLUENCE ON PURCHASE INTENTION WITH THE MEDIATING

EFFECT OF FAN IDENTIFICATION:

THE CASE OF ULTIMATE FIGHTING CHAMPIONSHIP

by

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(Under the Direction of James J. Zhang)

ABSTRACT

Recently, the population and importance of social media has increased rapidly. Consequently, the sport industry utilizes social media as effective marketing and communication tools, so the Ultimate Fighting Championship (UFC) also manages their social media with approximately 47 million followers. However, limited research has examined and identified UFC fans' social media motivation. Therefore, there was need to reveal UFC fans social media motivation and understand their consumption. Accordingly, based on the Uses and Gratifications (U&G) theory, this study was to explore and refine UFC fans' specific motivational factors through qualitative research. Furthermore, this study was to refine an instrument to measure the social media motivation of MMA fans' and validating the refined instrument, and to investigate how social media could affect PPV and ticket purchase intention by using fan identification as a mediator. The results showed that UFC fans have unique factors that distinguished it from other sports fans.

INDEX WORDS: Social Media, Motivation, Mixed Methods, Fan Identification,

Ultimate Fighting Championship, Uses and Gratifications Theory

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CHAPTER 1

INTRODUCTION

Mixed Martial Arts (MMA) is a combat sport that combines martial arts disciplines such as Boxing, Hapkido, Judo, Jujitsu, Wrestling, Karate, Kickboxing, and Taekwondo. In recent decades, the popularity of MMA has grown rapidly across many Asian and Western countries. This rise in popularity is particularly evident in recent years. Ever since Zuffa, LLC, purchased the Ultimate Fighting Championship (UFC) franchise for $2 million in 2001, the popularity of the UFC has been increasing by the day. Since 2007, UFC has grown at an annual average rate of 14.6% (Smith, 2016). Compared with the 4.2% annual growth rate of WWE in the same period (Smith, 2016), it can be seen that the UFC is developing at an extremely rapid pace. The rapid increase in the popularity of UFC has led to more Pay-Per-View (PPV) event sales than any other fighting sports, including boxing and wrestling (UFC is even competing with WWE). Also, UFC events have had higher ratings than MLB playoff games, college football, and NASCAR (Andrew, Kim, O'Neal, Greenwell, & James, 2009; Kim, Greenwell, Andrew, Lee, & Mahony, 2008). According to Miller (2008), 3 million viewers between the ages of 18 and 49 bought PPV access to UFC events; and they controlled 90% of the MMA market. In 2007, a total of 5.1 million people bought PPVs of UFC events (Miller, 2008); and seven of UFC's PPVs were ranked among the ten most popular PPV events of 2010 (Tainsky, Salaga, & Santos, 2012). Moreover, the UFC had sold 8.37 million PPVs for 13 events in 2016 (Meltzer, 2017).

The UFC's profits have amounted to over a quarter of a billion dollars in business sales, including avenues such as merchandise (Lopez, 2009), licensing fees, gate receipts, and

broadcast sales, and it has generated particularly more revenue through broadcast sale than through gate receipts (Tainsky et al., 2012). Indeed, broadcast profits are generated not only calculated by PPVs alone but also by cable TV broadcasting. UFC has earned an average of $100 million a year from Fox by granting its cable TV rights to Fox (Smith, 2016); and in the franchise's first cable broadcast of 2011, 5.7 million people watched the UFC event via the Fox network (Yoder, 2015). 2015 was a record year for the UFC in terms of gross revenue. UFC (the company) had profits of $157,806,000 in 2015 off of $608,629,000—indicating a profit margin of 25.9% (Connolly, 2016). Comparatively, the company generated $449,008,000 in revenue in 2014, generating $73,957,000 in profits—a 16.5% profit margin. In other words, the profits for 2015 had doubled when compared to 2014. Furthermore, UFC 205 had generated $17.7 million through gate receipts (Bohn, 2017). In 2017, WME-IMG took over UFC for $4 billion—a price which is almost similar to that of the Los Angeles Dodgers and the Los Angeles Clippers (Grossman, 2016).

Similarly, the population of social media has also sharply increased. Williams and Chinn (2010) defined social media as being "the tools, platforms, and applications that enable consumers to connect, communicate, and collaborate with others" (p. 422). Comparatively, Kaplan and Haenlein (2010) defined social media as being "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow for the creation and exchange of User Generated Content" (p. 61). There are various types of social media, but the most representative form of social media would be in social networking sites (e.g., Facebook and Twitter). According to Perrin (2015), in the year 2005, only 7% of American adults had been using social networking sites – whereas in the year 2015, 65% of the American adult population was using social networking sites. This showed that (from 2005 to

2015) the population that used social networking sites has increased more than nine times its initial size (in 2005). In addition, 90% of Americans aged 18 to 29 and 69% of Americans aged 30 to 49 used social networking sites. Miller (2009) further asserted that on a broader scope, 75% of Internet users use social media, with the most representative forms of social media being Facebook and Twitter. After Mark Zuckerberg introduced Facebook to consumers in 2004, Facebook increased and expanded its membership from 100 million users in 2008 to 2 billion active monthly users in 2017 (Statista, 2017b). On average, 1.33 billion active users were logged onto Facebook daily in 2017 (Statista, 2017a). Similarly, Twitter has also been used by many users. As of 2017, 68 million Americans were using, a large number when taking into account its introduction only 7 years ago (Statista, 2017c).

As the number of users increased, along with the importance of these forms of social media, many companies have used social media as communication tools and promotional tools for customers (Bruhn, Schoenmueller, & Schäfer, 2012; Keller, 2009; Mangold & Faulds, 2009). For example, thousands of Starbucks consumers have worked together to create new ideas for Starbucks (Bruhn et al., 2012); and Samsung has reflected the opinions of customers in their mobile phone designs (Haines, 2016). Furthermore, companies channeled funds into investments of over $1.54 billion into social media communications in 2008 (Bruhn et al., 2012). The use of social media marketing tools or communication tools is the same in the sports market. Notably, major American professional leagues, such as the National Basketball Association (NBA), Major League Baseball (MLB), the National Hockey League (NHL), and the National Football League (NFL) have managed their social media in ways that are designed to interact with fans. The sports teams in each of the four leagues also use social media. According to Burney (2016), NBA teams had a combined average of 7.6 million followers on Facebook, Instagram, and Twitter;

this comprised the most number of followers among the four leagues (the NBA, NFL, MLB, and NHL). NFL teams had an average of 4.6 million followers on the three social networks combined, and had an average number of 3.2 million followers that followed MLB teams. On average, only 1.8 million people followed NHL teams, and this amounts to the least number of followers among the four leagues. The four major American professional leagues, and the teams in each of the four leagues, have been in the practice of receiving advice from fans, and maintain interactions with them via their respective social media accounts. For example, the Boston Red Sox had received advice – regarding the changing of game time in the spring season – from their fans, through their social media; and the NHL asked fans to register for the Winter League on Facebook in order to run the event during the game (Fisher, 2011). These phenomena showed that sport and social media are indeed closely related.

Furthermore, the increase in the use of social media has led to changes in consumer behavior. Due to the consumers' changing perceptions of media, many research studies pertaining to social media usage are based on uses and gratifications (U&G) theory (e.g., Chen, 2011; Clavio & Kian, 2010; Johnson & Yang, 2009; LaRose & Eastin, 2004). Katz, Blumler, and Gurevitch (1974) asserted that the application of U&G demonstrated that individuals are active evaluators and media users, and that the media is used by the individuals to achieve gratification and to satisfy needs. The U&G basically assumes that members of the audience move from being passive to active audience participants through choosing and interpreting in choice media platforms. Therefore, U&G is suitable for investigating the characteristics of new media, such as social media (Ruggiero, 2000). Previous studies based on U&G were concentrated on social networking sites, such as Facebook or Twitter, and showed that sports players and fans are using social media for a variety of reasons: information gathering, diversion, interaction, and fandom

(Blaszka, Burch, Frederick, Clavio, & Walsh, 2012; Clavio & Kian, 2010; Hambrick, Simmons, Greenhalgh, & Greenwell, 2010).

Statement of Problem

The UFC runs a variety of official social media accounts that include Facebook, Twitter, and Instagram, with more than 41.1 million combined followers. In particular, more than 22 million UFC fans from around the world follow the official Facebook page. The UFC has uploaded a variety of content and information on these platforms, such as pay-per-view (PPV) and events details. This dissemination of content may be one of many reasons why UFC consumers, who are increasingly moving away from traditional media (i.e., radio, television, and newspapers), are turning to social media for information and purchasing decisions (Lempert, 2006; Rashtchy, Kessler, Bieber, Shindler, & Tzeng, 2007; Vollmer & Precourt, 2008). Additionally, consumers perceive social media as a more reliable source of information as compared to traditional corporate communications (Foux, 2006). In other words, customers want to control media consumption and to have instant access to information (Rashtchy et al., 2007; Vollmer & Precourt, 2008). Despite the increasing use and importance of social media and the ever-growing population of UFC social media follower, many MMA research studies done previously have been focused solely on the spectators' or participants' motivations (e.g., Andrew et al., 2009; Kim, Andrew, & Greenwell, 2009; Kim et al., 2008; Ko & Kim, 2010). Only a few research studies had been related to social media and MMA (e.g., Frederick, Clavio, Burch, & Zimmerman, 2012; Pegoraro, 2010). However, while noting this, researchers like Frederick et al. (2012) only focused on blogs, not social networking sites (e.g., Facebook, Twitter, and Instagram).

Furthermore, as social media becomes more crucial in the sports market, many research studies have been performed in terms of social media and sports; and many of these research studies have focused on Facebook and Twitter (Blaszka et al., 2012; Clavio & Kian, 2010; Hambrick et al., 2010; Sanderson, 2013). Indeed, it is also to be noted that researchers have found that social media is a useful tool for communicating with fans or customers (Eagleman, 2013; Hambrick, 2012). However, according to a survey by Broughton (2012), MMA fans have social media usage tendencies that differ from those of fans of other sports, such as NFL, NBA, college football, college basketball, and MLB. For instance, more than 50% of MMA fans have watched a game's video stream via smartphones or tablets, which is a higher percentage when compared to fans of other sports (35%). In addition, 36% of MMA fans have accessed sponsor promotions via social media sites, which is the highest amongst the 6 aforementioned sports. Previous studies have also completed social media motivation research in various sports. Therefore, social media usage tendencies with sports fans other than MMA have demonstrated that they are in need for social media motivation research based on MMA fans.

While noting these areas of strengths, the UFC's PPV has not always been successful. For example, more than 1 million UFC fans bought McGregor, Rousey, and UFC 200; 5 of 13 UFC events in 2016 sold less than 250,000 (Meltzer, 2017). The main reason for this phenomenon is that UFC event fight cards are in-depth and involved. Previous studies have shown that fight cards have a significant impact on both PPV and ticket purchases (Tainsky et al., 2012; Watanabe, 2015), and it can be expected that UFC event fight cards account for a considerable portion of PPV and ticket purchases. However, due to the nature of the UFC, it is hard to compose fight cards with only popular fighters who will attract fans to purchase the product in every event. In the case of the UFC, fan identification is very important, particularly

as they sell products like PPV and live event tickets. Previous literature has found that fan identification has positively impacted media consumption, event consumption, and purchase intention (e.g., Fisher & Wakefield, 1998; Wang, Jain, Cheng, & Aung, 2012; Wann, 2006; Wann & Branscombe, 1993). The UFC fans have shown that fans who were highly identified were more likely to purchase PPV and tickets as compared to less-identified fans (Brown, Devlin, & Billings, 2013). Prior studies have also found that fan identification has a mediating effect between various factors, including social media consumption and attendance intention or viewing motivation and viewing behavior (Hu & Tang, 2010; Park & Dittmore, 2014). Research has also found that social media tools have been useful in communicating and cultivating fan identification in professional sports teams (Waters, Burke, Jackson, & Buning, 2011). For the UFC to continuously grow, it is necessary to clarify the relationship between social media and fan identification.

Purpose of Study

The purpose of this study was three-fold. The first purpose of this study was to explore and refine the specific motivational factors of UFC fans in following and/or using the official UFC social media platforms through an approach that utilized qualitative research. A qualitative method was employed for the current study to explore and develop the UFC fans' specific motivational factors in their following and/or using of official UFC social media platforms. The second purpose of this study was to refine an instrument that is capable of measuring the social media motivation of MMA fans' and validating the refined instrument based on a U&G approach, along with the results of the aforementioned qualitative study. Along with this, MMA fans' social media motivation related to the UFC's official social media platforms needed to be

examined. Thirdly, the study investigated how social media could affect PPV and ticket purchase intention by using fan identification as a mediator.

Research Delimitations

1. This study focused on social media motivation and purchase intention.

2. This study studied the official UFC social media platforms.

3. This study utilized both qualitative and quantitative methods as mixed methods.

4. This study's participants were selected participants who follow and use the official UFC social media platforms.

5. This study used an online survey provider (i.e., Mechanical Turk from Amazon).

Significance of Study

There are a variety of big MMA promoters, such as K-1 and Pride FC, in the late 1990s and early 2000s. Currently, the UFC is only big promoters in MMA market. The popularity of the UFC has been growing rapidly, but other smaller promoters are not getting the same amount of success. Therefore, the significance of this study will lie in its contribution to the research on the MMA market as a whole, as well as the UFC. This study examined social media motivation, fan identification, and purchase intention of PPVs and ticket. Through this, it can also provide a better understanding of how social media can affect purchasing intention with the mediating impact of the fan identification by examining the relationships among these measures. Finally, the result of the study will help MMA promoters in giving them insight on what content to upload and promote on their social media based through using the study result and identifying what the fan needs, and as a result, it can further promote the sale of MMA-related products.

Definitions of Terms

1. Motivation: "A conscious experience or subconscious condition, which serves as a factor determining an individual's behavior or social conduct in a situation" (Alderson, 1955, p. 6).

2. Mixed Martial Arts: A combat sport that combines martial arts disciplines such as Boxing, Hapkido, Judo, Jujitsu, Wrestling, Karate, Kickboxing, and Taekwondo.

3. Social Media: "the tools, platforms, and applications that enable consumers to connect, communicate, and collaborate with others" (Williams & Chinn, 2010, p. 442).

4. Social Media Motivation: A social media users' conscious or subconscious reason, desire, gratifications, or willingness to follow and/or use social media platforms.

5. Fan Identification: "The extent to which a fan feels a psychological connection to a team and the team's performances are viewed as self-relevant" (Wann, 2006, p. 332).

CHAPTER 2

REVIEW OF LITERATURE

Mixed Martial Arts

The origin of MMA stemmed from the sport of Pankration, which occurred in the Olympic Games for the first time in 649 B.C. (Kim et al., 2008). The term "pankration" was a combination of two Greek words (pan, meaning "all"; and kratos, meaning "powers"), and referred to mixed boxing and wrestling; this similarity is the reason that pankration is thought to be the root of MMA (Kim et al., 2008). In the 20th century, combat sports were developed due to political tension and Western fighting styles (García & Malcolm, 2010). Tension between Eastern and Western fighting styles has brought about a syncretic result through the form of hybridization (García & Malcolm, 2010). The World Karate Association (WKA), which represents professional full-contact fighters in the U.S, had successfully achieved the combination of the Japanese and American styles – an emerging sport formed in the mid-1970s (García & Malcolm, 2010). Antonio Inoki, a pro-wrestler in Japan, who participated in a mixed-discipline event against Muhammed Ali in Tokyo in June 1976, worked for the WKA, and sought to create and attract Japanese interest (García & Malcolm, 2010). In Japan and America, there were a few broadcasts of full-contact kickboxing contests that combined know-how in terms of traditional karate and kickboxing from 1977 to 1979 (García & Malcolm, 2010). In the 1990s, MMA was extensively developed by incorporating a mixture of various skills from combat sports (García & Malcolm, 2010). As combat sports were increasingly being substituted

by K-1, UFC, and Pride FC (García & Malcolm, 2010), many MMA fans consider K-1, UFC, and Pride FC are believed to be the top promoters of MMA.

In 1993, Master Kazuyoshi Ishii introduced K-1 at Yoyogi Dai-Ichi stadium in Tokyo for the first time (Kim et al., 2008). K-1 was a championship to decide the best fighter in the world (Kim et al., 2008), and it only allowed stand-up fighting by using karate, kung-fu, taekwondo, and kick-boxing, a stark contrast to UFC and Pride FC, which allowed the use of a technique of grounding and grabbing (García & Malcolm, 2010; Kim et al., 2008). The K-1 was held in the Grand Prix in the National Stadium in Tokyo in 2002 (Kerr, 2004); and an estimated 90,000 spectators were present at the event (García & Malcolm, 2010; Kerr, 2004). Also, the K-1 super-fight match between Bob Sapp and Akebono was followed by about 54 million Japanese in 2004 (García & Malcolm, 2010; Snowden, 2010).

In 1997, Nobuhiko Takada, a wrestling hero in Japan, fought Rickson Gracie in the Tokyo Dome; this match was the first match in Pride FC (Kim et al., 2008). Although the match was a one-time event, it was a huge success in Japan; as a result, a revenge match was held on October 11th, 1998 (Kim et al., 2008). To broaden their business, Pride FC invited UFC fighters to their matches when the UFC was having a hard time surviving in America (Kim et al., 2008). In fact, Pride FC has tried to broaden their business to the global market (Kim et al., 2008). The first broadcasting of a Pride FC event in America was on May 13th, 2000 (Kim et al., 2008). In addition, the Pride FC video game was released by THQ (formerly Toy Headquarters), a video game company, in February 2002, which was helpful in increasing the reputation of Pride FC (Kim et al., 2008).

Art Davie, Rorion Gracie, Bob Meyrowitz, and Campbell McLaren held the first UFC event in Denver, Colorado on November 12th, 1993, which was the first MMA event (Kim et al.,

2008). Although UFC had held these first events with success, they were having difficulty

surviving due to negative social views of its brutality and violence (Kim et al., 2008). For

example, Arizona Senator John McClain proposed a bill to ban MMA; and MMA was banned in

all states in America except three (Wertheim, 2007). As a result, UFC lost 90% of its U.S-based

audience who had previously bought pay-per-view (Wertheim, 2007). After a rough patch from

1997 to 2001, the UFC franchise was taken over by Zuffa, LLC for just $2 million (Cooper,

2007), giving it an opportunity to reemerge in 2001 (Kim et al., 2008). UFC had attempted to

change public opinion of it by repositioning the sport—a repositioning which played an

important role in bringing pay-per-view purchasers back to the UFC (Wertheim, 2007). While an

earlier version of UFC allowed the use of all skills except biting and eye gouging, the new rules

included (1) divided rounds, (2) added time limits, (3) added a variety of fouls, (4) added eight

possible ways for the fight to end, and (5) split fighters into five weight classes (Kim et al., 2008).

After a change in the rules, interest in UFC began to increase in America; and as a result, pay-

per-view purchases and television ratings have begun to grow (Kim et al., 2008).

Fan Consumption of MMA

At the point of this study, few studies have investigated the motivations of MMA

consumers (e.g., Andrew et al., 2009; Kim et al., 2009; Kim et al., 2008; Tainsky et al., 2012).

