



Football Investment and Economic Diversification in Islamic Economies: Evidence from GCC Countries

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Abstract: This study examines the effect of football investment on economic diversification in GCC countries during the period 2000–2024. The analysis focuses on whether football-related investment contributes to non-oil economic growth, tourism expansion, and infrastructure development. This issue has become increasingly important as GCC economies continue to pursue long-term diversification strategies aimed at reducing dependence on oil revenues. The previous literature focuses on the short-term effects of mega sporting events, while this study examines both short-term and long-term economic effects of continuous football investment. The study employs a quantitative econometric framework using panel data analysis, Fixed Effects estimation, Difference-in-Differences, and the Synthetic Control Method. The results reveal that football investment has a positive and statistically significant effect on non-oil GDP growth, tourism activity, and infrastructure development across GCC countries. Major football events also generate substantial short-term economic gains, particularly in tourism, construction, and service sectors, while several positive effects continue beyond the event period. The paper concludes that football investment can support broader economic transformation when integrated into long-term development strategies, effective governance frameworks, and tourism-oriented policies. The paper contributes to sports economics and economic diversification literature by providing long-term empirical evidence from GCC economies and offering practical policy insights for sustainable development strategies.

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Introduction

The global sports industry has become an important part of the modern economy. It is no longer viewed only as a form of entertainment. Today, sport is connected to investment, tourism, infrastructure, employment, media, and national branding (Deloitte Sports Business Group, 2024). Football is especially important because it is the most popular sport worldwide and has a strong ability to attract public attention, private investment, and international visitors (IFRS Foundation, 2023).

In recent years, many governments have started to use football as part of their economic development strategies (Zhang et al., 2018). This is clear in the Gulf Cooperation Council (GCC) countries. Saudi Arabia, Qatar, the United Arab Emirates, and other GCC economies have invested heavily in stadiums, professional leagues, international tournaments, football clubs, and sports-related infrastructure. These investments are not isolated sporting projects; they are closely linked to broader national visions that aim to reduce dependence on oil and expand non-oil economic sectors (Salem, 2024).

In GCC countries, economic diversification becomes one of their main development priorities. Although oil revenues have supported rapid growth for decades, reliance on oil also creates long-term economic risks. Volatile oil prices, global energy transition, and fiscal pressures have encouraged GCC governments to search for new sources of growth. Within this context, football investment has emerged as a possible tool for supporting tourism, services, infrastructure development, and international visibility (Sebastian, 2025).

However, the academic evidence on this relationship remains limited. Many existing studies focus mainly on the short-term economic effects of mega-events, such as the FIFA World Cup or the Olympic Games. Other studies discuss sports investment from a descriptive or policy-oriented perspective (e.g., Bibolov et al., 2024; Nikolaou et al., 2023). Fewer studies examine whether continuous football investment can contribute to long-term economic diversification, especially in resource-dependent economies such as the GCC countries.

There is also a methodological gap in the literature. Much of the existing research does not use strong causal methods to test the macroeconomic impact of football investment. As a result, it remains unclear whether football investment directly supports non-oil growth, tourism, and infrastructure development, or whether these outcomes are mainly driven by broader economic reforms. This gap is important because policymakers need reliable empirical evidence before treating football as a strategic instrument of economic transformation.

This study addresses these gaps by examining the impact of football investment on economic diversification in GCC countries over the period 2000–2024. It focuses on three main indicators of diversification: non-oil GDP growth, international tourism inflows, and infrastructure development. The study also evaluates the impact of major football events and large-scale football initiatives, with particular attention to Qatar and Saudi Arabia.

The study contributes to the literature in three main ways. It extends the discussion of sports economics to the context of Islamic and resource-dependent economies. It provides empirical evidence from the GCC region, where football investment has become part of national diversification agendas. And finally, it applies a combined econometric framework using fixed-effects panel regression, Difference-in-Differences, and the Synthetic Control Method. This combination allows the study to examine both general relationships and causal effects.

The study also has practical relevance. For GCC policymakers, football investment is not only a matter of sport. It is linked to tourism promotion, urban development, private sector participation, job creation, and global competitiveness. The outcomes can therefore help governments design more effective sports investment strategies that support sustainable non-oil growth. At the same time, the study highlights the need for careful planning, strong governance, and post-event utilization of sports infrastructure.

The rest of the paper is organized as follows. Section Two reviews the relevant literature on sports economics, football investment, and economic diversification. Section Three presents the data, methodology, and econometric models. Section Four reports the empirical results. Section Five discusses the empirical results in theory, and previous studies. Section Six concludes the paper and presents policy implications.

Literature Review and Hypothesis Development

Theoretical Foundations of Sports Economics and Economic Diversification

The relationship between sports investment and economic development has received increasing attention in recent decades. Traditionally, sports were viewed mainly as a social or entertainment activity. However, modern economic literature increasingly treats sports as an economic sector capable of generating income, employment, tourism activity, infrastructure expansion, and international competitiveness (Bibolov et al., 2024). This transformation becomes more visible with the growth of global broadcasting markets, commercial sponsorships, international tournaments, and sports tourism (Nikolaou et al., 2023).

Several economic theories help explain the connection between football investment and economic diversification. One of the most important is Economic Diversification Theory. This theory argues that economies heavily dependent on one sector, particularly natural resources, face high exposure to external shocks and long-term structural vulnerability (Callen, 2013). Diversification therefore becomes necessary to create sustainable growth, reduce dependence on oil revenues, and strengthen economic resilience. Within this framework, investment in sports and entertainment sectors can contribute to expanding non-oil economic activity and developing service-based industries. (Hvidt, 2013).

Another relevant perspective is Growth Pole Theory, which suggests that investment in strategic sectors can generate spillover effects across the wider economy (Gavrila-Paven, 2017). In the context of football investment, spending on stadiums, transportation, hospitality, media, and tourism infrastructure may stimulate additional economic activity in related sectors. Large sports projects can therefore act as catalysts for urban development, labor market expansion, and private sector participation (Liberato, et al., 2021).

The literature also draws heavily on Event Legacy Theory. Preuss (2007) argues that mega sporting events may create both tangible and intangible long-term benefits. Tangible legacies include infrastructure development, transportation networks, and tourism facilities. Intangible legacies include international visibility, destination branding, and improved investor confidence. However, the sustainability of these benefits remains debated. Some scholars argue that many mega-events generate only temporary economic gains, while others highlight the risk of underutilized infrastructure after the event period.

Soft Power Theory also provides an important analytical perspective, particularly in the GCC region. Countries increasingly use sports diplomacy to improve their global image, strengthen international influence, and position themselves as modern economic and tourism destinations. Football has become an important instrument of international branding, especially for emerging economies seeking greater global visibility (De Martino, 2020)

From an Islamic economics perspective, economic diversification carries additional significance. Islamic economic principles emphasize productive investment, social welfare, responsible allocation of resources, and long-term societal benefit. Economic development is therefore not measured solely by income generation, but also by its contribution to sustainable growth, employment creation, and broader community welfare (Hofmann, 2002). Accordingly, football investment might be viewed as economically valuable when it contributes to real economic activity, infrastructure improvement, tourism development, and employment

opportunities rather than purely speculative or consumption-oriented activities (Nikolaou et al., 2023).

Sports Economics and Macroeconomic Development

The sports industry has become increasingly integrated into modern economic systems. The expansion of professional football leagues, global media rights, international sponsorships, and sports tourism has transformed football into a major commercial industry. According to Deloitte Sports Business Group (2024), football now generates substantial economic value through broadcasting, advertising, tourism, hospitality, merchandising, and infrastructure investment.

Many studies have examined the macroeconomic effects of sports investment. Early research often focused on mega-events such as the FIFA World Cup and the Olympic Games. Baade and Matheson (2016) argue that the economic benefits of mega-events are frequently overstated. Their analysis suggests that many host countries fail to achieve long-term employment or income gains proportional to the scale of investment. Similarly, Zimbalist (2010) highlights the financial risks associated with large sports infrastructure projects, particularly when stadiums become underutilized after tournaments end.

