An Analyzing of The Tactical Performance Characteristics of Spain's Goals in The 2024 Uefa European Championship

Dongzheng Li[a]
Jakrin Duangkam[b*]
Pongsatorn Sukityarn[c]

Article Info
Received 29 September 2025
Revised 7 November 2025
Accepted 16 November 2025
Available online 24 April 2026

[a] *Major of Physical Education and Health Education, Faculty of Graduate Studies, Udon Thani Rajabhat University, Thailand, E-mail: 1012804467@qq.com,*
[b*,c] *Major of Physical Education and Health Education, Faculty of Education, Udon Thani Rajabhat Universit, Thailand, E-mail: jakrin.d@udru.ac.th, pongsatorn.su@udru.ac.th*

Abstract

The purpose of this study was to analyze the goal-scoring characteristics of the Spanish national team in the UEFA Euro 2024. A total of 19 goals from 7 official matches were examined, focusing on four key variables: goal time, goal location, goal method, and pre-goal organizational patterns. Data were collected from official match videos and analyzed using heat map visualization and descriptive statistical methods.

The results were as follow:

1. Goal time: The results revealed a distinct "double-peak" pattern in goal timing, with the 16^{th}-30^{th} and 46^{th}-60^{th} minute intervals each contributing 27% of total goals (54% combined).

2. Goal location: In terms of spatial distribution, Zone 2 was the main scoring area with 10 goals (67%), while Zone 1, despite only three attempts, achieved 3 goals with a remarkable 75% conversion rate.

3. Goal method: Regarding goal methods, First-Time Shots demonstrated the highest efficiency with a 24% conversion rate and left-footed shots not only had the highest frequency (44.7%) but also achieved a conversion rate of 13%, slightly outperforming right-footed and header attempts.

4. Pre-goal organizational patterns: For pre-goal organizational patterns, positional attacks accounted for 53%, with 53% of goals initiated from the defensive third and 60% completed within five passes, reflecting a strategy of rapid and efficient offensive transitions.

This study was limited by the small sample size and descriptive analysis design. Nevertheless, the findings offer practical implications for coaches and trainers in developing training programs that emphasize timing-specific drills, central finishing efficiency, and rapid offensive transitions in football.

Keywords: Goal Characteristics, UEFA European Championship, Football

Introduction

Football is the most popular sport worldwide, with immense broadcasting value, cultural significance, and tactical diversity. The UEFA European Championship (Euro) is regarded as one of the most prestigious tournaments in international football, serving as both a platform for elite players and a concentrated stage for tactical innovations. Every four years, the competition highlights prevailing football trends, making it a valuable reference point for both research and coaching practice.

The recently concluded 2024 UEFA European Championship reinforced this perspective. Spain captured the title with a historic achievement: becoming the first team to win the tournament with a perfect record while also registering the highest number of goals scored in its history (ESPN, 2024; Spain national football team, n.d.). Traditionally celebrated for their possession-based style, Spain demonstrated notable tactical evolution by complementing controlled possession with vertical penetration, wide-area progression, and rapid transitions. This reflects the broader trend toward hybrid playing styles identified in longitudinal analyses of European Championships between 2012 and 2024, which show a shift from slower possession-based football to faster and more vertical attacking structures (Peng et al, 2025).

Goals, as the decisive element of match outcomes, provide critical insight into the effectiveness of offensive strategies. The study of goal-scoring opportunities whether through goal area analysis, pre-goal organization, or finishing patterns offers a deeper understanding of team offensive power, player role coordination, and spontaneous cooperation. Recent findings from the UEFA Youth League (2023–2024) confirm that tactical indicators and situational variables strongly influence scoring opportunities, further emphasizing the importance of systematic goal analysis for both academic research and applied coaching (Armatas et al., 2025).

Despite the increasing volume of research, analyses often fail to capture newly emerging tactical practices in a timely fashion. In rapidly changing contexts such as Euro 2024, delays in examining evolving strategies risk reducing the practical relevance of such findings. Therefore, a systematic and prompt investigation of Spain's attacking patterns and goal-scoring characteristics is necessary. Such research not only reflects the tactical practices of leading European teams but also provides grassroots coaches and youth academies with timely insights that can enhance player development and tactical training.

Therefore, this study aims to analyze "football performance efficiency is not only a technical indicator but also relates to the overall effectiveness and developmental value of the sport system" (Baert & Amez, 2018).