Kim et al. (2008) have done research on spectators of MMA regarding their experiences,

preferences, and motives for attending and watching MMA events. This research study was the

first empirical research study to investigate the sport consumers' motives for attending and

watching MMA (Andrew et al., 2009). The purpose of that study was to investigate the

experiences and motives of spectators who attended an MMA event; to investigate the

differences in motivation between male and female fans; and to apply this finding in order to

help increase the understanding regarding consumption behavior in media. This research used other sport research studies done regarding motivation as a scale (Funk, Mahony, & Ridinger, 2002; Trail, Fink, & Anderson, 2003; Trail & James, 2001; Wann, 1995)—one which is composed of 10 categorical set of motives: drama/eustress, escape, aesthetics, vicarious achievement, economics, national pride, violence, sport interest, adoration, and socializing or group affiliation. According to Kim et al. (2008), sport interest, drama, socializing, and vicarious achievement were important motives in making plans to attend MMA events; and sport interest was a particularly strong motive for spectators. Also, male and female responses showed significant differences. The results showed that gender had an impact in the sense that genders were significantly different in terms of their media consumption. Sport interest, vicarious achievement, and national pride were motives for males, whereas sport interest and drama were motives for females.

Kim et al. (2009) had developed previous research by comparing Korean and American consumers. The research purpose was to examine, and compare the difference between American and Korean MMA consumers regarding media and motivation consumption in order to give useful marketing strategies to MMA promoters to assist in advancing their work abroad. 209 Americans and 229 Koreans who participated in local, mid-scale MMA events participated in this study; and Kim et al. (2009) found significant differences between the two countries in five motives: interest in the sport, vicarious achievement, aesthetics, national pride, and violence. According to Kim et al. (2009), the American event was significantly influenced by an interest in the sport, interest in the fighters, and drama; whereas the Korean event was significantly influenced by interest, drama, and adoration. Adoration was a specific motivation for the Korean

event. However, drama and interest in the fighters had received high ratings among both spectator groups.

Andrew et al. (2009) analyzed how consumers of Mixed Martial Arts (MMA) are influenced by nine motives (in terms of media and merchandise). The researcher tried to expand upon previous MMA research by focusing on the limitations related to the type of event and the inclusion of motivation. This research showed that aesthetics was the most important factor behind attendance at an MMA event, followed by drama, escape, vicarious achievement, crowd experience, violence, knowledge, adoration, and social interaction. In addition, it has been shown that gender differences exist in terms of motivation to engage in merchandise and media consumption. A unique finding that is also noteworthy was that there were no significant relationships between the drama factor and merchandise and media consumption behaviors – even though there were significant correlations between the motivations and consumption behaviors, a finding which is in contrast to previous research.

Tainsky et al. (2012) predicted UFC PPV purchases by using consumer-theory modeling. The result of the study showed that particular weight grades, star fighters, an uncertain fight outcome, and co-main event quality factors had an effect on the purchase preference of MMA fans. Particularly, the number of star fighters on a specific UFC fight card influenced PPV purchase. Also, Tainsky et al. (2012) argued that the result can be interpreted as consumer preference for perceived fight card quality or for familiar fighters. In addition, consumption rates increased significantly for a card that had been in a title match of the heavyweight, light heavyweight, or welterweight class.

Social Media

In 2009, over 175 million people joined Facebook, a staggering sum that was more than twice the population of Germany (80 million). Also, 10 hours of content had been uploaded to YouTube in order to share it with other users (Kaplan & Haenlein, 2010). According to Perrin (2015), only 7% of American adults used social networking sites in 2005, whereas about 65% of American adults used social networking sites in 2015. The age group that primarily used social media was people between 18 to 29 years old in 2015; that is, 90% of young adults used social media. In addition, 77% of ages between 30 to 49 years old used social media in 2015, which was a 69% increase from 8% in 2005 (Perrin, 2015). The development of social media might not be as sudden and surprising as one might think. In 1979, the Usenet, which was a global discussion system for talking with other Internet users through posting public messages, was created by Tom Truscott and Jim Ellis from Duke University. However, the age of social media, as we understand it, might have actually begun when the "Open Diary" was created 20 years ago. The "Open Diary" – which was the beginnings of a modern social networking site and one that collected online diary writers into one community – was established by Bruce and Susan Abelson (Kaplan & Haenlein, 2010).

Social media of today may look like a Bulletin Board System (BBS) of the late 1970s because the BBS also allowed users to share and exchange various forms of information with other users (Kaplan & Haenlein, 2010). However, due to the rapid technical and Internet advancements over the past 20 years, social media is intrinsically different from BBS and enables more powerful forms of virtual content sharing (Kaplan & Haenlein, 2010). According to Kaplan and Haenlein (2010), a manager or researcher can thus be confused about what should be contained in the term "Social Media"; and social media is different from the seemingly-

related Web 2.0 and User Generated Content (UGC). The term "Web 2.0" was used for the first time in 2004 in order to explain a new way that software developers and end-users began to apply the World Wide Web. In other words, it referred to the Web as a platform through which individuals no longer created and published content and applications as a platform, but instead, constantly edited items in a participatory and collaborative way. Therefore, Web 2.0 is considered to be the platform for the development of social media. While Web 2.0 served as the ideological and technological basis, the sum of all the ways that people use social media can be called the UGC. The term "UGC" is commonly used to explain various types of media content that are openly available and which are created by end-users. Based on these definitions of Web 2.0 and UGC, Kaplan and Haenlein (2010) defined social media is "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (p. 61).

Also, as the speed of Internet access increased, the popularity of the concept increased simultaneously, which led to the establishment of social networking sites, such as MySpace (2003) and Facebook (2004) (Kaplan & Haenlein, 2010). Social media can be divided into social networking sites (e.g., MySpace, Facebook, Twitter, and Instagram), creativity works-sharing sites (e.g., YouTube and Flicker), user-sponsored blogs (e.g., The Unofficial AppleWeblog and Cnet.com), company-sponsored websites/blogs (e.g., Apple.com and P&G's Vocalpoint), and others (e.g., company-sponsored cause/help sites and business networking sites) (Mangold & Faulds, 2009).

Social Media vs. Traditional Media

The media environment has undergone a process of tremendous change over the past decade (Mangold & Faulds, 2009). Traditional media is being increasingly replaced by social

media. For example, the Facebook page of Coca-Cola has 105 million followers; a video by Evian had been the one most watched on YouTube; and thousands of Starbucks consumers worked together on the Mystarbucksidea.com platform to create new ideas for Starbucks (Bruhn et al., 2012). Consequently, "this trend of consumers becoming fans of brands on social media platforms and using social media as an increasing source of information about brands leads to the assumption that social media in addition to traditional marketing communication instruments exert an important impact on a brand's success" (Bruhn et al., 2012, pp. 770, 771). Companies have invested over $1.54 billion to implement and support their social media communications in 2008 (Bruhn et al., 2012), because the spread of information via social media is far more accessible to the public than forms of "short tail" media, such as TV, radio, and print advertisements (Keller, 2009).

Companies are no longer the only source of brand communication as social media grants consumers the opportunity to talk to hundreds or thousands of other consumers around the world (Bruhn et al., 2012). Consumers are also using social media increasingly to find information instead of searching through to traditional media – such as TV, radio, or magazines (Mangold & Faulds, 2009). In addition, consumers also constantly want more control over their media consumption; and they require access to information whenever they want it – immediate (Rashtchy et al., 2007; Vollmer & Precourt, 2008). They consider social media as a more reliable source of information than the traditional tools of marketing communication that had been used by companies (Foux, 2006). According to the Nielsen (2010) survey, 70% of Internet users have faith in the ratings of consumers posting on social media platforms. As a result, marketers can expect that brand communication will be increasingly created by consumers themselves through user-generated social media communications, rather than being created individually by the

company (Bruhn et al., 2012). Therefore, it is important to both distinguish between company-created social media communications versus user-created social media communications and to individually examine the impact of each of these two types of social media communications (Bruhn et al., 2012).

Social Media Research in Sport

Due to the increasing importance of social media as a new marketing tool, and due to the increase in users, many studies that are related to social media have also been conducted in the field of sports. According to Filo, Lock, and Karg (2015), research studies related to sports and social media can be divided into three categories: (1) Strategic social media research, (2) operational social media research, and (3) user-focused social media research.

Firstly, there are research studies that investigate the role and function of social media from an aspect of the brand belonging to the category of the strategic use of social media (Filo et al., 2015). Studies in this category include organizational objectives in social media, managers' attitudes toward social media, social media's impact on brand equity or outcomes, and the integration of social media with a brand's traditional communication and promotional strategy (Filo et al., 2015). For example, Eagleman (2013) investigated the role of social media within National Governing Bodies (NGBs) in the United States by looking at the employees' acceptance of social media, motivation for using social media, and the organization's current social media usage. Eagleman (2013) found that most NGBs considered social media as being a useful strategic tool for communication that is used to build branding-focused relationships with fans of the brand and to promote the sport. Also, Hambrick (2012) investigated how influential Twitter users disseminated sporting event information via social media, and stated that Twitter can be an

important brand-building tool for the dissemination of information and promotional messages; and further emphasized the role of influential users when the users transmit these messages.

Second, the operational use of social media category included researches concentrated on examining how brands use of social media (Filo et al., 2015). For instance, Frederick, Lim, Clavio, Pedersen, and Burch (2014) used the theoretical framework of the Para Social Interaction (PSI) to investigate the relationship promoted by professional athletes on Twitter, and uncovered that athletes were more likely to interact with fans on Twitter with regards to talk of their personal lives.

Lastly, the user focus of social media research studies has specifically focused on investigating the preferences, motivations, perceptions, and constraints of sports fans in relation to both their social media usage and to the demographic or user profiles of the social media users themselves (Filo et al., 2015). For example, Jensen, Ervin, and Dittmore (2014) investigated the potential impact of acting on the popularity of coaches in social media through the use of Twitter, and found that program quality – as reflected through the program history, field success, attendance, and stadium capacity – was the most important when predicting NCAA football coaches' number of Twitter followers. Also, Mahan (2011) examined the use of consumers preferences' functionality as a predictor - in terms of social media using the technology acceptance model - and explained that consumers who were motivated by the pleasure of using social media responded positively to the sports organizations' use of social media platforms.

Uses and Gratifications Theory

This research is based on the U&G theory that first appeared in Katz et al. (1974). Katz et al. (1974) argued that the application of U&G is useful as individuals are active evaluators and media users, and that they satisfy needs and achieve gratification through the use of media. U&G

theory basically assumes that members of the audience shift from having been a passive viewing audience to being an active viewing audience through selecting and interpreting media. In other words, the basic premise of U&G would be that individuals will pursue media among competitors that assist in achieving their needs and leads to ultimate gratifications (Lariscy, Tinkham, & Sweetser, 2011). According to Rubin (2009), media behavior is goal-oriented; and the media can be used consciously (i.e., habitually) or instrumentally (i.e., in seeking information). U&G presents a vision of media audiences that make active or conscious choices as to the media they consume, and the setting of goals that would be directed towards pursuing their chosen activities (Clavio & Walsh, 2013; Katz et al., 1974). The U&G theory also encourages researchers to communicate directly with users to verify what media the users are choosing (Clavio & Walsh, 2013; Katz et al., 1974). The spread of new media, such as virtual worlds and social media would therefore require a significant amount of new research from a U&G perspective. A key specific feature of new media that should be noted would be the interaction that represents the ability of users to deliver content in response to other users (Ha & James, 1998).

According to Quan-Haase and Young (2010), many of the past studies that are related to U&G were mainly focused on the primary media of the time; television (e.g.,Bantz, 1982; Bryant & Zillmann, 1984; Cazeneuve, 1974; Dobos, 1992; McIlwraith, 1998) and traditional media (e.g.,Armstrong & Rubin, 1989; Dimmick, Sikand, & Patterson, 1994; O'Keefe & Sulanowski, 1995). However, according to Ruggiero (2000), U&G has been the most advanced theoretical approach to date in describing the beginning of a new communication media. U&G is particularly suited to investigating three characteristics of communication owned by new media, but not by traditional media. These characteristics are interactivity, demassification, and

asynchronicity; and social media and UGC are applied directly by these characteristics (Clavio & Walsh, 2013; Ruggiero, 2000). In other words, the behaviors of an active user in the newspaper-and-TV era may not be enough to qualify as behaviors of an active user in the Internet era. However, the application of U&G to investigate media use on the Internet has become widespread and increased, since a variety of media platforms that are available to individuals require the audience to actively select specific media (LaRose & Eastin, 2004). Newhagen and Rafaeli (1996) have stated that it is reasonable to apply U&G as an effective framework to help researchers understand Internet user behavior.

In the literature, U&G studies have developed and modified the gratifications dimension for the internet, video game, computer-mediated communication, mobile application, and social media in many different fields. Whiting and Williams (2013) have investigated the reasons behind the consumers' use social media, looking to prove its importance based on U&G. By adopting and modifying several scales of previous literature, this research identified 10 dimensions of gratification to explore social media motivation: (1) social interaction; (2) information seeking; (3) pass time; (4) entertainment; (5) relaxation; (6) communicatory utility; (7) express of opinions; (8) convenience utility; (9) information sharing; and (10) surveillance/knowledge about others (e.g., Ko, Cho, & Roberts, 2005; Korgaonkar & Wolin, 1999; Papacharissi & Rubin, 2000). The result of this study has shown that 88% of participants used social media for social interaction; and 80% of participants used social media for information seeking. The rest of the dimensions are: 76% for pass time, 64% for entertainment, 60% for relaxation, 56% for communicatory utility, 56% for expression of opinions, 52% for convenience utility, 40% for information sharing, and 20% for surveillance/knowledge about others.

Furthermore, there are also many research studies that analyze U&G as it relates to social media in the field of sports (Blaszka et al., 2012; Clavio, 2008; Clavio & Kian, 2010; Clavio & Walsh, 2013; Hambrick et al., 2010). Clavio and Walsh (2013) were the first to try to comprehend why college sports fans engage in social media that is focused on sports use; with their research being based on U&G theory. According to Clavio and Walsh (2013), college sports fans had relatively low social media involvement in official Twitter and Facebook feeds; and that sports fans used Facebook and Twitter in order to get interaction and information.

Blaszka et al. (2012) investigated the use of the Twitter hashtag (#WorldSeries) during the 2011 World Series by using 7 dimensions of gratification factors: interactivity, diversion, information sharing, content, fanship, promotional, and combo. According to Blaszka et al. (2012), the hashtag #WorldSeries was primarily used by the laymen to express fandom, as well as interactivity; that is to say, fandom proved to be a factor in driving the use of the official Major League Baseball World Series hashtag. Hambrick et al. (2010) investigated how professional athletes who communicated with fans and other players used Twitter, and based it on the U&G framework; the results showed that interactivity tweets belonged to the highest category (34%). The diversion category also belonged to the second-highest category (28%). Through these previous studies, it can be expected that sports fans will use social media as various means of gratification.

There are only a few MMA research studies that are currently based on U&G (e.g., Frederick et al., 2012; Lim, Martin, & Kwak, 2010). Lim et al. (2010) examined the consumption of MMA television, with the result of the study showing that emotion had a mediating effect between risk-taking and attitude, and that actual media consumption behavior was directly influenced by attitude. Frederick et al. (2012) ascertained MMA blog users' demographics and

usage trends by using 6 dimensions of gratification factors: evaluation, community, information gathering, knowledge demonstration, argumentation, and diversion. According to Frederick et al. (2012), the most prominent motivational statements were related to information gathering.

Media Motivation and Consumption

Previous researches related to U&G have found that media motivation of consumers' can lead to consumption or behavioral intentions (e.g., Choi, Kim, & McMillan, 2009; Cianfrone, Zhang, & Jae Ko, 2011; Phua, Jin, & Kim, 2017). Choi et al. (2009) further investigated the impact of gender on the intention with the use of mobile TV, taking into account the mediating effect of attitude, and using five motivation factors – social interaction, entertainment, pass time, fashion/status, and permanent access. According to the result of the study, males and female had different motivations to use mobile TV, and in particular, social interaction motivation held a high relation to female attitude and intention. Phua et al. (2017) investigated the reasons behind the consumers' use of one of the four social media platforms (i.e., Facebook, Twitter, Snapchat, and Instagram) in order to follow brands, and the platform's impact on brand community-related outcomes based on the U&G framework. This study found that Twitter users had higher brand community identification and membership intention as compared to other social media users, such as Facebook, Instagram, and Snapchat. Furthermore, Cianfrone et al. (2011) examined sports video game motivation by modifying and extending the Sport Video Game Motivation Scale, and the researchers found 8 factors for video game motivation: Competition, Diversion, Enjoyment, Fantasy, Social Interaction, Sport Interest, Sport Knowledge Application, and Team Identification. In addition, the result of this study showed that video game motivational factors were highly related to consumption, and these would impact on game users' future consumption.

Social Identity Theory

Social identity theory has been extensively related to research in terms of sports fan identification and teams/organizations. Social identity is an individual's self-concept based on their perception of belonging to a social group (Tajfel & Turner, 1986). Individuals create a shared social identity by internalizing a group's beliefs and values through membership of a social group. Therefore, the social identity theory suggests that both a social identity and personal identity exists in individuals. Social identities include organizational memberships (i.e., religion, education, social institution, or demographic) and classification (i.e., sex or race). This would also encompass personal identity, including distinctive attributes like abilities and interests (Tajfel & Turner, 1986). Individuals in the group are motivated to accomplish and maintain a positive social identity by making social comparisons through in-groups and out-groups (Hogg & Abrams, 1999; Tajfel & Turner, 1986). Individuals in the group believe that their in-group is superior to the inferior out-group. For this to happen, comparisons between in-group and out-group must be accepted in social situations, out-groups must exist, and individuals must be internalized into groups (Hogg, 2003).

Social identity theory further implies that individuals are attracted to a desire for higher self-esteem, which is partially established through membership with a social group (Tajfel & Turner, 1986). This means that the social identity theory assumes that individuals feel immediate intimacy with the group, organization, or team by looking for other people who have similar interests (Donavan, Carlson, & Zimmerman, 2005). This phenomenon is prominent in sports fans because they highly identify with their team, are more likely to criticize other teams' fans, and show favoritism to their teams' fans (Branscombe & Wann, 1994; Wann & Branscombe, 1995; Wann & Grieve, 2005). Sports fans also believe that their teams are an extension of themselves

(Wann, Melnick, Russell, & Pease, 2001). Furthermore, it is possible that sports fans connect to other strangers who wear jerseys of similar colors in a stadium (Tajfel & Turner, 2004). The sense that sports fans favor their team (in-group) and disparage rival teams (out-group) thus strengthen their perceived social identity (Wann & Grieve, 2005).

Fan Identification

Fan identification predicts the consumption behaviors of sports fans (Milne & McDonald, 1999). Wann (2006) defined fan identification as "the extent to which a fan feels a psychological connection to a team and the team's performances are viewed as self-relevant" (p.332). According to the previous literature related to fan identification, fans with high identification were more likely to attend live events or purchase sports media and merchandise when compared to fans with less identification (Fisher & Wakefield, 1998; Wann, 2006; Wann & Branscombe, 1993). Previous literature has also found that fan identification positively impacts upon purchase intention. Wang et al. (2012) examined the traditional cause and effect relationship between fan identification and purchase intention. The study showed that high fan identification led to high purchase intention for products sold by team sponsors. Kwon and Armstrong (2002) found that the level of identification impacted the purchase of licensed products and merchandise marked with a team's logo. Wann (2006) asserted that fans with high identification were more likely to participate in live sporting events or purchase sports media. Furthermore, Hu and Tang (2010) found that viewing motivations (i.e., self-esteem, eustress, entertainment) were positive impacts on fan identification. Fan identification had a mediating impact on motivational factors and viewing behavior. Accordingly, the level of fan identification has an effect on purchase intention.