In contrast, other scholars present a more optimistic perspective. Preuss (2007) argues that mega-events can create long-term economic legacies when investments are integrated into broader national development strategies. Szymanski (2009) also emphasizes that sports industries generate spillover effects through tourism, retail activity, media markets, and urban development. Buraimo et al. (2010) further suggest that football activity can stimulate local economic demand, particularly in hospitality and transportation sectors.

The literature therefore presents mixed findings. Some studies emphasize temporary gains and financial costs, while others highlight long-term structural benefits. These differences often reflect variations in methodology, governance quality, institutional capacity, and post-event planning. More recent studies increasingly argue that the economic impact of football investment depends largely on whether sports strategies are integrated with broader economic transformation policies.

To further strengthen the theoretical discussion, several additional considerations should be highlighted. Although football investment may generate positive economic spillovers, the literature also raises important concerns regarding fiscal sustainability and long-term efficiency. Some scholars argue that large sports projects may create financial pressure on governments, particularly when investments are heavily state-funded and when post-event infrastructure utilization remains weak (Preuss, 2010). The concept of “white elephant projects” is frequently discussed in sports economics literature, referring to expensive stadiums or facilities that become economically underutilized after major tournaments conclude. This criticism has appeared in studies examining previous Olympic Games and World Cup host countries, where infrastructure maintenance costs continued long after the events ended (Baade & Matheson, 2016).

Furthermore, the success of football investment depends heavily on governance quality and institutional effectiveness. Football investment alone does not automatically produce sustainable diversification outcomes. Instead, positive economic effects are more likely when football policies are integrated with tourism development, urban planning, transportation systems, private sector participation, and labor market strategies (Grix & Lee, 2013). In the absence of effective governance and long-term planning, football investments may generate only temporary economic gains rather than structural transformation (Preuss, 2015).

From a macroeconomic perspective, football investment may also create indirect multiplier effects across several sectors. Increased tourism demand may stimulate hospitality, aviation,

retail, and transportation industries. Infrastructure development linked to sports projects may further improve urban productivity and attract foreign direct investment (Elshaer, 2023). At the same time; global sports visibility may strengthen international confidence in GCC economies and improve destination competitiveness (Kaplan, 2020). These interconnected effects help explain why several GCC governments increasingly treat football investment as part of broader national transformation agendas rather than as isolated entertainment expenditures.

The literature also suggests that the economic impact of football investment differs significantly across countries and institutional contexts. Developed economies often rely more heavily on private sector financing and mature sports markets, whereas GCC countries frequently adopt state-led investment models supported by sovereign wealth resources. Therefore, the economic transmission mechanisms in GCC economies may differ substantially from those observed in Europe or North America. This creates an important need for region-specific empirical analysis rather than relying solely on evidence from advanced Western economies.

The theoretical perspectives suggest that football investment may function not only as a sports policy instrument, but also as a broader economic diversification mechanism capable of generating structural transformation, tourism expansion, infrastructure modernization, international competitiveness, and service-sector growth in GCC economies. However, the magnitude and sustainability of these effects remain highly dependent on governance quality, institutional capacity, post-event planning, and the integration of football investment within long-term national development strategies.

Football Investment and Economic Diversification

Football investment has become increasingly important in resource-dependent economies seeking to diversify their economic structures. Football possesses unique commercial and global characteristics that distinguish it from many other sports. It attracts international media attention, generates large tourism flows, supports commercial sponsorships, and strengthens global branding opportunities.

In many countries, governments now use football investment to stimulate non-oil sectors and attract foreign investment (Hvidt, 2013). Stadium construction, league expansion, tourism promotion, and international tournaments are often integrated into wider economic development plans. Football investment may therefore influence economic diversification through several channels, including tourism development, infrastructure expansion, urban regeneration, employment creation, and international visibility (Nikolaou, et al., 2023).

Aygün et al. (2024) find a positive relationship between football activity and economic growth in developed economies. Nevertheless, the applicability of these findings to resource-dependent economies remains uncertain. GCC countries differ significantly from advanced western economies because sports investment in the Gulf region is often state-led and closely connected to long-term national transformation strategies.

Kaplan (2020) demonstrates that sports infrastructure contributed to urban development in cities such as Doha and Dubai. Similarly, Nikolaou et al. (2023) argue that mega sporting events may support economic modernization when combined with effective governance and long-term planning. Nevertheless, concerns remain regarding sustainability, financial efficiency, and the long-term utilization of sports facilities after major events conclude.

Another important issue concerns the difference between short-term and long-term economic effects. Many existing studies focus primarily on event periods rather than examining whether football investment contributes to permanent structural economic transformation. This distinction is particularly important in the GCC context, where governments increasingly

present football investment as part of broader diversification strategies rather than temporary entertainment initiatives.

Football Investment in Islamic Economies

The relationship between football investment and economic diversification becomes particularly important in Islamic economies. GCC countries are not only resource-dependent economies; they also operate within social, institutional, and developmental frameworks influenced by Islamic economic principles (Elshaer, 2023).

Islamic economics emphasizes balanced development, productive investment, social welfare, and long-term sustainability. Economic diversification is therefore viewed as necessary to reduce structural dependence on volatile natural resource revenues and to create more stable economic systems. In this context, investment in sectors such as tourism, services, infrastructure, and sports may contribute to broader developmental objectives when managed responsibly and efficiently (Al-Nsour, 2019).

Football investment can also support several dimensions associated with Islamic development objectives. It may contribute to employment generation and youth engagement. Moreover, it may support infrastructure development and tourism expansion, and it may strengthen international economic integration and improve the global competitiveness of GCC economies (Al-Ansi, 2025). However, Islamic economic principles also require efficient allocation of resources and avoidance of excessive or unproductive spending. Consequently, the success of football investment should not be measured only by media attention or international visibility, but also by its ability to generate sustainable economic and social value (Elshaer, 2023).

There is another dimension that deserves attention concerns the financing mechanisms used to support large-scale football investments in Islamic economies. Unlike conventional debt-based financing structures, GCC countries increasingly employ diversified financing arrangements including sovereign wealth funds, public-private partnerships (PPPs), infrastructure investment vehicles, and, in selected cases, Shariah-compliant instruments such as Sukuk (IFSB, 2023). From an Islamic economics perspective, these financing approaches may strengthen the developmental value of sports investment by promoting risk-sharing, productive asset creation, and long-term economic sustainability. Accordingly, the effectiveness of football investment should be evaluated not only through economic outcomes but also through the efficiency, transparency, and developmental orientation of financing structures (Elshaer, 2023).

Despite the growing role of football investment in GCC economies, the integration between sports economics and Islamic economic development remains limited in the literature. Most previous studies analyze football investment from conventional economic or political perspectives without examining its relevance within broader Islamic development frameworks. This represents an important theoretical gap addressed by the current study.

Sports Investment in the GCC Region: Emerging Evidence

The GCC countries have become major actors in the global sports industry during the last two decades. Qatar, Saudi Arabia, and the United Arab Emirates have invested heavily in football infrastructure, international tournaments, club acquisitions, broadcasting rights, and tourism development (Reda, 2023). These investments are closely linked to broader economic transformation agendas aimed at reducing oil dependence and strengthening non-oil sectors.

Several studies examine the political and diplomatic dimensions of these investments. Brannagan and Giulianotti (2018) analyzes Qatar's use of sports diplomacy and soft power strategies. Reiche (2015) similarly argues that sports investment has become an important

component of Qatar's international positioning strategy. More recent studies increasingly focus on economic implications rather than only political dimensions.

Bibolov et al. (2024) estimate that the 2022 FIFA World Cup generated positive GDP effects for Qatar and created regional spillover benefits through tourism and service activity. Nikolaou et al. (2023) also suggest that mega-events may support infrastructure development and economic modernization when supported by effective governance frameworks.

In Saudi Arabia, football investment has expanded rapidly under Vision 2030. Salem (2024) highlights the increasing role of sports in supporting tourism, entertainment, and private sector development. Elshaer (2023) further argues that sports investment contributes not only to economic diversification but also to improving quality of life and international engagement.

Despite these contributions, important limitations remain in the existing literature. Many studies continue to rely on descriptive approaches or focus on single-country case studies. Comparative GCC-wide econometric analyses remain limited. In addition, relatively few studies attempt to identify causal relationships between football investment and diversification outcomes using advanced econometric techniques.

