

# Alcohol-free branding in formula one: stealth marketing strategy or something more?

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## Abstract

**Purpose** – This paper studies how alcohol sponsors in Formula One (F1) adapt their branding strategies across changeable regulatory environments. It enquires whether alcohol-free activations exclusively serve as compliance devices or, on the contrary, as deliberate stealth and alibi strategies that ensure parent-brand visibility and cultural meaning.

**Design/methodology/approach** – We conducted a visual-content analysis of the complete broadcast footage from all the 22 Grands Prix of the 2023 F1 season, using a one-minute interval coding protocol. The analysis captured the frequency and type of brand exposure, differentiating between alcoholic and alcohol-free variants and documented the use of responsibility slogans.

**Findings** – Despite a variable legal background, alcohol-related branding is becoming more prevalent in F1 broadcasts. The analysis reveals a noticeable shift in sponsorship content towards alcohol-free variants and responsibility messages, which often coexist with – and sometimes replace – explicit alcohol promotion. When interpreted through the relevant marketing frameworks, these activations operate both as stealth cues (low-salience, repeated exposures that reduce audience persuasion knowledge activation) and alibi devices (line extensions and shared semiotics that sustain parent-brand equity across jurisdictions).

**Originality/value** – By combining exhaustive season-long broadcast coding with a theory-driven interpretive framework, this study provides the first systematic cross-jurisdictional analysis of alcohol-free branding in F1. It contributes to sport marketing scholarship by integrating stealth and alibi perspectives and offers practical insights for regulators, rights-holders and public health stakeholders concerned with surrogate sponsorship and hidden promotion.

**Keywords** Alcohol-free beer, Formula one, Sports marketing, Stealth marketing, Alibi branding, Regulatory frameworks, Public health

**Paper type** Research article

## 1. Introduction

Sport serves as a powerful vehicle for brand awareness, consumer engagement, and market expansion (Shank and Lyberger, 2014). By associating themselves with sports, companies can tap into fans' emotional connection with their favourite teams and athletes (Smith *et al.*, 2017). This combination enhances brand image and builds consumer loyalty and trust (Martín *et al.*, 2020). In addition, sports marketing offers multiple opportunities for targeted advertising, sponsorship, and promotional events, allowing companies to reach a wider and more heterogeneous demographics (Ross, 2007).

Formula One (F1) represents a particularly relevant case, given its hybrid identity as both elite sport and global commercial enterprise. Originating as a competition among car manufacturers, F1 has been progressively shaped by the interests of corporate partners and sponsors (Boyle and Haynes, 2024; Sturm, 2014). Automotive companies such as Mercedes-

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Benz, Ferrari, and Renault, have leveraged their participation to prove technological excellence and reinforce their brand reputation, while companies from various business segments have exploited F1's global media exposure and highly engaged fan base. This convergence of sport, media, and commerce positions F1 as one of the most lucrative sponsorship arenas worldwide.

Despite these opportunities, sponsorship arrangements raise significant ethical questions. Athletes and teams may be pressured to endorse products that conflict with health-oriented values, such as alcohol, fast food, or sugary drinks, or to associate with companies criticised for environmental or labour issues (Outram and Stewart, 2015; Agnew *et al.*, 2017). In this regard, historically, F1 relied heavily on tobacco sponsorship, which persisted for decades despite growing awareness of health harms (Neuman *et al.*, 2002). Even if regulatory interventions gradually curtailed tobacco promotion, teams and companies adapted through creative strategies (such as logo modifications) to maintain this fundamental financial source.

Corporations increasingly rely on stealth marketing to embed persuasive messages in entertainment and cultural forms that appear to be outside the traditional advertising domain (Balasubramanian, 1994; Kaikati and Kaikati, 2004). Stealth practices in sports include sponsorship signage, responsibility slogans, and brand extensions that formally comply with the regulations while keeping the core brands constantly visible and available. F1's global exposure and motorsport values (Boyle and Haynes, 2024; Sturm, 2014) represent a challenging environment for companies aiming at observing the international and transnational regulations. One common strategy is the promotion of 0% alcohol variants. Although marketed as health-conscious options or socially responsible products, their presence on F1 broadcasts and media serves as a subtle, constant reminder of the wider alcohol brand family.

Alibi/surrogate branding is a related concept and the history of tobacco sponsorship in F1 is a true testament of such strategy. In light of the growing restrictions on cigarette advertising, large tobacco companies including British American Tobacco and Philip Morris introduced surrogate identities, ambiguous logos, and other corporate initiatives to retain their presence in F1 (Carlyle *et al.*, 2004; Dewhirst, 2023; Dewhirst and Lee, 2023). These tactics relied on continuity of design and colour of the sponsoring material with the traditional brands, and semiotic cues that preserved consumer recognition. While formally conforming to advertising bans, these devices effectively guaranteed both corporate legitimacy and market access (Crompton, 1993; Dewhirst, 2023). Contemporary parallels can be drawn with the alcohol industry, where zero and low-alcohol variants are being developed as a tool to maintain the brand equity notwithstanding a legal background with mounting restrictions (Miller and Wright, 2024; MacGilchrist, 2023).

In F1, the pervasive broadcast exposure of "0%" branding appears less as an attempt to market a niche product and more as a strategic form of alibi branding that enables sponsors to remain embedded in the sport's global media landscape. This raises important questions about the blurred boundary between compliance and promotion, echoing wider debates about alcohol marketing, public health, and the ethics of sport sponsorship (Westberg *et al.*, 2018; Wenner and Jackson, 2009).

Building on these debates, this paper investigates the visibility and strategies of alcohol and alcohol-free branding in F1 during the 2023 season. Through visual content analysis of 22 Grand Prix, the study explores how companies adapt their marketing to diverse regulatory environments, and whether the increasing prominence of 0% variants is primarily a function of regulation or reflects wider brand strategies aimed at consumer legitimacy and market expansion (Barker *et al.*, 2018).

The article continues as follows: [Section 2](#) develops the conceptual frameworks of stealth marketing and alibi branding, together with the regulatory background on alcohol promotion in F1 host countries. [Section 3](#) outlines the methodological design, including the coding procedure for broadcast content. [Section 4](#) reports the empirical findings from the 2023 season. [Section 5](#) discusses these results in relation to prior literature on sport sponsorship and public

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health. Finally, [Section 6](#) concludes by highlighting the theoretical contributions, regulatory implications, and avenues for future research.

## 2. Conceptual frameworks

F1 is the highest class of international racing for single-seater racing cars licenced by the Fédération Internationale de l'Automobile ("FIA"). The F1 world championship takes place over the course of a season currently consisting of 24 races, commonly known as Grand Prix (GPs).

The championship's race-weekend format (practice, qualifying and the main race), the growing incidence of sprint events, and expanded behind-the-scenes programming produce long, highly mediated broadcast windows that routinely cut between on-car shots, pit-lane activity, trackside signage, replays and driver/team content ([Sturm, 2014](#); [Boyle and Haynes, 2024](#)). These recurrent visual elements—car liveries, hoardings and on-screen overlays—create dense, repeated opportunities for in-frame branding, meaning that logos and 0% cues can function as embedded or "hybrid" messages rather than discrete paid spots. For this reason, F1's broadcast architecture is especially conducive to both stealth and alibi branding and is central to understanding how sponsors can sustain visibility across heterogeneous regulatory regimes ([Lowes, 2018](#); [Sturm et al., 2023](#); [Naess and Chadwick, 2023](#)).

