

TIME SERIES ANALYSIS



IS THERE A TREND?

- Identify the trend
- Underlying reasons



WHERE IS THE PEAK?

- Identify the peak season
- Quantify the peak sales amount



WHICH MATERIAL SELLS MORE?

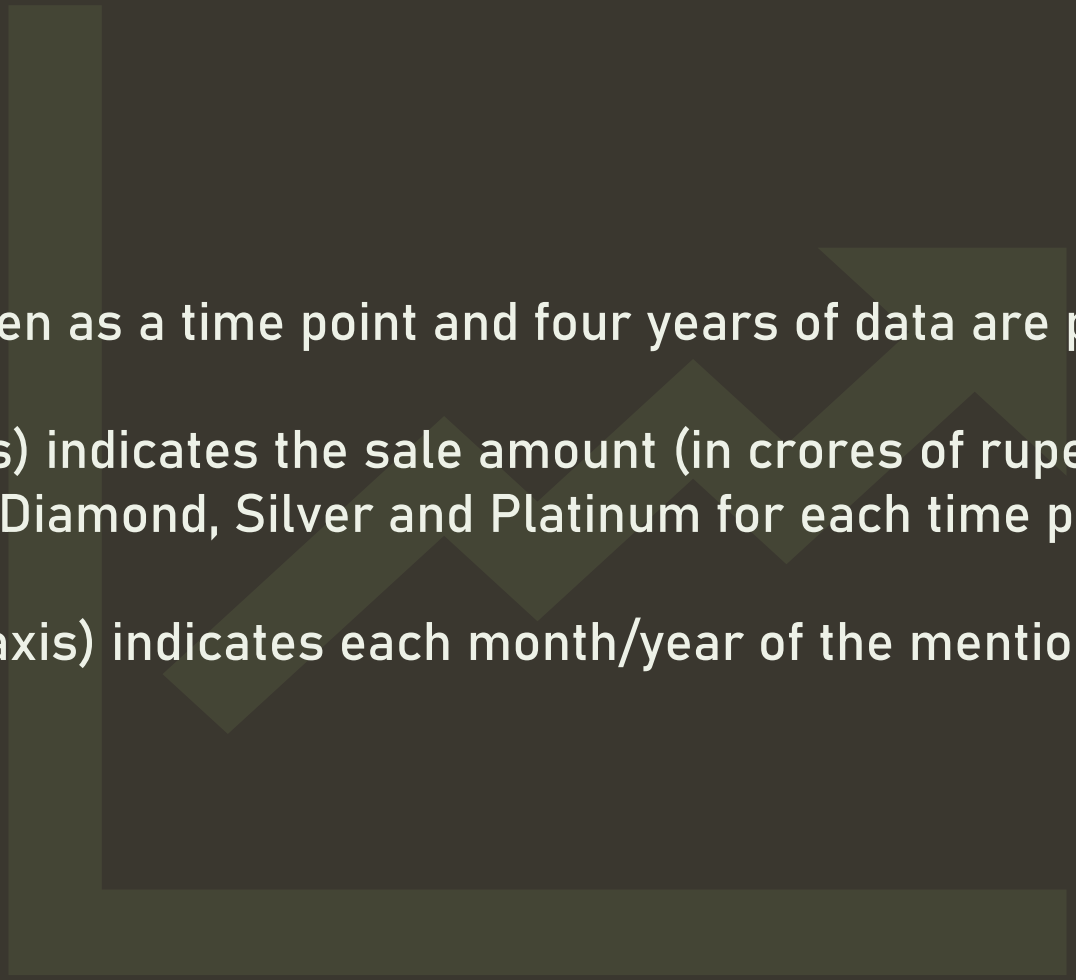
- Identify the popular materials and categories
- Quantify the overall sale

