Dynamic Ticket Pricing

Implementation in European Football

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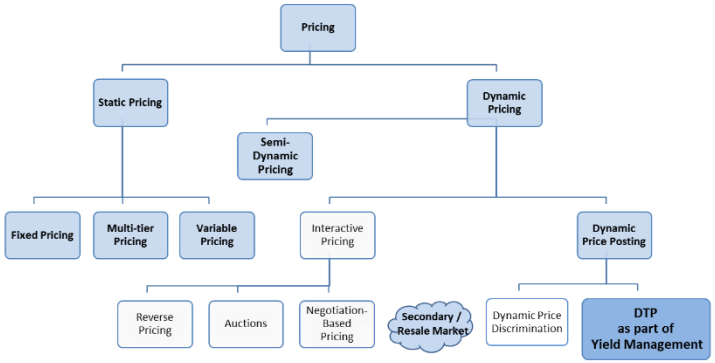
Football Industry and Tickets

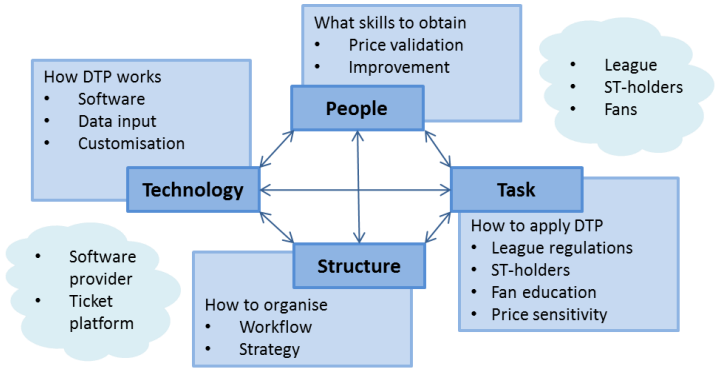
Recent regulative and economic developments have put more pressure on football clubs to generate revenue streams. Ticket sales as part of match-day revenue are one of the main income streams, which football clubs can directly influence. Dynamic Ticket Pricing (DTP) focuses on increasing attendance and ticket revenue through optimal ticket price settings.

Topic	Comment
Uniqueness of Football as a Sport	Football clubs face a specific business environment dealing with interdependencies of sporting success, financial sustainability, and media attention. Other relationships such as leagues, regulative bodies and a loyal fan basis build the frame of it.
Environment of and Demand for Football	Demand for football tickets depends on various interacting variables, which makes its assessment complicated. Main factors influencing attendance for games have been identified as the local market environment, sporting success, seasonal and week-day timing of the game, price sensitivity or substitutes in form of live broadcasting or other events. Football fans are split into loyal season ticket holders, regular and non-regular match ticket purchasers and non-attenders.
Characteristics of Tickets	Tickets are characterised as perishable goods facing uncertain demand and being bound to capacity constraints resulting in high fixed but low variable costs. These factors often lead to under-priced tickets, however, price setting might depend on a club’s intentions to maximise revenue, utility or wins.

Ticket Pricing

Topic	Comment
Price discrimination	Price discrimination theory, which has the goal to increase producer and consumer welfare, works well for ticketing. Most commonly applied practices include consumer segmentation based on personal demographics, quantity or quality. Depending on the timing of price setting and price communication, static and dynamic pricing can be distinguished.
Pricing  Based on Schwind (2007): Dynamic Pricing and Automated Resource Allocation for Complex Information Services.	**Static Pricing:** Prices are denoted in advance of a football season. Currently applied approaches include unitary ticket pricing with one single admission price for the whole stadium, multi-tier pricing, where tickets are priced differently based on stadium location and linked viewing quality, and variable pricing, which prices games differently depending on expected demand. For multi-tier pricing, an appropriate stadium categorisation is vital, whereas for variable ticket pricing the correct classification of the games is important. **Dynamic Pricing:** Semi-dynamic ticket pricing classifies games according to a variable pricing scheme; however, price bands are determined during and not at the beginning of the season. This allows a more accurate game categorisation. Further, DTP is the pricing method, which sets prices for each game and seat on a continual time basis. This allows adapting prices on a daily basis according to demand, which is influenced by customer behaviour. Resale and secondary markets are considered to reflect true market demand, giving hints for ticket price developments.

