# The Effect of Performance, Age, Transfer Fee and Salary to the Market Value of Professional Players (Empirical Studies in European Leagues Football Clubs)

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**Abstract**

This study aims to provide empirical evidence about the effect of performance, age, transfer fee, and salary to the market value of professional football players. Data obtained from the official website which publish price of the football players in the transfer market in European leagues that is transfermarkt.co.uk. The population in this study is 4 club in Europe. Based on purposive sampling method, samples obtained as many as 400 players from 40 clubs. The hypothesis in this study tested use multiple regression analysis to test the effect of independent variables on the dependent variable. The research result shows that the performance has positive significant affect the market value of football players, ages has positive significant effect to the market value of football players, incoming transfer fee has positive significant effect to the market value of football players and the salary has positive significant effect to the market value of football players. The conclusion of this study is the performance, age, transfer fee and salary can be used to base appraisals football players in the market value.

*Keywords:* Performance, Transfer Fee, Market Value, Football

## 1. Introduction

One of the professional sports that has attracted the attention of manu researchers to know about human resource management is football. There is abig difference between professional sportsmen and ordinary employees. One of the differences is that there is a measurement aspect in the form of a transfer and contract system so that a very large amount of fees must be paid by a club to transfer registration and contract individuals from one club to another.

The income of a football club varies greatly from ticket sales, merchandise sales, broadcasting rights, as well as sponsorship and advertising. The popularity of the sport also has an impact on the players, even football player can be more popular than his club. Even because of the popularity of the football player, it can increase the club's income from merchandise sales (Flotnes, 2011). This is what makes football players a very valuable asset in the football industry in the European region so that buying and selling football players often involves very large amounts of money. The income earned by the club will be invested in buying players to create a good team and score success on the pitch, not to create capital for the club and shareholders (Brommer, 2011).

Football players as intangible assets can be identified in monetary value in the form of market value (market value). Market value is very relevant because of its proximity to economic value. Market value can also be used as a basis for financial reporting (rowbottom, 1998).

The market value of a football player is estimated from the acquisition cost (tranfer fee), development costs and salary costs. Salary is the most appropriate element to be used as a reference in estimating player prices. Soccer player salaries differ from one another. The high salaries of players make the price of these players more expensive. Another factor that also affects the market value of a football player is age. The useful life of a football player decreases over time, giving rise to the assumption that the older the player, the less benefit is left (Rowbottom, 1988).

In the research of Barajas (2004), the market value of players is determined by age, experience, previous team achievements and total goals scored so that team performance is negatively correlated with market value. While research conducted by erik van Den Berg (2011) says that the transfer price of football players is determined by individual performance in the field and innate ability of the player so that it can determine the market price in Dharmawan's research (2013).

## 2. Literature Review

### 2.1. Signaling Theory

Signaling theory emphasizes the importance of information issued by the company on the investment decisions of parties outside the company. Information is an important element for investors and business people because information essentially presents information, notes or descriptions for past, current and future conditions for the survival of a company and how the securities market will be. Complete, relevant, accurate and timely information is needed by investors in the capital market as an analytical tool to make investment decisions.

According to Jogiyanto (2000), information published as an announcement will provide a signal for investors in making investment decisions. If the announcement contains a positive value, it is expected that the market will react when the announcement is received by the market. When the information is announced and all market participants have received the information, market participants first interpret and analyze the information as good signal (good news) or a bad signal (bad news). If the announcement of the information is agood signal for investors, there will be a change in the volume of stock trading. According to sharpe (1997) and Ivana (2005), the announcement of accounting information gives a signal that the company has good prospects in the future (good news) so that investors are interested in trading stocks, thus the market will react which is reflected throught changes in stock trading volume. Thus, the relationship between the publication of information whether financial statements, financial conditions or socio-political to fluctuations in the volume of stock trading can be seen in market efficiency.

One type of information issued by a company that can be a signal for perties outside the company, especially for investors, is the annual report. Information disclosed in the annual report can be in the form of accounting information, namely information related to financial statements and non-accounting information, namely information not related to financial statements. The annual report should contain relevant information and disclose information that is considered infortant to be known by users of the report, both internal and external parties. All investors need information to evaluate the relative risk of each company so that they can diversify their portfolios and investment combinations with the desired risk preferences. If a company wants its shares to be purchased by investors, the company must disclose its financial statements openly and transparently.