OVERALL SETUP

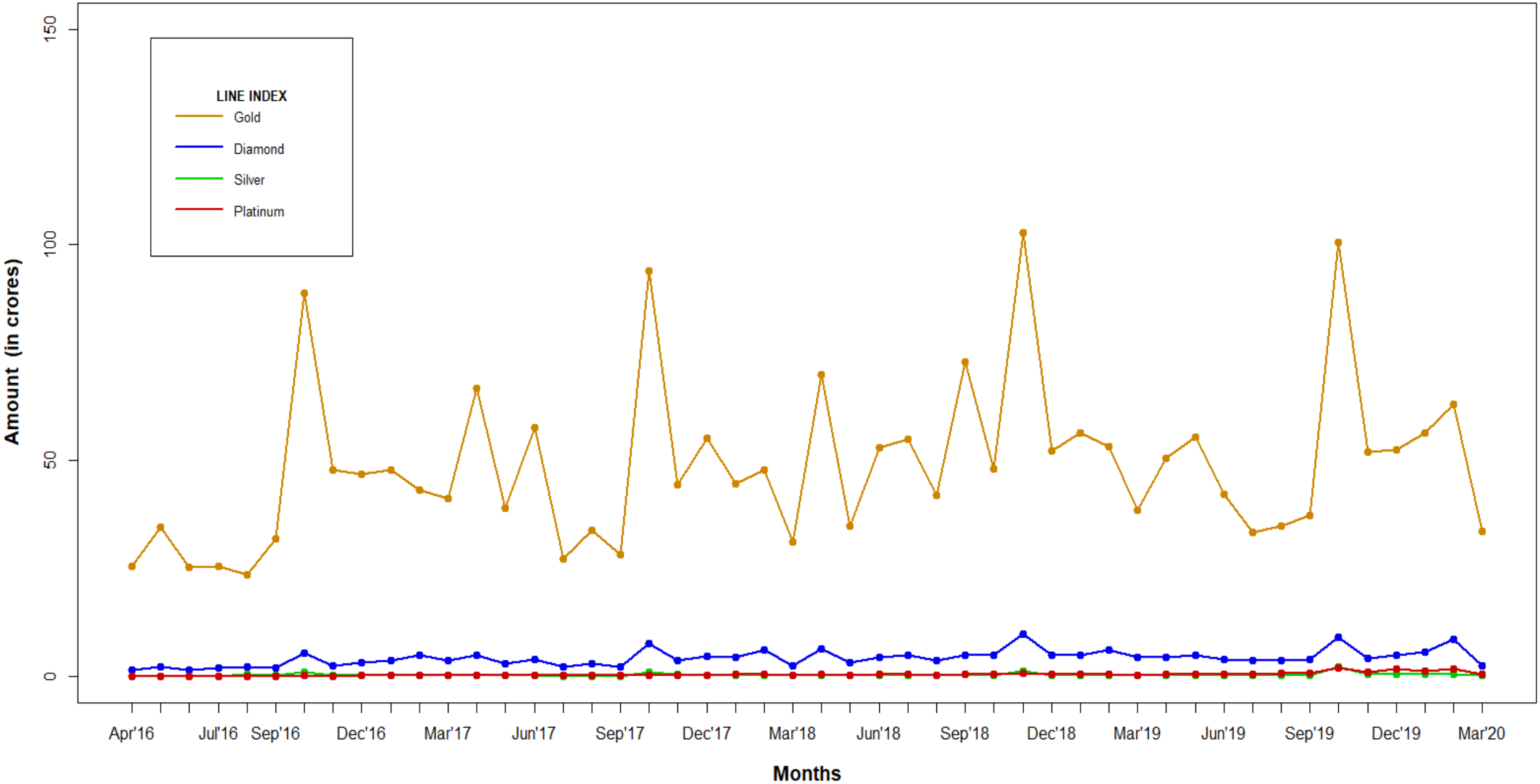
- Data meeting the following conditions were extracted –
 - i. BOMLINETYPE = Material
 - ii. Amount > 0
- Time period under consideration is April 2016 to March 2020
- The Y-axis (vertical axis) indicates the sale amount (in Indian rupees)
- The X-axis (horizontal axis) indicates the corresponding time points
- The following table indicates the number of stores from where data is collected for each financial year –

	2016-2017	2017-2018	2018-2019	2019-2020
Gold	24	25	26	27
Silver	24	25	26	27
Diamond	24	25	26	27
Platinum	22	25	26	27