Objective

The objective of this study is to analyze Spain's goal-scoring tactical performance characteristics at UEFA Euro 2024 to provide transferable technical and tactical guidance for grassroots football development in China. In the Discussion, we explicitly compare Spain's patterns with selected Euro 2024 teams (e.g., high-possession vs. transition-oriented sides) and translate the findings into practical training implications for Chinese youth and school-based programs (e.g., timing-specific drills, central finishing patterns, and rapid transition play) while accounting for local constraints (coach education, training time, facility access).

Literature Review

1. Goal-Scoring Characteristics

The timing of goals is crucial for understanding the rhythm and decisive phases of football matches. Analyses of elite competitions consistently reveal that late goals especially in the final quarter of matches play a decisive role in determining outcomes due to fatigue, tactical substitutions, and increased offensive risk-taking (Armatas et al., 2025). Evidence from UEFA competitions shows similar clustering toward the end of each half (Michailidis et al., 2018), and the 2024 UEFA European Championship further illustrated this pattern as Spain broke the all-time goalscoring record while maintaining a perfect record (ESPN, 2024; UEFA, 2024). Beyond timing, team momentum and psychological factors also shape goal-scoring opportunities; coordinated collective organization under positive momentum is associated with successful attacking sequences, whereas negative momentum often precedes conceded goals (Gautier et al., 2024).

2. Goal Timing

Goal timing serves as a tactical indicator of offensive adaptation across matches and tournaments. In South American football, the distribution of goals depends not only on game phases but also on tournament context and external shocks such as the COVID-19 pandemic (Oliveira et al., 2025). UEFA Champions League analyses similarly show goal concentration in central periods particularly late in matches reflecting tactical persistence and emergent defensive vulnerabilities (Michailidis et al., 2018). At the same time, a shift toward faster, more vertical attacking since 2012 has altered when goals are most likely to occur, with rapid transitions creating earlier and more frequent attempts (Peng et al, 2025).

3. Goal Location

Spatial location provides a concrete readout of tactical effectiveness. Most successful attacks still conclude in the central corridor of the penalty area, underscoring positional play and central overloads (UEFA, 2024). Spain's record-breaking Euro 2024 campaign offers a contemporary illustration, with numerous finishes stemming from controlled build-ups into central spaces (ESPN, 2024). Yet modern play is increasingly hybrid: wide progression combined with rapid central penetration yields goals from cutbacks, crosses, and wider angles as well (Peng et al, 2025).

4. Pre-Goal Organizational Patterns

Pre-goal organization reveals the mechanisms that create high-quality chances. Situational variables such as the number of attackers involved and transition speed substantially raise the probability of scoring (Armatas et al., 2025). Immediately preceding goals, higher-intensity running and pressing are decisive determinants of outcomes in professional men's matches (Konefał et al., 2024). Organizational momentum also matters: positive momentum aligns with coordinated and efficient attacking sequences; negative momentum correlates with defensive disorganization (Gautier et al., 2024)

Research Methodology

1. Literature review method

According to the needs of the research content, in the process of research, the library, CNKI and other databases are mainly used to find reference materials, search by keywords such as "goal characteristics" and "European Cup", and collect, sort, summarize and analyze the relevant literature, aiming to explore the goal characteristics of the Spanish team and provide important reference materials for the research.

2. Video Observation Method

By watching by video from the competition of the Spanish team at Euro 2024, focusing on four variables: goal time, goal location, goal method, and pre-goal organizational patterns. A total of 19 goals from 7 official matches. The analytical framework adopted in this study followed the notational analysis principles proposed by Hughes and Franks (2005).

3. Mathematical and Statistical Analysis Method

The data of the Spanish football team of Euro 2024 was collected through the UEFA Euro 2024 summary report, and the statistics were carried out by SPSS27.0 performed analyzed by and heat map analysis program. Analyzed data were statistically analyzed by descriptive statistical frequency and percentages.

Conceptual Framework

The purpose of this research was to analyze the tactical performance characteristics of Spain's goal-scoring in the UEFA Euro 2024. The analysis focused on four major variables goal timing, goal location, goal method, and pre-goal organizational pattern which together represent the key components of goal-scoring performance.