### 2.1 Stealth marketing

Stealth marketing encompasses promotional practices that embed persuasive content within entertainment and cultural contexts in ways that are not readily recognised as advertising ([Balasubramanian, 1994](#); [Kaikati and Kaikati, 2004](#)). These practices exploit the audience's limited activation of "persuasion knowledge" ([Friestad and Wright, 1994](#)): when viewers do not perceive a message as a paid attempt to influence, they are less likely to counter-argue. Under such conditions, even low-attention and incidental exposures can shift attitudes, through mechanisms such as the mere exposure effect ([Zajonc, 1968](#)). Beyond conventional spot advertising, stealth techniques include product placement, native/branded content, corporate responsibility slogans embedded in editorial/broadcast frames, and brand architecture moves (e.g. alcohol-free variants) that preserve salience while appearing informational or pro-social.

Sport broadcasts are fertile terrain for stealth because brand symbols are visually blended with the spectacle of competition, allowing logos, slogans, and colourways to function as "hybrid messages" ([Balasubramanian, 1994](#)) rather than discrete ads. F1 intensifies these effects: it is a mediated, global and corporate spectacle with unusually high densities of in-frame branding opportunities ([Sturm, 2014](#)), a cosmopolitan place-marketing aura ([Lowes, 2018](#)), and a platformised media ecosystem that now spans live broadcast, official team social channels, and streaming narratives ([Boyle and Haynes, 2024](#); [Soble and Lowes, 2024](#)). The rise of Drive to Survive-style storytelling extends sponsorship touchpoints into serialised, character-driven formats where brand cues can be threaded through behind-the-scenes content and social feeds, compounding broadcast exposures and algorithmic amplification ([Boyle and Haynes, 2024](#); [Westberg et al., 2018](#)).

Research about sports and mega-events shows that alcohol messaging—often framed as "responsible" or "low/no" consumption—remains highly visible and culturally normalising even when formal restrictions exist ([Cody and Jackson, 2014](#); [Gee et al., 2014, 2017, 2018, 2021](#)). These studies document how visual clutter, crowd shots, and venue signage sustain brand salience in ways that tables of spot counts alone can understate. In the F1 milieu, similar logics apply: 0% variants and safety slogans can operate as stealth cues that feel editorial, instructional, or health-oriented yet still transfer glamour, speed, technological prowess, and cosmopolitanism to the brand family ([Fleming and Sturm, 2011](#)). Alcohol-free activations in F1 can therefore be read as a form of stealth communication: they remain visible across

jurisdictions, borrow symbolic assets such as glamour and technological prowess from the sport, and appear to audiences less like overt advertising than like part of the spectacle itself.

### 2.2 *Alibi branding*

Alibi branding (also called surrogate branding or surrogate advertising) refers to the use of product variants, corporate identities, or adjacent categories that carry the same name, logo, colours, or design cues as a restricted product. The strategy allows companies to sustain consumer recognition and visibility even when direct advertising is prohibited (Crompton, 1993). It is not confined to sport: across markets where tobacco, alcohol, or gambling promotion faces restrictions, firms have long relied on line extensions such as sodas, music labels, “0%” variants, or lifestyle campaigns that remain legally permissible while semantically tethered to the core product.

This practice has been examined as a form of brand architecture, where a “branded house” structure enables equity transfer between a restricted flagship product and its sanctioned extensions (Aaker and Keller, 1990; Keller, 1993). It can also be interpreted using legitimacy theory as a guiding framework: surrogate cues sustain pragmatic legitimacy by preserving access and visibility, moral legitimacy by framing the brand as health-conscious or socially responsible, and cognitive legitimacy by embedding its presence as routine and taken for granted (Suchman, 1995). From a corporate responsibility perspective, alibi strategies overlap with cause marketing and CSR discourse (Demirel, 2020), where responsibility messages act as reputational cover while still functioning as promotion—a critique captured in the notion of “instrumental CSR” (Porter and Kramer, 2006).

Historically, the clearest example is tobacco, where as advertising bans intensified, companies sustained their presence through ambiguous marks, colourways, or corporate campaigns (Carlyle *et al.*, 2004; Dewhirst, 2023). In sport, and F1 in particular, this included distinctive livery designs and later corporate initiatives such as “Mission Winnow” that echoed the equities of cigarette brands while presenting themselves as platforms for innovation or sustainability (Dewhirst and Lee, 2023). A similar trajectory is evident in alcohol promotion, where no- and low-alcohol variants increasingly serve as surrogate vehicles under tightening policy regimes (Miller and Wright, 2024; MacGilchrist, 2023). While 0% products may look as progressive step, public health research cautions that “zero alcohol” cues carry social meaning beyond “zero risk”, as they normalise brand presence and extend associations to youth and at-risk groups (Hew and Arunogiri, 2023).

### 2.3 *Regulatory framework for alcohol marketing: another smoking gun?*

The history of tobacco sponsorship in motorsport and related legislation provides a useful background for analysing alcohol marketing in F1. Both tobacco and alcohol rely heavily on sponsorship, face health-related criticism, and adapt fast under regulation. Tobacco sponsors were the first commercial actors in F1, shaping the sport’s image through their logos on cars, helmets, and suits [1]. As evidence of tobacco’s dangers grew (Hammond and Horn, 1954), authorities restricted advertising and sponsorship, prompting a regulatory dance between policymakers and industry.

Early regional regulations ultimately failed: sanctions were weak and enforcement limited to national borders, while F1 races occurred globally, leaving loopholes (Yadav and Dabar, 2022; Masullo, 2003). The late 1980s brought EU-wide action with Directive 1989/552/EEC prohibiting TV advertising for tobacco but not sponsorship or non-television media. Consequently, tobacco shifted to sponsorship within F1 teams (Mooney, 2024; Directive 2003/33/EC) then extended bans to print, radio, and cross-border event sponsorship starting in 2006.

The WHO’s Framework Convention on Tobacco Control (FCTC, 2003) aimed to reduce tobacco demand through comprehensive advertising bans, though key nations like the United States did not ratify it, highlighting global enforcement challenges relevant to alcohol (Nikogosian, 2010). Facing restrictions, tobacco and F1 teams innovated: stylised logos,

harm-reduction campaigns, and branding through unrelated ventures (Grant-Braham and Britton, 2011; Dewhirst *et al.*, 2023). These tactics foreshadow alcohol marketing strategies, including “responsible drinking” messages and other indirect approaches, which continue to outpace regulation until measures like EU Directive 2014/40/EU extend bans on tobacco-related products. The WHO urged strict bans on all tobacco advertising and sponsorship, including in motorsport. However, the tobacco-F1 connection persists as strategies evolve to new restrictions. British American Tobacco, for example, shifted from tobacco products to nicotine and tobacco-free pouches, exploiting regulatory gaps in newer products (Sun and Tattan-Birch, 2024).

Globally, alcohol regulation ranges from total bans to self-regulation codes, reflecting cultural, economic, and religious considerations (Noel *et al.*, 2017; Babor and Winstanley, 2008). Historically, many regimes targeted supply—restricting sale and service. Although research on harms dates to the late 1970s (Cuoghi *et al.*, 2012), international and European attempts to curb consumption emerged slowly. The 1979 World Health Assembly urged reducing supply but offered no demand-reduction strategy. EU Directive 89/552/EEC (late 1980s) introduced strict TV advertising criteria for alcohol, while prohibiting direct targeting of minors or linking drinking to social or sexual success or driving, prompting a shift in advertising narratives (Castendyk *et al.*, 2008; Holden and Hawkins, 2016).

Since then, regulation has largely focused on advertising, with updates in 2007 (on-demand audiovisuals) and 2018 (video-sharing platforms). The directive scope consistently excludes sponsorship, illustrating a persistent gap (Directive 552/1989). In 2022, the European Parliament proposed restricting sponsorship, including a general ban on sports event sponsorship by alcohol, but member-state opposition significantly diluted the proposal (Schulz *et al.*, 2022).