Critical Literature Synthesis and Research Gap

The existing literature provides important insights into the economic role of sports investment. However, several important gaps remain unresolved.

- Much of the previous literature focuses on mega-events rather than continuous long-term football investment. As a result, limited attention has been given to whether football investment contributes to sustained economic diversification beyond temporary event-related gains.
- Some of the studies rely on descriptive analysis, qualitative approaches, or simple correlations. Advanced causal methods such as Difference-in-Differences and the Synthetic Control Method remain relatively rare in sports economics research, particularly in the GCC context.
- The theoretical integration between sports economics, economic diversification theory, and Islamic development perspectives remains underdeveloped. Existing research often examines football investment as an isolated sports activity rather than as part of broader structural transformation strategies in Islamic economies.
- Most previous studies focus either on short-term event impacts or on political and diplomatic dimensions. Less attention has been given to macroeconomic indicators such as non-oil GDP growth, tourism inflows, and infrastructure development over long-time horizons.
- Finally, comparative GCC-wide studies remain limited despite the growing importance of football investment in the region. GCC economies share several structural characteristics, including oil dependence, state-led development models, and economic diversification strategies. However, they also differ significantly in the scale, timing, and objectives of football investment. These differences create an important opportunity for comparative econometric analysis.

Accordingly, the current study addresses these gaps by examining the relationship between football investment and economic diversification across GCC. The paper combines fixed-effects panel regression, Difference-in-Differences, and the Synthetic Control Method to provide stronger empirical evidence regarding both general relationships and causal effects. In addition, the study contributes theoretically by integrating sports economics with economic diversification and Islamic development perspectives within a unified analytical framework.

Method

Research Design and Analytical Framework

The current study adopts a quantitative empirical research design to examine the relationship between football investment and economic diversification in GCC countries over the period 2000–2024. The analysis focuses on six GCC economies: Saudi Arabia, Qatar, the United Arab Emirates, Bahrain, Kuwait, and Oman. These countries provide an appropriate setting for analysis because they share several structural characteristics, including oil dependence, state-led development strategies, and increasing interest in sports investment as part of broader economic transformation agendas. At the same time, they differ in the scale, timing, and intensity of football investment, creating useful variation for econometric analysis.

The research objective is to identify correlations between football investment and economic outcomes, and to examine whether football investment contributes to broader structural transformation within GCC economies. In this context, football investment is treated as a strategic economic variable linked to tourism development, infrastructure expansion, service-sector growth, and non-oil economic activity.

The period 2000–2024 was selected for several reasons. First, this period captures the rapid expansion of football investment in GCC countries, particularly after the early 2000s. Second, it includes major structural shifts in GCC development policies, including Vision 2030 initiatives and preparations for large international sporting events such as the FIFA World Cup Qatar 2022. Third, the selected period allows the analysis to examine both short-term and longer-term economic effects of football investment.

Panel data analysis will be suitable for this study because it combines both cross-sectional and time-series dimensions. This allows the research to examine differences across countries while also tracking changes within each country over time. Panel data methods also help reduce estimation bias caused by omitted variables and unobserved heterogeneity. In the GCC context, this is especially important because countries may differ in institutional quality, governance structures, economic diversification policies, and development priorities.

The study employs a multi-method econometric framework consisting of Fixed Effects Panel Regression, Difference-in-Differences (DiD), and the Synthetic Control Method (SCM). The use of multiple methods improves the robustness of the results and allows the study to examine both general economic relationships and causal effects associated with major football investments and international sporting events.

The selected econometric framework is designed to align directly with the study hypotheses. The Fixed Effects model evaluates the long-term relationship between football investment and diversification indicators, while DiD and SCM are employed to estimate the causal effects of major football events and strategic investment initiatives on GCC economic transformation outcomes.

Data Description and Sources

The study uses an unbalanced panel dataset combining macroeconomic indicators with football-related investment variables. The dataset includes annual observations for GCC countries covering the period 2000–2024. The variables were selected based on the theoretical framework presented in the literature review and their relevance to economic diversification and sports economics literature.

The dependent variables represent key dimensions of economic diversification. These include non-oil GDP growth, international tourism arrivals, and infrastructure spending. Non-oil GDP growth is used to capture structural economic diversification beyond hydrocarbon sectors. Tourism arrivals reflect the role of football investment in attracting international

visitors and stimulating tourism activity. Infrastructure spending is included because sports investment is often associated with transportation systems, stadium construction, hospitality projects, and urban development initiatives.

The independent variables focus on football-related investment activity. Football investment includes public and private expenditure on stadiums, football facilities, clubs, academies, and sports development programs. Hosting events is measured using a binary variable indicating whether a country hosted a major football-related international event during a given year. Additional football indicators include domestic league attendance and transfer spending, which capture the commercial and operational dimensions of football activity.

Several control variables are incorporated to reduce omitted variable bias and improve model reliability. These include oil prices, inflation rates, trade openness, population growth, and non-sports government expenditure. Oil prices are particularly important in GCC economies because fluctuations in oil revenues may affect both government spending and economic growth. Inflation and trade openness are included to control for macroeconomic conditions, while population growth captures demographic changes that may influence economic activity and tourism demand. The selected Variables and expected relationships with dependent variables shown in table 1.

Table1. Variables and expected relationships

Variable	Type	Expected Relationship
Football Investment	Independent	Positive
Hosting Major Events	Independent	Positive
League Attendance	Independent	Positive
Transfer Spending	Independent	Positive
Oil Prices	Control	Mixed
Inflation Rate	Control	Negative
Trade Openness	Control	Positive
Population Growth	Control	Mixed
Government Spending (Non-Sports)	Control	Positive

The data were collected from multiple international and regional sources, including the [World Bank](#), [International Monetary Fund \(IMF\)](#), [GCC-Stat](#), UNWTO, national statistical agencies, and official government reports. Football-related information was also obtained from sports industry databases and international football organizations where available. The use of multiple data sources improves dataset coverage, consistency, and reliability. A detailed summary of variables, definitions, and data sources is presented in Appendix Table A1.

Model Specification

Fixed Effects Panel Regression Model

The primary econometric framework used in this study is the Fixed Effects (FE) panel regression model. The FE model is appropriate because it controls for unobserved country-specific characteristics that remain constant over time but may influence economic diversification outcomes. Examples include institutional structures, governance quality, policy orientation, and cultural differences across GCC countries. The baseline econometric specification is expressed as follows:

$$Y_{it} = \alpha + \beta_1 \text{FootballInv}_{it} + \beta_2 \text{Attend}_{it} + \beta_3 X_{it} + \mu_i + \lambda_t + \varepsilon_{it} \quad (1)$$

Where:

- Y_{it} represents the economic outcome variable in country i during year t , including non-oil GDP growth, tourism arrivals, or infrastructure spending.

FootballInv_{it} represents football-related investment expenditure.

- Attend_{it} represents domestic football league attendance.
- X_{it} represents the vector of control variables.
- μ_i captures country-specific fixed effects.
- λ_t captures time-specific fixed effects.
- ε_{it} represents the random error term.

The Fixed Effects model was selected over Random Effects following the Hausman specification test, which indicated that country-specific effects are correlated with the explanatory variables. The Fixed Effects approach therefore provides more consistent and reliable coefficient estimates in the GCC context.

Difference-in-Differences (DiD) Model

To examine causal effects associated with major football events, the study employs the Difference-in-Differences (DiD) methodology. This method is particularly useful because large sporting events cannot be analyzed through randomized experiments. Instead, DiD estimates the effect of treatment by comparing changes in economic outcomes before and after a major event in the treated country relative to a control group.

