

## **BALL POSSESSION OF A SUCCESSFUL TEAM (JOHOR DARUL TA'ZIM FC) IN MALAYSIA SUPER LEAGUE 2015: A CASE STUDY**

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### **Abstract**

The ability to possess the ball during soccer matches is linked to success. The domination of Johor Darul Ta'zim FC (JDT FC) in recent years in the Malaysia Super League has impressed many. The aim of this study was to compare the performance between JDT FC and their opponents in Malaysia Super League 2015 season. Successful and unsuccessful passes, ball possession rates, attempt on goal, shot on target, and goals scored were selected as Performance Indicators (P.I) in this study. Twelve matches from Malaysia Super League (MSL) season 2015 were selected. Video of 12 matches was obtained from Media Prima Sdn. Bhd., [www.youtube.com](http://www.youtube.com) and live recordings. Longo Match 1.0 match analysis software was used for post-coding. Kolmogorov-Smirnov Z was used to analyse the differences while Spearman's rho correlation test was utilized to determine the correlation. Percentage of successful passes ( $p=0.034$ ), ball possessions rate ( $p=0.000$ ), and goal scored ( $p=0.002$ ) were significantly difference between JDT FC and their opponents. There were also positive correlations between possessions and all variables except for unsuccessful passes. This study concludes that in Malaysian soccer matches, a high percentage of successful passes and high rate of ball possessions influence total shots in a soccer game.

**Keywords:** Performance Indicator, Malaysian soccer, ball possession, successful team, matches analysis.

## **Introduction**

Feedback on team performance is crucial, especially in terms of coaches' collected quantitative information about games. Rabiou Muazu, Mohamad Razali, Ahmad Bisyri, Norlaila, Siti Musliha, Aleesha, Norzulaika & Vijayamurugan (2017) mentioned that the nature of the information transmitted to both the coach and the players, such as its simplicity and ease in sharing information, provides players with feedback about their performance with the purpose of accelerating their development and achieving success. Match analysis or performance analysis is commonly used in the sports setting to close this gap by providing the information needed (Castellano, Casamichana, & Lago, 2012). Hughes and Franks (2005) stated that the match analysis can help a coach to recall specific event in the game and also enable coaches to create a better training program for the team to overcome their weaknesses. Besides that, match analysis also can be used to determine the weaknesses of the opponent team and exploiting their weaknesses to win the game (Hughes & Franks, 2007).

Soccer is categorized as an invasion game, which is a game divided into two sections with the main objective of advancing the ball down field into the opposing team's goal to score more goals than your opponent (Collet, 2013). Every sport has different aspect of performance indicators (P.I); one of the most common indicators in soccer used for tactical study is ball possession. Previous researchers (Collet, 2013; Göral, 2015; Hughes & Franks, 2005; Jones, James, & Mellalieu, 2004; Kempe, Vogelbein, Memmert, & Nopp, 2014) have found that most successful teams pass more than unsuccessful teams. They also added that the ability of teams to keep possession longer will lead to greater opportunities to create goal chances. Ball possession (BP) is defined as when a player has sufficient control of the ball to affect a deliberate influence on its subsequent path. Possession is lost when the ball went out of play, an opposing player touches, the ball or the referee blows the whistle for an infringement (Jones et al., 2004).

There is some evidence regarding relationship between possession rates and its affects toward games success. A study of 380 matches involving the La Liga Spanish League during 2008-2009 seasons (Lago-Peñas & Dellal, 2010) showed that successful teams have higher ball possession. For example, the mean for F.C. Barcelona (65.29%) was 16.24% greater than those found for the bottom-placed Recreativo (48.05%). Teams tend to have less possession while leading, and greater possession if playing at home. Data from La Liga Spanish league 2003-2004 seasons also show the same trends (Lago & Martín, 2007). Jones et al. (2004) stated that successful teams had significantly longer possession compared to unsuccessful by 10.2% above 20 second in time ball control, but both groups (successful and unsuccessful teams) had greater possession when in losing position. Teams with high rate of ball possession in soccer often have good results, since most of the successful teams in soccer tend to play a possession game as compared to direct play (Kempe et al., 2014).

