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EXTENDED ABSTRACT

Impact of Rule Changes on Tactical Performance: A Comparative Analysis of Attacking and Defensive Metrics in the UEFA Champions League

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I. Introduction

The structure of a football tournament can significantly influence team tactics, match dynamics, and overall performance outcomes [1]. In elite competitions such as the UEFA Champions League, even subtle changes to tournament format may prompt tactical adjustments, as teams seek to optimize performance within evolving structural constraints. This study investigates the impact of recent changes to the UEFA Champions League format on attacking and defensive performance metrics among the top four teams. By comparing data from the 2023/2024 season (under the traditional format) with the 2024/2025 season (under the revised format), the study aims to identify and describe tactical shifts prompted by these structural changes. Through quantitative analysis of key match statistics, the research offers insights into how top-tier European clubs adapt their strategic approaches in response to competition design modifications. Understanding these adaptations not only contributes to the growing field of performance analytics in football [2] but also informs coaching, preparation, and organizational decision-making in high-stakes tournament settings [3].

II. Methods

This study employed a quantitative, comparative research design using secondary match statistics from the UEFA Champions League. Data were collected for the top four teams from two consecutive seasons: 2023/2024 (old tournament format) and 2024/2025 (new format). The focus was on key attacking and defensive performance indicators, such as goals, shots on target, possession, interceptions, and defensive duels. To assess the impact of the format change, independent sample t-tests were conducted to compare mean values across the two seasons. This statistical approach enabled the identification of significant differences in tactical behavior resulting from structural modifications to the competition format. Data reliability was ensured through the use of validated official match sources (e.g., UEFA's performance analytics reports), with a test-retest reliability threshold set at $r > 0.80$. The acceptable percentage of error for performance variable coding was maintained below 10%, in line with established standards in sports performance analysis.

III. Results and Discussion

A. Describe the Effect of Game Format Changes on Attacking and Defending Variables Among the Top Four Teams in UEFA

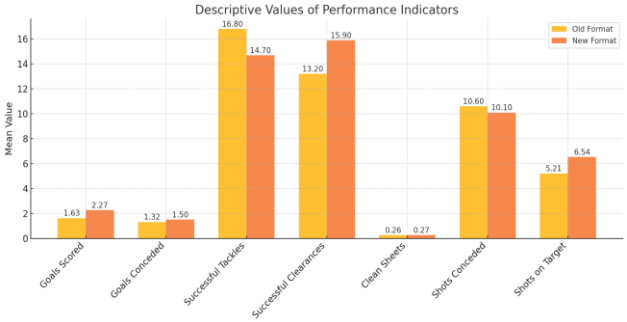

Fig.1 Descriptive value of the performance indicators, comparing different seasons

Figure 1 presents a comparative analysis of the mean values for key performance indicators under the old (2023/2024) and new (2024/2025) UEFA Champions League formats. The results indicate a noticeable increase in goals scored (from 1.63 to 2.27) and shots on target (from 5.21 to 6.54) under the new format, suggesting a tactical shift toward more aggressive, attacking play. This trend aligns with recent findings that structural changes in tournament formats can incentivize risk-taking and increase offensive output among elite teams [3]. Conversely, a slight decline in successful tackles (from 16.8 to 14.7) and a rise in successful clearances (from 13.2 to 15.9) may indicate adjustments in defensive priorities, with teams opting for positional discipline and recovery-based defending over high-pressure challenges. Although clean sheets remained stable (0.26 vs. 0.27), the modest increase in goals conceded (from 1.32 to 1.50) further supports the notion that open and attacking match dynamics have become more prevalent. Interestingly, shots conceded slightly decreased (from 10.6 to 10.1), which may reflect improved defensive shape or enhanced possession control—factors increasingly linked to modern match dominance in elite football [2]. Overall, these patterns suggest that the new competition format has influenced tactical decision-making, prompting both offensive intensification and subtle reconfigurations in defensive structure.

B. Differentiate the Effect of Game Format Changes on Attacking and Defending Variables Among the Top Four Teams In UEFA

Table 1 summarizes the results of the Mann-Whitney U test conducted to assess differences in key performance indicators between the old and new UEFA Champions League formats. The analysis included statistical values such as the U statistic, effect size, and corresponding p-values to determine the significance of any observed differences. Goals scored showed a small-to-moderate effect size ($r = 0.2678$) with a p-value of 0.089, indicating a trend toward increased scoring in the new format, although this result did not reach statistical significance ($p > 0.05$) [3]. Goals conceded, successful tackles, and successful clearances also presented small effect sizes ($r = 0.1213$, 0.2648, and 0.1154, respectively), with p-values well above 0.05, suggesting no statistically significant differences in these defensive metrics between formats [2]. Clean sheets, shots conceded, and shots on target demonstrated very small effect sizes ($r = 0.0385$, 0.0311, and 0.3343), with only shots on target reaching statistical significance ($p = 0.038$). This result implies a meaningful increase in shot accuracy or offensive efficiency under the new format [1].

TABLE I
MANN-WHITNEY U TEST TABLE

Indicator	Statistic	Effect size	*p* value
Goals scored	248	0.2678	0.089
Goals conceded	297	0.1213	0.441
Successful tackle	249	0.2648	0.102
Successful clearance	299	0.1154	0.480
Clean sheet	325	0.0385	0.771
Shots conceded	328	0.0311	0.854
Shots on target	225	0.3343	0.038

**Significantly different if ($p < 0.05$).*

IV. CONCLUSIONS

Among all performance indicators analyzed, only shots on target exhibited a statistically significant difference between the old and new UEFA Champions League formats, with a moderate effect size. This suggests that the new tournament structure may have encouraged teams to adopt more effective attacking strategies, resulting in better shot placement. Although goals scored approached significance, the remaining indicators revealed no meaningful differences, indicating that while offensive precision improved, other aspects of team performance remained relatively stable. These findings highlight attacking efficiency as the most responsive variable to structural changes in elite football competition formats.

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