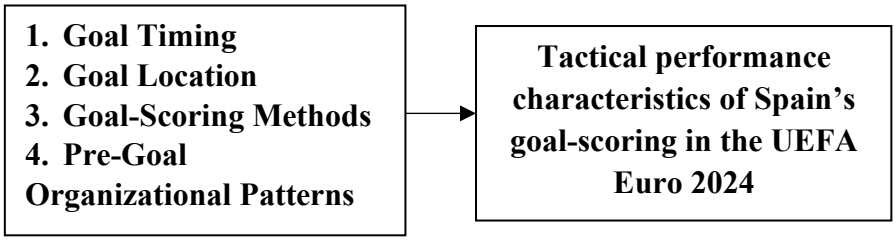


Figure 1: Conceptual Framework

Research Finding

1. Analysis of Goal Timing

Table1: Distribution of Spain's Goals by Time Periods (UEFA Euro 2024)

Goals by Time Periods	1-15 min	16-30 min	31-45 min	46-60 min	61-75 min	76-90 min	extra time	Total
Goals scored	1	4	2	4	1	2	1	15
Scored Percentage	7%	27%	13%	27%	7%	13%	7%	100%
Goals conceded	2	0	0	0	1	1	0	4
Conceded Percentage	50%	0%	0%	0%	25%	25%	0%	100%

Table 1 shows that overall, Spain's entire distribution of objectives in the tournament has a very clear "double-peak" form: 16^{th}-30^{th} and 46^{th}-60^{th} minute intervals are the most successful ones, comprising (54%) of all objectives. These two intervals fall on crucial intervals when the team has adapted to play rhythm completely and achieves its best organization conditionally and physically, due to which it performs very successful attacking combinations. Particularly, 46^{th}-60^{th} minute interval emphasizes Spanish talents to change very quickly to attacking mode after the interval and demonstrate very good tactical play and attacking effectiveness. During the UEFA Euro 2024, Spain conceded a total of four goals. Two goals were conceded in the 1^{th}-15^{th} minute period, accounting for 50% of all concessions.

One goal was conceded in the 61th-75th minute period (25%), and another in the 76th-90th minute period (25%). No goals were conceded in the other time intervals or during extra time. Overall, the distribution of goals conceded shows that concessions occurred primarily in the opening and final phases of matches, with fewer goals conceded during the middle stages.

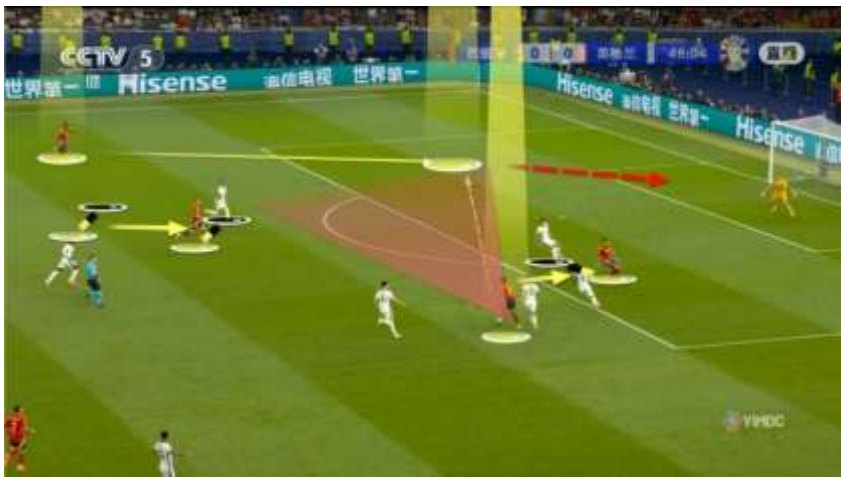


Figure 2: Goal in The Second Half Time

2. Analysis of Goal location

Table2: Shot And Goal Distribution by Zone (Spatial Analysis)

Zone	Shots	Goals	Avg. Shots/Match	Avg. Goals/Match	Shot Conversion Rate
Zone 1	4	3	0.57	0.43	75%
Zone 2	60	10	8.57	1.43	17%
Zone 3	0	0	0.00	0.00	0%
Zone 4	59	2	8.43	0.29	3%
Zone 5	0	0	0.00	0.00	0%

Table 2 shows that overall distribution perspective, Zone 2 emerged as the most concentrated attacking area for Spain, accounting for 48.8% of total shots (60 out of 123) and contributing 10 out of 15 goals (66.7%), thus confirming its role as the team's primary offensive zone. Located centrally within the penalty area, Zone 2 offers a wider shooting angle and shorter distance to goal, which facilitates higher-quality shot attempts and greater scoring potential. In terms of efficiency, its shot conversion rate stands at 17%, which, although slightly lower than that of Zone 1, still reflects a favorable scoring yield.



