

BRANDING AND VIEWERSHIP: DOES A UNIFORM
PRESENTATION CHANGE PUBLIC INTEREST?

by

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1 Introduction

In 2015, the UFC implemented a first-of-its-kind policy that standardized their Fighters' uniforms during any UFC event. They struck a deal with Reebok to be the exclusive provider of fighter uniforms. The underlying theory was that a more uniform appearance of their fighters would enhance their appeal to consumers. However, this move seemingly contradicts the concept of product variety, which refers to the diversity of variants within a specific product category or market.

According to the principle of product variety, consumers seek diversity in their consumption habits. Different consumers have different tastes, so producing multiple models can increase a firm's profits (Lancaster, 1990). When evaluating a single brand, the variety of products offered is critical to a consumer's perception of brand quality. Even if it makes choosing more challenging, a brand's variety can positively influence quality perceptions (Berger et al., 2007). The market structure theory emphasizes the importance of competitive relationships, product differentiation, and product variety as decision variables for the firm (Lancaster, 1990). While extensive research has been conducted on the effect of product variety on consumer interest, more attention should be given to the sports market.

There also has not been much research done on homogeneity, the extent to which a group's members appear uniform on one or more salient dimensions in the context of sports. However, studies suggest that more homogeneous groups attract collective treatment and that collectively treated groups are perceived as more homogeneous (Alter and Darley, 2009). This relationship also appears bidirectional, whereby homogeneous groups attracted collective treatment and collectively treated groups after that appeared more homogeneous. (Alter and Darley, 2009). Homogeneity can be displayed in sports through uniforms as it establishes a legitimate relationship between the wearer and the organization.

By wearing the uniform, it indicates that individuals will adhere to the values and beliefs of the organization, and group members are to be considered equal in status (Lancaster, 1990).

2 History of the UFC

The Ultimate Fighting Championship (UFC) was founded by Rorion Gracie, Art Davie, and Bob Meyrowitz in 1993 under Semaphore Entertainment Group to promote the Gracie family's martial arts school. The event would have experts from different disciplines fighting each other to display what the superior martial art is. The fights had no weight classes, time-outs, or judges. The only two rules were no biting or eye gouging, and any fighter who broke those rules would be punished with a \$1,500 fine. The matches would only end by submission, knockout, or the fighter's corner throwing in the towel ("The History of the UFC 1993-2001," 2018). Boxing, wrestling, ju-jitsu, karate, and taekwondo are among the martial arts disciplines combined in combat. With the growth of diverse martial arts systems and the advent of professional wrestling, MMA started to take shape in the modern age in the late 19th and early 20th centuries. (History of MMA and the UFC, n.d.)

In the early years of the UFC, from around 1993 to 2001, they had a big issue with public image. It was seen as extremely brutal to the point that people questioned its legitimacy as a sport, as shown by an expert from a New York Times article:

"Merely regulating a barbaric act does not change its nature. Nor does posting doctors at ringside to prevent the combatants from killing each other turn a bloody public spectacle into a legitimate sport. . . Extreme fighting puts two contestants in a ring surrounded by a chain-link fence. They are allowed to pummel each other into pulp until one of them becomes unconscious or surrenders, or until a doctor stops the action because a contestant has sustained serious injury. . .

The fact that audiences may relish seeing men bleed and that some fighters will risk any amount of injury for prize money or glory does not justify the state's approving these exhibitions of brutality.”

(Opinion — Ban This Extreme Barbarism, 1997)

It wasn't until 2001, when it was purchased by Zuffa LLC, under the leadership of owners

Frank Fertitta III, Lorenzo Fertitta, and Dana White, that the UFC began to clean up its image. It first began by establishing unified rules and complying with the athletic commissions. On the week of the 6th of July in 2015, a new fight kit policy was put into place.

