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 Influence of contextual variables on styles of play in soccer

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Article

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Table 1. Styles of play definitions by Prozone	
Style of Play	Definition
Direct Play	Captures instances of play where teams attempt to move the ball quickly towards the opposition's goal through the use of long passes. Specifically, it looks at the distance gained forward every time a team makes use of any of the following events: pass, direct free kick pass, indirect free kick pass, cross, direct free kick cross, indirect free kick cross, goal kick, goalkeeper throw, goalkeeper kick, throw in, or clearance. The forward distance gained must be greater than 20 metres and reaches 100% at 40 metres.
Counterattack	A team regains possession and moves the ball into an attacking area via passes, dribbles or a combination of both. The ball must reach a target location within the opposition's half. This location varies depending on the regain location. The speed of the transition from a regain to a target location determines the Counter Attack value. The quicker the ball is moved up the pitch, the higher the Counter Attack value. Counter attack regains include: goal keeper catch, goal keeper save, interception, clearance, header, tackle and block. Counter Attack distance gained include: touch, dribbling, clearance and pass.
Maintenance	Captures possessions in which a team looks to maintain possession of the ball within the defensive area of the pitch. The time spent in possession directly relates to the Maintenance membership value. The team must have a passage of play lasting more than 10 seconds. From then on, the membership value increases linearly up until 30 seconds where it reaches 100%.
Build Up	Captures long and controlled ball possessions – but is aimed at periods of play where a team is looking for opportunities to attack. The calculation is similar to Maintenance with the differences being the zone on the pitch and the time thresholds. The Build Up area is between the halfway line and the opposition's penalty area and the passage of play must last more than 8 seconds. From then on, the membership value increases linearly up until 25 seconds where it reaches 100%.
Sustained Threat	Similar to Maintenance and Build Up. However, here the focus lies on possessions in the attacking third of the pitch. The time spent in possession must be more than 6 seconds, reaching 100% at 20 seconds.
Fast Tempo	Captures when the team is moving the ball quickly to increase the tempo and speed of the game. Fast Tempo looks at sequences of consecutive individual 'fast possessions'. An individual fast possession must occur in the opposition's half and can be achieved as follows: the player releases the ball to a team mate in less than 2 seconds, or the player dribbles at a high tempo.
Crossing	It occurs if the ball is delivered from a wide area of the pitch with the intention of finding a teammate. All Crossing events in a possession are assigned a value of 100%. The value assigned to the team possession can only be 0% or 100% depending on the occurrence of a crossing event. Crossing events are: cross, corner cross, direct free kick cross and indirect free kick cross.
High Pressure	Captures how high up the pitch teams regain possession. The first factor taken into consideration is the location where the team wins the ball: High Press regains are those higher than 5 metres prior to the halfway line. The value increases linearly up until 15 metres into the opposition's half where it reaches 100%. The second factor is the opposition's time in possession prior to the High Press regain happening. To retain the full value established based on the regain location, the opposition must have been in possession for at least 10 seconds. This time factor is introduced to try and capture controlled pressing efforts rather than 'counter press' regains. The combination of these two factors leads to the final High Press membership value. Regain events include: interception, header, tackle and block.

Table 2. Effects of match status, venue and quality of opposition on each of the 8 styles of play measured in the 2015-2016 English Premier League												
	Direct Play			Counterattack			Maintenance			Build Up		
Fixed effects	β (SE)	t	P	β (SE)	t	P	β (SE)	t	P	β (SE)	t	P
Intercept	0.396 (0.015)	26.173	<0.001	0.048 (0.002)	25.030	<0.001	0.135 (0.006)	22.212	<0.001	0.096 (0.007)	14.769	<0.001
Match status (-2 or more)	-0.075 (0.011)	-6.536	<0.001	-0.004 (0.002)	-1.654	0.098	-0.009 (0.005)	-1.754	0.080	0.035 (0.005)	6.622	<0.001
Match status (-1)	-0.052 (0.009)	-5.755	<0.001	-0.003 (0.002)	-1.646	0.100	-0.013 (0.003)	-3.807	<0.001	0.025 (0.004)	5.753	<0.001
Match status (+1)	0.075 (0.009)	8.134	<0.001	0.014 (0.002)	7.357	<0.001	-0.022 (0.003)	-6.621	<0.001	-0.018 (0.004)	-3.997	<0.001
Match status (+2 or more)	0.070 (0.012)	6.077	<0.001	0.018 (0.003)	7.198	<0.001	-0.024 (0.005)	-4.622	<0.001	-0.013 (0.005)	-2.358	0.021
Venue (away)	0.057 (0.005)	11.775	<0.001	-	-	-	-	-	-	-0.012 (0.002)	-5.171	<0.001
Quality opposition	0.003 (0.001)	5.795	<0.001	-	-	-	-0.001 (<0.001)	-2.919	0.004	-0.002 (<0.001)	-8.007	<0.001
Match status (-2 or more) * Quality opposition	-0.003 (0.001)	-2.292	0.022	-	-	-	0.001 (0.001)	2.430	0.015	-	-	-
Match status (-1) * Quality opposition	-0.002 (0.001)	-2.987	0.003	-	-	-	0.001 (<0.001)	2.487	0.013	-	-	-
Match status (+1) * Quality opposition	0.001 (0.001)	0.678	0.498	-	-	-	-<0.001 (<0.001)	-0.371	0.710	-	-	-
Match status (+2 or more) * Quality opposition	0.001 (0.001)	0.841	0.401	-	-	-	-0.002 (0.001)	-3.250	0.001	-	-	-
Venue (away) * Quality opposition	-	-	-	-	-	-	-	-	-	-0.001 (<0.001)	2.365	0.019
Random effects	β (SE)	Wald Z	P	β (SE)	Wald Z	P	β (SE)	Wald Z	P	β (SE)	Wald Z	P
Match	<0.001 (<0.001)	2.598	0.009	<0.001 (<0.001)	2.667	0.008	0.001 (<0.001)	7.250	<0.001	<0.001 (<0.001)	5.223	<0.001
Match status	0.001 (<0.001)	4.588	<0.001	-	-	-	<0.001 (<0.001)	4.465	<0.001	<0.001 (<0.001)	5.795	<0.001
Quality opposition	<0.0001 (<0.001)	5.761	<0.001	-	-	-	-	-	-	<0.001 (<0.001)	5.034	<0.001
Team	0.004 (0.001)	2.888	0.004	<0.001 (<0.001)	2.643	0.008	0.001 (<0.001)	2.944	0.003	0.001 (<0.001)	2.807	0.005
Match status	<0.001 (<0.001)	2.738	0.006	-	-	-				<0.001 (<0.001)	2.330	0.020
Residuals	0.177 (0.001)	183.418	<0.001	0.028 (<0.001)	184.862	<0.001	0.058 (<0.001)	183.738	<0.001	0.047 (<0.001)	183.406	<0.001
$R^2_{(m)}$	0.016			0.002			0.002			0.009		
$R^2_{(c)}$	0.049			0.005			0.030			0.042		
β, beta coefficient; SE, standard error. Statistical significance set at $P < 0.05$.												
Intercepts represent a draw and playing home.												