Internationally, the WHO’s Global Strategy to Reduce the Harmful Use of Alcohol (2010) advocated a multilevel approach to cut consumption and control marketing. WHO’s SAFER initiative (2018) emphasises enforcing bans on advertising, sponsorship, and promotion, arguing that restrictive policies must target all audiences, not just minors. The 2022–2030 GAAP plan reinforces this stance, aiming for wide adoption of comprehensive marketing restrictions across media, including digital channels, with a target that 70% of signatory countries implement recommended options by 2030 (WHO, 2022; McCambridge and Lesch, 2024).

#### 2.4 Research questions

In F1, alcohol branding emerges at the intersection of stealth tactics, surrogate identities, and shifting regulatory frameworks, raising key questions about how sponsorship adapts and evolves under variable constraints. These strategies suggest both continuity with earlier tobacco tactics and distinctive innovations that exploit the global, mediated character of F1.

Within this background, we pose two exploratory research questions:

- RQ1. Through what mechanisms do alcohol sponsors in F1 adapt their branding strategies across heterogeneous regulatory environments? In particular, how do they sustain visibility in countries where direct alcohol advertising is formally prohibited?
- RQ2. To what degree is the growth of alcohol-free branding explained by compliance with regulatory frameworks versus deliberate attempts to sustain brand equity and consumer acceptance?

Although exploratory and primarily descriptive, these questions are significant. They provide a necessary starting point for addressing the ethical tensions surrounding alcohol sponsorship in motor racing, especially the contradiction between global campaigns against drink driving and the ongoing visibility of alcohol brands in F1. By framing the issue in these terms, the study contributes to clarifying why such practices warrant sustained academic and policy scrutiny.

### 3. Data and methods

[Section 3](#) describes data and methods for the analysis in [Section 4](#). We present three sets of data: a score of the regulatory permissiveness of alcohol marketing by country; the level of alcohol consumption per capita in the host countries; and the data from a visual content analysis of alcohol branding in F1. The methodology to retrieve the latter data is described in [Section 3.2](#).

#### 3.1 Country-level regulation and alcohol consumption

Regulatory approaches to alcohol marketing are very different across the world. Even within the European Union, though there is a common regulation on audio-media alcohol advertising, individual national provisions may differ. For this research, we analysed the legislation on alcohol advertising on national television or during sporting events across all F1 host countries during the 2023 season. The data comes from the WHO annual report “*Restriction on alcohol advertising—Indicator Metadata Registry*” (WHO, 2016) [2].

The countries analysed were classified into four mutually exclusive levels of restriction, both for alcohol advertising on TV and during sporting events:

- (1) Ban: Complete prohibition of alcohol advertising
- (2) Partial Restriction: alcohol advertising is allowed with limitations on factors such as time of broadcast, placement, or content
- (3) Voluntary/Self-restriction: lack of government-enforced regulations and rules, self-established by voluntary codes or guidelines issued by the alcohol industry and/or the advertising organisations themselves
- (4) No restrictions: absence of explicit regulations on alcohol advertising.

F1 hosting countries’ regulatory frameworks on alcohol marketing are summarised in [Table 1](#).

**Table 1.** Regulation of alcohol marketing by F1 hosting countries

Country	Alcohol brands advertisements in national TV	Alcohol brands advertisements in sport events
Australia	Partial restriction time/place/content	No restriction
Austria	Partial restriction time/content (ban for spirits)	Voluntary/self-restricted
Azerbaijan	Ban	Partial restriction
Bahrain	Ban	Ban
Belgium	Partial restriction time/place	Voluntary/self-restricted
Brazil	Voluntary/self-restricted	Voluntary/self-restricted
Canada	Partial restriction content	Partial restriction content
Hungary	Partial restriction content	No restriction
Italy	Partial restriction time/place	Partial restriction
Japan	Voluntary/self-restricted	No restriction
Mexico	Partial restriction time/content	No restriction for beers, ban for others
Monaco* (France)	Ban	Ban
Netherlands	Partial restriction time	No restriction
Qatar	Ban	Ban
Saudi Arabia	Ban	Ban
Singapore	Voluntary/self-restricted	Voluntary/self-restricted
Spain	Partial restriction time	Ban
UK	Voluntary/self-restricted	Voluntary/self-restricted
United Arab Emirates	Ban	Ban
USA	Voluntary/self-restricted	Voluntary/self-restricted

Source(s): WHO (2016)

All countries in the dataset implement some form of restriction on alcohol advertising on national television. Over a quarter enforce a complete ban, including nations adhering to traditional Islamic law such as Azerbaijan, Bahrain, Qatar, Saudi Arabia, and the United Arab Emirates (Intes *et al.*, 2023). Aside from France, all EU member states display partial restrictions, with variations in the scope of limitations concerning time, place, and/or content.

A third of the sample relies on voluntary/self-regulatory frameworks, including non-EU major alcohol producers such as Brazil, the UK, the United States (Smith *et al.*, 2014), or Japan (Kato *et al.*, 2022). The regulatory landscape for alcohol advertising during sporting events also shows significant variation. Fewer countries impose a ban compared to the regulation of advertising on television, and even countries with an Islamic culture, such as Azerbaijan and Qatar, relax restrictions.

As with television advertising, many large non-EU alcohol producers, such as the UK, Brazil, or the United States, rely on voluntary/self-regulatory mechanisms. Interestingly, a notable number of countries do not present any restrictions on alcohol advertising during sporting events, namely Australia, Hungary, Japan, the Netherlands, and Qatar. The complete absence of “no restriction” for national television suggests a broad consensus on the need for some level of control over alcohol advertising in this pervasive medium. However, the variation in the stringency of these controls reflects differing societal values, public health priorities, and the influence of economic factors.

The large number of countries with “no restriction” for sporting events in comparison to national television warrants further investigation. Sporting events often attract large and diverse audiences, including young people, raising potential public health concerns regarding exposure to alcohol marketing. The reasons for this disparity may lie in the perceived economic benefits of alcohol sponsorships and advertising in sports, potentially outweighing public health considerations in certain contexts (Graham, 2025).

Building on the regulatory background outlined in Section 2, this subsection operationalises those frameworks into measurable indicators for empirical analysis. Based on Table 1, we have assessed the values of the permissiveness of alcohol marketing according to national restrictions in national television (TV) and in sponsoring events (EVENTS). If advertising is completely banned, the score is zero; partial restriction is measured as one; if advertising is only voluntary/self-restricted, the score is two; if the country is completely permissive, the score is three. Table 2 shows the results of this assessment allows us to identify whether or not a country’s legal framework is hostile to the marketing of alcohol brands. The SUM index ranges from 0 to 6 (higher values indicate greater permissiveness) and serves as the main country-level variable in our descriptive analysis in Section 4.

Table 3 displays the descriptive statistics of the regulatory permissiveness of alcohol marketing and per capita alcohol consumption by country, based on data from the WHO (2016, 2024).

Figure 1 shows the relationship between alcohol consumption and regulatory permissiveness in the different countries hosting F1 Grand Prix events in 2023. The correlation between consumption and permissiveness is 0.487 [3]. As expected, countries with stricter regulations—particularly those where alcohol restrictions are influenced by cultural or religious factors—tend to have lower consumption levels. We will refer to this graph in the results section when addressing the second research question. This operationalisation of regulatory permissiveness provides the empirical basis for addressing RQ1, by allowing us to examine whether alcohol sponsors sustain brand presence even in restrictive environments.