The new policy will provide several benefits to the athletes, including but not limited to:

- a. Associating every athlete with a global athletic footwear and apparel brand
- b. High quality performance apparel specifically developed, tested and produced for MMA athletes
- c. Elevating the visual identity of UFC athletes to be on par with other global mainstream sports
- d. A guaranteed income for each fight, eliminating the burden of seeking sponsors on a per event basis
- e. The opportunity to generate royalty income from the new athlete-specific products created through this program

Figure 1: UFC Outfitting FAQ

The UFC partnered with Reebok, a major global footwear and sports apparel brand, to create a unique and consistent look for their athletes. As a result of this partnership, athletes' sponsors will no longer be permitted to display their branding on athletes' apparel during UFC Fight Week official events, including fight night, UFC-produced content, or other official UFC events (UFC Outfitting Frequently Asked Questions, 2012).

3 Purpose

This research aims to determine whether consumers prefer a consistent appearance akin to traditional team sports or a distinct look from fighters. This investigation will employ consumer interest, measured by relevant established metrics from prior studies. The significance of this research lies in its ability to aid other mixed martial arts promotions in understanding consumers and their interests, resulting in enhanced popularity and market competitiveness. The recent policy change profoundly impacted fighters' livelihoods, as nearly all of them could not secure individual sponsorships since such sponsors were not allowed to be displayed during official UFC Fight Week events. Examining the rationales behind company actions is critical because they often affect their workers more than the company itself. Although the Reebok deal may have benefited the company, it may not have benefited the fighter. To investigate this matter is to provide fighters with the knowledge they require to defend themselves against exploitation better. Being a mixed martial arts fighter is a high-risk occupation, and these fighters should be compensated accordingly.

4 Literature Review

Although there is a substantial amount of empirical economics research examining consumer interest in traditional team sports, some of the findings in those studies don't necessarily apply to the UFC or the sport MMA in general. Although research examining the MMA industry is more scarce, there are two studies looking into the factors driving demand for pay-per-view purchases (Tainsky et al., 2013). Both studies explore broadcast revenue generation for the UFC, starting with the traditional consumer theory model. The research diverges from early econometric analyses of sports by substituting PPV buy rates for attendance. However, it maintains the substance by employing the more crucial revenue stream as a proxy of fan interest (Tainsky et al., 2013). It is important to note that most of the existing literature focuses on the economics of PPV and is not related to sport. Instead, it investigates the overall televising of fights. The research presented in this paper is thus crucial because PPV is a significant source of revenue for organizations (Watanabe, 2012). As stated previously, despite the number of demand studies on professional sports, the findings regarding other forms of consumer interest unrelated to local team dynamics could be more extensive. Some studies have shown backing for live sports attendance as habit forming that can be captured through a trend or lagged variables. Similarly, supply capacity has no bearing on buy rates; in contrast to attendance, where the number of viewers is limited by stadium capacity, the number of PPV viewers is effectively uncapped (Tainsky et al., 2013).

Weight classes on a fight card significantly affect consumer interest, specifically heavier weights. The current research demonstrates that consumption rates of pay-per-view for the UFC increase substantially for a card headlined by title fights in the heavyweight, light heavyweight, or welterweight fight (Tainsky et al., 2013). There are two theories as to why that is. The speed of the smaller fighters may not be as appealing to fans as the power demonstrated by physically larger ones, which is a dynamic similar

to boxing (Tainsky et al., 2013). It is also possible that the effect is attributable to specific athletes fighting in these weight classes who have been some of the most popular in the UFC. Welterweights Matt Hughes and Georges St. Pierre, light heavyweight Chuck Liddell, heavyweight Brock Lesnar, and light heavyweight/heavyweight Randy Couture have been some of the most popular fighters in the UFC (Tainsky et al., 2013). The effect of championship fights on consumer interest is interconnected with weight class, meaning that not all championship fights are equal. Estimated results have found that championship matches in featherweight, light heavyweight, and heavyweight championships are positively correlated with PPV buys for UFC fights at the 1% level and welterweight championships at the 5% level (Watanabe, 2012, 233). In addition, pay-per-view buys are higher with every additional consecutive title defense by the main event title holder, at an estimated rate of 31,184 additional purchases, which suggests consumer interest in established champions. It is possible that consumers are interested in established title holders with whom they are familiar or drawn to these matchups in hopes that the incumbent title holder is defeated (Tainsky et al., 2013).