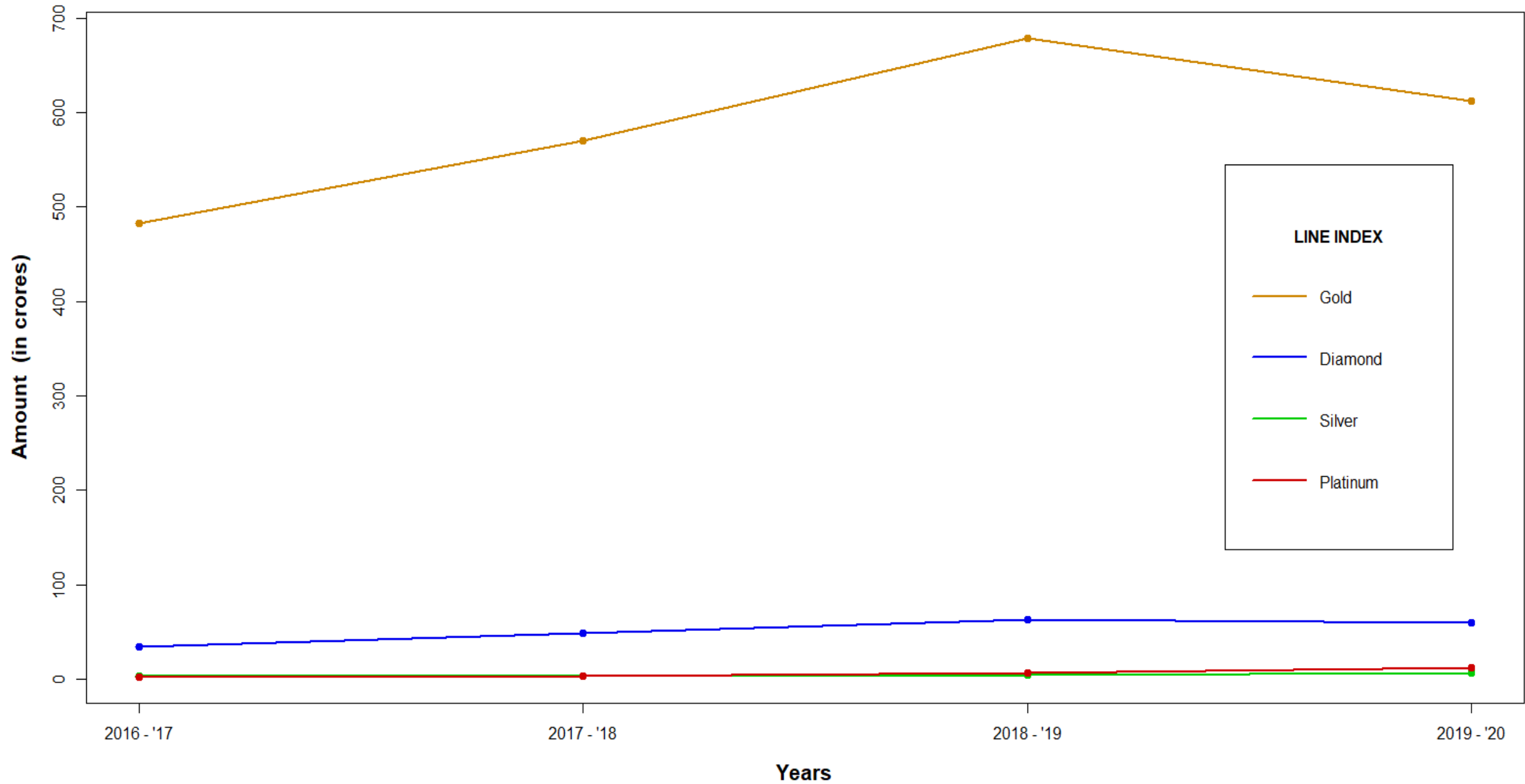
Monthly Analysis on: ITEM TYPE

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- Each month/year is taken as a time point and four years of data are plotted
 - The Y-axis (vertical axis) indicates the sale amount (in crores of rupees) of the corresponding material type, i.e. Gold, Diamond, Silver and Platinum for each time point
 - The X-axis (horizontal axis) indicates each month/year of the mentioned time period

Monthly Sales Amount of Gold, Diamond, Silver and Platinum
Time Period: April '16 - March '20



Yearly Sales Amount of Gold, Diamond, Silver and Platinum
Time Period: 2016 - '20



Comments :

- Every material attains a peak in October – November
- Gold brings maximum revenue followed by diamond, platinum and silver in respective order
- Gold attains maximum sales amount in November 2018, amounting to ₹102,70,54,502 (approximately 102.7 crores)
- Diamond attains maximum sales amount in November 2018, amounting to ₹9,82,60,370 (approximately 9.82 crores)
- Silver attains maximum sales amount in October 2019, amounting to ₹2,26,86,587 (approximately 2.26 crores)
- Platinum attains maximum sales amount in October 2019, amounting to ₹1,92,84,747 (approximately 1.93 crores)

