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PROMOTION, RELEGATION, AND COMPETITIVE BALANCE: EVIDENCE FROM MEXICAN FÚTBOL

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Promotion, Relegation, and Competitive Balance: Evidence from Mexican Fútbol

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Abstract

We study how the suspension of promotion and relegation in Mexican professional football affected competitive outcomes and the relationship between expected and realized match results. Using betting-market odds as measures of ex-ante expectations, we analyze how the mapping from team strength to match outcomes varies across institutional regimes. We distinguish four phases: a pre-suspension period with promotion and relegation, an immediate post-suspension period, a steady-state ban period, and a late-ban period in which reinstatement is anticipated. We find that, during the suspension, second-tier favorites were less likely to turn their pre-match edge into wins and longshots won more often than their odds implied, consistent with weaker incentives for dominant clubs and stronger payoffs for underdogs. Complementary evidence from player valuations shows that the suspension increased stratification in underlying team quality across divisions, with player values in the top tier rising relative to the second tier. The reform is associated with a large (about 50%) increase in valuations in the top division relative to the second tier. Taken together, the results indicate that the suspension concentrated talent while reducing competitive intensity, weakening the extent to which underlying quality differences are reflected in match outcomes. These findings highlight the role of institutional design in shaping not only the distribution of talent, but also how effectively that talent is realized on the field.

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"To live without promotion and demotion is to promote mediocrity. The level of football in our country has declined noticeably"

Ricardo Ferretti, former coach of the Mexican national team, ESPN, 2025

Introduction

In competitive sports, winners tend to be rewarded and losers to be punished upon their performance. This is the basis of competitiveness and fairness and, thereby, it creates incentives for investment and planning, and has an impact over expected results. While it is true that winners in the top tournaments become champions, celebrate and get their revenues; there is considerable variation in the institutions that govern competitions across fields, time and space. This is particularly salient for another feature of competitiveness, such as the costs that losers are forced to pay. In open systems, contenders with poor performances face risks of demotion, while those who succeed in a lower category have opportunities to promote and replace them. While this format seems fair and straightforward, there are also other rules in the real world. Beyond the fact that some of them may be controversial and conspire against perceptions of integrity, these institutions tend to create varying incentives. One of those uncommon institutions is the ban on the promotion and relegation of participants, which creates a de facto closed competition. Even though such formats are quite common in U.S. sport leagues, they tend to be the exception worldwide, especially in football competitions. Moreover, an even less frequent situation is that where a league decides to ban promotion and relegation for a specific time period after decades of openness. Despite normative considerations, such shocks are unlikely to be sterile over multiple patterns of competition. What are the expected effects of such a rule change on multiple indicators of performance, valuation, and quality, among others? Can we see tangible impacts of the release or withdrawal of promotions and demotions? What's the net effect over the competitiveness of a league?

The specialized literature has already provided wide theoretical and empirical work on promotion and relegation (pro/rel), which emphasizes two dimensions of competitive balance:

static balance within a season and dynamic balance across seasons (e.g. Dobson, Goddard and Dobson, 2001; Puterman and Wang, 2011; Szymanski and Valletti, 2010). Static balance refers to how evenly wins and points are distributed in a given season, while dynamic balance captures persistence of dominance or weakness over time (Noll, 2003; Gerrard and Kringstad, 2022; Manasis and Ntzoufras, 2014). Open systems with pro/rel increase mobility between tiers and can raise the number of "meaningful" matches at both ends of the table, but they also amplify financial shocks from moving between divisions (Jasina and Rotthoff, 2012). Recent work by Speer (2023) shows that, in major European leagues, promotion is worth roughly 238–280 million USD in additional revenues over seven years, whereas relegation costs about 225–262 million USD over the same horizon; these shocks are persistent on the pitch, with performance effects lasting at least three seasons.

Classic and more recent comparative studies conclude that pro/rel systems reliably raise aggregate fan value (more meaningful games, higher attendance) and player wages, but the net effect on competitive balance is ambiguous: some leagues appear more balanced, others less so, and the outcome depends heavily on league policies such as revenue sharing, spending controls, and parachute payments (Szymanski and Valletti, 2010; Szymanski, 2012; Quirk and Fort, 1992; Késenne, 2014; Read, Smith and Skinner, 2021). Although several expectations look straightforward, empirical evidence is not abundant. As for today, beyond the well-known case of the MLS, only the leagues of Canada, Gibraltar, New Zealand, Papua Nueva Guinea, Philippines, San Marino and Sri Lanka are not utilizing a system of promotion and demotion. Indeed, there is another case that, due to a temporary suspension, currently operates under the same dynamics: the curious case of the Mexican Liga and the Liga Expansión.

Mexico's Institutional Shock: Suspending Promotion and Relegation

Mexico provides a clear institutional shock because its top division, Liga MX, suspended promotion and relegation for a fixed period and is now being pressured (and committed) to restore it. Prior to 2020, Mexico operated a standard pro/rel pyramid: the lowest-ranked club in Liga MX (evaluated over a multi-season coefficient) was relegated to the second tier, and the Ascenso MX champion could be promoted, subject to certification requirements (financial and infrastructural). In April 2020, following votes of Liga MX and Ascenso MX club owners, the Mexican federation (FMF) suspended promotion and relegation for an initial period of five to six seasons as part of a "stabilization" project [1]. Ascenso MX was converted into Liga de Expansión MX, a developmental second tier with no sporting route into the top division. Liga MX remained a closed set of 18 clubs, with financial fines and development funds replacing the traditional relegation mechanism. In other words, while successful teams from the 2nd division could not expect promotion, Liga Mx teams with poor performance just had to deal with economic sanctions.