Figure 3: Shot and Goal Heat Map with Numbered Zones (1-5) in The Final 30 M

3. Analysis of Goal method

Table 3: Goal Distribution and Efficiency by Method

Goal method	Goal conceded	Goals scored	Shots	Avg. Shots/Match	Avg. Goals/Match	Shot Conversion Rate
Controlled Finish	2	4	43	6.14	0.57	9.3%
Dribble and Shot	0	2	32	4.57	0.29	6.3%
First-Time Shots	0	6	25	3.57	0.86	24.0%
Header	1	2	19	2.71	0.29	10.5%
Own Goal	1	1	1	0.14	0.14	100.0%
Free Kick	0	0	3	0.43	0.00	0.0%

Table 3 shows that in terms of shooting methods, First-Time Shots proved to be the most efficient, with 6 goals from 25 attempts and a conversion rate of 24%, highlight the team's advantage in quick link-up play and one-touch finishing. In contrast, Controlled Finishes and Dribble and Shots, despite being attempted more frequently, showed much lower efficiency, with conversion rates of 9.3% and 6.3% respectively. On the defensive side, most goals conceded came from opponents' Controlled Finishes and Headers, indicating certain weaknesses in penalty-area defense and aerial duels.



Figure 4: First-Time Shots

Body part used for shots

According to the statistical data shows that the Spanish national football team made a total of 123 attempts at goal, successfully converting 14 of them into goals (excluding own goals) during the UEFA Euro 2024, thereby achieving an 11% shot-conversion rate. A scrutiny of the data with regard to the body parts used in shots makes it clear that shots from the left foot dominated, making 55 attempts (around 44.7%) and scoring 7 goals, thereby achieving a conversion rate of 13%. This indicates that players who mostly used their left foot not only contributed more actively towards shooting attempts but also displayed more effectiveness towards conversion.

Table 4: Body Parts Used for Shots

Body Part	Number of goal shots	Goals scored	Shot Conversion Rate	Goal Conceded
Right Foot	48	5	10%	1
Left Foot	55	7	13%	2
Head	20	2	10%	1
Total	123	14	11%	4

For example, in the game against France, Lamine Yamal took the ball to the periphery of the penalty area, dribbled past a defender, and eventually took an exquisite long-range shot from his left foot, scoring a goal.



Figure 5: Left-Foot Shots

Right-foot shots were the second most common group, numbering 48, which represented 39.0% of all shots, leading to 5 goals scored and a corresponding 10% conversion rate. Though fewer frequent than their left-foot counterparts, these shots still showed a significant number of resultant goals, suggesting an equivalent ability to score goals by right-footed individuals when given individual consideration.

The headers total 20 shots, equivalent to 16.3%, accompanied by 2 goals, and hence constituted a conversion rate of 10%. This rate of efficiency was indicative of the results related to shots aimed at the goal using either foot; the direct goals scored through headers, however, were greatly restricted. This restriction can be attributed to Spain's tactical strategy, which included ground-based penetrating plays and lateral low crosses as compared to aerial attacks (Table 4). On goal concessions by body part, the left foot had the greatest frequency of

concessions, at 2, which represents 50% of the total. On the other hand, the right foot and the head each had one concession, representing 25% respectively.

4. Analysis Pre-Goal Organizational Patterns

1. Attacking Type

According to the chart, among Spain's 15 goals during the UEFA Euro 2024, positional attacks accounted for the largest share with 8 goals, representing 53% of the total. This indicates that the team, while continuing its traditional possession-based approach, maintained a structured and organized positional build-up as its primary offensive strategy, relying on multi-point ball circulation and spatial manipulation to create scoring opportunities. (See Table 5)

Table 5: Goals by Attacking Type

Attacking Type	Positional Attack	Counter-Attack	Second Phase Attack	Total
Goals Scored	8	5	2	15
Scored Percentage	53%	33%	13%	100%
Goals Conceded	1	3	0	4
Conceded Percentage	25%	75%	0%	100%

Table 5 shows that for instance, in a strategic build-up offensive, Rodri's shot provides an example of Spain's ability to move defensive units around. With sustained ball possession, the attacking group, in effect, pulled the opposing defenders out of a tight unit, leaving behind a good shooting chance near the penalty area's outer fringe, as shown in Figure 5. Exploiting available space, Rodri made a good long-range shot, illustrating tactical poise and spatial knowledge typical of Spain's build-up game.