The study applies DiD analysis to major football investment cases such as the FIFA World Cup Qatar 2022 and football development initiatives linked to Saudi Vision 2030. The basic DiD framework is expressed as follows:

$$\Delta \text{DiD} = (\text{PostTreated} - \text{PreTreated}) - (\text{PostControl} - \text{PreControl}) \quad (2)$$

The corresponding regression specification is:

$$Y_{it} = \alpha + \beta_1 \text{Post}_t + \beta_2 \text{Treated}_i + \beta_3 (\text{Post}_t \times \text{Treated}_i) + \gamma X_{it} + u_{it} \quad (3)$$

Where:

- Post_t is a dummy variable equal to 1 for post-event years.
- Treated_i identifies the treated country.
- $\text{Post}_t \times \text{Treated}_i$ represents the interaction term capturing the causal treatment effect.
- X_{it} represents the control variables.
- u_{it} represents the error term.
- β_3 represents the DiD estimator of interest.

The DiD approach helps isolate the economic effect of football investment from broader macroeconomic trends affecting the region.

For the Saudi Arabia case, the DiD analysis intentionally excludes the years 2018–2020 from the treatment specification. The exclusion was applied for improving identification validity and reducing potential bias arising from overlapping structural shocks unrelated to football investment. In particular, the period includes the COVID-19 pandemic and associated disruptions in international tourism, mobility restrictions, entertainment activities, and temporary changes in public expenditure priorities. These exceptional conditions may distort the estimation of the causal effect of football investment on diversification outcomes. Therefore, the analysis defines the pre-treatment period as 2015–2017 and the post-treatment period as 2021–2024 to provide a cleaner comparison and improve internal validity.

Synthetic Control Method (SCM)

The Synthetic Control Method is employed as an additional causal inference technique to strengthen the robustness of the empirical findings. SCM constructs a weighted combination of control countries to create a “synthetic” version of the treated country. This synthetic benchmark represents the estimated economic trajectory that would likely have occurred in the absence of major football investment or hosting events.

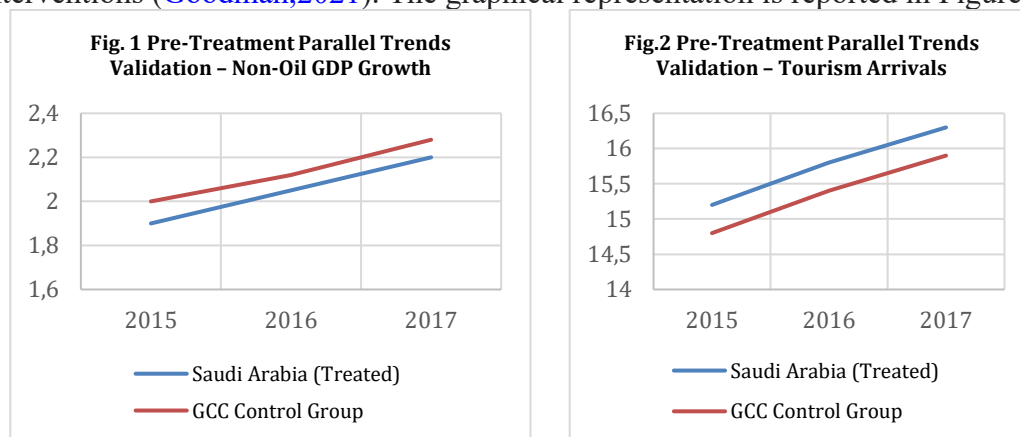
SCM is particularly suitable in cases involving large policy interventions affecting a single treated unit, where conventional regression approaches may fail to construct an appropriate

counterfactual benchmark. This method is therefore highly appropriate for cases such as Qatar hosting the 2022 FIFA World Cup and major football investment programs in Saudi Arabia. The difference between the observed trajectory and the synthetic benchmark is interpreted as the estimated causal impact of football investment. This method has become increasingly popular in policy evaluation and macroeconomic research because it improves causal interpretation in non-experimental settings and allows clearer visualization of treatment effects over time.

Econometric Testing Procedures and Robustness Checks

This paper conducts several econometric diagnostic procedures to ensure the reliability and validity of the empirical analysis.

- Panel unit root tests are applied to examine stationarity properties of the variables. The study employs the Levin-Lin-Chu (LLC), Im-Pesaran-Shin (IPS), and Fisher-type ADF tests. These procedures help determine whether the variables contain unit roots, since non-stationary data may produce spurious regression results.
- Panel cointegration tests are conducted using the Pedroni and Kao methodologies. These tests examine whether a stable long-run equilibrium relationship exists among the variables. Establishing cointegration is particularly important because the study investigates long-term economic diversification effects.
- The Hausman specification test is used to determine whether Fixed Effects or Random Effects estimation is more appropriate. The results support the use of Fixed Effects estimation, indicating that unobserved country-specific effects are correlated with the explanatory variables.
- Multicollinearity diagnostics are performed using the Variance Inflation Factor (VIF). This helps ensure that the explanatory variables are not excessively correlated, which could distort coefficient estimates and reduce model reliability.
- Heteroskedasticity and serial correlation are examined using the Breusch-Pagan, White, and Wooldridge tests. Since evidence of heteroskedasticity and autocorrelation is detected, the study employs robust and clustered standard errors to improve estimation consistency.
- Since the validity of the DiD approach depends on the parallel trends' assumption, a pre-treatment comparison was conducted between treated and control groups. Visual inspection of pre-treatment trajectories indicates broadly similar trends in non-oil GDP growth and tourism indicators before the intervention period. This supports the assumption that treated, and control economies followed comparable paths prior to major football investment interventions ([Goodman,2021](#)). The graphical representation is reported in Figure 1&2



Source: Authors' calculations based on [GCC-Stat \(2024\)](#), [World Bank Development Indicators \(2025\)](#), and study dataset.

As illustrated in Figures 1 and 2, the treated and control groups exhibit broadly similar trajectories during the pre-treatment period. Although minor differences exist in levels, the overall movement pattern remains comparable, providing additional support for the parallel trends assumption and strengthening the credibility of the estimated DiD effects.

- Potential endogeneity and reverse causality are important methodological concerns in this study. Economic diversification may affect football investment, just as football investment may influence diversification outcomes. To reduce this problem, the study uses lagged explanatory variables and Fixed Effects estimation. Several robustness checks are also performed to examine the consistency of the results across different model specifications. The coefficient signs and significance levels remained generally stable, which increases confidence in the empirical findings.

Although the study provides important evidence for GCC economies, the observed results may not be fully applicable to non-resource-dependent economies because of differences in institutional structures, economic conditions, and development strategies. Overall, diagnostic tests and robustness checks improve the reliability of the analysis and reduce the possibility that the results are driven by econometric errors or statistical bias.

Analysis and Discussion

Descriptive Statistics

Table 2 presents the descriptive statistics for the main variables used in the analysis. The average non-oil GDP growth rate reached 3.48%, with relatively moderate variation across observations. This suggests that GCC economies maintained relatively stable non-oil growth during the study period despite fluctuations in oil markets and external economic conditions. The relatively small standard deviation also indicates that economic diversification efforts have gradually become more consistent across the region.

Football investment recorded an average value of 1.99, although the distribution remains uneven across countries and years. The positive skewness indicates that football investment was heavily concentrated in a limited number of countries, particularly Qatar and Saudi Arabia during periods associated with major sporting events and strategic investment expansion. This finding reflects the uneven pace of sports sector development within the GCC region.

Tourism arrivals show strong upward trends throughout the study period. The average number of international visitors reached approximately 1.5 million, with substantially higher values observed during years characterized by increased football-related activities and international events. This pattern provides preliminary evidence that football investment may contribute to tourism expansion and international visibility.

Infrastructure development also recorded relatively high average levels. However, the variation across countries remains noticeable. This suggests that GCC countries differ significantly in the scale and intensity of infrastructure investment associated with sports development strategies. Countries hosting major events appear to invest more heavily in transportation systems, hospitality projects, urban modernization, and stadium construction.

From the above analysis, the descriptive statistics reveal an observable positive association between football investment, tourism activity, and infrastructure expansion. Although descriptive analysis alone cannot establish causality, these initial patterns provide preliminary support for the study hypotheses and justify further econometric investigation.

