

Model and methodology for transfer evaluation of soccer players

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The soccer transfer market (6.5 billion USD) is a huge but partially financial struggling business. The aim of this scientific work is to develop a transfer decision concept to improve financial sustainability. It considers financial elements like predicted market values and wages of soccer players. The model predicted a three-year prognostic of market values for the club BVB using market value valuation data from the crowd to support transfer strategy in future.

Introduction and Objectives

The soccer business has become a 6.5 billion Dollar business in the year 2022 (FIFA, 2023). Thus soccer clubs in major leagues are no longer just sports organizations, but also businesses with high financial in- and outflows. However, many clubs report negative financial results and make a deficit rather than a profit (Deloitte, 2022). Key factors influencing clubs' financial results are the negotiated transfer fees and the agreed salaries with contracted soccer players. The aim of this thesis is to develop an initial concept to support transfer decisions with greater consideration of financial factors. Players are to be considered as assets with a total cost of ownership (TCO) approach. To determine their TCO, a forecasting model should be developed and included in the concept to predict the development of market values.

Theoretical Background

The market value and the effective amount paid for a player ("transfer fee") can be different. However, the transfer fee is influenced by the estimated market value, as the market value could serve as a reference point for negotiations. The platform Transfermarkt.de provides well-discussed market values within its user community. The market value development data provided by this platform is often consistent to the actual transfer fees. This so called "wisdom of crowds" (Surowiecki, 2005) is a strong tool to assess players market value and to make use of it for market value predictions.

Methodological approach

Market value histories of 350 players (defence, mid-field, and forwards) from the German Bundesliga were collected via Transfermarkt.de and fitted to a normal distribution of market values over soccer players' age. The fitting parameters mean, and standard deviation provide the forecasting model for a "standard player" in his field position between age 18-40. Using these standard values, the forecasting model can

predict market values. The model is then validated to access the reliability of simulating transfer decisions. As a final step, the predicted market values from the forecasting model are embedded into the transfer decision concept together with the recommendations for player transfers.

Results

Henceforth, with data gathered from Transfermarkt.de a market value prediction can be made. Figure 1 shows the rolling one-year & three-year market value forecast over the life cycle of the soccer player Mats Hummels compared to the documented market value on Transfermarkt.de. As a final step, the predicted market values from the forecasting model are embedded into the transfer decision concept together with the recommendations for player transfers.



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Implications and Recommendations

The developed transfer decision concept can improve the net transfer value on the balance sheet. In addition, it provides market value forecasts and transfer recommendations for negotiations. Furthermore, the accuracy of the forecasting model shows its practical usefulness with an average forecast error of 26.3% over the tested squad within 27 players. The predicted market values provide the transfer decision concept with cost elements such as market values and salaries to create recommendations in dealing with upcoming contract signings.

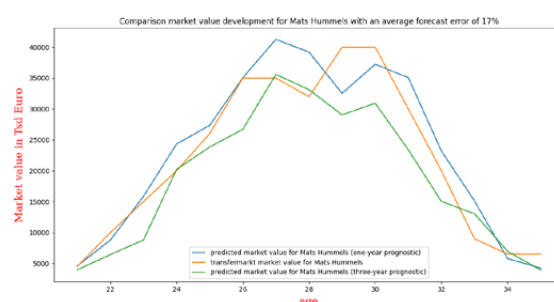


Figure 1: Comparison based on Mats Hummels' market value 2007 - 2022