Fan identification, which refers to an individual's dedication toward their team or player (or close attachment), can create a sense of belonging and connection (Sanderson, 2011), and

many professional sports teams used their website and social media platforms to communicate and cultivate fan identification (Waters et al., 2011). Consequently, it is expected that fan identification and social media are closely related. According to previous studies, team identification was directly influenced by social media consumption (Park & Dittmore, 2014), and also had a direct impact on attendance intention. Fan identification was a mediating impact between social media consumption and attendance or word-of-mouth intention. There are few studies which relate to UFC fan identification (e.g., Brown et al., 2013; Devlin, Brown, Billings, & Bishop, 2013). Those studies found that UFC fan identification was closely related to future UFC purchase intention. Both the 18 to 24 age group and the 35 and older age group were identified as the UFC fans who were most likely to purchase UFC products, like tickets and PPV (Brown et al., 2013).

Mixed Methods

Recently, as qualitative and quantitative research have become justified as methods for inquiry within the social and human sciences, mixed methods that use a combination of quantitative and qualitative approaches are gaining popularity (Creswell, 2017). The reason for this popularity is that mixed methods are another methodological advancement that combines and uses the strengths of both qualitative research and quantitative research (Creswell, 2017). As such, through the combined used of quantitative and qualitative research, the researcher can have more insights that lead to a better expansion and understanding of the research problems. Greene, Caracelli, and Graham (1989) defined mixed methods as "those that include at least one quantitative method (designed to collect numbers) and one qualitative method (designed to collect words), where neither type of method is inherently linked to any particular inquiry paradigm" (p. 256). Also, according to Johnson, Onwuegbuzie, and Turner (2007), the mixed

methods approach is "the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration" (p. 123).

Rossman and Wilson (1985) suggested three reasons for the combination of both quantitative and qualitative research: (1) it is used for identifying or verifying the other components through triangulation, (2) it is used for enabling or developing analytics for providing affluent data, and (3) it can be used for a new way of thinking through paying attention to the contradictions in two sources of data. Greene et al. (1989) have identified and highlighted the five purposes with the rationales for the mixed methods evaluation designs through theoretical sources: triangulation, complementarity, development, initiation, and expansion. Given the five purposes for mixed methods evaluation designs, as researcher used mixed methods design, it is available to (1) increase the validity of constructs and cut down biasness (triangulation), (2) enhance the interpretability and clarifying results (complementarity), (3) develop or inform other method of research (development), (4) finding paradox and contradictions (initiation), and (5) extending and attaining broad knowledge and understanding of inquiry (expansion).

Creswell (2017) proposed that there are four important aspects for planning mixed methods procedures: timing, weighting, mixing, and theorizing. According to Creswell (2017), these four aspects are helpful for outlining a mixed methods research. The timing is related to the need to consider the timing of data collection. Researchers can collect qualitative and quantitative data in phases (sequential) or at the same time (concurrent). The weighting is related to the amount of weight needed in order to prioritise or emphasize it in a research. Researchers

can emphasize both qualitative and quantitative research equally, or highlight one or the other, depending on his interests. The meaning of mixing can be defined as "either that the qualitative and quantitative data are actually merged on one end of the continuum, kept separate on the other end of the continuum, or combined in some way between these two extremes" (pp. 207, 208). In the mixed method design, the quantitative and qualitative data should be connected, integrated, or embedded. Lastly, the theorizing is related to theoretical perspectives of researchers for the directing of the entire design. Researchers can embed a theory (or theories) explicitly or implicitly.

For these reasons, a sequential exploratory mixed-methods design was adopted for the current study. The collection and analysis of qualitative methods were employed for the first phase of this study, followed by the collection and analysis of quantitative methods. This type of design is useful in explaining and interpreting relationships, and the main focus would be to explore the phenomenon further (Creswell, 2009). Accordingly, since the study was designed to explore the UFC fans' specific motivational factors in their following and/or using of official UFC social media platforms and refine a theoretical instrument based on the qualitative procedure, the adoption of this method was found to be the most viable option.

CHAPTER3

PHASE 1: QUALITATIVE STUDY

Methodology

Research Design: Qualitative Methods

To explore and develop the UFC fans' specific motivational factors in their following and/or using of official UFC social media platforms, and particularly as this sport is distinguished from other sports, such as the NBA, MLB, and NHL, a qualitative method was employed for the current study. Creswell and Miller (2000) defined triangulation as "a validity procedure where researchers search for convergence among multiple and different sources of information to form themes or categories in a study" (p.126). According to Golafshani (2003), a triangulation process is useful for enhancing the validity and reliability of research or to assess findings. In particular, in qualitative research designs, the triangulation process is helpful in enhancing validity and curbing bias by using different kinds of methods or data (Patton, 2002). As such, this study undertook a qualitative research approach by using three types of data: previous literature (i.e., theoretical data: U&G), documents (i.e., explore four types of UFC social media), and qualitative data (i.e., in-depth interviews).

Firstly, the contents on the official UFC social media, such as video, pictures, and comments, were collected and analyzed to investigate and understand the UFC fans' character profile and hypothesized needs. As such, the researcher collected and examined the contents of four different the UFC official social media platforms (i.e., Facebook, YouTube, Twitter, and Instagram). To collect qualitative data, in-depth interviews were conducted to find and explore

UFC fans' specific motivational factors. An in-depth interview is advantageous in finding

information about an individual and revealing personal experiences of a specific topic or issue,

and it is also helpful in determining how people making decisions, investigating their beliefs and

perceptions, and exploring motivations for specific behaviors (Hennink, Hutter, & Bailey, 2010).

Participants

The eligibility of participants in this study's qualitative method included UFC fans who

follow and/or use the UFC official social media platforms. The sample participants were selected

purposively and a total of 12 UFC fans were collected for qualitative study. The interviews in

this study used an in-depth interview based on a semi-structured interview guide to explore the

UFC fans' social media motivational factors. The interview questionnaire was composed mainly

of three parts: (1) General social media tendency, (2) social media tendency in terms of UFC

social media platform, and (3) comparison with general sport social media tendency.

In terms of the participants' demographic, a total of 12 participants were males; and the

participants' age ranged from 25 to 41 years old; with 7 participants identified as Asians, 4 as

Caucasians, and one as an African-American. All participants followed and/or used the official

UFC social media platforms; a total of 11 participants followed and/or used the UFC YouTube

Channel, which was the most popular UFC social media platform in this study. In addition, all

participants followed and/or used the official UFC's Facebook, Twitter and/or Instagram. Table

3.1 provides a comprehensive look at the participants' information and the individual

demographics. The interview was conducted using a face-to-face interview (a total of 9

participants) or Skype (a total of three participants), and the total interview time was

approximately 240 minutes. The current research was approval from the institutional review

board (IRB), and all participants were provided with consent forms. Lastly, all interview processes were recorded.

Data Analysis

The grounded theory method was selected based on Charmaz (2006) guidelines and procedures for qualitative data analyzing. The grounded theory method provides "rigorous procedures for researchers to check, refine, and develop their ideas and intuitions about the data. In addition, these methods enable the researcher to make conceptual sense of large amounts of data" (Charmaz & Belgrave, 2007, p. 29). According to Creswell (2013), and Zhang, Kim, and Pifer (2015), an approach through the grounded theory is a better way to better understand groups and their similarities and differences, or a correlation between categorized information. It is particularly advantageous to analyze data with new themes, and to develop or modify theories about a particular issue. Accordingly, since the main purpose of a qualitative research in this study was to find the specific motivational factors of UFC fans' in following and/or using the official UFC's social media platforms, an approach through the grounded theory was found to be suitable for the current study.

At the beginning, the data were analyzed inductively, as "inductive analysis involves discovering patterns, themes, and categories in one's data"(Patton, 2002, p. 453). Also, inductive analysis is usually used at the beginning of qualitative analysis in order to develop a codebook or identify certain patterns and themes. After themes were identified through inductive analysis, deductive analysis was conducted to confirm the accuracy and propriety of the inductive analysis as a confirmatory step. Patton (2002) indicated that when inductive analysis was completed, deductive analysis can be used in confirming the suitability of the inductive analysis. Furthermore, Strauss and Corbin (1998) had also noted that "anytime that a researcher derives

hypotheses from data, because it involves interpretation, we consider that to be a deductive process" (p. 22).

The data was analyzed based on Charmaz (2006), Creswell (2009), and Moustakas (1994) guidelines and procedures after the completion of the interviews. During the first step of the data analysis, all the recorded data was transcribed in order to read the raw data. Secondly, similar data were categorized and classified according to the interview questions. In the third step, NVivo 12, the data analyzing program, was used for data coding and analysis. Finally, themes were figured out and identified. For the validity, the criteria of trustworthiness were used (Lincoln & Guba, 1985). To enhance the internal validity, a copy of the transcript was sent to every interviewee to confirm both the clarity of the themes and accuracy of transcript. Furthermore, after coding and finding the theme, the coding data and the transcripts were sent to two external scholars who are expert in qualitative research for review, in order to increase and evaluate the validity. One professor conducted several qualitative analyses in a mixed method, while the other was an expert in case studies that utilized a qualitative method. For increasing the external validity, it was evaluated by comparing the responses of all participants and comparing the themes of the findings with previous literature based on the Lincoln and Guba (1985) criteria. To increase reliability, every interview was recorded with an agreement from participants, and NVivo 12 was used for data coding and finding the themes present in order to intensify data accuracy and dependability.

Result

Document Analysis

For the triangulation purpose, UFC social media platforms (i.e., Facebook, Twitter, YouTube, and Instagram) were analyzed for a better understanding of UFC fans' character

profile and needs. In terms of followers on the UFC official social media, approximately 47 million UFC fans follow UFC official social media platforms, including Facebook, Twitter, Instagram, and YouTube in December 2018. Particularly in the case of the UFC official Facebook page, it has more than 22.1 million followers, which was found to be the greatest number of followers when compared with other social media platforms. Furthermore, given the comparison with the major American professional leagues, such as the NBA, MLB, NHL, and NFL, the number of followers (approximately 22.2 million) was ranked second. The number of followers of the NBA official Facebook page (approximately 36 million) was greater than the UFC official Facebook page, but the number of followers of the UFC official Facebook page was greater than other major American professional leagues (i.e., MLB: approximately 7 million, NHL: approximately 4.3 million, and NFL: approximately 16 million).

Since there was a large amount of content uploaded on the UFC official social media, mainly contents, which were uploaded in October 2018, these were analyzed to increase the data accuracy. Seeing the UFC official Facebook page, there were more than 9000 photos have been uploaded on the page since the page was created, and during the data analysis period, all photos had the purposes such as for promotional use, fight cards, and keeping in touch with the fans. The photos also provided moments during the UFC events. Moreover, due to the nature of Facebook, the UFC official Facebook page had many videos, including a live stream. In particular, these videos included short highlight reels of UFC events and interviews of UFC players. Furthermore, to provide a specific schedule of UFC events to UFC fans, the UFC official Facebook page updated their event schedule on the page. Lastly, according to the Facebook report on the page, the managers of the UFC official Facebook page answered to the UFC fans very quickly through the use of Facebook messenger.

In terms of the UFC official Twitter, approximately 6.83 million UFC fans follow the UFC official Twitter. There are more than 85,000 Tweets and more than 30,000 photos and videos on the account. The content that was uploaded in October 2018, were very similar with the uploaded contents on the Facebook page. The UFC official Twitter content was usually composed of short video clips and photos with short comments. In addition, the video clips and photos were uploaded with tagging UFC players, who were related to the contents, and/or hashtags for UFC event as well as short comments. On the UFC official Instagram, there are approximately 12.1 million followers, the second largest number of followers among all four of the UFC official social media platforms. The UFC official Instagram also had short video clips and photos with short comments, which was similar to the UFC official Twitter. Furthermore, the UFC official Instagram had a link that connected users to a website for UFC event ticket purchase, instead of providing UFC events schedules. Most of the uploaded contents on the UFC official Twitter and Instagram appeared to be highly attuned towards promotion for UFC events. Also, many UFC fans discussed and shared their perspective, such as events' result-predicting, result of events, or events' fight card, through comments on the uploaded contents on the Twitter or Instagram.

The UFC official YouTube channel had more than 5 million followers (subscribers). Due to the nature of YouTube, all of the uploaded contents were either short or long videos. Since the UFC official YouTube channel was created, approximately 7000 videos have been uploaded to the channel. The most popular video was the "Top 20 Knockouts in UFC History", and more than 94 million YouTube users have watched the video. In addition, during the data analysis period, the most popular video was the "UFC 229: Post-fight Press Conference", and more than 8.7 million YouTube users watched the video, with more than 30,000 comments on the post. The

UFC official YouTube channel provided short highlights of UFC events, information on UFC events or players, and Weight-ins. Also, through the use of live stream, the channel broadcasted a Pre-fight Press Conference Faceoffs to their fans. Another characteristic of the UFC official YouTube channel was that UFC fans can purchase a UFC event as a PPV on the YouTube channel.

Main Study

Theme: Information

The first theme that emerged from UFC fans' responses was that they use the UFC social media platforms for information regarding the UFC. Information motivation refers to information seeking or self-education through social media and/or the internet. Previous U&G studies used information motivation to investigate social media and/or internet motivation, and many studies found that information motivation is important in the use of the internet and/or social media (e.g., Frederick et al., 2012; Ko et al., 2005; Korgaonkar & Wolin, 1999; Papacharissi & Rubin, 2000). Ko et al. (2005) found that consumers with high information motivation were more likely to participate in human message interaction on the internet, while Frederick et al. (2012) found that many MMA fans who visited MMA blogs used the platform for MMA-specific information. Chen, Clifford, and Wells (2002) and Hausman and Siekpe (2009) noted that informative websites enhanced a user's attitude toward the site. Users can also obtain daily information, breaking news, and answers to questions through social network services (Humphreys, 2007).

Participants in this study answered that they follow and/or used UFC social media in order to get information regarding the UFC. A UFC fan noted that "I can get the information that I do need and be done", and, another UFC fan highlighted that "I would know about UFC the

fights or any news or any updates, is via social media". Also, UFC fans followed the social media to get information on their favorite player's schedule. For instance, the #8 UFC fan stated that:

> "The one of the biggest reason of following the UFC social media is to get update and news and I just want to double check next schedule and information about like a champion Corner McGregor or my country player Chan Sung Jung, and the most important motive of UFC to me are passion and reality".

Furthermore, the #11 UFC fan used UFC social media platforms in order to get useful information through social media, stating that that "I was watching UFC games to develop my skills and go over what I ever learned in an institution, so that's one motivation, it's kind of education motivation". Given the participants' answers, UFC fans follow and/or use the UFC social media to get a variety of information on the UFC, such as event schedule, result, and any news about the UFC.

Theme: Convenience

The second them is convenience. Convenience motivation provides offers users easy access to social media without time and space constraints (Ha, Kim, Libaque-Saenz, Chang, & Park, 2015). Prior literature that exists is related to U&G and internet research using convenience motivation (e.g., Ko et al., 2005; Papacharissi & Rubin, 2000). Particularly, Ko et al. (2005) found that human-human interaction was influenced by convenience motivation as users with high convenience motives used interactive features to promote interaction. Jayawardhena and Wright (2009) found that consumers valued convenience when they purchased products and services without having to invest excessive time, effort, and money. Recent advances in information technology and the internet also highlight the importance of convenience motivation.

Social media can be comfortably access via a laptop or cell phone, regardless of the location or

time. Mobile applications for social media disperse information quickly and easily (Ha et al.,

2015).

Half of the UFC fans interviewed stated that they can reduce their time consuming for

watching UFC event by using the UFC social media. On UFC social media, many highlight

videos were uploaded, which is main reason why these UFC fans followed and/or use the UFC

social media. Particularly, these fans did not want to watch a whole game, including the several

undercards matches that they were not interested in. Also, one UFC fan mentioned that he

followed social media instead of searching on Google or MMA world because he can access and

get information immediately when he wants. Here are two sample answers:

> #2: "UFC's social media has highlight videos of main event. And I can click and I can
>
> watch only main event, which usually takes several minutes, like ten minutes to watch all
>
> the cool moves and knockouts. Yeah, that's why I use UFC social media, than watching a
>
> whole game".
>
> #3: "Ease of use and time efficiency, because as a PhD student, I don't have a lot of time.
>
> I mean, everybody has the same amount of time, but I have a lot of stuff that fills my time.
>
> I don't want to spend an inordinate amount of time looking for, searching for".

Also, some UFC fans stated that "It is quickly", and "Facebook is really convenient for me to

check and use". Based on the answers that are highly related to convenience, the convenience

motivational theme can be viewed as a main factor for using social media in terms of the UFC.

Theme: Social Interaction

The current study also found the third theme related to social interaction. Social

interactive motivation refers to interacting and communicating through social media. Indeed,

many internet users have participated in social interaction by sharing content and information, especially with interactive social media platforms (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). Highly motivated users in social interaction are likely to visit websites to exchange ideas, communicate with friends, or interact with others (Ko et al., 2005). According to Ko et al. (2005), social interactive motivation is relevant to human-human interaction and positively relates to an individual's attitude toward a website. Choi et al. (2009) examined the impact of gender on intention and attitude toward the use of mobile TV. The study showed that females' intentions regarding the use of mobile TV have been affected by social interaction. Furthermore, users trust these social interactions for information as compared to information provided by product and service companies (Brown, Broderick, & Lee, 2007).

UFC fans also follow and/or use the official UFC social media for social interactions with their friends or colleagues. One UFC fan answered that he used it "Mostly to keep up with friends and to communicate with friends". Furthermore, UFC fans use it to share their perspective about the UFC with other fans, and another UFC fan stated that he followed the social media to check other fans' comments. The #11 UFC fan, who is highly motivated in social interaction, mentioned:

"My first reason that I follow UFC channel is. I want to share any news and then my interest with other people in social media channel. So, we can see each others comment on the post. And yeah I can see many other opinions other than my opinions".

Many social media platforms allow users to share and discuss their interest, which is one of the strengths of social media. In addition, the result of the study showed that this strength can be applied to UFC fans. Also, the results also show that UFC fans follow and/or use the UFC social media to keep in touch with their friends and colleagues.

Theme: Entertainment

The entertainment theme is also one of the main reasons why UFC fans follow and/or use the official UFC social media. Entertainment motivation relates to enjoyment, spent time, rest, and joyful experiences. Previous U&G studies used this motivation as a dimension of gratification in their research (Ko et al., 2005; Whiting & Williams, 2013). Furthermore, similar concepts related to this motivation (i.e., hedonic, escapism, and pass time) were used for prior studies (e.g., Ha et al., 2015; Korgaonkar & Wolin, 1999; Nambisan & Baron, 2007; Papacharissi & Rubin, 2000). Korgaonkar and Wolin (1999) asserted that online users sought entertainment and escape, in addition to information. Lu and Su (2009) examined a conceptual model to investigate customer awareness using mobile commerce services for online shopping. Results showed that the intention for engaging in mobile shopping (m-shopping) was powerfully influenced by enjoyment. According to Alwitt and Prabhaker (1992), high entertainment-motivated individuals were more likely to use to programs and view advertising than individuals with low entertainment motivations.

According to the UFC fans' answers, they followed and/or used official social media because it is fun and entertaining, and they highlighted that this enjoyment lead to getting rid of stress. A UFC fan stated that "keeping up to date on it is always just fun for me. It's a fun thing to watch, and I know a lot about it because it's in my background". Furthermore, another UFC fan mentioned:

> "To get rid of stress. Like, a cold knockout scene is really awesome and ... yeah. That's why I'm watching. I trained some. My brother introduced to me … I really like to watch some fighters use high class skills to opponent. Yeah. That's why I'm still watching the mixed martial arts."

