From Readiness to Calibrated Match Structure in Elite Team Sports

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Headline

Most games are not surprises. Most games follow structure.

The FAIR framework demonstrates that when pregame readiness (RAI) and postgame execution (PAI) are analyzed together, match outcomes become interpretable through identifiable performance levers rather than narrative explanations.

Aim of the paper

Following the introduction of the Readiness Attribution Index (RAI), which quantified pregame structural preparedness (1), and the subsequent development of execution-based Performance Attribution (PAI), which decomposed in-game performance domains (2), this report represents the third step of the FAIR framework within the SPSR program. Specifically, it examines whether calibrated analysis confirms that most matches follow structural readiness signals and whether deviations are primarily execution-driven. In the initial SPSR publication, readiness-based attribution was presented within the broader Performance Attribution framework; the present trilogy formalizes the distinction between structural readiness (RAI) and execution-based attribution (PAI) as complementary but analytically distinct layers.

Design

Retrospective match-based comparative analysis using publicly available elite team sport data (NBA, NFL, European soccer). Each match was decomposed into pregame structural readiness (RAI), in-game execution domains (PAI), and comparative performance levers. The objective was structural interpretation rather than outcome prediction.

Conceptual Framework

The framework integrates readiness (RAI), execution (PAI), and calibrated match probability using Shapley-based attribution (4). Calibration performance was assessed using Brier score and reliability curves (3).

Results

To examine generalizability beyond basketball, the framework was applied to a championship-level NFL context. Pregame readiness favored Seattle (RAI +0.71), and postgame execution domains (offensive execution, efficiency/turnovers, defensive resistance) consistently reinforced this structural asymmetry. The final score (29–13) aligned with pregame expectations, illustrating that even in high-visibility contexts, outcomes typically reflect structural readiness rather than narrative momentum.

In the most recent NBA slate (11 matches), 91% of outcomes aligned with pregame readiness signals, indicating high structural stability. A minor deviation was observed in LA Clippers vs Orlando Magic (109–111). Pregame RAI favored the Clippers (+0.30), but negative execution deltas (offensive execu-tion, shot conversion, defensive resistance) offset this advantage. The upset (surprise score 0.06) was therefore execution-driven rather than structural.

Compared with NetRating (Figure 1), discrimination was similar, whereas calibration improved in mid-probability ranges with a lower Brier score. The primary added value was therefore probabilistic reliability rather than marginal discrimination gain. Across matches, surprises were primarily execution-driven rather than structural collapses. Integration of RAI and PAI identifies actionable performance levers: when readiness asymmetries exist, execution domains determine whether structural advantages are preserved or neutralized.

This third step extends the FAIR framework beyond readiness and execution decomposition by introducing structured match calibration, quantification of deviation (surprise score), and cross-sport application. The contribution therefore lies not in reapplying RAI or PAI, but in formalizing how structural expectation and execution interact within a calibrated match-level interpretation model.

Practical Applications

The RAI–PAI integration allows practitioners to distinguish structural imbalance from execution variance and to identify actionable performance levers. It may also assist performance departments in monitoring structural fatigue effects, consistent with established load–performance frameworks (5,6).

Limitations

Public data restrict detailed defensive tracking capabilities, the weekly sample size was limited, and external validation across multiple slates is ongoing.

Conclusion

As the third step of the FAIR SPSR program, integration of RAI and PAI within a calibrated framework shows that most match outcomes follow structural readiness signals and that deviations are typically execution-driven. Rather than predicting randomness, the FAIR approach formalizes competitive structure and identifies the performance levers that govern match outcomes.

Conflicts of interest

The author declares no conflicts of interest.

Data availability

Data were derived from publicly available NBA and European football statistics. Analytical procedures and code are available from the author upon reasonable request. An illustrative demonstration of the analytical framework is accessible at: `https://1tw69i-eytan-ellenberg.shinyapps.io/fair-sport/`
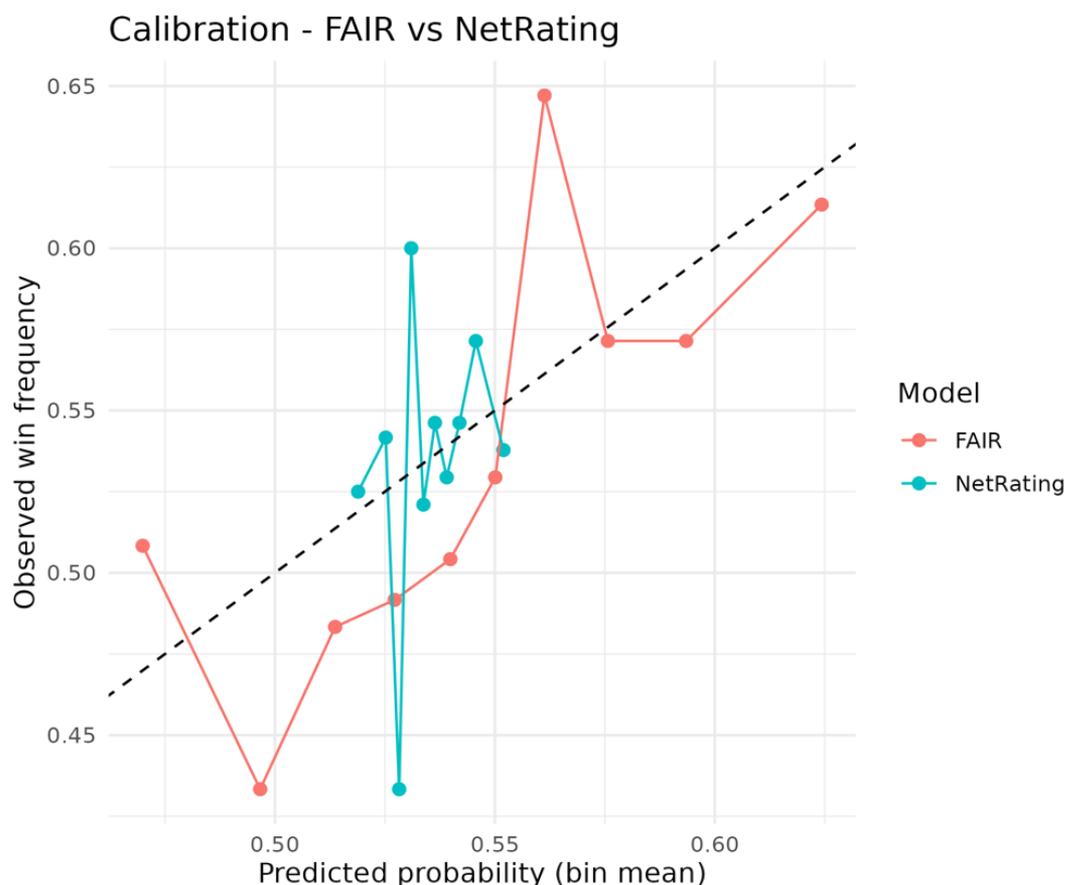
Fig. 1. Calibration comparison between FAIR and NetRating in the NBA rolling dataset. The diagonal line represents perfect calibration.

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