One of the main objectives of keeping ball possession is to prevent the opponent from getting the ball. Teams that have good ball possession often create goal chances to start a movement to penetrate while maintaining possession and preventing the opponent from

getting the ball. Studies by Göral (2015) showed that the top three successful soccer teams in FIFA World Cup 2014 had high ball possession rates, including Germany (56.71%) followed by Argentina (54.56%), and the Netherlands (50.32%). However, several teams have been successful by producing direct attacking plays and counterattacking their opponents. A study of consecutive passes from 1990 and 1994 FIFA World Cup (WC) soccer by Hughes and Franks (2005) stated that 84% (1990 WC) and 80% (1994 WC) of consecutive passes that create goal come from four passes or less where longer passing sequences having lower frequencies of goal. It was shown that the quicker effectiveness of attacking plays can disrupt the opponent defensive formation with element of surprise. While the longer attacking builds up play, the defensive line had the opportunity to minimize the dislocation of defensive formation and take more time to prepare. However, this study find longer possession creates more shooting opportunities by successful team, while shorter numbers of consecutive passes have better ratio possession per goal (Hughes & Franks, 2005).

Scoring goal is the most important aspect of the game. To score a goal, the player should ensure that the ball is over the line of the opponent's goal post. Number of shots on target plays important role in scoring a goal and this is related to ball possession retention. Several study (Lago-Peñas, Lago-Ballesteros, Dellal, & Gómez, 2010; Lago & Martín, 2007) showed that successful team have greater total shots, shot on goal, crosses, ball possession and playing home venue. Thus, high ball possession contributes on winning matches and has significant impact on failure and success in soccer matches. However, while many studies have been conducted in major soccer nations regarding the relationship between ball possessions and winning games, it is good to get the idea whether the same principles can be applied to local soccer scene in Malaysia. Thus, this study was conducted to investigate the passing success percentage and ball possession rates of successful soccer team by analyzing the selected P.I of Johor Darul Ta'zim FC (JDT FC) in the Malaysia Super League (MLS) 2015 season.

## **Methodology**

### *Sample*

The sample consisted of 12 matches played in the 2015 Malaysia Super League season. Johor Darul Ta'zim FC was selected as successful team by winning 2015 MSL season. Two teams from top table (Pahang FA and Selangor FA), two teams from middle table (PDRM FC and Lions IIX) and two teams from bottom table (ATM FA and Sime Darby FC) were selected as the opponent teams. Home and away games were observed.

### *Instrumentation*

This study was analyzed using the Longo Match 1.0 match analysis software. The videos were obtained from Media Prima Sdn. Bhd., a licensed broadcasting company for live soccer match coverage in Malaysia for the 2015 season. There are also videos that were

### *Ball possession of a successful team*

obtained from [www.youtube.com](http://www.youtube.com) and live coding method. The analyst was a soccer fan and already understood the nature of soccer matches and tournaments.

### *Data Collection Procedure*

Selected videos were obtained from Media Prima Sdn. Bhd., licensed broadcasting company for live soccer match coverage in Malaysia for 2015 season. Some of the videos were obtained from [www.youtube.com](http://www.youtube.com) and live coding method. Next, all 12 matches from the Malaysia Super League were selected as a sample. All six indicators selected were set in Longo Match 1.0 match analysis software and divided into two sections, one for the successful team (JDT FC) and another one is for the opponent team. The indicators were notated during video analysis based on the action performed.

### *Data Analysis*

All the data being collected and transferred to Statistical Packages for Social Science (SPSS) with  $p < 0.05$  were denoted as significant. Kolmogorov-Smirnov Z was used to analyse the difference between groups and Spearman's rho correlation test to reveal relationship among all selected P.I between Johor Darul Ta'zim FC and the opponent team since it is nonparametric data.

### *Reliability*

Three matches were selected for reliability testing procedure. Test-retest notations for intra-observer reliability were highly correlated ( $r: 0.999$ ).

### *Performance Indicators*

The performance indicators were the successful passes (SP), unsuccessful passes (UP), ball possession rates (PR), attempt on goal (AG), shot on target (SH) and goal scoring (G). All games selected were evaluated based on these six performance indicators.

*Successful Passes:* The successful passes are determined when players pass the ball to teammates and the teammates are able to touch/control the ball before release for another action.

#### *- Unsuccessful Passes*

Unsuccessful passes are determined when a pass is not complete, as an example, when a player try to pass the ball to another player, but during the passes the ball is not directed to the teammates or intercepted by the opponent team.

*Possession Rates:* Possession is determined when the team is able to control the ball from being taken by the opponent during the game, calculated by the successful consecutive passes.

- *Attempt on goal*

Labeled when the player makes an attempt towards the opponent goal area, even if the ball is not directed towards the goal post. A shot is count when the players make an attempt in term of shooting, heading, free kick towards goal post.

- *Shot on target*

Same definition as *attempt on goal* but only counted when the ball is directly towards the opponent goal post.

- *Goal Scored*

The goal score is count when the ball is fully over the line of opponent goal post.