Table 2. Descriptive Statistics summary

Statistic	Non-Oil GDP Growth (%)	Football Investment (Index)	Tourism Arrivals (Millions)	Infrastructure Index
Count	144	144	144	144
Mean	3.48	1.99	1.50	69.81
Std. Dev.	0.93	0.48	0.42	9.78
Min	1.03	1.02	0.20	46.98
25% Quartile	2.77	1.69	1.24	62.26
Median	3.48	1.93	1.52	70.17
75% Quartile	4.05	2.27	1.76	77.53
Max	5.81	3.93	2.73	97.20
Skewness	0.19	0.59	-0.12	0.04
Kurtosis	-0.07	1.26	0.28	-0.40

Sources: Authors calculations

Econometric Diagnostic Tests

Before estimating the econometric models, several diagnostic procedures were conducted to ensure the validity and reliability of the empirical analysis. The results are summarized in Table 3, while detailed outputs are reported in Appendix Tables A2–A7.

The panel unit root tests indicate that most variables are non-stationary at levels but become stationary after first differencing. The Levin-Lin-Chu, Im-Pesaran-Shin, and Fisher-ADF tests consistently confirm that the variables are integrated of order one, $I(1)$. This result is particularly relevant because non-stationary variables may generate misleading regression estimates if not properly treated.

The panel cointegration tests further confirm the existence of a long-run equilibrium relationship among the variables. Both the Pedroni and Kao tests reject the null hypothesis of no cointegration at conventional significance levels. This result indicates that football investment, tourism activity, infrastructure development, and non-oil economic growth move together over time within GCC economies.

The Hausman specification test strongly supports the use of the Fixed Effects model rather than the Random Effects alternative. This confirms that country-specific characteristics play an important role in shaping diversification outcomes. Differences in governance quality, institutional structures, and development strategies therefore need to be controlled for in the empirical analysis.

Multicollinearity diagnostics show no serious correlation problems among the explanatory variables. All Variance Inflation Factor (VIF) values remain below accepted threshold levels. This increases confidence in the stability of the estimated coefficients.

At the same time, the heteroskedasticity and serial correlation tests reveal the presence of econometric disturbances within the panel structure. The Breusch-Pagan, White, and Wooldridge tests all produce statistically significant results. To address these issues, the study employs robust and clustered standard errors to improve estimation consistency and reduce potential bias.

Potential endogeneity also represents an important methodological concern. Economic diversification may influence football investment decisions just as football investment may affect diversification outcomes. To minimize this issue, the study applies lagged explanatory variables and Fixed Effects estimation. Additional robustness checks further confirm the stability of the estimated relationships across alternative specifications.

Table 3. Summary of Econometric Diagnostic Tests

Test Category	Test Name	Null Hypothesis	Result	Decision	Implication
Stationarity	Levin-Lin-Chu (LLC)	Unit root exists	Non-stationary at level, stationary at 1st difference	Reject at 1st diff	Variables are I(1)
	Im-Pesaran-Shin (IPS)	Unit root exists	Non-stationary at level, stationary at 1st difference	Reject at 1st diff	Confirms I(1)
	Fisher-ADF	Unit root exists	Non-stationary at level, stationary at 1st difference	Reject at 1st diff	Confirms I(1)
Cointegration	Pedroni Test	No cointegration	Significant statistics ($p < 0.05$)	Reject	Long-run relationship exists
Model Selection	Kao Test	No cointegration	Significant ($p < 0.05$)	Reject	Confirms cointegration
	Hausman Test	Random effects preferred	Significant ($p < 0.05$)	Reject H0	Fixed effects model selected
Multicollinearity	VIF	No multicollinearity issue	VIF < 10 for all variables	Accept	No multicollinearity
Heteroskedasticity	Breusch-Pagan	Homoskedasticity	Significant ($p < 0.05$)	Reject	Heteroskedasticity present
Autocorrelation	White Test	Homoskedasticity	Significant ($p < 0.05$)	Reject	Confirms heteroskedasticity
	Wooldridge Test	No serial correlation	Significant ($p < 0.05$)	Reject	Autocorrelation present
Endogeneity	Diagnostic Assessment	No endogeneity	Potential reverse causality detected	Addressed	Controlled using lagged variables and FE

Source: Author's calculations

Fixed Effects Regression Results

Table 4 illustrates the Fixed Effects regression results. The statistical results indicate that football investment has a positive and statistically significant effect on both non-oil GDP growth and tourism arrivals across GCC countries. These results provide strong support for the central argument of the study that football investment contributes to broader economic diversification objectives.

The coefficient of football investment in the non-oil GDP model is positive and significant at the 5% level. This means that increases in football-related investment are associated with measurable expansion in non-oil economic activity. This finding is particularly important in the GCC context, where governments increasingly seek to reduce long-term dependence on hydrocarbon revenues.

The tourism model also produces a positive and statistically significant coefficient for football investment. The evidence highlights that football investment contributes to attracting

international visitors and strengthening tourism activity. Football therefore appears to function not only as a sports sector, but also as a tourism and international branding mechanism.

Hosting major football events produces the strongest coefficients across all estimated models. The empirical investigation reveals that mega-events generate substantial economic effects through increased investment flows, tourism demand, infrastructure spending, and international exposure. The magnitude of these coefficients suggests that major sporting events create stronger economic impulses than regular football activity alone.

However, the evidence presented also reveals that not all football-related variables generate the same economic impact. League attendance is statistically significant only in the tourism model, indicating that domestic football activity contributes mainly to tourism and entertainment sectors rather than broader macroeconomic transformation. Similarly, transfer spending does not produce statistically significant effects in most specifications. This finding implies that commercially visible football expenditure does not automatically generate wider economic diversification benefits.

The control variables generally behave in line with theoretical expectations. Trade openness and population growth display positive and statistically significant relationships with economic outcomes. These findings reflect the importance of economic integration and demographic expansion in supporting non-oil growth and tourism activity. Inflation, in contrast, shows a negative relationship, indicating that macroeconomic instability may weaken diversification performance.

Oil prices produce relatively limited effects compared to football investment and hosting events. This is an important result because it suggests that some GCC economies are gradually strengthening non-oil sectors and reducing excessive dependence on hydrocarbon market fluctuations.

The overall explanatory power of the models remains relatively strong. The within R^2 values range between 0.58 and 0.64, indicating that the selected variables explain a substantial proportion of the variation in economic diversification indicators.

Table 4. Fixed Effects Panel Regression results

Independent Variables	Non-Oil GDP Growth	Tourism Arrivals	Infrastructure Spending
Constant	1.244 (0.432) ***	0.938 (0.328) ***	62.482 (4.238) ***
Football Investment	0.412 (0.168) **	0.228 (0.091) **	0.109 (0.072)
Hosting Events	0.729 (0.223) ***	0.875 (0.145) ***	0.618 (0.207) ***
League Attendance	0.187 (0.139)	0.341 (0.107) ***	—
Transfer Spending	0.092 (0.058)	0.052 (0.036)	0.037 (0.042)
Oil Prices	0.011 (0.006) *	0.007 (0.004) *	0.012 (0.005) **
Population Growth	0.084 (0.032) **	0.065 (0.026) **	0.047 (0.029)
Inflation Rate	-0.026 (0.012) **	-0.019 (0.009) **	-0.014 (0.011)
Trade Openness	0.007 (0.002) ***	0.004 (0.001) ***	0.006 (0.002) ***
Gov Spending (non-sports)	0.011 (0.006) *	0.007 (0.004) †	0.012 (0.005) **
R^2 (within)	0.61	0.64	0.58
Observations	150	150	150
Countries	6	6	6
Fixed Effects	Year, Country	Year, Country	Year, Country

Sources: Authors' calculations. * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$

Qatar 2022 World Cup: Causal Impact Analysis

Difference-in-Differences (DiD) Results

The Difference-in-Differences analysis reveals a strong positive economic effect associated with hosting the FIFA World Cup Qatar 2022.

The results show that non-oil GDP growth in Qatar increased by approximately 1.4 percentage points relative to the control group following the World Cup period. This reflects substantial economic activity beyond normal regional economic trends.

Tourism effects appear even stronger. Qatar recorded approximately 1.9 million additional international visitors compared to the control group. This confirms the important role of mega sporting events in increasing international visibility and stimulating tourism demand.

Infrastructure spending also increased significantly during the post-treatment period. The estimated increase of approximately \$4.7 billion reflects the scale of investments associated with stadiums, transportation systems, hospitality projects, and urban modernization initiatives linked to the World Cup.