Consequently, the motivational factors of UFC fans that are related to entertainment is highly related to entertainment and enjoyment, and following or using the official UFC social media was helpful in helping them to get rid of their stress.

Theme: Economic

The last theme is related to economics. In the current study, the economic theme can be defined as the seeking of economic advantage through using social media, and it also defined as a users' ability to acquire free products (Korgaonkar & Wolin, 1999). To the author's knowledge, there are only a few researches related to economic motivation and U&G, in particular, related to social media and sport context. Due to the UFC's specialty in utilizing the pay-per-view system, many UFC fans indicated that they follow the UFC official social media to watch and get information in inexpensive way. More than half of the participants in this study answered that they were not willing to pay for the UFC's pay-per-view every time, which is main reason why they were watching highlight videos on the UFC's social media platforms. A UFC fan indicated "...to save my money to watch UFC video". Also, another fan highlighted that he felt that the UFC's pay-per-view system was very expensive, and he saved a lot of money by watching highlights on the social media. One Asian fan stated that he could watch UFC events without paying for the event in South Korea, but in the U.S, he could not watch the events without paying for that, which was the main reason why he started to follow the UFC social media. Here is a part of his statement:

> "So, in Korean broadcasting system there is already lots of advertisement, so it's free to watch for people like me. So, some companies who want to advertise something, they pay lots of money to UFC, but it's publicly available. That's the beauty of watching UFC in Asia."

According to the UFC fans' answers, economic advantage is a very important part of social media following, and many UFC fans want to get information and watch events in an inexpensive way in order to save their money.

Discussion

The result of this study found the UFC fans have five different themes of motivations behind following and/or using official UFC social media, and these were identified as Information, Social Interaction, Convenience, Entertainment, and economic motivation. Of these, Information, Social Interaction, Convenience, and Entertainment are very similar to the social media motivations of previous findings within the U&G literature. Especially in the sport context, previous U&G literature found that Information motivation (Clavio & Walsh, 2013; Frederick et al., 2012) and Social Interaction motivation (Hambrick et al., 2010) were reasons to use social media platforms. Also, according to Blaszka et al. (2012), the hashtag #WorldSeries was primarily used for interactivity as well as an expression of their fandom.

However, research findings revealed that UFC fans had a special theme that is distinguishable from other sports, which was labeled as Economic, related to financial constraints, and was highly related to the UFC PPV system. As UFC operates on a PPV system, the results of this study showed that many UFC fans follow and/or use social media to obtain UFC information, or to watch UFC highlights inexpensively, instead of purchasing a PPV. Recently, UFC managers have begun to upload more content on their social media, especially YouTube, which was one of main reason why the UFC fans follow and/or use the social media. According to the result of the study, some of the fans felt the UFC pay-per-views were expensive despite the fans' interest in the events. Also, the UFC events' fight cards were composed and configured differently due to the nature of combat sports, which was also led and related to

economic motivation. The fans did not want to pay and purchase for a pay-per-view when the UFC fight card was not interesting, and would rather watch a highlight on the social media without paying for that.

Findings of the current study contribute to the application of the U&G theory and a more in-depth understanding of social media motivations across many sports that utilize a PPV, including the UFC. Due to the currently limited understanding regarding social media researches of UFC fans in relation to their social media usage for gratification in their needs and wants, the results of this study will be able to provide other researchers with verification on these factors and help in establishing the importance and relevance of identified social media motivational factors. Furthermore, the findings might also be helpful to UFC managers who upload their content and promoting events through their social media.

Table 3.1 Participant description

Participant	Pseudonym	Age	UFC Social Media Platform	Ethnicity & Nation
1	#1	26	YouTube	Caucasian (From U.S)
2	#2	35	YouTube, Facebook, Twitter, and Instagram	Asian (From South Korea)
3	#3	26	YouTube	Caucasian (From U.S)
4	#4	27	YouTube	Caucasian (From U.K)
5	#5	25	YouTube and Facebook	Asian (From South Korea)
6	#6	31	YouTube	Asian (From South Korea)
7	#7	41	YouTube	Asian (From South Korea)
8	#8	27	Facebook, Twitter, and Instagram	Asian (From U.S)
9	#9	25-30	YouTube	Caucasian (From U.S)
10	#10	25-30	YouTube	African-American (From U.S)
11	#11	34	YouTube and Twitter	Asian (From South Korea)
12	#12	27	YouTube	Asian (From China)
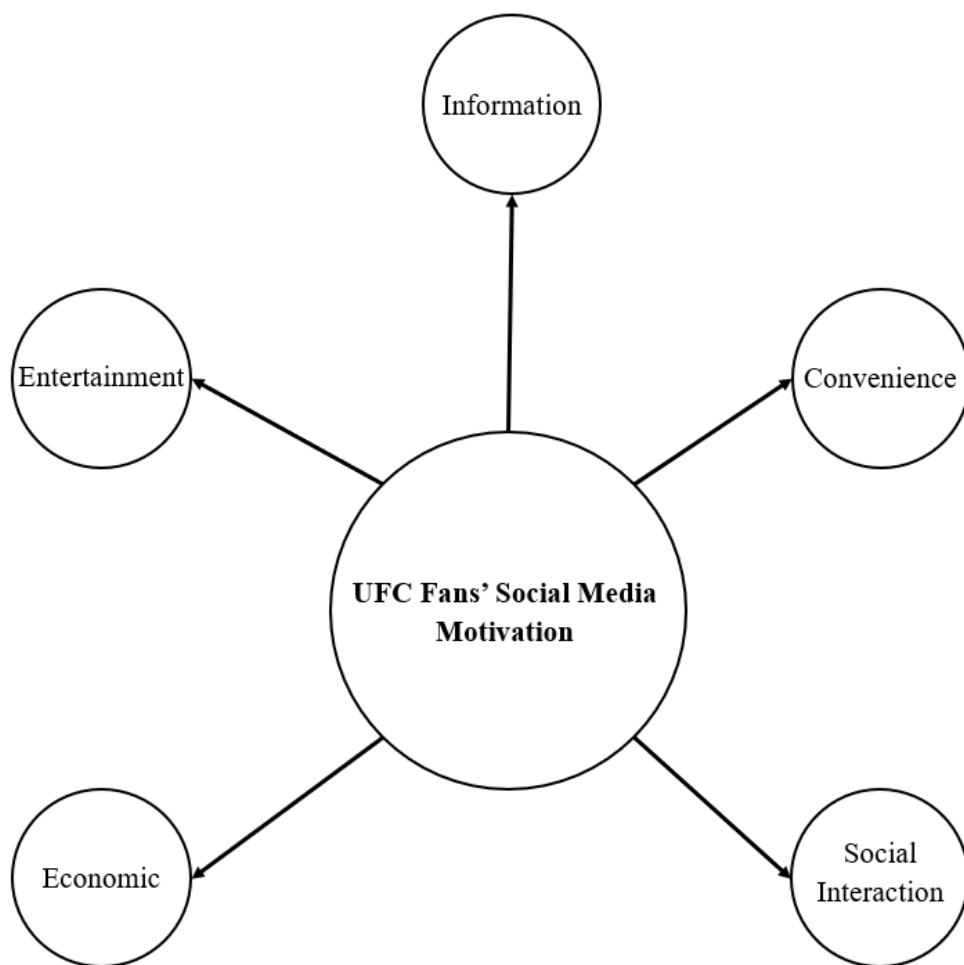
Figure 3.1 Finding themes

CHAPTER4

PHASE 2: QUANTITATIVE STUDY

The main purpose of the quantitative study in the current research was to modify and

refine an instrument to measure MMA fans' social media based on U&G approach and results

from the qualitative study, and to investigate how the use of social media could affect PPV and

ticket purchase intention by using fan identification as a mediator. Accordingly, the theoretical

framework and research hypotheses of the current study were set up based on previous literature

and qualitative study. Figure 4.1 shows a theoretical framework of the current study. The

following are research hypotheses in this study:

> Hypothesis 1: UFC fans' social media motivation would have a positive impact on PPV
>
> purchase intention.
>
> Hypothesis 2: UFC fans' social media motivation would have a positive impact on ticket
>
> purchase intention.
>
> Hypothesis 3: UFC fans' social media motivation would have a positive impact on fan
>
> identification.
>
> Hypothesis 4: Fan identification would have a positive impact on PPV purchase intention.
>
> Hypothesis 5: Fan identification would have a positive impact on ticket purchase
>
> intention.
>
> Hypothesis 6: Fan identification would have a mediating effect between UFC fans' social
>
> media motivation and PPV purchase intention.

Hypothesis 7: Fan identification would have a mediating effect between UFC fans' social media motivation and ticket purchase intention.

Methodology

This section discusses the quantitative method in this study in the following sections: (1) participants, (2) measurement, (3) procedures, and (4) data analyses. It is to be noted that the data analyses section is divided into two parts: (1) scale refinement, and (2) model testing. The scale refinement part includes the refinement of the instrument used to measure the UFC fans' social media usage motivation, and the measurement model part was to validate the instrument and analyze the influence of the social media motivation on future intentional behavior (i.e., PPV purchase intention and live event ticket purchase intention) with the mediating impact of fan identification.

Participants

Purposive sampling was used for survey UFC fans Participation in this study was voluntary; target participants (UFC fans who are at least 18 years of age) who followed and/or used the official UFC social media platforms. The purpose of this study was explained when recruiting participants. A 15-minute questionnaire was then provided to participants after they received the agreement. Since Kline (2005) and Hair, Black, Babin, Anderson, and Tatham (2006) suggested a 10:1 minimum desirable ratio of respondents for each observed variable, a study sample size of 649 participants for 41 items under eight factors was used to conduct the advanced statistical analyses, including exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modeling (SEM).

Measurement

A survey instrument measured social media motivation, fan identification, PPV purchase intention, ticket purchase intention, and demographic variables based on a comprehensive review of previous literature and the results of this study's qualitative research.

Social Media Motivation

This study included five sub-factors for social media motivation: (1) Information; (2) Entertainment; (3) Social Interaction; (4) Convenience; and (5) Economic. It adopted and modified the scales of sub-motivation from previous U&G research (i.e., Ha et al., 2015; Ko et al., 2005; Ku, Chu, & Tseng, 2013) to measure social media motivation. In addition, several new items were added based on the results of the qualitative study. Twenty-nine items were used to measure social media motivation under five sub-motivations. To measure social media motivation, a 7-point Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree), was used.

In order to measure information motivation, this study adopted and modified the Ku et al. (2013) scale. Ku et al. (2013) have adopted and developed the scale to examine motivations for computer-mediated communication. The scale for information motivation was modified for social media related to the UFC. The information consisted of six items. Sample items in these motivations included "It is to find out the information on UFC fight cards" and "It is to obtain useful UFC information". Ko et al. (2005) adopted and developed the internet motivation scale from the Papacharissi and Rubin (2000) scale. This study adopted the Ko et al. (2005) motivation scale to measure entertainment motivation as well as to modify the scale for social media. Entertainment motivation was composed of five items, including reasons such as "It's

entertaining". Also, based on the result of the qualitative study, "It is to get rid of stress" was added under the entertaining motivation.

In order to measure social interaction motivation, this study adopted and modified pervious literature (Choi et al., 2009; Ku et al., 2013). Social interaction motivation was composed of five items. The sample items in the social interaction included "It is to see what other people have said", "It is to meet people who share my interests in the UFC", and "It is to keep in touch with my colleagues". This study also adopted and modified Ha et al. (2015)'s social network sites motivation scale to measure convenience motivation. Ha et al. (2015) developed and modified the scale from existing U&G studies (Calder, Malthouse, & Schaedel, 2009; Ko et al., 2005; Leung & Wei, 2000; Nambisan & Baron, 2007). In addition, several items were added, such as "It is the availability to watch UFC highlights any time" and "It is to save my time", which were based on the qualitative result used for this study. Convenience motivation consisted of five items.

The result of the qualitative study in the current research showed that economic motivation was an important part of following and/or using the UFC official social media. Accordingly, to measure for economic motivation, the current study developed new items for the motivation based on the result. The economic motivation items were composed of 8 items with the following statements: (1) "It is the ability to watch UFC highlights in an inexpensive way", (2) "It is available to get UFC information in an inexpensive way", (3) "It is free to watch UFC highlights", (4) "It is free to get UFC information", (5) "It is to watch UFC highlights economically", (6) "It is to get UFC information economically", (7) "It is to save money to watch UFC highlights", and (8) "It is to save money to get UFC information".

Fan Identification

Previous UFC and fan identification studies had adopted and developed fan identification scales from both Wann and Branscombe (1993)'s sport spectator identification scale (SSIC) and Mahony, Madrigal, and Howard (2000)'s personal commitment to a team (PCT) (e.g.,Devlin, Billings, & Leeper, 2016; Devlin et al., 2013). Accordingly, the current study also adopted and modified both the SSIS and PCT to measure fan identification, including the UFC. Furthermore, to measure fan identification, this study adopted and modified Trail et al. (2003)'s point of attachment index (PAI) as well as SSIS and PCT. Six items were selected and used with the following sample statements: (1) "I identify with the UFC", (2) "I am a huge fan of the UFC", (3) "My friend(s) regard me as a big fan of the UFC", and (4) "It is important for me to be a UFC fan". All items will use a 1 (low fan) to 7 (high fan) scale to measure UFC identification.

PPV Purchase Intention

Three items were adopted and adapted from the theory of planned behavior to measure PPV purchase intention, including "I am likely to purchase the UFC PPV," "I will purchase the UFC PPV," and "I plan to purchase the UFC PPV" (Ajzen, 1991). All three items will be measured on a 7-point Likert-type scale ranging from "1 = strongly disagree" to "7 = strongly agree."

Ticket Purchase Intention

The scale for ticket purchase intention was also adopted and modified from the theory of planned behavior (Ajzen, 1991). This scale consists of the three following items: "I am likely to purchase the UFC ticket," "I will purchase the UFC ticket," and "I am planning to purchase the UFC ticket." All items will be measured on a 7-point Likert-type scale ranging from (1) strongly disagree to (7) strongly agree.

Demographics Information

A sociodemographic section was also included in the questionnaire. It consisted of 12 variables: (1) age; (2) gender; (3) ethnicity; (4) marital status; (5) occupation; (6) household income (7) level of education; (8) social media usage; (9) social media usage related to the UFC; (10) following and/or using status related to the official UFC social media platforms; (11) experience of PPV purchase; and (12) experience of ticket purchase. For the sociodemographic variables, the researcher adopted a multiple choice or fill-in-the-blank format.

Procedures

When the preliminary questionnaire was developed based on previous literature and the result of the qualitative study, it was submitted to a panel of five experts (i.e., professors and scholars in sports management and marketing) for review of the content validity. The five expert panel members examined and evaluated the items for clarity, relevance, and representativeness. The preliminary questionnaire was revised, improved, and modified in test format, factor relevance, adequacy, and wording clarity based on the experts' feedback. The final version of the revised questionnaire was sent to the experts in order to get a confirmation from them, and all the experts eventually agreed to use a revised questionnaire for data collection.

After proposing this research, the requisite documents were sent to the university's institutional review board (IRB) for data collection approval. After permission was received from the IRB, the revised questionnaire, a cover letter (explaining the purpose of the study and requesting the cooperation of the participant), and the informed consent form (no signature required from participants) were included in the survey packet. The survey instrument also had demographic and general information sections. These sections were used to develop a profile of the current pool of research participants.

An online survey was conducted for data collecting using research software, Qualtrics. After the questionnaire was set up on the Qualtrics, the Qualtrics' link was sent out to managers of MMA gyms to receive permission for data collection, and then uploaded onto online MMA communities. Also, the author contacted the UFC fans who follow and/or use the official UFC social media (i.e., Facebook, Twitter, and Instagram) individually using email and Facebook messenger to disseminate the link. However, due to very strict eligibility of this study and the limited number of permission given by the manager, the data collection was also conducted using an online survey provider (i.e., Amazon Mechanical Turk).

Due to potential threats regarding internal and external validity and the generalizability of data that was collected from online survey providers (Kim, 2016), researchers in many fields have had difficult problems regarding the usefulness and quality of data when online survey providers were used for data collection (Berinsky, Huber, & Lenz, 2012; Buhrmester, Kwang, & Gosling, 2011; Horton, Rand, & Zeckhauser, 2011; Paolacci, Chandler, & Ipeirotis, 2010). As such, there were still concerns about the overall quality of the data and the representation of the population (Paolacci & Chandler, 2014). However, recent research has shown that data collection that utilized online survey providers were found to have substantial benefits, such as cost savings and recruiting participants, and it also had an internal validity that is nearly identical to traditional data collection methods (Buhrmester et al., 2011; Horton et al., 2011; Paolacci & Chandler, 2014). Moreover, Berinsky et al. (2012) found that participants recruited from online survey providers were sometimes more representative of the U.S. population than traditional sampling methods. Accordingly, the use of an online survey provider can be considered acceptable in this study, based on the previous researches regarding the viability of this method of collection. Furthermore, at the beginning for the survey, there were several screening

questions for increasing the data quality and ensuring reliability and validity (Chandler, Mueller, & Paolacci, 2014; Paolacci & Chandler, 2014). Additionally, the screening questions were also used to judge the eligibility of participants. The following were the screening questions for this study: (1) "Do you follow the official Ultimate Fighting Championship (UFC) social media (e.g., Facebook, Twitter, YouTube, and/or Instagram)?", (2) "Have you ever used the official UFC social media (e.g., Facebook, Twitter, YouTube, and/or Instagram)?". If participants failed to pass the screening questions, they could not access the link through the same IP address.

Data Analysis

Scale Refinement

After completed the data collection, the descriptive statistics for sociodemographic was calculated using the version 24 of SPSS for Windows. Next, the EFA was conducted using the 24th version of SPSS for Windows. The main purpose of utilizing EFA was "to arrive at a more parsimonious conceptual understanding of a set of measured variables by determining the number and nature of common factors needed to account for the pattern of correlations among the measured variables" (Fabrigar, Wegener, MacCallum, & Strahan, 1999, pp. 274, 275). Accordingly, EFA was undertaken to ascertain a set of latent constructs among the refined factor and for each item (Fabrigar et al., 1999) by using maximum likelihood extraction with direct oblimin rotation because maximum likelihood extraction would "allows for the computation of a wide range of indexes of the goodness of fit of the model [and] permits statistical significance testing of factor loadings and correlations among factors and the computation of confidence intervals" (Fabrigar et al., 1999, p. 277). Further, direct oblimin rotation, which is one of the oblique methods of rotation, assumes that factors are correlated with each other. In the social sciences, researchers commonly "expect some correlation among factors, since behavior is rarely

partitioned into neatly packaged units that function independently of one another" (Costello &

Osborne, 2005, p. 3). Accordingly, if the factors are correlated, valuable information would be

lost when using the results of orthogonal rotation, and oblique rotations should theoretically

provide a more accurate and reproducible solution (Costello & Osborne, 2005). However, if the

factors are uncorrelated, orthogonal and oblique rotation would generate similar results. To

decide each factor and item, an eigenvalue was considered to be a factor, and factor loading was

considered for the item. An eigenvalue should equal to or greater than 1.0 (Kaiser, 1974), and

have a factor loading should equal to or greater than .40 (Nunnally & Bernstein, 1994). All

identified factors and retained items were thus related to the theoretical context.

