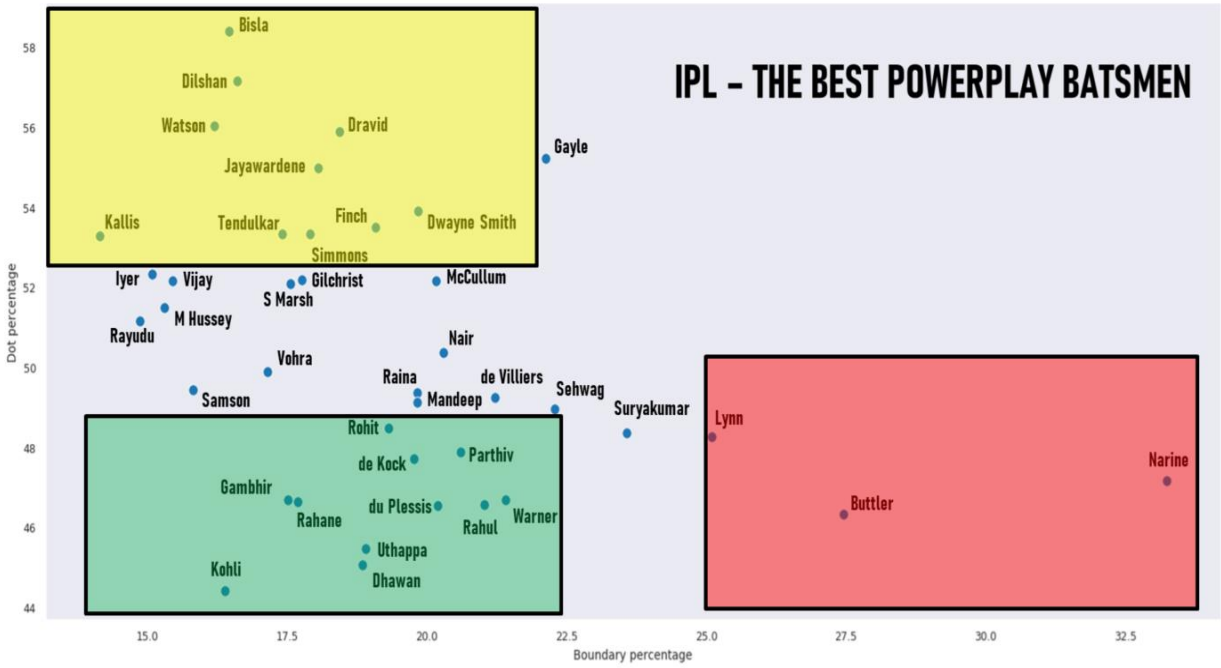
POWERPLAY OVERS IN IPL - VISUALIZATIONS



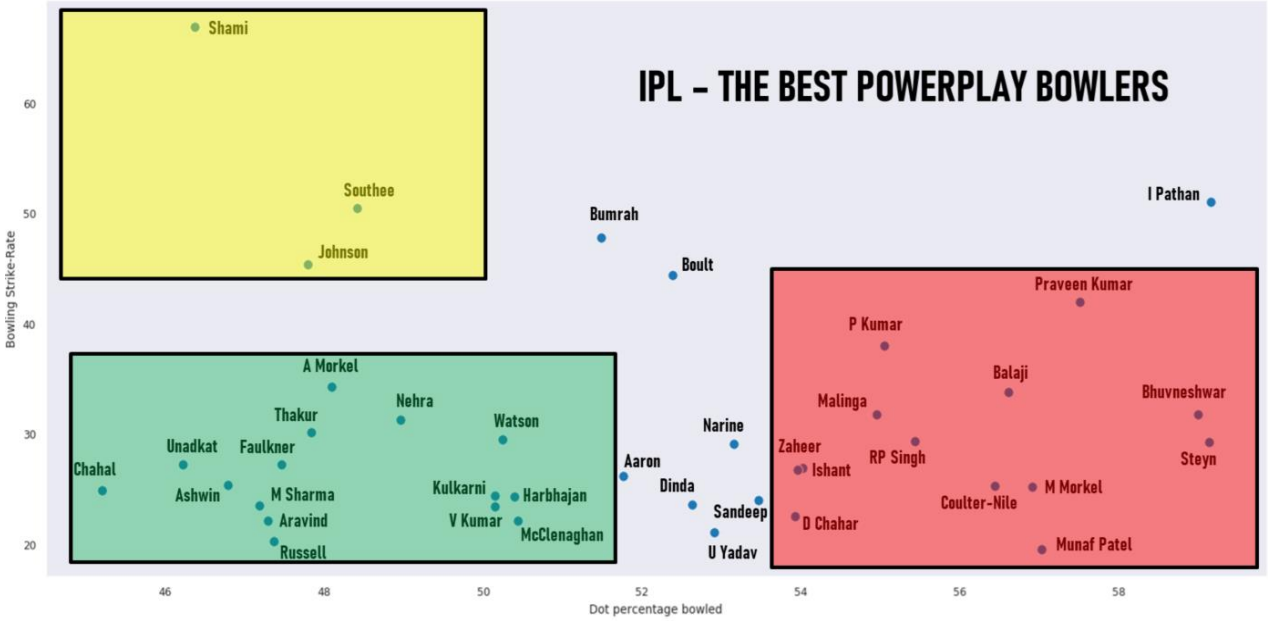
The above image is a visualization of batsmen in the Powerplay overs (1-6) of IPL, for the seasons 2011-2019. These are all the batsmen who have faced more than 300 balls in the Powerplay over the course of their IPL careers. The graph is a representation of boundary percentages of batsmen versus their dot percentages. An ideal batsman should have a high boundary (4 and 6) percentage and a low dot ball percentage. Percentages have been used to normalize the values and discount the situation of longevity outweighing everything else.