### 2.2. Human Resource Accounting

Human resource accounting is the process of identifying and measuring data regarding human resources and providing information to interested parties. Briefly, human resource accounting includes accounting for people as organizational resources for managerial and financial accounting purposes. In the football industry, players or human resources are a very valuable asset for the club, because it can provide value added to the club. Even in the professional leagues in the world, the contract value of the players can reach half the value of the assets owned by the club. So, if the player is not reported as an asset in the balance sheet, then it cannot describe the true value of the club. Hidayat (2010) in his research said that with the increasing necessity of football clubs to report their financial situation, causing the highest international football organization FIFA to issue regulations contained in article 10 regarding financial criteria. The objectives of these financial criteria are: (1) improving the economic and financial capabilities of the football club; (2) for club transparency; (30 as a protector for creditors. Financial criteria are not like other industries which receive special discussion regarding their financial standard, in football clubs this is not specifically explained. However, as part of the club's compliance in participating in the competition, several minimum criteria related to financial criteria, a football club requires accounting for its club.

### 2.3. Market Value

International Valuation Standards (IVS2007) and Indonesian Valuation Standards (SPI 2012) define market value as follows : "the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in anarm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulson".

### 2.4. Performance

Performance is the performance of players on the field. Guldbrandsen argues that regardless of whether there is a clear relationship between the sportive success (success on the pitch) and the financial success (financial success) of a club, the main job of a football player is to help his team win the games. Players who have good performance will encourage their team to win, thereby increasing the popularity of the team.

### 2.5. Age

According to the FIFA 2008 statues, a professional football player is a player who already has a written contract with a club and has been paid a fixed salary from the club concerned. Usually in a professional football league there are

several rules that state that a new player can have a contract and play for the club when the player is 18 years old or older. 19 articles of the FIFA statues states that transfers that occur between players across countries may only occur for players who are 18 years of age or older. Players under 17 years old may be transferred across countries but with the condition that the parents of the player must also move to the country the player is going to.

## 2.6. Transfer Fee

The initial cost incurred by a club is the entry transfer fee. Mariana (2008) suggests that recruitment costs can be seen by the quality of appointments. This measurement can provide input to management on an assessment of the estimated quality of new people to be recruited.

## 2.7. Salary

Salary is regular income received by a player. The amount of salary value is not the same between players with another. This is influenced by several things, such as the skill of the player, the level of popularity of player, and the amount of bonus that will be given to player.

## 2.8. Hypothesis Development

### 2.8.1. The Effect of Performance to Market Value

Individual performance is a service provided by a player to the club he is defending. The performance of each individual who is put together into a team will have a big influence on the achievement of the team he is defending. The performance of each player in a team is not the same but very different from one another. Players with good performance can be seen from some statistical data from these players such as the number of goals, total passes, the number of shots on goal and others. Individual performance and innate ability are the main things to determine the transfer fee of a professional football player. Based on this explanation, the following hypothesis is proposed:

$H_1$: Performance has a positive effect on Market Value

### 2.8.2. The Effect of Performance to Market Value

The age of a football player will determine the performance of the player. Coaches will prefer players who are young and talented because they can improve performance during matches. Football players will find their best performance at the age of 25 to 30 years old. Football players who are less than 17 years old cannot have a contract because they are usually still in an academy. Some football players who are over the age of 30 years old can still be fielded to play although not all of them have good performances. However, in football, it is known that there is a productive age, which is where the age of the player still meets the fitness criteria in playing determined by the club. The fact is that players who have entered old age will sit on the bench more than play on field. This shows that the higher the age, the lower the market value of the player. Based on this explanation, the following hypothesis is proposed:

$H_2$: Age has a positive effect on Market Value

### 2.8.3. The Effect of Transfer Fee to Market Value

The transfer fees are costs that must be present to get human resources to fill certain positions. According to Rowbottom (1998), the more time remaining on the valid contract, the higher the market value will be. This means that clubs interested in the player will incur an incoming transfer fee to replace the contract value of the club that sold him. Based on this explanation, the following hypothesis is proposed:

$H_3$: Salary have a positive effect on Market Value

### 2.8.4. The Effect of Transfer Fee to Market Value

Salary is the main thing that is expected by every individual in a club. Salary is also the main component of service companies in influencing the company's profit. The higher the club benefits from the player's services, the higher the player's salary will be. Based on this explanation, the following hypothesis is proposed:

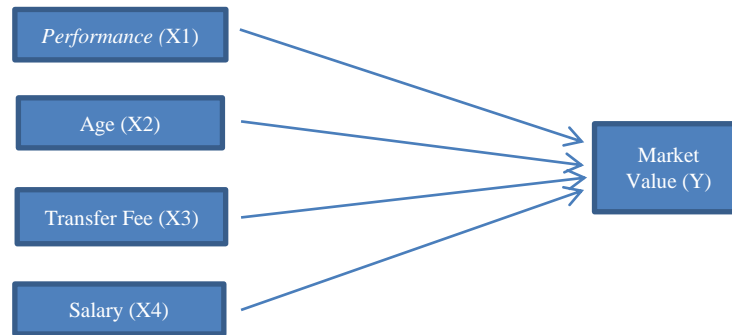$H_4$: Salary have a positive effect on Market Value

**Figure 1**. Research Framework

## 3. Materials and Methods

### 3.1. Materials

The population in this study is 4 club in Europe. Based on purposive sampling method, samples obtained as many as 400 players from 40 clubs in English league, Italian League, german League and Spanish league. The selected sample is the core players of the football club who transferred three times. Data obtained from the official website which publish price of the football players in the transfer market in European leagues that is transfermarkt.co.uk.

### 3.2. Methods

The method used in this research is multiple linear regression model, correlation and determination, T-Ratio statistic, F statistic. The hypothesis in this study for testing the effect of independent variables (Performance variable, age variable, transfer fee variable and salary variable) to the dependent variable (Market Value) for the football player. The regression equation in this study is:

$$Y = \beta0 + \beta1X1 + \beta2X2 + \beta3X3 + \beta4X4 + e$$

Description:
Y                         : Market Value
$\beta0$                  : Constanta
$\beta1, \beta2, \beta3, \beta4$ : Independent Variable Regression Coefficient
X1                        : Performance
X2                        : Age
X3                        : Transfer Fee
X4                        : Salary
e                         : Error

## 4. Results and Discussion

### 4.1. Descriptive Statistics of Research Variables

**Table 1**. Descriptive Statistics

|                    | N    | Minimum | Maximum    | Mean       | Std. Deviation |
|--------------------|------|---------|------------|------------|----------------|
| MV                 | 1200 | 0       | 45500000   | 3887466.67 | 5445483.699    |
| OI                 | 1200 | 0       | 210519681.3 | 3816664.04 | 1.1611E7       |
| AGE                | 1200 | 16      | 35         | 24.29      | 3.264          |
| TFEE               | 1200 | 0       | 65800000   | 287423.33  | 6484799.099    |
| SAL                | 1200 | 10000   | 288000     | 67015.00   | 31356.252      |
| Valid N (listwise) | 1200 |         |            |            |                |

Sources: Primary data processed, 2016

The result of descriptive statistics shows the number of N in this study is 1200. Market Value has minimum value of 0 and maximum value of £45.500.000 with an average value of 3887466,67 and standard deviation of 5445483,699. The performance

variable shows minimum value of 0 and maximum value of 210519681,3 with an average value of 3816664.043 points and standard deviation of 1.1611E7 points. The age variable has minimum value 16 years old and maximum age of 35 years old. The average age of the players is 24.29 years and the standard deviation of 3.264 that shows the variation in the age of the transferred players. The transfer fee variable has minimum value of £0 and maximum value of £65.800.000. the mean value of the transfer fee is £2.987.423,33 and the standard deviation of £6.484.799,099 reflects the variation in transfer fees. The salary variable has minimum value of £10.000 and maximum value of £288.000. Salary means of £67.015,00 and standard deviation of £31.356,252 reflects the variation in player salaries.