After several seasons under these rules, second-division clubs subsequently filed a complaint at the Court of Arbitration for Sport (CAS), arguing that promotion should be restored earlier than 2026. CAS ultimately upheld the FMF's interpretation of the original 2020 agreement: the suspension is valid through the 2025–26 season, and promotion and relegation must be reinstated from 2026–27 onward [2]. In short, Mexico moved from an open pyramidal system to a de-facto closed league for six seasons, with a scheduled re-opening in 2026–27. This institutional variation provides a natural setting to test how changes in incentives affect the relationship between expected and realized match outcomes. The suspension of promotion and relegation in the Liga MX may not have only reflected a drop in competitiveness of the Liga Expansión and the first division; it may have also triggered

[1] La Afición Deportes, Suspenden el ascenso y descenso por 5 años en el futbol mexicano, April 17, 2020.
[2] CAS' resolution can be found at `https://www.tas-cas.org`

lower attendance, rating and revenue, and even disincentives to invest by the owners of the teams in the second division.

Dynamic Competitive Balance: Access to Liga MX

Dynamic competitive balance concerns long-run access to the top division and the ability of new clubs to challenge incumbents (Noll, 2003; Ramchandani et al., 2018). Pro/rel systems are thought to improve this "opportunity balance" by tying top-division membership to sporting performance rather than franchise status (Szymanski and Késenne, 2004). In Mexico, the 2020–2026 suspension clearly reduced this incentive. The set of Liga MX clubs became effectively closed; no club from Liga de Expansión MX could enter the top division, regardless of on-field performance, and incumbents could not be relegated for sporting reasons during the suspension period. Importantly, ambitious second-tier clubs thus lost the key mechanism to move up. This shift is consistent with league-design concerns: a closed top league narrows long-run opportunity and entrenches incumbents, even if parity among those incumbents remains the same (Szymanski and Késenne, 2004). In other words, dynamic competitive balance in the Mexican system deteriorated during the freeze, even if measures based only on the 18 Liga MX clubs might not show a large change.

The planned restoration of pro/rel in 2026–27 could reverse these trends at the institutional level by reopening the path from the second tier to Liga MX, conditional on licensing and financial criteria (Goal, 2025). From the perspective of the academic literature, this would move Mexico back toward an "open" configuration in which dynamic opportunity balance is higher.

Static Competitive Balance: Within-Season Incentives

Static balance relates to how competitive matches are within a given season, especially near the bottom of the table. Theoretical analyses of pro/rel systems stress that relegation

risk introduces strong incentives for low-ranked clubs to exert effort and invest, raising the number of high-stakes matches late in the season; by contrast, closed leagues often see more "dead" games for teams that are out of playoff contention but cannot be relegated (Jasina and Rotthoff, 2012; Noll, 2003). As mentioned, Mexico's 2020 reform replaced the threat of relegation with fines and development-fund mechanisms, explicitly framed as a way to stabilize clubs financially and support youth development. While these sanctions are non-trivial, they are orders of magnitude smaller than the revenue losses associated with actual relegation documented by Speer (2023). Consequently, bottom-of-the-table Liga MX clubs should face weaker marginal incentives than under a standard pro/rel system, exactly as open/closed league models predict. This aligns with the general model: absent relegation, static competitive intensity at the bottom should fall, and the number of truly "must-win" matches late in the season should decline (Noll, 2002, 2003). The federation itself described the changes primarily as a stabilization measure to save financially fragile clubs in the second tier, rather than as a way to intensify competition. As an implication, both competitions should not only be farther away in expected performance, but the aggregate depreciation of Liga Expansión should be visible.

When pro/rel is reinstated in 2026–27, theory predicts a return of stronger relegation incentives for bottom clubs, and thus a higher share of meaningful games, consistent with findings for open European leagues (Noll, 2002; Speer, 2023; Nowland, Cannavan and Sankara, 2025). These theoretical arguments imply that institutional changes should affect not only the distribution of outcomes, but also how closely realized results reflect underlying differences in team strength. We test this implication using betting-market expectations.

Financial Stratification and the Mexican Pyramid

Empirical work on promotion and relegation underscores the magnitude and persistence of financial shocks: promotion raises revenues sharply and durably, while relegation produces

significant, long-lasting losses. In English and other European contexts, promotion increases revenues through attendance and broadcasting, whereas relegation cuts match-day and media income, with attendance typically falling on the order of 20–35% after a dropping to the second division (Speer, 2023).

The alleged rationale for Mexico's suspension was to protect financially fragile Ascenso/Liga de Expansión clubs from these shocks, against the backdrop of COVID-19 and structural revenue problems in the second tier. The reform shrank the second division to 15 teams, converted it into a developmental league, and provided annual support payments, while also eliminating relegation risk for small-market Liga MX clubs that supported the change. From the perspective of the general findings, this design trades off dynamic competitive balance and open-system incentives against short-run financial stability. It likely increases stratification between Liga MX and the second tier in at least three ways. First, incumbents in the top division enjoy stable first-tier revenues without relegation risk for six seasons. Second, challengers in the second tier lose the prospect of promotion, undermining their ability to attract investment, talent, and fan engagement. Third, as pro/rel returns, only second-tier clubs meeting stringent financial and infrastructural criteria will be allowed to move up, further biasing mobility toward better-capitalized entities.

This pattern is consistent with the broader literature's warning that open systems can still produce strong stratification if not paired with revenue sharing, parachute payments, and financial regulation (Speer, 2023). Mexico emphasizes stability and solvency for certain clubs, at the cost of reduced mobility and a more segmented pyramid during the suspension period. These financial differences may translate into persistent variation in team quality, affecting how strongly strength differences are reflected in match outcomes.

Mapping General Findings to Mexico

The Mexican case lines up closely with general conclusions about pro/rel. First, on dynamic opportunity balance, open pyramids with pro/rel are expected to enhance long-run opportunity by allowing lower-tier clubs into the top division on sporting merit (Szymanski and Valletti, 2010). Mexico's freeze explicitly curtailed this, making Liga MX functionally closed for six seasons-a clear reduction in dynamic competitive balance at the system level .