The yellow region of the visualization consists of batsmen who have a small boundary percentage and a high dot percentage, the worst possible combination in the Powerplay overs. On closer inspection, a number of cricket legends belong to this region, including Tendulkar, Dravid, Kallis, and Jayawardene. It clearly suggests that these stalwarts of the longer format of the game weren't particularly suited to T20 cricket, particularly not the Powerplay. Current IPL cricketer Shane Watson also belongs in the yellow region, surprisingly, seeing as he is considered a T20 specialist. This can be attributed to Watson starting off slowly in order to get into his groove, before taking off. A similar approach is also common with Chris Gayle who narrowly escapes the yellow region, on account of a higher boundary percentage.

The green region of the visualization consists of batsmen who don't have a high boundary percentage in the Powerplay, but have lower dot percentages. In essence, they are good strike rotators who value the ones and twos. It can be noticed that a number of IPL's most renowned and capped batsmen belong to this region, including Kohli, Rohit, Warner, Gambhir and Dhawan. It suggests that these cricketers understand the importance of avoiding dot balls in the Powerplay, and instead try to run the maximum ones and twos when not hitting boundaries. Kohli, in particular, has the least dot ball percentage among

all the cricketers on the list. What the region also suggests, however, is that these batsmen aren't particularly adept at hitting boundaries frequently, with the possible exception of Warner, and will probably need to significantly up their game as T20 cricket approaches a more frenetic phase.

The red region of the visualization consists of batsmen best suited to the Powerplay overs, the ones who have the highest boundary percentages and the lowest dot percentages. Only 3 players fall under this category, Narine, Buttler, and Lynn. Narine is quite an enigma. He started off as KKR's most potent and mysterious bowler in 2012, and found himself opening the batting for KKR in 2017, which kick-started a spectacular spree of hitting by the West-Indian. Narine has the highest boundary percentage in the Powerplay, 33.2%, essentially meaning that 1 out of every 3 balls he faces goes to the boundary. Buttler is another Powerplay monster who has redefined batting in the initial phase. A surprising name figuring between the green and red regions is Suryakumar Yadav, who has the 4th highest boundary percentage of all. Another household name missing from the red region is de Villiers, a massively impactful player in IPL, absent because he hasn't batted too much in the Powerplay overs.