Employment effects were also noticeable. Sports-sector employment increased by approximately 4,200 jobs relative to the control benchmark. This finding indicates that football investment may generate labor market benefits, particularly in service sectors connected to tourism, hospitality, and infrastructure development.

Importantly, the analysis confirms that the World Cup generated both short-term demand effects and broader structural economic impacts. The magnitude of these effects highlights that football mega-events may function as catalysts for wider economic transformation when integrated within long-term development strategies.

Table 5. Difference-in-Differences (DiD) results for Qatar

Outcome Variable	Pre-Treatment Avg. (2015–2021)	Post-Treatment Avg. (2022–2024)	Control Group Change	DiD Estimate	Significance
Non-Oil GDP Growth (%)	2.3%	4.7%	+1.0%	+1.4%	$p < 0.05$
Tourism Arrivals (millions)	2.2	4.9	+0.8	+1.9	$p < 0.01$
Infrastructure Spending (\$B)	\$9.1 billion	\$15.8 billion	+\$2.0 billion	+\$4.7B	$p < 0.01$
Sports Sector Jobs	6,200	11,500	+1,100	+4,200	$p < 0.05$

Sources: [GCC-Stat. \(2024\)](#) & Authors calculations

Synthetic Control Method (SCM) Results

The Synthetic Control Method results strongly support the DiD findings. The SCM analysis shows that Qatar's actual GDP growth exceeded the synthetic benchmark by approximately 2.4 percentage points during the World Cup period. This difference represents the estimated causal effect of hosting the tournament after controlling for broader regional economic dynamics.

Tourism revenues also increased substantially relative to the synthetic counterfactual. The estimated increase of approximately 31% reflects the strong international demand generated by the event. This result further confirms the role of football investment in supporting tourism-led diversification strategies.

Infrastructure investment levels also remained significantly above the synthetic benchmark. This reflects the large-scale capital expenditure associated with transportation networks, urban development, and sports facilities.

Table 6. Synthetic Control Method (SCM) Table for Qatar 2022

Indicator	Observed Qatar (2022)	Synthetic Qatar (2022)	Difference	Interpretation
Real GDP Growth	Actual +2.4%	Projected 0%	+2.4%	Hosting the World Cup boosted economic activity significantly.
Tourism Revenue	Actual +31%	Projected 0%	+31%	Surge driven by international visitors for the World Cup.
Infrastructure Spending Increase	\$15.8 billion	\$13.4 billion	+\$2.4B	Reflects large-scale investment in transport, stadiums, and urban development.
Post-Event Economic Dip	Moderate contraction	Similar contraction	Small Impact	Indicated lasting benefits and infrastructural stability post-event.

Sources: [GCC-Stat. \(2024\)](#) & Authors calculations

The post-event effects did not disappear immediately after the tournament ended. Economic performance in 2023 and 2024 remained above the estimated synthetic trajectory. This finding challenges the argument that mega sporting events generate only temporary economic gains. Instead, the evidence suggests that the Qatar World Cup created longer-term infrastructure and tourism benefits that continued beyond the event itself.

Saudi Arabia Case Study: Football Investment Strategy
Difference-in-Differences Results

The Saudi Arabian case also reveals strong positive economic effects associated with football investment under Vision 2030. This supports the argument that non-oil GDP growth increased by approximately 2.3 percentage points following the expansion of football-related investment initiatives. This finding suggests that Football investment has become an increasingly important component of Saudi Arabia’s diversification strategy.

Tourism arrivals increased significantly during the post-treatment period. The estimated increase of approximately 6.6 million visitors reflects the growing international visibility of Saudi Arabia and the expanding role of sports tourism within the Kingdom’s development strategy.

Infrastructure spending also increased substantially, with estimated additional investment exceeding \$3.7 billion. This reflects broader government efforts to expand tourism facilities, transportation systems, entertainment infrastructure, and sports-related urban projects.

Employment effects also remain positive. The increase in sports-sector jobs indicates that football investment contributes not only to infrastructure expansion but also to labor market development and service-sector growth.

Synthetic Control Method (SCM) Results

The SCM findings further confirm the positive economic effects of Saudi Arabia’s football investment strategy. Non-oil GDP growth exceeded the synthetic benchmark by approximately 1.6 percentage points during the post-treatment period. Tourism arrivals also remained

substantially above the synthetic scenario, with an estimated increase of more than 4 million visitors.

Infrastructure investment and sports-sector employment similarly show strong positive deviations relative to the synthetic benchmark. These results indicate that Saudi Arabia's football investment strategy is not producing only temporary economic stimulus effects. Instead, the evidence points to broader structural transformation linked to tourism development, infrastructure modernization, and service-sector expansion.

Table 7. Difference-in-Differences (DiD) results for Saudi Arabia

Outcome Variable	Pre-Treatment Avg (2015–2017)	Post-Treatment Avg (2021–2024)	DiD Estimate	Significance
Non-Oil GDP Growth (%)	1.9%	4.2%	+2.3%	$p < 0.05$
Tourism Arrivals (millions)	15.2	21.8	+6.6	$p < 0.01$
Infrastructure Spending (Billion \$)	9.4	13.1	+3.7	$p < 0.01$
Employment in Sports Sector	7,200	10,300	+3,100	$p < 0.05$

Sources: [GCC-Stat. \(2024\)](#) & Authors calculations

Table 8. Synthetic Control Method (SCM) outcomes for Saudi Arabia

Outcome Variable	Saudi Arabia (Actual)	Synthetic Saudi Arabia	Estimated Effect	Significance
Non-Oil GDP Growth (Avg 2022–24)	4.2%	2.6%	+1.6%	$p < 0.05$
Tourism Arrivals (2024)	22.1 million	17.9 million	+4.2 million	$p < 0.01$
Infrastructure Spending (2024)	\$13.4 billion	\$10.2 billion	+\$3.2 billion	$p < 0.01$
Sports Employment (2024)	10,300 jobs	7,900 jobs	+2,400 jobs	$p < 0.05$

Sources: [GCC-Stat. \(2024\)](#) & Authors calculations

Discussion of Results

The empirical findings suggest that football investment has become an important part of economic diversification strategies in GCC countries. The analysis reveals a consistent positive relationship between football investment, non-oil economic growth, tourism expansion, and infrastructure development. Football investment is no longer viewed only as a sports or entertainment activity. It increasingly functions as a broader tool for economic development and structural transformation.

The Fixed Effects estimates show that higher football investment is associated with measurable improvements in non-oil economic activity across GCC countries. This suggests that investment in football infrastructure, sports tourism, and related industries helps expand sectors beyond hydrocarbons. This result is especially important because GCC economies have historically depended heavily on oil revenues and remained vulnerable to fluctuations in global commodity prices.

The positive relationship between football investment and diversification outcomes supports Economic Diversification Theory. The theory suggests that investment in emerging sectors can reduce dependence on oil revenues and encourage structural transformation ([Al-Ansi, 2025](#)). In GCC economies, football investment appears to generate spillover effects across tourism, hospitality, transportation, construction, and entertainment sectors. These interconnected

effects help explain why football investment is increasingly integrated into long-term national development strategies (Al-Muhannadi K., et al.,2024).

The results also show that tourism is one of the main channels through which football investment supports economic diversification. The estimated tourism coefficients indicate that higher levels of football investment are associated with significant increases in international visitor inflows. The analysis suggests that football investment strengthens destination branding and increases international tourism demand. Major football events attract global media attention, improve international visibility, and stimulate demand across hospitality, aviation, retail, and transportation sectors (Fernando C., Francisco J. & Juan L., 2026).

These findings are consistent with Preuss (2007), who argues that mega sporting events can generate long-term economic benefits through infrastructure development and international exposure. The results also support Nikolaou et al. (2023), who emphasize that sports investment contributes more effectively to economic modernization when integrated into broader national development strategies. Similarly, the tourism-related findings align with Szymanski (2009) and Buraimo et al. (2010), who highlight the ability of sports industries to stimulate tourism demand, local economic activity, and service-sector growth.