      After conducting the EFA analyses, version 24 of AMOS was used to conduct CFA, in

order to optimally match the observed and theoretical factor structures for a given dataset, as

well as determine a good fit for the predetermined factor model. Executing a CFA required the

following steps: (1) model specification; (2) model identification; (3) model estimation; (4)

testing model fit; and (5) model re-specification (Bollen, 1989; Hair et al., 2006). The goodness

of the fit was examined using the following criteria: (1) root mean square error of approximation

(RMSEA); (2) comparative fit index (CFI); (3) standardized root mean residual (SRMR); (4) chi-

square statistic (x^2); and (5) normed chi-square (x^2/df). Browne and Cudeck (1992) noted that a

close fit occurs if the RMSEA value is less than .05. However, Hu and Bentler (1999) reported

that a close fit is any RMSEA value less than .06, and that an acceptable fit is between .06

and .08. The CFI is commonly known as ''the relative improvement in fit of the researcher's

model compared with a baseline model (i.e., null model)'' (Kline, 2005, p. 140). If the value of

the CFI is larger than .90, it is indicated as an acceptable fit (Hu & Bentler, 1999). Furthermore,

Hu and Bentler (1999) reported that it is an acceptable SRMR fit if a cut-off value is less than .08.

Cronbach's alpha scores and average variance extracted (AVE) values were also used for the composite reliability assessment and discriminant validity of the construct.; cut-off value of .70 is for Cronbach's alpha (Nunnally & Bernstein, 1994) and AVE value should be greater than .50 (Fornell & Larcker, 1981). Lastly, comparisons of squared correlations among factors were considered for the discriminate validity purpose. Kline (2005) suggested that correlations among constructs should be less than .85 in order to establish discriminate validity.

Model Testing

After instrument refinements were made to measure the UFC fans' social media usage motivation, a validation process was conducted to investigate the relationships between the social media motivation and future intention (i.e., PPV purchase intention and live event ticket purchase intention), including having fan identification as a mediator. The data was analyzed using the version 24 of SPSS and AMOS software. First, descriptive statistics were analyzed using version 24 of SPSS, and a follow-up CFA was undertaken using version 24 of AMOS for examining the goodness of fit of the data and determining the dimensionality of the constructs.

Finally, the hypothesized structural relationships were tested following the SEM. To examine the relationship among social media motivation, fan identification, PPV purchase intention, and ticket purchase intention, SEM analyses were conducted using version 24 of the AMOS software. The main reason why the SEM is conducted in this study is that SEM is appropriate for the data analysis as it is a statistical technique designed to model and analyze multiple variables identifying the relationship between one or more independent and dependent variables (Kim, 2016).

Result

In this section, the results of the current study are presented. The quantitative data was collected using a refined instrument to measure the relationship between the UFC fans' social media usage motivation and intention behavioral with the mediating impact of fan identification to assess the constructs employed for this study. Accordingly, this section showcasing the result was divided into two parts: (1) scale refinement, and (2) model testing. The first part included (1) descriptive statistics; (2) exploratory factor analysis; (3) confirmatory factor analysis; and (4) reliability and validity. The second part was composed of (1) preliminary analysis; (2) confirmatory factor analysis; and (3) SEM analysis.

Scale Refinement

Descriptive Statistics

Descriptive statistics were analyzed using version 24 of SPSS. Table 4.1 provides Descriptive statistics for the demographic. A total of 649 people participated in this study, and there were 59.6% ($n = 397$) male and 39.9 % ($n = 259$) female. However, three (0.5%) of the participants did not provide their demographic information despite answering all the questions. The participants' age range was from 18 to 81 years old (M = 32.43; SD = 9.49). Approximately, the participants, who ranged in age from 18 to 29 years old, accounted for more than 45% of the total, and the 37% of the participants were between 30 and 39 years old. Caucasian (60.7%) was the main ethnic composition of the participants and the remaining sample was composed of 16.8% Asian, 12.3% African Americans, and 6.2% Hispanics. 56.7% of the total participants were single. In terms of annual income, more than 50% of the respondents had less than $50,000 as income, while about 25% of the respondents had more than $75,000 as an income. In addition, more than 65% of participants had a college degree or higher degree.

More than 60% of participants answered that they spent more than 45 minutes a day on general social media. Approximately, 50% of the UFC fans in this study have spent more than 15 minutes in a day on official UFC social media platforms, whereas the other 50% of UFC fans in this study spent less than 15 minutes in a day on official UFC social media platforms. Of the respondents viewed for this study, 475 of the total participants followed and/or used the UFC Facebook page (see Table 4.2), and the other sample consisted of YouTube ($n = 383$), Instagram ($n = 277$), Twitter ($n = 246$), and others ($n = 28$). The 58.7% ($n = 381$) of the total participants had purchased a UFC PPV, of which more than 280 participants purchased UFC PPVs more than twice. In terms of live event ticket experience, 38.5% ($n = 250$) participants had purchased a UFC live event ticket.

Descriptive statistics for the UFC fans' social media usage motivation are presented in Table 4.3, which includes a general summary of means and standard deviations. All of the factors in the UFC fans' social media usage motivation has well above the midpoint (M = 4.12 to 5.66) on the 7-point Likert scale. The means score of the UFC fans' social media usage motivation ranged from 4.12 to 5.66 and standard deviations ranged from 1.08 to 1.83. Among the social media factors, Entertainment had the highest means on the 7-point Likert type scale (M = 5.32), while Social Interaction had the lowest means (M = 4.52). The item "It is to keep in touch with my colleagues" scored the lowest mean score (M = 4.12, SD = 1.83), whereas the item "It is entertaining" scored the highest mean score (M = 5.66, SD = 1.20).

Exploratory Factor Analysis

All data was randomly divided into two halves using an option of the SPSS program in order to conduct an EFA and a CFA. The first group was for EFA ($n = 326$), and the other group was for CFA ($n = 323$). The UFC fans' social media usage motivation variables were used for an

EFA to identify a set of latent constructs among the refined instrument items and to reassess a simple structure using the first group of the data. Since an EFA is used widely and adopted as one of the main statistical techniques for examining and determining the number of factors that is comprised of the data, this analysis was appropriate for the current study (Costello & Osborne, 2005).

The EFA was conducted by using maximum likelihood extraction with direct oblimin rotation. The EFA results yielded four-factors with 22 items, explaining a total variance of 53.02%. The scree plot also showed that a four-factor model was the most interpretable. There were no cross-loaded factors found with the others. However, 7 items were removed as these items were less than the cut-off value of .40 (Nunnally & Bernstein, 1994). Consequently, another round of EFA was undertaken without the aforementioned removed items to confirm the results. The final EFA results yielded the same as that of the first round, which showed the four-factors with 22 items, but explaining a total variance was increased from 53.02% to 55.43%. Based on the result of the EFA, the Convenience factor was removed, and the Information items were combined with 2 items of Convenience. Moreover, one item of Entertainment was removed due to the low value, and the one of the other items in Entertainment was included in Social Interaction. Three items from the Economic were also removed due to low value. As a result, the Information factor's name was changed to Information Seeking, and had 8 items, and the other factors were Social Interaction (6 items), Entertainment (3 items), and Economic (5 items). Also, all 22 items were greater than the cut-off value of .40. The result of the EFA was gathered through using a rotated pattern matrix with direct oblimin rotation is presented in Table 4.4.

Confirmatory Factor Analysis

After conducting the EFA, a CFA was conducted to identify the dimensionality of the

four-factor model, which emerged from previous EFA, by using the second half of the data.

Version 24 of the AMOS software was used to estimate the goodness of fit indices. The

measurement model of the four social media motivational factors with 22 items was tested.

Goodness of fit indexes showed that the measurement model was close to a good fit with the data

(Table 4.5). The chi-square was significant ($x^2 = 527.5$, $p < .001$), and normed chi-square (x^2/df

= 2.598) was lower than the suggested cut-off value (< 3.0; Kline, 2005). Also, the CFI value

was indicated as .911, which was a value higher than the recommended cut-off ratio of .90 (Hu

& Bentler, 1999). In addition, the RMSEA value showed an acceptable fit (RMSEA = .070), and

SRMR (.0729) was lower than .08 (Hu & Bentler, 1999). Accordingly, the measurement model

was close to a good fit based on the goodness of fit indexes.

Although the goodness of fit indexes indicated the measurement model has a good fit

with the data, there was required model re-specification because the 7 items' factor loading was

lower than .707. Anderson and Gerbing (1988) suggested that factor loading should be equal to

or greater than .707. Accordingly, two items in Social Interaction were removed due to low

factor loading, and these were 0.51 and 0.55. However, another 5 items with low factor loadings

below .707 were not removed. These 5 items included one item under Social Interaction and four

items under Economic, and these 5 items were retained. The main reason why these five items

were retained was in its theoretical relevance. Also, since the four items under Economic

motivation revealed the importance of following and/or using the UFC social media through the

qualitative study in the current study, these items were retained. In addition, the descriptive

statistics showed their importance, and these items had minimal deviance from the high standard

of .707. Furthermore, the goodness of fit indexes indicated the measurement model revealed a good fit, despite using the data which included the five items (Table 4.5). For these reasons, the 5 items were retained.

Consequently, model re-specification yielded a four-factor model with 20 items: Information seeking (8 items), Social Interaction (4 items), Entertainment (3 items), and Economic (5 items). In Table 4.5, the results of the CFA showed that the four-factor model fit was improved. The chi-square was significant ($x^2 = 416.7$, $p < .001$), and normed chi-square (x^2/df) was 2.541, which was lower than the suggested cut-off value of 3.0 (Kline, 2005). Also, the CFI (.926) was higher than the recommended cut-off ratio (> .90; Hu & Bentler, 1999). The RMSEA value showed an acceptable fit with .069, and the SRMR was .0651, which indicated a good fit of the model as the SRMR was less than .08 (Hu & Bentler, 1999). Given the comparison with a four-factor model utilizing 22 items, the goodness of fit indexes showed that the overall model fit of the four-factor model comprising of 20 items had been improved (Table 4.5).

Reliability and Validity Estimates

Cronbach's alpha scores were considered for evaluating the reliability of four-factors and respective items. The four factors in Cronbach's alpha scores were greater than the suggested cut-off value of .70 (Nunnally & Bernstein, 1994), and ranged from .81 (Economic) to .91 (Information Seeking). As a result, it was seen during the evaluation of the reliability, the determined factors were considered to be reliable. Also, there were no correlations among constructs that were higher than .85 (Table 4.7), which proves that discriminant validity was established. This was as Kline (2005) suggested that discriminant validity can be established when correlation among constructs are lower than .85. In Table 4.7, the range was from .322

(between Social Interaction and Entertainment) to .821 (between Information Seeking and Economic).

The AVE values of three factors were found to be higher than the suggested cut-off value of .50 (Information Seeking: .57, Social Interaction: .57, and Entertainment: .61), but the Economic factor's AVE values did not exceed the cut-off value of .50, as it had a value of .46. However, the AVE value of the Economic was accepted despite the lower value as compared to the cut-off value because the composite reliability (CR) of the Economic (.81) was higher than .60. According to Fornell and Larcker (1981), if composite reliability exceeds .60, the convergent validity of the construct is acceptable despite the AVE being lower than .50. Accordingly, the AVE value of Economic can be accepted. The CR of all of the four factors ranged from .81 (Economic) to .92 (Information Seeking), which were higher than the cut-off of .70 (Nunnally & Bernstein, 1994). As a result, discriminant validity for a four-factor model was established. Table 4.6 shows the AVE, CR, factor loading, and Cronbach's alpha.

Model Testing

Preliminary Analysis

The purpose of this part of the current study was to examine the impact of social medial motivation on future intention behavioral outcomes (i.e., PPV and live event ticket). Therefore, the second half of the data was selected to be analyzed for the structural relationships among variables (i.e., the UFC fans' social media motivation, Fan Identification, PPV Purchase Intention, and Live Event Ticket Purchase Intention).

Table 4.8 provides an overall descriptive statistic including means and standard deviations for the UFC fans' social media motivation, Fan Identification, PPV Purchase Intention, and Live Event Ticket Purchase Intention. All of the items in the UFC fans' social media usage

motivational factors were well above the midpoint (M = 4.09 to 5.64) on the 7-point Likert scale. The items for Fan Identification also scored mean scores that were above the midpoint (M = 4.41 to 5.11). Finally, the mean scores for PPV Purchase Intention and Live Event Ticket Purchase Intention also returned at values found in the midpoints (M = 4.46 to 4.61 and M = 4.47 to 4.55, respectively). Among all the factors, the Entertainment factor scored the highest means on the 7-point Likert type scale (M = 5.56), while the Social Interaction scored the lowest means (M = 4.41). The item "It is to keep in touch with my colleagues" had the lowest mean score (M = 4.09, SD = 1.79), whereas the item "It is enjoyable" had the highest mean score (M = 5.64, SD = 1.14).

Confirmatory Factor Analysis

Based on the result of the part regarding scale refinement, the theoretical framework (see Figure 4.1) has been developed as a hypothesized model depicted in Figure 4.2. Before undertaking an SEM analysis to examine the hypothesized model (see Figure 4.2), a CFA was conducted to assess a measurement model for determining the goodness of fit. Using the version 24 of AMOS, the maximum likelihood estimation method was used, and of fix indices (e.g., chi-square statistic, normed chi-square, CFI, RMSEA, and SRMR) were estimated and considered.

Initially, it seemed that the hypothesized measurement model was supported by the CFA. The reason for this was in the chi-square statistic being significant (x^2 = 1054.1, p < .001) and the other fit indices indicating a good fit to the data. The normed chi-square (x^2/df) was 2.379, which was lower than the cut-off value of 3.0 (Kline, 2005), and the CFI value (.916) also exceeded the recommended cut-off ratio of .90 (Hu & Bentler, 1999). Furthermore, the RMSEA value (.065) was in the acceptable range, and the SRMR value was .0605, which was less than .08 (Hu & Bentler, 1999). However, a model re-specification was needed despite the fit indices indicating that it was a good fit to the data due to poor factor loadings and modification indices. In addition,

Schmitt and Stuits (1985) advised that shortening an instrument is an effective way to reduce response bias due to boredom or fatigue. Accordingly, one item under Fan Identification factor was removed after considered the statistical and theoretical justifications and interpretability.

A follow-up CFA was undertaken for the modified measurement model. The fit indices showed a good fit to the data. The chi-square was significant ($x^2 = 933.7$, $p < .001$), and the normed chi-square ($x^2/df = 2.261$) was found to be lower than the suggested cut-off value of 3.0 (Kline, 2005). The CFI value was .925, a value that was found to be higher than the suggested cut-off ratio of .90 (Hu & Bentler, 1999). Furthermore, the RMSEA value (.063) showed an acceptable fit, and the SRMR value (0.0560) was also lower than .08 (Hu & Bentler, 1999). All of the factor loadings were higher than the suggested cut-off .707 (Anderson & Gerbing, 1988), except for four items with factor loading values that were slightly lower than cut-off values. All of these items were under the Economic factor. Although the items' factor loading was lower than the suggested cut-off of .707, these four items were retained based on the following considerations: (1) the result of this study's qualitative study, (2) theoretical relevance, (3) the descriptive statistics with showing their importance, (4) overall model fit, and (5) minimal deviance from the cut-off value of .707. Finally, it was decided that the modified measurement model would be used for SEM analysis. The social media motivational factor consisted of four sub-motivational factors: Information Seeking (8 items), Social Interaction (4 items), Entertainment (3 items), and Economic (5 items). Furthermore, Fan Identification had 5 items, and PPV Purchase Intention and Live Event Ticket Purchase Intention had 3 items, respectively.

Cronbach's alpha values were used to calculate for reliability assessments of the seven factors before conducting an SEM analysis. All the seven factors' of Cronbach's alpha score exceeded the suggested cut-off value of .70 (Nunnally & Bernstein, 1994). In Table 4.9, the

Cronbach's alpha scores ranged from .93 (PPV Purchase Intention and Live Event Ticket

Purchase Intention respectively) to .81 (Economic), and it can be considered that the factors were

reliable. Also, in Table 4.10, there was no factor correlations greater than .85 (Kline, 2005),

ranging from .253 (between Entertainment and Live Event Ticket Purchase Intention) to .822

(between Information Seeking and Economic). The ranging of AVE values was from .47

(Economic) to .82 (PPV Purchase Intention and Live Event Ticket Purchase Intention

respectively), which shows that all of the AVE values were greater than the suggested cut-off

value of .50 (Fornell & Larcker, 1981), with the exception of the Economic value. However,

since the CR of Economic exceeded .60 (Fornell & Larcker, 1981), the AVE value of the

Economic was accepted. Also, all the CR values were higher than the cut-off of .70 (Nunnally &

Bernstein, 1994). Accordingly, and based off this result, this measurement model was used for an

SEM analysis.

Structural Equation Modeling Analysis

An SEM analysis was conducted for testing the hypotheses of this study using the second

half of the data set. Before testing path coefficients for the hypothesized structural model, the

goodness of fit indices for the overall structural model was estimated as a first step, and the

results from the goodness of fit indices for the overall structural showed that the model was truly

acceptable. The chi-square was significant ($x^2 = 1081.4$, $p < .001$), and other fit indices indicated

a good fit to the data. The normed chi-square (x^2/df) was 2.532, which was below the cut-off

value of 3.0 (Kline, 2005), and the CFI value (.906) was also higher than the recommended cut-

off ratio of .90 (Hu & Bentler, 1999). Moreover, the RMSEA value was .069, which was a value

that was in the acceptable range of .06 to .08 (Hu & Bentler, 1999).

The hypothesized model (Model A) was tested for the impact of the UFC fans' social media motivation on PPV Purchase Intention and Live Event Ticket Purchase Intention with a mediating effect of Fan Identification. Figure 4.2 shows the hypothesized model. The second-order social media motivation had a significant impact on Fan Identification (standardized γ = .73). Also, the Fan Identification significantly influenced two dependent variables, which were PPV Purchase Intention and Live Event Ticket Purchase Intention (standardized γ = .76, .72, respectively). Accordingly, Hypothesis 3, 4, and 5 were supported by this result. Overall, UFC fans' social media motivation had a positive impact on Fan Identification, and Fan Identification had a positive impact on the two dependent variables (i.e., PPV Purchase Intention and Live Event Ticket Purchase Intention).

Another path coefficient analysis was conducted to test the Hypothesis 1 and Hypothesis 2 by testing direct effects of the second-order social media motivation on PPV Purchase Intention and Live Event Ticket Purchase Intention (see Figure 4.3). The model fit was a reasonable (x^2/df = 3.071, CFI = .89, and RMSEA = .08). Hu and Bentler (1999) suggested the cut-off value of CFI (.90), but the CFI value (.89) also can be accepted marginally based on Meyers, Gamst, and Guarino (2016). Also, the normed chi-square (x^2/df) was higher than the cut-off value of 3.0 (Kline, 2005), but according to Marsh and Hocevar (1985), the ratio showed a reasonable fit. The standardized direct effect of second-order social media motivation was found to influence on PPV Purchase Intention (standardized γ = .56). Furthermore, second-order social media motivation had a positive impact on Live Event Ticket Purchase Intention (standardized γ = .51). Consequently, the second-order social media motivation significantly influenced two dependent variables (i.e., PPV Purchase Intention and Live Event Ticket Purchase Intention), an effect which could support Hypothesis 1 and Hypothesis 2.