Second, on static within-season balance, pro/rel systems create strong incentives at the bottom through relegation risk, increasing the number of meaningful matches and discouraging low-effort equilibria (Jasina and Rotthoff, 2012). By substituting relatively modest fines and development-fund transfers for relegation, Mexico likely weakened these incentives in Liga MX, consistent with theoretical predictions for closed leagues.

Third, on financial shocks and stratification, empirical work documents large and persistent financial impacts of promotion and relegation. Mexico's reform explicitly tries to smooth or avoid those shocks for certain clubs, but in doing so it entrenches a relatively advantaged set of Liga MX incumbents and leaves second-tier clubs structurally disadvantaged, which mirrors the literature's caution about stratification without robust redistribution mechanisms (Speer, 2023).

Finally, the CAS-linked timeline that restores promotion and relegation in 2026–27 moves Mexico back toward the canonical open-league logic: more mobility and higher stakes, but also renewed volatility and the possibility of financial distress unless complementary policies such as parachute payments, licensing, and revenue-sharing schemes are implemented (Goal, 2025; The Football Week, 2025; Soy Fútbol, 2025).

Overall, Mexico's experience is consistent with the broader conclusion that promotion and relegation is not a simple lever that uniformly increases competitive balance. Instead, it raises dynamic opportunity and in-season stakes while introducing powerful financial shocks that can generate or reinforce stratification, with the net outcome mediated by league-specific institutional design (Speer, 2023). These arguments imply not only changes in

competitive balance, but also changes in how strongly underlying differences in team quality are translated into match outcomes. When incentives are strong, more powerful teams should convert their advantages into wins more consistently; when incentives are weakened, realized outcomes should be less tightly linked to ex-ante strength differences. Taking betting-market odds as measures of ex-ante advantages, we test these implications by comparing expected probabilities to realized match outcomes across institutional phases.

Empirical Strategy: Betting Markets

We assemble a match-level panel for Mexico's first and second divisions between 2016 and 2026 combining information from *FootyStats*, one of the most respected sites of fútbol statistics, which provides standardized information on fixtures and final scores, with data on average closing odds from multiple bookmakers obtained from *Oddsportal*.[3] For each season in our sample, we thus have information on match results together with market prices on the three full-time outcomes (home win, draw, away win), allowing us to construct implied probabilities and to link betting-market expectations to realized outcomes in Mexico.

For each match we observe average closing decimal odds on the home win, draw, and away win. Following Hegarty and Whelan (2025), we convert these odds into implied probabilities by inverting and normalizing them so that the three implied probabilities sum to one, which removes the bookmaker's overround and yields a set of "normalized" probabilities that coincide with true probabilities under the standard efficiency benchmark. Specifically, consider a match i with K mutually exclusive outcomes indexed by $j = 1, \ldots, K$, each occurring with probability P_{ij} and decimal odds O_{ij}. Betting-market efficiency requires that the expected payout from a \$1 stake is the same for all outcomes in match i, so that $P_{ij}O_{ij} = \mu_i$ for all j, where $\mu_i < 1$ is the common expected return once bookmakers' margin and costs are taken into account. Together with the adding-up condition $\sum_j P_{ij} = 1$, this restriction implies

$$\mu_i \;=\; \left(\sum_{j=1}^{K} \frac{1}{O_{ij}}\right)^{-1} \quad \text{and} \quad P_{ij} \;=\; \frac{1/O_{ij}}{\sum_{k=1}^{K} 1/O_{ik}} \;\equiv\; P_{ij}^{N},$$

[3] https://footystats.org/; and https://www.oddsportal.com/football/mexico

so that the true outcome probabilities can be written as "normalized" probabilities that rescale inverse odds to sum to one. Next, we define the favorite as the team—home or away—with the higher implied win probability and the longshot as the other team, and construct realized outcome indicators for favorite wins, longshot wins, and draws. Therefore, each match can be characterized by a triplet of implied probabilities and a triplet of mutually exclusive result dummies.

Our key institutional variable tracks the evolution of promotion and relegation rules over time. The pre-ban seasons (Phase 1) cover 2016–17 to 2018–19 and contribute 1,494 matches (22% from 2016–17 and roughly 39% from each of the next two seasons). The early-ban period (Phase 2) spans 2019–20 and 2020–21, with 1,023 matches split about 41% and 59% across the two tournaments. The middle-ban "steady state" (Phase 3) consists of 2021–22 and 2022–23, contributing 1,265 matches almost evenly divided between seasons. Finally, the late-ban period (Phase 4) covers 2023–24 through 2025–26, adding 1,619 matches with a fairly even distribution across the three tournaments (34%, 34%, and 32%, respectively). We estimate all specifications separately for the top and second divisions, which allows us to compare how odds and outcomes evolve across these phases in both tiers.

Our core specification relates realized outcomes to implied probabilities via a common slope and phase-specific intercepts. For each outcome type $k \in \{\text{favorite win}, \text{longshot win}, \text{draw}\}$ in tier $s \in \{\text{upper}, \text{lower}\}$, we estimate linear probability models of the form

$$y^k_{jgs} \;=\; \alpha^k_{1s} \;+\; \sum_{h=2}^{4} \alpha^k_{hs}\, \mathbf{1}\{g = h\} \;+\; \beta^k_s\, \text{prob}^k_{jgs} \;+\; \varepsilon^k_{jgs}, \tag{1}$$

where y^k_{jgs} is an indicator that outcome k occurs in match j played in phase g and tier s, and prob^k_{jgs} is the corresponding implied probability. Phase $g = 1$ (the pre-ban period) serves as the reference category, so α^k_{1s} is the baseline intercept and α^k_{hs} for $h \geq 2$ capture phase-specific level shifts in the outcome, holding implied probabilities fixed. The parameter β^k_s is the common slope linking implied probabilities to realized frequencies of outcome k

across all phases in tier s.[4]

Because the variance of a Bernoulli outcome with success probability p is $p(1-p)$, we weight observations inversely to the square root of this variance. For each outcome type k we set

$$w_{jgs}^{k} = \left[\text{prob}_{jgs}^{k}\left(1 - \text{prob}_{jgs}^{k}\right)\right]^{-1/2},$$

so matches in which the implied probability is closer to one half—where realized outcomes are most informative about the slope—receive greater weight. All regressions are estimated separately by tier and outcome type with these analytic weights and standard errors clustered at the tournament level.

