

SITUATIONAL EFFICIENCY ANALYSIS OF THE TEAMS THAT PARTICIPATED IN 2008 EUROPEAN FOOTBALL CHAMPIONSHIP

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Abstract

We analyzed all European championship 2006 soccer games with basic aim to emphasize significant factors that have influence on success of soccer game. For examination we prepare following variables: ŠNGU16M – shots on goal in Penalty Area, ŠNGV16M – shots on goal outside Penalty Area, ŠPGU16M – shots wide in Penalty Area, ŠPGV16M – shots wide outside Penalty Area, BŠU16M – shots blocked in Penalty Area, BŠV16M – shots blocked outside Penalty Area, UPRPAS – Total passes completion, DUGPAS – Long passes, PRDUGPAS – Long passes completion, SREPAS – Medium passes, PRSREPAS – Medium passes completion, KRAPAS – Short passes, PRKRAPAS – Short passes completion. Criterion variable will be define by the number of shots that accomplish every team during the game. For determination variable, which have significant influence on success in soccer game, will be apply regression analysis.

Key words: regression analysis, variables, entity, criterion variable

INTRODUCTION

In present literature and research which are narrowly connected to this subject, you can see that not many researchers approached this problem. It's safe to say that researches of this type have task to advance football game from aspect of technical-tactical actions which are applied during one game. Although researches based on technical-tactical expressions are not standardized they still deliver important information for football game especially because this info has been obtained in situational conditions. These researches can be very useful for practice, because information obtained by this research can serve for football improvement in our country. Thereby we are trying to quantify football game, but we still can not talk about one real picture which for longer time of period will show implementation of technical-tactical action just because football game is growing and advancing very fast. Some obtained info in this research can serve in training process meaning choosing more adequate training means which would attribute to the improvement of the training efficiency itself and exponentially would develop better i.e. more efficient model of football game. Even though we said that this topic is not enough

researched we'll mention some of authors who addressed this issue: Kapidžić, A., Mujanović, E. (2007)², Radoman, M. (2007)³, Smajić, M., Molnar, S., Radoman, M. (2008)⁴.

METHODS

Entity sample

For the purpose of this research we analyzed national team games in European football championship which was held in Austria and Switzerland in 2008. Entities represent teams on every of 31 played games on this football championship. Therefore inside this research we have 62 entities because every team on every game represents separate entity. Info about teams situational efficiency we got from www.euro2008.com official page, on which official statistics from this European championship were shown. Result is outcome of every game after 90 minutes of regular course of game or if there were overtimes or penalty kicks in the game itself. Following game outcomes were considered: victory, defeat and draw. We have to emphasize that elements of observation within this research are not games but the elements of the teams games which reached certain outcome i.e. victory, defeat and draw.

Variable sample

Variable in this research are features of game elements which were implemented by the teams during the game. These statistics indicators FIFA promotes for all competitions which are performed under FIFA tutorship. From all features that are analyzed and which are on official FIFA page, we analyzed following variables i.e. features: ŠNGU16M – shots on goal in Penalty Area, ŠNGV16M – shots on goal outside Penalty Area, ŠPGU16M – shots wide in Penalty Area, ŠPGV16M – shots wide outside Penalty Area, BŠU16M – shots blocked in Penalty Area, BŠV16M – shots blocked outside Penalty Area, UPRPAS – Total passes completion %, DUGPAS – Long passes, PRDUGPAS – Long passes completion %, SREPAS – Medium passes,

PRSREPAS – Medium passes completion %, KRAPAS – Short passes, PRKRAPAS – Short passes completion %. These variables represented predictor system of variables.

Criteria variable is defined by number of goals scored by each team: UKUPGO – Total goals scored.

RESULTS AND DISCUSSION

Based on results we got in Tables 1 and 2, you can see that multiple correlation i.e. correlation of predicting system with criteria is R .60, with total explained variability R Square .36%, which is on .50 significant level. These results tell us that whole system of predicting variables is significant in prediction of the criteria variable.