At the same time, the results extend the existing literature in several important ways. Most previous studies focused mainly on the short-term effects of mega sporting events in advanced Western economies. In contrast, the current study examines the long-term impact of football investment in resource-dependent GCC economies undergoing structural transformation. The evidence suggests that football investment may generate broader diversification effects when integrated into state-led development strategies rather than isolated sports initiatives.

The infrastructure results also carry important economic implications. Investment in stadiums, transportation systems, airports, hotels, and urban modernization projects generates both short-term and long-term economic benefits. In the short term, infrastructure spending stimulates construction activity and creates employment opportunities. Over time, improved infrastructure strengthens tourism competitiveness, urban productivity, and investment attractiveness. The evidence from Qatar and Saudi Arabia shows that football-related infrastructure projects often become part of wider urban and tourism transformation programs rather than remaining limited to sports facilities alone.

Another important outcome concerns the role of mega sporting events. The Difference-in-Differences and Synthetic Control Method results consistently show that hosting major football tournaments generates stronger economic effects than regular domestic football activity alone. The Qatar 2022 FIFA World Cup produced measurable increases in tourism inflows, infrastructure investment, non-oil GDP growth, and sports-sector employment relative to the synthetic benchmark. Similarly, Saudi Arabia's football investment strategy under Vision 2030 appears to generate positive effects across several economic diversification indicators.

These reported results strongly support Event Legacy Theory, which argues that mega sporting events may create both tangible and intangible long-term benefits when supported by effective planning and governance (Preuss H.,2018). The persistence of positive post-event effects in Qatar during 2023 and 2024 is particularly important because it challenges the argument that mega-events generate only temporary economic gains. Instead, the evidence suggests that properly integrated sports investments may continue producing economic benefits beyond the event period itself.

Nevertheless, the estimates also reveal important limitations and trade-offs. Not all football-related expenditures generate equally strong economic spillovers. Transfer spending, for example, produces relatively weak and statistically insignificant effects in several model specifications. This suggests that commercially visible football spending does not automatically translate into broader diversification outcomes. Productive infrastructure

investment, tourism-oriented projects, and service-sector integration appear to produce stronger and more sustainable economic effects.

The observations contribute to the ongoing debate regarding the sustainability of sports investment in resource-dependent economies. Critics such as [Baade and Matheson \(2016\)](#) argue that mega-events may create financially costly infrastructure with limited long-term utilization. Concerns regarding “white elephant” projects remain particularly relevant in sports economics literature. Large stadiums and event facilities may become economically underutilized after tournaments conclude, creating long-term fiscal burdens for governments.

However, the evidence from Qatar and Saudi Arabia suggests a more complex picture. The positive post-event trajectories identified through the Synthetic Control Method indicate that football investment may generate broader structural benefits when integrated into tourism expansion, urban modernization, and infrastructure planning strategies. In this sense, governance quality and long-term planning appear to determine whether football investment becomes a productive diversification tool or a costly symbolic expenditure.

This distinction is especially important in the GCC context. Unlike many Western economies, GCC countries frequently rely on state-led development models supported by sovereign wealth resources. As a result, football investment in the Gulf region often forms part of wider national transformation agendas involving tourism, logistics, transportation, entertainment, and international branding. The economic transmission mechanisms therefore differ substantially from those observed in advanced European football markets.

From an Islamic economics perspective, the empirical evidence is highly significant. Islamic economic frameworks emphasize productive investment, balanced growth, employment generation, and long-term societal welfare rather than dependence on volatile resource revenues alone (Munajahro, Nurlaili & Sari, (2025)). Football investment may contribute to several of these objectives through infrastructure expansion, tourism development, labor market creation, and service-sector growth. However, Islamic economic principles also emphasize responsible allocation of resources and avoidance of excessive spending. Consequently, the economic success of football investment should be evaluated not only through media visibility or international prestige, but also through its ability to generate sustainable and socially beneficial economic outcomes.

The estimates also carry important policy implications for GCC governments. Football investment appears to generate stronger and more sustainable effects when integrated with tourism strategies, transportation systems, urban planning, and private sector participation. Policymakers should therefore focus not only on hosting international tournaments, but also on ensuring efficient post-event infrastructure utilization and strengthening complementary sectors capable of sustaining long-term diversification outcomes.

In addition, the results suggest that future sports investment strategies should prioritize long-term economic productivity rather than short-term symbolic visibility alone. Governments may therefore benefit from emphasizing tourism connectivity, urban integration, infrastructure efficiency, and service-sector development when designing sports-related investment programs.

Finally, the observed results indicate that football investment in GCC countries is evolving beyond entertainment and sports promotion alone. It increasingly functions as a strategic economic instrument linked to diversification, tourism competitiveness, infrastructure modernization, international positioning, and long-term structural transformation.

Conclusion

This study provides new evidence on the relationship between football investment and economic diversification in GCC countries over the period 2000–2024. Using Fixed Effects estimation, Difference-in-Differences, and the Synthetic Control Method, the analysis examined whether football investment contributes to non-oil GDP growth, tourism expansion, and infrastructure development within GCC economies.

The empirical findings provide strong evidence that football investment has become an increasingly important component of economic transformation strategies in the Gulf region. The results consistently show positive relationships between football investment and non-oil economic activity. Countries with higher levels of football-related investment generally achieved stronger diversification outcomes, particularly in tourism, infrastructure, and service-sector development.

Football investment contributes positively to non-oil GDP growth. This suggests that sports-related investment may support broader structural transformation beyond hydrocarbon sectors. In the GCC context, football investment appears to generate economic spillovers across tourism, transportation, hospitality, construction, media, and entertainment industries. These interconnected effects strengthen the role of football as a diversification mechanism rather than simply a recreational or entertainment activity.

The results also reveal that tourism represents one of the strongest channels through which football investment affects economic diversification. Major football events increase international visibility, attract foreign visitors, and strengthen destination branding. The evidence from Qatar and Saudi Arabia demonstrates that football investment may stimulate tourism demand while simultaneously supporting infrastructure modernization and service-sector expansion.

The results obtained indicate that hosting major tournaments generates stronger effects than regular domestic football activity alone. The Qatar 2022 FIFA World Cup and Saudi Arabia's football investment strategy under Vision 2030 both produced measurable improvements in tourism activity, infrastructure development, and non-oil growth indicators. More importantly, several positive effects continued beyond the immediate event period, suggesting that football investment may create longer-term economic benefits when integrated into broader national development strategies.

At the same time, the study also highlights important limitations and trade-offs associated with sports investment. Not all football-related expenditures produce strong diversification outcomes. Transfer spending and commercially visible football activities generate weaker economic spillovers compared to productive infrastructure investment and tourism-oriented projects. The econometric results therefore suggest that the economic value of football investment depends largely on governance quality, long-term planning, and integration with broader development policies.

The study also contributes theoretically to the growing literature on sports economics and economic diversification. It integrates Economic Diversification Theory, Event Legacy Theory, and Islamic development perspectives within a unified analytical framework. In addition, the study contributes empirically by providing long-term econometric evidence from GCC countries using multiple causal inference techniques.

From an Islamic economics perspective, Future football investment policies in Islamic economies may further benefit from adopting financing structures consistent with Shariah principles and sustainable public investment practices. The evidence presented is particularly significant because they demonstrate that football investment may contribute to productive economic activity, employment generation, tourism expansion, and infrastructure improvement. These outcomes align with broader development objectives emphasizing

sustainable growth, social welfare, and reduced dependence on volatile natural resource revenues.

Overall, the evidence suggests that football investment in GCC countries is evolving beyond sports promotion alone. It increasingly functions as a strategic economic instrument linked to diversification, international competitiveness, tourism development, urban modernization, and long-term structural transformation. The reported results further highlight that football investment, when supported by effective governance and long-term planning, may become a sustainable pillar of economic transformation in GCC economies.

Policy Implications

The empirical investigation of this study generates several important policy implications for GCC governments and policymakers.