For interpretation, it is convenient to express equation (1) in terms of phase-specific conditional expectations. In tier s, the expected frequency of outcome k in phase g is

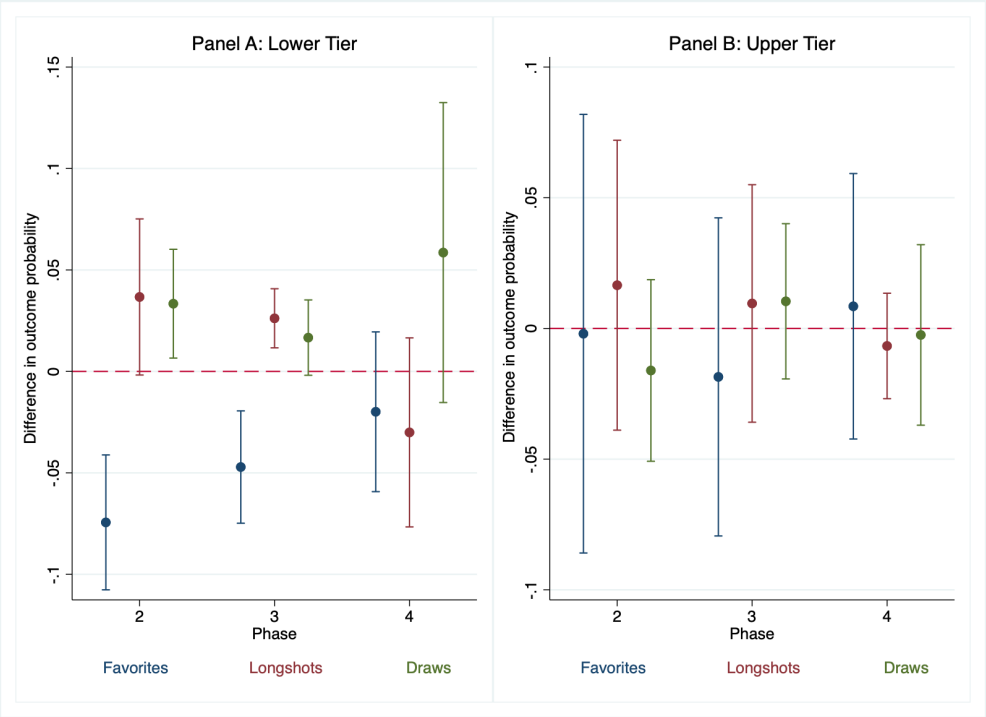
$$\mathbb{E}\left[y_{jgs}^{k} \mid \text{prob}_{jgs}^{k}\right] = \alpha_{gs}^{k} + \beta_{s}^{k}\,\text{prob}_{jgs}^{k},$$

with α_{1s}^{k} the pre-ban intercept and α_{gs}^{k} for $g \geq 2$ capturing deviations from this benchmark. The parameter β_{s}^{k} thus summarizes how strongly implied probabilities for outcome k map into realized frequencies in tier s, while the phase-specific intercepts describe how the average success rate at a given implied probability shifts across institutional regimes.

Figure 1 plots phase-specific changes in outcome probabilities relative to the pre-ban phase, conditional on betting-market expectations. Each point shows how the probability of a favorite win, a longshot win, or a draw in that phase differs from Phase 1 when we hold the corresponding implied probability fixed.

[4] In other specifications we allowed the slope on implied probabilities to vary by phase via interaction terms. Joint tests of the phase-specific interactions fail to reject the null of a common slope across regimes in our main samples, so we adopt the parsimonious specification in (1) and focus on phase-specific shifts in average outcomes conditional on implied probabilities.

Figure 1: Change in outcome frequency vs Phase 1 (pre-ban)