Table 2. (Continued)												
	Sustained Threat			Fast Tempo			Crossing			High Pressure		
Fixed effects	β (SE)	t	P	β (SE)	t	P	β (SE)	t	P	β (SE)	t	P
Intercept	0.080 (0.004)	18.598	<0.001	0.033 (0.003)	10.774	<0.001	0.174 (0.005)	37.794	<0.001	0.076 (0.002)	39.929	<0.001
Match status (-2 or more)	0.020 (0.004)	5.628	<0.001	0.006 (0.002)	2.602	0.009	0.049 (0.006)	8.131	<0.001	0.002 (0.003)	0.607	0.544
Match status (-1)	0.017 (0.003)	6.122	<0.001	0.002 (0.002)	1.152	0.250	0.045 (0.004)	10.253	<0.001	-0.001 (0.002)	-0.521	0.602
Match status (+1)	-0.011 (0.003)	-4.022	<0.001	<0.001 (0.002)	0.177	0.859	-0.048 (0.004)	-10.788	<0.001	-0.009 (0.002)	-3.744	<0.001
Match status (+2 or more)	-0.010 (0.004)	-2.682	0.007	0.012 (0.002)	4.699	<0.001	-0.045 (0.006)	-7.489	<0.001	-0.011 (0.004)	-2.966	0.003
Venue (away)	-0.018 (0.002)	-9.149	<0.001	-0.004 (0.001)	-2.738	0.006	-0.040 (0.003)	-11.342	<0.001	-0.010 (0.002)	-5.557	<0.001
Quality opposition	-0.001 (<0.001)	-6.702	<0.001	-0.001 (<0.001)	-6.266	<0.001	-0.002 (<0.001)	-6.115	<0.001	-<0.001 (<0.001)	-2.362	0.019
Match status (-2 or more) * Quality opposition	-	-	-	-	-	-	-	-	-	<0.001 (<0.001)	0.214	0.831
Match status (-1) * Quality opposition	-	-	-	-	-	-	-	-	-	-<0.001 (<0.001)	-0.632	0.528
Match status (+1) * Quality opposition	-	-	-	-	-	-	-	-	-	-0.001 (<0.001)	-1.954	0.051
Match status (+2 or more) * Quality opposition	-	-	-	-	-	-	-	-	-	-0.001 (<0.001)	-2.899	0.004
Venue (away) * Quality opposition	-	-	-	-	-	-	-	-	-	-	-	-
Random effects	β (SE)	Wald Z	P	β (SE)	Wald Z	P	β (SE)	Wald Z	P	β (SE)	Wald Z	P
Match	<0.001 (<0.001)	1.641	0.101	<0.001 (<0.001)	2.506	0.012	<0.001 (<0.001)	2.315	0.021	<0.001 (<0.001)	4.065	<0.001
Match status	<0.001 (<0.001)	6.603	<0.001	<0.001 (<0.001)	3.910	<0.001	<0.001 (<0.001)	2.604	0.009	-	-	-
Quality opposition	<0.001 (<0.001)	3.854	<0.001	<0.001 (<0.001)	4.097	<0.001	<0.001 (<0.001)	4.341	<0.001	<0.001 (<0.001)	3.737	<0.001
Team	<0.001 (<0.001)	2.866	0.004	<0.001 (<0.001)	2.761	0.006	<0.001 (<0.001)	2.463	0.22	<0.001 (<0.001)	2.025	0.043
Match status	-	-	-	-	-	-	-	-	-	-	-	-
Residuals	0.037 (<0.001)	183.473	<0.001	0.020 (<0.001)	183.442	<0.001	0.128 (0.001)	183.646	<0.001	0.038 (<0.001)	184.390	<0.001
$R^2_{(m)}$	0.006			0.003			0.008			0.001		
$R^2_{(c)}$	0.026			0.022			0.015			0.005		

β, beta coefficient; SE, standard error. Statistical significance set at $P < 0.05$.
Intercepts represent a draw and playing home.