Analysis on : ORNAMENT CATEGORIES

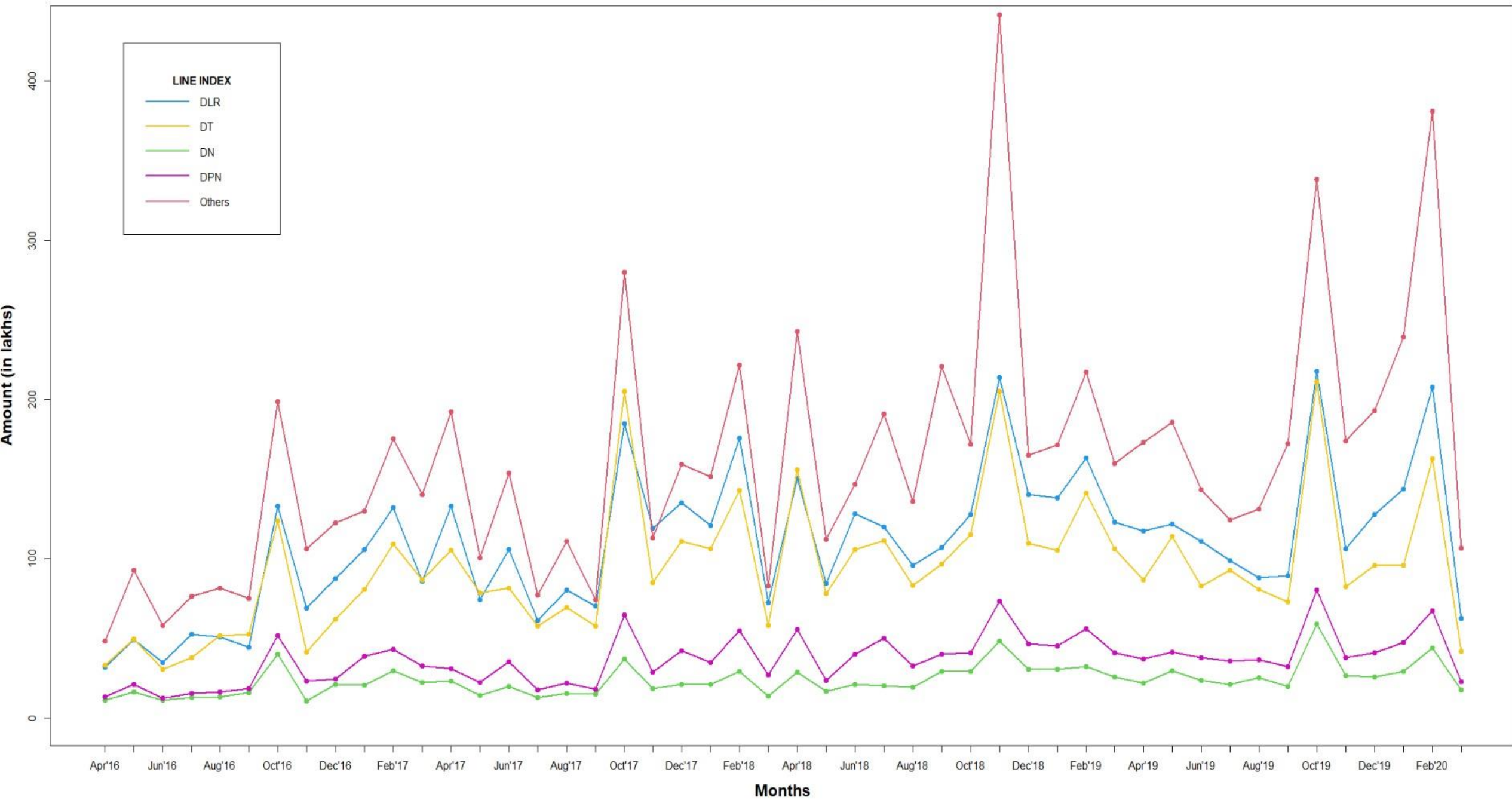
- Each month/year (both are studied in separate graphs) is taken as a time point and four years of data are plotted. Each graph indicates the time series data corresponding to a specific material, i.e. Gold, Platinum, Silver and Diamond
- The Y-axis (vertical axis) indicates the sale amount (in lakhs of rupees) of the corresponding material type, i.e. Gold, Diamond, Silver and Platinum for each time point
- The X-axis (horizontal axis) indicates each month of the mentioned time period
- Each graph is a multiple line diagram indicating the sales amount of the ornament categories (under a specific Item Type).
- For better visualization, the major ornament categories are studied individually while the remaining categories are condensed into a single category titled as 'Others'

Multiple line diagram of : DIAMOND

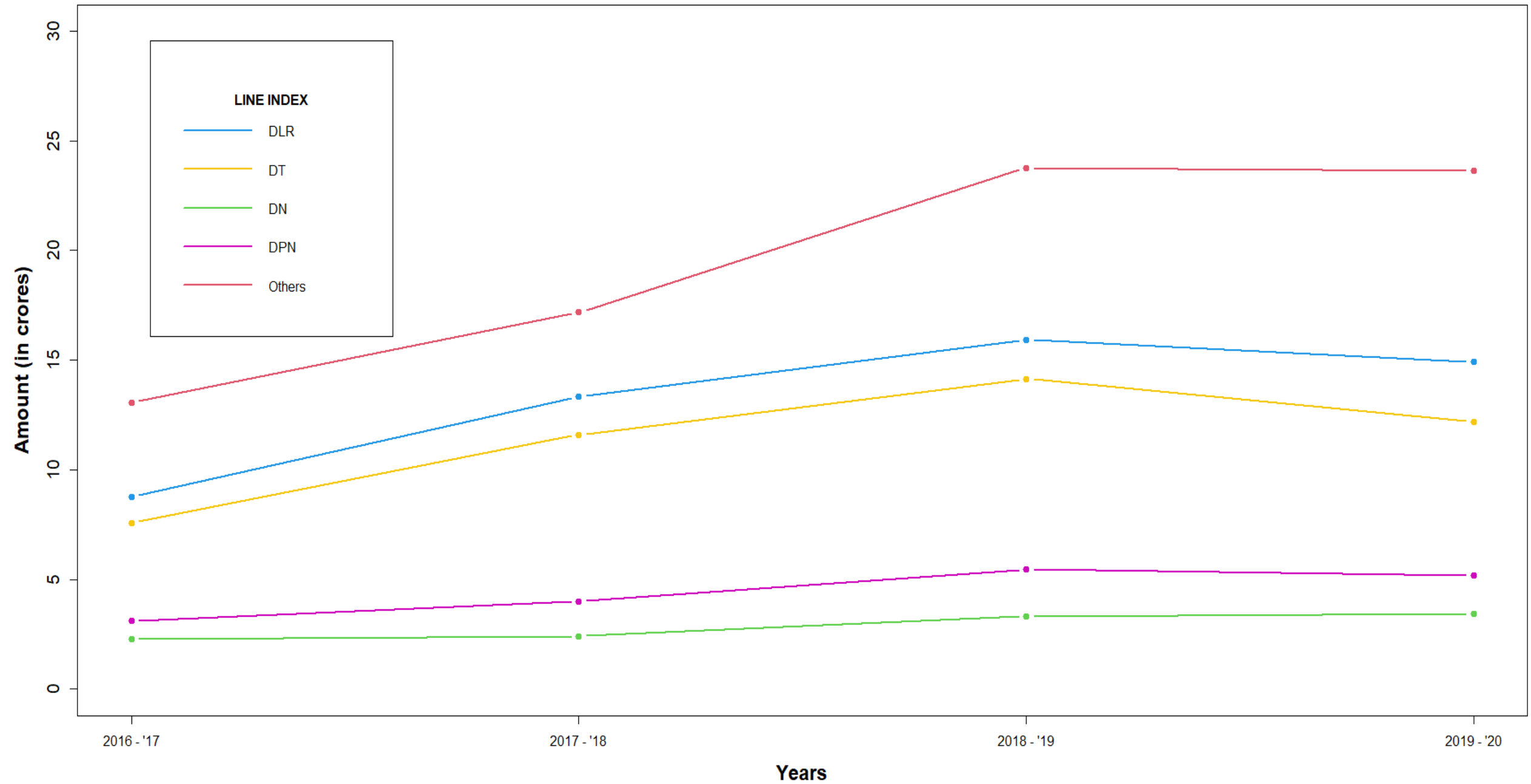
Categories under study :