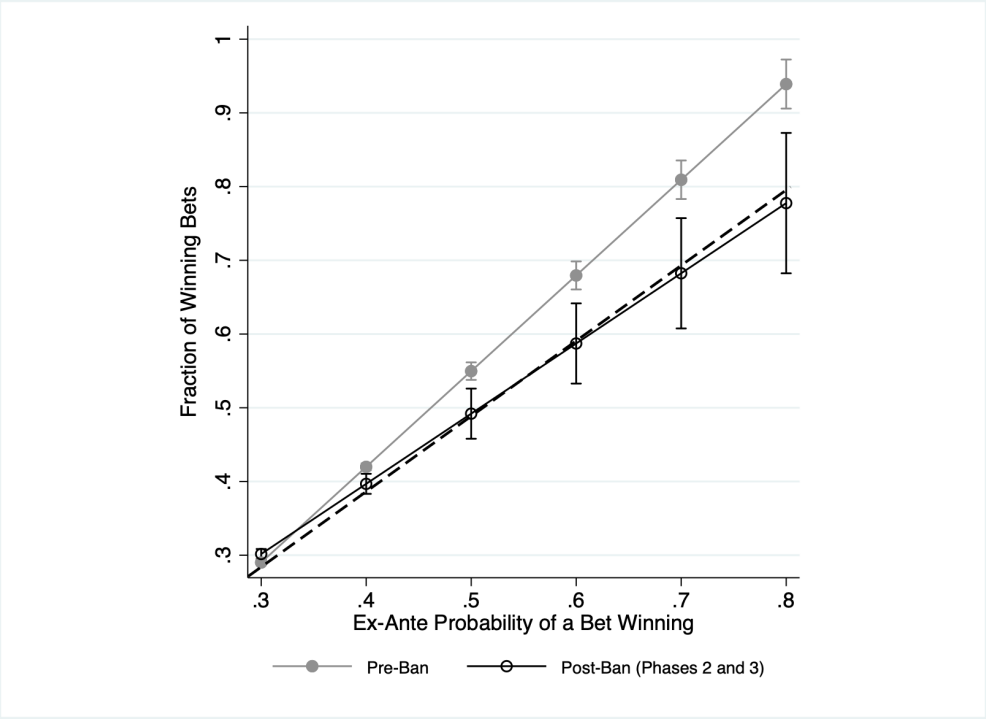
Notes: The figure plots estimated differences in outcome probabilities across institutional phases, relative to the pre-ban phase (Phase 1). Each point reports the change in the probability of a favorite win (blue), longshot win (red), or draw (green) in that phase, conditional on the corresponding implied win probability and relative to Phase 1, with vertical lines showing 95% confidence intervals. Panel A reports estimates for the lower tier (Ascenso/Liga de Expansión), and Panel B reports estimates for the upper tier (Liga MX). Estimates come from linear probability models relating each outcome indicator to its implied probability and phase indicators, imposing a common slope on implied probabilities across phases and estimating the models separately by tier. All regressions are weighted using the analytic weights described in the text and cluster standard errors at the tournament level.

Panel A documents a clear reallocation of results in the lower tier during the suspension. In the Ascenso/Liga de Expansión, favorites win markedly less often than in the pre-ban period for a given implied win probability: the coefficients on the Phase 2 and Phase 3 indicators in the favorite-win regression are about –0.07 and –0.05, respectively, both statistically different from zero, implying a 5–7 percentage point drop in conditional favorite win rates. By contrast, longshot wins and draws become more frequent relative to Phase 1. Conditional on their implied probabilities, longshots win about 2–4 percentage points more often in Phases 2 and 3, and draws are roughly 3 percentage points more common in Phase 2, with positive though less precise differences thereafter. Taken together, Panel A shows that, holding the odds fixed, the suspension shifts lower-tier outcomes away from favorites and

toward longshots and draws. Panel B shows that conditional outcome frequencies in the upper tier are much more stable. In Liga MX, the coefficients on the Phase 2–4 indicators in the favorite-win regression are close to zero and statistically indistinguishable from the pre-ban benchmark, indicating that favorites continue to convert implied advantages into wins at similar rates across phases. The corresponding phase coefficients for longshot wins and draws in the upper tier are also small and imprecise, with confidence intervals that comfortably span zero. Thus, conditional on implied probabilities, we find little systematic evidence that the suspension reallocated win and draw frequencies in the top division.

Figure 2 plots the relationship between bookmakers' implied win probabilities and the realized fraction of winning bets in Mexico's lower tier, showing how the favourite–longshot pattern changes from the pre-ban to the post-ban period. Favorite–longshot bias in payouts occurs because longshot bets do not win as often as the odds suggest they should, and favorite bets win a bit more often (Hegarty and Whelan, 2025). Along the horizontal axis we group bets by their ex-ante win probability, while the vertical axis reports the empirical frequency with which bets in each bin actually win, with the 45-degree dashed line indicating perfectly calibrated odds in which implied and realized win probabilities coincide. In the pre-ban seasons (grey line with filled markers), realized win rates for mid-probability bets lie close to the 45-degree benchmark. By contrast, bets on strong favorites (high implied probabilities) lie above the diagonal indicating that longshot bets do not win as often as the odds suggest they should, and favorite bets win more often. In the post-ban period (black line with open markers), the entire curve shifts toward the 45-degree line, with smaller deviations at both tails, indicating that conditional win frequencies for favorites and longshots more closely match their quoted probabilities and the favorite–longshot bias is substantially attenuated.

Figure 2: Implied vs. Realized Bet Win Probabilities (Lower Tier)



Notes: This figure plots model-based predictions of the win probability against bookmakers' implied win probability for second-division matches, separately for the pre-ban and post-ban periods. The solid grey line (filled markers) reports predicted outcomes from an OLS regression of the realized win indicator on implied probability for the pre-ban seasons; the solid black line (open markers) reports the corresponding predictions when the model is evaluated with the post-ban indicator set to one. The dashed 45-degree line marks the benchmark of perfect calibration, in which implied probabilities equal realized win frequencies.

Playoff matches in the lower tier further highlight the weakening of incentives in the post-ban era. Before the suspension, favorites were substantially more likely to win in high-stakes games: lower-tier favorites won about 63% of playoff matches compared with 47% of non-playoff matches, a difference of roughly 16 percentage points ($p = 0.02$). Longshots showed the mirror image pattern, winning only about 11% of playoff matches versus 27% of non-playoff matches ($p = 0.01$). During the ban period, by contrast, these gaps essentially disappear. Favorite win rates in playoff and non-playoff matches converge to roughly 48%, and longshot win rates in the two settings are also statistically indistinguishable (about 22–25%). In short, the extra edge that strong teams enjoyed, and the extra hurdle faced by longshots, in lower-tier playoff matches before the reform is no longer evident once promotion and relegation are suspended.