### 3.2 Visual content analysis

In order to understand whether alcohol companies adapt their marketing strategies in response to different regulatory landscapes, we conducted a visual content analysis of the 2023 F1 season. We assessed the presence and messaging of alcoholic brands at F1 GPs by reviewing video race footage. The assessment of the frequency and visibility of alcohol marketing is

**Table 2.** Score assessment of alcohol marketing permissiveness

Country	Alcohol branding Permissiveness score (TV)	Alcohol branding Permissiveness score (EVENTS)	Alcohol branding Permissiveness score (SUM)	Relation with alcohol branding
Bahrain	0	0	0	Hostile
Monaco	0	0	0	Hostile
Qatar	0	0	0	Hostile
Saudi Arabia	0	0	0	Hostile
United Arab Emirates	0	0	0	Hostile
Azerbaijan	0	1	1	Moderately hostile
Spain	1	0	1	Moderately hostile
Canada	1	1	2	Moderately hostile
Italy	1	1	2	Moderately hostile
Austria	1	2	3	Moderately permissive
Belgium	1	2	3	Moderately permissive
Brazil	2	2	4	Permissive
Singapore	2	2	4	Permissive
UK	2	2	4	Permissive
USA	2	2	4	Permissive
Australia	1	3	4	Permissive
Hungary	1	3	4	Permissive
Mexico	1	3	4	Permissive
Netherlands	1	3	4	Permissive
Japan	2	3	5	Very permissive

Source(s): WHO (2016)

**Table 3.** Descriptive statistics: Score of regulatory permissiveness of alcohol marketing and per capita alcohol consumption by country

Variable	Obs	Mean	Std. Dev	Min	Max	Source
Score of the regulatory permissiveness of alcohol marketing by country (SUM)	22	2.59	1.76	0	5	WHO (2016)
Per capita alcohol consumption by country (litres per year)	22	7.33	3.94	0.10	12.00	WHO (2024)

Source(s): WHO (2016, 2024)

based on race footage from the 22 GP events in the 2023 season. The footage is publicly available [4] at <https://f1tv.Formula1.com/> and has been viewed and coded using the one-minute interval method. All footage was coded independently by one researcher, and two additional researchers reviewed and cross-checked the coding to ensure consistency and minimise potential bias. No formal inter-coder reliability statistic was computed; however, consistency was ensured through systematic cross-checks (see Section 5 for limitations). This method is taken from Barker *et al.* (2018) and involves recording the presence of visual alcohol content every one-minute interval in the categories displayed in Table 4. The unit of analysis is the coded minute; categories can co-occur within the same minute, so percentages may exceed 100% in aggregate. The categorisation is only slightly modified: the billboards of public service announcements (such as “don’t drink and drive” messages) are separated by the residual “other alcohol references” to better assess companies’ engagement in responsible advertising. The rest is coded as in Barker *et al.* (2018).

### Alcohol consumption and regulatory framework, by country

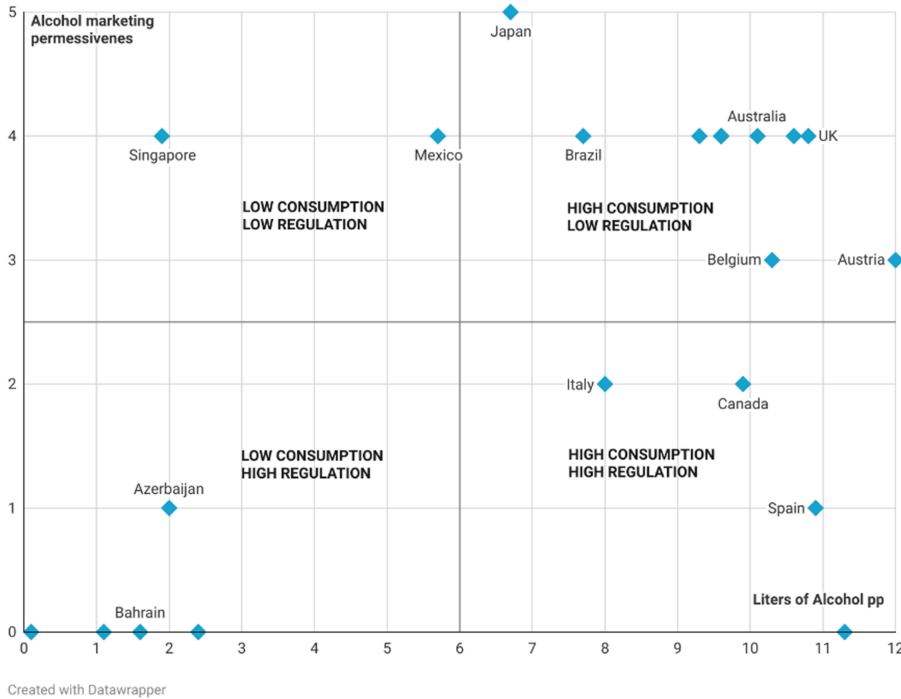


Figure 1. Matrix of alcohol consumption and marketing regulation by country (Source: WHO, 2016, 2024)

Table 4. Coded categories during the 2023 F1 season footage

Actual use	The use of alcohol on screen by any character (e.g. seeing a person actually consume alcohol on screen)
Implied Use	Any implied use of alcohol without actual use on screen (e.g. a person holding a bottle of alcohol but not actually drinking)
Other Alcohol References	The presence of alcohol or other related materials on screen (e.g. bottles or beer pumps not actually in use)
Public Service Announcements	Messages that discourage alcohol consumption (e.g. “don’t drink and drive”)
Alcohol Branding	The presence of alcoholic product branding
0% Alcohol Branding	The presence of 0% beer branding
Any Alcohol Content	Any of the above categories

Source(s): Adapted from Barker et al. (2018)

An F1 GP is usually a Sunday afternoon event that lasts around 90 min. The broadcast is slightly longer (2 h and 12 min on average) because it includes race preparation, interruptions due to crashes or bad weather, final interviews with the top three drivers, and the podium celebrations. The 2023 F1 season covered all continents except Africa. Table 5 shows the race calendar, the length of each race, and the event’s main sponsor.

Figure 2 shows the data that emerged from the visual content analysis at an aggregated level. Out of 2,905 min of GP footage, barely 1,079 (37.1%) contained no reference to alcohol brands or alcohol consumption. While implied (59 min) or actual (32 min) usage accounted for