Figure 6: Positional Attacking

Goals resulting from positional attacks tend to derive from sustained ball possession accompanied by effective passing sequences, illustrating Spain's ability to control tempo and implement complex passing frameworks, in particular through midfield organization and

coordinated thrusts down the wings. The counter-attack comprised the second most utilized approach, leading to the creation of 5 goals (33%).

These often resulted from rapid follow-ups following winning possession back in midfield or defended areas, more commonly after successful high pressing or interceptions. Spain made use of the gap immediately before reorganization of the enemy defense, relying on rapid vertical passing accompanied by rapid movement from offensive units to generate swift threats. That reflects Spain's ability to transition seamlessly from possession-based play to vertical attacking approaches as needed, strengthening their attacking ability. In addition, objectives from second-phase attacks comprised 2 goals, accounting for 13% of the sample, which ordinarily followed upon an initial attacking venture successfully repelled, when Spainverted possession astutely and organized a future attacking thrust. Although not overly frequent, goals from second-phase attacks illustrate the team's ability to keep the pressure on in the attacking third and to marshal efficiently when dealing with loose balls or secondary interventions frequently following from set pieces or crosses.

In terms of goals given away grouped by attacking approach, counter-attacks were the leading group appearing 3 times, which represents 75% of all concessions. Conversely, positional attacks caused 1 goal to be given away, which represents 25%, while no goals were given away due to second-phase attacks.

2. Goal Initiation zones Before Scoring

The zone of attack refers to the area of the pitch where a team, upon regaining possession and transition from defense to offense, begins to organize an effective attacking movement. This section aims to examine the initiation zones corresponding to Spain’s goals during the UEFA Euro 2024, in order to reveal their overall attacking organization and tactical structure (See Table 6).

Table 6: Goal Initiation Area Before Scoring

Goal Initiation Area Before Scoring	Attacking Third	Midfield Third	Defensive Third	Total
Number of Goals Scored	4	3	8	15
Goals Scored Percentage	26%	20%	53%	100%
Number of Goals Conceded	1	1	2	4
Goals Conceded Percentage	25%	25%	50%	100%

Table 6 shows that among the 15 goals scored by Spain in the tournament, 8 goals (53%) were initiated from the defensive third, 4 goals (26%) from the attacking third, and 3 goals (20%) from the middle third. This distribution suggests a pronounced tendency for Spain to launch attacks from deep areas. The frequent use of deep build-up reflects the team’s strategic response to high pressing and compact defensive blocks, often opting for long balls, diagonal switches, or flank progression to bypass pressure and break defensive lines. This approach not only increased the efficiency of attacking transitions but also underscored the tactical discipline and technical quality of Spain’s backline in initiating play. In a match against Germany, Spain’s center-back initiated the attack from the defensive third with a direct pass to Morata, who had dropped back near the center circle. Drawing defenders toward him, Morata then released the ball to the right flank, quickly advancing the play behind the opponent’s defensive line and showcasing the effectiveness of direct build-up from the back.



Figure 7: Attacking From Defensive Third

Initiating area of assault refers to that particular portion of play when, following gaining possession, a team shifts from a defense to an attacking strategy, initiating the construction of a shaped attacking maneuver. For this analysis, we aim to identify initiating areas engaged by Spanish goals in UEFA Euro 2024, to illustrate their overall attacking structure and tactical makeup. Within the tournament structure, Spain retained a total of 15 goals, 8 goals (53%) of which stemmed from the defensive third, 4 goals (26%) from the attacking third, and 3 goals (20%) from the middle third. This pattern reflects Spain's unique tendency to launch attacking transitions from deeper areas of the pitch. The overarching use of deep build-up tactics reflects the team's tactical response to high pressing and compact defense, more often using long passes, diagonal switches, or flank runs to avoid pressure and breach defensive frameworks. This approach not only improved the quality of attacking transitions but also emphasized the tactical unity and technical skill of Spain's defensive side in controlling the rhythm of the game. In a specific game against Germany, Spain's center defender triggered an offensive process from the defensive third using a direct pass to Morata, who had positioned himself close to the center circle. Through the involvement of defenders in front of him, Morata then released the ball to the right wing, taking the play quickly beyond the defensive line and showcasing the effectiveness of direct build-up approaches from deeper areas of the pitch (See Figure 8). While the middle third has long been viewed as the key area for possession-based football, less than 3 goals were created from this region during the tournament. Nevertheless, these attempts were often accompanied by quality combinations. In these instances, Spain utilized quick one-touch combinations to explore vertical space, often combining central penetration with wide support. With the spatial complexities and defensive solidity within the area of the midfield sector, effective attacking transitions from this region required a high level of tactical accuracy. Even though less common, these breakthroughs often presented major threats when launched.

