

Toward a Model of Collective Intelligence of Sporting Teams: Examining Data from the 2014 Soccer World Cup

- We collected game data on 64 matches of the 2014 World Cup (Opta, FIFA, ESPN, video recordings) played by 32 teams;
- During these 64 matches, 1690 shooting events – or executed shots on goal – were analyzed;
- Following each match, teams were assigned an identifier of W (winning), L (losing) or D (drawing);
- 13 matches concluded as draws, giving 26 drawing teams. The remaining 51 matches had 51 winners and 51 losers, giving a total of 128 teams with designations of winning, losing or drawing (W-L-D);
- Pearson Chi-Square tests were used to look for statistically significant associations between W-D-L and the following variables: Possession (Approximately Even Possession, Less than Opponent, More than Opponent); Tackles (High, Medium, Low); Set-Piece (Corner, Indirect Free Kick, Direct Free Kick, Throw-In); Body Part Used to Shoot (Head, Left Foot, Right Foot); Field Zone of Shot (Back, Center, Left, Right); Shot Teamwork (Assisted, Individual); Shot Strength (Strong, Weak); Shot Swerve (Left, Right, Moving), Attack Mode (Fast Break, Regular Play, Set-Piece) and Shooting Event Outcomes (Goal, Missed Close, Missed Wide, Posts or Bar, Saved)

Winning teams had significantly more shooting events in a fast break attack mode than losing or drawing teams.

		ATTACK MODE (AM)				Pearson Chi-Square	Degrees of freedom	Significance
		Fast Break	Regular Play	Set-Piece	Total			
Drawing	Count	10	230	96	336	13.253	4	.010 (<.05)
	% of Drawing	3.0%	68.5%	28.6%	100.0%			
	% of AM Category	18.9%	19.6%	20.8%	19.9%			
Losing	Count	9	427	181	617			
	% of Losing	1.5%	69.2%	29.3%	100.0%			
	% AM Category	17.0%	36.3%	39.2%	36.5%			
Winning	Count	34	518	185	737			
	% of Winning	4.6%	70.3%	25.1%	100.0%			
	% of AM Category	64.2%	44.1%	40.0%	43.6%			
TOTAL		53	1175	462	1690			