**Table 5.** The 2023 F1 season calendar

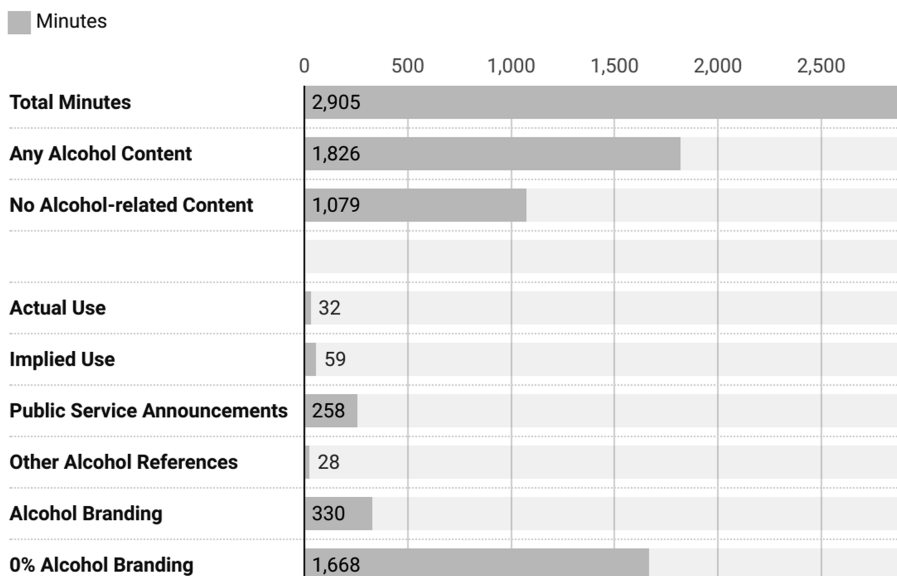
	Circuit	Location	Date	Official GP naming sponsor	Footage length (minutes)
1	Bahrain International Circuit	Manama–Bahrain	05 March	Gulf Air	124
2	Jeddah Corniche Circuit	Jeddah–Saudi Arabia	19 March	STC	114
3	Albert Park Circuit	Melbourne–Australia	02 April	Rolex	185
4	Baku City Circuit	Baku–Azerbaijan	30 April	–	125
5	Miami International Autodrome	Miami–United States	07 May	Crypto.com	122
6	Circuito di Monte Carlo	Monaco–Monaco	28 May	–	140
7	Circuit de Barcelona-Catalunya	Montmeló–Spain	04 June	AWS	118
8	Circuito Gilles-Villeneuve	Montreal–Canada	18 June	Pirelli	129
9	Red Bull Ring	Spielberg–Austria	02 July	Rolex	116
10	Silverstone Circuit	Silverstone–United Kingdom	09 July	Aramco	120
11	Hungaroring	Mogyoród–Hungary	23 July	Qatar Airways	130
12	Circuito di Spa-Francorchamps	Stavelot–Belgium	30 July	MSC Cruises	113
13	Circuit Zandvoort	Zandvoort–Netherlands	27 August	<u>Heineken</u>	174
14	Autodromo nazionale di Monza	Monza–Italy	03 September	Pirelli	126
15	Marina Bay Street Circuit	Singapore–Singapore	17 September	Singapore Airlines	140
16	Suzuka International Racing Course	Suzuka–Japan	24 September	Lenovo	124
17	Lusail International Circuit	Doha–Qatar	08 October	Qatar Airways	120
18	Circuit of the Americas	Austin–United States	22 October	Lenovo	130
19	Autodromo Hermanos Rodríguez	Mexico City–Mexico	29 October	–	153
20	Autódromo José Carlos Pace	Sao Paulo–Brazil	05 November	Rolex	149
21	Las Vegas Strip Circuit	Las Vegas–United States	18 November	<u>Heineken Silver</u>	131
22	Yas Marina Circuit	Abu Dhabi–United Arab Emirates	26 November	Etihad Airways	122

a limited amount of time, the appearance of alcohol brands was substantial (330 min, 11.4% of the footage analysed).

The number of minutes coded as “0% Alcohol branding” was 1,668 (57.4%). This high percentage confirms the investment made by the breweries in F1 and their strategic promotion of associating their brand with a virtuous product rather than a vice. This is also confirmed by the efforts made by Heineken, in particular, to promote public service announcements discouraging drink-driving (258 min).

**Table 6** presents the descriptive statistics derived from the visual content analysis of the 2023 F1 season footage. The table summarises the distribution of the frequency of the coded categories: actual and implied alcohol consumption, other alcohol-related references, public service announcements, alcohol branding, and 0% alcohol branding. Values represent the ratio of minutes coded in each GP to the total number of minutes coded. These measures allow us to assess the prominence of 0% branding relative to other forms of alcohol visibility, directly informing **RQ2** on whether such activations reflect reactive compliance with regulation or proactive brand strategy.

## Visual Content Analysis Results - F1 2023 Season



Created with Datawrapper

**Figure 2.** Results of the Visual content analysis: minutes per category analysed

**Table 6.** Descriptive statistics: Alcohol-related references and branding in the 2023 F1 season

Variable	Obs	Mean	Std. Dev	Min	Max	Source
Actual Use	22	0.01	0.01	0.00	0.03	Authors' video analysis based on the 2023 F1 season footage
Implied Use	22	0.02	0.02	0.00	0.09	
Other Alcohol References	22	0.01	0.01	0.00	0.03	
Public Service Announcements	22	0.08	0.11	0.00	0.34	
Alcohol Branding	22	0.11	0.06	0.01	0.20	
0% Alcohol Branding	22	0.57	0.16	0.18	0.78	
Any Alcohol Content	22	0.62	0.17	0.23	0.83	

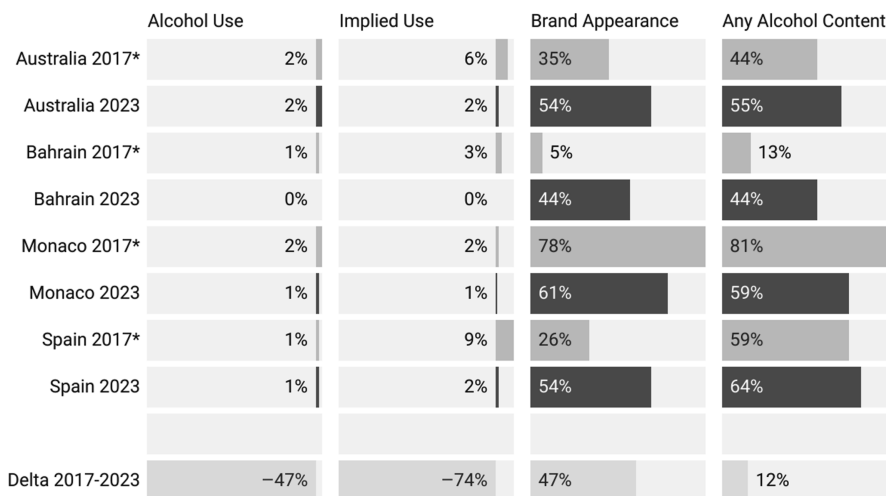
**Source(s):** Authors' Video Analysis Based on 2023 F1 Season Footage

### 4. Results

In this section, we address the research questions by analysing alcohol marketing strategies in F1. The findings will highlight how alcohol brands adapt to different legislative frameworks and the growing role of 0% beer marketing in the sport.

As a first set of evidence, we compare data from the four Grand Prix events from [Barker et al. \(2018\)](#) that were still part of the 2023 season. The results from [Figure 3](#) show an overall increase in alcohol-related content in F1 broadcasts. While actual and implied alcohol consumption remains minimal (although decreasing), brand appearances have increased significantly (+47%), contributing to an overall increase in alcohol-related content of 12%.

## Comparison with results in Barker *et al.* 2018



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**Figure 3.** Alcohol content in Formula 1 GPs: Comparison Between 2023; 2017

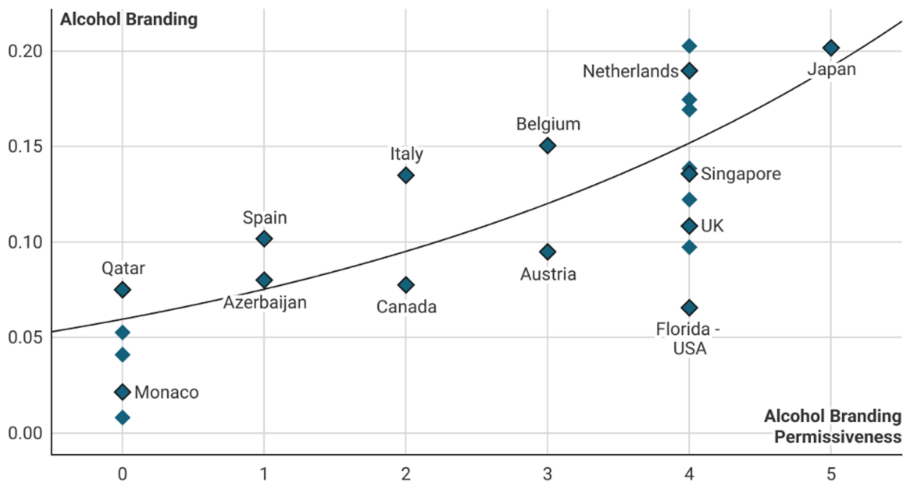
This finding confirms and extends Barker *et al.* (2018), indicating that the role of alcohol sponsors has become even more central in F1's media ecosystem [5].