The attacking third accounted for 4 goals, largely generated through high pressing or sustained pressure following set-piece situations. Attacks initiated from this zone placed greater emphasis on players' technical ability in tight spaces and clinical finishing, highlighting Spain's proficiency in capitalizing on advanced ball recoveries and second-ball situations. In the distribution of goals conceded by goal initiation area, the defensive third accounted for the highest number with 2 goals conceded (50% of total concessions). Both the attacking third and midfield recorded 1 goal conceded each, representing 25% respectively.

3. Passes Before Goals

In this study, the number of passes before a goal is defined as the number of passes completed by the attacking team without losing possession prior to the shot. Situations such as penalties, rebounds, and direct shots following interceptions are categorized as direct shots and are not included in the passing count. Among Spain's 15 goals during the UEFA Euro 2024, 9 goals (60%) were preceded by 1 to 5 passes, while only 5 goals (33%) involved more than 5 passes (See Table 7).

Table 7: Passes Completed Before Goals

Passes Before Goals	0 Passes	1-5 Passes	More than 5 Passes	Total
Goals Scored	1	9	5	15
Goals Scored Percentage	7%	60%	33%	100%
Goals Conceded	0	3	1	4
Goals Conceded Percentage	0%	75%	25%	100%

Table 7 shows that the highlights a key trend in high-level competitive football: the efficiency of attacking transitions is often linked to minimizing redundant passes and accelerating offensive tempo. Excessive passing not only reduces attacking efficiency but also increases the risk of turnovers, giving opponents opportunities to launch counterattacks. Particularly during transitions, lengthy passing sequences allow the defensive side time to regroup and organize, weakening the attacking team's ability to exploit imbalanced defensive structures.This is especially true in counter-attacking scenarios. Following a turnover or successful interception, the defending side requires time to recover its shape. If the attacking side can transition quickly, moving from ball recovery to penetration in one or two passes, it can maintain the tactical initiative and capitalize on the disorganization of the opponent. Thus, reducing lateral passes and unnecessary back passes has become an essential adjustment in Spain's approach to increasing offensive efficiency.

In the match against England, Spain scored through a concise and efficient passing sequence. The team required only three consecutive passes to dismantle the opposition's defensive structure: the central midfielder played a penetrating pass to an advancing teammate, who drew the Centre-back and quickly laid the ball wide. The winger then delivered a cross into the box, where a central runner applied the decisive finish. This goal exemplifies Spain's ability to create high-quality scoring opportunities within fewer than five passes, demonstrating remarkable attacking efficiency.