**Result**

A total of twelve soccer matches from seven different Malaysia soccer teams were observed. JDT FC was selected as a Successful Team, with two top table teams (Selangor FA and Pahang FA), two teams from middle table (PDRM FC and Lions IIX) and two teams from bottom table (ATM FA and Sime Darby FC) selected as Opponents. All matches observed were from the Malaysia Super League 2015 season. (*Selected Performance Analysis (Table 1)*)

There were no statistically significant differences in unsuccessful passes (UP), attempt on goal (AG), and shot on target (SH) even though there were show higher in mean score in Successful team compared to Opponent team. However, there were significant differences in possession rate (PR) ( $p=0.000$ ), successful passes (SP) ( $p=0.034$ ), and goals scored (G) ( $p=0.002$ ).

**Table 1:** Mean score of Selected Performance Analysis in soccer matches

Item	Successful Team	Opponent
Possession (%)	59.5* ± 7.24	40.50 ± 7.24
successful passes	269.67** ± 52.95	184.75 ± 48.88
Unsuccessful passes	51.00 ± 7.01	47.83 ± 6.23
Attempt on goal	9.58 ± 2.77	5.67 ± 2.42
Shot on Target	4.00 ± 2.42	2.25 ± 1.83
Goal Scored	1.5^ ± 1.16	0.67 ± 0.49

\*significant difference between successful team and opponent ( $p=0.000$ )

\*\*significant difference between successful team and opponent ( $p=0.034$ )

^significant difference between successful team and opponent ( $p=0.002$ )

Spearman Correlations between parameters of possession rates (PR%), successful passes (SP), unsuccessful passes (UP), attempt on goal (AG), shot on target (SH), and goal scored

(G) are shown in Table 2. As shown in Table 2, there were significant correlations between possession rate and all of the performance indicators (P.I) except unsuccessful passes (UP). There were no significant correlations at all between unsuccessful passes and others performance indicators (P.I). There were also significant correlations between successful passes (S.P) and shot on target (S.H) with others performance indicators (P.I) except unsuccessful passes (U.P). Interestingly, there was no significant correlation between Attempt on Goal and Goal Scored.

**Table 2:** Spearman's rho correlation coefficient test of Selected Performance Analysis in soccer matches

	PR (%)	SP	UP	AG	SH	G
PR (%)		0.013*	0.286	0.000**	0.025*	0.011*
SP	0.014*		0.381	0.0132*	0.000**	0.015*
UP	0.287	0.3809		0.9198	0.4754	0.5491
AG	0.000**	0.013*	0.9198		0.000**	0.1480
SH	0.025*	0.000**	0.4754	0.000**		0.038*
G	0.012*	0.015*	0.5491	0.1480	0.038*	
n	24	24	24	24	24	24

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

PR (%): Possession Rate, SP: Successful Passes, UP: Unsuccessful Passes, AG: Attempt on Goal, SH: Shot On Target, G: Goal Scored

## Discussion

The aim of this study was to determine whether there were differences between a Successful Team (Johor Darul Ta'zim FC) and other opponents in the Malaysia Super League 2015 season. Successful passes, unsuccessful passes, ball possession rates, attempt on goal, shot on target, and goal scored were observed.

The results indicate that Successful Teams (JDT FC) tend to have higher rates of successful passing and possession percentage; concurrent with high reps of successful passes per match compare to the Opponent (unsuccessful) Teams. These findings are aligned with a study by Göral (2015) which stated that the successful team in the FIFA World Cup 2014 had higher passing success percentages, and the results for the FIFA World Cup champion Germany, which had greatest overall ball possession in the tournament. While success in a tournament like FIFA, World Cup differs from the league format. A study by Kempe et al. (2014) used 676 official games over three competitions (Bundesliga 2009/10, 2010/11 seasons and FIFA World Cup 2010) as a sample. They found that successful team preferred possession of play instead of direct play. In addition, teams with a high rate of ball possession were more likely to occupy the opponent half to create chances. However, one exception to support this idea is the Borussia Dortmund team under Coach Jürgen Klopp. This team was the only successful team that preferred direct play with the direct approach and high efficiency when attacking. Still, the main indicator of high percentage of successful passes is seen here. It is suggested that the

ability to do effective action while have/possess a ball is more crucial as far as ball possession is concern. Current study contradicts with one study of 908 team possessions of La Liga Spanish League by Lago-Ballesteros, Lago-Peñas, and Rey (2012) when he found that 303 (33.4%) produced score-box possessions, 477 (52.5%) achieved progression and 128 (14.1%) failed to reach any sort of progression. They stated that direct attack and counter attack were three times more effective compared than elaborate ball possession attacking style. The study also found that team possessions originating from pre-defensive and pre-offensive zone were twice time more effective producing a goal-box penetration than those start the attacking from defensive area. The reason behind why counterattacking is more effective to create goal box penetrating chances is that the purpose of direct play and counter attack is to divide and exploit some sort of imbalance in the defensive formation of an opponent.