Holidays' effect on consumer interest has been measured in two different ways. The study by Tainsky, Salaga, and Santos signaled an event scheduled on a holiday weekend, regardless of whether the event date was a holiday. It found that fights held on US holiday weekends produce approximately 137,000 additional PPV purchases compared with fights held on non-holiday weekends (2013). In contrast, the study conducted by Watanabe viewed weekends and holidays separately. It showed that consumers were less likely to make PPV buys on holidays (2012). Although there is a slight distinction, they produce incredibly different results. Most likely, it is due to the availability of fans on holidays exceeding that of a typical day, resulting in larger audiences. (Tainsky et al., 2013). On the other hand, consumers are most likely to participate in other activities when fights are held on actual holidays.

Where the fights are held also affects consumer interest. Multiple studies find that match attendance decreases with the distance between the home locations of the two teams playing. Although these studies are looking at traditional team sports, there is still reasonably strong evidence that transport costs, both cost of transport and opportunity cost of traveling time, matter to fans (Borland and MacDonald, 2003) It is also important to note that the UFC books different venues for their pay per view fights, and the size of the venue may act as a constraint on attendance, so any empirical modeling using attendance would need to take that into account (Borland and MacDonald, 2003). UFC fights held internationally also had a negative effect on PPV buys, much of it due to the time differences between North America and Europe, where the majority of international fights are held. This means that holding fights outside of the USA may cause less interest among consumers of UFC fights (Watanabe, 2012).

5 Data

The dataset utilized for this study encompasses a comprehensive collection of observations from various sources meticulously gathered to ensure a robust analysis. The primary focus is on the UFC pay-per-view events from November 12, 1993, to May 7, 2022, yielding 210 observations. In addition, attendance data collected over a decade from 2009 to 2018 contributed an additional 530 observations.

Furthermore, the dataset includes information on the weight class of individual fights, with a substantial count of 6012 observations recorded from March 11, 1994, through March 20, 2021. However, it is pertinent to note that the scope of this study is confined to the data from 2009 to 2018. This specific timeframe was chosen to encapsulate the period following the implementation of the Unified Rules of Mixed Martial Arts and before the onset of the COVID-19 pandemic. It also includes the era succeeding the acquisition by Zuffa. The sources of data collection are diverse. Fight data was procured from Wikipedia, mmapayout.com's Blue Book, tapology.com, and ufcstats.com. Data on US GDP per capita was obtained from the Federal Reserve Economic Data. Lastly, information on holidays was sourced from Calendar-365.com.

6 Methodology

This study will employ a difference-in-differences (DiD) regression approach, using attendance data from the Ultimate Fighting Championship (UFC) as the treatment group and Bellator as the control group. The DiD regression is a quasi-experimental design that leverages longitudinal data from treatment and control groups to establish an appropriate counterfactual for estimating causal effects. It is commonly used to gauge the impact of a specific intervention or treatment by comparing changes in outcomes over time between a population enrolled in a program (the intervention group) and a population that is not (the control group) (“Difference-in-Difference Estimation — Columbia Public Health”, n.d.).

Given the challenges in extracting attendance data from the most reliable sources, this study will compare results with another regression that utilizes UFC pay-per-view data. As the availability of pay-per-view data for other mixed martial arts promotions is limited, an interrupted time series regression will be implemented. This practical quasi-experimental design is primarily used to evaluate the longitudinal effects of interventions, especially when full randomization or a case-control design is not feasible or affordable. Its primary advantage over alternative methods is its ability to fully utilize the longitudinal nature of the data and account for pre-intervention trends (Fusi & Lecy, n.d.).