These patterns are specific to the lower tier. In Liga MX, favorite and longshot win rates in playoff and non-playoff matches are very similar both before and during the suspension. Pre-ban favorite win probabilities are about 48% in regular-season games and 50% in playoffs, a difference that is small and statistically indistinguishable from zero, and longshot win rates also differ little between playoff and non-playoff matches. During the ban period, favorite wins in the top division occur in roughly 49% of both playoff and non-playoff games, and longshot win rates are essentially identical across the two settings. Thus, while the suspension erodes the extra edge that strong teams previously enjoyed in lower-tier playoffs, top-division playoffs behave much like regular-season matches throughout.

Taken together, our findings highlights an asymmetric adjustment across tiers. In the lower division, conditional on implied probabilities, the suspension period makes matches less favorable to strong teams and somewhat more favorable to outsiders and draws: early- and middle-ban seasons feature significantly lower favorite win rates and higher longshot and draw frequencies than in the pre-ban phase. By the late-ban seasons, however, the estimated differences for favorites have largely closed and the longshot and draw effects are smaller and imprecisely estimated, suggesting that the conditional win-probability structure in the second tier begins to re-consolidate toward its pre-ban benchmark even before promotion and relegation are formally restored. In the top division, by contrast, conditional outcome frequencies remain close to their pre-ban levels throughout, with no systematic evidence that the suspension meaningfully alters the mapping from implied advantages to realized results for favorites, longshots, or draws.

Player Valuations Before and After the Suspension

The suspension of promotion and relegation is likely to affect not only incentives within matches, but also the allocation of resources and talent across divisions. One interpretation of the previous section's findings is that uncertainty over wins reflects increases in the competitiveness of the Liga Expansión, adding uncertainty over results and, therefore, making

the league more attractive, such as the English Premier League. On the flipside, an alternative reading is that the negative incentives to investment and risk incubated a mediocre league that shifted overall quality downward. As an implication, ex-ante differences among contenders were so small that forecasts became erratic. Therefore, by insulating Liga MX clubs from relegation risk while eliminating the promotion pathway for second-tier clubs, the reform should have increased stratification in underlying team quality. In particular, one would expect the gap in player quality between the top division and Liga de Expansión MX to widen during the suspension period.

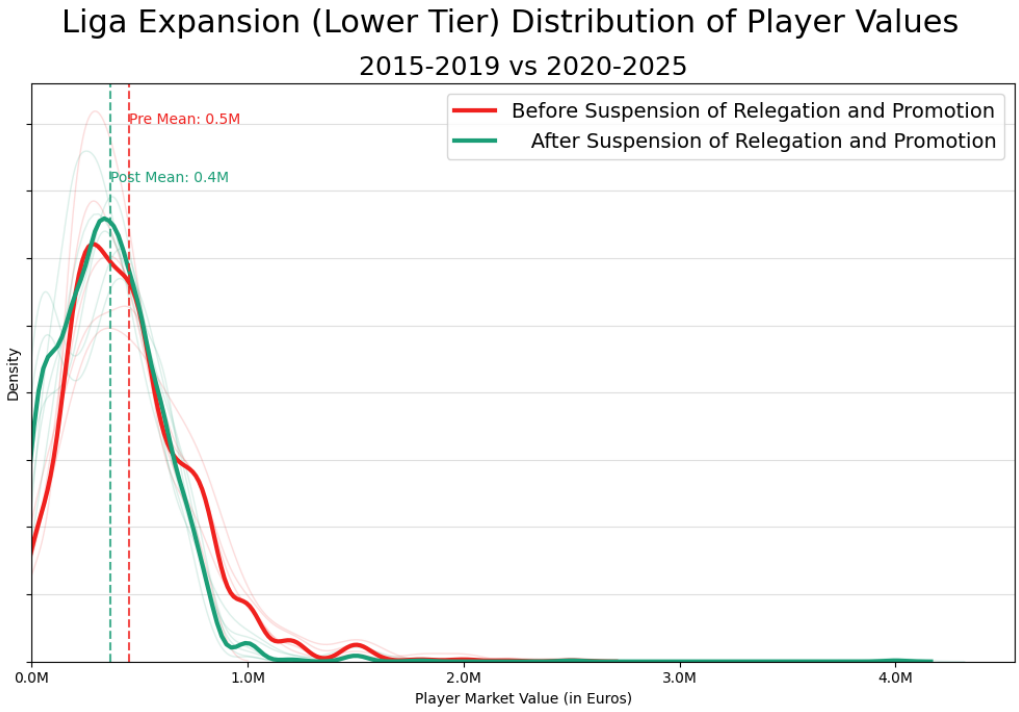


Figure 3: Distribution of Player Values (Lower Tier)

Notes: The figure plots the distribution of player values for the Liga Expansion, comparing the values before the Suspension of Relegations and Promotions to after. The data, which comes from Transfermarkt, shows that the mean value of players in the league reduced from around €0.5M before 2020 to €0.4M.

Figures 3 and 4 suggest that this is indeed the case: the distribution of player values in the lower tier shifts leftward, with a decline in average valuations, while the top division exhibits a rightward shift and a higher mean, indicating increasing concentration of talent at the top and deterioration below. These opposing movements are consistent with a widening inter-

league gap and motivate the difference-in-differences analysis that follows, which formally tests whether player valuations in Liga MX increased relative to those in the second tier after the 2020 suspension.