Regarding F1's adaptation of marketing strategies to varying legislative frameworks, we correlate legislative frameworks and alcohol branding across hosting countries. Figure 4 shows that GPs in countries with more permissive regulations displayed more alcohol branding during the 2023 F1 season. Indeed, the pairwise correlation between *regulatory permissiveness score* and *alcohol branding* is 0.78: this positive correlation suggests that regulatory environments shape visible branding opportunities, though causality cannot be inferred.

However, alcohol companies can be present in countries where alcohol branding is banned. As expected, the visual content analysis of the 2023 F1 season reveals that in less permissive markets, alcohol brands focus on promoting 0% products, leveraging them to work around the regulatory restrictions. As shown in Figure 5, which compares alcohol and 0% branding across different regulatory contexts at an aggregated level, the frequency of 0% alcohol branding in these markets is 0.346. This indicates that alcohol companies were present in more than a third of all coded minutes, even in markets where regulatory restrictions make direct promotion more challenging. This indicates that "alcohol-free" branding is strategically deployed as a workaround to maintain visibility where traditional advertising is restricted. These results answer our first research question by confirming the adaptation of alcohol companies' marketing to different legislative frameworks.

Additional scrutiny reveals a notable pattern. While 0% branding appears as a "compulsory choice" for alcohol companies in hostile countries, breweries also actively promote "health-conscious" products in permissive countries—often even more extensively than in restrictive markets. In this regard, Figure 6 illustrates a strong positive correlation (0.69) between regulatory permissiveness and 0% branding, complementing the aggregated patterns shown in Figure 5, where the frequency of 0% brand appearances ranges from 0.607 to 0.653 in more permissive markets. This paradoxical voluntary use of 0% branding in permissive contexts

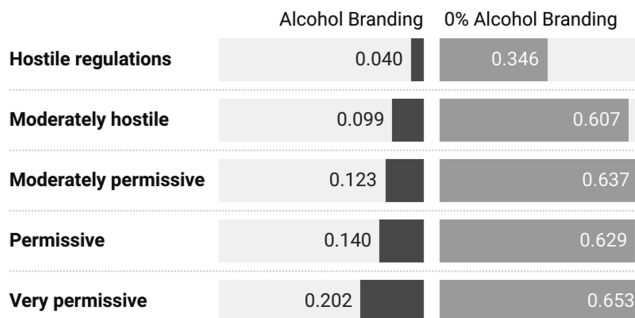
## Alcohol branding by country in F1



Created with Datawrapper

**Figure 4.** Alcohol branding and its positive correlation with country-level alcohol marketing permissiveness

## The Adaptation of Alcohol Companies to Different Regulatory Frameworks



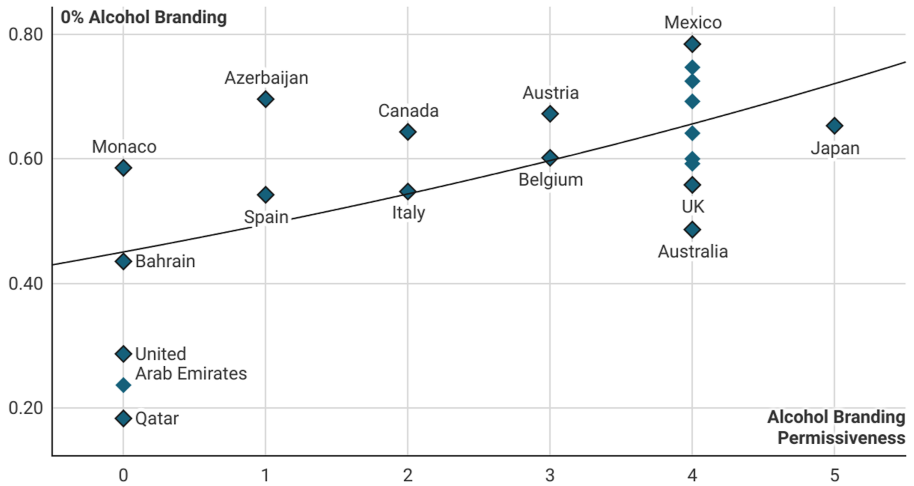
Created with Datawrapper

**Figure 5.** Alcohol and 0% branding across different regulatory contexts (aggregated level)

suggests that it functions not only as a compliance mechanism but also as a proactive strategic tool to enhance brand visibility and market positioning.

The emergence of 0% beer branding in F1 is driven by legal restrictions; however, this second part of the results section investigates whether breweries are actually targeting consumers with their non-alcoholic versions. We address this research question by providing additional insights emerging from the visual content analysis and by investigating alcohol companies' behaviour in markets where legal frameworks are more permissive. This approach allows us to disentangle the regulatory effect and to see if the alcohol companies are targeting 0% consumers.

## 0% Alcohol branding by country in F1



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**Figure 6.** 0% branding and its positive correlation with country-level alcohol marketing permissiveness

To achieve our goal, we refer to Figure 2, which reveals a clear segmentation of countries based on their propensity to consume alcohol and their regulatory framework. We chose to analyse the “high consumption and low regulation” quadrant, as it represents the most favourable markets for alcohol companies—i.e. countries with fewer restrictions and high demand. This cluster accounts for half of the hosting venues (9 countries, 11 GPs). These countries represent an ideal setting to investigate alcohol companies’ marketing strategy, since they are free to allocate their investment in promoting the alcohol brand or the 0% alternative. To measure this allocation choice, we determine *0% Branding Ratio*, representing the proportion of alcohol-free (0%) branding compared to the total alcohol-related branding, as follows (Eq.1):

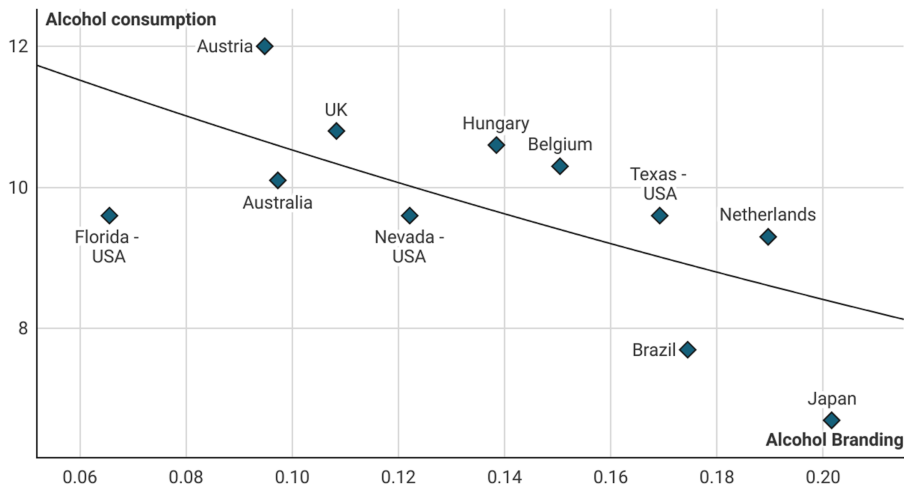
$$0\% \text{ Branding Ratio} = \frac{0\% \text{ Branding}}{\text{Alcohol Branding} + 0\% \text{ Branding}} \quad (1)$$

This metric helps assess the relative presence of non-alcoholic product promotions within the overall alcohol-related marketing landscape.