By analyzing attendance and PPV data, we can gain valuable insights into the behavior and preferences of two distinct types of consumers. Those who attend live events and those who watch from home via PPV. By understanding the different motivations and behaviors of these two types of consumers, the UFC can make informed decisions regarding marketing and event planning, ultimately leading to better outcomes for the organization and its fans.

The Difference-in-difference regression is as follows:

$$\begin{aligned}
Attendance_{iw} = & \beta_0 + \beta_{11}(PostReebok)_{iw} + \\
& \beta_{21}(UFC)_{iw} + \beta_{31}(UFC)_{iw}1(PostReebok)_{iw} + \\
& \beta_{41}(bantamweight)_{iw} + \beta_{51}(featherweight)_{iw} + \\
& \beta_{61}(flyweight)_{iw} + \beta_{71}(heavyweight)_{iw} + \\
& \beta_{81}(lightheavyweight)_{iw} + \beta_{91}(lightweight)_{iw} + \\
& \beta_{101}(middleweight)_{iw} + \beta_{111}(welterweight)_{iw} + \\
& \beta_{121}(women\ fight)_{iw} + \\
& \beta_{13}(gdp_per_cap)_i + \beta_{141}(holiday)_i + \gamma_v + \epsilon_{iw}
\end{aligned}$$

The variable *attendance* is the number of people attending the UFC or Bellator events. The average attendance for a UFC event was 9,319 per event, whereas Bellator averaged 4471 per event. The variable *gdp per cap* is the US's gross domestic product (GDP) per capita per capita in the year the fights occurred. The GDP per capita is an important variable to account for economic health and the purchasing power of the consumers. *holiday* is a dummy variable that accounts for the holiday weekend and shows its effects on consumer attendance. A holiday weekend is defined in this study as a weekend that precedes or is followed by a holiday.

The variables *flyweight*, *bantamweight*, *featherweight*, *lightweight*, *welterweight*, *mid- dleweight*, *lightheavyweight*, and *heavyweight* represent all the men's championship weight classes in the fight event. The variable *women fight* represent all the women's championship weight classes on the fight card.

The variable *reebok* is a dummy variable that indicates whether the fight occurred after the implementation of the Reebok policy.

The variable *ufc bell* is a dummy variable that indicates whether the fight occurred under the UFC or Bellator promotion. *reebok*ufc bell* is the interaction variable that shows us the treatment effect.

The Interrupted time series is as follows:

$$\begin{aligned}
 \text{Buyrate}_i = & \beta_0 + \beta_1(\text{days})_i + \beta_{21}(\text{intervention})_i + \\
 & \beta_3(\text{time_after_intervetnion})_i + \beta_{41}(\text{bantamweight})_i + \\
 & \beta_{51}(\text{featherweight})_i + \beta_{61}(\text{flyweight})_i + \\
 & \beta_{71}(\text{heavyweight})_i + \beta_{81}(\text{lightheavyweight})_i + \\
 & \beta_{91}(\text{lightweight})_i + \beta_{101}(\text{middleweight})_i + \\
 & \beta_{111}(\text{welterweight})_i + \beta_{121}(\text{women_fight})_i + \\
 & \beta_{13}(\text{gdp_per_cap})_i + \beta_{141}(\text{holiday})_i + \epsilon_i
 \end{aligned}$$

The variable *buyrate* is the number of people that bought the PPV. The *day* is the time variable. The variable *intervention* is a dummy variable that indicates whether the fight occurred after the implementation of the Reebok policy. The variable *time after intervention* indicates the number of days after the Reebok policy implementation