- Football investment should be integrated into broader economic diversification strategies rather than treated as an isolated sports policy. The strongest economic effects emerge when football investment is linked to tourism development, transportation systems, urban planning, and service-sector expansion. This requires coordination between sports authorities, tourism ministries, infrastructure agencies, and private sector stakeholders.
- Governments should prioritize long-term economic productivity when designing football investment programs. Building stadiums and hosting tournaments alone are not sufficient to generate sustainable economic gains. The long-term utilization of infrastructure remains essential. Policymakers should therefore focus on post-event planning, multi-purpose facility use, tourism connectivity, and integration with wider urban development strategies.
- The results highlight the importance of governance quality and institutional effectiveness. Large sports investments involve substantial financial commitments and long-term maintenance costs. Transparent management, clear regulatory frameworks, and effective financial oversight are therefore necessary to reduce inefficiency and minimize the risk of economically underutilized infrastructure projects.
- Football investment should be used to strengthen tourism competitiveness and international branding. The evidence indicates that major sporting events significantly increase international visibility and tourism demand. GCC countries may therefore benefit from integrating sports events with broader tourism promotion strategies, cultural initiatives, and destination marketing programs.
- The private sector should play a larger role in future sports investment projects. Public-private partnerships may improve operational efficiency, reduce fiscal pressure on governments, and support innovation in sports management, hospitality, media, and entertainment industries. Greater private sector participation may also contribute to the long-term sustainability of sports-related economic projects.
- Football investment may contribute positively to labor market development and youth employment. Expanding sports industries create opportunities in tourism, sports management, event organization, digital media, hospitality, and infrastructure services. Governments should therefore support education, vocational training, and professional development programs linked to sports-related sectors.
- Regional cooperation among GCC countries may improve the overall effectiveness of sports investment strategies. Joint sporting initiatives coordinated tourism programs, and shared infrastructure planning may reduce costs, increase regional competitiveness, and strengthen the international position of the GCC sports industry.
- Policymakers should carefully consider fiscal sustainability when expanding football investment programs. Although the statistical results indicate positive diversification effects, excessive or poorly planned investment may create financial burdens and underutilized

infrastructure. Long-term economic returns therefore depend on effective planning, governance quality, and sustainable investment strategies.

Limitations and Future Research

Despite the important findings of this study, several limitations should be acknowledged. One of the main challenges concerns data availability and consistency. Football investment data are not always reported uniformly across GCC countries, particularly for earlier years in the sample period. Some football-related expenditures are also difficult to measure precisely because they are integrated within wider tourism, infrastructure, or entertainment projects.

In addition, the study focuses primarily on macroeconomic indicators such as non-oil GDP growth, tourism arrivals, and infrastructure development. Although these variables capture important dimensions of diversification, they may not fully reflect broader social, institutional, or environmental impacts associated with football investment.

Another limitation relates to the time horizon of the analysis. While the study examines both short-term and medium-term effects, the full long-term economic consequences of major sporting events may require additional years of post-event observation. This is particularly relevant for recently completed projects and ongoing investment programs within the GCC region.

The study also focuses specifically on GCC economies, which share several structural characteristics, including oil dependence and state-led development models. As a result, the empirical results may not be fully generalizable to non-resource-dependent economies or countries with different institutional and financial structures.

Future access to more detailed project-level financial data may improve estimation precision and strengthen the measurement of football-related investment effects across sectors.

Future research may extend this analysis in several directions. First, future studies may use more detailed project-level data to examine differences between specific types of football investment. Second, researchers may investigate the social and environmental dimensions of football investment, including sustainability, urban inequality, and environmental impact. Third, additional econometric approaches, such as dynamic panel models or spatial econometric techniques, may provide deeper insights into long-term diversification effects and regional spillovers.

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Ethical and Data Considerations

This research depends entirely on publicly available secondary data obtained from international organizations, official government publications, and recognized statistical databases. No human participants, surveys, interviews, or confidential information were involved in the research process. Therefore, formal ethical approval was not required.

The study also follows principles of transparency and replicability. Variable definitions, data sources, and econometric procedures are clearly reported to allow future researchers to verify, reproduce, or extend the analysis. Every effort was made to ensure data consistency, accuracy, and methodological reliability throughout the empirical investigation.

Appendix

Table A1. Summary of Study Variables, Descriptions, and Data Sources

Variable	Description	Source
Dependent Variables		
GDP Growth (non-oil)	Annual % growth of GDP excluding oil-related revenues	World Bank, IMF, national statistics
Tourism Arrivals & Receipts	Total number of international tourist arrivals and associated tourism revenue (USD)	UNWTO, GCC national statistics
Employment in Sports & Services	Number or percentage of employed people in sports-related and broader service sectors	Labor ministries, World Bank
Infrastructure Spending	Government investment in sectors such as transport, stadiums, hospitality, and public utilities	Government budgets, IMF
Independent Variables		
Football Investment	Total annual expenditure (public/private) on football infrastructure, clubs, and development programs (USD millions)	Government budget reports, Deloitte Football Money League
Hosting Events	Binary variable: 1 if a country hosted an international football event each year; 0 otherwise	FIFA, national sports authorities
League Attendance	Average number of spectators per match in domestic football leagues annually	National football federations, Transfermarkt.
Transfer Spending	Total value of player transfers (incoming and outgoing) in football, per year (USD)	FIFA TMS, Transfermarkt.
Control Variables		
Oil Prices	Average annual price of Brent crude oil (USD per barrel)	World Bank, Brent crude index
Population Growth	Annual percentage increase in total population	GCC national statistics
Inflation Rate	Annual percentage change in consumer price index (CPI)	GCC national statistics
Trade Openness	Sum of exports and imports as a % of GDP	GCC national statistics
Government Spending (non-sports)	Public sector spending in areas excluding sports (e.g., health, education, defense)	GCC national statistics

Table A2: Panel Unit Root Tests results

Variable	LLC (Level)	IPS (Level)	ADF-Fisher (Level)	LLC (1st Diff)	IPS (1st Diff)	ADF-Fisher (1st Diff)	Order
GDP Growth	-1.98*	-1.65	3.12	-4.21***	-3.87***	15.32***	I(1)
Tourism	-1.44	-1.22	2.85	-3.98***	-3.41***	13.76***	I(1)
Infrastructure	-1.33	-1.18	2.44	-4.12***	-3.55***	14.90***	I(1)
Football Investment	-1.52	-1.36	2.71	-3.88***	-3.29***	13.11***	I(1)
Inflation	-2.11*	-1.94*	4.01*	-5.02***	-4.21***	18.45***	I(1)

Source: Author's calculations, * p<0.01, ** p<0.05, *** p<0.1

Table A3: Panel Cointegration Tests

Pedroni Test Results		
Statistic	Value	Prob
Panel v-Statistic	2.11	0.000
Panel PP-Statistic	-3.42	0.000
Panel ADF-Statistic	-3.88	0.000
Kao Test		
Statistic	Value	Prob
ADF t-statistic	-2.97	0.003

Source: Author's calculations

Table A4: Hausman test results

Test	Chi-Square	Prob
Hausman test	18.74	0.007

Source: Author's calculations

Table A5: Multicollinearity Test (VIF) results

Variable	VIF
Football Investment	2.31
Hosting Events	1.87
Inflation	2.44
Trade Openness	3.12
Population Growth	1.95

Source: Author's calculations

Table A6: Heteroskedasticity and Autocorrelation tests results

Test	Statistic	Prob.
Breusch-Pagan	12.83	0.005
White Test	21.47	0.002
Wooldridge Test	9.62	0.003

Source: Author's calculations

Table A7. Endogeneity and Robustness Handling

Model Specification	Econometric Issue Addressed	Method Applied	Purpose	Result
Baseline Model	Unobserved country heterogeneity	Fixed Effects Estimation	Control for time-invariant country-specific characteristics	Model appropriate (supported by Hausman test)
Model with Robust Errors	Heteroskedasticity	Robust Standard Errors	Correct non-constant variance of residuals	Coefficients remain statistically significant
Model with Clustered Errors	Serial Correlation	Clustered Standard Errors (by country)	Adjust for within-country correlation across time	Results remain stable
Lagged Variables Model	Reverse Causality / Endogeneity	Lagged Explanatory Variables	Ensure past football investment affects current economic outcomes	Coefficient signs and significance remain consistent
Robustness verification	Overall Model Reliability	Combined FE + Robust/Clustered SE	Validate stability of estimates	Results confirm robustness of econometric framework