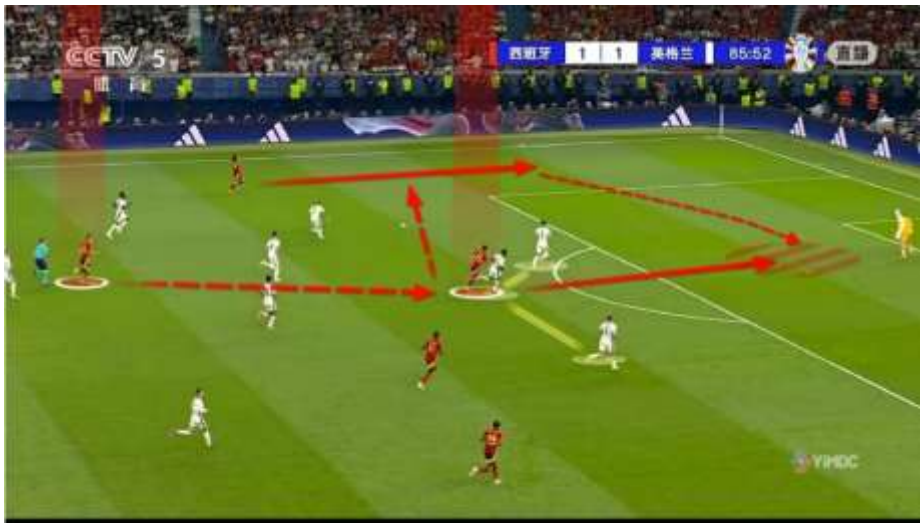


Figure 8: 1-5 Passes Before Goals

In terms of goals conceded by passes before goals, attacks involving 1-5 passes resulted in the highest number of concessions, with 3 goals conceded (75% of total concessions). Attacks involving more than 5 passes accounted for 1 conceded goal (25%), while no goals were conceded from situations with zero passes

Conclusion

1. Goal timing

Spain's goals in UEFA Euro 2024 showed a double-peak pattern, with most scored between the 16th - 30th and 46th - 60th minutes (54% in total). These periods reflected the team's best rhythm and physical condition. Additional goals in stoppage and extra time highlighted their resilience, while scoring in every interval indicated stable offensive output across the match

2. Goal location

In terms of spatial distribution, Zone 2 yielded the most goals due to its central positioning, wide shooting angle, and proximity to the goalkeeper, offering greater scoring opportunities. While Zone 1 produced only 3 goals, its exceptionally high conversion rate of 75% reflects Spain's acute awareness and decisiveness in capitalizing on close-range opportunities. In contrast, Zone 4 saw frequent shot attempts but resulted in only 2 goals, translating to a low 3% conversion rate. This can be attributed to the increased shooting distance and the extended reaction time afforded to the goalkeeper, making long-range shots less effective overall.

3. Goal method

Analysis of shooting methods reveals that Spain's scoring patterns primarily relied on controlled finishes and quick-touch opportunities. First-Time Shots demonstrated the highest conversion efficiency at 24%, indicating a tactical preference for rapid ball circulation and decisive one-touch finishes in the final third. This reflects the team's emphasis on attacking tempo and execution speed. In terms of shooting body parts, the distribution was relatively balanced: left-footed shots occurred most frequently and yielded slightly higher efficiency than right-footed ones. Although headers showed a decent conversion rate, the total number

of goals from headers was low, reflecting Spain's preference for ground-based penetration over aerial strategies

4. Pre-goal organizational patterns

In terms of attack organization, positional play accounted for the majority of Spain's goals (53%), supported by a notable share from counter-attacks (33%) and second-phase attacks (13%). Additionally, over half of the goals (53%) were initiated from the defensive third, indicating the team's preference for structured build-up play starting deep within their own half. Through vertical passing and wing progression, Spain effectively dismantled defensive lines and created scoring chances. Moreover, 60% of the goals were completed within five passes, reinforcing the tactical emphasis on fast, efficient, and minimalistic transitions between defense and attack. This strategic balance between patient build-up and rapid execution underlines Spain's adaptability and tactical coherence in the tournament.

Discussion

1. Analysis of goal timing

The double-peak distribution of Spain's goals between the 16th-30th and 46th-60th minutes indicates critical phases of enhanced physiological and tactical performance. From a sports physiology perspective, these periods correspond to optimal aerobic capacity and neuromuscular efficiency, which typically occur after the initial warm-up phase and immediately following halftime recovery. According to Michailidis et al. (2018), players reach peak oxygen uptake and improved decision-making accuracy after approximately 15 minutes of continuous play, enabling sharper attacking transitions. Similarly, post-halftime intervals allow partial glycogen replenishment and physiological reset, enhancing reaction speed and coordination (Oliveira et al., 2025). Spain's ability to exploit these physiological windows demonstrates a well-integrated conditioning and tactical structure that supports sustained offensive output throughout the match.

This pattern also reflects effective tactical management. During these phases, Spain frequently adjusted tempo and formation to maximize vertical penetration and exploit opponent fatigue. The synchronization between high physical readiness and tactical adaptability explains Spain's scoring efficiency and aligns with broader trends in elite football emphasizing rapid transitions and mid-phase dominance (Peng et al., 2025; UEFA, 2024).