7 Results

7.1 Descriptive Statistics

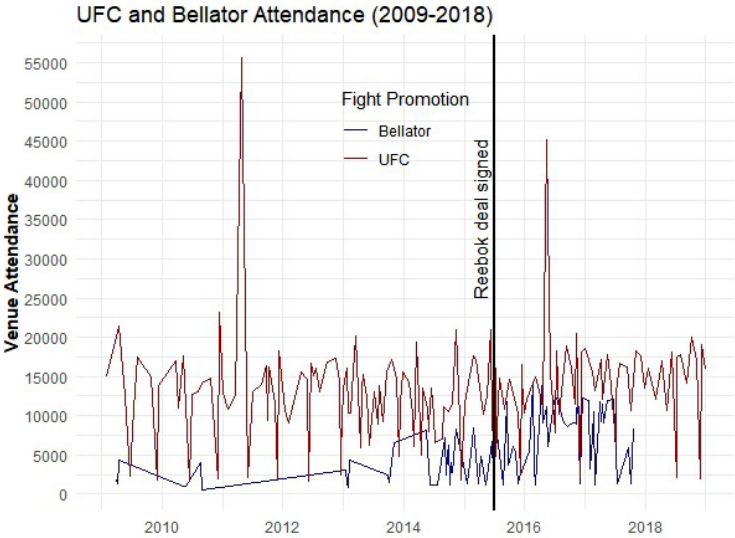


Figure 2: UFC and Bellator Attendance

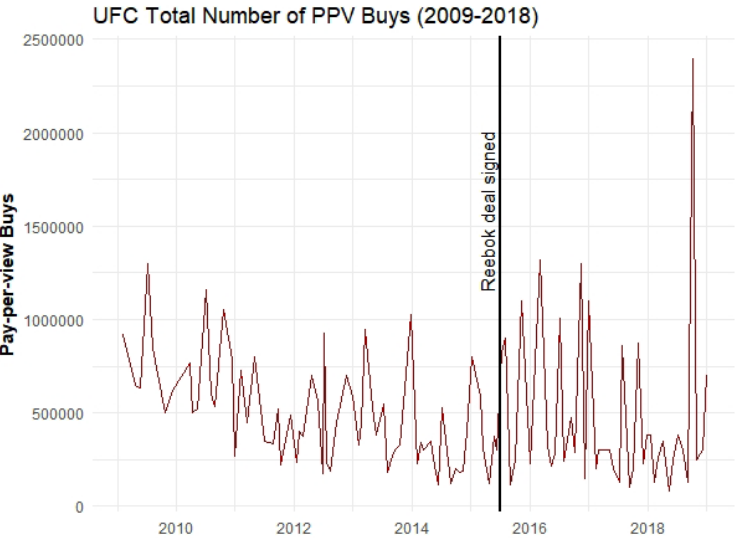


Figure 3: UFC Total Pay-per-view Buys

7.2 Difference-in-Difference Regression

	Estimate	Std. Error	Pr(> t)
reebok	1171.074	819.912	1.5629e-01
ufc bell	6725.018	1649.027	9.0702e-05 ***
bantamweight	162.884	645.737	8.0136e-01
featherweight	944.183	749.615	2.1073e-01
flyweight	-1448.515	1089.560	1.8670e-01
heavyweight	1845.775	521.118	6.0273e-04 ***
lightheavyweight	456.168	644.142	4.8047e-01
lightweight	575.637	643.471	3.7314e-01
middleweight	1463.135	663.019	2.9594e-02 *
welterweight	819.979	684.898	2.3402e-01
women fights	849.528	751.556	2.6100e-01
gdp per cap	0.064	0.152	6.7275e-01
holiday	31.043	561.218	9.5600e-01
reebok:ufc bell	-2200.544	1134.118	5.5130e-02 .