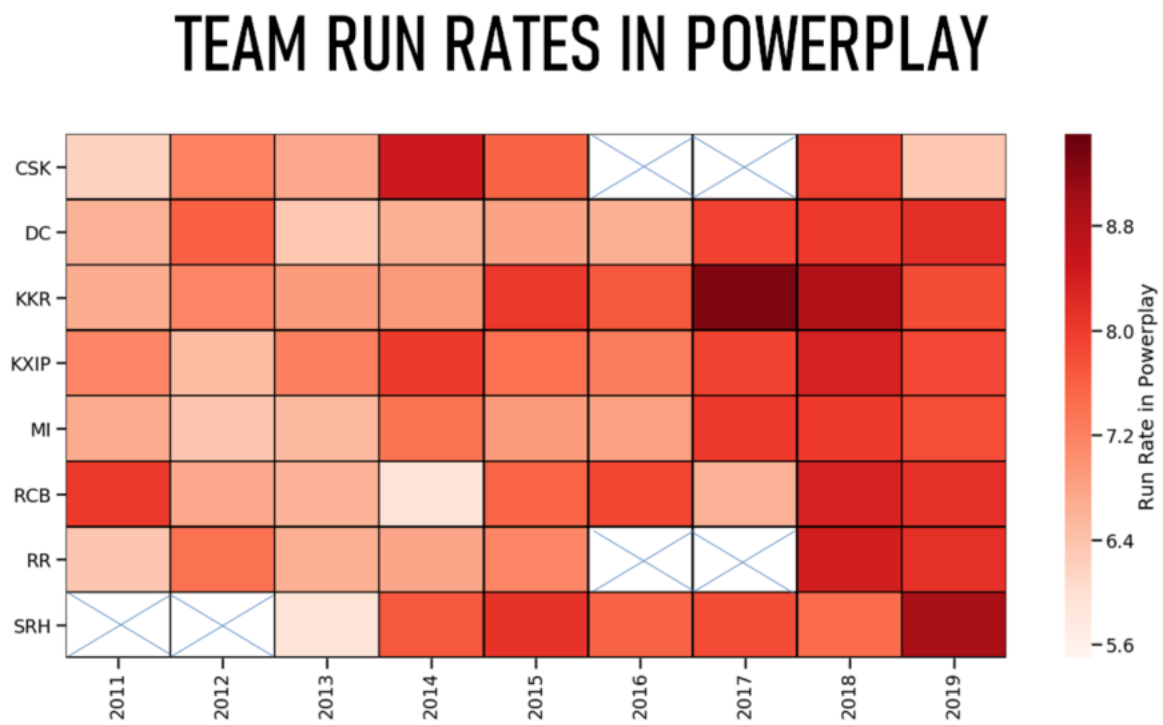
The above image is a visualization of bowlers in the Powerplay overs (1-6) of IPL, for the seasons 2011-2019. These are all the bowlers who have bowled more than 300 balls in the Powerplay over the course of their IPL careers. The graph is a representation of bowlers' dot percentages bowled versus their Bowling Strike-Rates in the Powerplay (number of balls taken to take a wicket). An ideal bowler should have a high dot percentage and a low Bowling Strike-Rate.

The yellow region consists of bowlers who have the lowest dot ball percentages and the highest strike-rates, the worst possible combination for a bowler in the Powerplay overs. Indian pace ace Shami, who has been stellar is Test of late, is one of the poorest Powerplay bowlers in IPL. Southee is another such bowler, who, in spite of being highly rated as a white-ball specialist, is a bad fit for the Powerplay overs.

The green region consists of bowlers who have lower dot percentages, but lower strike rates as well, meaning that they take wickets more regularly, though they might not bowl dot balls as often. McClenaghan, Unadkat and V Kumar are some players firmly belonging to this category, who have a

happy knack of picking up wickets, but tend to go for runs. A surprising entrant in this list is Yuzvendra Chahal, who has the worst dot ball percentage among all. The reasoning behind this is that Chahal bowls rarely in the Powerplay, and the small sample used for him might be unreasonably skewed.