2. Analysis of goal location

Spain's goals were predominantly concentrated in central scoring zones, especially Zone 2, which accounted for two-thirds of total goals. This spatial bias highlights the team's tactical focus on maintaining positional superiority within high-probability scoring areas. Physiologically, central penetrations minimize physical strain by shortening running distances and optimizing shooting angles, thereby conserving energy for repeated attacking efforts (Reilly, 2008; Kubayi, 2020).

The high conversion rate in Zone 1, though with fewer attempts, demonstrates the effectiveness of close-range positioning and rapid decision-making under pressure. This pattern aligns with Michailidis et al. (2018) and UEFA (2024), who observed that central-area finishes yield the highest expected goal values due to reduced goalkeeper reaction time and optimal shot trajectory. From a tactical performance standpoint, Spain's compact offensive shape emphasizing quick ball circulation and central overloads reflects an advanced application of "positional play" allowing players to exploit spatial gaps efficiently while maintaining physiological economy (Codina et al, 2025).

3. Analysis of goal method

Spain's dominance through first-time shots reflects the synergy between tactical tempo and physiological readiness. First-time finishes, requiring rapid visual-motor coordination and pre-activation of shooting muscles, depend heavily on fine neuromuscular control developed through high-intensity interval training. The 24% conversion efficiency of first-time shots suggests that Spain's players not only anticipated ball trajectories effectively but also executed within milliseconds indicative of superior cognitive-motor integration (Eusebio et al, (2025).

Left-footed and right-footed balance in scoring further indicates symmetrical muscular conditioning and bilateral skill training, reinforcing physical versatility. Compared with controlled finishes or dribble shots, which require longer preparation time and energy expenditure, first-time shooting optimizes both tempo and physiological efficiency. These findings correspond with Armatas et al. (2025) and Kyranoudis et al. (2024) who reported that high-speed technical executions following short passing sequences produce higher scoring success. Thus, Spain's goal-scoring methods illustrate an effective balance between tactical execution and physiological optimization.

4. Analysis of pre-goal organizational patterns

The predominance of positional attacks (53%) and the high proportion of goals initiated from the defensive third (53%) reflect Spain's tactical emphasis on structured buildup combined with rapid transition. Physiologically, this approach maintains moderate-intensity exertion for defenders and midfielders during ball circulation, allowing controlled heart rate and delayed fatigue accumulation. When opportunity arises, the team accelerates into high-intensity bursts a transition supported by anaerobic readiness and neuromuscular reactivity (Konefał et al., 2024).

Counter-attacks (33%) further demonstrate the team's ability to exploit opponents' temporary disorganization, requiring explosive sprinting and maximal power output over short distances. Such sequences correspond with studies by Gautier et al. (2024), indicating that positive momentum and coordinated collective runs are crucial for goal creation during transition phases. Kubayi and Toriola (2019) similarly reported that effective transition speed and sequence length strongly influence scoring probability in elite matches.

The predominance of short passing combinations (1-5 passes) before goals confirms Spain's strategy of rapid progression and low time-to-shot ratio, minimizing defensive recovery time. This efficiency reflects tactical intelligence and physical conditioning harmonized through high-intensity, small-sided training models an approach consistent with elite-level performance frameworks (Armatas et al., 2025; Peng et al., 2025).

Suggestion

Suggestions for Research

1. Spain scored most often between the 16th–30th and 46th–60th minutes, showing peak efficiency during these phases. Training should therefore simulate time-specific match scenarios, focusing on controlled build-up early and rapid offensive transitions after halftime.

2. Most goals came from Zone 2 and Zone 1, while Zone 4 showed low efficiency. Training should emphasize quick combinations and finishing in central areas, poaching in close range, and improving long-range shot quality and decision-making.

3. First-Time Shots were the most efficient, and left-footed attempts showed both higher frequency and accuracy. Training should highlight one-touch shooting, bilateral foot coordination, and heading in set-piece contexts to maximize finishing variety and precision.

Suggestions for Future Research

1. Opponent-adjusted spatial models: Build zone-based xG/xThreat controlling for opponent strength, match state, and defensive shape to test generalizability of Zone-2 dominance and Zone-1 efficiency across tournaments.

2. Causal mechanisms of timing and finishing: Use mixed-effects or quasi-experimental designs to identify effects of late substitutions/pressing and final-pass type/preparation time on conversion in central zones; extend to set-pieces vs. open play and men's vs. women's competitions.

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