Most researchers used several successful teams to be grouped as 'Successful' in identifying group sampling. However, the current study chooses Johor Darul Ta'zim FC as the only 'Successful Team' for this case study. Lago (2009) used the same method. He studied the pattern of possession based on match location, quality of opposition, and match status (leading, drawing and losing) of 27 matches played by Espanyol FC during 2005/06 seasons. He found that ball possession was greater when losing than when leading or drawing. He also stated that playing against stronger opponent in league ranking was associated with decreasing of possession. It was clear that ball possession can fluctuate according to situational play, venue of play and opponent league rank (Lago, 2009). However, in the English Premier League (EPL), Bloomfield, Polman, and O'Donoghue (2005) showed that top three teams of the English Premier League (EPL) in 2003/04 season which is Manchester United, Chelsea FC and Arsenal FC, dominated possession whether leading, drawing or losing. It was suggested that top team likely to dominate possession compared to mid-table team like Espanyol FC which ball possession influenced by situation. Same result here, In Malaysian soccer context, Johor Darul Ta'zim FC followed the trend of successful teams in dominating and dictating game play regardless of their opponents.

The current study also shows that there is no significant different in mean attempt on goal and shot on target indicators compared to their opponent. The reasons are the ability of teams to create attempt on goal is about the same within the Malaysian Super League, but the quality of attacking is better in successful team. Study by Lago-Peñas and Dellal (2010) mentioned that winning teams had averages that were significantly higher for the following game statistics: total shots ( $p < 0.001$ ), shots on goal ( $p < 0.01$ ), effectiveness ( $p < 0.01$ ), assists ( $p < 0.01$ ), offside committed ( $p < 0.01$ ) and crosses against ( $p < 0.01$ ). Losing teams had significantly higher averages in the variable crosses ( $p < 0.01$ ), offside received ( $p < 0.01$ ) and red cards ( $p < 0.01$ ).

Current result also indicated that there was a significant correlation between Possession Rate and all of the Performance Indicators (P.I) including successful passes, attempt on goal, shot on target and goal. This relationship was supported by Collet's (2013) study that concluded that teams that retain ball possession were more successful in Western Europe and FIFA tournaments compared to the teams with less ball possession during soccer

matches. The relationship between complete passes and successful attempt on goal varied across context, but still have a positive influence on major soccer nations such as England, Germany and Spain. There was a strong correlation between success team and high ball possession, but still the efficacy of higher successful pass to shot on goal ratio is crucial. This argument was aligned by a study conducted by Collet (2013) especially in tournament that have knocked out phase like FIFA World Cup and European Champions League in which the ball possession effect diminished. Nevertheless, the current study contradicts that of Redwood-Brown (2008) which mentioned that 285 goals in 120 FA Premier League were not significantly correlate between the number of passes made and percentage of successful passes between scoring and conceding team, 5 minutes before and after goal scored.

The results from this study also contradict findings which show no significant correlation between Attempt on Goal and Goal Scored found. A study by Lago-Peñas and Dellal (2010) suggested that leading teams tend to sit back and preferred to play counter attacking or direct play ( move the ball quickly and often using long ball downfield) and let the visitor (the opponent team) have better ball possession. By playing counter attack, the chance of creating more attempt on goal is limited, but the conversion rate towards goal is high. This might be explaining this new finding scenario for this study. However, when in losing position, teams start to control ball more and increasing their ball possession and start dictating play. It was suggested that possession in soccer influenced by situational factors and change style of play accordingly.

## **Conclusion**

This study helps in making comparisons between Successful Team (JDT FC) and their opponents in selected Performance indicators (P.I) regarding ball possession in Malaysia Super League 2015 season. There were significant better performances for the Successful Team compared to Opponent in term of Possession Rate, successful Passes, and Goals Scored. The results indicate moderate to high correlations between Performance Indicators with ball possessions among soccer teams. These results can be used in the formulation of successful tactics and patterns of play of modern soccer in Malaysia. In addition, the findings will also be useful in helping coaches and officers, specifically the managers, in creating a plan for a soccer philosophy based on possession for teams, especially in the context of Malaysia's soccer scene.

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