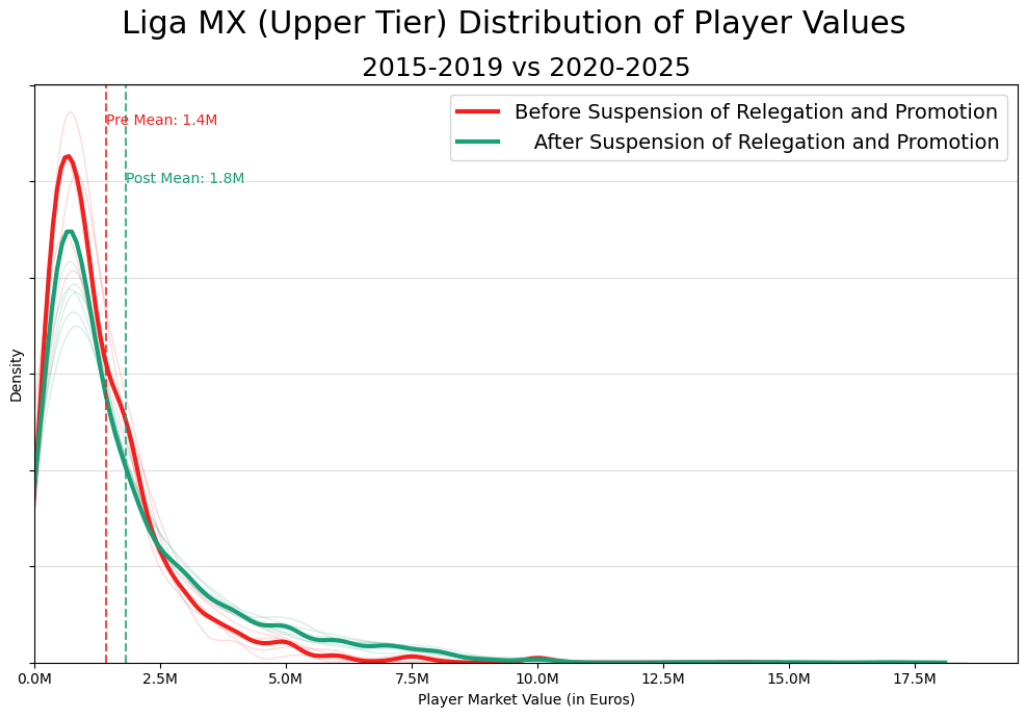


Figure 4: Distribution of Player Values (Upper Tier)

Notes: The figure plots the distribution of player values for the Liga MX, comparing the values before the Suspension of Relegations and Promotions to after. The data, which comes from Transfermarkt, shows that the mean value of players in the league increased from around €1.4M before 2020 to €1.8M.

To further examine this implication, we estimate a difference-in-differences model of player valuations. The dependent variable is the logarithm of player value, which serves as a proxy for underlying team quality and financial investment. The treatment indicator equals one for Liga MX players and zero for Liga de Expansión MX players, and we include an interaction between this indicator and a post-2020 dummy capturing the suspension period. The specification includes season fixed effects and standard errors. Table 1 estimates the following model:

$$Y_{jt} = \alpha + \beta_1 D_i + \beta_2 (D_i \times Post_t) + \lambda_t + \varepsilon_{it}, \tag{1}$$

where Y_{jt} is the natural log of player j's valuation in year t, D_i is an indicator for the first

Division (Liga MX), $Post_t$ is an indicator for the post-2020 when promotions and relegations were suspended, λ_t denotes year fixed effects. Because time fixed effects are included, the standalone post-2020 indicator is absorbed by the season dummies, and identification comes from the interaction term.

Table 1: Player Valuations in Liga MX and Liga Expansión Before and After Suspension of Promotion and Relegation

DV: Ln(player valuation)	
Liga MX	0.986***
	(0.096)
	[0.772, 1.200]
Liga MX × Post-2020	0.392***
	(0.066)
	[0.245, 0.539]
Season FE	Yes
Observations	8,939
R^2	0.311
Adjusted R^2	0.310

Notes: *** $p < 0.01$. 95% Confidence intervals in square brackets []. Standard errors are clustered at the club, player and season levels. The dependent variable is the logarithm of player valuation. The omitted season is the baseline year in the regression. Liga MX equals one for top-division clubs and zero for Liga de Expansión MX. Because the specification includes season fixed effects, the standalone Post-2020 indicator is perfectly collinear with the time dummies and is therefore omitted. The interaction coefficient indicates that, after 2020, player values in Liga MX increased relative to those in the second tier.

Table 1 reports the results. As expected, player values are substantially higher in Liga MX than in the second tier. More importantly, the interaction between Liga MX status and the post-2020 period is positive and statistically significant, indicating that player values in the top division increased relative to those in Liga de Expansión MX following the suspension of promotion and relegation. In magnitude, this effect implies a sizeable widening of the valuation gap between the Liga MX and the Liga Expansión during the ban period. The estimated coefficient of 0.392 implies that, following 2020, player valuations in Liga MX increased by approximately 48 percent relative to the second tier. The corresponding 95% confidence interval ranges from about 28 to 71 percent, indicating a large and precisely

estimated effect.

Team-Level Market Values and Robustness

We next examine whether the player-level results also appear in team-level market values. The data consist of club-by-tournament observations for Liga MX and Liga de Expansión MX from 2015 to 2025, with one observation for Clausura and one for Apertura in each year. The dependent variable is the logarithm of team market value. Observations with zero reported values are treated as missing and excluded. The resulting panel contains 672 team-tournament observations for 52 clubs.

The treatment group is Liga MX, and the post indicator equals one for 2020 and later, marking the period after promotion and relegation were suspended. A feature of the data is that measured market values are systematically lower in Apertura than in Clausura, likely reflecting within-year timing in valuation updates. To account for this, some specifications include tournament fixed effects. In all cases, standard errors are clustered at the club level.

Let Y_{it} denote the logarithm of team market value for club i in tournament t. Let D_i be an indicator for Liga MX, $Post_t$ an indicator for the post-2020 period, α_i club fixed effects, γ_y year fixed effects, and δ_s tournament (Clausura/Apertura) fixed effects.