As a last step of the SEM analysis part, the alternative model was tested with a bootstrapping procedure with 10,000 bootstrap samples and 95% confidence interval by adding direct paths between the second-order social media motivation and two dependent variables (i.e., PPV Purchase Intention and Live Event Ticket Purchase Intention) to test the mediating impact of Fan Identification (see Figure 4.4), with the model being named Model B (Alternative Model). The reason as to why this was needed was based on a bootstrapping procedure that a bootstrap test is more advantageous in terms of superior and power rather than the Baron and Kenny procedure (Preacher & Hayes, 2004, 2008; Zhao, Lynch Jr, & Chen, 2010). Also, the bootstrapping test is less biased compared to the Sobel test (Preacher & Hayes, 2004, 2008).

The results of the SEM showed that the model fit was more acceptable ($x2/df = 2.519$, CFI = .907, and RMSEA = .069) than Model A (hypothesized model). All the paths for direct and indirect in Model B were statistically significant. The second-order social media motivation directly influenced on PPV Purchase Intention (standardized $\gamma = - .20$, $p < .05$) and Live Event Ticket Purchase Intention (standardized $\gamma = - .24$, $p < .01$). Furthermore, second-order social media motivation was found to have a positive impact on the Fan Identification (standardized $\gamma = .76$, $p < .001$), and the Fan Identification also positively influenced on two dependent variables (PPV Purchase Intention: standardized $\gamma = .92$, $p < .001$, and Live Event Ticket Purchase Intention: standardized $\gamma = .91$, $p < .001$). Accordingly, the second-order social media motivation's standardized direct effects were -.20 (between second-order social media motivation and PPV Purchase Intention), -.24 (between second-order social media motivation and Live Event Ticket Purchase Intention), and .76 (between second-order social media motivation and Fan Identification) respectively (see Table 4.11). In addition, standardized indirect effects between the second-order social media motivation and two dependent variables

were .70 (between second-order social media motivation and PPV Purchase Intention) and .69 (between second-order social media motivation and Live Event Ticket Purchase Intention), respectively. Lastly, a standardized total effect between the second-order social media motivation and PPV Purchase Intention was .50, and the standardized total effect between the second-order social media motivation and Live Event Ticket Purchase Intention was .45. All of the standardized direct and indirect effects have been provided in Table 4.11. Based on the result of this analysis, the Fan Identification has a partial mediation impact between the second-order social media motivation and two dependent variables (Zhao et al., 2010), thereby proving and supporting Hypothesis 6 and 7.

Discussion

In terms of the scale refinement of the UFC fans' social medial motivational, it was first proposed that five factors with 29 items would be used for the initial EFA, based on previous literature related U&G and the results of the qualitative study in the current research. Based on the initial EFA, the proposed five factors and each item were re-specification, due to interpretability of the measurement. Accordingly, four factors with 22 items were identified. As a next step for the scale refinement, the re-specified model with 22 items was analyzed for CFA. The first CFA had a good fit to the data ($x^2/df = 2.598$, CFI = .911, and RMSEA = .070), but there was a need for re-specification due to some items with poor factor loadings. For this reason, the follow-up CFA was conducted, and the fit of the re-specified model was acceptable ($x^2/df = 2.541$, CFI = .926, and RMSEA = .069), as it had a better than the former model, with two items in Social Interaction being removed. As a result, the four factors with 20 items (Information Seeking: 8 items, Social Interaction: 4 items, Entertainment: 3 items, and Economic: 5 items) were refined based on the result of EFA and CFA. In previous researched related to U&G, the

Information and Convenience were dealt with separately (e.g., Choi et al., 2009; Ko et al., 2005; Ku et al., 2013), but the result of the scale refinement step in the current study showed the items in the information factor and several items in the convenience factor were combined, which was re-named as Information Seeking. Furthermore, the Social Interaction and Entertainment factors were similar with previous studies, while the Economic factor was a notable finding in this study. The Economic factor is related to financial constraints, and these constraints were highly correlated with UFC's PPV system.

After the scale refinement step, the current study sought to validate the refined instrument to examine the effect of UFC fans' social media motivation on purchase intention (i.e., PPV and live event ticket) with the mediation effect based on fan identification. Accordingly, the SEM analysis was conducted to test the series of hypotheses. Prior to this, the SEM and the CFA were undertaken to assess the goodness of fit of the measurement model, and one item in fan identification was removed. Finally, the hypothesized model was proposed (7 factors with 31 items). At first, the hypothesized model was tested through the use of an SEM analysis. The results of the analysis revealed that the second-order social media motivation was significantly influenced on the Fan Identification, and Fan Identification has a positive impact on the two dependent variables. It is also notable that the result that the Fan Identification had a positive impact on future intention is supporting previous researches (e.g., Kwon & Armstrong, 2002; Wang et al., 2012; Wann, 2006).

To test the direct effects of the second-order social media motivation on two dependent variables, path coefficients analysis was conducted (see Figure 4.3). The result of the path coefficients analysis can support Hypothesis 1 and 2 by revealing that second-order social media motivation has positive direct effects on PPV Purchase Intentions Live Event Ticket Purchase

Intention (standardized γ = .56, .51 respectively). In previous U&G literature, consumers' media motivation has a positive impact on consumption or behavioral intention (e.g., Choi et al., 2009; Cianfrone et al., 2011; Phua et al., 2017), and this result can make strengthen the previous result.

To examine the mediating effect of the fan identification, the alternative model was tested by following a bootstrapping procedure with 10,000 bootstrap samples and a 95% confidence interval (see Figure 4.4). The bootstrapping procedure was to confirm the indirect effects between the second-order social media motivation and two dependent variables. Based on the result of this analysis, the second-order social media motivation had indirect effects on two dependent variables, of which the standardized indirect effects were .70 (between second-order social media motivation and PPV Purchase Intention) and .69 (between second-order social media motivation and Live Event Ticket Purchase Intention), respectively. Also, second-order social media motivation influence on the Fan Identification (standardized γ = .76, $p < .001$), and the fan identification have positive effects on PPV Purchase Intention and Live Event Ticket Purchase Intention (standardized γ = .92, .91, respectively, $p < 0.001$). Through this result, fan identification can be a partial mediator between the second-order social media motivation and two dependent variables (Zhao et al., 2010). Most importantly, the second-order social media motivation and two dependent variables' relationship was surprisingly found to be significantly negative (PPV Purchase Intention: standardized γ = - .20, $p < .05$, and Live Event Ticket Purchase Intention: standardized γ = - .24, $p < .01$), which meant that when social media motivation is increased, the PPV Purchase Intention and Live Event Ticket Purchase Intention will decrease, with the Fan Identification effect as a mediator.

The major findings of the current study can thus provide a significant contribution to the literature. Particularly the findings of the current study which share a notable approach of the

U&G theory and can therefore provide a better understanding of social media motivations and future intention. Also, the mediating effect of fan identification can provide an extended, better understanding of UFC fans' needs through the second-order social media motivation – fan identification – two dependent variables model. Furthermore, the finding that fan identification has a positively partial mediation effect between social media motivation and future intention is very beneficial to UFC managers when uploading their content and promoting events on the various UFC social media platforms.

Table 4.1. Descriptive statistics for the sociodemographic variables (*n* = 649)

Variable	Category	*n*	%	Valid %	Cumulative %
Age	18 - 29	293	45.4	45.4	45.4
	30 - 39	240	37.2	37.2	82.5
	40 - 49	68	10.5	10.5	93.0
	50 - 59	34	5.3	5.3	98.3
	More than 60	11	1.7	1.7	100.0
Gender	Male	387	59.6	59.9	59.9
	Female	259	39.9	40.1	100.0
	Missing	3	.5		
Ethnicity	Caucasian	384	60.7	61.0	61.0
	African-American	80	12.3	12.4	73.4
	Hispanic	40	6.2	6.2	79.6
	Asian	109	16.8	16.9	96.4
	Other	23	3.5	3.6	100.0
	Missing	3	.5		
Marital Status	Single	368	56.7	57.0	57.0
	Married	278	42.8	43.0	100.0
	Missing	3	.5		
Household Income	Less than $25K	163	25.1	25.2	25.2
	$25K ~ $50K	200	30.8	31.0	56.2
	$50K ~ $75K	121	18.6	18.7	74.9
	$75K ~ $100K	87	13.4	13.5	88.4
	$100K ~ $150K	47	7.2	7.3	95.7
	More than $150K	28	4.3	4.3	100.0
	Missing	3	.5		
Spend Time on Social Media	Less than 5 min	21	3.2	3.3	3.3
	5 min ~ 15 min	54	8.3	8.4	11.6
	15 min ~ 30 min	58	8.9	9.0	20.6
	30 min ~ 45 min	104	16.0	16.1	36.7
	45 min ~ 60 min	155	23.9	24.0	60.7
	More than 60 min	254	39.1	39.3	100.0
	Missing	3	.5		

Table 4.1. Continued

Variable	Category	*n*	%	Valid %	Cumulative %
Spend Time on UFC Social Media	Less than 5 min	132	20.3	20.4	20.4
	5 min ~ 15 min	187	28.8	28.9	49.4
	15 min ~ 30 min	106	16.3	16.4	65.8
	30 min ~ 45 min	89	13.7	13.8	79.6
	45 min ~ 60 min	95	14.6	14.7	94.3
	More than 60 min	37	5.7	5.7	100.0
	Missing	3	.5		
PPV Purchase Experience	Yes	381	58.7	59.2	59.2
	No	263	40.5	40.8	100.0
	Missing	5	.8		
Number of PPV Purchase	Once	87	22.8	22.8	22.8
	2 times	127	33.3	33.3	56.2
	3 times	37	9.7	9.7	65.9
	4 times	34	8.9	8.9	74.8
	5 times	33	8.7	8.7	83.5
	More than 5 times	63	16.5	16.5	100.0
Live Ticket Purchase Experience	Yes	250	38.5	38.9	38.9
	No	393	60.6	61.1	100.0
	Missing	6	.9		
Number of Live Ticket Purchase	Once	64	25.7	25.7	25.7
	2 times	95	38.2	38.2	63.9
	3 times	24	9.6	9.6	73.5
	4 times	21	8.4	8.4	81.9
	5 times	23	9.2	9.2	91.2
	More than 5 times	22	8.8	8.8	100.0

Table 4.2. Demographic of following and/or using of the UFC Social Media

Variable	Category	*n*	%
UFC Social Media	Facebook	475	73.2
	Twitter	246	37.9
	Instagram	277	42.7
	YouTube	383	59.0
	Others	28	4.3

Table 4.3. Descriptive statistics for the UFC fans' social media usage motivation ($n = 649$)

Factor	Items	M	SD
Information	It is to find out the information on UFC fight cards.	5.14	1.35
	It is to find out the information on UFC events' schedules.	5.30	1.33
	It is to find out the information on UFC player(s).	5.25	1.28
	It is to find out the information on any news or updates about the UFC.	5.41	1.25
	It is to obtain useful UFC information.	5.32	1.24
	It is to obtain helpful UFC information.	5.33	1.28
Convenience	It is the availability to watch UFC highlights any time.	5.22	1.32
	It is easy to use.	5.60	1.15
	It is easy to get UFC any information what I want.	5.35	1.27
	It is to save my time.	4.81	1.50
	It is to obtain UFC information what I want without any delay.	5.22	1.28
Entertainment	It is to pass time.	5.18	1.29
	It is to get rid of stress.	4.57	1.62
	It is enjoyable.	5.65	1.08
	It is fun.	5.54	1.19
	It is entertaining.	5.66	1.20
Social Interaction	It is to see what other people have said.	4.96	1.48
	It is to share my perspectives about the UFC freely.	4.71	1.59
	It is to meet people who share my interests in the UFC.	4.52	1.74
	It is to keep in touch with my colleagues.	4.12	1.83
	It is to keep in touch with my friends.	4.30	1.80
Economic	It is the ability to watch UFC highlights in an inexpensive way.	5.17	1.35
	It is available to get UFC information in an inexpensive way.	5.21	1.36
	It is free to watch UFC highlights.	5.31	1.26
	It is free to get UFC information.	5.39	1.22
	It is to watch UFC highlights economically.	5.13	1.30
	It is to get UFC information economically.	5.04	1.38
	It is to save money to watch UFC highlights.	5.00	1.40
	It is to save money to get UFC information.	4.81	1.49

Table 4.4. Factor pattern matrix for the UFC fans' social media usage motivation variables: maximum likelihood extraction with direct oblimin rotation using first half data ($n = 326$)

	F1	F2	F3	F4
Information Seeking (8 items)				
It is to find out the information on UFC fight cards.	.519			
It is to find out the information on UFC events' schedules.	.485			
It is to find out the information on UFC player(s).	.634			
It is to find out the information on any news or updates about the UFC.	.662			
It is to obtain useful UFC information.	.649			
It is to obtain helpful UFC information.	.705			
It is easy to get UFC any information what I want.	.458			
It is to obtain UFC information what I want without any delay.	.549			
Social Interaction (6 items)				
It is to get rid of stress.		.442		
It is to see what other people have said.		.496		
It is to share my perspectives about the UFC freely.		.703		
It is to meet people who share my interests in the UFC.		.801		
It is to keep in touch with my colleagues.		.838		
It is to keep in touch with my friends.		.837		
Entertainment (3 items)				
It is enjoyable.			-.793	
It is fun.			-.744	
It is entertaining.			-.754	
Economic (5 items)				
It is the ability to watch UFC highlights in an inexpensive way.				-.634
It is to watch UFC highlights economically.				-.545
It is to get UFC information economically.				-.544
It is to save money to watch UFC highlights.				-.863
It is to save money to get UFC information.				-.503

Note. F1 = information seeking, F2 = social interaction, F3 = entertainment, F4 = Economic

Table 4.5. Model fit comparison between the four-factor model with 22 items and four-factor model with 22 items of the UFC fans' social media usage motivation using the second half data ($n = 323$)

Model	x^2	df	x^2/df	RMSEA	CFI
Four-Factor Model (22 items)	527.5	203	2.598	.070	0.911
Four-Factor Model (20 items)	416.7	164	2.541	.069	0.926

Table 4.6. Summary result for reliability and validity assessments (Factor loadings, Cronbach's Alpha & AVE) for the UFC fans' social media usage motivation

Factor	Item	CR	λ	α	AVE
Information Seeking		.92		.91	.57
	It is to find out the information on UFC fight cards.		.73		
	It is to find out the information on UFC events' schedules.		.73		
	It is to find out the information on UFC player(s).		.75		
	It is to find out the information on any news or updates about the UFC.		.79		
	It is to obtain useful UFC information.		.76		
	It is to obtain helpful UFC information.		.79		
	It is easy to get UFC any information what I want.		.76		
	It is to obtain UFC information what I want without any delay.		.73		
Social Interaction		.84		.84	.57
	It is to share my perspectives about the UFC freely.		.66		
	It is to meet people who share my interests in the UFC.		.75		
	It is to keep in touch with my colleagues.		.80		
	It is to keep in touch with my friends.		.82		
Entertainment		.82		.82	.61
	It is enjoyable.		.72		
	It is fun.		.79		
	It is entertaining.		.83		
Economic		.81		.81	.46
	It is the ability to watch UFC highlights in an inexpensive way.		.66		
	It is to watch UFC highlights economically.		.78		
	It is to get UFC information economically.		.66		
	It is to save money to watch UFC highlights.		.65		
	It is to save money to get UFC information.		.65		

Table 4.7. Correlation matrix for four-factor model

Variable	INFS	SI	ENT	ECON
INFS	1			
SI	0.381***	1		
ENT	0.751***	0.322***	1	
ECON	0.821***	0.477***	0.683***	1

Note. INFS = information seeking, SI = social interaction, ENT = entertainment, ECON = economic
***. Correlation is significant at the 0.001 level (2-tailed).

Table 4.8. Descriptive statistics for the UFC fans' social media motivation, fan
identification, pay-per-view purchase intention, and live event ticket purchase intention

Factor	Items	*M*	*SD*
Information Seeking			
	It is to find out the information on UFC fight cards.	5.08	1.35
	It is to find out the information on UFC events' schedules.	5.23	1.38
	It is to find out the information on UFC player(s).	5.22	1.31
	It is to find out the information on any news or updates about the UFC.	5.32	1.36
	It is to obtain useful UFC information.	5.28	1.30
	It is to obtain helpful UFC information.	5.18	1.38
	It is easy to get UFC any information what I want.	5.24	1.34
	It is to obtain UFC information what I want without any delay.	5.22	1.28
Entertainment			
	It is enjoyable.	5.64	1.14
	It is fun.	5.47	1.22
	It is entertaining.	5.58	1.30
Social Interaction			
	It is to share my perspectives about the UFC freely.	4.70	1.59
	It is to meet people who share my interests in the UFC.	4.47	1.75
	It is to keep in touch with my colleagues.	4.09	1.79
	It is to keep in touch with my friends.	4.36	1.75
Economic			
	It is the ability to watch UFC highlights in an inexpensive way.	5.18	1.33
	It is to watch UFC highlights economically.	5.16	1.28
	It is to get UFC information economically.	5.06	1.43
	It is to save money to watch UFC highlights.	5.02	1.43
	It is to save money to get UFC information.	4.82	1.49

Table 4.8. Continued

Factor	Items	*M*	*SD*
Fan Identification	I identify with the UFC.	4.69	1.49
	I am a huge fan of the UFC.	5.11	1.33
	My friend(s) regard me as a big fan of the UFC.	4.83	1.60
	I am a committed fan of the UFC.	4.90	1.47
	It is important for me to be a UFC fan.	4.63	1.54
	I like to display the UFC insignia at my place of work, home, clothing, and/or social media profiles.	4.41	1.83
Pay-Per-View Purchase Intention	I am likely to purchase UFC pay-per-view(s).	4.61	1.74
	I will purchase UFC pay-per-view(s).	4.53	1.74
	I plan to purchase UFC pay-per-view(s).	4.46	1.76
Live Event Ticket Purchase Intention	I am likely to purchase UFC live event ticket(s).	4.55	1.74
	I will purchase UFC live event ticket(s).	4.48	1.72
	I plan to purchase UFC live event ticket(s).	4.47	1.82

Table 4.9. Summary result for reliability and validity assessments (Factor loadings, Cronbach's Alpha & AVE) for measurement model

Factor	Item	CR	λ	α	AVE
Information Seeking		.91		.91	.57
	It is to find out the information on UFC fight cards.		.74		
	It is to find out the information on UFC events' schedules.		.72		
	It is to find out the information on UFC player(s).		.76		
	It is to find out the information on any news or updates about the UFC.		.79		
	It is to obtain useful UFC information.		.76		
	It is to obtain helpful UFC information.		.79		
	It is easy to get UFC any information what I want.		.76		
	It is to obtain UFC information what I want without any delay.		.73		
Social Interaction		.84		.84	.57
	It is to share my perspectives about the UFC freely.		.71		
	It is to meet people who share my interests in the UFC.		.79		
	It is to keep in touch with my colleagues.		.74		
	It is to keep in touch with my friends.		.77		
Entertainment		.82		.82	.61
	It is enjoyable.		.71		
	It is fun.		.79		
	It is entertaining.		.83		
Economic		.82		.81	.47
	It is the ability to watch UFC highlights in an inexpensive way.		.69		
	It is to watch UFC highlights economically.		.78		
	It is to get UFC information economically.		.66		
	It is to save money to watch UFC highlights.		.65		
	It is to save money to get UFC information.		.64		

Table 4.9. Continued

Factor	Item	CR	λ	α	AVE
Fan Identification		.91		.90	.66
	I identify with the UFC.		.74		
	I am a huge fan of the UFC.		.79		
	My friend(s) regard me as a big fan of the UFC.		.85		
	I am a committed fan of the UFC.		.85		
	It is important for me to be a UFC fan.		.83		
Pay-Per-View Purchase Intention		.93		.93	.82
	I am likely to purchase UFC pay-per-view(s).		.91		
	I will purchase UFC pay-per-view(s).		.92		
	I plan to purchase UFC pay-per-view(s).		.88		
Live Event Ticket Purchase Intention		.93		.93	.82
	I am likely to purchase UFC live event ticket(s).		.91		
	I will purchase UFC live event ticket(s).		.93		
	I plan to purchase UFC live event ticket(s).		.88		

Table 4.10. Correlation matrix for seven factors of information seeking, social interaction, entertainment, economic, fan identification, pay-per-view purchase intention, and live event ticket purchase intention

Variable	INFS	SI	ENT	ECON	FID	PPV	LIVE
INFS	1						
SI	.422***	1					
ENT	.751***	.388***	1				
ECON	.822***	.516***	.682***	1			
FID	.675***	.701***	.574***	.623***	1		
PPV	.497***	.539***	.308***	.380***	.744***	1	
LIVE	.425***	.573***	.253***	.371***	.698***	.699***	1

Note. INFS = information seeking, SI = social interaction, ENT = entertainment, ECON = economic, FID = fan identification, PPV = pay-per-view purchase intention, LIVE = live event ticket purchase intention
***. Correlation is significant at the 0.001 level (2-tailed).