Table 1: OLS estimation, Dep. Var.: attendance. Observations: 247. Fixed-effects: venue:

102. Standard-errors: Clustered (venue). RMSE: 1,814.4. Adj. R2: 0.884616. Within R2: 0.242723. Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1

It is essential to note that variables *ufc bell* and *heavyweight* were positive and significant at the 1% level, while the variable *middleweight* was statistically significant and positive at the 5% level. Having the fight be under the UFC fight promotion instead of Bellator is associated with a higher attendance of 6,725 people. A heavyweight and middleweight championship fight is associated with higher attendance by 1,846 and 1,463 respectively. Lastly, the interaction term *reebok*ufc bell* was negatively correlated and statistically significant at the 10% level. This suggests that average attendance at UFC events was 2,200 lower after the Reebok fight kits were introduced. However, it is worth noting that a less stringent 10% threshold is more prone to false positives. So this finding should be taken with caution.

7.3 Interrupted Time Series Regression

	Estimate	Std. Error	Pr(> t)
(Intercept)	4871816.035	4199416.328	0.248971
days	18.131	237.521	0.939318
intervention	248107.391	135915.012	0.071141
time after intervention	58.849	173.910	0.735833
bantamweight	9505.554	110359.804	0.931546
featherweight	-115720.787	105447.334	0.275288
flyweight	-181375.588	135868.071	0.185155
heavyweight	84611.8556	105272.500	0.423596
lightheavyweight	53434.703	100126.417	0.594841
lightweight	110617.725	106367.035	0.301054
middleweight	47826.365	106324.758	0.653891
welterweight	166624.752	98265.790	0.093297
women fights	127780.615	119418.542	0.287378
gdp per cap	-82.049	102.868	0.427130
holiday	48845.373	81474.981	0.550288

Table 2: OLS estimation, Dep. Var.: buyrate. Observations: 108. Standard-errors: IID. RMSE: 289,238.8. Adj. R2: 0.219057. Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1

Both the *intervention* and *welterweight* variables demonstrated a positive and statistically significant relationship at the 10% level. With the Reebok fight kits being introduced in 2015, the average number of pay-per-view buys per event is 248,107 higher. Furthermore, when the championship fight is a welterweight fight, there is pay-per-view buys are 166,625 higher. However, it's important to note that the 10% threshold is less stringent and more susceptible to false positives. Thus, it's advisable to interpret these results with caution.

8 Discussion

The aim of this research paper was to investigate a significant aspect of consumer interest in fighting sports - whether there is evidence that consumers prefer a standardized appearance similar to traditional team sports over a more individualized and unique style. Based on my findings, there is no statistically significant increase in Pay-per-view viewership that could be attributable to the UFC-Reebok policy. If anything, there is evidence of a possible decrease in event attendance. The conflicting findings of this study are indeed unexpected, particularly given the Ultimate Fighting Championship's (UFC) initial promotion of this change as a mutually beneficial move for both the organization and its fighters. However, it appears that the uniform appearance of fighters is a distinguishing factor for consumers watching from home, while those attending live events prefer to see unique appearances.

Further examination of the results reveals several intriguing findings. Notably, the difference-in-difference regression highlights statistical significance in the middleweight and heavyweight championship fights, while the Interrupted Time Series regression demonstrates statistical significance in the welterweight championship fights. These findings align with previous studies that suggest a higher level of consumer appeal for heavier weight classes.

9 Conclusion

In summary, according to statistical analysis, the Reebok fight kits policy implemented by the UFC appear not to have had a common impact on consumer interest. Consumers who watch live at the events do not seem to respond positively to the uniform appearance of fighters like traditional sports teams, while those who watch from home may. Previous research was reaffirmed, which indicates that factors such as fighter weight class and the overall appeal of the UFC brand may influence consumer interest. Additionally, the UFC experience may be the primary attraction for those attending live events, making the choice of uniform and/or presentation relatively subtle in comparison. Given these findings, it may be challenging to justify maintaining a policy that enforces a common look among fighters when there are no discernible benefits for them—it is not for its popularity that it would be continued.