Table 1

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.600 ^a	.360	.187	1.324

a. Predictors: (Constant), BŠV16M, ŠNGU16M, PRDUGPAS, ŠPGV16M, BŠU16M, KRAPAS, ŠNGV16M, ŠPGU16M, SREPAS, UPRPAS, DUGPAS, PRKRAPAS, PRSREPAS

Table 2

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.355	13	3.643	2.078	.034 ^a
	Residual	84.145	48	1.753		
	Total	131.500	61			

a. Predictors: (Constant), BŠV16M, ŠNGU16M, PRDUGPAS, ŠPGV16M, BŠU16M, KRAPAS, ŠNGV16M, ŠPGU16M, SREPAS, UPRPAS, DUGPAS, PRKRAPAS, PRSREPAS

b. Dependent Variable: UKUPGO

By analyzing individual influence (Table 3), we can see that only one variable has statistically significant influence on criteria and that is variable ŠNGU16M – shots on goal in Penalty Area. Beta coefficient is .44 for

above mentioned variable, which is on .01 significant level. Also importance of this variable influence on criteria confirms T-test value which is 3.126.

Table 3

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	4.064	1.614		2.518	.015
UPRPAS	-.005	.004	-.334	-1.392	.170
DUGPAS	.011	.023	.126	.481	.633
PRDUGPAS	-.004	.026	-.043	-.169	.866
SREPAS	-.031	.024	-1.377	-1.272	.209
PRSREPAS	.031	.026	1.358	1.177	.245
KRAPAS	-.009	.032	-.118	-.273	.786
PRKRAPAS	.005	.039	.052	.117	.908
ŠNGU16M	.299	.096	.443	3.126	.003
ŠNGV16M	.100	.084	.175	1.186	.241
ŠPGU16M	.013	.118	.016	.106	.916
ŠPGV16M	.001	.075	.002	.017	.986
BŠU16M	-.063	.207	-.039	-.307	.761
BŠV16M	.292	.170	.247	1.717	.092

a. Dependent Variable: UKUPGO

Because only variable ŠNGU16M – shots on goal in Penalty Area, indicated statistically significant individual influence, and the rest of variables don't have statistically important individual influence, we have to find reasons why we've gotten these indicators. Info attained this way mean nothing without some deeper analysis, so to explain these reactions of predicting system with criteria we will do it. First of all to shoot on goal in penalty area, we have to realize all factors which are necessary to get to penalty area of opponent team, and then to shoot on goal. Shooting in football is also linked to intellect of the player. To shoot well adopted technique is not the only important thing but perceptive capabilities which arise at all technical elements, even so more at shooting. Perceptive capabilities represent mental process in which feelings and experience are closely connected, which means, that every perception contains feelings which is it based on. Accordingly players with more experience notice more details. That means that players remember all previous similar situations that they've found themselves in, and when in certain moment they find themselves in similar situation they compare these previous situations with the current one they're in. Information is requisite for adequate analysis like the following: positioning of the player with regards to goal,

positioning of the opponent players in front of the ball if there are any, positioning of the goalkeeper on the goal etc., all this information player compares to previous experience and is choosing the best way of shooting. Thus acquired results can be compared to results acquired in a research of Kapidžić, A., Mujanović, E., Nožinović, F. (2006)¹. In this research authors reached results which revealed that shot on goal has significant influence on success of the teams in games i.e. materialization of the utmost objective – victory.

However, when we talk about shot on goal in penalty area, we have to say that very good shooting technique is needed for that. In order to shoot inside penalty area, very often we don't have enough time for the preparation of the shot i.e. establishing control, but shooting in most cases is executed from the first stroke. This way of shooting has a surprise effect because defense players don't have enough time to block a shot, and a goalkeeper has a very little time to position himself properly. Based on the results we can say that more successful teams in this championship had better individual and group tactics. By analyzing raw info we see that more successful teams had better number of total passes completion %, which tells us that teams have played through all three stadium areas