Issues of and Focus for the Implementation of Dynamic Ticket Pricing

Topic	Comment
Impact and Influence of DTP  Based on Leavitt, Dill and Eyring (1973): The organizational world.	The implementation of DTP is part of change management. The exact execution depends on the individual organisation. The identified key areas follow an organisational model that identifies four variables that mainly constitute a company. **Technology:** DTP works based on sales data, which is input into software for price calculations. Proper data transfer is crucial for timely price adaptions and running DTP. Required data input include complete ticket details for past seasons and daily sales data transmission for the current season. Further information such as broadcast transmission, derbies, team performance or marketing campaigns help to interpret price developments. Further, each club must customise parameters to its specific situation, such as minimum and maximum ticket prices, number of floor prices, or frequency, direction and amount of price changes to run DTP effectively.

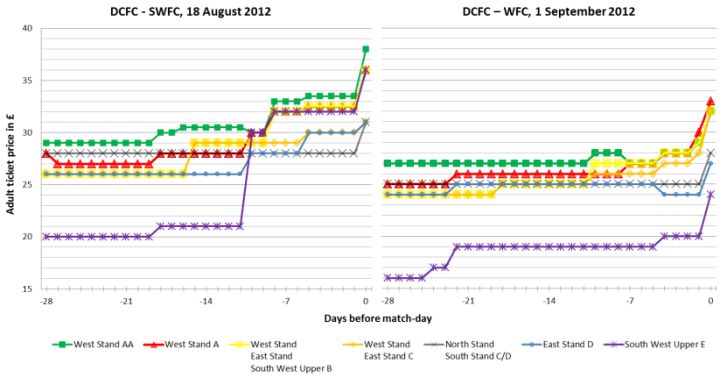
Task: DTP must be compatible to league regulations. In English football, the leagues stipulate certain rules, which limit ticket price setting. Approval of the league and its member teams is therefore currently necessary to implement DTP. To be compliant with the away-fan rules, those sections are either excluded from DTP or away-fan tickets are apportioned with controllable fixed prices. ST-holders must always get the best deal in their section. This is achieved by applying a variable price scheme for each match and not pricing tickets for match ticket purchasers below this floor price. Communication with season ticket holders and fans is important from the very beginning of DTP implementation to encourage them into the new price method and educate them how it works. Price sensitivity tests must be executed before DTP implementation, as the understanding of this factor as one of the major elements is crucial for successful DTP operation.

People: Football clubs must perform constant price validation, as calculated prices by the software are suggestions, which need to be approved by clubs. Further, football clubs should institutionalise a process of continuous improvement and in-house analysis concerning DTP. DTP is considered as a tool and not a solution for ticket price setting and therefore clubs must ensure to take full advantage of it by using it accurately.

Structure: DTP will change the current workflow of an organisation. Cross-departmental work will occur as well as new processes for non-ticketing departments. DTP needs to fit into the club's strategy. Only a clear strategy enables an effective implementation and running of DTP, as it can be geared towards these goals. This includes the tactical decision to choose the right momentum for DTP implementation.

Match Ticket Data of Dynamic Ticket Pricing and Notable Findings

Topic	Comment
Price Development for Derby County FC's first two Games in the 2012/13 Season using DTP	**Match Ticket Data**



First data about ticket price developments revealed from Derby County FC and Cardiff City FC shows that price adaptions can be executed conservatively or aggressively. Derby County FC has applied a more aggressive approach for the first two matches by starting with lower floor prices to potentially stimulate demand and applying more stadium categorisations and price adaption. The absolute change in price correlates to the number of tickets sold. Therefore, more stable, straight price lines or lower absolute price adaptions would indicate low-demand. This general assumption is reflected by fewer and especially lower price changes in Derby County FC's second game with a 20% lower stadium utilisation rate compared to the first game.

Notable Findings

Preconditions: Preconditions enabling a successful implementation of DTP include compliance with league regulations, price as a major perceived issue for attending a game including flexible price sensitivity in the marketplace, good stadium infrastructure, an average stadium utilisation of about 75% with about 20% sold-out home games, up-to-date IT systems and available resources to handle the system.

Opportunities: Currently, financial impacts are difficult to assess. It is assumed to have a slightly positive effect. Further applications of dynamic pricing include hospitality, season tickets or concessions. As a result of more sophisticated data gained from ticketing through DTP, improvements for stadium categorisation, dressing the stadium by allocating people in the stadium according to the club's intention or more customised offers to fans in combination with CRM data could be further undertakings.

Threats: Apart from issues with season ticket holders, fans, data management or organisational change within the club, the understanding of DTP for fans through simple and transparent communication and fan acceptance of DTP are the main issues to overcome. Negative price developments during periods of bad performance, dependency on an external software provider and a potential lack of understanding the ticket pricing mechanism are other issues to consider.