- i. DLR
- ii. DT
- iii. DN
- iv. DPN
- v. Others (57)

Monthly Sales Amount of Diamond
(Ornament Category-wise)
Time Period : April '16 - March '20



Yearly Sales Amount of Diamond
(Ornament Category-wise)
Time Period: 2016 - '20



Comments :

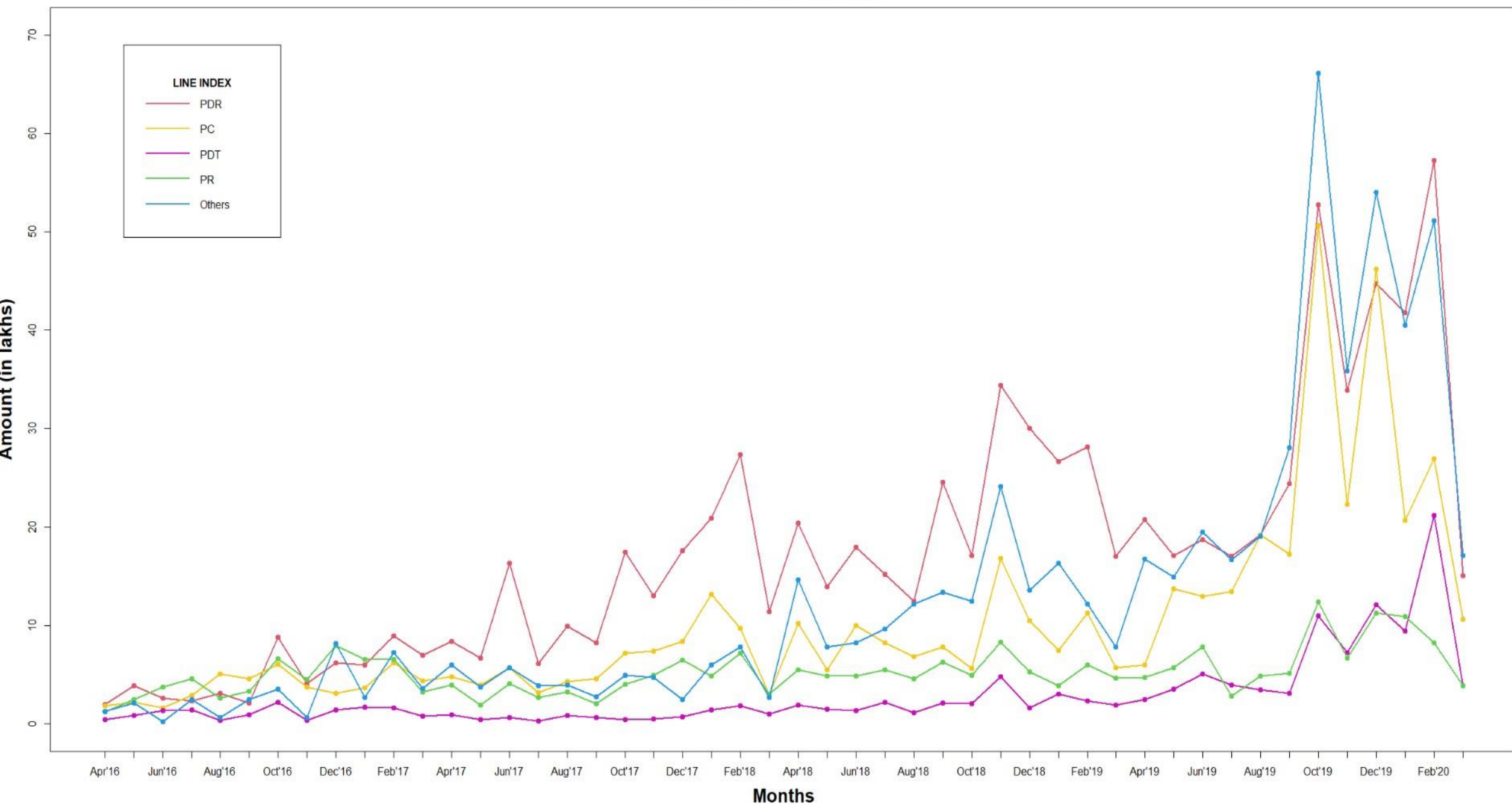
- DLR brings maximum revenue followed by DT, DPN and DN in respective order
- Every category attains a peak in October–November of each financial year
- DLR attains peak sales amount in October 2019, amounting to ₹2,17,76,636 (approximately 2.18 crores)
- DT attains peak sales amount in October 2019, amounting to ₹2,11,25,249 (approximately 2.11 crores)
- DPN attains peak sales amount in October 2019, amounting to ₹80,13,847
- DN attains peak sales amount in October 2019, amounting to ₹59,12,997