The first evidence that emerges is that in the most liberal countries, alcohol branding is negatively correlated with alcohol consumption ( $-0.66$ ). This suggests that companies intensify alcohol advertising where latent demand exists, targeting underdeveloped markets rather than saturated ones (see Figure 7, which illustrates the relationship between alcohol branding intensity and country-level alcohol demand).

In analysing the allocation of resources between alcoholic and non-alcoholic branding, we observe a notable correlation between alcohol consumption and the prevalence of 0% branding. Figure 8 indicates that in countries with a high demand for alcoholic products, companies are increasingly directing their marketing efforts towards non-alcoholic alternatives. This suggests that, in markets where alcohol consumption is already saturated, alcohol companies are targeting consumers with alcohol-free options to capture new demand.

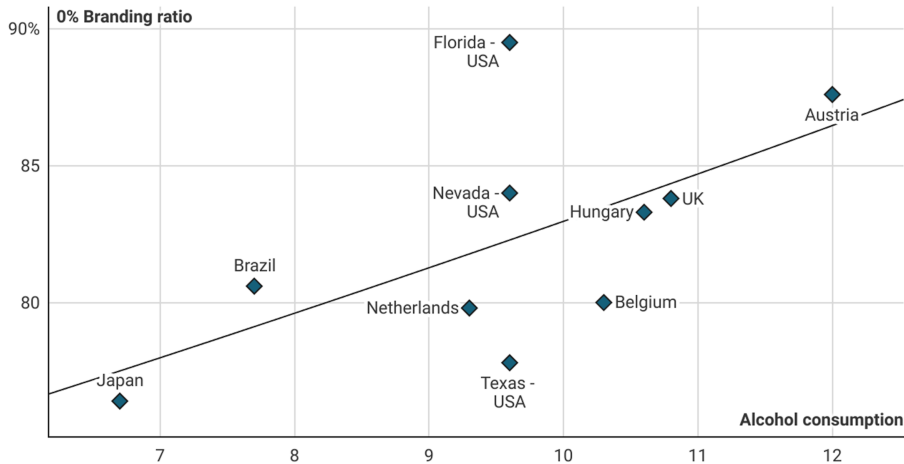
## Alcohol Branding vs. Alcohol Consumption by Country in F1



Created with Datawrapper

**Figure 7.** Alcohol branding and its relationship with alcohol demand

## Allocation of 0% vs. Alcohol Branding by Alcohol Consumption



Created with Datawrapper

**Figure 8.** Branding ratio and its relationship with alcohol demand

We can answer our second research question by affirming that while the emergence of 0% beer marketing is driven by legal restrictions, breweries are actually targeting consumers with their non-alcoholic versions. Indeed, results show 0% beer ads are more common in countries with lower alcohol consumption, indicating that breweries target health-conscious or less

alcohol-driven markets to align with changing preferences. This pattern further supports the view that 0% variants are positioned as a growth segment, not merely a regulatory substitute.

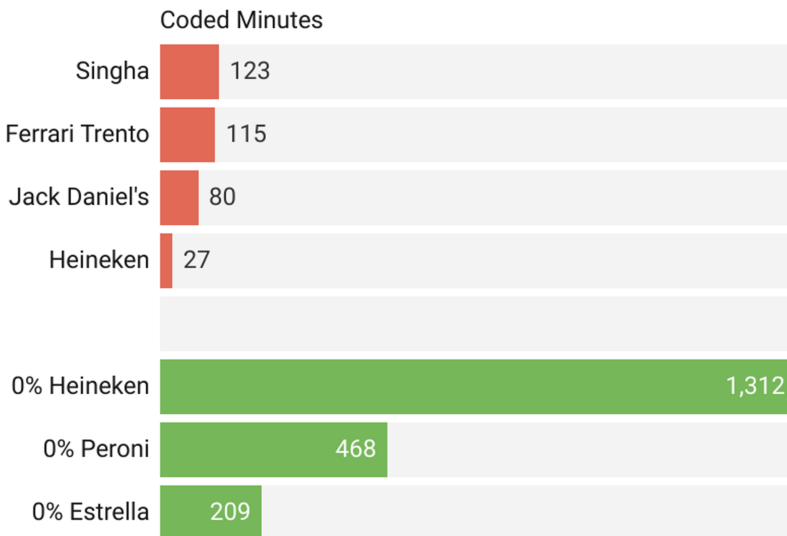
In this respect, [Figure 9](#) shows the alcohol companies present in the 2023 F1 GP footage. Heineken stands out as the only company present in both categories. However, its presence for alcoholic beer is minimal, comprising just 27 min compared to the substantial 1,312 min for its 0% version. Peroni and Estrella, on the other hand, choose to be associated exclusively with the 0% product. Singha, on the other hand, prominently features its company (and beer) name. Without a 0% version, Ferrari Trento (a sparkling wine) and Jack Daniel's (a whiskey) cannot choose between alcoholic and non-alcoholic brands. This is undoubtedly a competitive advantage for breweries, allowing them not only to appeal among health-conscious consumers but also to keep their logos visible in markets with strict regulations against alcohol marketing.

### 5. Discussion

The results of the 2023 F1 season provide empirical support for interpreting alcohol-free branding as a combination of stealth marketing and alibi branding strategies. Across different legislative contexts, alcohol companies maintain visibility even where direct promotion of alcoholic products is restricted, demonstrating the strategic duality of 0% variants: they function both as regulatory compliance tools and as instruments for sustaining the parent brand's commercial and cultural presence within the coded race broadcasts and associated visual assets.

Applying the Persuasion Knowledge Model ([Friestad and Wright, 1994](#)), our findings show that repeated exposure to alcohol-free logos, responsibility slogans, and branded liveries operates as stealth communication. [Figure 3](#) illustrates how such cues remain visible in restrictive jurisdictions, yet because many viewers may not recognise them as advertising,

## Coded Minutes of Alcoholic Brands



Created with Datawrapper

**Figure 9.** Alcohol and 0% branding by firm

persuasion knowledge is less likely to be activated. This supports the idea that mere exposure effects (Zajonc, 1968) strengthen brand salience precisely under low-attention conditions. These patterns confirm prior literature on the subtlety of brand reinforcement through entertainment platforms (Balasubramanian, 1994; Kaikati and Kaikati, 2004) and suggest that F1's mediated, global spectacle is particularly effective for such practices.

Beyond stealth, the findings illustrate classic alibi branding dynamics (Carlyle *et al.*, 2004; Dewhirst and Lee, 2023). Figures 7 and 9 show the consistent use of visual and semiotic cues—logos, colour schemes, and typefaces—across 0% variants. These activations reinforce parent-brand recognition, allowing sponsors to hedge reputational risk while maintaining global continuity. Even in permissive markets, breweries foreground 0% products alongside alcoholic ones, which suggests that these activations are not simply a response to regulation but a deliberate portfolio strategy aimed at protecting equity and extending halo effects across the alcohol brand family (Aaker and Keller, 1990; Cody and Jackson, 2014).