Table 4.11. Mediation analysis of fan identification with Bootstrapping

	b	$b*$	
Direct effect			
SMM → PPV	-.38*	-.20	
SMM → LIVE	-.44**	-.24	
	b	$b*$	Conclusion
Indirect effect			
SMM → FID → PPV	1.31***	.70	Partial Mediation
SMM → FID → LIVE	1.28***	.69	Partial Mediation

Note. Bootstrapping sample size = 10,000. SMM = Social Media Motivation, FID = fan identification, PPV = pay-per-view purchase intention, LIVE = live event ticket purchase intention.
* $p < .05$, ** $p < .01$, *** $p < .001$
b = unstandardized regression weight, $b*$ = standardized regression weight
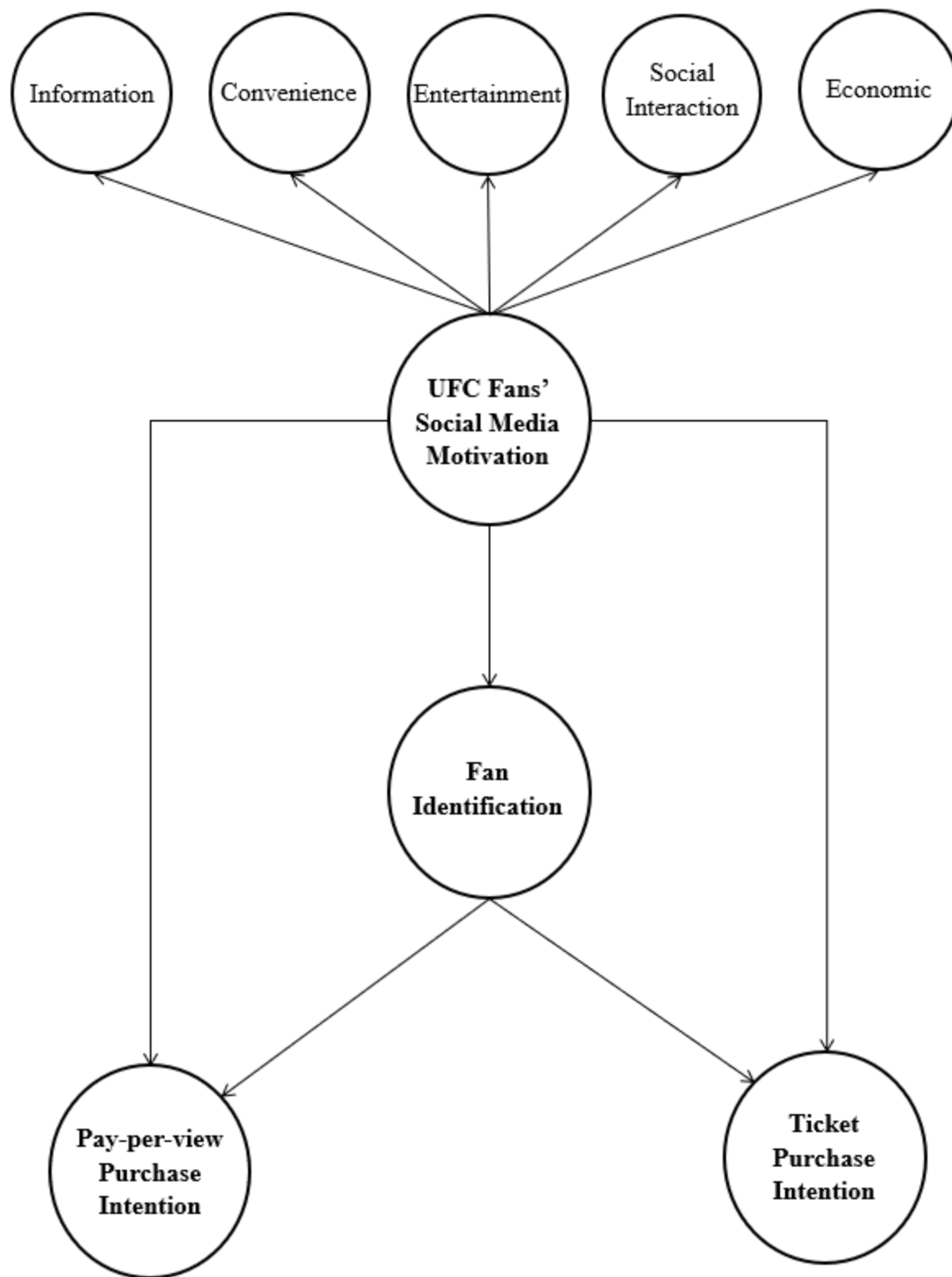
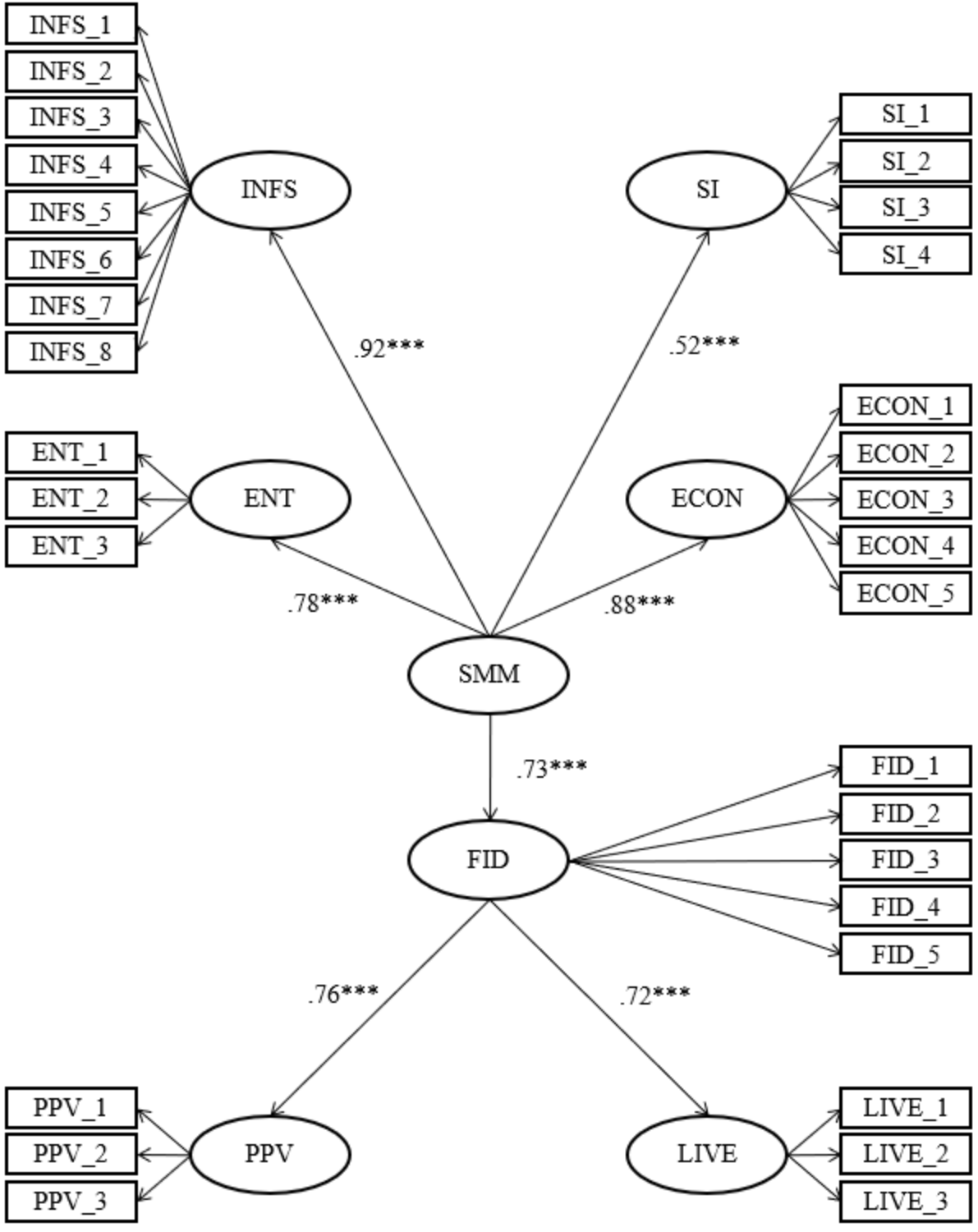Figure 4.1. Theoretical framework
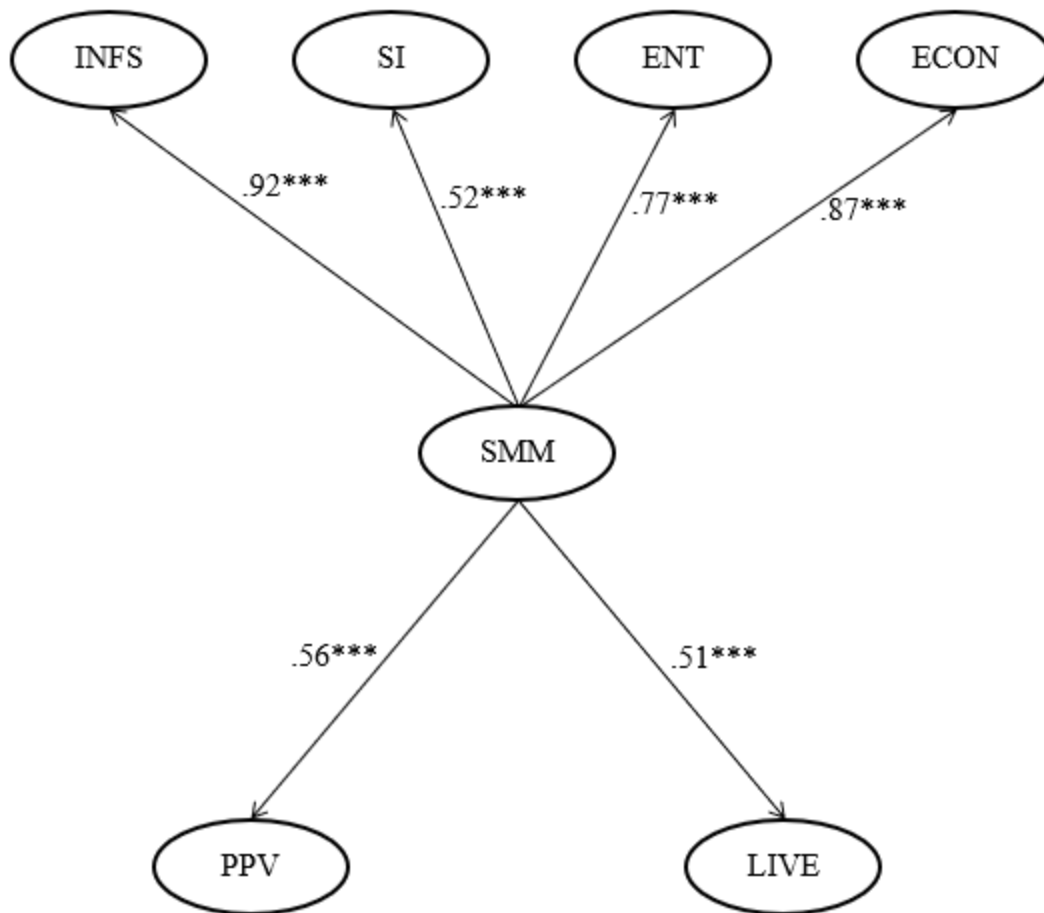
Figure 4.2. Hypothesized structural model (Model A)

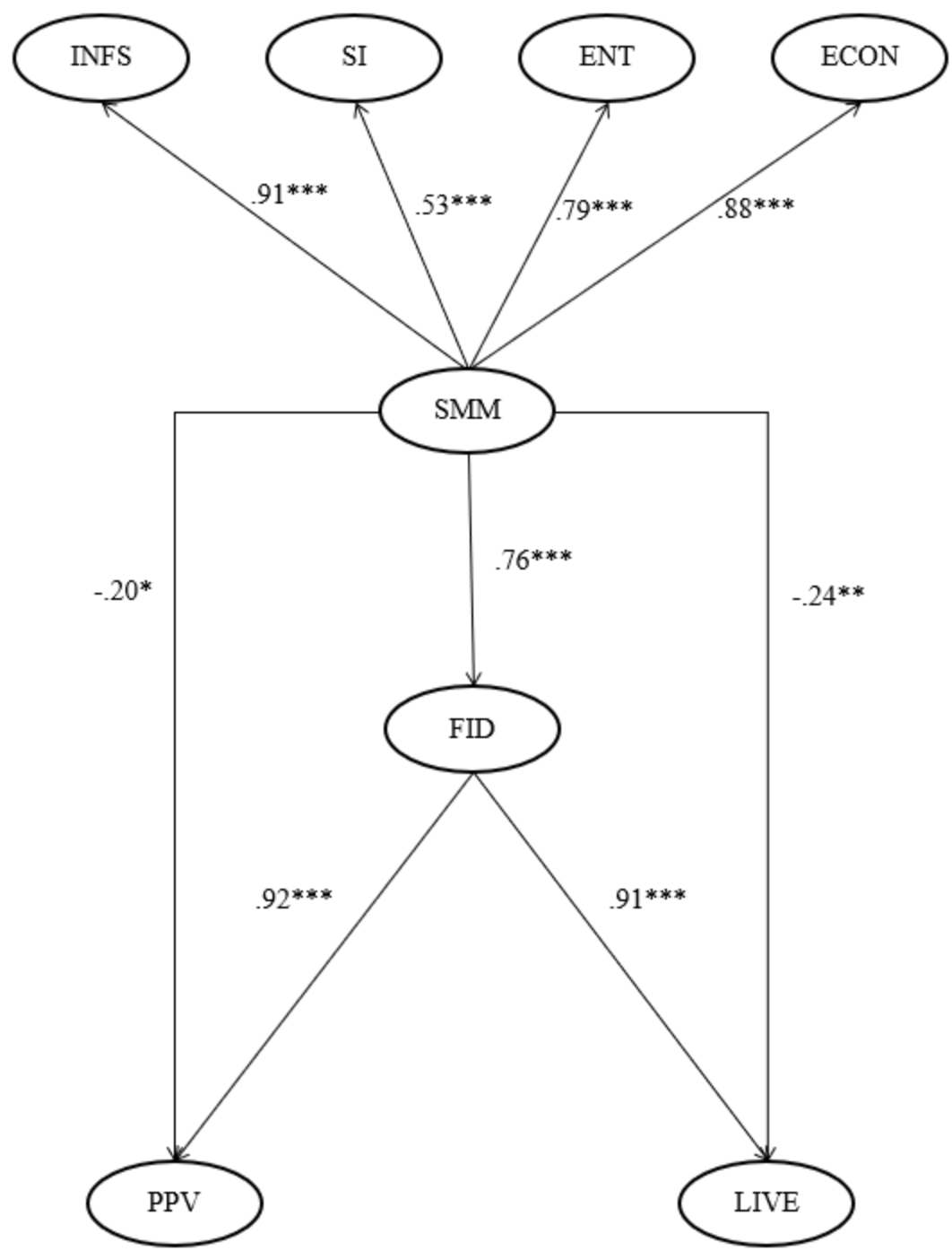Figure 4.3. Direct effect model with the second-order UFC fans' social media motivation

Figure 4.4. An alternative model (Model B) of the relationships among the second-order social media motivation, fan identification, pay-per-view purchase intention, and live event ticket purchase intention

CHAPTER5

OVERALL DISCUSSION

Although the popularity of UFC and the importance of social media have rapidly

increased in many countries, there has been a dearth of research with regards to the relation

between the UFC and social media. As the importance of social media in the sports market has

become more pronounced, previous research has revealed that social media is a helpful tool for

communicating with fans or customers (Eagleman, 2013; Hambrick, 2012). As a result, many

sports leagues, such as the NFL, MLB, NBA, and NHL, along with individual teams, have

started to run their social media as a communication and promotion tools. The UFC is no

exception. The UFC manages social media accounts with approximately 47 million followers on

Facebook, Twitter, Instagram and YouTube. Furthermore, since the UFC pay-per-view does not

always have a successful buy rate, there was a need to for research to provide a better

understanding of UFC fans consumption. Most importantly, it is necessary for managers to

develop more effective strategies for building consumer interest and a loyal fan base by clearly

grasping the decision-making process of their fans through the content provided and motivation

of social media. For these reasons, the current research was designed to fill the gap in the

literature by clearly elucidating an understanding regarding the motivations of UFC fans in social

media, along with identifying and reviewing the relationships between social media motivation,

fan identification, and future intentions. To be specific, the purpose of this study was to find the

UFC fans' specific motivation factors in following and/or using official UFC social media

platforms, which is distinguished from other sports fans through a qualitative study, and to

examine how social media can affect PPV and ticket purchase intention by using fan identification as a mediator as well as investigating MMA fans' social media motivation through a quantitative study. This chapter includes discussions and an interpretation of the data analyses of both the qualitative and quantitative study in the following order: (1) qualitative study, (2) quantitative study, (3) limitation and future study.

Qualitative Study

The qualitative study was conducted to find specific motivational factors of UFC fans' that are distinguished from other sports. Accordingly, based on a triangulation process, the four different types of the UFC social media (i.e., Facebook, Twitter, Instagram and YouTube) were analyzed as a data analysis step, and in-depth interviews were undertaken. After reviewing previous literature, contents from the four official UFC social media platforms were analyzed by collecting and reviewing the contents. In order to increase data accuracy, the content which was uploaded in October 2018, were primarily analyzed. Approximately 47 million UFC fans follow the four UFC social media platforms. Furthermore, the number of followers on the four types of social media platforms is a substantial amount when compared with major American professional leagues such as the NBA, MLB, NHL, and NFL. In addition, a large number of contents, such as photos, short video clips, schedules, and highlights were uploaded on the UFC social media for promotional purposes and provided information related to the UFC event, players, the result of events or etc. to their fans. Furthermore, many UFC fans shared their perspectives about events or players with other fans through the comments section.