(defense, middle and offense). Confirmation of this is research of Smajić, M., Molnar, S., Radoman, M. (2008)⁴ where author came to conclusion that difference between more successful teams and less successful teams is in ball activities. This game requires players with highly adopted technique which we won't discuss about here since all players have a high level of technical preparation. What separates players of more successful teams from the players of less successful teams are just individual and group tactics, because players have a good control over ball especially in offensive third, make good passes

CONCLUSION

From this research it's possible to obtain information to guide the process of preparing football players in our country, both, already established athletes as well as those in younger age groups. There are many reasons that may affect the results thus obtained, and it is impossible to number them all, but we have listed only those that we think are the most logical cause of the results thus obtained. For this research to have practical use especially in football in our country and not to stay only the theoretical discussion, we will list following suggestion by which should trainer go in work with football players for the better quality of their performance.

1. Therefore, we suggest that in training process it's taken into account the development of the cognitive abilities of young football players, which obviously leads to achieving better results in the opportunistic-motor skills, where results of this research also implied for. Practice games on both goals on smaller part of stadium can be used for development of perceptive abilities, then practice on smaller field with limited number of contacts with ball etc.
2. More experienced trainers should work with young athletes just because kids in this period of life are the most flexible for certain changes and if some mistakes are made then later it's very hard or almost impossible to correct them.
3. Young football players have to adopt well football technique, but should more and more apply and perfect that technique in situational conditions.
4. The major problem in Bosnia and Herzegovina (BH) football is a great delay in

under pressure and have a good sense for running in the blank space for reception. It's certain that more successful teams on this championship had a technique which was more orientated on concept of the game than the teams that were less successful. This says that more successful teams had players which had better level of creativity. Results achieved in research of Kapidžić, A., Mujanović, E. (2007)² are in favour of such discussion, where authors concluded that teams that had more creative players had more success in played games.

application of scientific achievements for the purpose of gaining excellent results, and therefore we believe that this work may be a small contribution to the promotion of football in our country.

5. Analysis of some matches at the European and world level, and based on the PRO-ZONE program, shows that the players during one game have an average speed of 2 m/s. When at that speed they have to implement any technical element, not even to mention the pressure of opponent players that tells us about level of technical readiness of these players. This can be achieved only if in competition period we pay great attention to training technique but also in situation conditions.

Finally we must say that the top success is only possible if the process of athletes preparation and sport itself is based on scientifically based tendencies, and that's probably the only and right way to direct our league competition according to contemporary acquisitions of football game.

LITERATURE

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ANALIZA SITUACIONE EFIKASNOSTI TIMOVA KOJI SU UČESTVOVALI NA EVROPSKOM FUDBALSKOM PRVENSTVU 2008.

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Sažetak

Sa ciljem određivanja značajnih faktora koji utječu na uspjeh igre u nogometu analizirali smo sve utakmice sa evropskog nogometnog prvenstva 2006 godine. Za istraživanje primjenili smo slijedeće varijable: ŠNGU16M – šut u okvir vrata unutar 16 metara, ŠNGV16M – šut u okvir vrata izvan 16 metara, ŠPGU16M – šut van okvira vrata unutar 16 metara, ŠPGV16M – šut van okvira vrata izvan 16 metara, BŠU16M – blokiran šut unutar 16 metara, BŠV16M – blokiran šut izvan 16 metara, UPRPAS – ukupno preciznih pasova, DUGPAS – dugi pasovi, PRDUGPAS – precizni dugi pasovi, SREPAS – pasovi na srednja rastojanja, PRSREPAS – precizni pasovi na srednja rastojanja, KRAPAS – pasovi na malim rastojanjima, PRKRAPAS – precizni pasovi na malim rastojanjima. Kriterijska varijabla bit će definisana na osnovu broja pogodaka koje je postigla svaka ekipa u utakmici. Za određivanje varijabli koje imaju značajan utjecaj na uspjeh igre u nogometu bit će primjenjena multipla regresiona analiza.

Ključne riječi: regresiona analiza, varijable, entitet, kriterijska varijabla

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