Multiple line diagram of : PLATINUM

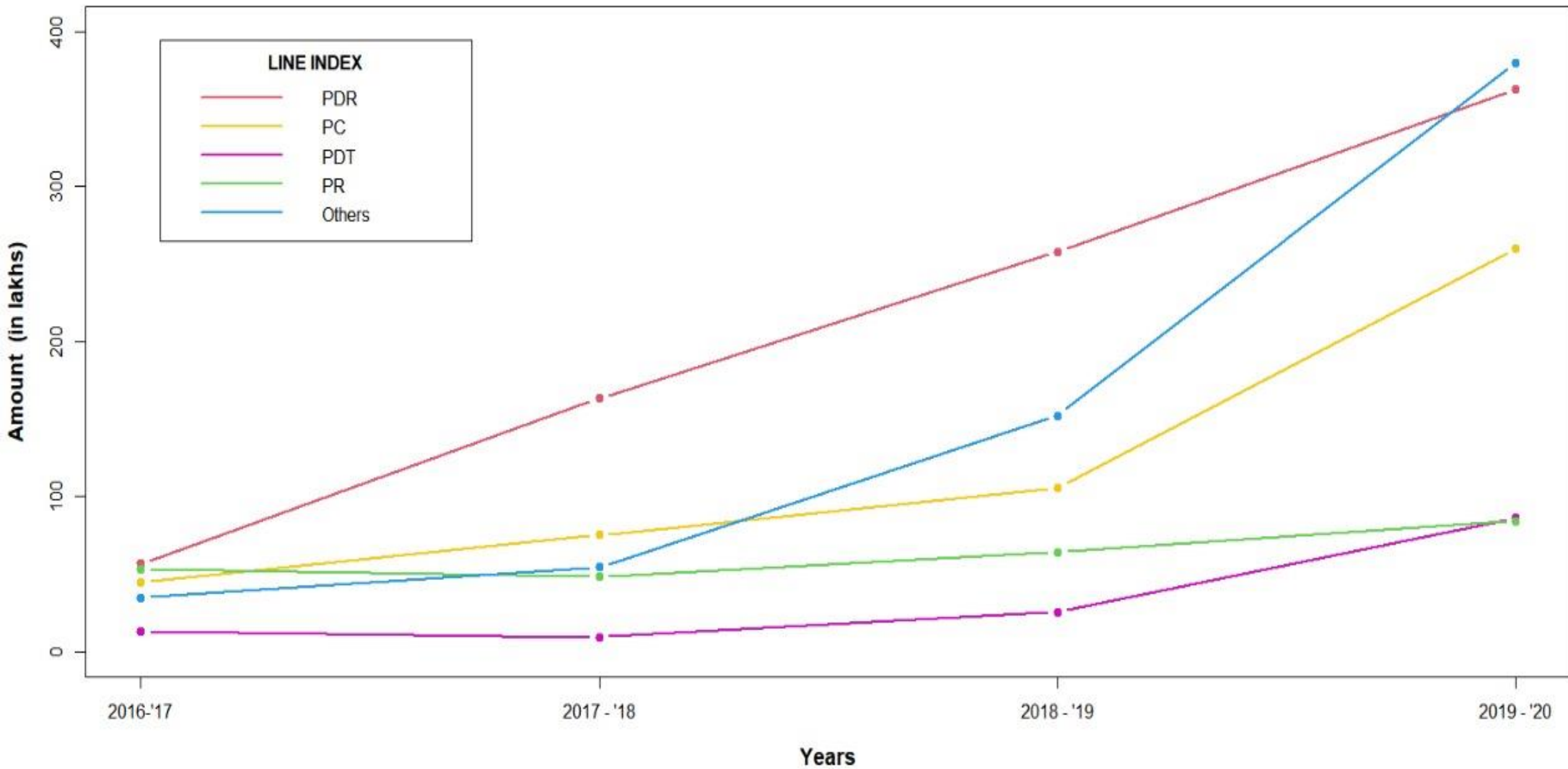
Categories under study :