In order for collect qualitative data, an in-depth interview was performed with 12 UFC fans that followed and/or used official UFC social media. Most importantly, this study found that UFC fans have five different types of themes, in terms of motivations in following and/or using

official UFC social media through the interviews. These themes were classified as Information, Social Interaction, Convenience, Entertainment, and Economic motivation. The four motivations (i.e., Information, Social Interaction, Convenience, and Entertainment) have already been shown and been revealed to play an important role in using social media through previous U&G researches in many fields, as well as within the sports sphere (e.g., Blaszka et al., 2012; Clavio & Walsh, 2013; Frederick et al., 2012; Hambrick et al., 2010). Similar to other sports fans, UFC fans have shown that they follow and/or use the UFC official social media for information, social interaction, entertainment, and convenience. In the case of most of the UFC fans who were participants in the qualitative study, they answered that they followed and/or used the official UFC social media to get information related to fight cards, schedule, or result of the event. Other reasons as to why they followed and/or used social media included easy access to social media and the availability of relevant information without large amounts of time consumption. Also, it was revealed that UFC fans followed and/or used the social media to keeping touch with someone or for entertainment purposes.

By qualitatively exploring social media motivation in the UFC, the study shed more light regarding the motivation for UFC fans' use of social media with grounds for supporting the finding themes. As a result, the current study found a unique factor (i.e., Economic) that distinguished it from other sports fans. The UFC operates on a PPV system, and it is the main cause behind the unique factor. The Economic motivation is related to financial constraints of UFC fans and UFC, as the latter makes profits through PPV. For example, the UFC organization made a profit of $157,806,000 in 2015 (Connolly, 2016). In addition, as aforementioned, the UFC uploaded a large amount of content on their social media for PPV sales. However, it is ironic that the UFC fans who were participants in the qualitative study answered that they

followed and/or used UFC social media instead of purchasing PPV. Furthermore, these fans responded that it was a burden to purchase PPV every time, particularly with regards to pricing. UFC fight cards also affected this result. According to the results of the qualitative study, UFC fans did not want to purchase PPV when they were not interested in the events' fight cards. However, due to the nature and limitations of combat sports, it is difficult to construct an event only with cards that can always attract the fans' attention. Therefore, in this case, there is a need for UFC managers to stimulate their fans' desire to purchase for PPV events by posting social media content that can increase their motivations in other areas besides the chosen fighters. An example of this can be in UFC managers posting contents related to entertainment. This is as highly motivated consumers in the entertainment factor were more likely to watch advertising than low motivated consumers (Alwitt & Prabhaker, 1992).

Quantitative Study

Measurement Model

For the refinement of the UFC fans' social medial motivation scale, five factors with 29 items were decided upon for the EFA by modifying and refining from previous literature (i.e., Ha et al., 2015; Ko et al., 2005; Ku et al., 2013), and the results of the qualitative research part of the current study. The result of initial EFA showed that 7 items were removed due to a low value and the five factors were re-specified to four factors. The reason why the factor was reduced from five factors to four factors was that the Information and Convenience were combined, and were re-named as Information Seeking. Based on the result of the EFA, four factors with 22 items were retained, including Information Seeking (8 items), Social Interaction (6 items), Entertainment (3 items), and Economic (5 items).

After conducting the EFA, the initial CFA was conducted with the four factors. Even though the result of the initial CFA indicated that the model fit was acceptable ($x^2/df = 2.598$, CFI = .911, and RMSEA = .070), another CFA was needed due to poor factor loadings. Accordingly, the follow-up CFA was undertaken after removing two items. However, the 5 items with low factor loadings were retained. The main reasons why these items were not removed was based on the results of this study's qualitative study, the theoretical relevance, the descriptive statistics with showing their importance, and overall model fit. The re-specified model has a better fit ($x^2/df = 2.541$, CFI = .926, and RMSEA = .069) rather than the former model. Finally, the four factors that had 20 items (Information Seeking: 8 items, Social Interaction: 4 items, Entertainment: 3 items, and Economic: 5 items) were refined through the CFA.

In previous U&G literature in multiple fields, including the sport field, many researchers conducted their studies with various medial motivational factors, such as information, convenience, entertainment, interaction, pass time, fandom and permanent access (e.g., Blaszka et al., 2012; Choi et al., 2009; Clavio & Walsh, 2013; Ha et al., 2015; Ko et al., 2005). The current study also found four unique social media usage motivational factor for the UFC through the result of the EFA and CFA. The Social Interaction and Entertainment factor in the current study have similar characteristics to those found in previous studies (e.g., Choi et al., 2009; Ko & Kim, 2010). There is no doubt that UFC fans as well as other social media users use social media for social interaction and entertainment. Many internet users, especially social media user, share their information and perspective through social interaction (Kietzmann et al., 2011). Furthermore, highly motivated users in social interaction tend to visit websites to exchange their opinions, interact, and communicate with people (Ko et al., 2005). Furthermore, many sports leagues' team and many companies use their contents for promotional purposes or

communication with their fans or consumers, and it is highly related to the entertainment factor. Many social media users use social media to pass time and/or entertainment purposes (Whiting & Williams, 2013). Indeed, the Entertainment factor is likely to impact on viewing advertising (Alwitt & Prabhaker, 1992). Therefore, it is expected that if managers can increase or enhance consumer's motivation related to entertainment by uploading contents that can increase the consumer's interest on social media, it would lead a better promotional effect.

Previous literature related to U&G dealt with Information and Convenience as a different motivation factor for media (e.g., Ha et al., 2015; Ko et al., 2005; Whiting & Williams, 2013). Information motivation is related to searching for information and/or self-education through social media and/or the internet, and Convenience motivation refers to the users' easy access to social media and/or any website without time and space constraints (Ha et al., 2015). These two factors also played an important role in terms of using social media (Whiting & Williams, 2013). This is as many social media users can get information, breaking news, and answers to questions through social media (Humphreys, 2007). Furthermore, due to the advances in technology, consumers would increasingly want to purchase products in comfort (Jayawardhena & Wright, 2009), and it has been found that it is valuable for consumers when they purchased products without too much time consumption or effort. However, while this study's information and convenience scale has been modified and refined from the previous literature (i.e., Ha et al., 2015; Ku et al., 2013), the EFA result showed that these two factors were combined. Given recent advances in information technology and the internet, this result may not be surprising, and instead reveals the deep relation to mobile applications. Consumers can access information that they want quickly and easily through mobile applications without space constraints (Ha et al., 2015). As a result, UFC fans can access their mobile applications at any time and find the

information any time, and could be the reason behind this result. Based on the result, it can be considered that due to the recent advances in information technology and internet speeds, the Information and Convenience factor can now be viewed as one factor rather than two separate factors. Thus, in this study, Information Seeking can be defined not only as the retrieval of information, but also how quickly information can be obtained.

Another notable finding was the emergence of Economic as one of the motivational factors. The qualitative result in the current study revealed that the Economic factor was one of the main themes in terms of following and/or using social media, and this result of the quantitative study was very similar with the results of the qualitative research. Therefore, this result reaffirms the qualitative study's result and proves its validity. The Economic motivation is highly related to financial constraints. In the current study, the Economic motivation refers to following and/or using social media for money-saving purpose by getting information or watching any videos inexpensively through social media. There were similar concepts to this factor that were found from literature in relation to shopping motivation (e.g., Arnold & Reynolds, 2003) or web usage (e.g., Korgaonkar & Wolin, 1999). According to Korgaonkar and Wolin (1999), economic motivation was defined as the "consumers' ability to get free products" (p. 59). Most importantly, the reason as to why this factor is important is that the factor is unique and a distinguishing factor that is difficult to find in other sporting leagues, such as NBA, MLB, NFL, NHL and NCAA, along with its relation to PPV system in the UFC. As mentioned earlier, the UFC is running a PPV system, so all UFC fans have to pay to watch UFC main events. Other professional sports leagues' and college sports' fans, however, can watch almost games for free if they have cable TV. In addition, while other sports fans can use a streaming service with a single payment for a month or an entire season, the UFC fans have to purchase PPV for only one

event at a relatively high price. Thus, as shown in the qualitative research results in connection

with this phenomenon, UFC fans do not want to purchase UFC PPVs every time, and they feel

that they are being burdened in terms of the PPVs' prices. Therefore, it is certain that the

Economic motivation is an important motivation for following and/or using social media because

it is expected that fans of other sports organizations or sports events that might be running the

PPV system, would be able to show the same tendency as UFC fans.

Hypothesis Testing

Another purpose of this study was to validate the refined instrument used for

investigating the UFC fans social media motivation by measuring the effect of social media

motivation on future intention (i.e., PPV Purchase Intention and Live Event Ticket Purchase

Intention) with Fan Identification as a mediator. Accordingly, a series of hypotheses testing was

conducted through the use of an SEM analysis. Before conducting the SEM analysis, the CFA

was conducted to confirm the goodness of fit of the measurement model. The result of the initial

CFA showed the model had an acceptable fit (x^2/df = 2.379, CFI = .916, and RMSEA = .065).

However, a model re-specification was needed due to high modification indices. As a result, the

hypothesized model with 31 items in 7 factors was decided upon by removing one item in Fan

Identification. The model fit also got a little better (x^2/df = 2.261, CFI = .925, and RMSEA

= .063).

After the CFA, the SEM analysis was performed to test the hypothesized model (Figure

4.2). The test of a hypothesized model tested the relationships both between the second-ordered

social media motivation and Fan Identification and between Fan Identification and two purchase

intention (i.e., PPV and live event ticket), showing that the second-ordered social media

motivation was a positive impact on Fan Identification, and that Fan Identification significantly

influenced two purchases intention. According to the result of this analysis, and taking into account that the second-ordered social media motivation significantly influenced on the Fan Identification (standardized $\gamma = .73$), it was found that Hypothesis 3 was supported. Furthermore, Hypothesis 4 and 5 were supported by the finding that Fan Identification had a positive effect on the PPV Purchase Intention and Live Event Ticket Purchase Intention (standardized $\gamma = .76, .72$ respectively). The next step was to test Hypothesis 1 and Hypothesis 2, both of which were related to relationships the second-order social media motivation and two dependent variables, and another path coefficients analysis were undertaken (see Figure 4.3). The result showed that the second-order social medial motivation had a positive impact on PPV Purchase Intention and Live Event Ticket Purchase Intention (standardized $\gamma = .56, .51$, respectively), and this result can support both hypotheses.

These results were found to support previous studies. In many fields, there have been many studies related to motivation, which increases the importance of media. This is particularly as the importance of media has increased due to the development of the Internet and technology, and researches related to between media and future intention based on the U&G have been continuously carried out, with these studies finding a correlation between media motivation and future intention (e.g., Choi et al., 2009; Cianfrone et al., 2011; Phua et al., 2017). This phenomenon also applied to UFC fans. As aforementioned, UFC fans' social media motivations have a positive impact on future intention (i.e., PPV purchase intention and Live ticket purchase intention). The result suggests that the UFC needs to put more effort on social media content when they sell PPVs or tickets. Furthermore, social media motivation was highly related to fan identification through the result that revealed social media motivation influenced fan identification. Many professional sports leagues and teams manage their website and social

media platforms for communicating and cultivating fan identification (Waters et al., 2011) because fan identification can lead to consumption by creating a sense of belonging and connection. Indeed, many studies have found that fans that highly identify with the sport are more likely to purchase sporting products than less identified fans (e.g., Fisher & Wakefield, 1998; Wann, 2006; Wann & Branscombe, 1993). In addition, since the consumption behaviors of sports fans can be predicted by fan identification (Milne & McDonald, 1999), sports teams or leagues should consider fan identification when selling goods. The relationship between fan identification and consumption behavior was revealed as a result of this study, showing that UFC fan identification was significantly impacting on two dependent variables. Also, this result can support a previous research. According to Brown et al. (2013) and Devlin et al. (2013), highly identified UFC fans are more likely to purchase UFC merchandises, such as PPV, than less identified UFC fans. When managers upload contents on their social media, the results of this study offer a direction to create more profit by simply uploading contents that can increase the sense of belonging of fans, rather than solely for entertainment and promotion purposes.

To examine the mediating effects of Fan Identification, the alternative model was tested by using a bootstrapping procedure with 10,000 bootstrap samples and 95% confidence interval (see Figure 4.4). Indeed, the bootstrapping procedure was for confirming indirect effects between the second-order social media motivation and two dependent variables. The result of this testing revealed that the second-ordered social media motivation has direct and indirect effects on two future intentions (i.e., PPV Purchase Intention and Live Event Ticket Purchase Intention). Also, the second-ordered social media motivation has a positive impact on the Fan Identification (standardized $\gamma = .76$, $p < .001$). Fan Identification also has direct effects on two dependent variables intention (standardized $\gamma = .92$, .91 respectively, $p < 0.001$). In Figure 4.3, the second-

ordered social media motivation has a positive impact on the two dependent variables without the mediating effect of Fan Identification. However , it is surprising to note that when Fan Identification added as a mediator in the model, the result of this model showed that the second-order social media motivation had a negative impact on the two dependent variables (PPV Purchase Intention: standardized $\gamma = - .20$, $p < .05$, and Live Event Ticket Purchase Intention: standardized $\gamma = - .24$, $p < .01$). Given the result of the Direct effect model (Figure 4.3) and Model B (Figure 4.4), Fan Identification can be confirmed as being partial mediator between the second-order social media motivation and two dependent variables (Zhao et al., 2010), and this result can support both Hypothesis 6 and 7.

Fan identification allows the creation of a sense of belonging and connection (Sanderson, 2011). Furthermore, as aforementioned, fan identification is important because it predicts the consumption behavior of sports fans and positively affects the direct purchase intention (e.g., Fisher & Wakefield, 1998; Kwon & Armstrong, 2002; Wang et al., 2012; Wann, 2006; Wann & Branscombe, 1993). The importance of fan identification is also revealed in this study. Based on the results of this study, it was found that social media motivation had a positive impact on increase of fan identification, which could result in increased future purchase intentions, particularly in case of the UFC which, due to the nature of their PPV scheme, can be sold without a limit, unlike live ticket, and is one of the biggest advantages of PPV. Therefore, it can be expected that UFC can generate tremendous profits if UFC fans highly identify through social media. Most importantly, fan identification would be able to play an important role in providing a solution when a UFC crisis comes. Unfortunately, the UFC's PPV is not always successful. For example, more than 1 million UFC fans purchased McGregor, Rousey, and UFC 200's PPV, whereas 5 of 13 UFC events in 2016 had less than 250,000 in purchase sales (Meltzer, 2017).

This phenomenon might be highly related to events' fight cards, but it is difficult to constantly hold events with fight cards that stimulate a fans' interest due to the nature of combat sports. For this reason, fan identification is very important in terms of selling PPVs. This is as the results of the current study have clearly shown that highly identified UFC fans are more likely to purchase a PPV, regardless of fight cards.

Implications

Qualitative Study

Since it has been shown through previous studies that social media plays an important role in marketing tools or consumers purchase decision (Foux, 2006; Mangold & Faulds, 2009), it was deemed necessary to examine the motivation of sports fans in social media more clearly. Furthermore, it is important to understand social media usage motivation more critically because the motivating factors affect actual purchases or future intentions. In addition, there has been a lack of in-depth research on UFC fans' social media motivation. Accordingly, the findings of the qualitative study in the current study contribute to the theoretical tenets of the U&G theory and provide a better understating of social media motivation in the UFC.

The results of the qualitative study clearly show the difference between other sports and the UFC through the economic motivation factor. These results also demonstrate the validity of the need for in-depth research related to social media and UFC fans. In addition, by identifying unique social media motivations of UFC fans, the result provides a clearer direction to UFC managers, who can then upload the appropriate content on the UFC social media when they organize social media content. Furthermore, the results of this study can be applied not only to the UFC, but also to other sporting events or organizations that are running PPV schemes. Furthermore, by reaffirming the four motivations (i.e., Information, Social Interaction,

Convenience, and Entertainment) of the results elucidated previous studies and thereby supporting the previous studies, the study contributes to researches related to social media and sports.

Quantitative Study

The results of the current study have provided some notable directions for social media managers. According to the results of this study, many UFC fans have found the buying of PPVs to be a burden. As a result, social media managers need to construct social media contents that can satisfy fans' purchasing needs in a slightly different way. For example, since entertainment motivations have a positive effect on the viewing of advertisements (Alwitt & Prabhaker, 1992), the managers need to stimulate fans motivation by its relation to entertainment. In other words, it is necessary to create and foster the interest of the fans by posting the previous match highlights or interviews with players participating in the specific event. Furthermore, many UFC fans share their perspectives and needs through the comments section, so managers should consider paying closer attention to the comments, and to configure the social media contents accordingly.

Furthermore, social media managers should keep in mind that social media contents have a positive impact on fan identification and that these results can lead to actual consumption. In other words, managers need social media content to enhance UFC fans' sense of belonging, along with distinguishing it from other sports fans, such as NBA, NHL, MLB, and NFL, as this sense of belonging would be conducive to the UFC's profit creation. Furthermore, as aforementioned, the relationship between fan identification and purchase intention helps to overcome the limitations of combat sports as well as the UFC. The main reason is that the results of the current study have clearly shown that highly identified UFC fans are more likely to purchase a PPV, regardless of the fight cards for that particular event. Therefore, it is expected

that if social media managers were to emphasize aspects that can enhance their sense of belonging rather than promotional aspects when constructing social media contents, they can naturally contribute to publicity and profits.

For academicians, the major findings of the current study would provide a significant contribution to the use of the U&G theory approach. In addition, this researcher not only contributed to existing motivation literature, but it also extends the existing literature by predicting future behavior through sports fan motivation of social media. This is especially the case in second-order social media motivation – fan identification – two future intentions model that clearly outline the fundamental process through which the motivations of sports fans' via social media influence future purchase intentions. Accordingly, this research provides a better understanding of the relationship between UFC fans' social media motivation and future intention. Furthermore, fan identification in this study serves as a mediator between social media and future intentions, which not only means reaffirming and supporting the existing literature, but also providing a direction on how to generate more profits through social media content to managers of the various sports leagues, as well as the UFC.

Limitation and Future Study

The researcher acknowledges the limitations of this research, and these limitations can lead to further opportunities for future study. Since data collection in this study is solely focused on UFC, the researcher made an effort to increase data quality. Despite this effort, almost all the participants were recruited from an online survey provider (i.e., Mechanical Turk from Amazon), rather than directly from the four different types of UFC social media. As such, there is no way to measure how carefully the participants, who participated in this survey through the online survey provider, responded to the survey, and could thus raise concerns in terms of the overall

quality of the data (Paolacci et al., 2010). Furthermore, the current study analyzed the four different types of UFC social media platform as a whole and found the second-order social media motivation has a positive impact on fan identification and two future intentions. In other words, the sample of this study was not distinguished based on the type of social media platform. Accordingly, future research is needed to examine UFC fans social media motivation by distinguishing each social media platform.

Given the results of the scale refinement part in this study, the new Economic motivation factor that distinguishes it from other sports was revealed. However, since it was the first finding from this study and the scale was made for the first time, there is a need for further research to revalidate this factor. Accordingly, future research needs to revalidate the instrument measuring social media motivation, particularly the Economic motivation. Furthermore, the result of scale refinement part showed that the Information motivation and the Convenience motivation were combined. It was expected that the result was highly related to the use of mobile applications. Therefore, future research should reveal the difference between the social media motivation of sports fans that access social media using mobile device, and the social media motivation of other fans, which use social media through other devices, such as laptops. Lastly, the current study did not investigate demographic information associated with participants in this study. According to Evanschitzky and Wunderlich (2006), variables in demographic, such as gender, ethnicity and age, would play a role as moderator. Therefore, future researches should consider and examine the role of sociological variables, and it can lead to make for an in-depth understanding of UFC fans characteristics.

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