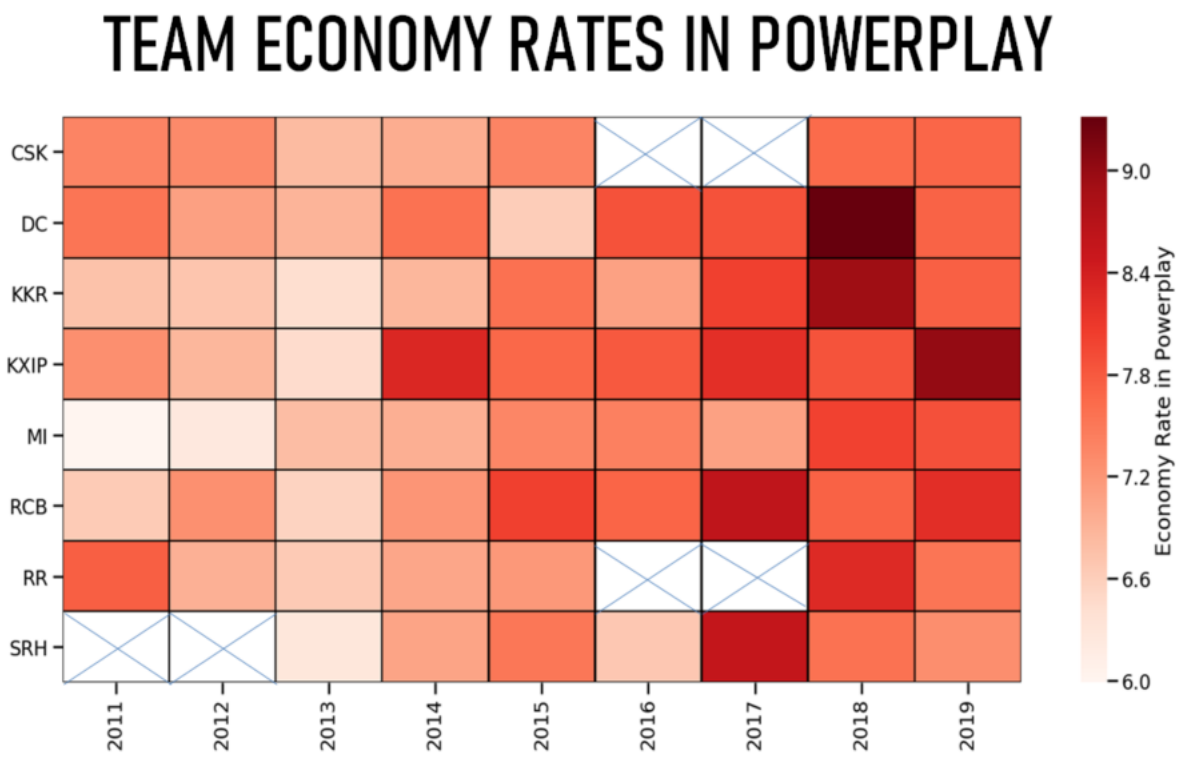
The red region consists of the best Powerplay bowlers, a combination of low strike-rates and high dot-ball percentages. Bhuvneshwar, Steyn and Morkel are the usual suspects, but Munaf Patel boasts of a stunning strike-rate of 19.47, the lowest in the list. Deepak Chahar, Coulter-Nile and Ishant Sharma are some other excellent Powerplay bowlers, the latter of whom is often undervalued in white-ball cricket. It can also be noted that of the entire assortment of 40- odd bowlers, only 3 spinners figure – Ashwin, Chahal and Narine, implying that teams are still hesitant to give spinners a go early on.



This is a heatmap of how teams have fared with the bat in the Powerplay overs in IPL seasons since 2011, measured by run-rate during the Powerplay.

It can be seen that KKR's Powerplay performance in the 2017 IPL utterly dominates the heatmap. Reflecting on the previous visualizations, a natural reasoning can be attributed to Narine and Lynn, who were at their breath-taking best for KKR in the Powerplay that season, contributing to KKR's record season run rate of 9.3.

At the other end of the spectrum is the case of RCB's 2014 season, when they recorded a season run rate of 5.9, the lowest among all teams in all considered seasons. RCB didn't have a fixed opening combination that season, with Gayle laid back with injuries for a while, and other players like Takawale, Parthiv, Maddinson playing musical chairs. All these contributed to a forgettable season for the Royal Challengers.



This is a heatmap of how teams have fared with the ball in the Powerplay overs in IPL seasons since 2011, measured by economy-rate during the Powerplay.

Delhi Capitals' bowlers in 2018 had the worst Powerplay season of all, as they finished last on the table. A bowling attack comprising Shami, Rabada, Ishant, Morris, Axar among others couldn't get the job done. KXIP's 2019 IPL also saw a poor Powerplay performance by the side. Their bowling attack was R Ashwin, M Ashwin, Shami, Viljoen, Tye among others, who failed miserably. The common name in both these attacks is Shami, who, as evidenced in a previous visualization, leaks runs in the Powerplay.

Mumbai Indians' 2011 season was a surprisingly good one for its bowlers, the best on the entire chart. Their season economy rate was a miserly 6.2, and with Malinga and Harbhajan at their peaks, MI qualified for the playoffs on the back of an excellent bowling unit.