Crucially, the high visibility of 0% branding in both permissive and restrictive frameworks (Figures 5 and 6) underlines the transnational logic of alibi branding. By deploying a unified visual system that travels across jurisdictions, alcohol companies achieve continuity without breaching local laws (Dewhirst, 2023; Naess and Chadwick, 2023). This indicates that 0% branding is not merely health-oriented messaging but a regulatory hedge designed to ensure brand persistence worldwide (Miller and Wright, 2024).

The integration of legitimacy theory (Suchman, 1995) helps explain the moral, cognitive, and pragmatic effects of alcohol-free activations. Responsibility slogans and 0% branding provide moral legitimacy by signalling concern for health, cognitive legitimacy by embedding brand symbols in normalised F1 imagery, and pragmatic legitimacy by ensuring compliance with regulatory requirements. In the motorsport context, where promoting alcohol directly risks contradicting public expectations around safety, these legitimacy cues are particularly valuable for sustaining sponsorship without reputational backlash (Wenner and Jackson, 2009; Westberg *et al.*, 2018). Policy responses should therefore consider the combined effect of multiple legitimacy strategies—environmental pledges alongside surrogate branding—since sustainability narratives may reduce public scrutiny of controversial sponsorship. Effective regulation must recognise how brands use environmental and health narratives together to increase their visibility and credibility. This requires a coordinated policy response from FIA that addresses these interlinked strategies for gaining legitimacy (Sturm *et al.*, 2023, 2025).

A further nuance emerges in the allocation strategy of alcohol companies. In high-consumption but low-regulation countries, firms devote substantial attention to 0% products, suggesting that these variants are also market-expansion tools targeted at health-conscious consumers. Conversely, in lower-consumption markets, 0% branding ensures a visible presence despite weaker demand. This dual pattern indicates that non-alcoholic variants are simultaneously regulatory instruments and proactive market assets, reflecting a strategic repositioning rather than incidental compliance.

In direct response to our research questions, the evidence shows that (RQ1) alcohol sponsors do maintain presence under restrictive frameworks, adapting their visibility through hybrid and surrogate cues that sustain cross-border continuity; and (RQ2) 0% branding is not confined to regulatory necessity but also reflects a deliberate brand strategy to expand reach and normalise alcohol brands through “safer” extensions.

Taken together, these findings may suggest that 0% alcohol activations in F1 are far from neutral health messaging. They operate as stealth devices that preserve and extend brand salience, leveraging the sport's symbolic assets—glamour, innovation, and elite performance—while simultaneously appearing compliant. Interpreted through the lens of alibi branding, these activations exemplify a sophisticated transnational marketing strategy. For regulators, the lesson is clear: surrogate branding ensures alcohol visibility even without alcohol, a loophole that existing frameworks fail to close.

## 6. Conclusion

Building on an international regulatory framework, we developed a visual content analysis of the 2023 F1 season to understand the marketing strategies of alcohol companies in this challenging yet lucrative environment. Our analysis reveals three key insights.

Firstly, alcohol maintains a prominent position in the sponsorship landscape of F1 despite the escalation of restrictive policies across the globe on alcohol marketing and branding. As a consequence, a large global and mostly young audience (Formula 1, 2021) is constantly exposed to alcohol promotional communication. This is primarily reached through a mix of enabling devices such as Heineken's "responsible consumption" slogan, which formally comply with the regulation but aim to ensure brand legitimisation rather than addressing a public health issue.

This is also consistent with our second insight, as F1 key alcohol sponsors have proven to be resilient to a variable regulatory background by adapting their marketing strategies and anticipating the approach that has been observed within the tobacco industry and the tobacco sponsorship in the motorsport.

In line with RQ1, alcohol partners remain present even in countries where branding is formally restricted or banned, but they adjust their communication by emphasising alcohol-free or "responsible drinking" cues. These cues operate as alibi branding: they remain compliant while sustaining cross-border recognition of the parent brand.

The third insight emerges from comparing traditional and alcohol-free branding during races held in countries with permissive regulations. In answering the RQ2, our findings show that the vast presence of 0% alcohol branding cannot be justified by the legislative background alone: it embodies an intentional strategy to normalise alcohol presence, keep the brand visible and expand the target audience among health-conscious customers or younger demographics. This can be inferred through the analysis of the relationship between alcohol branding and per capita consumption in such markets. Indeed, alcohol companies promote their traditional brands in markets with unexpressed demands (i.e. lower alcohol consumption per capita), whereas they implement 0% alcohol branding in already established markets (where demand is already high and customers are familiar with the traditional product). This confirms the trend in the alcohol industry of anticipating the potential threat coming from a more restrictive regulatory framework, while attracting at the same time new consumer segments, echoing the lesson learnt from tobacco sponsorship.

From the perspective of the policy makers, these findings pose multiple challenges. The use of stealth and alibi marketing strategies, as documented in this study, allows brands to outpace the regulations that target only traditional alcohol products. The global nature of sporting events like F1 further weakens national restrictions and highlight the need for international cooperation.

In particular, the evidence suggests that restrictions limited to explicit alcohol branding may be insufficient: hybrid and surrogate practices warrant brand visibility in ways that existing regulations fail to anticipate. Our study also suggests that even more restrictive measures could be ineffective as the case of tobacco sponsorship has proven in the past. As the legal framework evolves, so the players adapt to the new challenges and deploy new creative ways to circumvent the emerging limitation. The surrogate branding campaign launched by Philip Morris International is a clear example of the resilience within the industry and there is little reason to expect that the alcohol industry would behave differently.

To address these challenges, policymakers should prioritise coordinated and forward-looking regulatory responses. First, the development of internationally harmonised frameworks is essential to prevent brands from exploiting regulatory discrepancies across jurisdictions; a multilateral approach would ensure consistency in sponsorship and advertising standards. Moreover, existing legal definitions of alcohol marketing should be expanded to include indirect and surrogate forms of branding, recognising visual, linguistic, and design continuity between 0% variants and their parent alcohol brands. Finally, regulators should adopt a dynamic and anticipatory stance, shifting from reactive bans to flexible mechanisms

capable of responding to emerging marketing innovations, including monitoring bodies capable of continuously reviewing marketing innovations in sport sponsorship and updating rules accordingly.

This study has few limitations that must be acknowledged. Firstly, the analysis is based exclusively on race broadcasts from F1TV. We recognise that considerable sponsorship activations occur across social media, live events, and fan experiences, which represent an increasingly relevant part of sport marketing. Secondly, although coding was independently cross-checked, inter-coder reliability was not formally assessed, which may limit the robustness of the findings. This methodological limitation should be considered when interpreting the findings, as it may affect the consistency of brand-coding outcomes.

Finally, the method focused on the frequency of brand appearances but did not differentiate the salience of logos (e.g. size, location on screen, or duration), which could influence audience perception.

Future research should address these limitations by incorporating multiple media platforms, particularly social media and streaming content, as well as fan-centered perspectives through surveys, interviews, or eye-tracking studies. Comparative work across different sports and mega-events (e.g. football, rugby, Olympic Games) would also clarify whether alcohol-free branding is specific to F1 or part of a broader transnational sponsorship strategy. In addition, qualitative approaches could explore how audiences interpret “responsible drinking” or “0%” messages—whether they are seen as genuine health promotion or as covert brand reinforcement—thus deepening our understanding of the persuasive impact of these hybrid practices.

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### Notes

1. Notably, tobacco sponsorship in F1 famously began with Lotus/Gold Leaf in 1967.
2. For the Monaco Grand Prix, French regulation was applied.
3. This is a Pearson correlation, calculated on an unweighted country-level basis.
4. For a small fee.
5. We cannot show whether brand appearance is driven by alcohol products or 0% version since this information is only displayed at an aggregated level in [Barker et al. \(2018\)](#).

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