Tra Mai Hoang

Ngoc Anh Duc Pham

MSIS 670 Business Intelligence

Final Project Text Commentary

T20 Cricket World Cup: What Went Wrong for India

**Business Problem:**

In the T20 Cricket World Cup 2022, which was held in Australia from 16 October and 13 November 2022, England defeated India though India was a promising team. The case problem is finding a better solution in terms of managing teams and using incorrect player metrics

**Data:**

Siddi, Adarsh. “T20 World Cup Analysis-2022.” *Kaggle*, 26 Nov. 2022, www.kaggle.com/datasets/siddiadarsh/t20-worldcup-analysis20222?datasetId=2677009&fbclid=IwAR07eHURlwZ93KUyLtCoXTrbgTkMAfOc6ZpkV7w8y7XPjprKWh57xAXpI20.

Icc. “Dominant England Seal Final Berth with Easy Win over India: Match Highlights: T20WC 2022.” *Official ICC Men's T20 World Cup 2022 Website*, 2022.t20worldcup.com/video/2901048.

Shyam A. Krishna, Senior Associate Editor. “T20 World Cup 2022: Why India's Loss to England Is so Disappointing.” *Icc – Gulf News*, Gulf News, 10 Nov. 2022, gulfnews.com/sport/cricket/icc/t20-world-cup-2022-why-indias-loss-to-england-is-so-disappointing-1.91905884.

**Tools:**

Tableau Desktop: An interactive data visualization that can drag and drop interfaces, uncover the hidden highlights and connection between different types of data. It supports delivering all the related matches, players, performances, scores as raw data to be easier to understand. Moreover, analysts can create dashboards, stories about the T20 Cricket World Cup with clarity and interesting visualization for all the audiences, especially the T20 consultant team.

**Solution Outlining:**

To discover the problem, India's consultant team is responsible to integrate the primary dataset, and any additional data. Use BI tools as our data integration facility. Generate insights using the visual analytics features of the tool, and create a presentation using the tool's visualization capabilities (Tableau Story and dashboards). To address organizational memory, export final data used with any cleanups, repairs, and/or additional fields or summaries created, AND snapshots or screen caps of the visual analytics artifacts as presented.

**Product:**

*I.Overview of England and India teams performance*

T20 World Cup’s format, there is 20 “over” per innings, and each bowler has 6 balls during each over. In this case, since England and India both are strong teams, there will be analysis between the “wicket scores”, “run scores”, and between “players” of each team.

1. Final Result sheet

Overall, based on the “Final Result” sheet, it’s reported that India lost since England has a significant scores win by wickets, achieving the highest scores of the all teams by 237 scores while India gained 82 wickets, marking only one-third of the England total wickets scores.

1. Stages results sheet

Moreover, according to the “Stage Final Results”, all of India's win matches during the “Super 12” were “won by run”, which means India scored a better run compared to the other teams. However, at the Semi-Final, India met a worthy opponent since England hit the same or over “run scores” as India and took more batsmen out of the game, which made England win by 10 wickets as the result of Semi-Final.

As we can see, even though India had an outstanding “run scores”, which reported the second highest score with 187, and most of the runs were scored during the first inning. That means the Indian batsman did a pretty good job during the match. However, the England bowlers and fielders did a better job, since they made more batsmen out of the game.

Before going to the semi-final, in “Super 12” matches, India won Zimbabwe by “run scores” and decided to stick with the same team structures for the next round with England. On the other hand, England won by “wickets” and made two changes including Woods and Dawid replaced by Phil Salt.

1. Scores sheet

It is reported that England's team had more consistent and better scores between two innings achieving the highest scores compared to other teams with 737 and 724 points, while India scored 708 at the first inning, but noticeably dropped to 543 points at the second inning.

*To sum up from the listed information, it is clear that England in the T20 World Cup of 2022 had a consistent performance and better quality players compared to all the other countries including India.*

*II. Analysis of India vs England match and reasons why India lost to England in the T20 Cricket World Cup*

To begin with, based on the Semi-Final match, England players had an outstanding performance during their second inning. In the first half of the match, India used 7 players in the field and could only score 168-6. For England, Hales and Buttler (captain) finished the other half of the game.

1. Average Score from Batters sheet

England has 5 well-performing batsmen with the average highest scores, while India has only 2 high-performing batters. Among the England and India batters, Alex Hales and Jos Buttler from England achieved the excellent results with 86 points and 73 points, respectively while Virat Kohli and Suryakumar Yadav’s scores were not significant, since they remained their average highest scores of 69.33 and 61. Moreover, England still had three well-performing batters with the scores of 67 points, 52 points, and 32 points. In case Hales and Buttler got “wicket”, there are still 3 more players that can earn good scores.

1. England and India player sheet

Best batters did not play well enough, especially their 2 best scorers, who are Kohli and Yadav (from “Average Score from batters” sheet). Virat Kohli played safe with 50 runs out of 40 balls, but Surya only had 14 points out of 10 balls and got eliminated.