References

- Alter, A. L., & Darley, J. M. (n.d.). When the Association Between Appearance and Outcome Contaminates Social Judgment: A Bidirectional Model Linking Group Homogeneity and Collective Treatment. *Journal of Personality and Social Psychology*, 97(5), 776-795. 10.1037/a0016957
- Attendance*. (n.d.). Wikipedia. Retrieved February 17, 2024, from <https://mmapayout.com/category/attendance/>
- Berger, J., Draganska, M., & Simonson, I. (2007, July 1). The Influence of Product Variety on Brand Perception and Choice. *Marketing Science*, 26(4), 460-472. <https://doi.org/10.1287/mksc.1060.0253>
- Borland, J., & MacDonald, R. (2003, December 1). Demand for Sport. *Oxford Review of Economic Policy*, 19(4), 478-502. <https://web-p-ebshost-com.uoregon.idm.oclc.org/ehost/pdfviewer/pdfviewer?vid=0&sid=85db20aa-edc4-4506-b77f-7e4fc832866a%40redis>
- Difference-in-Difference Estimation | Columbia Public Health*. (n.d.). Columbia University Mailman School of Public Health. Retrieved June 9, 2023, from <https://www.publichealth.columbia.edu/research/population-health-methods/difference-difference-estimation>
- Fusi, F., & Lecy, J. (n.d.). *Interrupted Time Series*. DS4PS. Retrieved June 9, 2023, from <https://ds4ps.org/pe4ps-textbook/docs/p-020-time-series.html>
- History of MMA and the UFC*. (n.d.). Verdict MMA. Retrieved May 8, 2023, from <https://verdictmma.com/guides/history-of-mixed-martial-arts-and-the-ufc>
- The History of the UFC 1993-2001. (2018, October 10). *Pledge Sports*. Retrieved May 29, 2023, from <https://www.pledgesports.org/2018/10/the-history-of-the-ufc-1993-2001/>
- Lancaster, K. (1990). The Economics of Product Variety: A Survey. *Marketing Science*, 9(3), 189-206.
- List of Bellator MMA events*. (n.d.). Wikipedia. Retrieved February 17, 2024, from https://en.wikipedia.org/wiki/List_of_Bellator_MMA_events
- List of UFC events*. (n.d.). Wikipedia. Retrieved February 17, 2024, from https://en.wikipedia.org/wiki/List_of_UFC_events
- 1993 Calendar*. (n.d.). 2024 Calendar. Retrieved February 17, 2024, from <https://www.calendar-365.com/1993-calendar.html>

- Opinion | Ban This Extreme Barbarism.* (1997, January 17). The New York Times. Retrieved June 7, 2023, from <https://www.nytimes.com/1997/01/17/opinion/ban-this-extreme-barbarism.html>
- Pay Per View Buys.* (n.d.). Tapology. Retrieved February 17, 2024, from <https://www.tapology.com/search/mma-event-figures/ppv-pay-per-view-buys-buyrate>
- Real gross domestic product per capita (A939RXoQo48SBEA) | FRED | St. Louis Fed.* (n.d.). Federal Reserve Economic Data. Retrieved February 17, 2024, from <https://fred.stlouisfed.org/series/A939RXoQo48SBEA#0>
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Houghton Mifflin.
- Tainsky, S., Salaga, S., & Almeida Santos, C. (2013). Determinants of Pay-Per-View Broadcast Viewership in Sports: The Case of the Ultimate Fighting Championship. *Journal of Sport Management*, 27(1), 43-58.
- UFC Outfitting Frequently Asked Questions.* (2012, December 1). UFC.com. Retrieved May 11, 2023, from <https://www.ufc.com/news/ufc-outfitting-frequently-asked-questions>
- UFC Stats.* (n.d.). Stats | UFC. Retrieved February 17, 2024, from <http://ufcstats.com/statistics/events/completed>
- Watanabe, N. M. (2012). Demand for pay-per-view consumption of Ultimate Fighting Championship events. *international journal of sport management and marketing*, 11(3/4), 225.