- i. PDR
- ii. PC
- iii. PDT
- iv. PR
- v. Others(20)

Monthly Sales Amount of Platinum
(Ornament Category-wise)
Time Period : April '16 - March '20



Yearly Sales Amount of Platinum
(Ornament Category-wise)
Time Period: 2016 - '20



Comments :

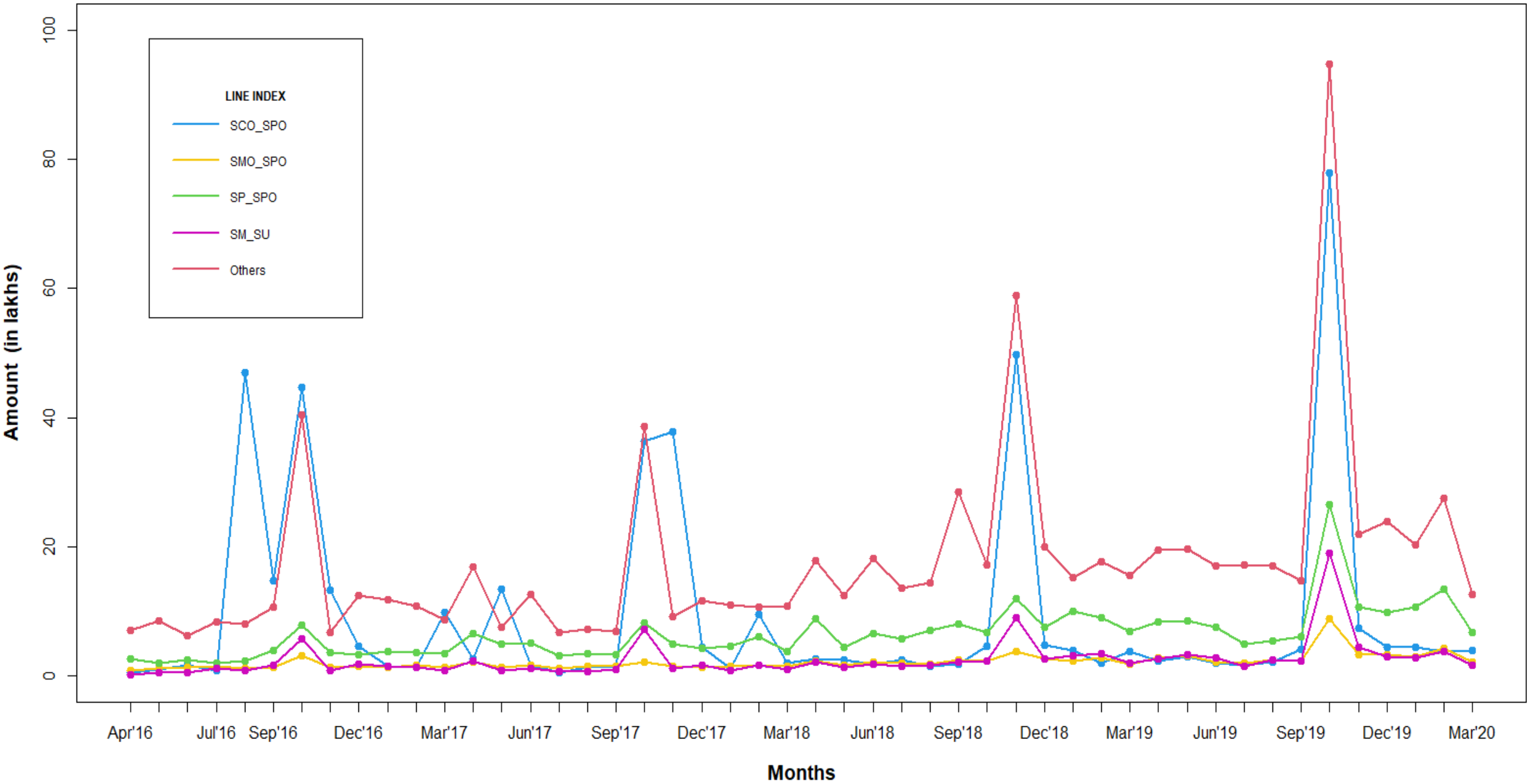
- PDR brings maximum revenue followed by PC, PR and PDT in respective order
- The data indicates a general increase in sales amount for every category of Platinum over the four financial years. The rise is gradual in the years 2016-17, 2017-18 and 2018-19 and becomes steeper from September 2019 onwards.
- PDR attains maximum sales amount in February 2020, amounting to ₹57,23,780
- PC attains maximum sales amount in October 2019, amounting to ₹50,66,237
- PR attains maximum sales amount in October 2019, amounting to ₹12,35,874
- PDT attains maximum sales amount in February 2020, amounting to ₹21,14,509