Even though “Best Bowler Analysis” and “Best Bowler Performance” sheets show that India has more good bowlers than England, but England’s bowlers did a great job since they scored 6 “wickets” and kicked the Indian batters out of the match. In this match, Jordan got 3 wickets (one of them was India's best player named Virat). On the other hand, Indian’s bowlers could not score any wickets.

Few highlights about the Semi-final match that shows why India lost

* Rahul was the first batter who got eliminated after earning 5 points/5 balls
* Rohit’s ball was also caught, after earning 27 points/28 balls
* Virat, who is the best player in the whole season got eliminated after 50 points/40 balls
* Surya, who plays well just behind Virat, only got 14 points/10 balls
* Hardik is the India most valuable player in this match, since he got 63 points/33 balls even though he isn't in the top scorer sheet. This shows that his performance in this match is great.

To conclude, England's bowlers played really well in this match, each of the players scored at least 1 wicket.

*III. What should have been done differently in managing the team?*

There are few options that India’s consultant can choose between:

1. In fact, India has good batters, but only two in average score compared to England, and they got more best scorers. Therefore, the Indian team could have more quality scorers(batters), in case the others got eliminated early in the match.
2. Another thing that they can do is to replace some bowlers with one top bowler to make sure they can take the opponent batters out of the game.

*IV. How does a cricket team win a world cup?*

Based on the “Results” sheet, we can see that England won most of the matches with “wicket”, not by “runs”.

In this case, “win by wickets” was most likely a better strategy, since good batters will eventually be eliminated after their ball was caught, and the other team scored “wicket”. The more players caught and out of the match is the key, so depending on “runs scores” is not a good strategy. Another example is New Zealand, where they had the highest runs, but they lost to Pakistan, who got fewer “runs” but more “wickets”.

However, as in the “Scores” sheet, England had the highest “sum of innings” and “second inning scores” , the” sum scores” of each inning matters, since the top four of the game have significantly higher “sum scores”. The batters of the winning team should hit the ball as far as they can to “hit the boundaries” or “over the boundaries” so they can score 4 or 6 points without running. Moreover, by hitting far, they can prevent being caught by the defense team. If they can run between the bat, it also can help them score more runs.

Beside a quality team of batters, 9 fielders who are responsible to catch as many balls as they can, so they can help their bowler to score “wickets”.

A winning cricket team should have a quality team of bowlers (at least 3 players, since both England and Pakistan made it to the final, while India only have 2 good bowlers.)

*V. How to beat Pakistan*

Based on the “Average score batter” and “Best Bowler Analysis” sheets:

* Pakistan would be an easier opponent for India. They only got 3 best scores and all of them had lower statistics than the two Indian players.
* The quality of Pakistan’s bowlers is not as good as India’s bowlers.
* The only thing that the Indian team must be careful of is that Pakistan gets more “wins by wickets”, which means there should be more quality batters.
* In this case, India could have 1 more better quality “batter” with a strong batting skills to hit the balls far to prevent Pakistan’s fielder catching the balls.

*VI.Use your knowledge of the Moneyball case to ask if there are inefficiencies in cricket, or incorrect player metrics that are being used.*

Based on the MoneyBall case, I would say that the Indian consultant team should focus on training the batters and the fielder, since India’s bowlers team seemed to have more than it needed. Each bowler can only have 4-6 times of throwing the balls, while batters need to “run” and “hit” the balls. In this case, I believe that the Indian team spent more money and efforts to train bowlers than it should have. Moreover, having 5 quality bowlers while there is only 1 well-performing batter can be considered as an “unbalanced line”.

There is no dataset showing “the spending” for the T20 India team. If it has the same circumstances as the “Moneyball” case: India's team needed to pay lots of money to hire Virat Kohli, so hiring another player who has the same qualification could exceed the budget. India team may consider few options below:

* Keep Virat Kohli and replace 2-3 bowlers by 2-3 better batters that have the average scoring as the same range as England's average batters. ( best option)
* If India wants to keep the same “bowler team”, they may summarize that players’ data and calculate the average scoring of all “batters”. They can replace the best batter by 3-4 average batters that have the same or more “average scoring” as England’s batters.

*VII.Are players being selected correctly?*

In my opinion, I strongly believe that the Indian batter team’s line-up was selected incorrectly, since Rohit had to battle with Jordan( who is one of England's best bowlers), and got wicked. It may be a better decision to select an average batter to battle England's best bowler at first, and wait for them to run out of pitches (6 maximum), then finally bring out the Ace.

*VIII. Designed our “fantasy cricket” team with a detailed explanation of why my team would have performed better*

As a consultant’s team, we will bring out a “balanced” team, with 3 best scorers(batters) who have equal statistics to England’s team and 5 best bowlers. If India has a match with our team, their batters won’t be able to stand against our top 5, so our team can either win by getting 10 “wickets” or earn more runs by our best 3 scorers(batters).

**Validation Approach**

We will need Professional Crickets trainers, who can check the players’ performance in reality to recheck the collected data was correct, or it may influenced by other factors such as “weather”, “soil conditions”, “injuries” and “mental health” before the match, and related equipments (bat, shoes) that were used during the game.

.