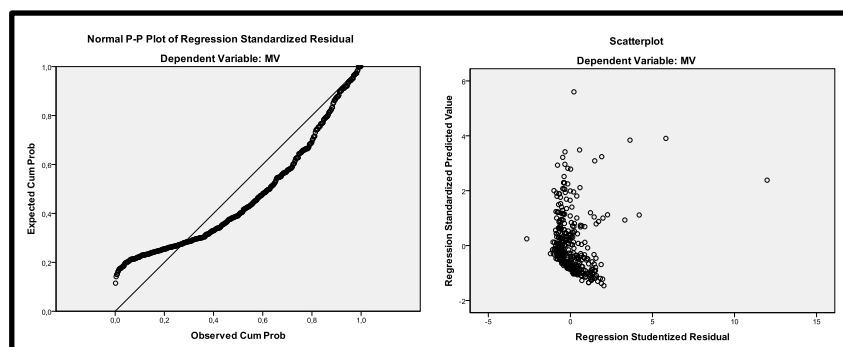## 4.2. Classic Assumption Test Results



**Figure 2**. Classic Assumption Test

From the Figure 2, it can be seen that the data is normally distributed, there is no heteroscedasticity and multicollinearity so that it can continued for hypothesis testing.

## 4.3. Hypothesis Testing

## 4.3.1. Coefficient of Determination Test

**Table 3**. Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | | 0.984[a] | 0.967 | 0.967 |

a. Predictors: (Constant), SAL, SQEARNS, AGE, TFEE

b. Dependent Variable: MV

From the results of the coefficient of determination ($R^2$) above, it can be concluded that the Market Value Variable can be explained by the Performance variables, age variable, transfer fee variable and salary variables by 96.7% while the remaining 3.3% is explained by other variables that is not explained in this study.

## 4.3.2. Coefficient of Determination Test

**Table 3**. ANOVA

| | Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1,568E16 | 4 | 3,921E15 | 3046,790 | 1 |
| | Residual | 5,302E14 | 412 | 1,287E12 | | |
| | Total | 1,622E16 | 416 | | | |

a. Predictors: (Constant), SQEARNS, AGE, TFEE, SAL

b. Dependent Variable: MV

The F statistical test is used to show whether the independent variables included in the model have a joint effect on the dependent variable. In table 3 of the ANOVA test or the F statistical test, the $F_{count}$ value is 6672,789 with a significance value <0,05, then the regression model can be used to predict salary, opta index or performance, age, and transfer fee together affect the market value.

### 4.3.3. T-Ratio statistic Test

**Table 3**. Coefficients

| Model | Unstandardized Coefficients | | Standardized Coefficients | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. | Tolerance | VIF |
| (Constant) | -6954616.862 | 495209.330 | | -14.044 | 0.000 | | |
| AGE | 219413.539 | 19868.663 | 0.100 | 11.043 | 0.000 | 0.968 | 1.033 |
| TFEE | 0.622 | 0.009 | 0.693 | 66.895 | 0.000 | 0.739 | 1.354 |
| SAL | 17.987 | 2.072 | 0.090 | 8.683 | 0.000 | 0.735 | 1.360 |
| SQEARNS | 3635.186 | 67.419 | 0.492 | 53.920 | 0.000 | 0.955 | 1.047 |
| a. Dependent Variable: MV | | | | | | | |

Based on the results of the processed statistical data in the table 4, it can be seen that the effect of the independent variable on the dependent variable partially is ad follows.

- Performance has significant positive effect on market value
- Ages has a significant positive effect on market value
- Transfer fees have a significant positive effect on market value
- Salary has a significant positive effect on market value.

## 5. Conclussion

Based on the analysis of the results and discussion of the research, the following conclusions can be drawn:

1. Performance has an effect on the market value of football players, based on the t statistical test with a significance value of 0.000 resulting that it has a significant effect and can be seen from the positive coefficient value of 3635,186 indicating that the independent variable has an effect. So it can be said that the performance variable has a significant effect on market value. This is because the performance of football players is the most important thing seen by the club that will play. So when the football player's performance is not good, it will be transferred at a low price and vice versa.

2. Age has an effect on the market value of football players, based on the statistical test t has a significance value of 0.000 resulting that it has a significant effect and can be seen from the positive coefficient, which is 219413,539 indicating that the independent variable has an effect. So it can be said that age has a significant positive effect on market value.

3. Transfer costs affect the market value of football players seen from the t statistical test which has a significance value of 0.000 resulting that it has a significant effect and can be seen from a positive coefficient of 0.622 indicating that the independent variable has an effect. So, the key is that transfer costs have a significant positive effect on market value.

4. Salary has an effect on market value seen from the t test which has a significance value of 0.000 resulting that it has a significant effect and can be seen from a positive coefficient of 17.987 indicating that the independent variable has an effect. So it can be said that salary has a significant positive effect on market value.

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