Multiple line diagram of : SILVER

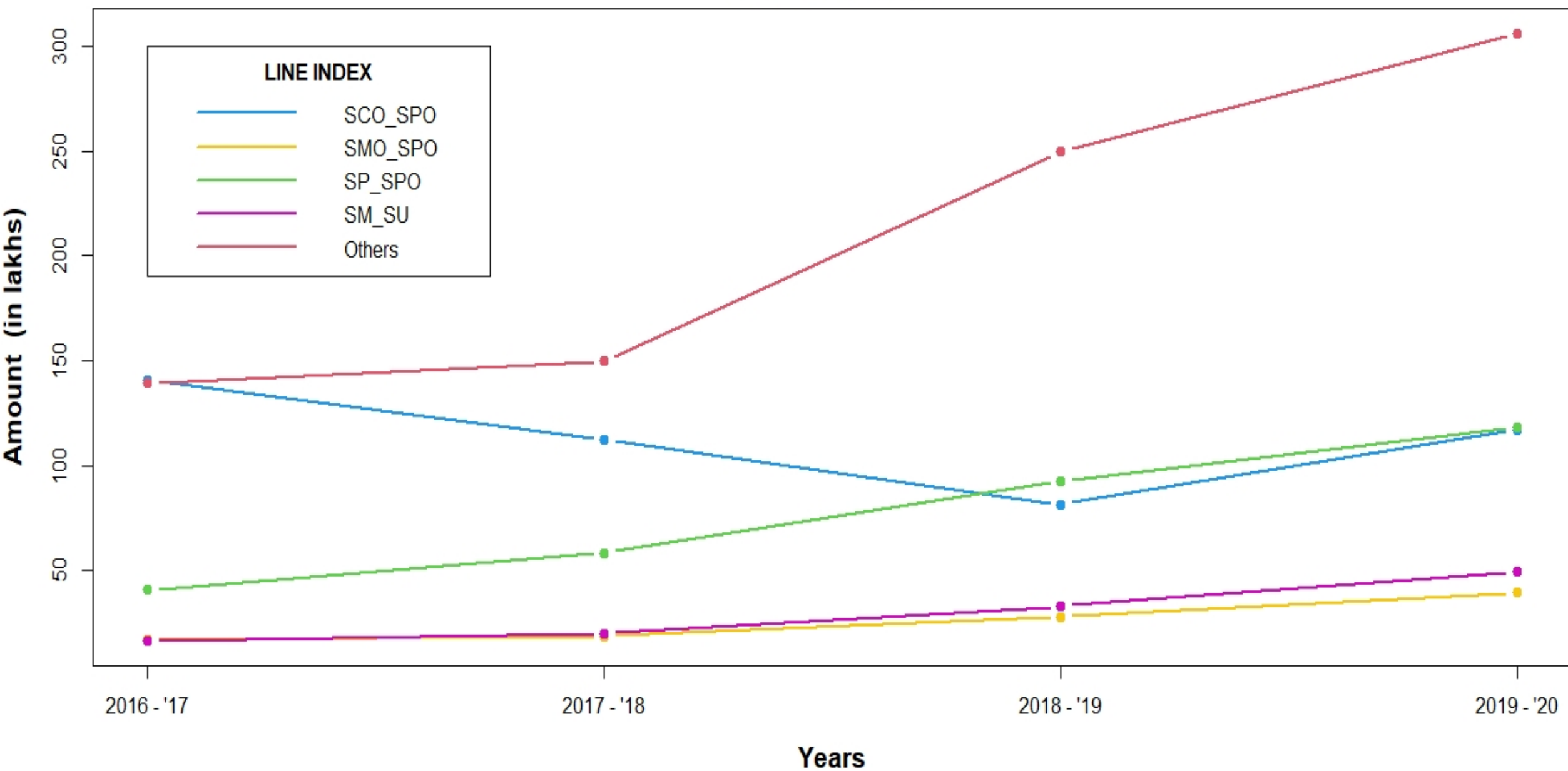
Categories under study :

- i. SCO_SPO
- ii. SMO_SPO
- iii. SP_SPO
- iv. SM_SU
- v. Others(18)

Monthly Sales Amount of Silver
(Ornament Category-wise)
Time Period: April '16 - March '20



Yearly Sales Amount of Silver
(Ornament Category-wise)
Time Period: 2016 - '20



Comments :

- Peaks are evident for each category in and around October–November
- The category SCO_SPO attains absurd peaks in August '16, March '17, May '17, November '17, February '18
- SCO_SPO attains maximum sales amount in October 2019, amounting to ₹77,89,077
- SMO_SPO attains maximum sales amount in October 2019, amounting to ₹8,80,214
- SP_SPO attains maximum sales amount in October 2019, amounting to ₹26,55,110
- SM_SU attains maximum sales amount in October 2019, amounting to ₹18,96,695