The baseline specification reported in column (1) is:

$$Y_{it} = \alpha_i + \beta_1 D_i + \beta_2 Post_t + \beta_3 (D_i \times Post_t) + \varepsilon_{it}. \tag{2}$$

Because the biannual fixed effects absorb all common shocks at the tournament level, including common seasonality, the identifying variation comes from whether Liga MX clubs experience a larger post-2020 increase in market values than clubs in Liga de Expansión MX, after removing time-invariant club heterogeneity and common tournament shocks. The key identifying assumption is that, absent the institutional change, the relative evolution of team valuations across the two leagues would have remained parallel once club fixed effects

and biannual common shocks are accounted for. Column (2) augments the specification with tournament fixed effects. The identifying assumption is that, conditional on club fixed effects, and common half-year seasonality, Liga MX and Liga de Expansión MX would have followed parallel trends in team valuations in the absence of the reform.

Column (3) includes year fixed effects, and column (4) includes both tournament and year fixed effects. This is the most conservative model with respect to the measurement issue in the data because it allows the Apertura effect to differ across leagues. Identification now requires that, after controlling for club fixed effects, year shocks, common seasonality, and league-specific seasonality, the remaining differential post-2020 change in Liga MX valuations is attributable to the institutional change rather than to other unobserved league-specific shocks.

Table 2: Team-Level Market Values in Liga MX and Liga Expansión

	(1)	(2)	(3)	(4)
Liga MX	0.819***	0.857***	0.759***	0.744***
	(0.159)	(0.151)	(0.168)	(0.146)
	[0.500, 1.139]	[0.554, 1.160]	[0.422, 1.096]	[0.451, 1.037]
Post-2020 (Expansión)	-0.267**	-0.253**	-0.619***	-1.161***
	(0.115)	(0.117)	(0.132)	(0.152)
	[-0.497, -0.037]	[-0.488, -0.018]	[-0.883, -0.354]	[-1.466, -0.855]
Liga MX × Post-2020	0.490***	0.466***	0.486***	0.454***
	(0.137)	(0.140)	(0.140)	(0.147)
	[0.216, 0.765]	[0.185, 0.747]	[0.205, 0.767]	[0.160, 0.748]
Club FE	Yes	Yes	Yes	Yes
Season FE	No	Yes	No	Yes
Year FE	No	No	Yes	Yes
Observations	672	672	672	672
Within R^2	0.053	0.349	0.103	0.505
Overall R^2	0.497	0.599	0.506	0.636

Notes: *** $p < 0.01$, ** $p < 0.05$. 95% confidence intervals are reported in square brackets []. Standard errors clustered at the club level are reported in parentheses. The dependent variable is the logarithm of team market value. The treatment group is Liga MX. Post-2020 equals one for tournaments in 2020 and later. Column (2) includes tournament fixed effects (Clausura vs. Apertura). Column (3) includes year fixed effects. Column (4) includes both tournament and year fixed effects. In columns (3) and (4), 2019 is omitted because of collinearity.

The results are highly consistent across specifications. In all models, the coefficient on Liga MX × Post-2020 is positive and statistically significant at the one-percent level. The point estimates range from 0.454 to 0.490 log points, implying increases of approximately 57 to 63 percent in team market values in Liga MX relative to Liga de Expansión MX after 2020.

The estimates are also stable across alternative time controls. Column (1) yields an estimate of 0.490 (about 63 percent). Adding tournament fixed effects in column (2) produces a similar estimate of 0.466 (about 59 percent), indicating that the results are not driven by seasonality. Column (3), which absorbs year-level shocks, yields an estimate of 0.486 (about 63 percent). Finally, column (4), which includes both tournament and year fixed effects, produces an estimate of 0.454 (about 57 percent), confirming robustness to both dimensions of time controls. While the estimated post-2020 effect for Liga de Expansión MX becomes more negative when year fixed effects are included, this reflects the absorption of common shocks affecting both leagues. The differential effect captured by the interaction term remains stable across all specifications.

Overall, the team-level evidence reinforces the individual-player analysis. Across all three specifications, the suspension of promotion and relegation is associated with a substantial increase in the relative market value of Liga MX clubs. The stability of the treatment effect across increasingly demanding specifications suggests that the results are robust and point in the predicted direction: the reform increased stratification between the top division and the second tier.

These results provide direct evidence that the reform increased stratification in underlying team quality across the Mexican football pyramid. By stabilizing revenues at the top and removing the prospect of upward mobility for second-tier clubs, the suspension appears to have reallocated talent and investment toward incumbent Liga MX teams.

Conclusion

The suspension of relegation and promotion into the Liga MX has had significant impact in the competitiveness of Mexican professional football. Our results suggest that the relative performance of favorites and underdogs varies systematically across institutional phases. Under promotion and relegation, favorites perform approximately in line with expectations while underdogs substantially under-perform, consistent with strong translation of team strength into outcomes. During the ban, favorite returns deteriorate and underdog returns improve toward break-even, indicating a compression of performance differences.

These findings suggest that the suspension had a negative effect on competitive intensity: while it increased stratification in player quality, it weakened the translation of that quality into on-field performance. This pattern is consistent with a reduction in effort or performance incentives during the ban period, which dampens the ability of stronger teams to fully exploit their advantages in match play.

The results are reinforced by evidence on player valuations, which show that the suspension increased stratification in underlying team quality across divisions. Following the 2020 reform, the difference in player values between Liga MX and the Liga Expansión rose significantly, indicating a widening gap in talent and financial resources. The suspension of promotions and relegations is associated with a large (50%) increase in valuations in the top division relative to the second tier.

Taken together, these results highlight a central tension: the suspension concentrated talent at the top while simultaneously weakening the extent to which that talent translated into match outcomes. This pattern is consistent with a decline in competitive intensity during the ban period, whereby reduced incentives dampened the ability of stronger teams to fully convert their advantages into wins, underscoring that institutional design shapes not only the distribution of talent, but also how effectively that talent is realized on the pitch.

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